

Appendix D

Preliminary Environmental Review Report

(Part 2 of 2)

Appendix 4.5

Appendix 4.5 Calculation of Vehicular Emission

[REDACTED]

From: [REDACTED]
Sent: Wednesday, December 3, 2025 10:17 AM
To: [REDACTED]
Cc: [REDACTED]
Subject: Re: CE 79/2023 (GE) TYNUQ - Technical Note on Traffic Forecast for Environmental Impact Assessment – Issue 1 (Ref. B20e-01)

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Dear [REDACTED]

We generally do not provide comments on traffic figures specifically prepared for Environmental Impact Assessments, as such assessments fall outside our purview.

Nonetheless, if the traffic projections in your submission align reasonably with existing data sources, such as officially approved Traffic Impact Assessments, the Annual Traffic Census, or traffic models endorsed by the TD, we would have no adverse comments on the forecast provided.

Regards,

[REDACTED]
E/TY,TD

[REDACTED]

Date: 02/12/2025 04:43 PM

Subject: CE 79/2023 (GE) TYNUQ - Technical Note on Traffic Forecast for Environmental Impact Assessment – Issue 1 (Ref. B20e-01)

Dear [REDACTED],

Agreement No. CE 79/2023 (GE)
Underground Quarrying at Tsing Yi North – Investigation, Design and Construction
Technical Note on Traffic Forecast for Environmental Impact Assessment – Issue 1
(Ref. B20e-01)

To facilitate our study on the environmental impact assessment for the captioned project, we are pleased to submit the Technical Note on Traffic Forecast for Environmental Impact Assessment for your review and agreement. A hard copy is being sent to your office.

We would be grateful to have your reply to us on or before 9 December 2025, and grateful if you could also copy your reply to CGE/Mines, GEO, CEDD (fax no. 2714 0193). A nil return is required for record purposes.

Should you have any queries, please contact our [REDACTED] or me at [REDACTED]

Thank you.

Regards,

[REDACTED]

[REDACTED]

AECOM

[Attachment "B20e-01.pdf" deleted by Kiroa Kai Chun WONG (T2180482)]

Appendix 4.5 Calculation of Vehicular Emissions

Estimation of Vehicular Emission for the Study Area with EMFAC-HK model

Open road emission contributes to the cumulative air quality in the Study Area during the operation phase. As NO₂ and particulate matters are the key pollutants for the operation phase, the estimation shall also focus on vehicular emission in NO₂ and particulate matters namely RSP and FSP. EMFAC-HK v4.3 model and SAMPv2.1 are adopted to estimate the vehicular emission rates of NO_x and particulate matters including RSP and FSP. The input parameters and model assumptions made in EMFAC-HK model are summarised as follows:

Model Year

EMFAC-HK considers 45 years of model years for the estimation of vehicular emission. The model years start from 45 years preceding the year of interest to the year of interest as the final model year. The following table summarizes the starting and final model years of the assessment year implemented in EMFAC-HK.

Table 1 Starting and Final model years in EMFAC-HK

Scenario Year	Starting Model Year	Final Model Year
2028	1984	2028
2030	1986	2030
2033	1989	2033
2043	1999	2043
2048	2004	2048

Vehicle Emission Standard Implementation Programme and Technology fraction

The “2018 Licensed Vehicle by Age and Technology Group Fractions” provided in EPD’s website, are adopted in this assessment. Since the provided exhaust technology fractions are only up to Year 2018 at the time of the assessment, those after Year 2018 has been adopted by default in EMFAC-HK in accordance with EPD’s Guideline on Modelling Vehicle Emissions – Appendix III “Implementation Schedule of Vehicle Emission Standards in Hong Kong (Updated as in May 2020)” and Appendix IV “EMFAC-HK Technology Group Indexes (Released in January 2021)”.

Vehicle Population

As recommended in the EPD’s Guideline on Modelling Vehicle Emissions, default vehicle populations forecast in EMFAC-HK was used.

Vehicle Accrual

The default accrual rates in EMFAC-HK are estimated from the local mileage data adjusted to reflect the total VKT for each vehicle class. The default value was used.

Vehicle Kilometre Travel (VKT)

The “vehicle fleet” refers to all motor vehicles operating on roads within this assessment area. The modelled fleet was broken down into 18 vehicle classes based on the information in the Transport Monthly Digest and vehicle population provided by EPD.

Vehicle-kilometer-travelled (VKT) represents the total distance travelled on a weekday. The VKT is calculated by multiplying the number of vehicles, which based on the highest predicted hourly traffic flow, and the length of road travelled in the assessment area. The diurnal variation of VKT in the assessment area was provided by the traffic consultant, and the input in the model is by vehicle/fuel/hour.

Vehicle Speed

Vehicle speed on each road link at each hour was provided by the traffic consultant. All the vehicle classes on the same road link were assumed to have the same travelling speed, except medium goods vehicles, heavy goods vehicles, buses and public light buses.

In accordance with the Road Traffic Ordinance, for any road with design speed limit of 70 kph or above, the speed limit for medium goods vehicles, heavy goods vehicles and buses would be limited to not more than 70 kph. Thus, the speeds of medium goods vehicles, heavy goods vehicles and buses from the flow speed or 70 kph, whichever is lower, were adopted. For the public light buses, the speed limit should be limited to post speed of the carriageway or 80 kph, whichever is lower, were adopted.

Temperature and Humidity Profile

The WRF meteorological data are extracted from PATHv3.0 to estimate the vehicular emission factors. For the estimation of air quality impact of short-term NO₂ (i.e., hourly NO₂ and daily NO₂), short-term and long-term RSP (i.e., daily RSP and annual RSP) and short-term and long-term FSP (i.e., daily FSP and annual FSP), an approach of using daily profile of lowest temperature and relative humidity data in each hour for each month was adopted. For long-term NO₂ (i.e., annual NO₂), an approach of using daily profile of averaged temperature and relative humidity data in each hour for each month was adopted.

Trips

Start emissions of all 18 vehicles classes were assigned on local / rural roads with post speed of 50 km/hr with the number of trips for each vehicle class assumed directly proportional to VKT (Trips per VKT) and is estimated by the following formula:

$$\begin{aligned} & \text{Trip for local or rural roads within the study area} \\ &= \text{VKT for local or rural roads within the study area} \\ & \quad \times \frac{\text{Trip for local or rural roads within Hong Kong}}{\text{VKT for all roads within Hong Kong} \times \text{Proportion of roads with potential start emission}} \end{aligned}$$

Default trips and VKT values from EMFAC-HK are used in SAMP v2.1. The proportion of local and rural roads within Hong Kong refer to the latest Annual Traffic Census 2024 (3.74%). VKT within the study area was calculated by multiplying the number of vehicles by the distance travelled within the study area.

The highest NO_x (and the corresponding NO and NO₂), RSP and FSP start emission factors for each vehicle class among different soak time were adopted as a conservative approach.

Estimation of Composite Vehicular Emission Factor

Referring to the EPD's Guideline on Modelling Vehicle Emissions, "Emfac mode" was used for calculating emission factors in terms of grams of pollutants emitted per vehicle activity. It was applied for this Project, since it provides the emission factors according to the actual hourly travelling speeds of vehicles of each road.

Assuming that NO_x is comprised of NO and NO₂ only, the hourly emission of NO was calculated as the difference in emissions between NO_x and NO₂ extracted from EMFAC-HK for each vehicle type.

The hourly emissions of NO_x, RSP and FSP were divided by the number of vehicles and the distance travelled to obtain the emission factors in gram per miles per vehicle. In addition, the "zero emission vehicle scenario" of SAMPv2.1, which consider the projected population and proportion of zero emission vehicles (ZEV), such as electric vehicles, is enabled to provide more realistic estimation. The projections of ZEV for different vehicle classes, according to the *Summary of assumptions for projecting vehicle population & emissions* by EPD. The calculated 24-hour emission rates of 18 vehicle classes for each road are then adopted in the subsequent air dispersion modelling (i.e. AERMOD).

Vehicular Emission Burden by EMFAC-HK

Vehicular emission burden (Emission from Open Roads and Tunnels) for NO_x, RSP and FSP were calculated based on the traffic forecast, SAMPv2.1 and EMFAC-HK v4.3 model. The vehicular emission burden for Traffic Design Scenarios A and B summarized as below:

Table 2 Vehicular Emission Burden of Open Road Sources and Tunnels

Year	Vehicular Emission Burden (Tonne Per Year)					
	RSP		FSP		NO _x	
2028	2.60		2.39		62.82	
2030	2.11		1.94		49.07	
Traffic Scenario	A	B	A	B	A	B
2033	1.27	1.29	1.17	1.19	29.78	30.52
2038	0.68	0.70	0.62	0.64	18.54	19.17
2043	0.60	0.62	0.55	0.57	14.47	14.98

Remark:

[1] The annual lowest temperature and relative humidity are adopted to estimate the annual vehicular emission burden.

Tsing Yi North Underground Quarry

Summary of Open Road Segments

Road Name	Road ID	X coordinate of endpoint 1	Y coordinate of endpoint 1	X coordinate of endpoint 2	Y coordinate of endpoint 2	Grid (I,J)	Vehicle height	Release height	Zsinit	Width	Elevation
		(m)	(m)	(m)	(m)		(m)	(mAG)	(m)	(m)	(m)
Road 1	101	826033.66	823675.70	825802.35	823607.96	30,37	2.0	79.1	1.6	19.5	0.0
Road 1	102	826265.05	823744.87	826033.66	823675.70	31,37 30,37	2.0	75.8	1.6	19.5	0.0
Road 1	103	826443.60	823798.24	826265.05	823744.87	31,37	2.0	64.2	1.6	19.5	7.0
Road 1	104	826532.40	823828.20	826443.60	823798.24	31,37	2.0	62.0	1.6	24.0	8.0
Road 2	201	825941.95	823629.03	825814.33	823591.10	30,37	2.0	78.8	1.6	19.5	0.0
Road 2	202	826139.14	823687.81	825941.95	823629.03	30,37	2.0	77.2	1.6	19.5	0.0
Road 2	203	826376.20	823758.42	826139.14	823687.81	31,37 30,37	2.0	69.1	1.6	19.5	5.0
Road 2	204	826505.81	823797.10	826376.20	823758.42	31,37	2.0	64.4	1.6	19.5	6.0
Road 3	301	826594.96	823883.86	826528.39	823833.40	31,37	2.1	9.2	1.6	20.4	60.0
Road 4	401	826530.24	823821.55	826617.50	823846.41	31,37	1.9	9.5	1.5	15.4	60.0
Road 4	402	826617.50	823846.41	826711.75	823858.54	31,37	1.9	11.2	1.5	15.4	60.0
Road 4	403	826711.75	823858.54	826793.73	823839.77	31,37	1.9	12.6	1.5	21.4	60.0
Road 4	404	826793.73	823839.77	826831.32	823819.71	31,37	1.9	12.8	1.5	21.3	60.0
Road 5	501	826505.30	823799.75	826569.48	823818.43	31,37	1.9	36.2	1.5	16.2	33.0
Road 5	502	826569.48	823818.43	826644.07	823835.10	31,37	1.9	30.1	1.5	16.2	39.0
Road 6	601	826504.78	823794.44	826565.35	823802.71	31,37	2.1	36.4	1.7	15.1	33.0
Road 6	602	826565.35	823802.71	826681.44	823813.60	31,37	2.1	9.4	1.7	15.1	60.0
Road 6	603	826681.44	823813.60	826749.54	823833.71	31,37	2.1	16.2	1.7	15.6	60.0
Road 6	604	826749.54	823833.71	826802.51	823873.10	31,37	2.1	18.7	1.7	16.0	62.0
Road 6	605	826802.51	823873.10	826834.79	823938.19	31,37	2.1	17.4	1.7	17.6	63.0
Road 6	606	826834.79	823938.19	826838.22	823985.03	31,37	2.1	13.7	1.7	17.5	65.0
Road 6	607	826838.22	823985.03	826828.15	824034.87	31,37	2.1	3.7	1.7	17.2	73.0
Road 7	701	826614.35	823920.72	826591.05	823885.85	31,37	2.0	9.4	1.6	15.0	59.0
Road 7	702	826629.22	823977.85	826614.35	823920.72	31,37	2.0	5.8	1.6	15.0	60.0
Road 7	703	826622.87	824037.21	826629.22	823977.85	31,37	2.0	6.4	1.6	15.2	57.0
Road 7	704	826602.92	824088.38	826622.87	824037.21	31,37	2.0	2.9	1.6	15.2	57.0
Road 8	801	826627.41	824222.24	826654.67	824154.46	31,37	2.4	2.0	1.9	14.8	62.0
Road 8	802	826654.67	824154.46	826663.91	824104.73	31,37	2.4	2.0	1.9	14.8	63.9
Road 8	803	826663.91	824104.73	826665.01	824059.22	31,37	2.4	2.0	1.9	15.8	65.3
Road 8	804	826665.01	824059.22	826662.62	824018.69	31,37	2.4	9.3	1.9	16.0	60.0
Road 8	805	826662.62	824018.69	826634.44	823933.88	31,37	2.4	10.2	1.9	16.0	60.0
Road 8	806	826634.44	823933.88	826599.19	823883.08	31,37	2.4	8.6	1.9	16.0	60.0
Road 9	901	826548.08	824181.43	826579.77	824129.14	31,37	2.0	1.7	1.6	18.0	54.8
Road 9	902	826579.77	824129.14	826598.28	824083.73	31,37	2.0	1.7	1.6	19.6	56.0
Road 10	1001	826554.05	824184.08	826568.67	824166.14	31,37	2.6	2.2	2.0	11.5	54.8
Road 10	1002	826568.67	824166.14	826596.76	824127.25	31,37	2.6	2.2	2.0	11.5	55.6
Road 10	1003	826596.76	824127.25	826635.72	824051.82	31,37	2.6	2.2	2.0	12.3	58.2
Road 11	1101	826518.03	824227.74	826551.58	824182.76	31,37	2.1	2.4	1.7	19.0	52.1
Road 12	1201	826717.16	824587.80	826611.03	824541.02	31,38	3.7	3.2	2.9	9.0	14.0
Road 12	1202	826611.03	824541.02	826532.00	824528.77	31,38	3.7	3.2	2.9	9.0	20.0
Road 12	1203	826532.00	824528.77	826491.68	824508.44	31,38	3.7	3.2	2.9	9.0	32.0
Road 12	1204	826491.68	824508.44	826422.00	824486.51	31,38	3.7	3.2	2.9	9.0	35.0

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Tsing Yi North Underground Quarry

Summary of Open Road Segments

Road Name	Road ID	X coordinate of endpoint 1	Y coordinate of endpoint 1	X coordinate of endpoint 2	Y coordinate of endpoint 2	Grid (I,J)	Vehicle height	Release height	Zsinit	Width	Elevation
		(m)	(m)	(m)	(m)		(m)	(mAG)	(m)	(m)	(m)
Road 18	1803	827366.90	824580.90	827067.20	824580.70	31,38	2.0	15.7	1.6	14.8	28.0
Road 19	1901	827555.40	824571.40	827622.40	824570.10	32,38	2.1	11.8	1.7	14.8	25.0
Road 19	1902	827455.40	824571.30	827555.40	824571.40	32,38	2.1	12.8	1.7	14.8	25.0
Road 19	1903	827368.60	824570.90	827455.40	824571.30	32,38	2.1	13.8	1.7	14.8	25.0
Road 19	1904	827368.60	824570.90	827081.80	824570.90	31,38	2.1	15.8	1.7	14.8	25.0
Road 20	2001	827284.93	824641.91	827272.88	824660.59	32,38	2.6	2.2	2.1	12.0	0.0
Road 20	2002	827289.30	824618.10	827285.37	824641.46	32,38	2.6	2.2	2.1	12.0	0.0
Road 20	2003	827292.30	824604.10	827289.30	824618.10	32,38	2.6	2.2	2.1	12.0	0.0
Road 20	2004	827299.60	824586.10	827292.30	824604.10	32,38	2.6	2.2	2.1	12.0	0.0
Road 20	2005	827314.80	824563.90	827299.60	824586.10	32,38	2.6	2.2	2.1	12.0	0.0
Road 20	2006	827335.40	824546.70	827314.80	824563.90	32,38	2.6	2.2	2.1	12.0	0.0
Road 20	2007	827354.20	824536.90	827335.40	824546.70	32,38	2.6	2.2	2.1	12.0	0.0
Road 20	2008	827377.90	824531.60	827354.20	824536.90	32,38	2.6	2.2	2.1	12.0	0.0
Road 20	2009	827377.90	824531.60	827454.60	824530.90	32,38	2.6	2.2	2.1	12.0	0.0
Road 20	2010	827454.60	824530.90	827480.40	824531.60	32,38	2.6	2.2	2.1	12.0	0.0
Road 20	2011	827480.40	824531.60	827514.30	824536.60	32,38	2.6	2.2	2.1	12.0	0.0
Road 20	2012	827514.30	824536.60	827566.90	824551.50	32,38	2.6	2.2	2.1	12.0	0.0
Road 20	2013	827566.90	824551.50	827622.40	824561.60	32,38	2.6	2.2	2.1	12.0	0.0
Road 21	2101	827622.10	824564.90	827801.09	824570.96	32,38	2.2	1.8	1.7	20.5	0.0
Road 22	2201	827290.18	824666.10	827662.99	824661.55	32,38	2.7	2.3	2.1	11.0	0.0
Road 22	2202	827662.99	824661.55	827740.22	824655.12	32,38	2.7	2.3	2.1	11.0	0.0
Road 23	2301	827297.72	824661.89	827285.37	824641.46	32,38	2.8	2.4	2.2	11.0	0.0
Road 23	2302	827297.90	824661.97	827665.06	824659.27	32,38	2.8	2.4	2.2	11.0	0.0
Road 23	2303	827665.24	824659.33	827740.21	824652.83	32,38	2.8	2.4	2.2	11.0	0.0
Road 24	2401	827740.22	824655.12	827803.32	824649.85	32,38	2.1	1.8	1.7	11.0	0.0
Road 25	2501	827740.21	824652.83	827804.42	824648.08	32,38	2.7	2.3	2.1	11.0	0.0
Road 26	2601	827260.00	824661.80	827195.69	824661.15	31,38	2.8	2.4	2.2	11.0	0.0
Road 26	2602	827290.18	824666.10	827260.00	824661.80	32,38	2.8	2.4	2.2	11.0	0.0
Road 27	2701	827272.88	824660.59	827195.20	824657.97	31,38	2.8	2.4	2.2	11.0	0.0
Road 28	2801	826267.71	825014.04	826552.77	824439.88	31,38	2.1	68.7	1.7	21.1	0.0
Road 28	2802	826552.77	824439.88	826599.16	824344.40	31,38 31,37	2.1	1.8	1.7	21.1	66.9
Road 29	2901	826530.82	824430.04	826633.59	824224.56	31,38 31,37	2.2	1.9	1.8	24.4	63.6
Road 29	2902	826246.30	825007.68	826530.41	824430.93	31,38	2.2	68.8	1.8	21.1	0.0
Road 30	3001	826628.02	824369.74	826634.07	824325.22	31,37	2.2	1.9	1.7	16.0	61.4
Road 30	3002	826634.07	824325.22	826659.26	824251.79	31,37	2.2	1.9	1.7	15.5	62.4
Road 30	3003	826659.26	824251.79	826687.35	824198.29	31,37	2.2	1.9	1.7	13.2	63.2
Road 31	3101	826601.12	824344.73	826642.28	824270.51	31,37	2.3	2.0	1.8	15.1	63.0
Road 31	3102	826642.28	824270.51	826687.35	824198.29	31,37	2.3	2.0	1.8	14.1	63.2
Road 32	3201	826595.97	824344.40	826664.99	824197.97	31,37	2.1	1.8	1.6	19.7	62.6
Road 32	3202	826664.99	824197.97	826732.48	824071.02	31,37	2.1	1.8	1.6	20.8	62.6
Road 32	3203	826732.48	824071.02	826818.41	823944.07	31,37	2.1	1.8	1.6	20.9	62.8
Road 32	3204	826818.41	823944.07	826897.86	823817.01	31,37	2.1	1.8	1.6	21.5	51.6

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Tsing Yi North Underground Quarry

Summary of Open Road Segments

Road Name	Road ID	X coordinate of endpoint 1	Y coordinate of endpoint 1	X coordinate of endpoint 2	Y coordinate of endpoint 2	Grid (I,J)	Vehicle height	Release height	Szinit	Width	Elevation
		(m)	(m)	(m)	(m)		(m)	(mAG)	(m)	(m)	(m)
Road 12	1205	826422.00	824486.51	826368.45	824450.38	31,38	3.7	3.2	2.9	9.0	40.0
Road 12	1206	826368.45	824450.38	826309.42	824388.44	31,38 31,37	3.7	3.2	2.9	9.0	49.0
Road 12	1207	826309.42	824388.44	826303.34	824357.89	31,37	3.7	3.2	2.9	9.0	52.0
Road 12	1208	826303.34	824357.89	826363.29	824285.86	31,37	3.7	3.2	2.9	9.0	61.0
Road 12	1209	826363.29	824285.86	826420.84	824270.43	31,37	3.7	3.2	2.9	9.0	65.0
Road 12	1210	826420.84	824270.43	826518.22	824215.25	31,37	3.7	3.2	2.9	9.0	56.0
Road 13	1301	826716.52	824589.41	826609.74	824543.28	31,38	3.7	3.2	2.9	9.0	14.0
Road 13	1302	826609.74	824543.28	826531.68	824531.02	31,38	3.7	3.2	2.9	9.0	20.0
Road 13	1303	826531.68	824531.02	826491.68	824510.70	31,38	3.7	3.2	2.9	9.0	32.0
Road 13	1304	826491.68	824510.70	826421.68	824489.09	31,38	3.7	3.2	2.9	9.0	35.0
Road 13	1305	826421.68	824489.09	826367.81	824453.28	31,38	3.7	3.2	2.9	9.0	40.0
Road 13	1306	826367.81	824453.28	826308.45	824390.70	31,38 31,37	3.7	3.2	2.9	9.0	49.0
Road 13	1309	826361.03	824281.99	826420.39	824266.51	31,37	3.7	3.2	2.9	9.0	52.0
Road 13	1310	826420.39	824266.51	826520.39	824209.41	31,37	3.7	3.2	2.9	9.0	61.0
Road 13	1307	826308.45	824390.70	826301.03	824357.80	31,37	3.7	3.2	2.9	9.0	65.0
Road 13	1308	826301.03	824357.80	826361.03	824281.99	31,37	3.7	3.2	2.9	9.0	56.0
Road 14	1401	826485.09	824270.28	826516.48	824228.62	31,37	2.2	1.8	1.7	19.0	50.7
Road 14	1402	826466.28	824318.24	826485.09	824270.28	31,37	2.2	1.8	1.7	19.7	50.7
Road 14	1403	826464.65	824358.44	826466.28	824318.24	31,37	2.2	1.8	1.7	18.7	52.8
Road 14	1404	826471.27	824401.40	826464.65	824358.44	31,37	2.2	1.8	1.7	18.7	54.5
Road 14	1405	826506.02	824453.09	826471.27	824401.40	31,38 31,37	2.2	1.8	1.7	18.7	55.7
Road 15	1501	826506.02	824453.09	826552.07	824468.79	31,38	2.5	2.1	1.9	12.8	56.4
Road 15	1502	826552.07	824468.79	826587.29	824457.14	31,38	2.5	2.1	1.9	12.9	56.4
Road 15	1503	826587.29	824457.14	826608.28	824431.99	31,38	2.5	2.1	1.9	13.0	57.6
Road 15	1504	826608.28	824431.99	826628.02	824369.74	31,38 31,37	2.5	2.1	1.9	16.0	58.9
Road 16	1601	827067.20	824580.70	826981.13	824577.71	31,38	2.0	16.6	1.6	14.5	35.0
Road 16	1602	826981.13	824577.71	826889.76	824565.80	31,38	2.0	18.4	1.6	14.5	35.0
Road 16	1603	826889.76	824565.80	826623.88	824509.82	31,38	2.0	23.6	1.6	14.7	32.0
Road 16	1604	826623.88	824509.82	826575.88	824497.23	31,38	2.0	19.6	1.6	14.7	37.0
Road 16	1605	826575.88	824497.23	826537.55	824479.32	31,38	2.0	10.8	1.6	14.7	46.0
Road 16	1606	826537.55	824479.32	826506.02	824453.09	31,38	2.0	5.4	1.6	14.2	52.0
Road 17	1701	827081.80	824570.90	826951.56	824564.00	31,38	2.1	19.2	1.7	14.8	32.0
Road 17	1702	826951.56	824564.00	826881.00	824553.30	31,38	2.1	9.9	1.7	14.8	43.0
Road 17	1703	826881.00	824553.30	826811.46	824537.84	31,38	2.1	18.9	1.7	14.8	37.0
Road 17	1704	826811.46	824537.84	826759.13	824523.58	31,38	2.1	27.9	1.7	14.8	28.0
Road 17	1705	826759.13	824523.58	826715.04	824507.89	31,38	2.1	18.5	1.7	14.8	39.0
Road 17	1706	826715.04	824507.89	826677.01	824481.11	31,38	2.1	10.5	1.7	14.8	47.0
Road 17	1707	826677.01	824481.11	826649.28	824443.92	31,38	2.1	1.8	1.7	14.8	57.1
Road 17	1708	826649.28	824443.92	826635.05	824408.61	31,38 31,37	2.1	1.8	1.7	15.6	57.1
Road 17	1709	826635.05	824408.61	826628.02	824369.74	31,37	2.1	1.8	1.7	15.6	58.9
Road 18	1801	827460.90	824580.10	827800.53	824581.27	32,38	2.0	11.7	1.6	14.8	25.0
Road 18	1802	827366.90	824580.90	827460.90	824580.10	32,38	2.0	31.7	1.6	14.8	22.0

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Tsing Yi North Underground Quarry

Summary of Open Road Segments

Road Name	Road ID	X coordinate of endpoint 1	Y coordinate of endpoint 1	X coordinate of endpoint 2	Y coordinate of endpoint 2	Grid (I,J)	Vehicle height	Release height	Zsinit	Width	Elevation
		(m)	(m)	(m)	(m)		(m)	(mAG)	(m)	(m)	(m)
Road 32	3205	826897.86	823817.01	826978.49	823613.32	31,37	2.1	1.8	1.6	18.6	60.8
Road 32	3206	826978.49	823613.32	827007.46	823513.05	31,37	2.1	1.8	1.6	16.9	60.0
Road 33	3301	826687.35	824198.29	826731.09	824145.99	31,37	2.2	1.9	1.8	18.9	66.5
Road 33	3302	826731.09	824145.99	826800.99	824079.84	31,37	2.2	1.9	1.8	19.0	70.2
Road 33	3303	826800.99	824079.84	826830.42	824033.98	31,37	2.2	1.9	1.8	19.5	73.9
Road 34	3401	826634.52	824225.12	826759.93	823970.35	31,37	2.2	1.9	1.8	25.6	62.4
Road 35	3501	826752.92	823968.47	826761.04	823938.01	31,37	2.6	2.2	2.1	12.3	61.0
Road 35	3502	826761.04	823938.01	826758.24	823914.76	31,37	2.6	2.2	2.1	12.3	61.7
Road 36	3601	826756.59	823915.09	826747.11	823902.92	31,37	2.6	2.2	2.0	11.6	61.7
Road 36	3602	826747.11	823902.92	826737.32	823893.40	31,37	2.6	2.2	2.0	11.6	61.7
Road 36	3603	826737.32	823893.40	826708.73	823877.06	31,37	2.6	2.2	2.0	11.0	60.9
Road 37	3701	826717.25	823881.93	826696.26	823930.74	31,37	2.1	1.8	1.7	12.0	60.1
Road 38	3801	826635.67	824051.91	826708.73	823877.06	31,37	2.6	2.2	2.0	12.0	60.1
Road 39	3901	826759.79	823915.09	826771.52	823890.28	31,37	2.5	2.2	2.0	13.8	62.3
Road 39	3902	826771.52	823890.28	826786.34	823871.45	31,37	2.5	2.2	2.0	13.8	62.3
Road 39	3903	826786.34	823871.45	826798.99	823848.63	31,37	2.5	2.2	2.0	11.5	62.3
Road 39	3904	826798.99	823848.63	826814.32	823816.62	31,37	2.5	2.2	2.0	11.5	70.1
Road 39	3905	826814.32	823816.62	826852.39	823745.17	31,37	2.5	2.2	2.0	11.7	61.1
Road 40	4001	826792.79	823805.44	826736.26	823845.01	31,37	2.6	2.2	2.0	11.5	59.9
Road 40	4002	826736.26	823845.01	826708.73	823877.06	31,37	2.6	2.2	2.0	13.2	60.6
Road 41	4101	826831.14	824036.53	826917.07	823900.49	31,37	2.5	2.1	2.0	16.2	75.4
Road 42	4201	826917.07	823900.49	826945.65	823815.32	31,37	2.5	2.2	2.0	12.2	73.9
Road 42	4202	826945.65	823815.32	826963.43	823753.52	31,37	2.5	2.2	2.0	12.2	76.3
Road 42	4203	826963.43	823753.52	826971.42	823680.76	31,37	2.5	11.4	2.0	12.8	67.0
Road 42	4204	826971.42	823680.76	826961.82	823648.32	31,37	2.5	16.5	2.0	13.0	62.0
Road 42	4205	826961.82	823648.32	826931.01	823623.87	31,37	2.5	16.1	2.0	12.4	61.0
Road 42	4206	826931.01	823623.87	826889.40	823624.89	31,37	2.5	13.9	2.0	13.9	60.0
Road 42	4207	826889.40	823624.89	826849.04	823658.57	31,37	2.5	9.7	2.0	13.7	60.0
Road 42	4208	826849.04	823658.57	826821.87	823701.89	31,37	2.5	2.2	2.0	13.7	65.6
Road 42	4209	826821.87	823701.89	826809.95	823738.00	31,37	2.5	2.2	2.0	12.3	63.3
Road 42	4210	826809.95	823738.00	826806.98	823764.46	31,37	2.5	2.2	2.0	11.9	59.8
Road 42	4211	826806.98	823764.46	826792.79	823805.44	31,37	2.5	2.2	2.0	11.9	59.8
Road 43	4301	826917.07	823900.49	826945.87	823846.21	31,37	2.3	1.9	1.8	12.2	74.7
Road 43	4302	826945.87	823846.21	826964.90	823794.82	31,37	2.3	1.9	1.8	12.1	73.9
Road 43	4303	826964.90	823794.82	826981.86	823734.02	31,37	2.3	1.9	1.8	12.1	69.5
Road 43	4304	826981.86	823734.02	826990.73	823679.63	31,37	2.3	1.9	1.8	12.1	67.3
Road 44	4401	826987.81	823683.13	827005.45	823568.56	31,37	2.0	1.7	1.6	14.8	61.6
Road 45	4501	826831.84	823824.58	826898.77	823790.10	31,37	2.0	12.0	1.6	13.8	62.0
Road 45	4502	826898.77	823790.10	826946.75	823755.85	31,37	2.0	9.1	1.6	17.2	63.0
Road 45	4503	826946.75	823755.85	826986.98	823680.55	31,37	2.0	6.5	1.6	16.0	64.0
Road 46	4601	826830.90	823816.27	826872.91	823782.14	31,37	1.9	11.2	1.5	16.2	62.0
Road 46	4602	826872.91	823782.14	826900.70	823749.90	31,37	1.9	10.4	1.5	16.0	62.0

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Appendix 4.5 Calculation of Vehicular Emission

Tsing Yi North Underground Quarry
Summary of Open Road Segments

Road Name	Road ID	X coordinate of endpoint 1	Y coordinate of endpoint 1	X coordinate of endpoint 2	Y coordinate of endpoint 2	Grid (I,J)	Vehicle height	Release height	Szinit	Width	Elevation
		(m)	(m)	(m)	(m)		(m)	(mAG)	(m)	(m)	(m)
Road 46	4603	826900.70	823749.90	826930.85	823697.61	31,37	1.9	11.4	1.5	16.0	61.0
Road 46	4604	826930.85	823697.61	826966.23	823603.91	31,37	1.9	1.6	1.5	15.9	70.0
Road 46	4605	826966.23	823603.91	826985.76	823541.78	31,37	1.9	1.6	1.5	16.0	63.8
Road 47	4701	826643.55	823836.76	826675.07	823841.84	31,37	1.8	9.5	1.4	13.4	60.0
Road 47	4702	826675.07	823841.84	826706.59	823842.70	31,37	1.8	11.1	1.4	13.4	60.0
Road 47	4703	826706.59	823842.70	826769.83	823827.72	31,37	1.8	9.1	1.4	16.0	62.0
Road 47	4704	826769.83	823827.72	826817.82	823804.88	31,37	1.8	10.6	1.4	21.7	61.0
Road 47	4705	826817.82	823804.88	826863.94	823772.73	31,37	1.8	8.6	1.4	21.3	63.0
Road 47	4706	826863.94	823772.73	826920.24	823694.85	31,37	1.8	9.2	1.4	21.2	62.0
Road 47	4707	826934.12	823654.09	826970.01	823548.54	31,37	1.8	1.5	1.4	15.5	65.1
Road 47	4708	826920.24	823694.85	826934.12	823654.09	31,37	1.8	1.5	1.4	15.5	67.6
Road 48	4801	826856.82	823748.60	826913.93	823645.47	31,37	2.2	1.9	1.7	21.4	61.1
Road 48	4802	826913.93	823645.47	826949.63	823567.69	31,37	2.2	1.9	1.7	19.5	60.2
Road 49	4901	826643.65	823833.33	826674.04	823835.42	31,37	2.1	10.0	1.7	13.5	60.0
Road 49	4902	826674.04	823835.42	826706.18	823835.73	31,37	2.1	11.4	1.7	13.5	60.0
Road 49	4903	826706.18	823835.73	826735.22	823826.96	31,37	2.1	11.4	1.7	16.6	60.0
Road 49	4904	826735.22	823826.96	826769.51	823812.43	31,37	2.1	10.9	1.7	20.3	60.0
Road 49	4905	826769.51	823812.43	826812.44	823772.43	31,37	2.1	10.9	1.7	16.4	60.0
Road 49	4906	826812.44	823772.43	826868.43	823700.75	31,37	2.1	10.0	1.7	17.3	60.0
Road 49	4907	826868.43	823700.75	826907.12	823632.63	31,37	2.1	4.1	1.7	17.3	61.0
Road 49	4908	826907.12	823632.63	826937.21	823563.79	31,37	2.1	1.8	1.7	13.5	61.4
Road 50	5001	826792.79	823805.44	826813.37	823782.84	31,37	2.7	2.3	2.2	13.3	59.9
Road 50	5002	826813.37	823782.84	826832.51	823740.75	31,37	2.7	2.3	2.2	14.3	62.0
Road 50	5003	826832.51	823740.75	826845.67	823705.86	31,37	2.7	2.3	2.2	14.3	59.4
Road 50	5004	826845.67	823705.86	826886.94	823642.83	31,37	2.7	2.3	2.2	14.3	60.6
Road 50	5005	826886.94	823642.83	826917.70	823582.24	31,37	2.7	2.3	2.2	13.7	59.5
Road 50	5006	826917.70	823582.24	826929.32	823559.20	31,37	2.7	2.3	2.2	13.7	59.9
Road 51	5101	826761.99	823972.01	826821.24	823849.39	31,37	2.2	1.9	1.7	21.3	61.8
Road 51	5102	826821.24	823849.39	826860.94	823750.15	31,37	2.2	1.9	1.7	21.3	61.1
Road 52	5201	827740.21	824652.83	827741.85	824624.28	32,38	2.8	2.4	2.2	15.0	0.0
Road 52	5202	827741.85	824624.28	827762.18	824605.33	32,38	2.8	2.4	2.2	15.0	0.0
Road 52	5203	827762.18	824605.33	827800.27	824599.62	32,38	2.8	2.4	2.2	15.0	0.0
Road 53	5301	826720.71	823691.10	826550.03	823689.10	31,37	2.4	2.0	1.9	16.0	6.3
Road 53	5302	826737.88	823629.52	826720.71	823691.10	31,37	2.4	2.0	1.9	16.0	6.3
Road 53	5303	826763.71	823584.54	826737.88	823629.52	31,37	2.4	2.0	1.9	16.0	5.6
Road 53	5304	826759.47	823557.42	826763.71	823584.54	31,37	2.4	2.0	1.9	14.5	5.6
Road 53	5305	826823.90	823477.09	826759.47	823557.42	31,37	2.4	2.0	1.9	14.3	5.4
Road 54	5401	826716.84	823687.23	826549.39	823685.55	31,37	2.5	2.1	2.0	16.0	6.3
Road 54	5402	826733.69	823629.20	826717.49	823686.26	31,37	2.5	2.1	2.0	16.0	6.3
Road 54	5403	826760.32	823584.69	826733.69	823629.20	31,37	2.5	2.1	2.0	16.0	5.6
Road 54	5404	826755.63	823557.29	826760.32	823584.69	31,37	2.5	2.1	2.0	14.5	5.6
Road 54	5405	826820.07	823476.97	826755.63	823557.29	31,37	2.5	2.1	2.0	14.3	5.4

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Appendix 4.5 Calculation of Vehicular Emission

Tsing Yi North Underground Quarry
Summary of Open Road Segments

Road Name	Road ID	X coordinate of endpoint 1	Y coordinate of endpoint 1	X coordinate of endpoint 2	Y coordinate of endpoint 2	Grid (I,J)	Vehicle height	Release height	Szinit	Width	Elevation
		(m)	(m)	(m)	(m)		(m)	(mAG)	(m)	(m)	(m)
Road 101	10101	826296.46	823414.42	826088.10	823327.46	30,36 31,36 31,37	0.0	79.6	0.0	21.3	0.0
Road 101	10102	826424.43	823467.27	826296.46	823414.42	31,37	0.0	77.6	0.0	21.3	0.0
Road 101	10103	826565.18	823525.54	826424.43	823467.27	31,37	0.0	75.6	0.0	21.3	0.0
Road 102	10201	826313.14	823400.01	826100.48	823311.80	30,36	0.0	79.6	0.0	21.3	0.0
Road 102	10202	826430.60	823448.55	826313.14	823400.01	31,37	0.0	77.6	0.0	21.3	0.0
Road 102	10203	826547.96	823497.09	826430.60	823448.55	31,37	0.0	75.6	0.0	21.3	0.0
Road 103	10301	826564.66	823522.55	826647.70	823546.41	31,37	0.0	75.0	0.0	16.4	0.0
Road 103	10302	826647.70	823546.41	826681.80	823551.82	31,37	0.0	73.5	0.0	16.4	1.0
Road 103	10303	826681.80	823551.82	826717.54	823551.13	31,37	0.0	69.0	0.0	16.4	5.0
Road 103	10304	826717.54	823551.13	826759.25	823548.34	31,37	0.0	68.8	0.0	19.6	5.0
Road 103	10305	826759.25	823548.34	826799.83	823538.90	31,37	0.0	67.2	0.0	19.5	6.0
Road 103	10306	826799.83	823538.90	826853.28	823517.38	31,37	0.0	67.8	0.0	19.6	5.0
Road 103	10307	826853.28	823517.38	826910.94	823479.81	31,37	0.0	32.2	0.0	19.6	40.0
Road 104	10401	826547.13	823500.74	826633.27	823529.70	31,37	0.0	75.2	0.0	14.1	0.0
Road 104	10402	826633.27	823529.70	826695.38	823536.31	31,37	0.0	72.5	0.0	14.1	2.0
Road 104	10403	826695.38	823536.31	826761.82	823528.96	31,37	0.0	68.8	0.0	14.3	5.0
Road 104	10404	826761.82	823528.96	826833.70	823506.77	31,37	0.0	67.0	0.0	17.5	6.0
Road 104	10405	826833.70	823506.77	826891.98	823470.52	31,37	0.0	65.4	0.0	17.8	7.0
Road 105	10501	826593.85	824085.39	826601.76	824042.98	31,37	0.0	3.8	0.0	13.4	58.0
Road 105	10502	826601.76	824042.98	826592.26	824004.67	31,37	0.0	17.4	0.0	13.4	47.0
Road 105	10503	826592.26	824004.67	826558.96	823957.30	31,37	0.0	30.2	0.0	14.4	34.0
Road 105	10504	826558.96	823957.30	826509.17	823894.43	31,37	0.0	30.7	0.0	14.3	30.0
Road 105	10505	826509.17	823894.43	826488.02	823849.48	31,37	0.0	36.6	0.0	14.2	18.0
Road 105	10506	826488.02	823849.48	826490.26	823804.19	31,37	0.0	28.3	0.0	16.3	23.0
Road 105	10507	826490.26	823804.19	826516.71	823763.54	31,37	0.0	26.5	0.0	16.5	24.0
Road 105	10508	826516.71	823763.54	826562.02	823741.25	31,37	0.0	21.6	0.0	16.3	31.0
Road 105	10509	826562.02	823741.25	826637.71	823726.03	31,37	0.0	13.5	0.0	16.5	43.0
Road 105	10510	826637.71	823726.03	826670.25	823703.31	31,37	0.0	25.5	0.0	14.2	35.0
Road 105	10511	826670.25	823703.31	826689.90	823671.52	31,37	0.0	57.5	0.0	14.4	7.0
Road 105	10512	826689.90	823671.52	826692.97	823634.97	31,37	0.0	62.5	0.0	14.4	6.0
Road 105	10513	826692.97	823634.97	826685.12	823602.53	31,37	0.0	64.1	0.0	14.4	6.0
Road 105	10514	826685.12	823602.53	826661.62	823573.98	31,37	0.0	67.5	0.0	14.4	6.0
Road 105	10515	826661.62	823573.98	826624.53	823552.74	31,37	0.0	72.8	0.0	14.4	2.0
Road 105	10516	826624.53	823552.74	826563.12	823527.97	31,37	0.0	73.7	0.0	13.4	2.0
Road 106	10601	826547.34	823493.88	826588.03	823507.91	31,37	0.0	75.2	0.0	13.4	0.0
Road 106	10602	826588.03	823507.91	826639.65	823519.07	31,37	0.0	74.4	0.0	13.4	0.0
Road 106	10603	826639.65	823519.07	826696.10	823523.02	31,37	0.0	70.3	0.0	13.2	3.0
Road 106	10604	826696.10	823523.02	826739.15	823516.90	31,37	0.0	66.2	0.0	13.2	5.0
Road 106	10605	826739.15	823516.90	826791.57	823502.81	31,37	0.0	63.2	0.0	14.3	6.0
Road 106	10606	826791.57	823502.81	826834.72	823484.29	31,37	0.0	61.6	0.0	14.3	6.0
Road 106	10607	826834.72	823484.29	826891.25	823446.27	31,37	0.0	57.5	0.0	14.3	7.0
Road 106	106 2	826639.65	823519.07	826696.10	823523.02	31,37	0.0	70.3	0.0	13.2	3.0

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Traffic Data / Modeling Parameters For AERMOD (Year 2028)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Medium Goods Vehicles >15	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles >3.5t	07 - Heavy Goods Vehicles >4t	08 - Public Local	09 - Private <+3.5t	10 - Private >+3.5t	11 - Non-franchised Bus <4t	12 - Non-franchised Bus 4-15t	13 - Non-franchised Bus >15t	14 - Franchise 8 Bus Single Deck	15 - Franchise 8 Bus Double Deck	16 - Motorcyclist	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total	
Road 3	3	70	70.0	N	0000-0100	253	34.3%	24.4%	0.0%	3.2%	1.1%	1.0%	2.0%	0.0%	0.0%	0.2%	0.5%	0.3%	0.8%	0.1%	8.1%	2.7%	1.3%	0.0%	100.0%	
Road 3	3	70	70.0	N	0100-0200	165	52.2%	23.8%	0.0%	3.2%	1.1%	1.0%	2.0%	0.0%	0.0%	0.2%	0.5%	0.3%	0.8%	0.1%	8.1%	2.7%	1.3%	0.0%	100.0%	
Road 3	3	70	70.0	N	0200-0300	121	52.1%	23.2%	0.0%	3.8%	1.4%	1.2%	2.3%	0.0%	0.0%	0.3%	0.7%	0.5%	1.0%	0.1%	8.0%	3.3%	2.2%	0.0%	100.0%	
Road 3	3	70	70.0	N	0300-0400	96	51.0%	22.0%	0.0%	4.1%	1.8%	1.3%	2.5%	0.0%	0.1%	0.4%	0.7%	0.5%	1.1%	0.1%	7.9%	3.6%	2.6%	0.0%	100.0%	
Road 3	3	70	70.0	N	0400-0500	105	42.0%	22.4%	0.0%	4.4%	1.6%	1.4%	2.7%	0.0%	0.1%	0.5%	0.8%	0.6%	1.3%	0.7%	7.9%	3.6%	2.5%	0.0%	100.0%	
Road 3	3	70	70.0	N	0500-0600	180	49.6%	21.8%	0.0%	4.8%	1.7%	1.8%	3.0%	0.0%	0.1%	0.5%	0.8%	0.6%	1.4%	0.1%	7.9%	3.2%	1.9%	0.0%	100.0%	
Road 3	3	70	70.0	N	0600-0700	383	49.0%	21.4%	0.1%	5.1%	1.8%	1.6%	3.2%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.1%	7.9%	4.6%	3.3%	0.0%	100.0%	
Road 3	3	70	70.0	N	0700-0800	777	47.8%	20.0%	0.1%	5.5%	2.0%	1.7%	3.4%	0.0%	0.1%	0.7%	1.1%	0.8%	1.7%	0.1%	7.8%	4.9%	3.8%	0.0%	100.0%	
Road 3	3	70	70.0	N	0800-0900	893	53.7%	17.2%	0.0%	5.3%	1.7%	2.0%	3.1%	0.0%	0.1%	0.7%	1.1%	0.7%	1.7%	0.1%	7.8%	4.9%	3.8%	0.0%	100.0%	
Road 3	3	70	70.0	N	0900-1000	733	49.0%	17.9%	0.1%	8.4%	3.0%	2.3%	4.5%	0.0%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	7.2%	1.9%	2.2%	0.0%	100.0%	
Road 3	3	70	70.0	N	1000-1100	633	46.6%	18.1%	0.1%	9.1%	3.3%	2.9%	5.7%	0.0%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	7.2%	1.4%	2.6%	0.0%	100.0%	
Road 3	3	70	70.0	N	1100-1200	603	46.1%	18.0%	0.1%	9.0%	3.3%	2.8%	5.5%	0.0%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	7.4%	1.2%	2.6%	0.0%	100.0%	
Road 3	3	69.8	N	1200-1300	838	42.3%	16.2%	0.1%	10.9%	3.9%	3.9%	7.7%	0.0%	0.1%	0.7%	0.7%	0.5%	1.1%	0.0%	7.8%	1.2%	2.9%	0.0%	100.0%		
Road 3	3	69.4	N	1300-1400	858	40.6%	15.6%	0.1%	12.9%	4.6%	4.0%	7.9%	0.0%	0.1%	0.6%	0.6%	0.4%	0.9%	0.0%	7.4%	1.2%	2.9%	0.0%	100.0%		
Road 3	3	68.5	N	1400-1500	912	40.6%	15.5%	0.0%	13.2%	4.6%	4.0%	7.9%	0.0%	0.1%	0.6%	0.6%	0.4%	0.9%	0.0%	7.4%	1.2%	2.9%	0.0%	100.0%		
Road 3	3	68.2	N	1500-1600	932	40.6%	16.3%	0.1%	13.3%	4.8%	3.4%	6.6%	0.0%	0.1%	0.7%	0.8%	0.6%	1.3%	0.1%	7.3%	1.5%	2.5%	0.0%	100.0%		
Road 3	3	67.1	N	1600-1700	992	43.2%	14.9%	0.1%	10.5%	3.8%	3.3%	6.5%	0.0%	0.1%	1.0%	1.3%	0.9%	1.9%	0.0%	8.0%	2.0%	2.4%	0.0%	100.0%		
Road 3	3	65.8	N	1700-1800	1117	48.1%	13.1%	0.1%	12.1%	4.1%	1.2%	2.1%	0.0%	0.1%	0.8%	0.8%	0.3%	1.2%	0.0%	8.2%	1.5%	2.1%	0.0%	100.0%		
Road 3	3	65.1	N	1800-1900	1312	58.6%	13.8%	0.1%	5.9%	2.1%	1.2%	2.4%	0.0%	0.0%	0.1%	1.0%	0.7%	1.6%	0.8%	8.4%	2.8%	1.2%	0.0%	100.0%		
Road 3	3	69.3	N	1900-2000	964	57.3%	17.9%	0.0%	4.5%	1.6%	1.1%	2.1%	0.0%	0.0%	0.1%	0.9%	0.6%	1.3%	0.0%	8.6%	2.1%	0.7%	0.0%	100.0%		
Road 3	3	70.0	N	2000-2100	573	52.6%	22.2%	0.0%	4.7%	1.7%	1.0%	2.1%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	10.1%	2.1%	0.8%	0.0%	100.0%		
Road 3	3	70.0	N	2100-2200	745	54.1%	22.4%	0.1%	4.0%	1.2%	1.1%	2.2%	0.0%	0.0%	0.1%	0.3%	0.8%	0.3%	0.0%	9.2%	0.5%	0.8%	0.0%	100.0%		
Road 3	3	70	70.0	N	2200-2300	727	53.5%	24.2%	0.0%	3.7%	1.3%	1.2%	2.3%	0.0%	0.0%	0.1%	0.3%	0.8%	0.1%	9.6%	2.1%	0.9%	0.0%	100.0%		
Road 3	3	70	70.0	N	2300-0000	545	52.4%	23.6%	0.0%	4.2%	1.5%	1.3%	2.6%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.1%	9.5%	2.3%	1.0%	0.0%	100.0%	
Road 4	4	80.0	80.0	N	0000-0100	526	50.0%	25.0%	0.0%	4.2%	1.2%	1.0%	2.0%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.1%	3.1%	0.2%	0.0%	0.0%	100.0%	
Road 4	4	80.0	80.0	N	0100-0200	342	57.1%	25.0%	0.0%	3.5%	1.3%	1.1%	2.2%	0.0%	0.0%	0.3%	0.6%	0.9%	0.0%	3.1%	0.3%	0.2%	0.0%	100.0%		
Road 4	4	80.0	80.0	N	0200-0300	249	56.1%	25.0%	0.0%	3.9%	1.4%	1.2%	2.4%	0.0%	0.0%	0.4%	0.7%	0.5%	1.1%	0.0%	3.1%	0.3%	0.6%	0.0%	100.0%	
Road 4	4	80.0	80.0	N	0300-0400	197	55.0%	24.2%	0.0%	4.0%	1.5%	1.3%	2.5%	0.0%	0.0%	0.4%	0.6%	0.8%	0.2%	3.1%	0.2%	0.6%	0.0%	100.0%		
Road 4	4	80.0	80.0	N	0400-0500	216	54.2%	23.9%	0.0%	4.5%	1.6%	1.4%	2.8%	0.0%	0.1%	0.5%	0.9%	0.6%	1.4%	0.3%	3.1%	4.2%	0.7%	0.0%	100.0%	
Road 4	4	80.0	80.0	N	0500-0600	373	53.2%	23.4%	0.1%	4.9%	1.7%	1.5%	3.0%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	3.0%	4.5%	0.8%	0.0%	100.0%	
Road 4	4	80.0	80.0	N	0600-0700	799	51.2%	22.9%	0.1%	5.2%	1.8%	1.6%	3.2%	0.0%	0.1%	0.7%	1.1%	0.8%	1.7%	0.1%	3.0%	4.9%	0.9%	0.0%	100.0%	
Road 4	4	80.0	80.0	N	0700-0800	1613	51.2%	22.3%	0.1%	5.6%	2.0%	1.7%	3.4%	0.0%	0.1%	0.8%	1.2%	0.8%	1.8%	0.0%	3.0%	5.2%	0.9%	0.0%	100.0%	
Road 4	4	80.0	80.0	N	0800-0900	1867	57.1%	18.3%	0.1%	6.0%	2.2%	1.7%	3.3%	0.0%	0.1%	0.8%	1.1%	0.8%	1.7%	0.0%	2.7%	3.3%	0.9%	0.0%	100.0%	
Road 4	4	80.0	80.0	N	0900-1000	1522	52.7%	19.1%	0.1%	6.6%	3.1%	2.3%	4.6%	0.0%	0.1%	0.5%	0.9%	0.6%	1.4%	0.0%	2.8%	2.0%	1.2%	0.0%	100.0%	
Road 4	4	80.0	80.0	N	1000-1100	1311	50.0%	17.3%	0.1%	6.0%	2.3%	2.0%	3.8%	0.0%	0.1%	0.8%	1.1%	0.8%	1.3%	0.0%	2.8%	2.0%	1.2%	0.0%	100.0%	
Road 4	4	80.0	80.0	N	1100-1200	1242	49.9%	20.6%	0.1%	9.2%	3.3%	2.9%	5.7%	0.0%	0.1%	0.9%	0.5%	0.3%	0.8%	0.0%	2.8%	1.4%	1.5%	0.0%	100.0%	
Road 4	4	80.0	80.0	N	1200-1300	1812	46.7%	18.0%	0.1%	10.5%	3.8%	3.8%	7.4%	0.0%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	2.9%	1.4%	1.9%	0.0%	100.0%	
Road 4	4	80.0	80.0	N	1300-1400	1871	75.9%	17.9%	0.1%	9.5%	3.2%	4.4%	7.4%	0.0%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	2.7%	3.9%	1.4%	0.0%	100.0%	
Road 4	4	80	78.7	N	1400-1500	1997	45.2%	18.3%	0.1%	11.1%	4.0%	3.8%	7.4%	0.0%	0.1%	0.8%	0.9%	0.6%	1.4%	0.0%	2.7%	1.7%	1.9%	0.0%	100.0%	
Road 4	4	80	78.4	N	1500-1600	2042	44.9%	18.0%	0.1%	12.8%	4.6%	3.3%	6.4%	0.0%	0.1%	0.8%	0.9%	0.6%	1.4%	0.0%	2.6%	1.6%	1.7%	0.0%	100.0%	
Road 4	4	80	77.2	N	1600-1700	2175	47.2%	16.5%	0.1%	12.6%	4.7%	3.3%	6.4%	0.0%	0.1%	0.8%	0.9%	0.6%	1.2%	0.0%	2.6%	1.2%	1.2%	0.0%	100.0%	
Road 4	4	80	75.7	N	1700-1800	2468	52.7%	16.5%	0.1%	9.0%	3.2%	2.0%	4.0%	0.0%	0.1%	0.8%	0.9%	0.6%	1.4%	0.0%	3.0%	4.5%	1.1%	0.0%	100.0%	
Road 4	4	80	74.5	N	1800-1900	2705	63.6%	14.4%	0.1%	5.6%	2.0%	1.2%	2.3%	0.0%	0.0%	0.1%	1.1%	0.8%	1.7%	0.0%	3.0%	3.0%	0.6%	0.0%	100.0%	
Road 4	4	80	74.8	N	1900-2000	2156	57.8%	14.2%	0.1%	4.2%	1.5%	1.0%	2.0%	0.0%	0.0%	0.1%	0.4%	0.3%	0.4%	0.0%	3.4%	3.3%	0.3%	0.0%	100.0%	
Road 4	4	80	74.0	N	2000-2100	1703	57.3%	24.9%	0.4%	4.5%	1.6%	1.0%	1.9%	0.0%	0.0%	0.1%	0.8%	0.6%	1.2%	0.0%	3.6%	2.3%	0.5%	0.0%	100.0%	
Road 4	4	80	80.0	N	2100-2200	1668	58.6%	24.2%	0.0%	4.6%	1.6%	1.1%	2.1%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.3%	3.2%	2.7%	0.8%	0.0%	100.0%	
Road 4	4	80	80.0	N	2200-2300	1617	58.6%	31.5%	0.0%	5.8%	1.6%	1.2%	2.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.2%	3.4%	2.6%	0.8%	0.0%	100.0%	
Road 4	4	80	80.0	N	2300-0000	1113	57.0%	25.7%	0.0%	3.9%	1.4%	1.3%	2.5%	0.0%	0.0%	0.1%	0.4%	0.3%	0.7%	0.4%	3.4%	2.5%	0.6%	0.0%	100.0%	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Traffic Data / Modeling Parameters For AERMOD (Year 2028)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Medium Goods Vehicles >15	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles >3.5t	07 - Medium Goods Vehicles >4t	08 - Public Local	09 - Private <=3.5t	10 - Private >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus >4t	13 - Non-franchised Bus >4t	14 - Franchise 8 Bus Single Deck	15 - Franchise 8 Bus Double Deck	16 - Motorcyclist	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total	
Road 7	7	70	70.0	N	0000-0100	219	55.9%	25.1%	0.0%	3.0%	1.1%	0.0%	1.9%	0.0%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	6.0%	2.8%	1.3%	100.0%		
Road 7	7	70	70.0	N	0100-0200	143	54.0%	24.5%	0.0%	3.0%	1.2%	0.0%	1.2%	0.0%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	5.9%	2.7%	1.1%	100.0%		
Road 7	7	70	70.0	N	0200-0300	105	53.6%	23.9%	0.0%	3.6%	1.3%	1.1%	2.2%	0.0%	0.0%	0.3%	0.7%	0.5%	1.0%	0.0%	5.9%	3.4%	2.4%	100.0%		
Road 7	7	70	70.0	N	0300-0400	83	52.7%	23.3%	0.0%	3.9%	1.4%	1.2%	2.4%	0.0%	0.1%	0.4%	0.8%	0.5%	1.2%	0.0%	5.8%	3.7%	2.9%	100.0%		
Road 7	7	70	70.0	N	0400-0500	91	51.7%	22.8%	0.0%	4.2%	1.5%	1.3%	2.6%	0.0%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	5.8%	4.0%	2.7%	100.0%		
Road 7	7	70	70.0	N	0500-0600	156	51.2%	22.6%	0.0%	4.6%	1.6%	1.4%	2.8%	0.0%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	5.8%	4.0%	2.7%	100.0%		
Road 7	7	70	70.0	N	0600-0700	331	50.6%	22.1%	0.1%	4.9%	1.8%	1.5%	3.0%	0.0%	0.1%	0.6%	1.0%	0.7%	1.6%	0.0%	5.8%	4.7%	1.4%	100.0%		
Road 7	7	70	70.0	N	0700-0800	671	49.4%	21.5%	0.1%	5.2%	1.9%	1.6%	3.2%	0.0%	0.1%	0.7%	1.1%	0.8%	1.7%	0.0%	5.7%	5.0%	1.9%	100.0%		
Road 7	7	70	70.0	N	0800-0900	773	48.7%	20.7%	0.1%	5.5%	1.7%	1.7%	3.1%	0.0%	0.1%	0.7%	1.1%	0.7%	1.8%	0.0%	5.7%	5.2%	2.1%	100.0%		
Road 7	7	70	70.0	N	0900-1000	631	49.0%	18.5%	0.1%	8.1%	2.9%	2.2%	4.3%	0.0%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	5.3%	5.0%	2.3%	100.0%		
Road 7	7	70	70.0	N	1000-1100	544	48.4%	18.9%	0.1%	8.7%	3.1%	2.8%	5.4%	0.0%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	5.3%	1.5%	2.7%	100.0%		
Road 7	7	70	70.0	N	1100-1200	537	48.2%	17.6%	0.1%	8.8%	3.2%	2.9%	5.3%	0.0%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	5.4%	1.7%	2.8%	100.0%		
Road 7	7	70	70.0	N	1200-1300	612	46.6%	17.1%	0.1%	8.9%	3.3%	3.2%	6.2%	0.0%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	6.3%	1.4%	2.6%	100.0%		
Road 7	7	70	70.0	N	1300-1400	621	45.2%	17.4%	0.1%	10.6%	3.8%	3.3%	6.4%	0.0%	0.1%	0.7%	0.6%	0.4%	1.0%	0.0%	6.0%	1.4%	2.8%	100.0%		
Road 7	7	70	70.0	N	1400-1500	665	45.5%	18.4%	0.1%	10.5%	3.8%	3.3%	6.4%	0.0%	0.1%	0.7%	0.6%	0.4%	1.0%	0.0%	6.0%	1.4%	2.8%	100.0%		
Road 7	7	70	70.0	N	1500-1600	679	45.0%	18.1%	0.1%	10.9%	3.9%	2.8%	5.4%	0.0%	0.1%	0.8%	0.9%	0.6%	1.4%	0.0%	5.9%	1.6%	2.5%	100.0%		
Road 7	7	70	70.0	N	1600-1700	729	47.4%	16.3%	0.1%	8.5%	3.0%	2.6%	5.2%	0.0%	0.0%	1.1%	1.4%	1.0%	2.1%	0.0%	6.4%	2.2%	2.3%	100.0%		
Road 7	7	70	70.0	N	1700-1800	834	52.0%	17.3%	0.1%	7.8%	3.1%	2.7%	5.1%	0.0%	0.1%	0.6%	0.7%	0.6%	1.4%	0.0%	6.4%	1.5%	2.6%	100.0%		
Road 7	7	70	70.0	N	1800-1900	525	62.0%	16.0%	0.0%	4.6%	1.6%	1.0%	1.9%	0.0%	0.0%	0.1%	1.1%	0.8%	1.7%	0.0%	6.5%	2.3%	1.3%	100.0%		
Road 7	7	70	70.0	N	1900-2000	738	60.5%	15.9%	0.0%	3.5%	1.2%	0.8%	1.6%	0.0%	0.0%	0.1%	0.9%	0.6%	1.4%	0.0%	7.4%	2.2%	0.7%	100.0%		
Road 7	7	70	70.0	N	2000-2100	575	55.6%	23.6%	0.0%	3.7%	1.3%	0.8%	1.6%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	7.8%	2.2%	0.7%	100.0%		
Road 7	7	70	70.0	N	2100-2200	520	57.0%	23.6%	0.0%	3.8%	1.4%	0.9%	1.7%	0.0%	0.0%	0.1%	0.9%	0.6%	1.4%	0.0%	8.0%	2.6%	0.8%	100.0%		
Road 7	7	70	70.0	N	2200-2300	557	56.3%	25.4%	0.0%	2.9%	1.0%	0.9%	1.8%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.1%	7.4%	2.2%	0.8%	100.0%		
Road 7	7	70	70.0	N	2300-0000	447	55.3%	24.9%	0.0%	3.2%	1.2%	1.0%	2.0%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.1%	7.3%	2.4%	1.0%	100.0%		
Road 8	8	70	70.0	N	0000-0100	38	43.1%	18.7%	0.0%	4.2%	1.5%	1.3%	2.6%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.2%	22.3%	0.2%	0.1%	100.0%		
Road 8	8	70	70.0	N	0100-0200	22	43.0%	18.6%	0.0%	4.6%	1.6%	1.4%	2.8%	0.0%	0.0%	0.2%	0.5%	0.3%	0.7%	0.2%	22.2%	0.4%	0.7%	100.0%		
Road 8	8	70	70.0	N	0200-0300	16	42.1%	19.2%	0.1%	5.0%	1.8%	1.6%	3.1%	0.0%	0.0%	0.3%	0.5%	0.4%	0.8%	0.2%	22.0%	2.7%	0.8%	100.0%		
Road 8	8	70	70.0	N	0300-0400	13	41.1%	18.3%	0.1%	5.4%	1.9%	1.7%	3.4%	0.0%	0.0%	0.3%	0.4%	0.3%	0.7%	0.2%	21.8%	0.7%	0.9%	100.0%		
Road 8	8	70	70.0	N	0400-0500	14	40.4%	17.9%	0.1%	5.8%	2.1%	1.8%	3.6%	0.0%	0.0%	0.4%	0.7%	0.5%	1.0%	0.2%	21.6%	0.3%	1.0%	100.0%		
Road 8	8	70	70.0	N	0500-0600	24	39.5%	17.4%	0.1%	6.2%	2.2%	1.9%	3.8%	0.0%	0.1%	0.4%	0.7%	0.5%	1.1%	0.2%	21.4%	3.4%	1.0%	100.0%		
Road 8	8	70	70.0	N	0600-0700	12	38.7%	16.8%	0.1%	6.6%	2.3%	2.1%	4.1%	0.0%	0.1%	0.3%	0.6%	0.5%	1.2%	0.2%	21.2%	3.1%	1.1%	100.0%		
Road 8	8	70	70.0	N	0700-0800	105	37.8%	16.5%	0.1%	7.1%	2.5%	2.2%	4.3%	0.0%	0.1%	0.6%	0.9%	0.6%	1.3%	0.2%	21.0%	3.9%	1.1%	100.0%		
Road 8	8	70	70.0	N	0800-0900	119	43.0%	13.7%	0.1%	7.8%	2.8%	2.2%	4.3%	0.0%	0.1%	0.6%	0.8%	0.6%	1.3%	0.1%	19.0%	2.5%	1.1%	100.0%		
Road 8	8	70	70.0	N	0900-1000	101	38.2%	13.9%	0.1%	10.7%	3.6%	2.9%	5.7%	0.0%	0.0%	0.4%	0.6%	0.4%	0.8%	0.0%	19.1%	1.5%	1.5%	100.0%		
Road 8	8	70	70.0	N	1000-1100	88	35.7%	14.4%	0.1%	13.8%	4.1%	3.5%	6.9%	0.0%	0.0%	0.8%	0.9%	0.7%	1.0%	0.0%	13.8%	1.9%	1.7%	100.0%		
Road 8	8	70	70.0	N	1100-1200	84	35.5%	14.6%	0.1%	11.3%	4.1%	3.5%	6.9%	0.0%	0.1%	0.6%	0.4%	0.2%	0.5%	0.0%	19.1%	1.9%	1.5%	100.0%		
Road 8	8	70	70.0	N	1200-1300	226	30.3%	11.6%	0.2%	16.5%	5.9%	5.9%	11.6%	0.0%	0.1%	0.5%	0.5%	0.4%	0.8%	0.0%	12.0%	1.0%	3.0%	100.0%		
Road 8	8	70	70.0	N	1300-1400	236	28.0%	10.7%	0.2%	18.0%	6.7%	5.9%	11.6%	0.0%	0.1%	0.5%	0.5%	0.3%	0.9%	0.0%	11.1%	0.9%	3.0%	100.0%		
Road 8	8	70	70.0	N	1400-1500	247	29.1%	11.6%	0.2%	17.4%	6.2%	5.9%	11.5%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	11.3%	1.1%	3.0%	100.0%		
Road 8	8	70	70.0	N	1500-1600	254	28.8%	11.6%	0.2%	20.0%	7.2%	5.1%	10.0%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.1%	11.0%	1.0%	2.6%	100.0%		
Road 8	8	70	70.0	N	1600-1700	263	31.1%	11.2%	0.1%	19.0%	6.1%	5.1%	10.2%	0.0%	0.1%	0.5%	0.5%	0.4%	0.9%	0.2%	10.8%	1.2%	2.1%	100.0%		
Road 8	8	70	70.0	N	1700-1800	283	36.6%	11.4%	0.2%	15.2%	5.5%	3.4%	6.8%	0.0%	0.1%	0.5%	0.6%	0.4%	1.0%	0.0%	13.3%	3.1%	1.8%	100.0%		
Road 8	8	70	70.0	N	1800-1900	287	42.7%	11.2%	0.1%	10.1%	3.6%	2.1%	4.2%	0.0%	0.0%	0.1%	0.8%	0.6%	1.3%	0.1%	14.7%	2.3%	1.1%	100.0%		
Road 8	8	70	70.0	N	1900-2000	228	47.1%	14.7%	0.1%	7.1%	1.9%	1.7%	3.1%	0.0%	0.0%	0.1%	1.6%	1.3%	1.7%	0.0%	16.5%	7.9%	1.7%	100.0%		
Road 8	8	70	70.0	N	2000-2100	178	47.9%	18.2%	0.1%	8.2%	2.9%	1.8%	3.5%	0.0%	0.0%	0.1%	0.6%	0.4%	0.9%	0.0%	17.6%	1.7%	1.0%	100.0%		
Road 8	8	70	70.0	N	2100-2200	175	44.4%	18.4%	0.1%	8.4%	3.0%	1.9%	3.8%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	15.8%	2.0%	1.0%	100.0%		
Road 8	8	70	70.0	N	2200-2300	120	44.1%	18.5%	0.1%	8.4%	3.0%	1.9%	3.8%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	15.8%	2.0%	1.0%	100.0%		
Road 8	8	70	70.0	N	2300-0000	128	42.9%	19.3%	0.1%	7.2%	2.6%	2.3%	4.5%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.1%	16.7%	1.9%	1.2%	100.0%		

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Traffic Data / Modeling Parameters For AERMOD (Year 2028)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars		02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles <=10t	07 - Medium Goods Vehicles 10-15t	08 - Public Light Buses <=3.5t	09 - Private Light Buses <=3.5t	10 - Private Light Buses >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchised Bus Single Deck	15 - Franchised Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicle >24t	18 - Non-franchised Bus >24t	Total
							PC	TAXI		LGV1	LGV4	LGV6	HGV7	HGV8	PLB	PVL4	PVL5	NFB6	NFB7	NFB8	FBSDD	FBDDB	MC	HGV9	NFB9	
Road 9	9	50	45.3	N	0000-0100	219	55.9%	25.1%	0.0%	3.3%	1.1%	1.0%	1.9%	0.0%	0.0%	0.2%	0.5%	0.4%	0.0%	0.0%	6.0%	2.8%	1.3%	0.0%	100.0%	
Road 9	9	50	46.9	N	0100-0200	143	54.8%	24.5%	0.0%	3.3%	1.2%	1.0%	2.0%	0.0%	0.0%	0.3%	0.6%	0.4%	0.0%	0.0%	5.9%	3.1%	1.8%	0.0%	100.0%	
Road 9	9	50	47.7	N	0200-0300	105	53.6%	23.9%	0.0%	3.6%	1.3%	1.1%	2.2%	0.0%	0.0%	0.3%	0.7%	0.5%	1.0%	0.0%	5.9%	3.4%	2.4%	0.0%	100.0%	
Road 9	9	50	48.1	N	0300-0400	52	52.2%	23.3%	0.0%	3.9%	1.4%	1.2%	2.4%	0.0%	0.1%	0.4%	0.8%	1.2%	0.4%	1.2%	0.0%	5.8%	3.7%	2.9%	0.0%	100.0%
Road 9	9	50	48.0	N	0400-0500	91	51.7%	22.8%	0.0%	4.2%	1.5%	1.3%	2.6%	0.0%	0.1%	0.5%	0.8%	0.8%	1.3%	0.0%	5.8%	4.0%	2.7%	0.0%	100.0%	
Road 9	9	50	46.5	N	0500-0600	156	51.2%	22.5%	0.0%	4.5%	1.6%	1.4%	2.8%	0.0%	0.1%	0.6%	0.9%	0.7%	1.4%	0.0%	5.8%	4.4%	1.9%	0.0%	100.0%	
Road 9	9	50	42.6	N	0600-0700	331	50.6%	22.1%	0.1%	4.9%	1.8%	1.5%	3.0%	0.0%	0.1%	0.6%	1.0%	0.7%	1.6%	0.0%	5.8%	4.7%	1.4%	0.0%	100.0%	
Road 9	9	50	37.1	N	0700-0800	671	49.0%	21.6%	0.1%	5.2%	1.9%	1.6%	3.2%	0.0%	0.1%	0.7%	1.1%	0.8%	1.7%	0.0%	5.7%	5.0%	1.9%	0.0%	100.0%	
Road 9	9	50	36.8	N	0800-0900	773	55.3%	17.7%	0.1%	5.7%	2.0%	1.6%	3.1%	0.0%	0.1%	0.8%	1.1%	0.8%	1.6%	0.0%	5.1%	3.2%	1.7%	0.0%	100.0%	
Road 9	9	50	37.4	N	0900-1000	631	51.0%	18.5%	0.1%	6.1%	2.9%	2.2%	4.3%	0.0%	0.1%	0.5%	0.9%	0.8%	1.3%	0.0%	5.3%	2.0%	2.3%	0.0%	100.0%	
Road 9	9	50	38.3	N	1000-1100	544	48.4%	18.8%	0.1%	6.7%	3.1%	2.8%	5.4%	0.0%	0.1%	0.5%	0.8%	0.8%	1.2%	0.0%	5.3%	1.5%	2.7%	0.0%	100.0%	
Road 9	9	50	38.7	N	1100-1200	517	48.2%	19.8%	0.1%	6.6%	3.1%	2.7%	5.3%	0.0%	0.1%	0.9%	0.5%	0.3%	0.7%	0.0%	5.4%	1.4%	2.8%	0.0%	100.0%	
Road 9	9	50	37.2	N	1200-1300	612	46.6%	17.9%	0.1%	6.9%	3.2%	3.2%	6.2%	0.0%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	6.3%	1.4%	2.8%	0.0%	100.0%	
Road 9	9	50	37.1	N	1300-1400	621	45.2%	17.4%	0.1%	10.6%	3.8%	3.3%	6.4%	0.0%	0.1%	0.7%	0.6%	0.4%	1.0%	0.0%	6.0%	1.4%	2.8%	0.0%	100.0%	
Road 9	9	50	36.5	N	1400-1500	665	45.2%	18.3%	0.1%	9.4%	3.4%	3.2%	6.2%	0.0%	0.1%	0.8%	0.9%	0.8%	1.4%	0.0%	6.0%	1.7%	2.7%	0.0%	100.0%	
Road 9	9	50	36.4	N	1500-1600	679	45.0%	18.1%	0.1%	10.9%	3.9%	2.8%	5.4%	0.0%	0.1%	0.8%	0.9%	0.6%	1.4%	0.0%	5.9%	1.6%	2.5%	0.0%	100.0%	
Road 9	9	50	35.7	N	1600-1700	729	47.4%	16.3%	0.1%	8.5%	3.0%	2.6%	5.2%	0.0%	0.1%	1.1%	1.4%	1.6%	2.1%	0.0%	6.4%	2.2%	2.3%	0.0%	100.0%	
Road 9	9	50	34.8	N	1700-1800	834	52.0%	16.2%	0.1%	7.5%	2.7%	1.7%	3.3%	0.0%	0.1%	0.7%	0.9%	0.8%	1.4%	0.0%	6.4%	4.5%	1.7%	0.0%	100.0%	
Road 9	9	50	34.1	N	1800-1900	925	62.0%	14.6%	0.0%	4.6%	1.6%	1.0%	1.9%	0.0%	0.0%	0.1%	1.1%	0.8%	1.7%	0.0%	6.5%	3.0%	1.3%	0.0%	100.0%	
Road 9	9	50	36.5	N	1900-2000	738	60.5%	18.9%	0.0%	3.5%	1.2%	0.8%	1.6%	0.0%	0.0%	0.1%	0.9%	0.6%	1.4%	0.0%	7.4%	2.2%	0.7%	0.0%	100.0%	
Road 9	9	50	38.5	N	2000-2100	575	56.6%	23.6%	0.0%	3.7%	1.3%	0.8%	1.8%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	7.6%	2.2%	0.7%	0.0%	100.0%	
Road 9	9	50	38.7	N	2100-2200	570	57.0%	23.6%	0.0%	3.7%	0.8%	1.7%	1.8%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	7.6%	2.6%	0.8%	0.0%	100.0%	
Road 9	9	50	38.8	N	2200-2300	557	56.3%	25.4%	0.0%	2.9%	1.0%	0.9%	1.8%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.1%	7.4%	2.2%	0.8%	0.0%	100.0%	
Road 9	9	50	40.0	N	2300-0000	417	55.3%	24.9%	0.0%	3.2%	1.2%	1.0%	2.0%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.1%	7.3%	2.4%	1.0%	0.0%	100.0%	
Road 10	10	50	48.0	Y	0000-0100	70	36.2%	16.2%	0.1%	8.0%	2.2%	2.5%	4.0%	0.0%	0.0%	0.1%	0.6%	0.2%	0.5%	0.0%	1.8%	2.5%	0.0%	0.0%	100.0%	
Road 10	10	50	48.4	Y	0100-0200	52	31.2%	13.9%	0.1%	7.7%	2.5%	2.4%	4.8%	0.0%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	0.0%	1.8%	33.2%	0.0%	100.0%	
Road 10	10	50	48.6	Y	0200-0300	43	27.1%	12.1%	0.1%	7.5%	2.7%	2.3%	4.6%	0.0%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	0.0%	1.7%	39.9%	0.0%	100.0%	
Road 10	10	50	48.7	Y	0300-0400	38	23.9%	10.6%	0.1%	7.3%	2.8%	2.3%	4.5%	0.0%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	1.7%	45.2%	0.0%	100.0%		
Road 10	10	50	48.7	Y	0400-0500	40	24.1%	10.7%	0.1%	8.0%	2.9%	2.5%	5.0%	0.0%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.0%	1.9%	42.6%	0.0%	100.0%	
Road 10	10	50	48.2	Y	0500-0600	58	28.3%	12.4%	0.1%	10.3%	3.7%	3.2%	6.4%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	0.0%	2.4%	30.2%	0.0%	100.0%		
Road 10	10	50	47.0	Y	0600-0700	107	32.2%	14.1%	0.1%	12.8%	4.8%	4.0%	7.8%	1.0%	0.1%	0.4%	0.7%	0.5%	1.0%	0.0%	3.0%	17.5%	0.0%	100.0%		
Road 10	10	50	47.0	Y	0700-0800	170	31.1%	11.0%	0.1%	12.0%	5.0%	4.3%	7.0%	1.0%	0.1%	0.4%	0.7%	0.5%	1.0%	0.0%	3.0%	17.5%	0.0%	100.0%		
Road 10	10	50	41.7	Y	0800-0900	281	31.3%	10.0%	0.1%	13.2%	4.8%	3.7%	7.3%	0.7%	0.1%	0.4%	0.6%	0.4%	0.9%	0.0%	1.8%	24.5%	0.0%	100.0%		
Road 10	10	50	41.9	Y	0900-1000	263	25.2%	9.1%	0.2%	16.4%	5.9%	4.5%	8.8%	0.8%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.0%	1.0%	26.5%	0.0%	100.0%	
Road 10	10	50	42.2	Y	1000-1100	245	22.1%	8.6%	0.2%	10.4%	5.9%	5.2%	10.3%	0.0%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.0%	0.7%	28.6%	0.0%	100.0%	
Road 10	10	50	42.5	Y	1100-1200	235	21.8%	9.0%	0.2%	16.1%	5.9%	5.0%	9.9%	0.8%	0.1%	0.4%	0.2%	0.2%	0.3%	0.0%	0.0%	0.6%	29.7%	0.0%	100.0%	
Road 10	10	50	42.5	Y	1200-1300	234	22.1%	8.5%	0.2%	15.2%	5.5%	5.5%	10.7%	0.0%	0.0%	0.4%	0.4%	0.3%	0.6%	0.0%	0.0%	0.7%	30.0%	0.0%	100.0%	
Road 10	10	50	42.2	Y	1300-1400	245	20.8%	8.0%	0.2%	17.7%	6.3%	5.5%	10.6%	0.0%	0.0%	0.3%	0.5%	0.0%	0.6%	0.0%	0.0%	0.6%	28.8%	0.1%	100.0%	
Road 10	10	50	42.0	Y	1400-1500	251	21.7%	8.6%	0.2%	16.3%	5.9%	5.9%	10.8%	0.0%	0.0%	0.4%	0.4%	0.3%	0.7%	0.0%	0.0%	0.6%	28.2%	0.0%	100.0%	
Road 10	10	50	41.9	Y	1500-1600	257	21.6%	8.7%	0.2%	18.8%	6.6%	4.8%	9.4%	0.0%	0.0%	0.4%	0.4%	0.3%	0.7%	0.0%	0.0%	0.8%	27.2%	0.0%	100.0%	
Road 10	10	50	41.9	Y	1600-1700	258	24.3%	8.4%	0.2%	16.7%	5.8%	4.9%	9.7%	0.0%	0.1%	0.6%	0.7%	0.8%	1.1%	0.0%	0.0%	1.1%	27.1%	0.0%	100.0%	
Road 10	10	50	42.0	Y	1700-1800	268	29.3%	9.2%	0.2%	15.4%	5.5%	3.5%	8.9%	0.0%	0.1%	0.4%	0.5%	0.4%	0.8%	0.0%	0.0%	2.5%	25.5%	0.0%	100.0%	
Road 10	10	50	42.6	Y	1800-1900	261	39.8%	9.3%	0.1%	10.7%	3.3%	2.2%	4.4%	0.0%	0.0%	0.1%	0.7%	0.5%	1.3%	0.0%	0.0%	1.9%	25.5%	0.0%	100.0%	
Road 10	10	50	45.9	Y	1900-2000	167	48.5%	15.2%	0.1%	10.1%	3.6%	2.4%	4.7%	0.0%	0.1%	0.7%	0.8%	1.1%	0.0%	0.0%	1.8%	11.1%	0.0%	100.0%		
Road 10	10	50	46.6	Y	2000-2100	134	43.8%	18.4%	0.1%	10.4%	3.7%	2.3%	4.5%	0.0%	0.1%	0.6%	0.4%	0.9%	0.0%	0.0%	0.7%	17.1%	13.5%	0.0%	100.0%	
Road 10	10	50	46.6	Y	2100-2200	135	43.8%	18.1%	0.1%	10.5%	3.8%	2.4%	4.7%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.0%	2.0%	13.5%	0.0%	100.0%	
Road 10	10	50	46.6	Y	2200-2300	129	44.2%	20.0%	0.1%	8.2%	3.0%	2.6%	5.1%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.0%	1.7%	14.2%	0.0%	100.0%	
Road 10	10	50	47.3	Y	2300-0000	102	41.0%	18.5%	0.1%	8.7%	3.1%	2.7%	5.4%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.0%	1.8%	17.6%	0.0%	100.0%	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Traffic Data / Modeling Parameters For AERMOD (Year 2028)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles >=15t	07 - Medium Goods Vehicles >24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-Franchised Bus 6-15t	12 - Non-Franchised Bus 6-15t	13 - Non-Franchised Bus 15-24t	14 - Franchise Double Deck	15 - Franchise Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicle >24t	18 - Non-Franchised	Total	
							PC	TAXI	LGV1	LGV2	LGV3	HGV7	HGV17	PUB	PVS	NFB6	NFB17	NFB24	NFB15-24	NFB15-24	NFB15-24	FBD	MC	NFB9		
Road 13	13	50	27.6	N	9000-9100	20	4.7%	2.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Road 13	13	50	27.6	N	9100-9200	20	3.1%	1.4%	0.0%	0.0%	0.7%	0.2%	0.2%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.2%	93.7%	0.0%	100.0%
Road 13	13	50	27.6	N	9200-9300	19	2.2%	1.0%	0.0%	0.0%	0.5%	0.2%	0.2%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	95.3%	0.0%	100.0%
Road 13	13	50	27.7	N	9300-9400	19	1.8%	1.0%	0.0%	0.0%	0.27%	0.1%	0.27%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	97.0%	0.0%	100.0%
Road 13	13	50	27.6	N	9400-9500	19	1.9%	0.8%	0.0%	0.0%	0.6%	0.2%	0.2%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	95.7%	0.0%	100.0%
Road 13	13	50	27.6	N	9500-9600	20	3.1%	1.4%	0.0%	1.0%	0.4%	0.3%	0.6%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.3%	92.8%	0.0%	100.0%
Road 13	13	50	27.5	N	9600-9700	22	2.2%	4.0%	0.0%	0.0%	2.1%	0.2%	0.3%	0.0%	0.0%	0.0%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.6%	90.0%	0.0%	100.0%
Road 13	13	50	24.1	N	9700-9800	77	3.3%	1.4%	0.0%	1.3%	0.5%	0.4%	0.8%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.3%	91.7%	0.0%	100.0%
Road 13	13	50	24.1	N	9800-9900	78	4.2%	1.3%	0.0%	1.6%	0.6%	0.4%	0.9%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.2%	90.4%	0.0%	100.0%
Road 13	13	50	24.1	N	9900-1000	78	3.4%	1.8%	0.0%	0.7%	0.3%	0.6%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	90.0%	0.0%	100.0%
Road 13	13	50	24.1	N	1000-1100	77	2.6%	1.0%	0.0%	1.7%	0.6%	0.5%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	92.1%	0.0%	100.0%
Road 13	13	50	24.1	N	1100-1200	77	2.5%	1.0%	0.0%	1.6%	0.6%	0.5%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	92.5%	0.0%	100.0%
Road 13	13	50	24.1	N	1200-1300	77	2.8%	1.5%	0.0%	1.6%	0.6%	0.5%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	91.7%	0.0%	100.0%
Road 13	13	50	24.1	N	1300-1400	77	2.8%	1.1%	0.0%	1.6%	0.7%	0.6%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	91.7%	0.0%	100.0%
Road 13	13	50	24.1	N	1400-1500	78	2.9%	1.2%	0.0%	1.7%	0.6%	0.6%	1.2%	0.0%	0.0%	0.1%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.1%	91.4%	0.0%	100.0%
Road 13	13	50	24.1	N	1500-1600	78	2.8%	1.2%	0.0%	2.0%	0.7%	0.5%	1.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.1%	0.0%	0.0%	0.1%	91.3%	0.0%	100.0%
Road 13	13	50	24.1	N	1600-1700	78	3.4%	1.2%	0.0%	1.7%	0.6%	1.1%	1.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.2%	91.0%	0.0%	100.0%
Road 13	13	50	24.1	N	1700-1800	79	4.2%	1.3%	0.0%	1.7%	0.6%	0.4%	0.8%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.4%	90.3%	0.0%	100.0%
Road 13	13	50	24.1	N	1800-1900	79	5.6%	1.3%	0.0%	1.2%	0.4%	0.2%	0.5%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.3%	90.0%	0.0%	100.0%
Road 13	13	50	27.4	N	1900-2000	24	13.9%	4.4%	0.0%	2.3%	0.8%	1.1%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	75.7%	0.0%	100.0%
Road 13	13	50	27.4	N	2000-2100	23	10.0%	4.4%	0.0%	2.0%	0.7%	0.4%	0.9%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.0%	0.4%	80.0%	0.0%	100.0%
Road 13	13	50	27.4	N	2100-2200	23	10.1%	4.4%	0.0%	2.0%	0.7%	0.5%	0.9%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.5%	76.9%	0.0%	100.0%
Road 13	13	50	27.4	N	2200-2300	23	10.6%	4.7%	0.0%	2.1%	0.7%	0.5%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.4%	76.0%	0.0%	100.0%
Road 13	13	50	27.5	N	2300-0000	22	8.1%	3.6%	0.0%	1.3%	0.5%	0.4%	0.8%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.4%	84.7%	0.0%	100.0%
Road 14	14	50	46.7	N	0000-0100	284	51.1%	22.9%	0.0%	4.2%	1.5%	1.3%	2.6%	0.2%	0.0%	0.2%	0.5%	0.3%	0.7%	0.0%	0.0%	4.6%	2.6%	7.2%	100.0%	
Road 14	14	50	46.7	N	0100-0200	192	48.7%	21.5%	0.0%	4.1%	1.5%	1.6%	2.8%	0.2%	0.0%	0.2%	0.4%	0.4%	0.8%	0.0%	0.0%	4.4%	2.3%	7.2%	100.0%	
Road 14	14	50	46.2	N	0200-0300	145	45.8%	20.4%	0.0%	4.7%	1.7%	1.5%	2.9%	0.2%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	0.0%	4.2%	2.9%	13.4%	100.0%	
Road 14	14	50	48.5	N	0300-0400	119	43.4%	19.3%	0.1%	4.9%	1.8%	1.5%	3.0%	0.2%	0.0%	0.3%	0.6%	0.4%	1.0%	0.0%	0.0%	4.0%	3.1%	16.3%	100.0%	
Road 14	14	50	47.4	N	0400-0500	128	43.1%	19.3%	0.1%	4.9%	1.8%	1.5%	3.0%	0.2%	0.0%	0.3%	0.6%	0.4%	1.0%	0.0%	0.0%	4.0%	3.1%	16.3%	100.0%	
Road 14	14	50	47.4	N	0500-0600	210	44.9%	19.3%	0.1%	6.1%	2.2%	1.9%	3.8%	0.2%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	0.0%	4.3%	3.8%	16.7%	0.0%	100.0%
Road 14	14	50	44.9	N	0600-0700	431	46.0%	20.2%	0.1%	6.8%	2.4%	2.1%	4.2%	0.3%	0.1%	0.6%	0.9%	0.7%	1.4%	0.0%	0.0%	4.5%	4.3%	5.4%	100.0%	
Road 14	14	50	39.3	N	0700-0800	607	43.3%	19.3%	0.1%	7.0%	2.3%	2.2%	4.1%	0.3%	0.1%	0.6%	0.9%	0.7%	1.4%	0.0%	0.0%	4.3%	4.3%	5.4%	100.0%	
Road 14	14	50	38.5	N	0800-0900	1038	48.8%	15.5%	0.1%	7.7%	2.8%	2.1%	4.2%	0.2%	0.1%	0.7%	1.0%	0.7%	1.5%	0.0%	0.0%	3.8%	2.8%	7.9%	100.0%	
Road 14	14	50	39.3	N	0900-1000	881	43.9%	15.7%	0.1%	10.5%	3.8%	2.9%	5.5%	0.2%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	0.0%	3.8%	1.7%	9.5%	0.0%	100.0%
Road 14	14	50	39.0	N	1000-1100	777	40.2%	11.1%	0.1%	11.7%	4.0%	3.5%	6.2%	0.2%	0.1%	0.3%	0.5%	0.7%	1.2%	0.0%	0.0%	3.1%	1.2%	9.5%	0.0%	100.0%
Road 14	14	50	40.3	N	1100-1200	740	39.9%	16.4%	0.1%	10.9%	3.5%	3.4%	6.7%	0.2%	0.1%	0.7%	0.4%	0.3%	0.6%	0.0%	0.0%	3.8%	1.1%	11.3%	0.0%	100.0%
Road 14	14	50	39.5	N	1200-1300	823	39.6%	15.2%	0.1%	10.7%	3.9%	3.9%	7.6%	0.0%	0.1%	0.6%	0.7%	0.5%	1.0%	0.0%	0.0%	4.7%	1.2%	10.6%	0.0%	100.0%
Road 14	14	50	39.5	N	1300-1400	843	37.5%	14.6%	0.1%	12.4%	4.6%	3.9%	7.6%	0.0%	0.1%	0.6%	0.7%	0.5%	1.0%	0.0%	0.0%	4.8%	1.4%	10.6%	0.0%	100.0%
Road 14	14	50	39.0	N	1400-1500	891	38.4%	15.2%	0.1%	11.4%	4.1%	3.9%	7.6%	0.0%	0.1%	0.7%	0.8%	0.5%	1.2%	0.0%	0.0%	4.5%	1.4%	9.9%	0.0%	100.0%
Road 14	14	50	38.9	N	1500-1600	911	38.1%	15.3%	0.1%	13.2%	4.7%	3.3%	6.6%	0.0%	0.1%	0.7%	0.8%	0.5%	1.2%	0.0%	0.0%	4.4%	1.4%	9.5%	0.0%	100.0%
Road 14	14	50	38.6	N	1600-1700	960	38.1%	15.3%	0.1%	13.2%	4.7%	3.3%	6.6%	0.0%	0.1%	0.7%	0.8%	0.5%	1.2%	0.0%	0.0%	4.4%	1.4%	9.5%	0.0%	100.0%
Road 14	14	50	38.2	N	1700-1800	1070	46.1%	14.4%	0.1%	9.5%	3.4%	2.2%	4.2%	0.0%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	0.0%	5.0%	4.0%	7.7%	0.0%	100.0%
Road 14	14	50	38.0	N	1800-1900	1150	56.7%	13.3%	0.1%	6.0%	2.2%	1.3%	2.5%	0.0%	0.0%	1.1%	1.0%	0.7%	1.5%	0.0%	0.0%	5.2%	2.7%	6.8%	0.0%	100.0%
Road 14	14	50	42.2	N	1900-2000	479	41.7%	17.0%	0.1%	11.2%	4.0%	3.5%	6.2%	0.0%	0.1%	0.6%	0.7%	0.5%	1.0%	0.0%	0.0%	4.8%	1.4%	9.5%	0.0%	100.0%
Road 14	14	50	42.2	N	2000-2100	686	53.0%	22.5%	0.1%	5.0%	1.8%	1.1%	2.2%	0.0%	0.0%	0.1%	1.7%	0.5%	1.1%	0.0%	0.0%	6.5%	2.1%	3.2%	0.0%	100.0%
Road 14	14	50	42.3	N	2100-2200	682	54.2%	22.4%	0.1%	5.1%	1.8%	1.2%	2.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.0%	5.5%	2.5%	3.3%	0.0%	100.0%
Road 14	14	50	44.5	N	2200-2300	664	46.4%	14.6%	0.1%	4.6%	1.6%	1.0%	2.0%	0.0%	0.0%	0.1%	0.4%	0.3%	0.5%	0.0%	0.0%	5.4%	2.5%	6.4%	0.0%	100.0%
Road 14	14	50	44.3	N	2300-0000	502	52.2%	23.5%	0.0%	4.4%	1.6%	1.4%	2.7%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.0%	6.1%	2.3%	4.4%	0.0%	100.0%

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Traffic Data / Modeling Parameters For AERMOD (Year 2020)																									
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles <=5t	07 - Medium Goods Vehicles 5-24t	08 - Public Light Buses <=3.5t	09 - Private Light Buses <=3.5t	10 - Private Light Buses >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchised Bus Single Deck	15 - Franchised Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicle >24t	18 - Non-franchised Bus >24t	Total
							PC	TAXI	LGV	OLV4	LGV4	OLV4	PLB	PLB	PUB	PUB	NFB	NFB	NFB	NFB	NFB	NFB	NFB	NFB	
Road 17	17	70	67.7	N	0000-0100	320	55.1%	24.7%	0.0%	4.3%	1.5%	1.4%	2.7%	0.1%	0.0%	0.2%	0.0%	0.3%	0.8%	0.0%	3.7%	2.8%	1.8%	0.0%	100.0%
Road 17	17	70	68.5	N	0100-0200	210	53.7%	24.0%	0.0%	4.7%	1.7%	1.5%	2.9%	0.1%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	3.6%	3.0%	2.5%	0.0%	100.0%
Road 17	17	70	68.9	N	0200-0300	155	52.3%	23.3%	0.1%	5.1%	1.8%	1.6%	3.1%	0.1%	0.0%	0.3%	0.7%	0.5%	1.0%	0.0%	3.6%	3.3%	3.2%	0.0%	100.0%
Road 17	17	70	69.0	N	0300-0400	123	51.0%	22.6%	0.1%	4.4%	2.0%	1.7%	3.4%	0.1%	0.1%	0.4%	0.6%	1.1%	0.4%	0.0%	3.5%	3.8%	3.8%	0.0%	100.0%
Road 17	17	70	69.0	N	0400-0500	135	50.3%	22.1%	0.1%	5.9%	2.1%	1.8%	3.6%	0.1%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	3.5%	3.9%	3.6%	0.0%	100.0%
Road 17	17	70	68.3	N	0500-0600	232	49.6%	21.8%	0.1%	6.4%	2.3%	2.0%	3.9%	0.1%	0.1%	0.5%	0.9%	0.6%	1.4%	0.0%	3.5%	4.2%	2.6%	0.0%	100.0%
Road 17	17	70	66.3	N	0600-0700	493	48.9%	21.4%	0.1%	6.8%	2.5%	2.1%	4.2%	0.1%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	3.5%	4.6%	1.8%	0.0%	100.0%
Road 17	17	70	60.2	N	0700-0800	1006	47.3%	20.7%	0.1%	7.2%	2.6%	2.3%	4.5%	0.1%	0.1%	0.7%	1.1%	0.8%	1.7%	0.0%	3.4%	4.9%	2.6%	0.0%	100.0%
Road 17	17	70	55.0	N	0800-0900	1163	53.0%	17.0%	0.1%	7.9%	2.8%	2.2%	4.3%	0.1%	0.1%	0.7%	1.0%	0.7%	1.6%	0.0%	3.1%	3.1%	2.3%	0.0%	100.0%
Road 17	17	70	60.2	N	0900-1000	972	47.7%	17.3%	0.1%	10.9%	3.9%	3.0%	5.9%	0.1%	0.1%	0.5%	0.8%	0.8%	1.2%	0.0%	3.1%	1.9%	3.0%	0.0%	100.0%
Road 17	17	70	63.2	N	1000-1100	848	44.8%	17.4%	0.1%	11.6%	4.2%	3.7%	7.3%	0.1%	0.1%	0.5%	0.7%	0.5%	1.1%	0.0%	3.1%	1.4%	3.5%	0.0%	100.0%
Road 17	17	70	63.6	N	1100-1200	803	44.6%	18.4%	0.1%	11.6%	4.2%	3.6%	7.7%	0.1%	0.1%	0.8%	0.4%	0.3%	0.7%	0.0%	3.1%	1.3%	3.6%	0.0%	100.0%
Road 17	17	70	65.3	N	1200-1300	526	34.6%	13.3%	0.2%	15.5%	5.6%	14.6%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	5.3%	1.0%	5.5%	0.0%	100.0%	
Road 17	17	70	65.1	N	1300-1400	548	32.7%	12.6%	0.2%	18.0%	6.5%	5.6%	11.0%	0.0%	0.1%	0.5%	0.5%	0.3%	0.7%	0.0%	5.0%	1.0%	5.4%	0.0%	100.0%
Road 17	17	70	64.9	N	1400-1500	574	33.4%	13.5%	0.2%	16.3%	5.9%	5.5%	10.8%	0.0%	0.1%	0.6%	0.7%	0.5%	1.0%	0.0%	5.1%	1.3%	5.3%	0.0%	100.0%
Road 17	17	70	64.8	N	1500-1600	589	33.1%	13.3%	0.2%	18.8%	6.7%	4.8%	9.4%	0.0%	0.1%	0.6%	0.7%	0.8%	1.0%	0.0%	4.9%	1.2%	4.8%	0.0%	100.0%
Road 17	17	70	64.6	N	1600-1700	610	36.1%	12.5%	0.2%	15.2%	5.6%	4.8%	9.4%	0.0%	0.1%	0.9%	1.1%	0.7%	1.6%	0.0%	5.6%	1.7%	4.7%	0.0%	100.0%
Road 17	17	70	64.5	N	1700-1800	662	41.7%	13.0%	0.1%	14.2%	5.1%	3.2%	6.3%	0.0%	0.1%	0.6%	0.7%	0.5%	1.1%	0.0%	5.9%	3.6%	3.8%	0.0%	100.0%
Road 17	17	70	64.6	N	1800-1900	681	53.7%	12.6%	0.1%	9.3%	3.4%	1.9%	3.8%	0.0%	0.0%	0.1%	0.9%	0.3%	1.4%	0.0%	6.3%	2.6%	3.1%	0.0%	100.0%
Road 17	17	70	55.9	N	1900-2000	526	54.0%	16.9%	0.1%	7.3%	2.6%	1.7%	3.4%	0.0%	0.0%	0.1%	0.8%	0.6%	1.2%	0.0%	7.5%	2.0%	1.6%	0.0%	100.0%
Road 17	17	70	66.8	N	2000-2100	412	49.5%	21.0%	0.1%	7.9%	2.6%	1.7%	3.3%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	7.9%	2.0%	1.8%	0.0%	100.0%
Road 17	17	70	68.0	N	2100-2200	410	50.6%	20.9%	0.1%	6.8%	2.8%	1.8%	3.0%	0.0%	0.0%	0.1%	0.6%	0.8%	0.2%	0.0%	7.0%	2.3%	1.8%	0.0%	100.0%
Road 17	17	70	67.0	N	2200-2300	396	50.5%	22.8%	0.1%	6.1%	2.2%	1.9%	3.6%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.1%	7.6%	1.9%	1.9%	0.0%	100.0%
Road 17	17	70	67.7	N	2300-0000	299	49.1%	22.1%	0.1%	6.7%	2.4%	2.1%	4.2%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.1%	7.4%	2.2%	2.3%	0.0%	100.0%
Road 18	18	70	69.2	N	0000-0100	216	53.8%	24.2%	0.0%	4.0%	1.4%	1.3%	2.6%	0.0%	0.0%	0.2%	0.2%	0.0%	0.4%	0.0%	5.6%	2.7%	1.4%	0.0%	100.0%
Road 18	18	70	69.5	N	0100-0200	142	52.4%	23.4%	0.0%	4.3%	1.6%	1.4%	2.7%	0.3%	0.0%	0.3%	0.6%	0.9%	0.0%	5.5%	3.0%	3.3%	0.0%	100.0%	
Road 18	18	70	69.6	N	0200-0300	105	50.9%	22.7%	0.0%	4.7%	1.7%	1.5%	2.9%	0.3%	0.0%	0.3%	0.6%	0.4%	1.0%	0.0%	5.4%	3.2%	4.2%	0.0%	100.0%
Road 18	18	70	69.7	N	0300-0400	83	49.5%	22.0%	0.1%	5.0%	1.6%	1.3%	3.1%	0.3%	0.0%	0.4%	0.7%	0.5%	1.1%	0.0%	5.3%	3.5%	4.4%	0.0%	100.0%
Road 18	18	70	69.7	N	0400-0500	91	48.7%	21.5%	0.1%	5.4%	1.9%	1.7%	3.3%	0.3%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	5.3%	3.8%	4.5%	0.0%	100.0%
Road 18	18	70	69.4	N	0500-0600	156	48.5%	21.3%	0.1%	5.9%	2.1%	1.8%	3.6%	0.3%	0.1%	0.5%	0.9%	1.4%	0.0%	5.4%	4.1%	3.3%	0.0%	100.0%	
Road 18	18	70	68.8	N	0600-0700	330	48.6%	21.0%	0.1%	6.4%	2.3%	2.0%	3.9%	0.3%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	5.4%	4.5%	2.1%	0.0%	100.0%
Road 18	18	70	67.8	N	0700-0800	510	47.0%	20.1%	0.1%	6.7%	2.4%	2.1%	4.2%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	5.6%	4.8%	2.3%	0.0%	100.0%
Road 18	18	70	67.2	N	0800-0900	777	52.2%	16.9%	0.1%	7.3%	2.6%	2.1%	4.0%	0.3%	0.1%	0.7%	1.0%	0.7%	1.6%	0.0%	4.7%	3.0%	2.9%	0.0%	100.0%
Road 18	18	70	67.5	N	0900-1000	648	47.0%	17.1%	0.1%	10.2%	3.7%	2.8%	5.5%	0.3%	0.1%	0.5%	0.8%	0.8%	1.2%	0.0%	4.8%	1.8%	3.6%	0.0%	100.0%
Road 18	18	70	67.6	N	1000-1100	565	44.2%	17.1%	0.1%	10.9%	3.9%	3.5%	6.6%	0.3%	0.1%	0.5%	0.7%	0.5%	1.1%	0.0%	4.7%	1.3%	4.3%	0.0%	100.0%
Road 18	18	70	67.9	N	1100-1200	536	44.0%	18.1%	0.1%	10.8%	3.9%	3.4%	6.6%	0.3%	0.1%	0.8%	0.4%	0.3%	0.7%	0.0%	4.9%	1.2%	4.3%	0.0%	100.0%
Road 18	18	70	68.1	N	1200-1300	509	49.0%	18.9%	0.1%	6.5%	2.3%	2.3%	4.6%	0.0%	0.1%	0.8%	0.6%	0.6%	1.3%	0.0%	7.2%	1.5%	4.0%	0.0%	100.0%
Road 18	18	70	68.0	N	1300-1400	512	48.1%	18.5%	0.1%	7.9%	2.6%	2.4%	4.6%	0.0%	0.1%	0.7%	0.5%	1.0%	0.0%	6.9%	1.5%	4.0%	0.0%	100.0%	
Road 18	18	70	67.8	N	1400-1500	520	47.8%	18.3%	0.1%	6.9%	2.5%	2.3%	4.9%	0.0%	0.1%	0.8%	0.6%	0.9%	1.5%	0.0%	6.8%	1.8%	3.7%	0.0%	100.0%
Road 18	18	70	67.9	N	1500-1600	561	47.6%	16.1%	0.1%	8.1%	2.6%	2.0%	4.0%	0.0%	0.1%	0.8%	1.0%	0.7%	1.5%	0.0%	6.7%	1.7%	3.5%	0.0%	100.0%
Road 18	18	70	67.7	N	1600-1700	609	49.6%	17.1%	0.1%	6.2%	2.2%	1.9%	3.8%	0.0%	0.2%	1.2%	1.5%	1.0%	2.2%	0.0%	7.3%	2.3%	3.3%	0.0%	100.0%
Road 18	18	70	67.8	N	1700-1800	725	53.2%	16.6%	0.1%	6.4%	2.2%	1.2%	2.4%	0.0%	0.1%	0.4%	0.5%	0.7%	1.4%	0.0%	7.2%	4.6%	2.6%	0.0%	100.0%
Road 18	18	70	67.2	N	1800-1900	798	62.9%	14.4%	0.0%	3.3%	1.2%	0.7%	1.3%	0.0%	0.0%	0.1%	0.8%	1.7%	0.0%	7.1%	3.0%	2.1%	0.0%	100.0%	
Road 18	18	70	67.8	N	1900-2000	636	61.3%	19.2%	0.0%	2.5%	0.9%	0.6%	1.2%	0.0%	0.0%	0.1%	0.9%	0.8%	1.4%	0.0%	8.1%	2.3%	0.9%	0.0%	100.0%
Road 18	18	70	68.3	N	2000-2100	496	56.4%	23.9%	0.0%	2.6%	0.9%	0.6%	1.1%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	8.5%	2.3%	1.0%	0.0%	100.0%
Road 18	18	70	68.3	N	2100-2200	491	57.9%	24.0%	0.0%	2.7%	1.0%	0.6%	1.2%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	7.6%	2.6%	1.1%	0.0%	100.0%
Road 18	18	70	68.3	N	2200-2300	482	56.9%	25.7%	0.0%	2.1%	0.7%	0.7%	1.3%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.1%	8.8%	2.2%	1.1%	0.0%	100.0%
Road 18	18	70	68.8	N	2300-0000	360	56.0%	25.2%	0.0%	2.3%	0.8%	0.7%	1.4%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.1%	8.0%	2.5%	1.4%	0.0%	100.0%

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Traffic Data / Modeling Parameters For AERMOD (Year 2020)																									
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles <=5t	07 - Medium Goods Vehicles 5-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4-15t	12 - Non-franchised Bus 6.4-15t	13 - Non-franchised Bus 15-24t	14 - Franchise Bus Double Deck	15 - Franchise Bus Double Deck	16 - Motorcycl	17 - Heavy Goods Vehicle >24t	18 - Non-franchised Bus >24t	Total
							PC	TAXI	LV3	LV4	LV5	HGV7	HGV8	PLB	PVB	PVS	NFB6	NFB7	NFB8	NFB9	NFB10	NFB11	NFB12	NFB13	
Road 21	21	70	68.8	N	0000-0100	350	52.9%	23.7%	0.1%	6.3%	2.3%	2.0%	3.9%	0.1%	0.0%	0.3%	0.6%	0.4%	0.8%	0.0%	3.3%	2.9%	2.6%	0.0%	100.0%
Road 21	21	70	69.2	N	0100-0200	230	51.4%	23.0%	0.1%	6.3%	2.3%	2.0%	3.9%	0.1%	0.0%	0.3%	0.6%	0.4%	0.8%	0.0%	3.3%	2.9%	2.6%	0.0%	100.0%
Road 21	21	70	69.4	N	0200-0300	170	49.9%	22.2%	0.1%	6.8%	2.5%	2.2%	4.2%	0.1%	0.0%	0.3%	0.8%	0.4%	1.0%	0.0%	3.2%	3.2%	3.2%	0.0%	100.0%
Road 21	21	70	69.5	N	0300-0400	116	48.8%	21.6%	0.1%	7.2%	2.6%	2.1%	4.8%	0.1%	0.0%	0.3%	0.8%	0.4%	1.2%	0.0%	3.2%	3.2%	3.2%	0.0%	100.0%
Road 21	21	70	69.5	N	0400-0500	150	47.8%	20.0%	0.1%	7.9%	2.8%	2.5%	4.9%	0.1%	0.1%	0.4%	0.8%	0.5%	1.2%	0.0%	3.1%	3.7%	3.7%	0.0%	100.0%
Road 21	21	70	69.1	N	0500-0600	258	46.6%	20.5%	0.1%	8.5%	3.0%	2.7%	5.2%	0.1%	0.1%	0.5%	0.9%	0.8%	1.3%	0.0%	3.1%	4.0%	2.8%	0.0%	100.0%
Road 21	21	70	69.0	N	0600-0700	552	45.3%	20.0%	0.1%	9.4%	3.3%	2.8%	6.1%	0.1%	0.1%	0.6%	1.0%	0.9%	1.4%	0.0%	3.1%	4.3%	3.2%	0.0%	100.0%
Road 21	21	70	65.8	N	0700-0800	1130	44.3%	19.3%	0.1%	9.6%	3.4%	3.0%	5.9%	0.1%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	3.1%	4.5%	2.8%	0.0%	100.0%
Road 21	21	70	66.2	N	0800-0900	1310	43.9%	18.6%	0.1%	10.4%	3.7%	2.9%	5.7%	0.1%	0.1%	0.7%	1.0%	0.7%	1.5%	0.0%	2.7%	2.9%	2.6%	0.0%	100.0%
Road 21	21	70	66.7	N	0900-1000	1123	43.8%	14.0%	0.1%	14.0%	5.0%	3.8%	5.1%	0.1%	0.1%	0.7%	1.0%	0.7%	1.5%	0.0%	4.3%	4.3%	3.2%	0.0%	100.0%
Road 21	21	70	66.1	N	1000-1100	993	40.0%	15.5%	0.2%	14.7%	5.3%	4.7%	9.2%	0.1%	0.1%	0.4%	0.7%	0.5%	1.0%	0.0%	2.6%	1.2%	3.8%	0.0%	100.0%
Road 21	21	70	66.3	N	1100-1200	940	40.0%	16.5%	0.2%	14.7%	5.3%	4.6%	8.0%	0.1%	0.1%	0.7%	0.4%	0.3%	0.6%	0.0%	2.7%	1.1%	3.8%	0.0%	100.0%
Road 21	21	70	66.4	N	1200-1300	648	39.2%	10.1%	0.2%	16.3%	6.8%	4.5%	8.8%	0.0%	0.0%	0.7%	0.5%	0.2%	0.4%	0.0%	2.7%	1.8%	3.8%	0.0%	100.0%
Road 21	21	70	67.0	N	1300-1400	685	37.7%	10.5%	0.2%	21.9%	7.5%	6.8%	13.3%	0.0%	0.1%	0.4%	0.4%	0.3%	0.6%	0.0%	4.0%	0.8%	5.5%	0.0%	100.0%
Road 21	21	70	66.9	N	1400-1500	711	28.1%	11.4%	0.2%	20.0%	7.2%	6.8%	13.3%	0.0%	0.1%	0.5%	0.8%	0.4%	0.9%	0.0%	4.1%	1.1%	5.4%	0.0%	100.0%
Road 21	21	70	66.8	N	1500-1600	733	27.8%	12.3%	0.2%	23.0%	7.6%	5.8%	11.5%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	4.6%	1.0%	4.9%	0.0%	100.0%
Road 21	21	70	66.8	N	1600-1700	743	31.0%	10.7%	0.2%	19.8%	6.8%	5.9%	11.7%	0.0%	0.1%	0.7%	0.8%	0.6%	1.0%	0.0%	4.9%	1.9%	4.9%	0.0%	100.0%
Road 21	21	70	66.8	N	1700-1800	786	36.7%	11.5%	0.2%	18.2%	6.5%	4.1%	8.1%	0.0%	0.1%	0.5%	0.6%	0.4%	1.0%	0.0%	5.0%	3.2%	3.9%	0.0%	100.0%
Road 21	21	70	66.8	N	1800-1900	772	49.6%	11.6%	0.1%	12.5%	4.5%	2.9%	5.1%	0.0%	0.0%	0.1%	0.5%	0.6%	1.3%	0.0%	5.7%	2.4%	3.2%	0.0%	100.0%
Road 21	21	70	67.0	N	1900-2000	588	50.5%	15.8%	0.1%	10.3%	3.6%	2.4%	3.7%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	6.8%	2.8%	2.8%	0.0%	100.0%
Road 21	21	70	66.3	N	2000-2100	461	46.2%	19.8%	0.1%	10.5%	3.8%	2.3%	4.5%	0.0%	0.0%	0.1%	0.6%	0.5%	1.0%	0.0%	7.1%	1.8%	2.0%	0.0%	100.0%
Road 21	21	70	66.3	N	2100-2200	460	47.4%	19.5%	0.1%	10.7%	3.8%	2.5%	4.8%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	6.2%	2.2%	2.1%	0.0%	100.0%
Road 21	21	70	69.4	N	2200-2300	440	47.4%	21.4%	0.1%	8.4%	3.0%	2.5%	4.8%	0.0%	0.0%	0.2%	0.3%	0.2%	0.4%	0.0%	6.8%	1.8%	2.0%	0.0%	100.0%
Road 21	21	70	69.7	N	2300-0000	335	45.2%	20.0%	0.1%	9.2%	3.3%	2.9%	5.7%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.1%	6.6%	2.0%	2.6%	0.0%	100.0%
Road 22	22	50	27.1	N	0000-0100	37	18.5%	8.3%	0.3%	29.0%	10.4%	9.2%	16.0%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.9%	4.7%	0.0%	0.0%	100.0%
Road 22	22	50	27.0	N	0100-0200	26	17.0%	9.4%	0.3%	30.7%	10.4%	9.2%	16.0%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.9%	4.4%	0.0%	0.0%	100.0%
Road 22	22	50	26.4	N	0200-0300	20	15.7%	7.0%	0.3%	30.6%	11.0%	9.6%	16.0%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.9%	1.0%	5.0%	0.0%	100.0%
Road 22	22	50	26.7	N	0300-0400	17	13.6%	6.5%	0.3%	31.3%	11.2%	9.8%	16.4%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	1.0%	5.1%	5.1%	0.0%	100.0%
Road 22	22	50	26.2	N	0400-0500	20	13.5%	6.1%	0.3%	31.0%	10.9%	10.2%	16.0%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	1.1%	5.0%	5.0%	0.0%	100.0%
Road 22	22	50	26.7	N	0500-0600	36	12.6%	5.5%	0.3%	32.5%	11.7%	12.0%	20.0%	0.0%	0.0%	0.1%	0.2%	0.2%	0.4%	0.0%	0.9%	1.1%	5.2%	0.0%	100.0%
Road 22	22	50	24.7	N	0600-0700	81	11.7%	5.1%	0.3%	33.1%	11.8%	10.3%	20.3%	0.0%	0.0%	0.1%	0.2%	0.2%	0.4%	0.0%	0.9%	1.1%	5.3%	0.0%	100.0%
Road 22	22	50	25.2	N	0700-0800	122	10.8%	3.5%	0.3%	36.3%	12.5%	10.8%	20.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.9%	1.1%	5.3%	0.0%	100.0%
Road 22	22	50	24.7	N	0800-0900	205	11.8%	3.8%	0.4%	35.3%	12.7%	9.9%	19.4%	0.0%	0.0%	0.2%	0.2%	0.2%	0.4%	0.0%	0.7%	0.7%	5.1%	0.0%	100.0%
Road 22	22	50	22.4	N	0900-1000	221	8.8%	3.0%	0.4%	37.9%	13.6%	10.3%	20.3%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.9%	0.3%	5.3%	0.0%	100.0%
Road 22	22	50	22.4	N	1000-1100	215	8.9%	3.0%	0.4%	38.2%	13.6%	11.1%	20.3%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.9%	0.3%	5.3%	0.0%	100.0%
Road 22	22	50	22.5	N	1100-1200	201	7.0%	2.9%	0.4%	36.4%	13.1%	11.4%	22.4%	0.0%	0.0%	0.1%	0.1%	0.0%	0.1%	0.0%	0.2%	0.2%	5.9%	0.0%	100.0%
Road 22	22	50	22.5	N	1200-1300	209	9.0%	3.5%	0.3%	33.1%	11.9%	11.9%	23.3%	0.0%	0.0%	0.1%	0.2%	0.1%	0.2%	0.0%	0.9%	0.3%	6.1%	0.0%	100.0%
Road 22	22	50	22.1	N	1300-1400	232	7.9%	3.1%	0.4%	36.1%	12.1%	11.2%	22.9%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.9%	0.3%	6.1%	0.0%	100.0%
Road 22	22	50	22.2	N	1400-1500	232	8.5%	3.4%	0.4%	34.2%	12.3%	11.6%	22.7%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.9%	0.3%	5.9%	0.0%	100.0%
Road 22	22	50	22.0	N	1500-1600	242	8.3%	3.3%	0.4%	38.8%	13.9%	9.8%	19.3%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.9%	0.3%	5.1%	0.0%	100.0%
Road 22	22	50	22.2	N	1600-1700	238	10.2%	3.4%	0.4%	38.3%	13.9%	10.2%	19.3%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.9%	0.3%	5.1%	0.0%	100.0%
Road 22	22	50	22.6	N	1700-1800	214	13.3%	4.2%	0.4%	37.3%	13.4%	8.4%	16.6%	0.0%	0.0%	0.2%	0.2%	0.2%	0.4%	0.0%	0.9%	1.1%	4.3%	0.0%	100.0%
Road 22	22	50	23.6	N	1800-1900	164	23.3%	5.4%	0.3%	33.0%	11.8%	6.9%	13.5%	0.0%	0.0%	0.0%	0.4%	0.3%	0.6%	0.0%	0.9%	1.1%	3.5%	0.0%	100.0%
Road 22	22	50	23.7	N	1900-2000	113	28.0%	10.4%	0.3%	32.0%	11.8%	6.9%	13.5%	0.0%	0.0%	0.0%	0.4%	0.3%	0.6%	0.0%	0.9%	1.1%	3.5%	0.0%	100.0%
Road 22	22	50	23.0	N	2000-2100	89	23.5%	10.0%	0.3%	30.2%	10.8%	6.6%	13.1%	0.0%	0.0%	0.0%	0.3%	0.2%	0.5%	0.0%	0.9%	1.1%	3.4%	0.0%	100.0%
Road 22	22	50	24.7	N	2100-2200	91	23.5%	9.7%	0.3%	30.0%	10.8%	6.9%	13.6%	0.0%	0.0%	0.0%	0.2%	0.1%	0.3%	0.0%	0.9%	1.1%	3.5%	0.0%	100.0%
Road 22	22	50	24.8	N	2200-2300	92	24.8%	9.6%	0.3%	30.1%	10.8%	6.7%	13.6%	0.0%	0.0%	0.0%	0.2%	0.1%	0.3%	0.0%	0.9%	1.1%	3.5%	0.0%	100.0%
Road 22	22	50	25.1	N	2300-0000	65	23.1%	10.4%	0.3%	26.2%	9.4%	8.3%	16.3%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.9%	1.0%	4.3%	0.0%	100.0%

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Traffic Data / Modeling Parameters For AERMOD (Year 2028)																									
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Road/Broad Category (Y/N)	Hour	Total Vehicles (Total Veh)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=3.5t	04 - Light Goods Vehicles 3.5-5.5t	05 - Light Goods Vehicles 5.5-7.5t	06 - Medium Goods Vehicles >7.5t	07 - Medium Goods Vehicles >12t	08 - Public Buses	09 - Private Light >=3.5t	10 - Private Light >=3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 1st - 24t	13 - Non-franchised Bus 1st - 24t	14 - Franchised Bus Single	15 - Franchised Bus Double	16 - Motorcycles	17 - Franchised Goods Vehicles	18 - Non-franchised Bus >24t	Total
							PC	TAXI	LGV3	LGV4	LGV6	HGV7	HGV8	PLB	PV4	PV5	NFB6	NFB7	NFB8	FBS0	FBD0	MC	HGV9	NFB9	
Road 27	27	50	28.7	N	0000-0100	16	8.6%	3.8%	0.4%	35.2%	12.6%	11.1%	21.9%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Road 27	27	50	28.7	N	0100-0200	11	3.7%	1.5%	0.2%	23.6%	11.3%	11.3%	22.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Road 27	27	50	29.3	N	0200-0300	9	7.1%	3.2%	0.4%	36.1%	13.0%	11.4%	22.3%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.4%	5.8%	0.0%	100.0%
Road 27	27	50	29.4	N	0300-0400	7	6.5%	2.9%	0.4%	36.6%	13.3%	11.3%	22.9%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.5%	5.9%	0.0%	100.0%
Road 27	27	50	29.5	N	0400-0500	10	3.0%	2.6%	0.3%	32.0%	12.7%	11.3%	22.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Road 27	27	50	28.7	N	0500-0600	16	5.5%	4.4%	0.4%	37.1%	13.3%	11.6%	22.9%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.5%	6.0%	0.0%	100.0%
Road 27	27	50	26.9	N	0600-0700	36	5.1%	2.2%	0.4%	37.3%	13.4%	11.7%	23.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.5%	6.0%	0.0%	100.0%
Road 27	27	50	24.7	N	0700-0800	78	4.7%	2.0%	0.4%	37.6%	13.5%	11.8%	23.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.5%	6.0%	0.0%	100.0%
Road 27	27	50	24.7	N	0800-0900	104	4.1%	1.8%	0.4%	37.8%	13.6%	11.9%	23.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.5%	6.0%	0.0%	100.0%
Road 27	27	50	24.2	N	0900-1000	104	3.4%	1.2%	0.4%	41.0%	14.7%	11.2%	22.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.1%	5.7%	10.0%	100.0%
Road 27	27	50	24.2	N	1000-1100	102	2.8%	1.1%	0.4%	38.7%	13.9%	12.3%	24.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	6.3%	0.0%	100.0%
Road 27	27	50	24.2	N	1100-1200	99	2.8%	1.2%	0.4%	39.0%	14.0%	12.3%	24.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	6.3%	0.0%	100.0%
Road 27	27	50	24.3	N	1200-1300	95	2.3%	0.9%	0.4%	38.9%	13.3%	12.3%	28.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	6.8%	0.0%	100.0%
Road 27	27	50	24.1	N	1300-1400	108	2.3%	0.8%	0.4%	39.7%	14.2%	12.3%	24.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	6.3%	0.0%	100.0%
Road 27	27	50	24.1	N	1400-1500	102	2.2%	0.9%	0.4%	39.0%	14.2%	12.3%	24.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	6.3%	0.0%	100.0%
Road 27	27	50	24.1	N	1500-1600	111	2.1%	0.8%	0.4%	43.0%	15.4%	10.9%	21.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	6.5%	0.0%	100.0%
Road 27	27	50	24.2	N	1600-1700	102	2.6%	0.9%	0.4%	39.1%	14.0%	12.2%	24.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.1%	6.3%	0.0%	100.0%
Road 27	27	50	24.2	N	1700-1800	93	2.3%	1.0%	0.4%	43.0%	15.4%	10.9%	21.4%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	6.3%	0.0%	100.0%
Road 27	27	50	25.0	N	1800-1900	63	6.9%	1.6%	0.5%	43.3%	15.6%	9.0%	17.8%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.3%	4.6%	0.0%	100.0%
Road 27	27	50	26.6	N	1900-2000	41	8.2%	2.6%	0.4%	40.2%	14.4%	9.6%	16.9%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.3%	4.9%	0.0%	100.0%
Road 27	27	50	28.1	N	2000-2100	33	7.4%	3.1%	0.4%	44.0%	16.2%	9.2%	20.9%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.3%	6.7%	0.0%	100.0%
Road 27	27	50	27.2	N	2100-2200	34	7.3%	3.0%	0.4%	41.5%	14.8%	9.4%	18.6%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.3%	4.9%	0.0%	100.0%
Road 27	27	50	27.6	N	2200-2300	29	8.1%	3.3%	0.4%	35.4%	12.7%	11.3%	22.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.3%	5.8%	0.0%	100.0%
Road 27	27	50	28.5	N	2300-0000	24	10.2%	3.7%	0.4%	36.0%	12.9%	11.4%	22.4%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.3%	5.9%	0.0%	100.0%
Road 28	80	80	80.0	N	0000-0100	1499	50.6%	27.7%	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	48.7%	4.7%	2.8%	0.0%	100.0%
Road 28	80	80.0	80.0	N	0100-0200	928	49.1%	22.0%	0.1%	7.3%	2.6%	2.3%	4.5%	0.3%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	4.7%	2.8%	2.4%	0.0%	100.0%
Road 28	80	80.0	80.0	N	0200-0300	686	47.6%	21.2%	0.1%	7.8%	2.8%	2.5%	4.8%	0.3%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	4.6%	3.0%	2.9%	0.0%	100.0%
Road 28	80	80.0	80.0	N	0300-0400	549	45.0%	22.0%	0.1%	7.8%	2.8%	2.5%	4.8%	0.3%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	4.6%	3.2%	2.9%	0.0%	100.0%
Road 28	80	80.0	80.0	N	0400-0500	606	45.0%	19.9%	0.1%	9.0%	3.2%	2.8%	5.5%	0.3%	0.1%	0.7%	0.5%	1.1%	0.0%	4.5%	3.5%	3.3%	0.0%	100.0%	
Road 28	80	80.0	80.0	N	0500-0600	1051	44.1%	19.4%	0.1%	8.8%	3.5%	3.0%	5.9%	0.3%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	4.5%	3.8%	2.6%	0.0%	100.0%
Road 28	80	80.0	80.0	N	0600-0700	1218	42.1%	18.7%	0.1%	8.8%	3.5%	3.0%	5.9%	0.3%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	4.5%	3.8%	2.6%	0.0%	100.0%
Road 28	80	80.0	80.0	N	0700-0800	4622	41.7%	18.2%	0.1%	10.8%	3.9%	3.4%	6.6%	0.3%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	4.3%	4.3%	2.7%	0.0%	100.0%
Road 28	80	48.3	N	0800-0900	5359	46.5%	14.9%	0.1%	11.7%	4.2%	3.3%	6.4%	0.3%	0.1%	0.6%	0.9%	0.6%	1.4%	0.3%	3.8%	2.7%	2.5%	0.0%	100.0%	
Road 28	80	61.5	N	0900-1000	4665	51.5%	14.6%	0.1%	12.4%	4.5%	3.5%	6.5%	0.3%	0.1%	0.6%	0.9%	0.6%	1.4%	0.3%	3.8%	2.7%	2.5%	0.0%	100.0%	
Road 28	80	69.5	N	1000-1100	4100	36.9%	14.3%	0.2%	16.3%	5.8%	5.2%	10.2%	0.3%	0.1%	0.4%	0.6%	0.4%	0.9%	0.0%	3.6%	1.1%	3.7%	0.0%	100.0%	
Road 28	80	71.2	N	1100-1200	3927	36.9%	15.2%	0.2%	16.2%	5.8%	5.2%	10.2%	0.3%	0.1%	0.7%	0.4%	0.3%	0.6%	0.0%	3.7%	1.0%	3.7%	0.0%	100.0%	
Road 28	80	80.0	80.0	N	1200-1300	3796	37.9%	15.2%	0.2%	16.2%	5.8%	5.2%	10.2%	0.3%	0.1%	0.7%	0.4%	0.3%	0.6%	0.0%	3.7%	1.0%	3.7%	0.0%	100.0%
Road 28	80	80.0	80.0	N	1300-1400	2335	36.0%	15.9%	0.2%	17.0%	6.1%	5.3%	10.3%	0.4%	0.1%	0.5%	0.5%	0.4%	0.8%	0.0%	3.1%	1.1%	4.5%	0.0%	100.0%
Road 28	80	80.0	80.0	N	1400-1500	2457	36.6%	14.8%	0.2%	15.3%	5.5%	5.2%	10.2%	0.4%	0.1%	0.6%	0.7%	0.5%	1.1%	0.3%	3.0%	1.4%	4.4%	0.0%	100.0%
Road 28	80	80.0	80.0	N	1500-1600	2520	36.3%	14.6%	0.2%	17.6%	6.3%	4.5%	8.8%	0.4%	0.1%	0.6%	0.7%	0.5%	1.1%	0.3%	3.0%	1.3%	4.0%	0.0%	100.0%
Road 28	80	80.0	80.0	N	1600-1700	2621	39.15%	15.8%	0.2%	18.0%	6.7%	4.7%	8.8%	0.4%	0.1%	0.6%	0.7%	0.5%	1.1%	0.3%	3.4%	1.4%	4.4%	0.0%	100.0%
Road 28	80	79.6	N	1700-1800	2877	45.1%	14.1%	0.1%	13.1%	4.7%	3.0%	5.8%	0.4%	0.1%	0.6%	0.8%	0.5%	1.2%	0.3%	3.5%	3.9%	3.0%	0.0%	100.0%	
Road 28	80	79.8	N	1800-1900	3003	57.1%	13.4%	0.1%	8.5%	3.1%	1.8%	3.5%	0.4%	0.0%	0.1%	1.0%	0.7%	1.5%	0.0%	3.7%	2.7%	2.3%	0.0%	100.0%	
Road 28	80	80.0	80.0	N	1900-2000	2314	51.2%	7.9%	0.1%	12.1%	4.7%	3.0%	5.8%	0.4%	0.1%	0.6%	0.8%	0.5%	1.2%	0.3%	4.4%	2.7%	4.0%	0.0%	100.0%
Road 28	80	80.0	80.0	N	2000-2100	1823	52.5%	22.3%	0.1%	7.0%	2.5%	1.5%	3.0%	0.5%	0.0%	0.1%	0.7%	0.7%	1.1%	0.0%	4.6%	2.1%	2.3%	0.0%	100.0%
Road 28	80	81.0	N	2100-2200	1818	53.5%	22.2%	0.1%	7.1%	2.6%	1.6%	3.2%	0.5%	0.0%	0.1%	0.7%	0.8%	1.0%	0.0%	4.4%	2.4%	1.4%	0.0%	100.0%	
Road 28	80	80.0	80.0	N	2200-2300	1765	53.5%	22.5%	0.1%	7.1%	2.6%	1.6%	3.2%	0.5%	0.0%	0.1%	0.7%	0.8%	1.0%	0.0%	4.4%	2.5%	1.0%	0.0%	100.0%
Road 28	80	80.0	80.0	N	2300-0000	1324	53.1%	23.5%	0.1%	5.1%	2.2%	1.9%	3.8%	0.5%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	4.3%	2.3%	1.8%	0.0%	100.0%

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Traffic Data / Modeling Parameters For AERMOD (Year 2028)																											
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Car	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles <=5t	07 - Medium Goods Vehicles 5-24t	08 - Public Light Bus	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchised Bus Single Deck	15 - Franchised Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total		
Road 33	33	70	70.0	N	0000-0100	585	50.3%	22.6%	0.1%	5.6%	2.0%	1.8%	3.3%	0.2%	0.0%	0.2%	0.5%	0.2%	0.7%	0.0%	3.7%	2.5%	5.9%	0.0%	0.0%	100.0%	
Road 33	33	70	70.0	N	0100-0200	393	47.9%	21.4%	0.1%	6.0%	2.1%	1.9%	3.7%	0.2%	0.0%	0.2%	0.5%	0.2%	0.4%	0.5%	3.7%	2.5%	5.9%	0.0%	0.0%	100.0%	
Road 33	33	70	70.0	N	0200-0300	297	45.5%	20.3%	0.1%	6.3%	2.3%	2.0%	3.9%	0.2%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	3.5%	2.9%	10.9%	0.0%	0.0%	100.0%	
Road 33	33	70	70.0	N	0300-0400	242	43.1%	19.2%	0.1%	6.6%	2.4%	2.1%	4.1%	0.2%	0.0%	0.3%	0.6%	0.4%	1.0%	0.0%	3.3%	3.0%	13.2%	0.0%	0.0%	100.0%	
Road 33	33	70	70.0	N	0400-0500	264	42.7%	18.9%	0.1%	7.2%	2.6%	2.3%	4.4%	0.2%	0.1%	0.4%	0.7%	0.3%	1.1%	0.0%	3.3%	3.3%	12.3%	0.0%	0.0%	100.0%	
Road 33	33	70	70.0	N	0500-0600	438	43.7%	19.2%	0.1%	8.1%	2.9%	2.5%	5.0%	0.2%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	3.4%	3.7%	8.0%	0.0%	0.0%	100.0%	
Road 33	33	70	70.0	N	0600-0700	911	44.2%	19.3%	0.1%	8.9%	3.2%	2.8%	5.5%	0.2%	0.1%	0.6%	0.9%	0.8%	1.4%	0.0%	3.5%	4.1%	4.7%	0.0%	0.0%	100.0%	
Road 33	33	70	70.0	N	0700-0800	1907	41.8%	18.2%	0.1%	9.1%	3.3%	2.9%	6.0%	0.2%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	3.4%	4.3%	7.4%	0.0%	0.0%	100.0%	
Road 33	33	70	70.0	N	0800-0900	2196	46.9%	15.0%	0.1%	10.0%	3.6%	2.8%	5.5%	0.1%	0.1%	0.6%	0.9%	0.8%	1.4%	0.0%	3.0%	2.7%	6.6%	0.0%	0.0%	100.0%	
Road 33	33	70	70.0	N	0900-1000	1888	40.8%	14.8%	0.1%	13.4%	4.8%	3.7%	7.2%	0.2%	0.1%	0.4%	0.7%	0.8%	1.0%	0.0%	3.0%	1.6%	7.8%	0.0%	0.0%	100.0%	
Road 33	33	70	70.0	N	1000-1100	1689	37.5%	14.6%	0.1%	14.0%	5.0%	4.4%	8.7%	0.2%	0.1%	0.4%	0.6%	0.4%	0.9%	0.0%	2.9%	1.1%	9.0%	0.0%	0.0%	100.0%	
Road 33	33	70	70.0	N	1100-1200	1603	37.3%	15.4%	0.1%	13.9%	5.0%	4.3%	8.5%	0.2%	0.1%	0.7%	0.4%	0.3%	0.6%	0.0%	2.9%	1.0%	9.3%	0.0%	0.0%	100.0%	
Road 33	33	70	70.0	N	1200-1300	1198	36.6%	11.8%	0.2%	16.7%	5.6%	5.6%	11.1%	0.0%	0.1%	0.5%	0.5%	0.4%	0.8%	0.0%	4.0%	0.9%	12.3%	0.0%	0.0%	100.0%	
Road 33	33	70	70.0	N	1300-1400	1251	28.8%	11.1%	0.2%	18.2%	6.8%	5.6%	11.1%	0.0%	0.1%	0.4%	0.4%	0.3%	0.6%	0.0%	3.7%	0.9%	11.9%	0.0%	0.0%	100.0%	
Road 33	33	70	70.0	N	1400-1500	1300	29.7%	12.0%	0.2%	16.8%	6.0%	5.6%	11.0%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	3.8%	1.1%	11.6%	0.0%	0.0%	100.0%	
Road 33	33	70	70.0	N	1500-1600	1336	29.4%	11.8%	0.2%	19.1%	6.9%	4.8%	9.5%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	3.7%	1.1%	11.0%	0.0%	0.0%	100.0%	
Road 33	33	70	70.0	N	1600-1700	1370	32.4%	11.2%	0.2%	16.6%	5.6%	4.9%	9.6%	0.0%	0.1%	0.8%	1.0%	0.7%	1.5%	0.0%	4.3%	1.5%	10.8%	0.0%	0.0%	100.0%	
Road 33	33	70	70.0	N	1700-1800	1467	31.1%	10.2%	0.2%	16.0%	5.3%	3.2%	8.6%	0.0%	0.1%	0.5%	0.7%	0.5%	1.0%	0.0%	4.6%	3.2%	9.4%	0.0%	0.0%	100.0%	
Road 33	33	70	70.0	N	1800-1900	1483	49.6%	11.7%	0.1%	9.9%	3.6%	2.1%	4.1%	0.0%	0.0%	0.1%	0.9%	0.6%	1.3%	0.0%	5.0%	2.4%	8.7%	0.0%	0.0%	100.0%	
Road 33	33	70	70.0	N	1900-2000	1095	52.3%	16.4%	0.1%	8.1%	2.9%	1.9%	3.8%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	6.2%	1.9%	3.7%	0.0%	0.0%	100.0%	
Road 33	33	70	70.0	N	2000-2100	862	47.6%	20.2%	0.1%	8.5%	3.1%	1.9%	3.7%	0.0%	0.0%	0.1%	0.7%	0.5%	1.0%	0.0%	6.5%	1.9%	4.4%	0.0%	0.0%	100.0%	
Road 33	33	70	70.0	N	2100-2200	859	48.6%	20.3%	0.1%	9.7%	3.1%	2.0%	3.9%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	5.7%	2.2%	4.4%	0.0%	0.0%	100.0%	
Road 33	33	70	70.0	N	2200-2300	828	48.6%	22.0%	0.1%	6.8%	2.4%	2.1%	4.2%	0.0%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.1%	6.2%	1.9%	4.7%	0.0%	0.0%	100.0%
Road 33	33	70	70.0	N	2300-0000	631	46.7%	21.1%	0.1%	7.4%	2.6%	2.3%	4.6%	0.0%	0.0%	0.1%	0.4%	0.2%	0.5%	0.0%	6.0%	2.1%	5.8%	0.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	0000-0100	551	44.0%	19.8%	0.1%	10.6%	3.3%	3.3%	5.0%	0.0%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	3.6%	2.2%	3.7%	0.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	0100-0200	369	42.0%	18.8%	0.1%	11.3%	4.1%	3.6%	7.0%	0.0%	0.0%	0.2%	0.5%	0.3%	0.7%	0.0%	3.4%	2.4%	4.8%	0.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	0200-0300	277	40.1%	17.9%	0.1%	11.9%	4.3%	3.8%	7.4%	0.0%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	3.3%	2.5%	5.9%	0.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	0300-0400	225	38.3%	17.0%	0.1%	12.6%	4.5%	4.0%	7.8%	0.0%	0.0%	0.3%	0.6%	0.4%	0.8%	0.0%	3.2%	2.7%	6.1%	0.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	0400-0500	250	37.1%	16.4%	0.1%	13.4%	4.8%	4.2%	8.3%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	3.1%	2.9%	6.6%	0.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	0500-0600	431	36.4%	16.0%	0.2%	14.4%	5.2%	4.5%	8.9%	0.0%	0.1%	0.4%	0.7%	0.5%	1.0%	0.0%	3.1%	3.1%	4.9%	0.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	0600-0700	931	35.5%	15.6%	0.2%	15.3%	5.5%	4.8%	9.4%	0.0%	0.1%	0.5%	0.7%	0.8%	1.1%	0.0%	3.1%	3.3%	3.6%	0.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	0700-0800	1440	33.8%	14.7%	0.2%	16.9%	5.7%	4.0%	9.6%	0.0%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	3.0%	3.5%	4.7%	0.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	0800-0900	2258	37.5%	12.0%	0.2%	17.2%	6.2%	4.8%	9.4%	0.0%	0.1%	0.5%	0.7%	0.5%	1.1%	0.0%	2.6%	2.2%	4.3%	0.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	0900-1000	2083	30.6%	11.1%	0.2%	21.6%	7.7%	5.9%	11.6%	0.0%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	2.4%	1.2%	5.1%	0.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	1000-1100	1954	27.4%	10.6%	0.2%	21.9%	7.9%	7.0%	13.7%	0.0%	0.0%	0.3%	0.5%	0.3%	0.7%	0.0%	2.3%	0.8%	5.6%	0.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	1100-1200	1799	27.4%	11.3%	0.2%	21.9%	7.9%	6.8%	13.4%	0.0%	0.1%	0.5%	0.3%	0.2%	0.4%	0.0%	2.3%	0.8%	5.9%	0.0%	0.0%	100.0%	
Road 34	34	80	79.7	N	1200-1300	2590	36.3%	14.0%	0.1%	14.3%	5.1%	5.1%	10.1%	0.4%	0.1%	0.6%	0.6%	0.4%	0.9%	0.0%	6.4%	1.1%	4.3%	0.0%	0.0%	100.0%	
Road 34	34	80	79.0	N	1300-1400	2685	34.5%	13.3%	0.1%	16.8%	6.0%	5.2%	10.2%	0.3%	0.1%	0.5%	0.5%	0.3%	0.8%	0.0%	6.6%	1.3%	4.2%	0.0%	0.0%	100.0%	
Road 34	34	80	78.1	N	1400-1500	2814	35.1%	14.2%	0.1%	15.4%	5.4%	5.1%	10.0%	0.3%	0.1%	0.6%	0.7%	0.3%	1.1%	0.0%	6.0%	1.3%	4.1%	0.0%	0.0%	100.0%	
Road 34	34	80	77.8	N	1500-1600	2895	34.8%	14.0%	0.2%	17.4%	6.3%	4.4%	8.7%	0.3%	0.1%	0.6%	0.7%	0.5%	1.1%	0.0%	5.9%	1.3%	3.7%	0.0%	0.0%	100.0%	
Road 34	34	80	76.9	N	1600-1700	3019	37.8%	13.0%	0.1%	14.0%	5.0%	4.4%	8.6%	0.3%	0.1%	0.9%	1.1%	0.8%	1.7%	0.0%	6.7%	1.8%	3.7%	0.0%	0.0%	100.0%	
Road 34	34	80	76.1	N	1700-1800	3313	43.2%	13.5%	0.1%	12.9%	4.8%	2.9%	5.8%	0.4%	0.1%	0.6%	0.8%	0.5%	1.2%	0.0%	6.9%	3.7%	2.8%	0.0%	0.0%	100.0%	
Road 34	34	80	76.2	N	1800-1900	3457	54.7%	12.9%	0.1%	8.4%	3.0%	1.7%	3.4%	0.0%	0.1%	1.0%	0.7%	1.5%	0.0%	7.4%	2.6%	2.1%	0.0%	0.0%	100.0%		
Road 34	34	80	80.0	N	1900-2000	2704	54.4%	17.0%	0.1%	6.5%	2.3%	1.5%	3.0%	0.4%	0.0%	0.1%	0.8%	0.8%	1.2%	0.0%	8.6%	2.9%	1.2%	0.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	2000-2100	2117	51.1%	21.2%	0.1%	6.8%	2.5%	1.5%	3.0%	0.5%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	9.1%	2.0%	1.3%	0.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	2100-2200	2100	51.1%	21.1%	0.1%	7.0%	2.5%	1.6%	3.2%	0.4%	0.0%	0.1%	0.4%	0.2%	0.5%	0.0%	8.0%	2.3%	1.4%	0.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	2200-2300	2034	50.9%	23.0%	0.1%	5.4%	1.9%	1.7%	3.4%	0.4%	0.0%	0.1%	0.3%	0.2%	0.5%	0.1%	8.7%	2.0%	1.7%	0.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	2300-0000	1533	49.8%	22.3%	0.1%	6.0%	2.2%	1.9%	3.7%	0.4%	0.0%	0.1%	0.4%	0.3%	0.6%	0.1%	8.5%	2.2%	1.7%	0.0%	0.0%	100.0%	

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Traffic Data / Modeling Parameters For AERMOD (Year 2028)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles <=5t	07 - Medium Goods Vehicles 5-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus<=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchise d Bus Single Deck	15 - Franchise d Bus Double Deck	16 - Motorcycl	17 - Heavy Goods Vehicles>24t	18 - Non-franchised Bus >24t	Total	
							PC	TAXI	LGV3	LGV4	LGV6	HGV7	HGV8	PLB	PV4	PV5	NFB6	NFB7	NFB8	FBSDD	FBSDD	MC	HGV9	NFB9		
Road 41	41	70	70.0	N	0000-0100	140	38.7%	17.4%	0.1%	0.2%	2.2%	2.8%	5.1%	0.7%	0.0%	0.1%	0.4%	0.2%	0.5%	0.0%	0.2%	0.0%	0.1%	0.2%	100.0%	
Road 41	41	70	70.0	N	0100-0200	102	34.0%	15.2%	0.1%	0.0%	2.0%	2.5%	5.0%	0.7%	0.0%	0.2%	0.4%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 41	41	70	70.0	N	0200-0300	83	30.0%	13.4%	0.1%	0.7%	2.8%	2.5%	4.9%	0.6%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.0%	1.9%	34.6%	0.0%	100.0%	
Road 41	41	70	70.0	N	0300-0400	72	26.8%	11.9%	0.1%	0.7%	2.8%	2.4%	4.8%	0.5%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.0%	1.9%	30.6%	0.0%	100.0%	
Road 41	41	70	70.0	N	0400-0500	77	26.9%	11.9%	0.1%	0.5%	3.1%	2.7%	5.3%	0.6%	0.0%	0.3%	0.4%	0.3%	0.7%	0.0%	0.0%	2.1%	37.2%	0.0%	100.0%	
Road 41	41	70	70.0	N	0500-0600	114	30.7%	13.5%	0.1%	10.7%	3.8%	3.3%	6.6%	0.7%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	0.0%	2.6%	25.8%	0.0%	100.0%	
Road 41	41	70	70.0	N	0600-0700	217	34.0%	14.9%	0.1%	12.9%	4.8%	4.0%	7.9%	0.6%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	0.0%	3.2%	14.8%	0.0%	100.0%	
Road 41	41	70	70.0	N	0700-0800	495	29.3%	12.9%	0.1%	12.2%	4.4%	3.8%	7.5%	0.7%	0.1%	0.4%	0.7%	0.5%	1.0%	0.0%	0.0%	3.0%	23.4%	0.0%	100.0%	
Road 41	41	70	70.0	N	0800-0900	523	33.6%	10.7%	0.1%	13.5%	4.9%	3.8%	7.4%	0.5%	0.1%	0.5%	0.7%	0.9%	1.0%	0.0%	0.0%	2.0%	20.8%	0.0%	100.0%	
Road 41	41	70	70.0	N	0900-1000	521	27.2%	9.9%	0.2%	16.9%	6.1%	4.6%	0.0%	0.6%	0.0%	0.3%	0.5%	0.3%	0.7%	0.0%	0.0%	1.1%	22.7%	0.0%	100.0%	
Road 41	41	70	70.0	N	1000-1100	483	24.0%	9.2%	0.2%	16.9%	6.1%	5.4%	10.6%	0.6%	0.0%	0.3%	0.4%	0.3%	0.6%	0.0%	0.0%	0.7%	24.7%	0.0%	100.0%	
Road 41	41	70	70.0	N	1100-1200	462	23.8%	9.8%	0.2%	16.7%	6.0%	5.2%	10.2%	0.6%	0.1%	0.4%	0.2%	0.2%	0.4%	0.0%	0.0%	0.7%	25.6%	0.0%	100.0%	
Road 41	41	70	70.0	N	1200-1300	418	26.2%	10.1%	0.1%	13.6%	4.9%	4.9%	9.6%	0.6%	0.1%	0.4%	0.4%	0.3%	0.7%	0.0%	0.0%	0.8%	27.9%	0.0%	100.0%	
Road 41	41	70	70.0	N	1300-1400	438	24.8%	9.6%	0.2%	15.9%	5.7%	4.9%	9.7%	0.0%	0.0%	0.4%	0.4%	0.2%	0.5%	0.0%	0.0%	0.8%	26.9%	0.0%	100.0%	
Road 41	41	70	70.0	N	1400-1500	488	25.7%	10.4%	0.2%	14.8%	5.2%	4.9%	9.7%	0.0%	0.1%	0.4%	0.5%	0.4%	0.8%	0.0%	0.0%	1.0%	26.2%	0.0%	100.0%	
Road 41	41	70	70.0	N	1500-1600	458	25.6%	10.3%	0.2%	16.8%	6.1%	4.3%	8.4%	0.0%	0.1%	0.4%	0.5%	0.4%	0.8%	0.0%	0.0%	0.9%	25.3%	0.0%	100.0%	
Road 41	41	70	70.0	N	1600-1700	466	28.5%	9.8%	0.1%	13.9%	5.0%	4.3%	8.5%	0.0%	0.1%	0.7%	0.8%	0.6%	1.3%	0.0%	0.0%	1.3%	25.0%	0.0%	100.0%	
Road 41	41	70	70.0	N	1700-1800	602	30.0%	0.1%	10.3%	4.8%	3.0%	5.9%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	0.0%	2.9%	23.1%	0.0%	100.0%		
Road 41	41	70	70.0	N	1800-1900	494	44.5%	10.5%	0.1%	0.9%	5.2%	3.3%	1.9%	3.7%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	0.0%	2.1%	22.4%	0.0%	100.0%
Road 41	41	70	70.0	N	1900-2000	326	52.4%	16.4%	0.1%	8.2%	3.0%	2.0%	3.9%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	0.0%	1.9%	9.5%	0.0%	100.0%	
Road 41	41	70	70.0	N	2000-2100	260	47.1%	20.0%	0.1%	8.5%	3.1%	1.9%	3.7%	0.0%	0.0%	0.1%	0.7%	0.5%	1.0%	0.0%	0.0%	1.9%	11.5%	0.0%	100.0%	
Road 41	41	70	70.0	N	2100-2200	261	47.1%	18.7%	0.1%	9.0%	3.1%	2.0%	3.9%	0.0%	0.0%	0.1%	0.7%	0.5%	1.0%	0.0%	0.0%	2.2%	11.6%	0.0%	100.0%	
Road 41	41	70	70.0	N	2200-2300	251	47.0%	21.7%	0.1%	6.7%	2.4%	2.1%	4.2%	0.0%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.0%	1.8%	12.1%	0.0%	100.0%
Road 41	41	70	70.0	N	2300-0000	197	44.9%	20.2%	0.1%	7.2%	2.8%	2.3%	4.5%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.0%	2.0%	15.2%	0.0%	100.0%	
Road 42	42	50	47.3	N	0000-0100	98	40.1%	16.0%	0.0%	4.8%	1.7%	1.5%	0.0%	0.0%	0.0%	0.0%	0.1%	0.4%	0.3%	0.8%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 42	42	50	47.8	N	0100-0200	73	34.4%	15.4%	0.0%	4.4%	1.6%	1.4%	2.7%	0.9%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.0%	2.0%	35.7%	0.0%	100.0%	
Road 42	42	50	48.1	N	0200-0300	61	29.8%	13.3%	0.0%	4.3%	1.5%	1.3%	2.6%	0.8%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.0%	1.9%	19.4%	0.0%	100.0%	
Road 42	42	50	48.2	N	0300-0400	54	26.2%	11.6%	0.0%	4.1%	1.5%	1.3%	2.6%	0.7%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.0%	1.8%	46.6%	0.0%	100.0%	
Road 42	42	50	48.1	N	0400-0500	57	26.8%	11.8%	0.0%	4.6%	1.7%	1.5%	2.9%	0.8%	0.0%	0.3%	0.4%	0.3%	0.7%	0.0%	0.0%	2.1%	46.2%	0.0%	100.0%	
Road 42	42	50	47.6	N	0500-0600	79	32.3%	14.2%	0.1%	6.1%	2.2%	1.9%	3.8%	0.0%	0.4%	0.6%	0.4%	0.9%	0.0%	0.0%	0.2%	2.8%	33.3%	0.0%	100.0%	
Road 42	42	50	46.2	N	0600-0700	142	38.1%	16.7%	0.1%	7.9%	2.8%	2.5%	4.8%	1.2%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	0.0%	3.6%	19.4%	0.0%	100.0%	
Road 42	42	50	46.1	N	0700-0800	127	33.4%	13.3%	0.1%	7.3%	3.4%	3.1%	5.2%	1.0%	0.1%	0.5%	0.7%	0.5%	1.1%	0.0%	0.0%	3.3%	20.6%	0.0%	100.0%	
Road 42	42	50	39.5	N	0800-0900	374	36.9%	11.8%	0.1%	8.1%	2.9%	2.3%	4.5%	0.8%	0.1%	0.5%	0.4%	0.1%	0.0%	0.0%	0.2%	27.6%	0.0%	100.0%		
Road 42	42	50	39.9	N	0900-1000	338	30.9%	11.2%	0.1%	10.5%	3.8%	2.8%	5.6%	0.9%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	0.0%	1.2%	30.9%	0.0%	100.0%	
Road 42	42	50	40.3	N	1000-1100	308	27.6%	10.7%	0.1%	10.6%	3.8%	3.4%	6.6%	0.9%	0.0%	0.3%	0.5%	0.3%	0.7%	0.0%	0.0%	0.8%	33.8%	0.0%	100.0%	
Road 42	42	50	40.6	N	1100-1200	297	27.0%	11.1%	0.1%	10.3%	3.7%	3.2%	6.4%	0.9%	0.1%	0.5%	0.3%	0.2%	0.4%	0.0%	0.0%	0.8%	34.9%	0.0%	100.0%	
Road 42	42	50	39.7	N	1200-1300	329	23.2%	8.9%	0.1%	13.6%	4.9%	4.9%	9.6%	0.0%	0.0%	0.4%	0.4%	0.3%	0.6%	0.0%	0.0%	0.7%	32.5%	0.0%	100.0%	
Road 42	42	50	39.4	N	1300-1400	342	21.9%	8.4%	0.2%	16.8%	5.7%	4.9%	9.6%	0.0%	0.0%	0.3%	0.3%	0.5%	0.5%	0.0%	0.0%	0.7%	31.4%	0.0%	100.0%	
Road 42	42	50	39.3	N	1400-1500	322	22.8%	9.2%	0.2%	14.8%	5.2%	4.9%	9.7%	0.0%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	0.0%	0.9%	30.6%	0.0%	100.0%	
Road 42	42	50	39.3	N	1500-1600	360	22.7%	9.1%	0.2%	16.9%	6.1%	4.3%	8.4%	0.0%	0.1%	0.4%	0.5%	0.4%	0.8%	0.0%	0.0%	0.8%	26.0%	0.0%	100.0%	
Road 42	42	50	39.2	N	1600-1700	364	25.4%	8.8%	0.1%	14.0%	5.0%	4.4%	8.6%	0.0%	0.1%	0.6%	0.7%	0.5%	1.1%	0.0%	0.0%	1.2%	29.4%	0.0%	100.0%	
Road 42	42	50	39.2	N	1700-1800	380	30.4%	9.0%	0.1%	13.6%	4.9%	3.1%	0.0%	0.0%	0.1%	0.4%	0.5%	0.4%	0.8%	0.0%	0.0%	2.6%	27.5%	0.0%	100.0%	
Road 42	42	50	39.6	N	1800-1900	377	40.6%	9.5%	0.1%	9.3%	3.3%	1.9%	3.8%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	0.0%	1.9%	27.2%	0.0%	100.0%	
Road 42	42	50	44.2	N	1900-2000	239	49.8%	15.6%	0.1%	8.8%	3.2%	2.1%	4.1%	0.0%	0.0%	0.1%	0.8%	0.5%	1.1%	0.0%	0.0%	1.8%	11.8%	0.0%	100.0%	
Road 42	42	50	44.2	N	2000-2100	240	49.8%	15.6%	0.1%	8.8%	3.2%	2.0%	3.9%	0.0%	0.0%	0.1%	0.8%	0.4%	1.0%	0.0%	0.0%	1.8%	11.4%	0.0%	100.0%	
Road 42	42	50	45.2	N	2100-2200	193	45.0%	18.6%	0.1%	9.2%	3.3%	2.1%	4.1%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.0%	2.1%	14.4%	0.0%	100.0%	
Road 42	42	50	45.2	N	2200-2300	185	45.3%	20.5%	0.1%	7.2%	2.6%	2.3%	4.5%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.0%	1.7%	15.0%	0.0%	100.0%	
Road 42	42	50	46.2	N	2300-0000	147	42.0%	18.9%	0.1%	7.6%	2.7%	2.4%	4.7%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.0%	1.9%	18.7%	0.0%	100.0%	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Traffic Data / Modeling Parameters For AERMOD (Year 2028)																											
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Road Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles <=5t	07 - Medium Goods Vehicles 5-24t	08 - Public Buses	09 - Private Light <=3.5t	10 - Private >3.5t	11 - Non-franchised Bus<=4t	12 - Non-franchised Bus 4t-15t	13 - Non-franchised Bus 15t-24t	14 - Franchise d Bus Single	15 - Franchise d Bus Double Deck	16 - Motorcycl	17 - Heavy Goods Vehicles>24t	18 - Non-franchised Bus >24t	Total		
Road 45	45	80	80.0	N	0000-0100	242	56.0%	25.2%	0.0%	3.5%	1.3%	1.1%	2.2%	0.0%	0.0%	0.4%	0.0%	0.4%	0.8%	0.0%	5.4%	2.8%	0.6%	0.0%	100.0%		
Road 45	45	80	80.0	N	0100-0200	337	53.8%	24.2%	0.0%	3.5%	1.3%	1.1%	2.4%	0.0%	0.0%	0.3%	0.0%	0.3%	0.7%	0.5%	5.4%	3.1%	0.7%	0.0%	100.0%		
Road 45	45	80	80.0	N	0200-0300	115	54.1%	24.1%	0.0%	4.2%	1.5%	1.3%	2.6%	0.0%	0.0%	0.3%	0.0%	0.3%	0.7%	0.5%	1.0%	0.0%	3.4%	0.7%	0.0%	100.0%	
Road 45	45	80	80.0	N	0300-0400	91	53.2%	23.6%	0.0%	4.5%	1.6%	1.4%	2.8%	0.0%	0.1%	0.4%	0.8%	0.1%	0.4%	0.8%	1.2%	0.0%	5.3%	3.7%	0.7%	0.0%	100.0%
Road 45	45	80	80.0	N	0400-0500	129	52.8%	23.1%	0.1%	4.9%	1.8%	1.5%	3.0%	0.0%	0.1%	0.4%	0.5%	0.9%	0.6%	1.2%	0.5%	5.3%	4.8%	0.8%	0.0%	100.0%	
Road 45	45	80	80.0	N	0500-0600	172	51.2%	22.8%	0.8%	5.2%	1.8%	1.8%	3.5%	0.0%	0.1%	0.8%	0.6%	1.0%	0.8%	1.4%	0.0%	5.2%	4.4%	1.0%	0.0%	100.0%	
Road 45	45	80	80.0	N	0600-0700	369	50.2%	22.0%	0.1%	5.6%	2.0%	1.8%	3.5%	0.0%	0.1%	0.6%	1.0%	0.7%	1.6%	0.0%	5.2%	4.7%	0.9%	0.0%	100.0%		
Road 45	45	80	80.0	N	0700-0800	786	49.2%	21.4%	0.0%	6.0%	2.1%	1.9%	3.7%	0.0%	0.1%	0.7%	1.1%	0.8%	1.7%	0.0%	5.2%	5.0%	1.0%	0.0%	100.0%		
Road 45	45	80	80.0	N	0800-0900	861	47.8%	20.9%	0.0%	6.3%	2.3%	2.0%	3.8%	0.0%	0.1%	0.8%	1.0%	0.9%	1.7%	0.0%	5.2%	5.0%	1.0%	0.0%	100.0%		
Road 45	45	80	80.0	N	0900-1000	707	50.3%	18.3%	0.1%	9.2%	3.3%	2.5%	4.9%	0.0%	0.1%	0.5%	0.8%	0.6%	1.3%	0.4%	4.8%	2.0%	1.3%	0.0%	100.0%		
Road 45	45	80	80.0	N	1000-1100	611	47.7%	18.5%	0.1%	9.9%	3.6%	3.1%	6.2%	0.0%	0.1%	0.5%	0.8%	0.5%	1.2%	0.4%	4.8%	1.4%	1.8%	0.0%	100.0%		
Road 45	45	80	80.0	N	1100-1200	479	47.5%	18.6%	0.2%	10.3%	3.9%	3.4%	6.5%	0.0%	0.1%	0.5%	0.8%	0.6%	1.0%	0.4%	4.8%	1.3%	1.9%	0.0%	100.0%		
Road 45	45	80	80.0	N	1200-1300	849	45.8%	17.8%	0.1%	10.3%	3.7%	3.7%	7.3%	0.0%	0.1%	0.7%	0.8%	0.5%	1.2%	0.4%	4.8%	1.4%	1.9%	0.0%	100.0%		
Road 45	45	80	80.0	N	1300-1400	866	44.2%	17.0%	0.1%	12.3%	4.4%	3.8%	7.5%	0.0%	0.1%	0.8%	0.6%	0.4%	1.0%	0.4%	4.8%	1.3%	2.0%	0.0%	100.0%		
Road 45	45	78.6	78.6	N	1400-1500	1025	43.4%	16.3%	0.1%	13.3%	4.8%	4.2%	8.2%	0.0%	0.1%	0.9%	0.6%	0.4%	1.0%	0.4%	4.8%	1.3%	2.1%	0.0%	100.0%		
Road 45	45	78.6	78.6	N	1500-1600	945	44.1%	17.7%	0.1%	12.6%	4.5%	3.2%	6.3%	0.0%	0.1%	0.8%	0.9%	0.6%	1.4%	0.5%	4.5%	1.6%	1.6%	0.0%	100.0%		
Road 45	45	77.3	77.3	N	1600-1700	1099	46.8%	16.1%	0.1%	9.9%	3.6%	3.1%	6.1%	0.0%	0.1%	1.1%	1.4%	1.0%	2.1%	0.5%	4.9%	2.2%	1.6%	0.0%	100.0%		
Road 45	45	75.0	75.0	N	1700-1800	1145	45.6%	15.8%	0.1%	10.3%	3.9%	3.1%	6.5%	0.0%	0.1%	1.2%	1.4%	1.0%	2.0%	0.5%	4.9%	2.2%	1.6%	0.0%	100.0%		
Road 45	45	74.5	74.5	N	1800-1900	1256	42.3%	14.6%	0.1%	5.4%	2.0%	1.1%	2.2%	0.0%	0.1%	1.1%	0.8%	1.7%	0.5%	1.1%	0.3%	5.0%	3.0%	0.6%	0.0%	100.0%	
Road 45	45	79.4	79.4	N	1900-2000	1001	60.8%	19.0%	0.0%	4.1%	1.5%	1.0%	1.9%	0.0%	0.0%	0.1%	0.9%	0.1%	0.4%	0.5%	5.8%	2.2%	0.5%	0.0%	100.0%		
Road 45	45	80	80.0	N	2000-2100	780	55.9%	23.8%	0.0%	4.4%	1.6%	1.0%	1.9%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	6.1%	2.2%	0.5%	0.0%	100.0%		
Road 45	45	80	80.0	N	2100-2200	775	57.3%	23.7%	0.0%	4.9%	0.8%	0.9%	2.0%	0.0%	0.0%	0.1%	0.4%	0.8%	0.0%	0.0%	6.0%	2.8%	0.5%	0.0%	100.0%		
Road 45	45	80	80.0	N	2200-2300	755	56.7%	25.6%	0.0%	3.5%	1.2%	1.1%	2.2%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.5%	5.8%	2.2%	0.6%	0.0%	100.0%		
Road 45	45	80	80.0	N	2300-2400	565	55.7%	25.1%	0.0%	3.8%	1.4%	1.2%	2.4%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	5.7%	2.5%	0.6%	0.0%	100.0%		
Road 46	46	80	80.0	N	0000-0100	604	52.6%	20.6%	0.0%	3.0%	1.2%	0.9%	1.9%	0.0%	0.0%	0.2%	0.5%	0.3%	0.5%	0.0%	3.8%	2.0%	0.5%	0.0%	100.0%		
Road 46	46	80	80.0	N	0100-0200	185	58.7%	26.3%	0.0%	3.3%	1.2%	1.0%	2.0%	0.0%	0.0%	0.3%	0.6%	0.4%	1.0%	0.2%	3.3%	0.5%	0.6%	0.0%	100.0%		
Road 46	46	80	80.0	N	0200-0300	135	57.8%	25.6%	0.0%	3.6%	1.3%	1.1%	2.2%	0.0%	0.0%	0.4%	0.7%	0.5%	1.1%	0.1%	1.1%	3.7%	0.8%	0.0%	100.0%		
Road 46	46	80	80.0	N	0300-0400	106	58.2%	26.2%	0.0%	3.9%	1.3%	1.2%	2.4%	0.0%	0.0%	0.4%	0.7%	0.5%	1.0%	0.1%	1.0%	4.0%	0.8%	0.0%	100.0%		
Road 46	46	80	80.0	N	0400-0500	116	55.9%	24.7%	0.0%	4.2%	1.5%	1.3%	2.6%	0.0%	0.1%	0.5%	0.9%	0.6%	1.4%	0.4%	1.1%	4.3%	0.7%	0.0%	100.0%		
Road 46	46	80	80.0	N	0500-0600	201	54.9%	24.2%	0.0%	4.5%	1.6%	1.4%	2.8%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	1.1%	4.7%	0.7%	0.0%	100.0%		
Road 46	46	80	80.0	N	0600-0700	303	53.0%	23.0%	0.0%	4.8%	1.7%	1.5%	3.0%	0.0%	0.1%	0.7%	1.1%	0.8%	1.5%	0.0%	1.0%	4.9%	0.8%	0.0%	100.0%		
Road 46	46	80	80.0	N	0700-0800	867	52.9%	23.0%	0.1%	5.2%	1.9%	1.6%	3.2%	0.0%	0.1%	0.8%	1.2%	0.8%	1.8%	0.0%	1.1%	5.4%	0.8%	0.0%	100.0%		
Road 46	46	80	80.0	N	0800-0900	1006	58.9%	18.8%	0.1%	5.6%	2.0%	1.6%	3.1%	0.0%	0.1%	0.8%	1.2%	0.8%	1.9%	0.0%	1.0%	3.4%	0.8%	0.0%	100.0%		
Road 46	46	80	80.0	N	0900-1000	815	54.7%	19.9%	0.1%	8.7%	2.8%	2.2%	4.3%	0.0%	0.1%	0.5%	0.9%	0.4%	1.0%	2.1%	1.1%	3.0%	0.8%	0.0%	100.0%		
Road 46	46	80	80.0	N	1000-1100	578	52.9%	21.3%	0.0%	8.7%	3.1%	2.7%	4.9%	0.0%	0.1%	0.6%	0.9%	0.7%	1.8%	0.0%	3.7%	1.4%	0.8%	0.0%	100.0%		
Road 46	46	80	80.0	N	1100-1200	663	52.0%	19.4%	0.1%	8.7%	3.1%	2.2%	5.3%	0.0%	0.1%	0.9%	0.5%	0.4%	0.8%	0.0%	1.1%	1.5%	1.4%	0.0%	100.0%		
Road 46	46	80	80.0	N	1200-1300	983	47.5%	18.3%	0.1%	10.7%	3.9%	3.8%	7.6%	0.0%	0.1%	0.8%	0.9%	0.6%	1.2%	0.0%	1.2%	1.4%	2.0%	0.0%	100.0%		
Road 46	46	80	80.0	N	1300-1400	1005	45.8%	17.7%	0.1%	10.3%	4.8%	7.8%	7.9%	0.0%	0.1%	0.7%	1.2%	0.7%	0.4%	0.0%	1.2%	1.4%	2.0%	0.0%	100.0%		
Road 46	46	80	80.0	N	1400-1500	1072	45.9%	18.6%	0.1%	11.3%	4.1%	3.8%	7.5%	0.0%	0.1%	0.8%	0.9%	0.6%	1.4%	0.0%	1.1%	1.7%	2.0%	0.0%	100.0%		
Road 46	46	80	80.0	N	1500-1600	1057	45.6%	18.3%	0.1%	13.1%	4.7%	3.3%	6.5%	0.0%	0.1%	0.8%	0.9%	0.7%	1.4%	0.0%	1.1%	1.6%	1.7%	0.0%	100.0%		
Road 46	46	80	80.0	N	1600-1700	1166	45.6%	18.7%	0.1%	10.3%	4.8%	6.3%	6.3%	0.0%	0.1%	1.1%	1.2%	0.8%	1.3%	0.0%	1.0%	1.3%	1.7%	0.0%	100.0%		
Road 46	46	80	80.0	N	1700-1800	1337	53.7%	16.8%	0.1%	9.2%	3.3%	2.1%	4.1%	0.0%	0.1%	0.8%	0.9%	0.7%	1.4%	0.0%	1.2%	4.8%	1.1%	0.0%	100.0%		
Road 46	46	80	80.0	N	1800-1900	1580	54.2%	15.2%	0.1%	5.7%	2.0%	1.2%	2.3%	0.0%	0.0%	0.1%	1.1%	0.8%	1.7%	0.5%	1.2%	3.1%	0.6%	0.0%	100.0%		
Road 46	46	80	80.0	N	1900-2000	1149	56.8%	19.8%	0.0%	4.9%	1.6%	1.0%	1.9%	0.0%	0.0%	0.1%	0.8%	0.5%	1.0%	0.0%	1.1%	3.0%	0.8%	0.0%	100.0%		
Road 46	46	80	80.0	N	2000-2100	853	58.7%	24.9%	0.0%	4.6%	1.7%	1.0%	2.0%	0.0%	0.0%	0.1%	0.8%	0.6%	1.3%	0.0%	1.5%	2.3%	0.5%	0.0%	100.0%		
Road 46	46	80	80.0	N	2100-2200	893	59.7%	24.7%	0.0%	4.9%	1.7%	1.1%	2.1%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	1.3%	2.7%	0.6%	0.0%	100.0%		
Road 46	46	80	80.0	N	2200-2300	765	58.6%	24.9%	0.0%	4.9%	1.7%	1.2%	2.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	1.3%	2.8%	0.6%	0.0%	100.0%		
Road 46	46	80	80.0	N	2300-2400	648	58.2%	26.2%	0.0%	4.9%	1.4%	1.3%	2.5%	0.0%	0.0%	0.1%	0.4%	0.3%	0.7%	0.4%	1.4%	2.9%	0.7%	0.0%	100.0%		

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Traffic Data / Modeling Parameters For AERMOD (Year 2020)																									
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles <=10t	07 - Medium Goods Vehicles 10-15t	08 - Public Light Buses <=3.5t	09 - Private Light Buses <=3.5t	10 - Private Light Buses >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchised Bus Single Deck	15 - Franchised Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicle >24t	18 - Non-franchised Bus >24t	Total
							PC	TAXI	LGV	LOV4	LOV6	MOV	MOV1	MOV2	PLB	PV4	PV5	NFB	NFB7	NFB8	FBSD	FBSD	MOV24t	MOV24t	NFB9
Road 49	49	50	43.7	N	0000-0100	289	54.8%	24.8%	0.0%	3.8%	1.4%	1.2%	2.3%	0.0%	0.0%	0.2%	0.5%	0.3%	0.8%	0.1%	6.5%	2.8%	0.6%	0.0%	100.0%
Road 49	49	50	45.9	N	0100-0200	188	53.9%	24.1%	0.0%	4.1%	1.5%	1.3%	2.6%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.1%	6.5%	3.1%	0.7%	0.0%	100.0%
Road 49	49	50	47.0	N	0200-0300	138	52.9%	23.6%	0.0%	4.5%	1.6%	1.4%	2.8%	0.0%	0.0%	0.3%	0.7%	0.5%	1.0%	0.1%	6.5%	3.3%	0.7%	0.0%	100.0%
Road 49	49	50	47.6	N	0300-0400	169	51.9%	23.6%	0.1%	4.2%	1.6%	1.5%	1.9%	0.0%	0.1%	0.4%	0.7%	0.6%	1.1%	0.1%	6.5%	3.6%	0.8%	0.0%	100.0%
Road 49	49	50	47.3	N	0400-0500	119	50.9%	22.5%	0.1%	5.3%	1.9%	1.7%	3.3%	0.0%	0.1%	0.5%	0.8%	0.6%	1.3%	0.1%	6.4%	4.0%	0.8%	0.0%	100.0%
Road 49	49	50	45.3	N	0500-0600	207	49.9%	21.9%	0.1%	5.7%	2.0%	1.8%	3.5%	0.0%	0.1%	0.6%	0.9%	0.6%	1.4%	0.1%	6.4%	4.3%	0.9%	0.0%	100.0%
Road 49	49	50	39.9	N	0600-0700	443	48.9%	21.4%	0.1%	6.0%	2.2%	1.9%	3.7%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	6.3%	4.6%	1.0%	0.0%	100.0%
Road 49	49	50	34.1	N	0700-0800	897	47.8%	20.8%	0.1%	6.4%	2.3%	2.0%	4.0%	0.0%	0.1%	0.7%	1.1%	0.8%	1.7%	0.0%	6.3%	4.9%	1.0%	0.0%	100.0%
Road 49	49	50	32.4	N	0800-0900	1035	53.5%	17.1%	0.1%	7.0%	2.5%	2.0%	3.9%	0.0%	0.1%	0.7%	1.0%	0.7%	1.6%	0.0%	5.6%	3.1%	1.0%	0.0%	100.0%
Road 49	49	50	34.3	N	0900-1000	856	48.7%	17.7%	0.1%	6.8%	3.3%	2.7%	5.3%	0.0%	0.1%	0.5%	0.8%	0.7%	1.2%	0.0%	5.8%	1.9%	1.4%	0.0%	100.0%
Road 49	49	50	35.6	N	1000-1100	742	46.0%	17.8%	0.1%	10.5%	3.8%	3.3%	6.6%	0.0%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	5.7%	1.4%	1.7%	0.0%	100.0%
Road 49	49	50	36.2	N	1100-1200	703	45.8%	18.9%	0.1%	10.5%	3.8%	3.3%	6.4%	0.0%	0.1%	0.8%	0.5%	0.3%	0.7%	0.0%	5.8%	1.3%	1.7%	0.0%	100.0%
Road 49	49	50	39.6	N	1200-1300	413	39.9%	15.4%	0.1%	11.8%	4.2%	4.2%	8.3%	0.0%	0.1%	0.6%	0.7%	0.6%	1.0%	0.0%	9.9%	1.2%	2.2%	0.0%	100.0%
Road 49	49	50	39.4	N	1300-1400	424	38.2%	14.7%	0.1%	13.9%	5.0%	4.3%	8.5%	0.0%	0.1%	0.6%	0.5%	0.4%	0.8%	0.0%	9.4%	1.2%	2.2%	0.0%	100.0%
Road 49	49	50	39.0	N	1400-1500	450	38.6%	15.6%	0.1%	12.4%	4.5%	4.2%	8.3%	0.0%	0.1%	0.7%	0.8%	0.5%	1.2%	0.0%	9.4%	1.5%	2.2%	0.0%	100.0%
Road 49	49	50	38.9	N	1500-1600	460	38.4%	15.4%	0.1%	14.4%	5.2%	3.6%	7.2%	0.0%	0.1%	0.7%	0.8%	0.5%	1.2%	0.1%	9.2%	1.4%	1.9%	0.0%	100.0%
Road 49	49	50	38.5	N	1600-1700	488	40.9%	14.1%	0.1%	11.4%	4.1%	3.5%	7.0%	0.0%	0.1%	1.0%	1.2%	0.8%	1.8%	0.0%	10.2%	1.9%	1.8%	0.0%	100.0%
Road 49	49	50	38.1	N	1700-1800	546	44.3%	14.3%	0.1%	10.3%	3.7%	3.2%	4.6%	0.0%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	10.4%	3.9%	1.2%	0.0%	100.0%
Road 49	49	50	37.8	N	1800-1900	588	56.4%	13.2%	0.1%	6.5%	2.3%	1.3%	2.6%	0.0%	0.0%	0.1%	0.1%	0.2%	0.7%	0.3%	1.5%	0.0%	0.7%	0.0%	100.0%
Road 49	49	50	39.4	N	1900-2000	469	54.9%	17.2%	0.1%	4.9%	1.8%	1.2%	2.3%	0.0%	0.0%	0.1%	0.8%	0.6%	1.3%	0.0%	12.3%	2.0%	0.6%	0.0%	100.0%
Road 49	49	50	41.2	N	2000-2100	367	50.3%	21.4%	0.1%	5.2%	1.9%	1.1%	2.2%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	12.9%	2.0%	0.8%	0.0%	100.0%
Road 49	49	50	41.5	N	2100-2200	362	51.9%	21.5%	0.1%	5.1%	1.9%	1.2%	2.3%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	11.2%	2.4%	0.8%	0.0%	100.0%
Road 49	49	50	41.7	N	2200-2300	354	51.3%	23.2%	0.0%	4.1%	1.6%	1.3%	2.6%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.1%	12.3%	2.0%	0.7%	0.0%	100.0%
Road 49	49	50	43.7	N	2300-0000	265	50.2%	22.6%	0.0%	4.6%	1.6%	1.4%	2.8%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.1%	12.2%	2.2%	0.7%	0.0%	100.0%
Road 50	50	50	49.3	N	0000-0100	24	39.0%	12.6%	0.2%	20.0%	7.2%	6.3%	12.4%	0.0%	0.2%	0.4%	0.5%	0.2%	0.4%	0.0%	1.4%	11.0%	0.3%	0.0%	100.0%
Road 50	50	50	49.5	N	0100-0200	17	25.3%	10.3%	0.2%	20.2%	7.3%	6.4%	12.5%	0.0%	0.0%	0.1%	0.3%	0.2%	0.4%	0.0%	0.0%	1.4%	14.3%	0.0%	100.0%
Road 50	50	50	49.6	N	0200-0300	13	23.0%	10.3%	0.2%	20.4%	7.3%	6.4%	12.6%	0.0%	0.0%	0.1%	0.3%	0.2%	0.4%	0.0%	0.0%	1.5%	17.3%	0.0%	100.0%
Road 50	50	50	49.7	N	0300-0400	11	21.0%	9.3%	0.2%	20.5%	7.4%	6.5%	12.7%	0.0%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	0.0%	1.5%	19.9%	0.0%	100.0%
Road 50	50	50	49.6	N	0400-0500	13	20.2%	8.9%	0.2%	21.7%	7.8%	6.8%	15.4%	0.0%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	0.0%	1.6%	18.2%	0.0%	100.0%
Road 50	50	50	49.4	N	0500-0600	21	20.4%	9.0%	0.2%	23.9%	8.6%	7.5%	14.7%	0.0%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.0%	1.7%	12.6%	0.0%	100.0%
Road 50	50	50	48.7	N	0600-0700	46	20.1%	8.8%	0.3%	25.8%	9.3%	8.1%	15.9%	0.0%	0.0%	0.3%	0.4%	0.3%	0.8%	0.0%	1.9%	8.3%	0.0%	100.0%	
Road 50	50	50	48.3	N	0700-0800	50	19.3%	8.6%	0.3%	26.0%	9.3%	8.0%	16.0%	0.0%	0.0%	0.3%	0.5%	0.3%	0.9%	0.0%	1.8%	8.0%	0.0%	100.0%	
Road 50	50	50	46.6	N	0800-0900	116	20.2%	6.5%	0.3%	27.5%	9.9%	7.7%	15.1%	0.0%	0.0%	0.3%	0.4%	0.3%	0.6%	0.0%	0.0%	1.2%	10.1%	0.0%	100.0%
Road 50	50	50	46.4	N	0900-1000	119	14.9%	5.4%	0.3%	31.1%	11.2%	8.5%	16.7%	0.0%	0.0%	0.1%	0.3%	0.2%	0.4%	0.0%	0.0%	0.6%	10.4%	0.0%	100.0%
Road 50	50	50	46.5	N	1000-1100	144	12.7%	4.9%	0.3%	30.2%	10.9%	9.8%	16.9%	0.0%	0.0%	0.1%	0.3%	0.1%	0.3%	0.0%	0.4%	11.3%	0.0%	100.0%	
Road 50	50	50	46.7	N	1100-1200	107	12.8%	5.3%	0.3%	30.2%	10.9%	9.4%	16.6%	0.0%	0.0%	0.0%	0.2%	0.1%	0.1%	0.2%	0.0%	0.4%	11.6%	0.0%	100.0%
Road 50	50	50	48.3	N	1200-1300	49	4.5%	1.7%	0.3%	30.1%	10.8%	10.8%	21.2%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.1%	20.2%	0.0%	100.0%
Road 50	50	50	48.2	N	1300-1400	54	4.0%	1.5%	0.3%	33.0%	11.3%	10.2%	20.1%	0.0%	0.0%	0.1%	0.1%	0.0%	0.1%	0.0%	0.0%	1.8%	5.6%	0.0%	100.0%
Road 50	50	50	48.2	N	1400-1500	54	4.3%	1.7%	0.3%	31.4%	11.3%	10.8%	20.9%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.2%	18.8%	0.0%	100.0%
Road 50	50	50	48.2	N	1500-1600	56	4.2%	1.7%	0.4%	35.9%	12.9%	9.1%	17.9%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.2%	17.5%	0.0%	100.0%
Road 50	50	50	48.2	N	1600-1700	53	5.1%	1.8%	0.3%	32.0%	11.5%	10.0%	19.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.2%	18.8%	0.0%	100.0%
Road 50	50	50	48.4	N	1700-1800	49	6.8%	2.1%	0.4%	34.9%	12.6%	7.9%	15.5%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.6%	18.8%	0.0%	100.0%
Road 50	50	50	48.8	N	1800-1900	37	11.9%	2.8%	0.3%	30.9%	11.1%	6.4%	12.7%	0.0%	0.0%	0.0%	0.2%	0.1%	0.3%	0.0%	0.0%	0.6%	22.6%	0.0%	100.0%
Road 50	50	50	49.3	N	1900-2000	22	15.6%	4.9%	0.3%	31.7%	11.4%	7.6%	14.9%	0.0%	0.0%	0.0%	0.2%	0.2%	0.4%	0.0%	0.0%	0.6%	12.4%	0.0%	100.0%
Road 50	50	50	49.2	N	2000-2100	26	11.1%	4.0%	0.3%	32.1%	11.5%	7.1%	13.9%	0.0%	0.0%	0.0%	0.2%	0.2%	0.1%	0.3%	0.0%	0.6%	14.1%	0.0%	100.0%
Road 50	50	50	49.4	N	2100-2200	18	13.7%	5.7%	0.3%	32.0%	11.5%	7.4%	14.5%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.6%	14.0%	0.0%	100.0%
Road 50	50	50	49.5	N	2200-2300	16	14.8%	6.7%	0.3%	26.8%	9.6%	8.5%	16.7%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.6%	15.8%	0.0%	100.0%
Road 50	50	50	49.6	N	2300-0000	14	13.1%	5.9%	0.3%	26.9%	9.6%	8.5%	16.7%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.6%	18.1%	0.0%	100.0%

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Traffic Data / Modeling Parameters For AERMOD (Year 2020)																									
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles <=10t	07 - Medium Goods Vehicles 10-15t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4-15t	12 - Non-franchised Bus 6.4-15t	13 - Non-franchised Bus 15-24t	14 - Franchise d Bus Double Deck	15 - Franchise d Bus Double Deck	16 - Motorcycl	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total
							PC	Taxi	LGVE	LGVE	LGVE	HGV7	HGV7	PLB	PLB	PVS	NFB6	NFB7	NFB17	NFB17	NFB24	FBD0	FBD0	NFB9	
Road 53	53	50	28.1	N	0000-0100	27	23.0%	10.3%	17.0%	0.0%	17.3%	6.1%	5.4%	10.6%	22.0%	0.0%	0.1%	0.2%	0.2%	0.4%	0.0%	0.0%	1.2%	2.9%	100.0%
Road 53	53	50	28.7	N	0100-0200	18	21.8%	9.8%	0.2%	18.0%	6.5%	5.7%	11.1%	22.0%	0.0%	0.1%	0.2%	0.2%	0.4%	0.0%	0.0%				100.0%
Road 53	53	50	29.0	N	0200-0300	14	18.0%	9.2%	0.2%	18.9%	6.8%	5.9%	11.7%	21.4%	0.0%	0.1%	0.3%	0.2%	0.4%	0.0%	0.0%	1.3%	3.1%	1.0%	100.0%
Road 53	53	50	29.2	N	0300-0400	11	15.0%	9.0%	0.1%	15.7%	7.2%	6.2%	12.2%	20.0%	0.0%	0.1%	0.3%	0.2%	0.4%	0.0%	0.0%	1.4%	3.2%	1.0%	100.0%
Road 53	53	50	29.0	N	0400-0500	13	18.5%	8.2%	0.2%	20.5%	7.4%	6.4%	12.7%	20.3%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	0.0%	1.4%	3.3%	1.0%	100.0%
Road 53	53	50	28.3	N	0500-0600	23	17.5%	7.7%	0.2%	21.2%	7.6%	6.7%	13.1%	19.8%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	0.0%	1.5%	3.4%	1.0%	100.0%
Road 53	53	50	28.5	N	0600-0700	51	16.0%	7.0%	0.1%	24.5%	7.8%	6.8%	13.5%	19.2%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	0.0%	1.5%	3.5%	1.0%	100.0%
Road 53	53	50	24.4	N	0700-0800	106	15.7%	6.8%	0.2%	22.6%	8.1%	7.1%	13.9%	18.8%	0.0%	0.2%	0.4%	0.2%	0.5%	0.0%	0.0%	1.6%	3.6%	1.0%	100.0%
Road 53	53	50	24.2	N	0800-0900	120	17.9%	5.7%	0.3%	25.2%	9.0%	7.9%	13.8%	16.5%	0.0%	0.2%	0.4%	0.2%	0.5%	0.0%	0.0%	1.6%	3.6%	1.0%	100.0%
Road 53	53	50	24.2	N	0900-1000	124	13.1%	4.8%	0.3%	28.1%	9.8%	8.7%	14.2%	20.1%	0.0%	0.2%	0.4%	0.2%	0.5%	0.0%	0.0%	1.6%	3.6%	1.0%	100.0%
Road 53	53	50	24.1	N	1000-1100	117	11.3%	4.4%	0.3%	27.9%	10.0%	8.9%	17.4%	14.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	0.3%	4.6%	1.0%	100.0%
Road 53	53	50	24.2	N	1100-1200	110	11.4%	4.3%	0.3%	27.8%	10.0%	8.7%	17.1%	14.6%	0.0%	0.2%	0.1%	0.1%	0.2%	0.0%	0.0%	0.3%	4.5%	1.0%	100.0%
Road 53	53	50	24.0	N	1200-1300	136	16.0%	5.1%	0.2%	24.6%	9.1%	7.5%	14.8%	15.0%	0.0%	0.2%	0.3%	0.2%	0.4%	0.0%	0.0%	1.7%	3.7%	1.0%	100.0%
Road 53	53	50	23.9	N	1300-1400	144	23.8%	9.2%	0.3%	24.3%	8.7%	7.6%	14.8%	5.3%	0.0%	0.3%	0.3%	0.2%	0.5%	0.0%	0.0%	0.7%	3.9%	1.0%	100.0%
Road 53	53	50	23.8	N	1400-1500	149	24.6%	9.9%	0.2%	22.3%	8.0%	7.5%	14.8%	5.7%	0.1%	0.4%	0.5%	0.3%	0.8%	0.0%	0.0%	0.9%	3.9%	1.0%	100.0%
Road 53	53	50	23.8	N	1500-1600	153	13.3%	0.8%	0.3%	29.7%	9.2%	8.5%	12.8%	5.2%	0.0%	0.4%	0.5%	0.2%	0.8%	0.0%	0.0%	0.9%	3.3%	1.0%	100.0%
Road 53	53	50	23.8	N	1600-1700	153	27.5%	0.2%	21.5%	7.1%	6.7%	12.8%	5.2%	0.0%	0.7%	0.8%	0.6%	0.0%	0.0%	0.0%	0.0%	2.1%	3.5%	1.0%	100.0%
Road 53	53	50	23.8	N	1700-1800	160	33.1%	10.3%	0.2%	20.9%	7.5%	4.7%	9.3%	6.3%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	0.0%	2.8%	2.4%	2.0%	100.0%
Road 53	53	50	24.1	N	1800-1900	162	33.1%	10.8%	0.2%	14.9%	5.4%	3.1%	6.1%	6.0%	0.0%	0.1%	0.8%	0.6%	1.2%	0.0%	0.0%	2.2%	1.6%	1.0%	100.0%
Road 53	53	50	24.6	N	1900-2000	116	46.9%	14.7%	0.1%	11.8%	3.6%	2.8%	2.5%	0.4%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	0.0%	2.8%	0.0%	0.0%	100.0%
Road 53	53	50	24.9	N	2000-2100	91	42.8%	18.2%	0.1%	12.4%	4.4%	2.7%	5.4%	8.9%	0.0%	0.1%	0.6%	0.4%	0.9%	0.0%	0.0%	1.7%	1.4%	1.0%	100.0%
Road 53	53	50	24.9	N	2100-2200	91	43.4%	17.9%	0.1%	12.5%	4.5%	2.9%	5.7%	8.4%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.0%	2.0%	1.5%	1.0%	100.0%
Road 53	53	50	24.9	N	2200-2300	86	44.5%	20.1%	0.1%	10.0%	3.6%	3.9%	3.9%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.0%	1.7%	1.4%	1.0%	100.0%
Road 53	53	50	25.9	N	2300-0000	66	42.8%	19.3%	0.1%	10.9%	3.9%	3.5%	6.8%	7.8%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.0%	1.9%	1.8%	1.0%	100.0%
Road 54	54	50	26.8	N	0000-0100	31	17.5%	16.8%	0.1%	11.7%	4.2%	3.7%	7.3%	13.5%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.0%	1.9%	1.9%	1.0%	100.0%
Road 54	54	50	26.8	N	0100-0200	31	36.0%	17.8%	0.1%	11.7%	4.2%	3.7%	7.3%	13.5%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.0%	2.0%	1.9%	1.0%	100.0%
Road 54	54	50	26.4	N	0200-0300	25	34.6%	15.4%	0.1%	13.4%	4.8%	4.2%	8.3%	13.1%	0.0%	0.2%	0.4%	0.3%	0.7%	0.0%	0.0%	2.2%	2.2%	2.0%	100.0%
Road 54	54	50	26.7	N	0300-0400	20	33.2%	14.7%	0.1%	14.2%	5.1%	4.5%	8.8%	12.9%	0.0%	0.3%	0.5%	0.3%	0.7%	0.0%	0.0%	2.3%	2.3%	2.0%	100.0%
Road 54	54	50	26.8	N	0400-0500	23	31.8%	13.4%	0.2%	17.1%	4.5%	4.0%	12.2%	12.0%	0.0%	0.2%	0.4%	0.3%	0.7%	0.0%	0.0%	2.4%	2.4%	2.0%	100.0%
Road 54	54	50	27.3	N	0500-0600	40	30.5%	13.4%	0.2%	16.7%	5.6%	4.9%	9.7%	12.6%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	0.0%	2.6%	2.6%	2.0%	100.0%
Road 54	54	50	24.8	N	0600-0700	88	29.3%	12.8%	0.2%	16.4%	5.9%	5.1%	10.1%	12.4%	0.0%	0.4%	0.6%	0.4%	0.9%	0.0%	0.0%	2.7%	2.6%	2.0%	100.0%
Road 54	54	50	23.5	N	0700-0800	88	28.0%	12.8%	0.2%	16.4%	5.9%	5.1%	10.1%	12.4%	0.0%	0.4%	0.6%	0.4%	0.9%	0.0%	0.0%	2.7%	2.6%	2.0%	100.0%
Road 54	54	50	23.1	N	0800-0900	207	31.7%	10.1%	0.2%	18.9%	6.8%	5.3%	10.4%	9.7%	0.1%	0.4%	0.6%	0.4%	0.9%	0.0%	0.0%	1.8%	1.8%	2.7%	100.0%
Road 54	54	50	23.1	N	0900-1000	198	24.9%	9.0%	0.2%	22.9%	8.2%	6.2%	12.2%	10.5%	0.0%	0.2%	0.4%	0.3%	0.8%	0.0%	0.0%	1.9%	3.2%	2.6%	100.0%
Road 54	54	50	23.3	N	1000-1100	182	22.8%	8.1%	0.2%	22.9%	8.2%	6.2%	12.2%	10.5%	0.0%	0.2%	0.4%	0.3%	0.8%	0.0%	0.0%	1.9%	3.2%	2.6%	100.0%
Road 54	54	50	23.1	N	1100-1200	172	22.1%	9.1%	0.2%	23.0%	8.3%	7.2%	14.1%	10.4%	0.1%	0.4%	0.2%	0.2%	0.3%	0.0%	0.0%	0.6%	3.7%	2.6%	100.0%
Road 54	54	50	23.9	N	1200-1300	126	10.8%	4.1%	0.3%	29.6%	10.6%	10.6%	20.9%	6.6%	0.0%	0.2%	0.2%	0.1%	0.3%	0.0%	0.0%	0.3%	6.5%	0.6%	100.0%
Road 54	54	50	23.7	N	1300-1400	138	8.3%	3.7%	0.3%	32.7%	9.3%	10.1%	24.9%	10.1%	0.0%	0.2%	0.2%	0.1%	0.3%	0.0%	0.0%	0.3%	6.5%	0.6%	100.0%
Road 54	54	50	23.7	N	1400-1500	139	10.2%	4.1%	0.3%	30.7%	11.0%	10.4%	20.4%	6.1%	0.0%	0.2%	0.2%	0.1%	0.3%	0.0%	0.0%	0.4%	6.5%	0.3%	100.0%
Road 54	54	50	23.7	N	1500-1600	144	10.1%	4.0%	0.4%	38.1%	12.8%	8.9%	17.5%	5.8%	0.0%	0.2%	0.2%	0.1%	0.3%	0.0%	0.0%	0.4%	6.6%	0.6%	100.0%
Road 54	54	50	24.0	N	1600-1700	138	11.1%	3.7%	0.3%	37.9%	12.8%	9.0%	17.5%	5.8%	0.0%	0.2%	0.2%	0.1%	0.3%	0.0%	0.0%	0.4%	6.6%	0.6%	100.0%
Road 54	54	50	24.0	N	1700-1800	133	15.5%	4.8%	0.3%	32.3%	11.8%	7.3%	14.4%	7.5%	0.0%	0.2%	0.3%	0.2%	0.4%	0.0%	0.0%	1.3%	3.8%	1.0%	100.0%
Road 54	54	50	24.4	N	1800-1900	108	25.2%	5.9%	0.3%	27.0%	9.7%	5.6%	11.1%	9.7%	0.0%	0.0%	0.4%	0.3%	0.7%	0.0%	0.0%	1.2%	2.9%	1.0%	100.0%
Road 54	54	50	24.4	N	1900-2000	78	22.8%	6.1%	0.3%	22.4%	9.7%	5.6%	11.1%	9.7%	0.0%	0.0%	0.4%	0.3%	0.7%	0.0%	0.0%	1.2%	2.9%	1.0%	100.0%
Road 54	54	50	25.6	N	2000-2100	62	24.4%	10.0%	0.2%	25.4%	8.4%	5.2%	10.1%	13.1%	0.0%	0.0%	0.3%	0.2%	0.5%	0.0%	0.0%	1.0%	2.6%	1.0%	100.0%
Road 54	54	50	25.5	N	2100-2200	63	24.7%	10.2%	0.2%	23.6%	8.5%	5.4%	10.7%	12.3%	0.0%	0.0%	0.2%	0.1%	0.3%	0.0%	0.1%	1.1%	2.8%	1.0%	100.0%
Road 54	54	50	25.6	N	2200-2300	57	24.5%	10.5%	0.2%	23.6%	8.5%	5.4%	10.7%	12.3%	0.0%	0.0%	0.2%	0.1%	0.3%	0.0%	0.1%	1.1%	2.8%	1.0%	100.0%
Road 54	54	50	26.8	N	2300-0000	45	24.5%	11.0%	0.2%	20.7%	7.4%	6.6%	12.9%	11.5%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	1.1%	3.4%	0.4%	100.0%

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Traffic Data / Modeling Parameters For AEMOD (Year 2028)																										
Road Name	Road ID	Speed Limit (km/h)	Average Speed (km/hr)	Start Emission Estimated by Road Block Approach (Y/N)	Hour	Total Vehicles (Veh/hy)	0+ - Private Cars	02 - Taxi	03 - Light Goods Vehicles <= 3.5t	04 - Light Goods Vehicles 3.5-5.5t	05 - Light Trucks 5.5-7.5t	06 - Medium Goods Vehicles >7.5t	07 - Heavy Goods Vehicles >11t	08 - Public Transport Buses >4t	09 - Private Buses >4t	10 - Private Buses >4t	11 - Non-franchised Bus >4t	12 - Non-franchised Bus >4t	13 - Non-franchised Bus >4t	14 - Franchised Single Decker Bus	15 - Franchised Double Decker Bus	16 - Motorcycle	17 - Heavy Goods Vehicle >11t	18 - Non-franchised Bus >4t	Total	
							PC	TAXI	LG03	LG04	LG06	HGV7	HGV8	PLB	PV4	PV5	NFB8	NFB7	NFB8	FBSD	FBSD	MC	HGV9	NFB9		
Road 105	105	50	50.0	N	0000-0100	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 105	105	50	50.0	N	0100-0200	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 105	105	50	50.0	N	0200-0300	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 105	105	50	50.0	N	0300-0400	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 105	105	50	50.0	N	0400-0500	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 105	105	50	50.0	N	0500-0600	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 105	105	50	50.0	N	0600-0700	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 105	105	50	50.0	N	0700-0800	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 105	105	50	50.0	N	0800-0900	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 105	105	50	50.0	N	0900-1000	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 105	105	50	50.0	N	1000-1100	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 105	105	50	50.0	N	1100-1200	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 105	105	50	50.0	N	1200-1300	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 105	105	50	50.0	N	1300-1400	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 105	105	50	50.0	N	1400-1500	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 105	105	50	50.0	N	1500-1600	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 105	105	50	50.0	N	1600-1700	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 105	105	50	50.0	N	1700-1800	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 105	105	50	50.0	N	1800-1900	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 105	105	50	50.0	N	1900-2000	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 105	105	50	50.0	N	2000-2100	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 105	105	50	50.0	N	2100-2200	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 105	105	50	50.0	N	2200-2300	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 105	105	50	50.0	N	2300-0000	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 106	106	50	50.0	N	0000-0100	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 106	106	50	50.0	N	0100-0200	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 106	106	50	50.0	N	0200-0300	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 106	106	50	50.0	N	0300-0400	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 106	106	50	50.0	N	0400-0500	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 106	106	50	50.0	N	0500-0600	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 106	106	50	50.0	N	0600-0700	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 106	106	50	50.0	N	0700-0800	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 106	106	50	50.0	N	0800-0900	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 106	106	50	50.0	N	0900-1000	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 106	106	50	50.0	N	1000-1100	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 106	106	50	50.0	N	1100-1200	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 106	106	50	50.0	N	1200-1300	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 106	106	50	50.0	N	1300-1400	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 106	106	50	50.0	N	1400-1500	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 106	106	50	50.0	N	1500-1600	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 106	106	50	50.0	N	1600-1700	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 106	106	50	50.0	N	1700-1800	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 106	106	50	50.0	N	1800-1900	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 106	106	50	50.0	N	1900-2000	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 106	106	50	50.0	N	2000-2100	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 106	106	50	50.0	N	2100-2200	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 106	106	50	50.0	N	2200-2300	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Road 106	106	50	50.0	N	2300-0000	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Traffic Data / Modeling Parameters For AEMOD (Year 2030)																									
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Road-Bus Approach (tN)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles 2-5.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles >15t	07 - Heavy Goods Vehicles 1-4t	08 - Public Light Buses >4t	09 - Private Buses >4t	10 - Private Buses >3.5t	11 - Non-franchised Buses >4t	12 - Non-franchised Buses >4t	13 - Non-franchised Buses >4t	14 - Non-franchised Buses >4t	15 - Non-franchised Buses >4t	16 - Motorcycles	17 - Heavy Goods Vehicles >4t	18 - Non-franchised Buses >4t	Total
							PC	TAXI	LGV3	LGV4	LGVB	HGV7	HGV8	PLB	PV4	PV5	NFB6	NFB7	NFB8	FBSD	FBSD	MC	HGV9	NFB9	
Road 3	3	70.0	N 0000-0120	309	57.0%	25.0%	0.1%	0.8%	0.7%	1.3%	0.0%	0.0%	0.3%	0.0%	0.2%	0.5%	0.4%	0.8%	0.1%	6.7%	2.9%	1.0%	0.0%	100.0%	
Road 3	3	70.0	N 0100-0200	201	56.1%	25.0%	0.0%	2.3%	0.8%	0.7%	0.8%	0.0%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.1%	6.6%	3.2%	1.3%	0.0%	100.0%	
Road 3	3	70.0	N 0200-0300	247	55.3%	24.0%	0.0%	2.4%	0.8%	0.7%	0.8%	0.0%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.1%	6.6%	3.2%	1.3%	0.0%	100.0%	
Road 3	3	70.0	N 0300-0400	116	54.1%	24.0%	0.0%	2.8%	1.0%	0.9%	1.7%	0.0%	0.1%	0.4%	0.6%	0.5%	1.2%	0.1%	6.0%	3.8%	2.1%	0.0%	100.0%		
Road 3	3	70.0	N 0400-0500	126	53.4%	23.0%	0.0%	3.0%	1.1%	0.9%	1.9%	0.0%	0.1%	0.5%	0.6%	0.6%	1.3%	0.1%	5.5%	4.1%	2.0%	0.0%	100.0%		
Road 3	3	70.0	N 0500-0600	1073	52.0%	22.0%	0.0%	3.3%	1.2%	1.0%	2.3%	0.0%	0.1%	0.7%	0.7%	0.7%	1.0%	0.7%	1.0%	0.7%	1.0%	0.0%	100.0%		
Road 3	3	70.0	N 0600-0700	461	52.3%	22.0%	0.0%	3.5%	1.3%	1.1%	2.2%	0.0%	0.1%	0.7%	1.1%	0.7%	1.6%	0.1%	6.6%	4.9%	1.0%	0.0%	100.0%		
Road 3	3	70.0	N 0700-0800	931	51.3%	22.3%	0.0%	3.7%	1.3%	1.2%	2.3%	0.0%	0.1%	0.8%	1.2%	0.8%	1.8%	0.1%	5.5%	5.2%	1.4%	0.0%	100.0%		
Road 3	3	68.8	N 0800-0900	1073	50.0%	21.0%	0.0%	3.8%	1.3%	1.3%	2.3%	0.0%	0.1%	0.8%	1.3%	0.8%	1.8%	0.1%	5.5%	5.2%	1.4%	0.0%	100.0%		
Road 3	3	70.0	N 0900-1000	859	54.0%	19.6%	0.1%	5.9%	2.1%	1.6%	3.2%	0.0%	0.1%	0.5%	0.9%	0.6%	1.4%	0.0%	6.2%	2.1%	1.7%	0.0%	100.0%		
Road 3	3	70.0	N 1000-1100	733	51.8%	20.1%	0.1%	6.5%	2.3%	2.0%	4.0%	0.0%	0.1%	0.6%	0.9%	0.6%	1.3%	0.0%	6.2%	1.6%	2.0%	0.0%	100.0%		
Road 3	3	70.0	N 1100-1200	586	53.3%	21.0%	0.1%	5.3%	2.3%	2.0%	3.3%	0.0%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	6.2%	1.6%	2.0%	0.0%	100.0%		
Road 3	3	66.8	N 1200-1300	1046	44.4%	17.1%	0.1%	10.3%	3.7%	7.3%	7.3%	0.0%	0.1%	0.7%	0.6%	0.5%	1.2%	0.0%	6.3%	1.3%	2.6%	0.0%	100.0%		
Road 3	3	66.1	N 1300-1400	1067	42.9%	16.8%	0.1%	12.2%	4.4%	3.8%	7.5%	0.0%	0.1%	0.6%	0.6%	0.4%	0.9%	0.0%	6.0%	0.3%	2.6%	0.0%	100.0%		
Road 3	3	66.0	N 1400-1500	1138	43.0%	17.0%	0.1%	10.8%	4.3%	3.7%	7.2%	0.0%	0.1%	0.7%	0.6%	0.4%	0.9%	0.0%	6.0%	0.3%	2.6%	0.0%	100.0%		
Road 3	3	64.6	N 1500-1600	1163	42.8%	17.2%	0.1%	12.6%	4.5%	3.2%	6.3%	0.0%	0.1%	0.8%	0.6%	0.6%	1.3%	0.0%	5.8%	1.2%	3.3%	0.0%	100.0%		
Road 3	3	63.2	N 1600-1700	1241	45.4%	15.6%	0.1%	9.9%	3.6%	3.1%	6.1%	0.0%	0.1%	1.1%	1.3%	0.9%	2.0%	0.0%	6.4%	2.1%	2.2%	0.0%	100.0%		
Road 3	3	61.7	N 1700-1800	1405	50.2%	15.0%	0.1%	8.9%	3.2%	2.0%	3.9%	0.0%	0.1%	0.7%	0.6%	0.6%	1.3%	0.0%	6.5%	4.3%	1.5%	0.0%	100.0%		
Road 3	3	60.0	N 1800-1900	1537	60.1%	14.3%	0.0%	5.5%	2.0%	1.5%	2.4%	0.0%	0.1%	0.1%	1.4%	1.4%	1.4%	1.4%	0.0%	9.0%	1.1%	0.0%	100.0%		
Road 3	3	65.6	N 1900-2000	1224	59.3%	18.8%	0.0%	4.2%	2.0%	1.5%	1.0%	2.0%	0.0%	0.0%	0.1%	0.9%	0.6%	1.4%	0.0%	7.6%	2.2%	0.7%	0.0%	100.0%	
Road 3	3	70.0	N 2000-2100	955	54.5%	23.2%	0.0%	4.4%	1.6%	1.0%	1.9%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	6.9%	2.2%	0.7%	0.0%	100.0%		
Road 3	3	70.0	N 2100-2200	947	55.9%	23.1%	0.0%	4.5%	1.6%	1.0%	2.0%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	6.9%	2.2%	0.7%	0.0%	100.0%		
Road 3	3	70.0	N 2200-2300	923	55.3%	25.0%	0.0%	3.5%	1.2%	1.1%	2.2%	0.0%	0.0%	0.1%	0.3%	0.2%	0.1%	0.1%	7.6%	2.1%	0.8%	0.0%	100.0%		
Road 3	3	70.0	N 2300-0000	691	54.3%	24.0%	0.0%	3.9%	1.4%	1.2%	2.4%	0.0%	0.0%	0.1%	0.4%	0.3%	0.8%	0.1%	7.5%	2.4%	0.9%	0.0%	100.0%		
Road 4	4	80.0	N 0000-0120	215	59.0%	28.0%	0.0%	1.8%	0.6%	0.8%	1.2%	0.0%	0.0%	0.0%	0.1%	0.4%	0.2%	0.5%	0.0%	2.3%	0.4%	0.0%	0.0%	100.0%	
Road 4	4	80.0	N 0100-0200	463	58.8%	28.3%	0.0%	2.8%	1.0%	0.9%	1.7%	0.0%	0.0%	0.0%	0.3%	0.6%	0.4%	1.0%	0.0%	2.3%	0.3%	0.0%	0.0%	100.0%	
Road 4	4	80.0	N 0200-0300	338	57.9%	25.0%	0.0%	3.1%	1.1%	1.0%	1.9%	0.0%	0.0%	0.0%	0.4%	0.7%	0.5%	1.1%	0.0%	2.3%	0.3%	0.0%	0.0%	100.0%	
Road 4	4	80.0	N 0300-0400	266	57.0%	25.0%	0.0%	3.1%	1.1%	1.0%	1.9%	0.0%	0.0%	0.0%	0.4%	0.7%	0.5%	1.1%	0.0%	2.3%	0.3%	0.0%	0.0%	100.0%	
Road 4	4	80.0	N 0400-0500	291	56.1%	24.8%	0.0%	3.6%	1.3%	1.1%	2.2%	0.0%	0.1%	0.5%	0.9%	0.6%	1.4%	0.0%	2.3%	0.4%	0.8%	0.0%	100.0%		
Road 4	4	80.0	N 0500-0600	502	55.2%	24.3%	0.0%	3.9%	1.4%	1.2%	2.4%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	2.3%	0.3%	0.7%	0.0%	100.0%		
Road 4	4	80.0	N 0600-0700	1073	54.3%	24.0%	0.0%	4.4%	1.6%	1.4%	2.7%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	2.3%	0.3%	0.7%	0.0%	100.0%		
Road 4	4	70.4	N 0700-0800	2152	53.3%	23.0%	0.0%	4.4%	1.6%	1.4%	2.7%	0.0%	0.1%	0.8%	1.1%	0.8%	1.9%	0.0%	2.2%	0.5%	0.7%	0.0%	100.0%		
Road 4	4	76.5	N 0800-0900	2502	59.5%	19.0%	0.1%	4.8%	1.7%	1.4%	2.7%	0.0%	0.1%	0.8%	1.2%	0.8%	1.8%	0.0%	2.0%	3.5%	0.7%	0.0%	100.0%		
Road 4	4	80.0	N 0900-1000	2011	55.3%	20.2%	0.1%	7.0%	2.5%	1.9%	3.7%	0.0%	0.1%	0.5%	0.9%	0.7%	1.4%	0.0%	2.1%	2.2%	1.0%	0.0%	100.0%		
Road 4	4	80.0	N 1000-1100	1718	53.7%	21.0%	0.1%	7.2%	2.7%	2.4%	4.2%	0.0%	0.1%	0.6%	0.8%	0.7%	1.4%	0.0%	2.0%	2.0%	1.0%	0.0%	100.0%		
Road 4	4	80.0	N 1100-1200	1629	53.1%	21.1%	0.1%	7.5%	2.7%	2.4%	4.6%	0.0%	0.1%	0.6%	0.9%	0.4%	0.8%	0.0%	2.2%	1.5%	1.2%	0.0%	100.0%		
Road 4	4	80.0	N 1200-1300	2430	50.5%	19.8%	0.1%	8.7%	3.1%	3.1%	6.1%	0.0%	0.1%	0.8%	0.9%	0.6%	1.3%	0.0%	2.2%	1.5%	1.8%	0.0%	100.0%		
Road 4	4	70.0	N 1300-1400	2463	49.5%	19.4%	0.1%	10.4%	3.7%	3.1%	6.1%	0.0%	0.1%	0.7%	0.7%	0.5%	1.2%	0.0%	2.2%	1.5%	1.8%	0.0%	100.0%		
Road 4	4	73.4	N 1400-1500	2645	48.9%	18.5%	0.1%	9.1%	3.3%	3.1%	6.1%	0.0%	0.1%	0.8%	1.0%	0.7%	1.5%	0.0%	2.0%	1.8%	1.6%	0.0%	100.0%		
Road 4	4	73.0	N 1500-1600	2701	48.4%	19.5%	0.1%	10.6%	3.8%	2.7%	5.3%	0.0%	0.1%	0.9%	1.0%	0.7%	1.5%	0.0%	2.0%	1.8%	1.4%	0.0%	100.0%		
Road 4	4	71.0	N 1600-1700	2904	51.2%	8.1%	0.0%	11.2%	4.1%	3.3%	7.3%	0.0%	0.1%	0.6%	0.6%	0.4%	0.9%	0.0%	2.0%	1.8%	1.4%	0.0%	100.0%		
Road 4	4	68.7	N 1700-1800	3341	55.8%	17.4%	0.1%	7.3%	2.6%	1.8%	3.2%	0.0%	0.1%	0.8%	1.0%	0.7%	1.5%	0.0%	2.2%	4.8%	0.8%	0.0%	100.0%		
Road 4	4	59.1	N 1800-1900	3733	66.1%	15.5%	0.0%	4.4%	1.6%	0.9%	1.8%	0.0%	0.0%	0.1%	1.2%	0.8%	1.8%	0.0%	2.2%	3.1%	0.5%	0.0%	100.0%		
Road 4	4	61.1	N 1900-2000	3841	64.4%	13.8%	0.0%	4.4%	1.6%	0.9%	1.8%	0.0%	0.0%	0.1%	1.0%	0.7%	1.5%	0.0%	2.0%	3.0%	0.5%	0.0%	100.0%		
Road 4	4	78.6	N 2000-2100	2316	59.4%	25.2%	0.0%	3.5%	1.3%	0.8%	1.5%	0.0%	0.0%	0.1%	0.8%	0.6%	1.3%	0.0%	2.6%	2.4%	0.4%	0.0%	100.0%		
Road 4	4	80.0	N 2100-2200	2310	60.6%	25.1%	0.0%	3.6%	1.3%	0.8%	1.6%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	2.3%	2.8%	0.4%	0.0%	100.0%		
Road 4	4	79.0	N 2200-2300	2153	60.5%	21.9%	0.0%	3.5%	1.3%	0.8%	1.5%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	2.5%	2.6%	0.4%	0.0%	100.0%		
Road 4	4	80.0	N 2300-0000	1680	59.0%	26.0%	0.0%	3.1%	1.1%	1.0%	1.9%	0.0%	0.0%	0.0%	0.1%	0.4%	0.3%	0.7%	0.0%	2.5%	2.8%	0.5%	0.0%	100.0%	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Traffic Data / Modeling Parameters For AERMOD (Year 2030)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles <=10t	07 - Medium Goods Vehicles 10-15t	08 - Public Light Buses	09 - Private Light Buses <=3.5t	10 - Private Light Buses >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4-15t	13 - Non-franchised Bus 15-24t	14 - Franchised Bus Single Deck	15 - Franchised Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total	
Road 5	5	50	41.6	N	0000-0100	830	59.3%	26.6%	0.0%	2.7%	1.0%	0.9%	1.7%	0.0%	0.0%	0.2%	0.5%	0.4%	0.0%	2.3%	3.0%	0.4%	0.0%	0.0%	100.0%	
Road 5	5	50	44.5	N	0100-0200	538	58.4%	26.1%	0.0%	3.0%	1.1%	1.0%	1.9%	0.0%	0.0%	0.3%	0.6%	0.4%	0.0%	2.3%	3.0%	0.5%	0.0%	0.0%	100.0%	
Road 5	5	50	46.0	N	0200-0300	392	57.5%	25.6%	0.0%	3.3%	1.2%	1.0%	2.0%	0.0%	0.0%	0.4%	0.7%	0.5%	1.1%	0.0%	2.3%	3.6%	0.5%	0.0%	0.0%	100.0%
Road 5	5	50	46.8	N	0300-0400	309	56.6%	25.1%	0.0%	3.6%	1.1%	1.1%	2.2%	0.0%	0.1%	0.4%	0.8%	0.6%	1.2%	0.0%	2.3%	4.0%	0.6%	0.0%	0.0%	100.0%
Road 5	5	50	46.5	N	0400-0500	338	55.7%	24.6%	0.0%	3.9%	1.4%	1.2%	2.4%	0.0%	0.1%	0.5%	0.9%	0.9%	1.4%	0.0%	2.3%	4.3%	0.6%	0.0%	0.0%	100.0%
Road 5	5	50	43.9	N	0500-0600	585	54.8%	24.1%	0.0%	4.2%	1.5%	1.3%	2.6%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	2.3%	4.7%	0.7%	0.0%	0.0%	100.0%
Road 5	5	50	38.2	N	0600-0700	1250	53.8%	23.6%	0.0%	4.5%	1.6%	1.4%	2.8%	0.0%	0.1%	0.7%	1.1%	0.8%	1.7%	0.0%	2.2%	5.0%	0.7%	0.0%	0.0%	100.0%
Road 5	5	50	30.6	N	0700-0800	2520	52.8%	23.0%	0.0%	4.8%	1.7%	1.5%	2.9%	0.0%	0.1%	0.8%	1.2%	0.8%	1.8%	0.0%	2.2%	5.4%	0.8%	0.0%	0.0%	100.0%
Road 5	5	50	28.2	N	0800-0900	2918	58.9%	18.9%	0.1%	5.2%	1.9%	1.5%	2.9%	0.0%	0.1%	0.8%	1.2%	0.8%	1.8%	0.0%	2.0%	3.4%	0.7%	0.0%	0.0%	100.0%
Road 5	5	50	31.2	N	0900-1000	2354	54.9%	19.9%	0.1%	7.5%	2.7%	2.0%	4.0%	0.0%	0.1%	0.5%	0.9%	0.8%	1.4%	0.0%	2.1%	2.1%	1.0%	0.0%	0.0%	100.0%
Road 5	5	50	33.0	N	1000-1100	2017	52.3%	20.4%	0.1%	8.1%	2.9%	2.6%	5.1%	0.0%	0.1%	0.6%	0.9%	0.6%	1.3%	0.0%	2.1%	1.6%	1.3%	0.0%	0.0%	100.0%
Road 5	5	50	33.7	N	1100-1200	1912	52.3%	21.6%	0.1%	8.0%	2.9%	2.5%	4.9%	0.0%	0.1%	0.9%	0.5%	0.4%	0.8%	0.0%	2.1%	1.5%	1.3%	0.0%	0.0%	100.0%
Road 5	5	50	34.9	N	1200-1300	1713	53.0%	20.4%	0.1%	7.2%	2.6%	2.6%	5.1%	0.0%	0.1%	0.8%	0.9%	0.6%	1.4%	0.0%	2.4%	0.6%	1.3%	0.0%	0.0%	100.0%
Road 5	5	50	34.7	N	1300-1400	1726	51.8%	19.9%	0.1%	8.6%	3.1%	2.7%	5.3%	0.0%	0.1%	0.7%	0.7%	0.5%	1.1%	0.0%	2.3%	1.6%	1.4%	0.0%	0.0%	100.0%
Road 5	5	50	33.9	N	1400-1500	1851	51.4%	20.8%	0.1%	7.8%	2.7%	2.6%	5.1%	0.0%	0.1%	0.9%	1.0%	0.7%	1.6%	0.0%	2.3%	1.9%	1.3%	0.0%	0.0%	100.0%
Road 5	5	50	33.7	N	1500-1600	1899	51.2%	20.5%	0.1%	8.8%	3.2%	2.2%	4.4%	0.0%	0.1%	0.9%	1.1%	0.7%	1.6%	0.0%	2.2%	1.8%	1.1%	0.0%	0.0%	100.0%
Road 5	5	50	32.7	N	1600-1700	2058	53.4%	18.4%	0.1%	6.8%	2.4%	2.1%	4.2%	0.0%	0.2%	1.3%	1.6%	1.1%	2.4%	0.0%	2.4%	2.5%	1.1%	0.0%	0.0%	100.0%
Road 5	5	50	31.4	N	1700-1800	2391	58.0%	18.0%	0.1%	8.9%	2.9%	2.1%	4.2%	0.0%	0.1%	0.8%	0.0%	0.7%	1.5%	0.0%	2.4%	5.0%	0.7%	0.0%	0.0%	100.0%
Road 5	5	50	29.9	N	1800-1900	2710	67.3%	15.8%	0.0%	3.5%	1.3%	0.7%	1.5%	0.0%	0.0%	0.1%	1.2%	0.8%	1.8%	0.0%	2.3%	3.2%	0.4%	0.0%	0.0%	100.0%
Road 5	5	50	33.1	N	1900-2000	2173	65.3%	20.0%	0.0%	2.7%	1.0%	0.6%	1.3%	0.0%	0.0%	0.1%	1.0%	0.7%	1.5%	0.0%	2.7%	2.4%	0.3%	0.0%	0.0%	100.0%
Road 5	5	50	35.9	N	2000-2100	1689	60.3%	25.6%	0.0%	2.8%	1.0%	0.6%	1.2%	0.0%	0.0%	0.1%	0.8%	0.6%	1.3%	0.0%	2.8%	2.4%	0.3%	0.0%	0.0%	100.0%
Road 5	5	50	38.1	N	2100-2200	1682	61.3%	25.4%	0.0%	2.8%	1.0%	0.7%	1.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.7%	0.0%	2.5%	2.8%	0.3%	0.0%	0.0%	100.0%
Road 5	5	50	36.4	N	2200-2300	1642	60.8%	27.5%	0.0%	2.2%	0.8%	0.7%	1.4%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	2.7%	2.3%	0.4%	0.0%	0.0%	100.0%
Road 5	5	50	38.7	N	2300-0000	1223	59.9%	27.0%	0.0%	2.5%	0.9%	0.8%	1.6%	0.0%	0.0%	0.1%	0.5%	0.3%	0.7%	0.0%	2.6%	2.7%	0.4%	0.0%	0.0%	100.0%
Road 6	6	50	44.3	N	0000-0100	519	54.9%	24.6%	0.0%	4.8%	1.7%	1.5%	2.9%	0.0%	0.1%	0.8%	1.2%	0.8%	1.8%	0.0%	4.1%	2.8%	0.4%	0.0%	0.0%	100.0%
Road 6	6	50	46.2	N	0100-0200	348	53.7%	24.0%	0.1%	5.1%	1.8%	1.6%	3.1%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	4.0%	3.0%	0.4%	0.0%	0.0%	100.0%
Road 6	6	50	47.2	N	0200-0300	256	52.5%	23.4%	0.1%	5.5%	2.0%	1.7%	3.4%	0.0%	0.0%	0.3%	0.7%	0.8%	1.0%	0.0%	4.0%	3.3%	1.6%	0.0%	0.0%	100.0%
Road 6	6	50	47.7	N	0300-0400	203	51.3%	22.8%	0.1%	5.9%	2.1%	1.9%	3.7%	0.0%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	4.0%	3.6%	1.9%	0.0%	0.0%	100.0%
Road 6	6	50	47.5	N	0400-0500	223	50.2%	22.2%	0.1%	6.4%	2.3%	2.0%	3.9%	0.0%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	3.9%	3.9%	1.9%	0.0%	0.0%	100.0%
Road 6	6	50	45.7	N	0500-0600	386	49.3%	21.7%	0.1%	6.8%	2.5%	2.1%	4.2%	0.0%	0.1%	0.5%	0.9%	0.6%	1.4%	0.0%	3.9%	4.2%	1.6%	0.0%	0.0%	100.0%
Road 6	6	50	40.6	N	0600-0700	828	48.3%	21.2%	0.1%	7.3%	2.6%	2.3%	4.5%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	3.9%	4.5%	1.4%	0.0%	0.0%	100.0%
Road 6	6	50	39.4	N	0700-0800	1417	47.1%	20.1%	0.1%	7.6%	2.9%	2.4%	4.8%	0.0%	0.1%	0.6%	0.0%	0.5%	1.1%	0.0%	4.0%	4.5%	1.7%	0.0%	0.0%	100.0%
Road 6	6	50	33.2	N	0800-0900	1948	52.5%	16.8%	0.1%	8.4%	3.0%	2.4%	4.6%	0.0%	0.1%	0.7%	1.0%	0.7%	1.6%	0.0%	3.4%	0.6%	1.6%	0.0%	0.0%	100.0%
Road 6	6	50	34.8	N	0900-1000	1633	47.1%	17.1%	0.1%	11.7%	4.2%	3.2%	6.2%	0.0%	0.1%	0.5%	0.8%	0.8%	1.2%	0.0%	3.4%	1.8%	2.1%	0.0%	0.0%	100.0%
Road 6	6	50	35.9	N	1000-1100	1417	44.1%	17.1%	0.1%	12.4%	4.5%	3.9%	7.7%	0.0%	0.1%	0.5%	0.7%	0.5%	1.1%	0.0%	3.4%	1.3%	2.5%	0.0%	0.0%	100.0%
Road 6	6	50	36.5	N	1100-1200	1351	44.0%	18.1%	0.1%	12.3%	4.4%	3.9%	7.6%	0.0%	0.1%	0.8%	0.4%	0.3%	0.7%	0.0%	3.5%	1.2%	2.5%	0.0%	0.0%	100.0%
Road 6	6	50	38.9	N	1200-1300	929	38.6%	14.9%	0.1%	14.0%	5.0%	5.0%	9.8%	0.0%	0.1%	0.6%	0.7%	0.8%	1.0%	0.0%	5.2%	1.1%	3.3%	0.0%	0.0%	100.0%
Road 6	6	50	38.6	N	1300-1400	962	36.8%	14.2%	0.2%	16.4%	5.9%	5.1%	10.0%	0.0%	0.1%	0.5%	0.5%	0.4%	0.8%	0.0%	4.9%	1.1%	3.4%	0.0%	0.0%	100.0%
Road 6	6	50	37.8	N	1400-1500	1024	37.0%	15.1%	0.2%	14.7%	5.3%	5.0%	9.8%	0.0%	0.1%	0.6%	0.7%	0.5%	1.1%	0.0%	4.9%	1.4%	3.3%	0.0%	0.0%	100.0%
Road 6	6	50	38.1	N	1500-1600	1040	37.0%	14.8%	0.2%	17.0%	6.1%	4.3%	8.4%	0.0%	0.1%	0.6%	0.8%	0.5%	1.2%	0.0%	4.8%	1.3%	2.9%	0.0%	0.0%	100.0%
Road 6	6	50	37.8	N	1600-1700	1088	40.0%	13.8%	0.1%	15.8%	4.9%	4.3%	8.4%	0.0%	0.1%	0.9%	1.2%	0.8%	1.8%	0.0%	5.4%	1.9%	2.8%	0.0%	0.0%	100.0%
Road 6	6	50	37.5	N	1700-1800	1200	45.5%	14.2%	0.1%	12.5%	4.5%	2.8%	6.6%	0.0%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	5.6%	3.9%	2.1%	0.0%	0.0%	100.0%
Road 6	6	50	37.5	N	1800-1900	1262	57.2%	13.4%	0.1%	8.0%	2.2%	1.7%	3.3%	0.0%	0.0%	0.1%	1.0%	0.7%	1.5%	0.0%	5.9%	2.7%	1.4%	0.0%	0.0%	100.0%
Road 6	6	50	39.3	N	1900-2000	991	56.6%	17.7%	0.1%	6.2%	2.2%	1.5%	2.9%	0.0%	0.0%	0.1%	0.9%	0.8%	1.3%	0.0%	6.8%	2.1%	0.9%	0.0%	0.0%	100.0%
Road 6	6	50	41.2	N	2000-2100	1331	52.5%	12.1%	0.0%	6.5%	2.3%	1.4%	2.8%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	7.2%	2.1%	1.0%	0.0%	0.0%	100.0%
Road 6	6	50	41.4	N	2100-2200	770	53.2%	22.0%	0.1%	6.7%	2.4%	1.5%	3.0%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	6.4%	2.4%	1.0%	0.0%	0.0%	100.0%
Road 6	6	50	41.6	N	2200-2300	745	53.0%	23.9%	0.1%	5.7%	1.9%	1.6%	3.2%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.1%	6.9%	2.0%	1.1%	0.0%	0.0%	100.0%
Road 6	6	50	43.7	N	2300-0000	561	51.7%	23.3%	0.1%	5.7%	2.1%	1.8%	3.6%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.1%	6.8%	2.3%	1.3%	0.0%	0.0%	100.0%

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Traffic Data / Modeling Parameters For AERMOD (Year 2030)

Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars																		Total		
							02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles <=5t	07 - Medium Goods Vehicles >5-24t	08 - Public Light Buses	09 - Private Light Buses <=3.5t	10 - Private Light Buses >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchised Bus Single Deck	15 - Franchised Bus Double Deck	16 - Motorcycles	17 - Heavy Goods Vehicles <=24t	18 - Non-franchised Bus >24t				
Road 13	13	50	27.6	N	0000-0100	20	4.7%	2.1%	0.0%	0.0%	0.3%	0.3%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%			
Road 13	13	50	27.6	N	0100-0200	20	3.1%	1.4%	0.0%	0.0%	0.2%	0.2%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%			
Road 13	13	50	27.6	N	0200-0300	19	2.2%	0.6%	0.0%	0.0%	0.2%	0.2%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%			
Road 13	13	50	27.7	N	0300-0400	19	1.8%	0.9%	0.0%	0.0%	0.5%	0.2%	0.1%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%			
Road 13	13	50	27.6	N	0400-0500	19	1.9%	0.8%	0.0%	0.0%	0.5%	0.2%	0.2%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%			
Road 13	13	50	27.6	N	0500-0600	20	3.1%	1.4%	0.0%	0.0%	0.4%	0.3%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%			
Road 13	13	50	27.5	N	0600-0700	22	6.0%	2.6%	0.0%	2.1%	0.8%	0.7%	1.3%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.8%	85.5%	0.0%	100.0%		
Road 13	13	50	24.1	N	0700-0800	77	3.3%	1.4%	0.0%	1.3%	0.5%	0.4%	0.8%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.3%	0.1%	0.1%	25.6%	0.0%	100.0%	
Road 13	13	50	24.1	N	0800-0900	78	4.2%	1.3%	0.0%	1.6%	0.8%	0.4%	0.9%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	100.0%		
Road 13	13	50	24.1	N	0900-1000	78	3.2%	1.2%	0.0%	1.8%	0.7%	0.5%	1.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.3%	26.0%	0.0%	100.0%	
Road 13	13	50	24.1	N	1000-1100	77	2.6%	1.0%	0.0%	1.7%	0.8%	0.5%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.2%	0.0%	100.0%	
Road 13	13	50	24.1	N	1100-1200	77	2.5%	1.0%	0.0%	1.6%	0.8%	0.5%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.2%	0.0%	100.0%
Road 13	13	50	24.1	N	1200-1300	77	2.8%	1.1%	0.0%	1.5%	0.6%	0.5%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.2%	0.0%	100.0%
Road 13	13	50	24.1	N	1300-1400	77	2.8%	1.1%	0.0%	1.8%	0.7%	0.6%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	100.0%
Road 13	13	50	24.1	N	1400-1500	78	2.9%	1.2%	0.0%	1.7%	0.8%	0.6%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	100.0%
Road 13	13	50	24.1	N	1500-1600	78	3.0%	1.2%	0.0%	2.0%	0.7%	0.5%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	100.0%
Road 13	13	50	24.1	N	1600-1700	78	3.4%	1.2%	0.0%	1.7%	0.8%	0.5%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.1%	0.1%	0.2%	0.0%	100.0%
Road 13	13	50	24.1	N	1700-1800	79	4.2%	1.3%	0.0%	1.7%	0.8%	0.4%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 13	13	50	24.1	N	1800-1900	79	5.6%	1.3%	0.0%	1.2%	0.4%	0.2%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 13	13	50	27.4	N	1900-2000	24	13.9%	4.4%	0.0%	2.3%	0.8%	0.5%	1.1%	0.0%	0.0%	0.0%	0.2%	0.1%	0.3%	0.0%	0.0%	0.5%	75.7%	0.0%	100.0%		
Road 13	13	50	27.4	N	2000-2100	23	10.6%	4.5%	0.0%	2.0%	0.7%	0.4%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	80.0%	0.0%	100.0%		
Road 13	13	50	27.4	N	2100-2200	23	10.7%	4.4%	0.0%	2.1%	0.7%	0.4%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	79.9%	0.0%	100.0%		
Road 13	13	50	27.4	N	2200-2300	23	10.4%	4.7%	0.0%	1.5%	0.6%	0.5%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	80.7%	0.0%	100.0%			
Road 13	13	50	27.5	N	2300-0000	22	8.1%	3.6%	0.0%	1.3%	0.5%	0.4%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	84.7%	0.0%	100.0%			
Road 14	14	50	46.3	N	0000-0100	334	54.1%	24.3%	3.0%	1.1%	1.0%	1.9%	1.0%	0.0%	0.0%	0.0%	0.2%	0.5%	0.3%	0.8%	0.0%	3.9%	2.7%	6.0%	0.0%	100.0%	
Road 14	14	50	47.4	N	0100-0200	224	51.7%	23.1%	0.0%	3.2%	1.2%	1.0%	2.0%	0.2%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	3.8%	2.9%	6.7%	0.0%	100.0%	
Road 14	14	50	48.0	N	0200-0300	168	49.3%	22.0%	0.0%	3.4%	1.2%	1.1%	2.1%	0.2%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	3.8%	2.9%	6.7%	0.0%	100.0%		
Road 14	14	50	48.3	N	0300-0400	137	47.1%	20.9%	0.0%	0.8%	1.3%	1.1%	0.2%	0.0%	0.0%	0.4%	0.7%	0.5%	1.0%	0.0%	3.5%	3.3%	14.1%	0.0%	100.0%		
Road 14	14	50	48.2	N	0400-0500	148	46.8%	20.7%	0.0%	3.9%	1.4%	1.2%	2.4%	0.2%	0.1%	0.4%	0.8%	0.5%	1.2%	0.0%	3.5%	3.6%	13.1%	0.0%	100.0%		
Road 14	14	50	47.1	N	0500-0600	243	48.5%	21.3%	0.0%	4.5%	1.6%	1.4%	2.8%	0.2%	0.1%	0.5%	0.9%	0.6%	1.4%	0.0%	3.7%	4.1%	8.3%	0.0%	100.0%		
Road 14	14	50	44.3	N	0600-0700	498	49.6%	21.7%	0.1%	5.0%	1.8%	1.6%	3.1%	0.2%	0.1%	0.6%	1.0%	0.7%	1.6%	0.0%	3.9%	4.6%	4.9%	0.0%	100.0%		
Road 14	14	50	37.8	N	0700-0800	1040	47.1%	20.5%	0.1%	5.1%	1.8%	1.6%	3.1%	0.2%	0.1%	0.7%	1.1%	0.7%	1.6%	0.0%	3.7%	4.4%	7.6%	0.0%	100.0%		
Road 14	14	50	37.8	N	0800-0900	1151	53.1%	17.0%	0.1%	5.7%	2.0%	1.6%	3.1%	0.2%	0.1%	0.7%	1.1%	0.7%	1.6%	0.0%	3.7%	4.4%	7.6%	0.0%	100.0%		
Road 14	14	50	38.9	N	0900-1000	785	48.3%	17.5%	0.1%	7.9%	2.8%	2.2%	4.2%	0.2%	0.1%	0.5%	0.8%	0.8%	1.2%	0.0%	3.4%	1.9%	8.3%	0.0%	100.0%		
Road 14	14	50	39.6	N	1000-1100	858	45.3%	17.6%	0.1%	8.4%	3.0%	2.7%	5.3%	0.2%	0.1%	0.5%	0.7%	0.9%	1.1%	0.0%	3.4%	1.4%	9.6%	0.0%	100.0%		
Road 14	14	50	39.9	N	1100-1200	817	45.0%	18.5%	0.1%	8.4%	3.0%	2.6%	5.1%	0.2%	0.1%	0.6%	0.5%	0.3%	0.7%	0.0%	3.4%	1.3%	10.0%	0.0%	100.0%		
Road 14	14	50	38.8	N	1200-1300	927	40.9%	15.8%	0.1%	10.4%	3.7%	3.7%	7.4%	0.0%	0.1%	0.6%	0.7%	0.6%	1.1%	0.0%	4.2%	1.2%	9.6%	0.0%	100.0%		
Road 14	14	50	38.6	N	1300-1400	948	39.4%	15.2%	0.1%	11.4%	4.4%	3.8%	7.5%	0.0%	0.1%	0.6%	0.8%	0.4%	0.9%	0.0%	4.0%	1.2%	9.6%	0.0%	100.0%		
Road 14	14	50	38.3	N	1400-1500	1040	39.8%	16.1%	0.1%	12.1%	4.0%	3.7%	7.4%	0.0%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	4.0%	1.5%	9.6%	0.0%	100.0%		
Road 14	14	50	38.2	N	1500-1600	1025	39.6%	15.8%	0.1%	12.8%	4.4%	3.2%	8.4%	0.0%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	4.0%	1.4%	8.6%	0.0%	100.0%		
Road 14	14	50	37.8	N	1600-1700	1084	42.4%	14.6%	0.1%	10.2%	3.7%	3.2%	6.3%	0.0%	0.1%	1.0%	1.2%	0.9%	1.9%	0.0%	4.3%	2.0%	8.2%	0.0%	100.0%		
Road 14	14	50	37.3	N	1700-1800	1211	42.5%	14.8%	0.1%	9.2%	3.3%	2.1%	4.1%	0.0%	0.1%	0.7%	0.8%	0.6%	1.3%	0.0%	4.4%	1.4%	6.9%	0.0%	100.0%		
Road 14	14	50	37.0	N	1800-1900	1311	58.1%	13.6%	0.1%	5.8%	2.1%	1.2%	2.4%	0.0%	0.0%	0.1%	1.0%	0.7%	1.6%	0.0%	4.6%	2.8%	6.0%	0.0%	100.0%		
Road 14	14	50	39.3	N	1900-2000	1004	59.0%	18.5%	0.0%	4.6%	1.8%	1.1%	2.1%	0.0%	0.0%	0.1%	0.9%	0.8%	1.4%	0.0%	5.4%	2.2%	2.4%	0.0%	100.0%		
Road 14	14	50	41.2	N	2000-2100	786	54.1%	23.0%	0.1%	4.9%	1.7%	1.1%	2.1%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	5.7%	2.2%	2.9%	0.0%	100.0%		
Road 14	14	50	41.4	N	2100-2200	782	55.3%	22.9%	0.1%	4.9%	1.8%	1.1%	2.2%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	5.0%	2.5%	2.9%	0.0%	100.0%		
Road 14	14	50	41.6	N	2200-2300	761	54.8%	24.8%	0.0%	3.8%	1.4%	1.2%	2.4%	0.0%	0.0%	0.1%	0.4%	0.5%	0.0%	5.4%	2.1%	3.0%	0.0%	100.0%			
Road 14	14	50	43.5	N	2300-0000	574	53.3%	24.0%	0.0%	4.2%	1.5%	1.3%	2.6%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	5.3%	2.4%	3.9%	0.0%	100.0%		

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Traffic Data / Modeling Parameters For AERMOD (Year 2030)

Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars																		Total
							02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles <=5t	07 - Medium Goods Vehicles 5-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchise d Bus Single Deck	15 - Franchise d Bus Double Deck	16 - Motorcycl	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t		
Road 17	17	70.0	N	0000-0100	435	56.6%	25.4%	0.0%	3.9%	1.4%	1.2%	2.4%	0.1%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	2.7%	2.8%	1.5%	0.0%	100.0%	
Road 17	17	67.0	N	0100-0200	285	55.4%	24.8%	0.0%	4.2%	1.5%	1.3%	2.6%	0.1%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	2.7%	3.1%	2.0%	0.0%	100.0%	
Road 17	17	68.5	N	0200-0300	269	54.1%	24.1%	0.0%	4.6%	1.6%	1.4%	2.8%	0.1%	0.0%	0.3%	0.7%	0.5%	1.0%	0.0%	2.6%	3.4%	2.5%	0.0%	100.0%	
Road 17	17	68.5	N	0300-0400	166	50.5%	23.1%	0.0%	4.9%	1.7%	1.5%	3.1%	0.1%	0.0%	0.3%	0.7%	0.5%	1.0%	0.0%	2.6%	3.4%	2.5%	0.0%	100.0%	
Road 17	17	68.5	N	0400-0500	182	51.9%	22.9%	0.1%	5.3%	1.9%	1.7%	3.3%	0.1%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	2.6%	4.0%	2.9%	0.0%	100.0%	
Road 17	17	67.4	N	0500-0600	313	51.3%	22.6%	0.1%	5.8%	2.1%	1.8%	3.6%	0.1%	0.1%	0.6%	0.9%	0.7%	1.4%	0.0%	2.6%	4.4%	2.1%	0.0%	100.0%	
Road 17	17	68.1	N	0600-0700	687	60.8%	22.1%	0.0%	6.0%	2.3%	1.8%	3.8%	0.1%	0.1%	0.6%	0.9%	0.8%	1.2%	0.0%	2.6%	4.8%	2.3%	0.0%	100.0%	
Road 17	17	67.4	N	0700-0800	1355	49.2%	21.4%	0.1%	6.6%	2.4%	2.1%	4.0%	0.1%	0.1%	0.7%	1.1%	0.8%	1.7%	0.0%	2.5%	5.0%	2.1%	0.0%	100.0%	
Road 17	17	42.8	N	0800-0900	1569	54.9%	17.6%	0.1%	7.2%	2.6%	2.0%	4.0%	0.3%	0.1%	0.1%	0.7%	1.1%	0.7%	1.6%	0.0%	2.3%	3.2%	1.9%	0.0%	100.0%
Road 17	17	49.4	N	0900-1000	1258	49.9%	18.1%	0.1%	10.0%	3.6%	2.7%	5.4%	0.1%	0.1%	0.5%	0.9%	0.8%	1.3%	0.0%	2.3%	1.9%	2.5%	0.0%	100.0%	
Road 17	17	54.7	N	1000-1100	1027	51.2%	18.3%	0.1%	10.7%	3.7%	3.4%	6.2%	0.1%	0.1%	0.5%	0.9%	0.8%	1.3%	0.0%	2.3%	1.4%	1.9%	0.0%	100.0%	
Road 17	17	57.0	N	1100-1200	1068	46.9%	19.3%	0.1%	10.7%	3.8%	3.3%	6.6%	0.1%	0.1%	0.9%	0.9%	0.5%	0.7%	0.0%	2.4%	1.3%	3.0%	0.0%	100.0%	
Road 17	17	64.2	N	1200-1300	630	41.8%	16.1%	0.1%	11.0%	4.3%	4.3%	8.4%	0.0%	0.1%	0.7%	0.7%	0.5%	1.1%	0.0%	4.5%	1.2%	4.4%	0.0%	100.0%	
Road 17	17	64.2	N	1300-1400	627	41.4%	15.4%	0.1%	14.1%	4.6%	4.6%	8.9%	0.0%	0.1%	0.6%	0.6%	0.9%	0.4%	0.0%	4.2%	1.2%	3.4%	0.0%	100.0%	
Road 17	17	64.2	N	1400-1500	686	40.4%	16.4%	0.1%	12.6%	4.5%	4.3%	8.4%	0.0%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	4.2%	1.5%	4.2%	0.0%	100.0%	
Road 17	17	64.2	N	1500-1600	702	40.1%	16.1%	0.2%	14.5%	5.2%	3.7%	7.2%	0.0%	0.1%	0.7%	0.8%	0.6%	1.3%	0.0%	4.1%	1.5%	3.9%	0.0%	100.0%	
Road 17	17	63.5	N	1600-1700	841	43.0%	17.1%	0.1%	13.6%	5.1%	3.6%	7.1%	0.0%	0.1%	0.8%	0.9%	0.8%	1.2%	0.0%	4.0%	2.0%	3.3%	0.0%	100.0%	
Road 17	17	63.5	N	1700-1800	828	48.3%	15.1%	0.1%	10.5%	3.8%	2.4%	4.7%	0.0%	0.1%	0.7%	0.8%	0.7%	1.0%	0.0%	4.7%	4.1%	2.9%	0.0%	100.0%	
Road 17	17	63.5	N	1800-1900	890	59.4%	14.0%	0.1%	6.6%	2.4%	1.4%	2.7%	0.0%	0.0%	0.1%	0.1%	0.0%	0.7%	1.6%	0.0%	4.9%	2.8%	2.3%	0.0%	100.0%
Road 17	17	64.9	N	1900-2000	688	59.0%	18.5%	0.1%	5.1%	1.8%	1.2%	2.4%	0.0%	0.0%	0.1%	0.9%	0.8%	1.4%	0.0%	5.7%	2.2%	1.1%	0.0%	100.0%	
Road 17	17	66.1	N	2000-2100	595	62.4%	24.0%	0.0%	5.4%	2.0%	1.3%	2.5%	0.0%	0.0%	0.1%	0.8%	0.9%	1.4%	0.0%	5.4%	2.4%	1.3%	0.0%	100.0%	
Road 17	17	66.1	N	2100-2200	542	55.4%	22.9%	0.1%	5.9%	2.0%	1.3%	2.5%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	5.3%	2.9%	1.3%	0.0%	100.0%	
Road 17	17	68.2	N	2200-2300	526	55.0%	24.9%	0.0%	4.2%	1.5%	1.3%	2.7%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	5.7%	2.1%	1.4%	0.0%	100.0%	
Road 17	17	67.1	N	2300-2400	486	52.0%	24.0%	0.0%	2.6%	0.9%	0.9%	1.6%	0.0%	0.0%	0.1%	0.2%	0.3%	0.2%	0.0%	5.3%	2.4%	1.7%	0.0%	100.0%	
Road 18	18	69.1	N	0000-0100	265	57.0%	25.6%	0.0%	2.9%	0.9%	0.8%	1.6%	0.3%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	4.6%	2.9%	1.8%	0.0%	100.0%	
Road 18	18	69.4	N	0100-0200	171	55.8%	25.0%	0.0%	2.8%	1.0%	0.8%	1.7%	0.3%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	4.5%	3.2%	2.6%	0.0%	100.0%	
Road 18	18	69.6	N	0200-0300	127	54.3%	24.3%	0.0%	3.1%	1.0%	1.0%	1.9%	0.3%	0.1%	0.3%	0.7%	0.5%	0.9%	0.0%	4.3%	3.8%	2.4%	0.0%	100.0%	
Road 18	18	69.4	N	0300-0400	101	53.1%	23.6%	0.0%	3.3%	1.2%	1.0%	2.0%	0.3%	0.1%	0.4%	0.8%	0.5%	1.2%	0.0%	4.4%	3.7%	4.1%	0.0%	100.0%	
Road 18	18	69.6	N	0400-0500	110	52.6%	23.2%	0.0%	3.6%	1.3%	1.1%	2.2%	0.3%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	4.4%	4.1%	3.9%	0.0%	100.0%	
Road 18	18	69.3	N	0500-0600	188	52.4%	23.1%	0.0%	3.9%	1.4%	1.2%	2.4%	0.3%	0.1%	0.6%	0.9%	0.7%	1.5%	0.0%	4.4%	4.5%	2.6%	0.0%	100.0%	
Road 18	18	69.6	N	0600-0700	287	52.6%	22.6%	0.0%	4.2%	1.6%	1.3%	2.6%	0.3%	0.1%	0.7%	0.7%	1.1%	1.3%	0.0%	4.4%	4.9%	2.3%	0.0%	100.0%	
Road 18	18	67.2	N	0700-0800	807	50.7%	22.1%	0.0%	4.5%	1.6%	1.4%	2.8%	0.3%	0.1%	0.7%	1.2%	0.8%	1.8%	0.0%	4.4%	5.2%	2.5%	0.0%	100.0%	
Road 18	18	67.2	N	0800-0900	929	56.9%	18.2%	0.1%	4.9%	1.8%	1.4%	2.7%	0.2%	0.1%	0.8%	1.1%	0.8%	1.7%	0.0%	3.9%	3.3%	2.2%	0.0%	100.0%	
Road 18	18	67.3	N	0900-1000	913	56.3%	19.2%	0.1%	4.8%	1.8%	1.4%	2.8%	0.3%	0.1%	0.8%	1.0%	0.8%	1.7%	0.0%	2.1%	3.0%	2.4%	0.0%	100.0%	
Road 18	18	67.6	N	1000-1100	647	50.3%	19.5%	0.1%	7.6%	2.7%	2.4%	4.7%	0.3%	0.1%	0.5%	0.8%	0.3%	1.3%	0.0%	4.1%	1.5%	3.4%	0.0%	100.0%	
Road 18	18	67.7	N	1100-1200	614	50.0%	20.6%	0.1%	7.5%	2.7%	2.4%	4.6%	0.3%	0.1%	0.9%	0.5%	0.3%	0.8%	0.0%	4.2%	1.4%	3.5%	0.0%	100.0%	
Road 18	18	67.7	N	1200-1300	612	49.1%	19.1%	0.1%	7.8%	2.8%	2.5%	4.8%	0.3%	0.1%	0.8%	0.5%	0.3%	0.8%	0.0%	4.2%	1.4%	3.5%	0.0%	100.0%	
Road 18	18	67.7	N	1300-1400	616	48.5%	18.7%	0.1%	8.3%	3.0%	2.8%	5.0%	0.0%	0.1%	0.7%	0.5%	0.1%	0.5%	0.0%	5.8%	1.5%	3.6%	0.0%	100.0%	
Road 18	18	67.5	N	1400-1500	662	48.3%	19.5%	0.1%	7.3%	2.6%	2.5%	4.8%	0.0%	0.1%	0.8%	1.0%	0.7%	1.5%	0.0%	5.7%	1.8%	3.4%	0.0%	100.0%	
Road 18	18	67.5	N	1500-1600	675	48.1%	19.3%	0.1%	8.4%	3.0%	2.1%	4.2%	0.0%	0.1%	0.8%	1.0%	0.7%	1.5%	0.0%	5.6%	1.7%	3.2%	0.0%	100.0%	
Road 18	18	67.5	N	1600-1700	732	48.0%	6.5%	0.2%	8.5%	3.2%	2.0%	4.5%	0.0%	0.1%	0.8%	1.2%	1.1%	1.5%	0.0%	5.6%	1.7%	3.2%	0.0%	100.0%	
Road 18	18	67.0	N	1700-1800	947	54.4%	17.0%	0.1%	5.7%	2.1%	1.3%	2.5%	0.0%	0.1%	0.8%	1.0%	0.7%	1.5%	0.0%	6.0%	4.7%	2.3%	0.0%	100.0%	
Road 18	18	68.0	N	1800-1900	957	63.7%	15.0%	0.0%	3.4%	1.2%	0.7%	1.4%	0.0%	0.0%	0.1%	1.1%	0.8%	1.7%	0.0%	5.9%	3.0%	1.8%	0.0%	100.0%	
Road 18	18	67.4	N	1900-2000	913	62.5%	15.3%	0.0%	3.5%	1.2%	0.8%	1.5%	0.0%	0.0%	0.1%	1.2%	0.8%	1.7%	0.0%	5.9%	2.3%	1.8%	0.0%	100.0%	
Road 18	18	68.7	N	2000-2100	995	57.2%	24.3%	0.2%	2.7%	1.0%	0.6%	1.2%	0.0%	0.0%	0.1%	0.8%	0.6%	1.2%	0.0%	7.1%	2.3%	0.9%	0.0%	100.0%	
Road 18	18	68.0	N	2100-2200	990	56.6%	24.3%	0.0%	2.8%	1.0%	0.6%	1.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	6.3%	2.7%	0.9%	0.0%	100.0%	
Road 18	18	68.5	N	2200-2300	928	56.8%	25.8%	0.0%	2.5%	1.1%	0.7%	1.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.7%	0.0%	6.3%	2.5%	1.1%	0.0%	100.0%	
Road 18	18	68.5	N	2300-0000	451	56.8%	25.6%	0.0%	2.4%	0.9%	0.6%	1.5%	0.0%	0.0%	0.1%	0.4%	0.3%	0.7%	0.0%	6.1%	2.5%	1.2%	0.0%	100.0%	

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Traffic Data / Modeling Parameters For AEMO (Year 2030)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Road-Bike Approach (YN)	Hour	Total Vehicles (Veh/yr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles	04 - Light Goods Vehicles >3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles >15t	07 - Medium Goods Vehicles 15t	08 - Public Light Buses	09 - Private >3.5t	10 - Private >3.5t	11 - Non-franchised Bus <6.4t	12 - Non-franchised Bus 6.4t-15t	13 - Non-franchised Bus >15t	14 - Franchise Bus Single End	15 - Franchise Bus Double End	16 - Motorcycle	17 - Light Goods Vehicles >3.5t	18 - Non-franchised Bus >24t	Total	
							PC	TAXI	LGV3	LGV4	LGV6	HGV7	HVS8	PLB	PV4	PV5	NFB6	NFB7	NFB8	FBS0	FBD0	MC	HVS9	NFB9		
Road 23	23	50	29.1	N	0000-0100	11	8.6%	3.9%	0.4%	35.1%	12.6%	11.1%	21.8%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.4%	5.7%	0.0%	100.0%		
Road 23	23	50	29.4	N	0100-0200	8	7.8%	3.5%	0.4%	35.0%	12.8%	11.2%	22.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.4%	5.8%	0.0%	100.0%		
Road 23	23	50	29.5	N	0200-0300	10	7.9%	3.6%	0.4%	35.0%	12.9%	11.3%	22.3%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.4%	5.8%	0.0%	100.0%		
Road 23	23	50	29.6	N	0300-0400	5	6.5%	2.9%	0.4%	36.4%	13.1%	11.5%	22.5%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.5%	5.9%	0.0%	100.0%		
Road 23	23	50	29.5	N	0400-0500	6	6.0%	2.7%	0.4%	36.8%	13.2%	11.5%	22.7%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.5%	5.9%	0.0%	100.0%		
Road 23	23	50	29.3	N	0500-0600	11	5.5%	2.4%	0.4%	37.0%	13.3%	11.6%	23.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.5%	6.0%	0.0%	100.0%		
Road 23	23	50	27.9	N	0600-0700	25	5.1%	2.2%	0.4%	37.3%	13.4%	11.7%	23.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.5%	6.0%	0.0%	100.0%		
Road 23	23	50	25.4	N	0700-0800	54	4.7%	2.1%	0.4%	37.5%	13.5%	11.8%	23.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.5%	6.0%	0.0%	100.0%		
Road 23	23	50	24.9	N	0800-0900	65	5.1%	1.6%	0.5%	37.8%	14.2%	12.0%	23.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.5%	6.1%	0.0%	100.0%		
Road 23	23	50	24.8	N	0900-1000	73	3.4%	1.2%	0.4%	41.0%	14.7%	11.2%	21.9%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.1%	5.7%	0.0%	100.0%		
Road 23	23	50	24.8	N	1000-1100	71	2.9%	1.1%	0.4%	38.7%	13.9%	12.3%	24.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	6.3%	0.0%	100.0%		
Road 23	23	50	24.8	N	1100-1200	67	2.6%	0.8%	0.5%	38.0%	13.9%	12.3%	24.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	6.3%	0.0%	100.0%		
Road 23	23	50	24.8	N	1200-1300	67	3.2%	1.2%	0.4%	36.4%	13.1%	13.0%	25.6%	0.0%	0.0%	0.1%	0.1%	0.0%	0.1%	0.0%	0.1%	6.7%	0.0%	100.0%		
Road 23	23	50	24.7	N	1300-1400	76	2.8%	1.1%	0.4%	39.2%	14.1%	12.1%	23.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	6.2%	0.0%	100.0%		
Road 23	23	50	24.7	N	1400-1500	75	2.4%	0.7%	0.4%	37.4%	14.0%	12.2%	24.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	6.2%	0.0%	100.0%		
Road 23	23	50	24.7	N	1500-1600	79	3.0%	1.2%	0.4%	42.4%	15.2%	10.7%	21.1%	0.0%	0.0%	0.1%	0.1%	0.0%	0.1%	0.0%	0.5%	5.5%	0.0%	100.0%		
Road 23	23	50	24.8	N	1600-1700	73	3.6%	1.2%	0.4%	38.5%	13.8%	12.0%	23.6%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.2%	6.2%	0.0%	100.0%		
Road 23	23	50	24.9	N	1700-1800	69	4.2%	1.2%	0.4%	42.0%	15.1%	9.7%	21.5%	0.0%	0.0%	0.0%	0.1%	0.1%	0.3%	0.0%	0.4%	5.0%	0.0%	100.0%		
Road 23	23	50	26.3	N	1800-1900	46	9.5%	2.2%	0.4%	41.7%	15.0%	8.7%	17.1%	0.0%	0.0%	0.0%	0.2%	0.1%	0.3%	0.0%	0.5%	4.5%	0.0%	100.0%		
Road 23	23	50	27.6	N	1900-2000	30	11.2%	3.5%	0.4%	38.3%	13.8%	8.1%	18.0%	0.0%	0.0%	0.0%	0.2%	0.1%	0.3%	0.0%	0.4%	4.7%	0.0%	100.0%		
Road 23	23	50	28.1	N	2000-2100	24	10.1%	4.3%	0.4%	39.7%	14.2%	8.7%	17.2%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.4%	4.5%	0.0%	100.0%		
Road 23	23	50	28.0	N	2100-2200	25	10.0%	4.1%	0.4%	39.2%	14.1%	9.0%	17.7%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.5%	4.6%	0.0%	100.0%		
Road 23	23	50	28.2	N	2200-2300	22	11.0%	5.0%	0.4%	33.7%	12.1%	10.7%	21.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.4%	5.5%	0.0%	100.0%		
Road 23	23	50	28.5	N	2300-0000	18	9.9%	4.5%	0.4%	34.4%	12.3%	10.9%	21.4%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.4%	5.6%	0.0%	100.0%		
Road 24	24	50	29.0	N	0000-0100	9	10.4%	4.4%	0.4%	34.1%	12.5%	12.2%	20.8%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.4%	5.6%	0.0%	100.0%		
Road 24	24	50	29.1	N	0100-0200	6	9.4%	4.2%	0.4%	34.7%	12.5%	10.9%	21.5%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.5%	5.6%	0.0%	100.0%		
Road 24	24	50	29.6	N	0200-0300	5	8.6%	3.8%	0.4%	35.2%	12.6%	11.1%	21.8%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.5%	5.7%	0.0%	100.0%		
Road 24	24	50	29.6	N	0300-0400	4	7.8%	3.5%	0.4%	35.8%	12.8%	11.2%	22.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.5%	5.7%	0.0%	100.0%		
Road 24	24	50	29.2	N	0400-0500	5	7.2%	3.2%	0.4%	36.0%	12.9%	11.3%	22.2%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.6%	5.8%	0.0%	100.0%		
Road 24	24	50	29.6	N	0500-0600	9	6.7%	2.9%	0.4%	36.3%	13.0%	11.4%	22.4%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.6%	5.8%	0.0%	100.0%		
Road 24	24	50	29.2	N	0600-0700	11	6.2%	2.7%	0.4%	36.6%	13.1%	11.5%	22.6%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.6%	5.9%	0.0%	100.0%		
Road 24	24	50	26.2	N	0700-0800	45	5.7%	2.5%	0.4%	36.9%	13.2%	11.6%	22.7%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.6%	5.9%	0.0%	100.0%		
Road 24	24	50	25.5	N	0800-0900	54	6.3%	2.0%	0.4%	38.9%	14.0%	10.9%	21.4%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.4%	5.6%	0.0%	100.0%		
Road 24	24	50	25.0	N	0900-1000	60	4.5%	1.4%	0.4%	40.1%	14.5%	11.0%	21.7%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.5%	5.7%	0.0%	100.0%		
Road 24	24	50	25.0	N	1000-1100	59	3.5%	1.3%	0.4%	38.3%	13.8%	12.2%	23.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	6.3%	0.0%	100.0%		
Road 24	24	50	25.3	N	1100-1200	55	3.5%	1.4%	0.4%	38.6%	13.8%	12.1%	23.7%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.1%	6.2%	0.0%	100.0%		
Road 24	24	50	25.2	N	1200-1300	55	3.9%	1.5%	0.4%	38.2%	12.9%	12.9%	24.5%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.1%	6.6%	0.0%	100.0%		
Road 24	24	50	24.9	N	1300-1400	62	4.0%	1.4%	0.4%	38.8%	13.0%	12.0%	23.9%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.1%	6.2%	0.0%	100.0%		
Road 24	24	50	24.9	N	1400-1500	62	3.7%	1.5%	0.4%	37.0%	13.3%	12.5%	24.6%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.1%	6.4%	0.0%	100.0%		
Road 24	24	50	24.9	N	1500-1600	65	2.8%	1.4%	0.4%	42.0%	15.1%	10.6%	20.9%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.1%	5.5%	0.0%	100.0%		
Road 24	24	50	24.9	N	1600-1700	60	4.4%	1.4%	0.4%	38.1%	13.9%	11.9%	23.2%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.6%	5.9%	0.0%	100.0%		
Road 24	24	50	25.5	N	1700-1800	55	6.1%	1.9%	0.4%	42.2%	15.2%	8.6%	18.8%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.5%	4.9%	0.0%	100.0%		
Road 24	24	50	26.9	N	1800-1900	39	11.2%	2.7%	0.4%	40.5%	14.5%	8.4%	16.6%	0.0%	0.0%	0.0%	0.2%	0.1%	0.3%	0.0%	0.5%	4.3%	0.0%	100.0%		
Road 24	24	50	26.0	N	1900-2000	26	13.3%	4.2%	0.4%	37.1%	13.3%	8.9%	21.3%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.5%	4.8%	0.0%	100.0%		
Road 24	24	50	26.0	N	2000-2100	20	12.0%	5.1%	0.4%	38.3%	13.6%	8.4%	16.6%	0.0%	0.0%	0.0%	0.2%	0.1%	0.3%	0.0%	0.5%	4.3%	0.0%	100.0%		
Road 24	24	50	26.3	N	2100-2200	21	11.3%	4.9%	0.4%	38.0%	13.6%	8.7%	17.2%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.5%	4.5%	0.0%	100.0%		
Road 24	24	50	26.8	N	2200-2300	18	13.5%	5.3%	0.4%	39.5%	14.1%	11.3%	21.3%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.5%	5.1%	0.0%	100.0%		
Road 24	24	50	26.8	N	2300-0000	15	11.8%	5.3%	0.3%	33.2%	11.6%	10.5%	20.7%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.5%	5.4%	0.0%	100.0%		

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Traffic Data / Modeling Parameters For AEMOD (Year 2030)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Road-Bike Approach (YN)	Hour	Total Vehicles (Veh/yr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles 2.5-3.5t	04 - Light Goods Vehicles 3.5-5t	05 - Light Goods Vehicles 5-8t	06 - Medium Goods Vehicles 8-12t	07 - Medium Goods Vehicles 12-18t	08 - Public Buses	09 - Private Buses >3.5t	10 - Private Buses >3.5t	11 - Non-franchised Bus >4t	12 - Non-franchised Bus 1-15t	13 - Non-franchised Bus 15-24t	14 - Franchised Bus Single End	15 - Franchised Bus Double End	16 - Motorcycle	17 - Light Goods Vehicles >8t	18 - Non-franchised Bus >24t	Total	
							PC	TAXI	LGV3	LGV4	LGV6	HGV7	HGV5	PLB	PV4	PV5	NFB6	NFB7	NFB8	FBSD	FBD0	MC	HGV5	NFB9		
Road 27	27	50	28.7	N	0000-0100	16	8.6%	3.8%	0.4%	35.2%	12.6%	11.1%	21.9%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.4%	5.7%	0.0%	100.0%	
Road 27	27	50	28.1	N	0100-0200	11	7.9%	3.5%	0.4%	35.7%	12.6%	11.5%	22.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.4%	5.8%	0.0%	100.0%	
Road 27	27	50	29.3	N	0200-0300	36	7.3%	3.2%	0.3%	33.0%	13.4%	11.4%	22.3%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.4%	5.8%	0.0%	100.0%	
Road 27	27	50	29.4	N	0300-0400	7	6.5%	2.9%	0.4%	36.5%	13.1%	11.5%	22.5%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.5%	5.9%	0.0%	100.0%	
Road 27	27	50	29.3	N	0400-0500	9	6.0%	2.6%	0.4%	36.8%	13.2%	11.6%	22.7%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.5%	6.0%	0.0%	100.0%	
Road 27	27	50	29.7	N	0500-0600	16	5.5%	2.4%	0.4%	37.1%	13.3%	11.7%	23.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.5%	6.1%	0.0%	100.0%	
Road 27	27	50	27.0	N	0600-0700	36	5.1%	2.2%	0.4%	37.3%	13.4%	11.7%	23.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.5%	6.0%	0.0%	100.0%	
Road 27	27	50	24.7	N	0700-0800	77	4.7%	2.0%	0.4%	37.6%	13.5%	11.8%	23.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.5%	6.0%	0.0%	100.0%	
Road 27	27	50	24.7	N	0800-0900	77	5.1%	2.0%	0.4%	37.6%	13.5%	11.8%	23.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.5%	6.0%	0.0%	100.0%	
Road 27	27	50	24.3	N	0900-1000	103	3.4%	1.2%	0.4%	41.0%	14.7%	11.2%	22.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.1%	5.7%	0.0%	100.0%	
Road 27	27	50	24.3	N	1000-1100	101	2.8%	1.1%	0.4%	38.7%	13.9%	12.3%	24.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	6.3%	0.0%	100.0%	
Road 27	27	50	24.3	N	1100-1200	95	2.8%	1.0%	0.4%	39.2%	14.0%	12.3%	24.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	6.3%	0.0%	100.0%	
Road 27	27	50	24.4	N	1200-1300	94	2.3%	0.9%	0.4%	36.9%	13.3%	12.3%	26.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	6.8%	0.0%	100.0%	
Road 27	27	50	24.2	N	1300-1400	106	2.0%	0.8%	0.4%	39.6%	14.2%	12.3%	24.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	6.3%	0.0%	100.0%	
Road 27	27	50	24.2	N	1400-1500	102	2.2%	0.8%	0.4%	38.0%	13.5%	12.3%	24.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	6.3%	0.0%	100.0%	
Road 27	27	50	24.1	N	1500-1600	110	2.1%	0.8%	0.4%	43.0%	15.4%	10.9%	21.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	6.8%	0.0%	100.0%	
Road 27	27	50	24.2	N	1600-1700	101	2.6%	0.9%	0.4%	39.1%	14.0%	12.2%	24.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.1%	6.3%	0.0%	100.0%	
Road 27	27	50	24.5	N	1700-1800	92	2.5%	0.9%	0.4%	43.0%	15.4%	10.9%	21.4%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.1%	6.3%	0.0%	100.0%	
Road 27	27	50	25.0	N	1800-1900	63	7.0%	1.6%	0.5%	43.3%	15.5%	9.0%	17.7%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.3%	4.6%	0.0%	100.0%	
Road 27	27	50	26.6	N	1900-2000	41	8.3%	3.2%	0.4%	40.2%	14.4%	8.6%	18.8%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.3%	4.9%	0.0%	100.0%	
Road 27	27	50	27.3	N	2000-2100	31	7.5%	3.2%	0.4%	41.5%	14.4%	9.2%	18.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.3%	4.7%	0.0%	100.0%	
Road 27	27	50	27.3	N	2100-2200	34	7.4%	3.1%	0.4%	41.0%	14.6%	9.4%	18.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.3%	4.8%	0.0%	100.0%		
Road 27	27	50	27.6	N	2200-2300	29	8.2%	3.7%	0.4%	35.4%	12.7%	11.3%	22.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.3%	5.8%	0.0%	100.0%	
Road 27	27	50	28.0	N	2300-2400	24	7.3%	3.3%	0.4%	36.6%	12.6%	11.4%	22.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.3%	5.9%	0.0%	100.0%	
Road 28	28	50	28.1	N	0000-0100	1483	51.5%	21.5%	2.1%	6.2%	2.2%	2.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.3%	2.5%	0.0%	100.0%	
Road 28	28	80.0	50.0	N	0100-0200	974	50.0%	22.4%	0.1%	6.8%	2.4%	2.1%	4.2%	0.3%	0.0%	0.2%	0.5%	0.4%	0.8%	0.4%	0.5%	2.8%	2.2%	0.0%	100.0%	
Road 28	28	80.0	50.0	N	0200-0300	719	48.6%	21.0%	0.1%	7.3%	2.6%	2.3%	4.5%	0.3%	0.3%	0.3%	0.6%	0.4%	0.9%	0.9%	0.4%	3.1%	2.7%	0.0%	100.0%	
Road 28	28	80.0	50.0	N	0300-0400	574	47.2%	20.1%	0.1%	8.0%	2.8%	2.5%	4.8%	0.3%	0.3%	0.3%	0.6%	0.5%	0.8%	0.8%	0.4%	3.3%	2.8%	0.0%	100.0%	
Road 28	28	80.0	50.0	N	0400-0500	633	46.1%	20.4%	0.1%	8.4%	3.0%	2.6%	5.2%	0.3%	0.1%	0.4%	0.8%	0.5%	1.1%	0.9%	0.3%	3.6%	3.1%	0.0%	100.0%	
Road 28	28	80.0	50.0	N	0500-0600	1097	45.2%	19.9%	0.1%	9.0%	3.2%	2.8%	5.6%	0.3%	0.1%	0.5%	0.8%	0.6%	1.3%	0.9%	0.3%	3.9%	3.5%	0.0%	100.0%	
Road 28	28	80.0	50.0	N	0600-0700	1166	44.3%	19.6%	0.1%	9.6%	3.4%	3.0%	6.0%	0.3%	0.1%	0.6%	0.9%	0.7%	1.4%	1.0%	0.3%	4.1%	3.7%	0.0%	100.0%	
Road 28	28	64.9	50.0	N	0700-0800	4818	42.3%	18.7%	0.1%	10.1%	3.6%	3.2%	6.2%	0.3%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	0.4%	4.2%	4.4%	2.5%	100.0%	
Road 28	28	38.0	50.0	N	0800-0900	5583	47.7%	15.3%	0.1%	11.0%	4.0%	3.1%	6.1%	0.3%	0.1%	0.7%	0.9%	0.6%	1.4%	0.3%	0.3%	2.8%	2.3%	0.0%	100.0%	
Road 28	28	50.6	50.0	N	0900-1000	5424	45.3%	14.2%	0.1%	12.4%	4.5%	3.0%	5.5%	0.3%	0.1%	0.8%	0.9%	0.6%	1.4%	0.3%	0.3%	2.8%	2.3%	0.0%	100.0%	
Road 28	28	69.0	50.0	N	1000-1100	4276	38.3%	14.9%	0.2%	15.5%	5.6%	4.9%	9.7%	0.3%	0.1%	0.4%	0.6%	0.4%	1.0%	0.0%	0.3%	1.2%	3.5%	0.0%	100.0%	
Road 28	28	70.7	50.0	N	1100-1200	4046	38.3%	15.8%	0.2%	15.4%	5.5%	4.8%	9.5%	0.3%	0.1%	0.7%	0.4%	0.3%	0.6%	0.0%	0.3%	1.1%	3.5%	0.0%	100.0%	
Road 28	28	80.0	50.0	N	1200-1300	2550	40.3%	15.5%	0.1%	13.4%	4.9%	4.8%	5.5%	0.4%	0.1%	0.7%	0.5%	0.1%	0.3%	0.2%	0.1%	0.2%	4.1%	0.0%	100.0%	
Road 28	28	50.0	50.0	N	1300-1400	1535	38.4%	15.3%	0.2%	14.5%	5.2%	4.9%	9.0%	0.3%	0.1%	0.7%	0.5%	0.1%	0.3%	0.2%	0.1%	0.2%	4.1%	0.0%	100.0%	
Road 28	28	79.3	50.0	N	1400-1500	2783	38.9%	15.1%	0.1%	14.1%	5.1%	4.8%	9.4%	0.4%	0.1%	0.7%	0.8%	0.5%	1.2%	0.0%	0.2%	1.5%	4.0%	0.0%	100.0%	
Road 28	28	76.0	50.0	N	1500-1600	2652	38.6%	15.5%	0.2%	16.3%	5.9%	4.1%	8.1%	0.3%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	0.2%	1.4%	3.7%	0.0%	100.0%	
Road 28	28	80.0	50.0	N	1600-1700	2984	41.7%	14.1%	0.1%	17.0%	6.4%	4.1%	8.1%	0.3%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	0.2%	1.4%	3.7%	0.0%	100.0%	
Road 28	28	77.4	50.0	N	1700-1800	3305	47.2%	14.8%	0.1%	12.0%	4.3%	2.7%	5.3%	0.4%	0.1%	0.7%	0.8%	0.6%	1.3%	0.0%	0.3%	1.4%	2.7%	0.0%	100.0%	
Road 28	28	77.2	50.0	N	1800-1900	3497	59.1%	13.9%	0.1%	7.7%	2.7%	1.6%	3.1%	0.4%	0.0%	0.1%	0.8%	0.7%	1.6%	0.0%	0.3%	2.8%	2.0%	0.0%	100.0%	
Road 28	28	80.0	50.0	N	1900-2000	2732	58.0%	13.8%	0.1%	8.4%	2.8%	1.8%	3.1%	0.4%	0.0%	0.1%	0.8%	0.7%	1.6%	0.0%	0.3%	2.8%	2.0%	0.0%	100.0%	
Road 28	28	80.0	50.0	N	2000-2100	2132	54.1%	13.0%	0.1%	6.3%	2.2%	1.4%	2.7%	0.5%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	0.3%	2.8%	2.2%	1.2%	100.0%	
Road 28	28	80.0	50.0	N	2100-2200	2126	55.1%	12.6%	0.1%	6.4%	2.3%	1.5%	2.9%	0.4%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.3%	2.5%	1.3%	0.0%	100.0%	
Road 28	28	80.0	50.0	N	2200-2300	2056	55.0%	12.3%	0.1%	5.8%	1.8%	1.6%	2.9%	0.4%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.3%	2.5%	1.3%	0.0%	100.0%	
Road 28	28	80.0	50.0	N	2300-0000	1548	53.6%	12.2%	0.1%	5.5%	2.0%	1.7%	3.4%	0.4%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.3%	2.4%	1.6%	0.0%	100.0%	

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Traffic Data / Modeling Parameters For AERMOD (Year 2030)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Road Branch Approach (Y/N)	Hour	Total Vehicles (Vehicle)	01 - Private Car	02 - Taxi	03 - Light Goods Vehicles >2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles >2.5t	07 - Medium Goods Vehicles >2.5t	08 - Public Light Bus >2.5t	09 - Private Light Bus >3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus >4t	12 - Non-franchised Bus 1st 1st	13 - Non-franchised Bus 1st 2nd	14 - Franchised Bus Single	15 - Franchised Bus Double	16 - Motorcyclist	17 - Franchised Goods Vehicle	18 - Non-franchised Bus >4t	Total	
							PC	TAXI	LGV3	LGV4	LGV6	HGV7	HGV8	PLB	PV4	PV5	NFB6	NFB7	NFB8	FBS0	FBD0	MC9	HGV9	NFB9		
Road 31	31	80	80.0	N	0000-0000	214	47.5%	21.3%	0.1%	1.1%	7.9%	2.8%	2.6%	5.1%	0.3%	0.0%	0.3%	0.6%	0.4%	0.3%	0.7%	0.4%	0.3%	0.0%	100.0%	
Road 31	31	80	80.0	N	0100-0100	244	44.0%	24.4%	0.1%	1.4%	7.5%	2.8%	2.6%	5.0%	0.3%	0.0%	0.2%	0.5%	0.4%	0.3%	0.7%	0.4%	0.3%	0.0%	100.0%	
Road 31	31	80	80.0	N	0200-0200	109	42.6%	19.0%	0.1%	7.9%	2.8%	2.5%	4.9%	0.3%	0.0%	0.3%	0.5%	0.4%	0.8%	0.5%	0.3%	0.7%	1.1%	0.0%	100.0%	
Road 31	31	80	80.0	N	0300-0300	89	44.6%	17.9%	0.1%	7.9%	2.9%	2.6%	5.1%	0.3%	0.0%	0.3%	0.6%	0.4%	0.9%	0.3%	0.8%	2.8%	13.3%	0.0%	100.0%	
Road 31	31	80	80.0	N	0400-0400	244	44.0%	24.4%	0.1%	1.4%	7.5%	2.8%	2.6%	5.0%	0.3%	0.0%	0.2%	0.5%	0.4%	0.3%	0.7%	0.4%	0.3%	0.0%	100.0%	
Road 31	31	80	80.0	N	0500-0600	163	40.5%	17.8%	0.1%	9.9%	3.6%	3.1%	6.1%	0.3%	0.1%	0.4%	0.7%	0.5%	1.1%	0.3%	3.9%	5.3%	8.3%	0.0%	100.0%	
Road 31	31	80	80.0	N	0600-0700	340	40.8%	17.8%	0.1%	10.9%	3.9%	3.4%	6.7%	0.3%	0.1%	0.5%	0.8%	1.3%	0.3%	3.9%	3.8%	5.0%	0.0%	100.0%		
Road 31	31	80	80.0	N	0700-0800	715	38.4%	16.7%	0.1%	11.2%	4.0%	3.5%	6.9%	0.3%	0.1%	0.6%	0.9%	0.6%	1.3%	0.3%	3.8%	3.9%	7.7%	0.0%	100.0%	
Road 31	31	80	80.0	N	0800-0900	824	31.8%	14.0%	0.1%	11.2%	4.0%	3.5%	6.9%	0.3%	0.1%	0.6%	0.9%	0.6%	1.3%	0.3%	3.4%	3.2%	8.0%	0.0%	100.0%	
Road 31	31	80	80.0	N	0900-1000	730	36.6%	13.3%	0.2%	16.0%	5.7%	4.3%	8.5%	0.3%	0.0%	0.4%	0.6%	0.4%	0.9%	0.3%	3.2%	1.4%	8.0%	0.0%	100.0%	
Road 31	31	80	80.0	N	1000-1100	696	33.3%	12.9%	0.2%	16.5%	5.9%	5.2%	10.3%	0.3%	0.0%	0.4%	0.5%	0.4%	0.8%	0.3%	3.1%	1.0%	9.2%	0.0%	100.0%	
Road 31	31	80	80.0	N	1100-1200	427	31.2%	12.7%	0.2%	13.7%	4.5%	5.2%	10.3%	0.3%	0.0%	0.3%	0.6%	0.5%	0.9%	0.3%	3.2%	0.8%	9.0%	0.0%	100.0%	
Road 31	31	80	80.0	N	1200-1300	392	32.4%	12.5%	0.1%	13.9%	5.0%	5.0%	8.8%	0.3%	0.1%	0.5%	0.6%	0.4%	0.8%	0.3%	4.5%	1.0%	13.4%	0.0%	100.0%	
Road 31	31	80	80.0	N	1300-1400	407	30.7%	11.8%	0.2%	16.3%	5.9%	5.0%	9.9%	0.3%	0.1%	0.4%	0.4%	0.3%	0.7%	0.4%	4.2%	0.9%	13.0%	0.0%	100.0%	
Road 31	31	80	80.0	N	1400-1500	418	31.5%	12.7%	0.1%	14.0%	5.1%	5.0%	10.2%	0.3%	0.1%	0.4%	0.5%	0.4%	0.8%	0.3%	4.3%	0.9%	13.0%	0.0%	100.0%	
Road 31	31	80	80.0	N	1500-1600	435	31.1%	12.5%	0.2%	17.1%	6.1%	4.3%	8.5%	0.5%	0.1%	0.5%	0.6%	0.4%	1.0%	0.4%	4.2%	1.1%	12.0%	0.0%	100.0%	
Road 31	31	80	80.0	N	1600-1700	450	34.2%	11.8%	0.1%	13.0%	5.0%	4.3%	8.5%	0.5%	0.1%	0.8%	1.0%	0.7%	1.5%	0.4%	4.8%	1.6%	11.8%	0.0%	100.0%	
Road 31	31	80	80.0	N	1700-1800	417	31.6%	12.7%	0.1%	13.0%	5.0%	4.8%	9.8%	0.3%	0.1%	0.8%	1.0%	0.7%	1.5%	0.4%	4.8%	1.6%	11.8%	0.0%	100.0%	
Road 31	31	80	80.0	N	1800-1900	502	50.8%	11.9%	0.1%	8.5%	3.1%	1.8%	3.5%	0.5%	0.0%	0.1%	0.9%	0.6%	0.4%	0.5%	5.5%	2.4%	9.4%	0.0%	100.0%	
Road 31	31	80	80.0	N	1900-2000	371	53.5%	16.7%	0.1%	7.0%	2.5%	1.7%	3.3%	0.5%	0.1%	0.1%	0.8%	0.6%	1.2%	0.4%	6.8%	2.0%	3.8%	0.0%	100.0%	
Road 31	31	80	80.0	N	2000-2100	292	48.7%	20.7%	0.1%	7.3%	2.5%	1.6%	3.2%	0.5%	0.1%	0.1%	0.7%	0.5%	0.9%	0.5%	6.0%	1.9%	4.9%	0.0%	100.0%	
Road 31	31	80	80.0	N	2100-2200	371	49.8%	20.6%	0.1%	7.4%	2.7%	1.7%	3.4%	0.5%	0.0%	0.1%	0.4%	0.2%	0.5%	0.6%	6.2%	2.3%	4.7%	0.0%	100.0%	
Road 31	31	80	80.0	N	2200-2300	281	49.6%	22.4%	0.1%	5.8%	2.1%	1.8%	3.6%	0.5%	0.0%	0.0%	0.3%	0.2%	0.5%	0.1%	6.7%	1.9%	4.0%	0.0%	100.0%	
Road 31	31	80	80.0	N	2300-0000	215	47.7%	21.5%	0.1%	6.3%	2.3%	2.0%	3.9%	0.5%	0.1%	0.1%	0.4%	0.3%	0.5%	0.1%	6.5%	2.1%	6.2%	0.0%	100.0%	
Road 32	32	80	80.0	N	0000-0100	1387	47.2%	21.5%	0.1%	1.4%	7.5%	2.8%	2.6%	5.0%	0.3%	0.0%	0.2%	0.5%	0.4%	0.3%	0.7%	0.4%	0.3%	0.0%	100.0%	
Road 32	32	80	80.0	N	0100-0200	629	50.9%	22.8%	0.1%	6.7%	2.4%	2.1%	4.1%	0.3%	0.0%	0.2%	0.6%	0.4%	0.8%	0.4%	4.6%	2.9%	1.1%	0.0%	100.0%	
Road 32	32	80	80.0	N	0200-0300	610	49.7%	22.1%	0.1%	7.2%	2.6%	2.3%	4.5%	0.3%	0.3%	0.3%	0.6%	0.4%	1.0%	0.4%	4.5%	3.1%	1.2%	0.0%	100.0%	
Road 32	32	80	80.0	N	0300-0400	485	40.5%	22.8%	0.1%	6.7%	2.4%	2.1%	4.1%	0.3%	0.3%	0.3%	0.6%	0.4%	1.0%	0.4%	4.5%	3.1%	1.2%	0.0%	100.0%	
Road 32	32	80	80.0	N	0400-0500	535	47.2%	20.9%	0.1%	8.3%	3.0%	2.6%	5.1%	0.3%	0.1%	0.4%	0.8%	0.5%	1.2%	0.4%	3.7%	1.3%	1.3%	0.0%	100.0%	
Road 32	32	80	80.0	N	0500-0600	934	46.0%	20.2%	0.1%	8.9%	3.2%	2.8%	5.5%	0.3%	0.1%	0.5%	0.8%	0.6%	1.3%	0.4%	4.3%	3.9%	1.4%	0.0%	100.0%	
Road 32	32	80	80.0	N	0600-0700	2016	42.0%	20.6%	0.1%	6.7%	2.4%	2.1%	4.1%	0.3%	0.3%	0.3%	0.6%	0.4%	1.0%	0.4%	4.5%	3.1%	1.2%	0.0%	100.0%	
Road 32	32	72.3	N	0700-0800	4102	43.6%	19.0%	0.1%	10.0%	3.6%	3.1%	6.1%	0.3%	0.1%	0.6%	1.0%	0.7%	1.5%	0.4%	4.2%	4.5%	1.6%	0.0%	100.0%		
Road 32	32	80	80.0	N	0800-0900	4759	48.5%	15.5%	0.1%	10.8%	3.9%	3.0%	5.9%	0.3%	0.1%	0.7%	0.9%	0.7%	1.4%	0.4%	3.7%	2.8%	1.6%	0.0%	100.0%	
Road 32	32	71.3	N	0900-1000	4694	50.4%	16.8%	15.5%	0.1%	10.8%	3.9%	3.0%	5.9%	0.3%	0.1%	0.7%	0.9%	0.7%	1.4%	0.4%	3.7%	2.8%	1.6%	0.0%	100.0%	
Road 32	32	80	80.0	N	1000-1100	3620	39.3%	15.2%	0.2%	15.3%	5.5%	4.9%	9.6%	0.3%	0.4%	0.4%	0.6%	0.4%	1.0%	0.3%	3.7%	1.1%	2.5%	0.0%	100.0%	
Road 32	32	75.8	N	1100-1200	3424	39.3%	16.2%	0.2%	15.2%	5.5%	4.6%	9.4%	0.3%	0.1%	0.7%	0.4%	0.3%	0.6%	0.4%	3.6%	1.1%	2.4%	0.0%	100.0%		
Road 32	32	80	80.0	N	1200-1300	3588	44.7%	15.7%	0.2%	15.3%	5.5%	4.9%	9.6%	0.3%	0.4%	0.4%	0.6%	0.4%	1.0%	0.3%	3.7%	1.1%	2.5%	0.0%	100.0%	
Road 32	32	80	80.0	N	1300-1400	2228	39.6%	15.3%	0.2%	15.7%	5.6%	4.9%	9.5%	0.4%	0.1%	0.6%	0.6%	0.4%	0.9%	0.5%	2.4%	1.2%	2.5%	0.0%	100.0%	
Road 32	32	80	80.0	N	1400-1500	2358	40.3%	16.3%	0.1%	14.0%	5.0%	4.7%	9.3%	0.4%	0.1%	0.7%	0.8%	0.6%	1.2%	0.4%	2.4%	1.5%	2.4%	0.0%	100.0%	
Road 32	32	80	80.0	N	1500-1600	2417	39.9%	16.0%	0.2%	16.2%	5.8%	4.1%	8.1%	0.4%	0.1%	0.7%	0.8%	0.6%	1.2%	0.4%	2.3%	1.4%	2.1%	0.0%	100.0%	
Road 32	32	80	80.0	N	1600-1700	2584	43.1%	14.8%	0.1%	14.0%	5.0%	4.7%	9.3%	0.4%	0.1%	0.7%	0.8%	0.6%	1.2%	0.4%	2.6%	1.2%	2.0%	0.0%	100.0%	
Road 32	32	80	80.0	N	1700-1800	2818	48.6%	15.2%	0.1%	11.8%	4.2%	2.7%	5.2%	0.4%	0.1%	0.7%	0.9%	0.6%	1.3%	0.5%	2.7%	4.2%	1.4%	0.0%	100.0%	
Road 32	32	80	80.0	N	1800-1900	2996	60.4%	14.2%	0.1%	7.5%	2.7%	1.6%	3.1%	0.4%	0.0%	0.1%	1.1%	0.7%	1.6%	0.4%	2.8%	2.9%	0.8%	0.0%	100.0%	
Road 32	32	80	80.0	N	1900-2000	2811	59.0%	14.2%	0.1%	7.5%	2.7%	1.6%	3.1%	0.4%	0.0%	0.1%	1.1%	0.7%	1.6%	0.4%	2.8%	2.9%	0.8%	0.0%	100.0%	
Road 32	32	80	80.0	N	2000-2100	1819	54.9%	23.3%	0.1%	6.1%	2.2%	1.3%	2.6%	0.5%	0.1%	0.8%	1.2%	0.9%	1.2%	0.4%	3.4%	2.2%	0.7%	0.0%	100.0%	
Road 32	32	80	80.0	N	2100-2200	1386	56.0%	23.1%	0.1%	6.2%	2.2%	1.4%	2.8%	0.5%	0.1%	0.4%	0.3%	0.6%	0.4%	3.0%	2.6%	0.7%	0.0%	100.0%		
Road 32	32	80	80.0	N	2200-2300	1775	58.6%	23.8%	0.1%	6.2%	2.2%	1.4%	2.8%	0.5%	0.1%	0.4%	0.3%	0.6%	0.4%	3.0%	2.6%	0.7%	0.0%	100.0%		
Road 32	32	80	80.0	N	2300-0000	1333	54.6%	24.6%	0.1%	5.4%	1.9%	1.7%	3.3%	0.5%	0.0%	0.1%	0.4%	0.3%	0.6%	0.4%	3.2%	2.4%	0.9%	0.0%	100.0%	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Traffic Data / Modeling Parameters For AERMOD (Year 2030)																									
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start/End Estimated by Road Branch (Approx Y/N)	Hour	Total Vehicles (Vehicle)	Vehicle Type Distribution																		Total
							01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles >2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles >3.5t	07 - Medium Goods Vehicles >3.5t	08 - Public Buses	09 - Private Light Vehicle >3.5t	10 - Private Light Vehicle >3.5t	11 - Non-franchised Bus >4t	12 - Non-franchised Bus 1st	13 - Non-franchised Bus 2nd	14 - Franchised Bus Single	15 - Franchised Bus Double	16 - Motorcyclist	17 - Franchised Goods Vehicles	18 - Non-franchised Bus >4t	
Road 35	35	50	48.9	N	0000-0000	36	29.6%	13.3%	0.1%	9.2%	3.3%	2.9%	5.7%	0.0%	0.0%	0.1%	0.3%	0.1%	0.3%	0.2%	0.4%	0.0%	1.5%	32.5%	100.0%
Road 35	35	49.1	49.1	N	0100-0100	36	29.6%	13.3%	0.1%	9.2%	3.3%	2.9%	5.7%	0.0%	0.0%	0.1%	0.3%	0.1%	0.3%	0.2%	0.4%	0.0%	1.5%	32.5%	100.0%
Road 35	35	49.2	N	0200-0200	23	20.8%	9.2%	0.1%	8.0%	2.9%	2.5%	4.9%	0.7%	0.1%	0.1%	0.3%	0.2%	0.4%	0.0%	0.3%	0.1%	1.3%	48.6%	100.0%	
Road 35	35	49.2	N	0300-0300	31	17.9%	7.9%	0.1%	7.6%	2.7%	2.4%	4.7%	0.6%	0.0%	0.1%	0.3%	0.2%	0.4%	0.0%	0.3%	0.1%	1.3%	48.6%	100.0%	
Road 35	35	49.2	N	0400-0400	30	18.3%	8.0%	0.1%	7.8%	2.7%	2.4%	4.7%	0.6%	0.0%	0.1%	0.3%	0.2%	0.4%	0.0%	0.3%	0.1%	1.3%	48.6%	100.0%	
Road 35	35	49.0	N	0500-0600	31	22.2%	9.8%	0.1%	11.3%	4.1%	3.6%	7.0%	0.8%	0.0%	0.2%	0.4%	0.5%	0.6%	0.0%	0.1%	1.9%	37.6%	100.0%		
Road 35	35	49.0	N	0600-0700	54	26.4%	11.6%	0.2%	14.7%	5.3%	4.6%	9.1%	1.0%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	0.2%	2.5%	42.6%	100.0%		
Road 35	35	49.0	N	0700-0800	112	21.5%	8.4%	0.1%	13.0%	4.7%	4.1%	8.0%	0.8%	0.0%	0.3%	0.5%	0.3%	0.7%	0.0%	0.2%	2.2%	34.1%	100.0%		
Road 35	35	45.5	N	0800-0900	148	24.9%	10.4%	0.2%	14.7%	5.3%	4.6%	9.1%	1.0%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	0.2%	2.5%	42.6%	100.0%		
Road 35	35	45.4	N	0900-1000	142	19.4%	7.1%	0.2%	17.7%	6.4%	4.8%	9.5%	0.7%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	0.8%	32.2%	100.0%			
Road 35	35	45.5	N	1000-1100	135	16.8%	6.5%	0.2%	17.3%	6.2%	5.5%	10.8%	0.7%	0.0%	0.2%	0.3%	0.2%	0.4%	0.0%	0.5%	34.3%	100.0%			
Road 35	35	45.5	N	1200-1300	129	16.8%	6.5%	0.2%	17.3%	6.2%	5.5%	10.8%	0.7%	0.0%	0.2%	0.3%	0.2%	0.4%	0.0%	0.5%	34.3%	100.0%			
Road 35	35	46.3	N	1200-1300	112	22.1%	8.5%	0.1%	11.1%	4.0%	4.0%	7.8%	0.0%	0.0%	0.3%	0.3%	0.6%	0.0%	0.0%	0.9%	40.0%	100.0%			
Road 35	35	46.2	N	1300-1400	115	21.1%	8.1%	0.1%	13.1%	4.7%	4.1%	8.0%	0.0%	0.0%	0.3%	0.3%	0.2%	0.5%	0.0%	0.6%	38.9%	100.0%			
Road 35	35	46.2	N	1400-1500	112	21.0%	8.0%	0.1%	13.1%	4.7%	4.1%	8.0%	0.0%	0.0%	0.3%	0.3%	0.2%	0.5%	0.0%	0.6%	38.9%	100.0%			
Road 35	35	46.0	N	1500-1600	121	21.9%	8.8%	0.1%	14.0%	5.0%	3.5%	7.0%	0.0%	0.0%	0.4%	0.5%	0.3%	0.7%	0.0%	0.8%	37.0%	100.0%			
Road 35	35	46.0	N	1600-1700	122	24.4%	8.4%	0.1%	11.6%	4.2%	3.6%	7.1%	0.0%	0.1%	0.6%	0.7%	0.5%	1.1%	0.0%	1.1%	36.6%	100.0%			
Road 35	35	46.0	N	1700-1800	129	29.3%	10.1%	0.2%	12.1%	4.3%	3.8%	7.3%	0.0%	0.1%	0.6%	0.7%	0.5%	0.4%	0.0%	1.2%	39.0%	100.0%			
Road 35	35	46.1	N	1800-1900	129	38.4%	0.9%	0.1%	7.5%	2.7%	1.6%	3.1%	0.0%	0.0%	0.1%	0.7%	0.5%	1.0%	0.0%	1.8%	33.6%	100.0%			
Road 35	35	48.0	N	1900-2000	78	49.5%	15.5%	0.1%	7.5%	2.7%	1.8%	3.5%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	1.8%	15.1%	100.0%			
Road 35	35	48.0	N	2000-2100	61	42.8%	18.6%	0.1%	7.7%	2.8%	1.8%	3.5%	0.0%	0.0%	0.1%	0.7%	0.5%	0.9%	0.0%	1.9%	39.0%	100.0%			
Road 35	35	48.4	N	2100-2200	83	44.4%	18.3%	0.1%	7.8%	2.8%	1.8%	3.5%	0.0%	0.0%	0.1%	0.3%	0.2%	0.6%	0.0%	2.0%	18.3%	100.0%			
Road 35	35	48.4	N	2200-2300	61	44.4%	20.1%	0.1%	6.0%	2.2%	1.9%	3.8%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	1.7%	19.0%	100.0%			
Road 35	35	48.7	N	2300-0000	49	40.7%	18.3%	0.1%	6.3%	2.3%	2.0%	3.9%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	1.8%	23.5%	100.0%			
Road 36	36	49.0	N	0000-0000	34	29.6%	13.3%	0.1%	9.2%	3.3%	2.9%	5.7%	0.0%	0.0%	0.1%	0.3%	0.1%	0.3%	0.2%	0.4%	0.0%	1.5%	32.5%	100.0%	
Road 36	36	49.0	Y	0100-0200	34	10.0%	13.9%	0.1%	7.7%	2.8%	2.4%	4.8%	0.7%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	1.7%	33.8%	100.0%			
Road 36	36	49.0	N	0200-0300	28	26.9%	12.0%	0.1%	7.4%	2.7%	2.3%	4.6%	0.6%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	1.7%	40.6%	100.0%			
Road 36	36	49.2	N	0300-0400	25	23.0%	8.5%	0.1%	7.2%	2.5%	2.2%	4.4%	0.5%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	1.7%	43.0%	100.0%			
Road 36	36	49.1	Y	0400-0500	26	23.9%	10.6%	0.1%	8.0%	2.9%	2.5%	4.9%	0.5%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	1.9%	43.3%	100.0%			
Road 36	36	49.8	Y	0500-0600	38	28.1%	12.4%	0.1%	10.3%	3.7%	3.2%	6.3%	0.7%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	2.4%	40.8%	100.0%			
Road 36	36	49.8	Y	0600-0700	48	32.0%	13.1%	0.2%	12.8%	4.3%	4.0%	7.9%	0.8%	0.0%	0.3%	0.6%	0.5%	0.9%	0.0%	2.8%	43.0%	100.0%			
Road 36	36	45.1	Y	0700-0800	163	27.2%	11.9%	0.1%	11.8%	4.2%	3.7%	7.3%	0.7%	0.1%	0.4%	0.6%	0.4%	0.9%	0.0%	2.8%	27.9%	100.0%			
Road 36	36	44.6	Y	0800-0900	183	31.2%	10.0%	0.1%	13.2%	4.7%	3.7%	7.3%	0.5%	0.1%	0.4%	0.6%	0.4%	0.9%	0.0%	1.8%	25.0%	100.0%			
Road 36	36	44.4	Y	0900-1000	183	31.2%	11.1%	0.2%	16.4%	4.7%	4.3%	8.4%	0.5%	0.1%	0.4%	0.6%	0.4%	0.9%	0.0%	1.8%	25.0%	100.0%			
Road 36	36	44.9	Y	1000-1100	160	22.0%	8.5%	0.2%	16.3%	5.8%	5.2%	10.2%	0.6%	0.2%	0.2%	0.4%	0.3%	0.6%	0.0%	1.9%	29.2%	100.0%			
Road 36	36	45.1	Y	1100-1200	153	21.7%	8.9%	0.2%	16.0%	5.7%	5.0%	9.8%	0.6%	0.1%	0.4%	0.2%	0.2%	0.3%	0.0%	1.6%	30.2%	100.0%			
Road 36	36	44.8	Y	1200-1300	152	16.9%	6.2%	0.2%	15.9%	5.7%	5.0%	9.8%	0.6%	0.1%	0.4%	0.2%	0.2%	0.3%	0.0%	1.6%	30.2%	100.0%			
Road 36	36	44.8	Y	1300-1400	160	19.3%	7.4%	0.2%	18.4%	6.6%	5.7%	11.2%	1.2%	0.0%	0.3%	0.3%	0.2%	0.4%	0.0%	1.6%	29.5%	100.0%			
Road 36	36	44.8	Y	1400-1500	164	20.1%	8.1%	0.2%	17.0%	6.1%	5.8%	11.3%	1.0%	0.0%	0.3%	0.4%	0.3%	0.6%	0.0%	1.8%	29.8%	100.0%			
Road 36	36	44.7	Y	1500-1600	167	20.0%	8.0%	0.2%	18.7%	7.1%	5.0%	8.8%	0.0%	0.0%	0.4%	0.4%	0.3%	0.6%	0.0%	0.7%	27.9%	100.0%			
Road 36	36	44.4	Y	1600-1700	164	19.6%	7.8%	0.2%	16.5%	6.2%	5.0%	8.1%	0.0%	0.0%	0.4%	0.4%	0.3%	0.6%	0.0%	0.7%	28.0%	100.0%			
Road 36	36	44.8	Y	1700-1800	173	27.5%	8.6%	0.2%	16.2%	5.8%	3.7%	7.2%	0.2%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	2.4%	26.5%	100.0%			
Road 36	36	45.2	Y	1800-1900	166	37.8%	8.9%	0.1%	11.4%	4.1%	2.4%	4.7%	0.0%	0.0%	0.1%	0.7%	0.5%	1.0%	0.0%	1.8%	26.7%	100.0%			
Road 36	36	47.4	Y	1900-2000	110	40.7%	11.0%	0.2%	11.0%	4.0%	2.8%	5.1%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	1.1%	24.0%	100.0%			
Road 36	36	47.8	Y	2000-2100	84	41.6%	17.7%	0.1%	11.2%	4.0%	2.5%	4.9%	0.0%	0.1%	0.1%	0.6%	0.4%	0.9%	0.0%	1.7%	16.4%	100.0%			
Road 36	36	45.2	Y	2100-2200	85	42.1%	17.4%	0.1%	11.3%	4.1%	2.6%	5.1%	0.0%	0.0%	0.3%	0.2%	0.5%	0.0%	1.9%	14.4%	100.0%				
Road 36	36	47.4	Y	2200-2300	84	42.1%	17.4%	0.1%	11.3%	4.1%	2.6%	5.1%	0.0%	0.0%	0.3%	0.2%	0.5%	0.0%	1.9%	14.4%	100.0%				
Road 36	36	45.3	Y	2300-0000	64	39.3%	17.7%	0.1%	9.4%	3.4%	3.0%	5.8%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	1.7%	18.7%	100.0%			

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Traffic Data / Modeling Parameters For AERMOD (Year 2030)																									
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles <=5t	07 - Medium Goods Vehicles 5-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchise d Bus Single Deck	15 - Franchise d Bus Double Deck	16 - Motorcycl	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total
Road 37	37	50	50.0	Y	0000-0100	2	49.6%	22.3%	0.1%	9.7%	3.5%	3.1%	6.0%	0.0%	0.0%	0.2%	0.3%	0.2%	0.7%	0.0%	2.5%	1.6%	0.0%	100.0%	
Road 37	37	50	50.0	Y	0100-0200	1	47.1%	21.5%	0.1%	10.5%	3.8%	3.5%	6.5%	0.0%	0.0%	0.2%	0.3%	0.4%	0.8%	0.0%	2.7%	1.7%	0.0%	100.0%	
Road 37	37	50	50.0	Y	0200-0300	1	46.5%	20.7%	0.1%	11.2%	4.0%	3.5%	7.0%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	2.9%	1.8%	0.0%	100.0%	
Road 37	37	50	50.0	Y	0300-0400	1	44.9%	19.9%	0.1%	12.0%	4.3%	3.8%	7.4%	0.0%	0.0%	0.4%	0.6%	0.4%	1.0%	0.0%	3.2%	1.9%	0.0%	100.0%	
Road 37	37	50	50.0	Y	0400-0500	1	46.2%	19.2%	0.1%	12.7%	4.8%	4.0%	7.9%	0.0%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	3.4%	2.1%	0.0%	100.0%	
Road 37	37	50	50.0	Y	0500-0600	1	41.9%	18.4%	0.1%	13.4%	4.8%	4.2%	8.3%	0.0%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	3.6%	2.2%	0.0%	100.0%	
Road 37	37	50	49.9	Y	0600-0700	3	40.4%	17.7%	0.1%	14.2%	5.1%	4.4%	8.7%	0.0%	0.1%	0.5%	0.8%	0.8%	1.3%	0.0%	3.8%	2.3%	0.0%	100.0%	
Road 37	37	50	49.8	Y	0700-0800	7	39.0%	17.0%	0.2%	14.9%	5.3%	4.6%	9.1%	0.0%	0.1%	0.6%	0.9%	0.6%	1.4%	0.0%	4.0%	2.4%	0.0%	100.0%	
Road 37	37	50	49.8	Y	0800-0900	8	43.0%	13.8%	0.2%	16.0%	5.7%	4.5%	8.8%	0.0%	0.1%	0.6%	0.8%	0.6%	1.3%	0.0%	2.5%	2.3%	0.0%	100.0%	
Road 37	37	50	49.8	Y	0900-1000	7	35.8%	13.0%	0.2%	20.5%	7.4%	5.6%	11.0%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	1.4%	2.9%	0.0%	100.0%	
Road 37	37	50	49.8	Y	1000-1100	6	32.4%	12.6%	0.2%	21.0%	7.5%	6.7%	13.1%	0.0%	0.0%	0.4%	0.5%	0.4%	0.8%	0.0%	1.0%	3.4%	0.0%	100.0%	
Road 37	37	50	49.8	Y	1100-1200	6	32.4%	13.4%	0.2%	21.0%	5.5%	6.6%	12.9%	0.0%	0.1%	0.8%	0.3%	0.2%	0.5%	0.0%	0.9%	3.4%	0.0%	100.0%	
Road 37	37	50	49.8	Y	1200-1300	6	34.5%	13.3%	0.2%	18.6%	6.7%	6.7%	13.1%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	1.0%	3.4%	0.0%	100.0%	
Road 37	37	50	49.8	Y	1300-1400	7	32.2%	12.4%	0.2%	21.4%	7.7%	6.6%	13.0%	0.0%	0.1%	0.5%	0.5%	0.3%	0.7%	0.0%	1.0%	3.4%	0.0%	100.0%	
Road 37	37	50	49.8	Y	1400-1500	7	33.1%	13.4%	0.2%	19.5%	7.0%	6.6%	12.9%	0.0%	0.1%	0.6%	0.7%	0.5%	1.0%	0.0%	1.2%	3.4%	0.0%	100.0%	
Road 37	37	50	49.8	Y	1500-1600	7	32.6%	12.1%	0.2%	22.4%	8.0%	5.7%	11.1%	0.0%	0.1%	0.6%	0.7%	0.6%	1.0%	0.0%	1.2%	2.9%	0.0%	100.0%	
Road 37	37	50	49.8	Y	1600-1700	7	36.2%	12.5%	0.2%	18.4%	6.6%	5.8%	11.3%	0.0%	0.1%	0.9%	1.1%	0.7%	1.6%	0.0%	1.7%	3.0%	0.0%	100.0%	
Road 37	37	50	49.8	Y	1700-1800	8	33.3%	0.2%	19.0%	6.0%	3.9%	7.8%	0.0%	0.1%	0.6%	0.7%	0.5%	1.1%	0.0%	3.6%	2.0%	0.0%	100.0%		
Road 37	37	50	49.8	Y	1800-1900	8	56.2%	13.2%	0.1%	11.8%	4.2%	2.5%	4.8%	0.0%	0.0%	0.1%	1.0%	1.7%	1.5%	0.0%	0.2%	1.3%	0.0%	100.0%	
Road 37	37	50	49.9	Y	1900-2000	6	56.8%	17.8%	0.1%	9.3%	3.3%	2.2%	4.4%	0.0%	0.0%	0.1%	0.9%	0.6%	1.3%	0.0%	0.2%	1.1%	1.1%	0.0%	100.0%
Road 37	37	50	49.9	Y	2000-2100	5	52.3%	22.2%	0.1%	9.8%	3.5%	2.2%	4.3%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	0.2%	1.1%	1.0%	0.0%	100.0%
Road 37	37	50	49.9	Y	2100-2200	5	52.0%	21.9%	0.1%	9.9%	3.6%	2.3%	4.5%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	0.2%	1.2%	1.0%	0.0%	100.0%
Road 37	37	50	49.9	Y	2200-2300	4	53.4%	24.1%	0.1%	7.8%	2.8%	2.5%	4.9%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.2%	1.3%	1.0%	0.0%	100.0%
Road 37	37	50	49.9	Y	2300-0000	3	51.8%	23.3%	0.1%	8.6%	3.1%	2.7%	5.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.2%	1.4%	1.0%	0.0%	100.0%
Road 38	38	50	47.5	Y	0000-0100	78	39.1%	17.2%	0.1%	7.2%	2.3%	2.2%	4.3%	0.0%	0.1%	0.2%	0.2%	0.2%	2.0%	22.4%	0.0%	2.3%	22.5%	0.0%	100.0%
Road 38	38	50	48.3	Y	0100-0200	57	34.1%	15.3%	0.1%	7.1%	2.6%	2.2%	4.4%	0.8%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	1.9%	30.1%	0.0%	100.0%	
Road 38	38	50	48.6	Y	0200-0300	47	30.0%	13.4%	0.1%	7.0%	2.5%	2.2%	4.3%	0.7%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	1.9%	36.6%	0.0%	100.0%	
Road 38	38	50	48.7	Y	0300-0400	41	26.7%	11.8%	0.1%	6.8%	2.2%	2.1%	4.2%	0.6%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	1.9%	41.8%	0.0%	100.0%	
Road 38	38	50	48.6	Y	0400-0500	43	26.9%	11.9%	0.1%	7.6%	2.7%	2.4%	4.7%	0.7%	0.0%	0.3%	0.4%	0.3%	0.7%	0.0%	2.1%	39.3%	0.0%	100.0%	
Road 38	38	50	48.1	Y	0500-0600	64	31.1%	13.7%	0.1%	8.6%	3.4%	3.0%	5.9%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	0.7%	27.5%	0.0%	100.0%	
Road 38	38	50	46.8	Y	0600-0700	119	35.0%	15.3%	0.1%	11.7%	4.2%	3.7%	7.2%	0.9%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	3.3%	18.8%	0.0%	100.0%	
Road 38	38	50	41.2	Y	0700-0800	274	30.1%	13.1%	0.1%	11.0%	3.9%	3.4%	6.8%	0.8%	0.1%	0.4%	0.7%	0.5%	1.0%	0.0%	3.1%	25.0%	0.0%	100.0%	
Road 38	38	50	42.0	Y	0800-0900	310	34.4%	11.0%	0.1%	12.2%	4.4%	3.4%	6.7%	0.6%	0.1%	0.5%	0.7%	0.6%	1.0%	0.0%	0.2%	23.5%	0.0%	100.0%	
Road 38	38	50	41.5	Y	0900-1000	285	28.1%	10.2%	0.2%	15.4%	5.5%	4.2%	8.3%	0.7%	0.0%	0.3%	0.5%	0.3%	0.7%	0.0%	1.1%	24.5%	0.0%	100.0%	
Road 38	38	50	41.9	Y	1000-1100	264	24.9%	9.7%	0.2%	15.5%	5.5%	4.9%	9.7%	0.7%	0.0%	0.3%	0.4%	0.3%	0.6%	0.0%	0.8%	26.6%	0.0%	100.0%	
Road 38	38	50	42.2	Y	1100-1200	252	24.5%	10.1%	0.2%	15.2%	5.5%	4.8%	9.4%	0.7%	0.1%	0.4%	0.2%	0.2%	0.4%	0.0%	0.7%	27.6%	0.0%	100.0%	
Road 38	38	50	42.9	Y	1200-1300	218	20.6%	7.9%	0.2%	15.4%	5.5%	5.5%	10.8%	0.0%	0.0%	0.3%	0.4%	0.2%	0.5%	0.0%	0.6%	32.0%	0.0%	100.0%	
Road 38	38	50	42.6	Y	1300-1400	229	19.4%	7.5%	0.2%	17.6%	6.4%	5.5%	10.9%	0.0%	0.0%	0.3%	0.3%	0.2%	0.4%	0.0%	0.6%	30.7%	0.0%	100.0%	
Road 38	38	50	42.5	Y	1400-1500	234	20.3%	8.2%	0.2%	16.4%	5.9%	5.6%	10.9%	0.0%	0.0%	0.4%	0.4%	0.3%	0.6%	0.0%	0.4%	0.3%	30.0%	0.0%	100.0%
Road 38	38	50	42.4	Y	1500-1600	240	20.1%	8.1%	0.2%	19.0%	6.6%	4.8%	9.5%	0.0%	0.0%	0.4%	0.4%	0.3%	0.6%	0.0%	0.7%	28.0%	0.0%	100.0%	
Road 38	38	50	42.4	Y	1600-1700	240	22.7%	8.0%	0.2%	15.9%	5.7%	5.0%	9.8%	0.0%	0.1%	0.5%	1.0%	0.7%	0.8%	1.0%	0.0%	1.1%	29.1%	0.0%	100.0%
Road 38	38	50	42.5	Y	1700-1800	248	27.6%	8.6%	0.2%	16.6%	5.6%	3.5%	7.0%	0.0%	0.1%	0.4%	0.5%	0.7%	0.4%	0.0%	2.4%	27.5%	0.0%	100.0%	
Road 38	38	50	43.0	Y	1800-1900	240	37.7%	8.9%	0.1%	10.9%	3.9%	2.3%	4.5%	0.0%	0.0%	0.1%	0.7%	0.5%	1.0%	0.0%	1.8%	27.7%	0.0%	100.0%	
Road 38	38	50	46.2	Y	1900-2000	150	46.9%	14.7%	0.1%	10.6%	3.8%	2.5%	5.0%	0.0%	0.0%	0.1%	0.7%	0.8%	1.1%	0.0%	1.7%	12.3%	0.0%	100.0%	
Road 38	38	50	46.9	Y	2000-2100	121	41.8%	17.7%	0.1%	10.6%	3.9%	2.4%	4.7%	0.0%	0.0%	0.1%	0.7%	0.8%	1.1%	0.0%	1.7%	14.9%	0.0%	100.0%	
Road 38	38	50	46.9	Y	2100-2200	121	42.3%	17.5%	0.1%	10.9%	3.9%	2.5%	4.9%	0.0%	0.0%	0.0%	0.3%	0.2%	0.5%	0.0%	1.9%	14.9%	0.0%	100.0%	
Road 38	38	50	47.0	Y	2200-2300	116	42.7%	19.3%	0.1%	8.6%	3.1%	2.7%	5.4%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	1.6%	15.7%	0.0%	100.0%	
Road 38	38	50	47.5	Y	2300-0000	92	39.3%	17.7%	0.1%	9.0%	3.2%	2.9%	5.6%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	1.7%	18.4%	0.0%	100.0%	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Traffic Data / Modeling Parameters For AERMOD (Year 2030)																									
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Light <=2.5t	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles <=5t	07 - Medium Goods Vehicles 5-24t	08 - Public Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus >4t	13 - Non-franchised Bus 15t	14 - Franchised d Bus Single 24t	15 - Franchised d Bus Double Deck	16 - Motorcycl	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total
							PC	TAXI	LGVS	LGVA	LGVB	HGV7	HGV8	PLB	PV4	PV5	NFB	NFB7	NFB8	FBSB	FBD	MC	HGV9	NFB9	
Road 41	41	70	70.0	N	0000-0100	185	46.0%	20.7%	0.1%	5.7%	2.0%	1.8%	3.5%	0.5%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	2.3%	15.8%	0.0%	100.0%	
Road 41	41	70	70.0	N	0100-0200	131	41.6%	18.6%	0.1%	5.8%	2.1%	1.8%	3.6%	0.5%	0.0%	0.2%	0.5%	0.3%	0.7%	0.0%	2.4%	22.0%	0.0%	100.0%	
Road 41	41	70	70.0	N	0200-0300	104	37.7%	16.8%	0.1%	5.8%	2.1%	1.8%	3.6%	0.5%	0.0%	0.2%	0.5%	0.3%	0.7%	0.0%	2.4%	27.5%	0.0%	100.0%	
Road 41	41	70	70.0	N	0300-0400	88	41.1%	15.3%	0.1%	5.8%	2.1%	1.8%	3.6%	0.4%	0.0%	0.3%	0.5%	0.3%	0.8%	0.0%	2.4%	32.2%	0.0%	100.0%	
Road 41	41	70	70.0	N	0400-0500	94	34.5%	15.2%	0.1%	6.4%	2.3%	2.0%	4.0%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	2.7%	30.2%	0.0%	100.0%	
Road 41	41	70	70.0	N	0500-0600	165	39.8%	16.9%	0.1%	7.8%	2.5%	2.8%	4.8%	0.0%	0.0%	0.4%	0.7%	0.5%	1.0%	0.0%	3.3%	33.0%	0.0%	100.0%	
Road 41	41	70	70.0	N	0600-0700	280	41.5%	18.2%	0.1%	9.2%	3.3%	2.9%	5.7%	0.6%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	3.9%	11.3%	0.0%	100.0%	
Road 41	41	70	70.0	N	0700-0800	621	37.1%	16.2%	0.1%	9.0%	3.2%	2.8%	5.5%	0.3%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	3.8%	18.5%	0.0%	100.0%	
Road 41	41	70	70.0	N	0800-0900	906	41.5%	19.0%	0.1%	10.5%	3.5%	3.1%	6.0%	0.4%	0.1%	0.6%	0.9%	0.7%	1.3%	0.0%	4.0%	24.0%	0.0%	100.0%	
Road 41	41	70	70.0	N	0900-1000	626	35.8%	13.0%	0.1%	13.0%	4.7%	3.5%	7.0%	0.5%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	1.4%	18.8%	0.0%	100.0%	
Road 41	41	70	70.0	N	1000-1100	567	32.3%	12.5%	0.1%	13.3%	4.8%	4.2%	8.3%	0.5%	0.0%	0.4%	0.5%	0.4%	0.8%	0.0%	1.0%	20.9%	0.0%	100.0%	
Road 41	41	70	70.0	N	1100-1200	322	33.2%	13.2%	0.1%	13.3%	4.8%	4.2%	8.3%	0.5%	0.0%	0.4%	0.5%	0.4%	0.8%	0.0%	1.0%	20.9%	0.0%	100.0%	
Road 41	41	70	70.0	N	1200-1300	408	26.1%	10.1%	0.1%	13.4%	4.8%	4.8%	9.5%	0.0%	0.1%	0.4%	0.4%	0.3%	0.7%	0.0%	0.9%	28.4%	0.0%	100.0%	
Road 41	41	70	70.0	N	1300-1400	424	24.8%	9.6%	0.2%	15.7%	5.6%	4.9%	9.5%	0.0%	0.0%	0.4%	0.4%	0.2%	0.5%	0.0%	0.8%	27.5%	0.0%	100.0%	
Road 41	41	70	70.0	N	1400-1500	258	14.6%	4.4%	0.2%	15.6%	5.5%	4.8%	9.5%	0.0%	0.0%	0.4%	0.4%	0.2%	0.5%	0.0%	0.8%	26.7%	0.0%	100.0%	
Road 41	41	70	70.0	N	1500-1600	448	15.5%	10.2%	0.2%	16.6%	5.5%	5.2%	8.3%	0.0%	0.1%	0.5%	0.5%	0.4%	0.8%	0.0%	0.9%	0.9%	0.0%	100.0%	
Road 41	41	70	70.0	N	1600-1700	455	28.4%	9.8%	0.1%	13.7%	4.9%	4.3%	8.4%	0.0%	0.1%	0.7%	0.8%	0.6%	1.3%	0.0%	1.3%	25.5%	0.0%	100.0%	
Road 41	41	70	70.0	N	1700-1800	481	31.7%	10.5%	0.1%	13.2%	4.7%	3.0%	5.9%	0.0%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	2.9%	23.8%	0.0%	100.0%	
Road 41	41	70	70.0	N	1800-1900	383	31.4%	10.4%	0.2%	14.4%	5.0%	4.4%	8.9%	0.0%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	2.1%	23.0%	0.0%	100.0%	
Road 41	41	70	70.0	N	1900-2000	318	32.4%	16.4%	0.1%	8.1%	2.9%	1.9%	3.8%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	1.9%	9.7%	0.0%	100.0%	
Road 41	41	70	70.0	N	2000-2100	254	47.1%	20.0%	0.1%	8.4%	3.0%	1.9%	3.8%	0.0%	0.0%	0.1%	0.7%	0.5%	1.0%	0.0%	1.9%	11.8%	0.0%	100.0%	
Road 41	41	70	70.0	N	2100-2200	255	47.7%	19.7%	0.1%	8.1%	2.9%	1.9%	3.8%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	1.9%	11.8%	0.0%	100.0%	
Road 41	41	70	70.0	N	2200-2300	245	47.9%	21.6%	0.1%	7.6%	2.4%	2.1%	4.2%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	1.8%	12.3%	0.0%	100.0%	
Road 41	41	70	70.0	N	2300-2400	192	44.8%	20.2%	0.1%	6.1%	2.5%	2.2%	4.4%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	2.0%	15.5%	0.0%	100.0%	
Road 42	42	40	40.0	N	0000-0100	89	18.1%	4.5%	0.2%	4.2%	1.4%	1.4%	2.8%	0.0%	0.0%	0.1%	0.4%	0.2%	0.3%	0.0%	2.2%	1.8%	0.0%	100.0%	
Road 42	42	48.1	48.1	N	0100-0200	74	14.6%	15.5%	0.3%	4.3%	1.6%	1.4%	2.7%	0.9%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	2.0%	36.6%	0.0%	100.0%	
Road 42	42	50	47.8	N	0200-0300	61	30.0%	13.4%	0.4%	4.2%	1.5%	1.3%	2.6%	0.9%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	1.9%	42.8%	0.0%	100.0%	
Road 42	42	50	48.2	N	0300-0400	54	17.8%	11.3%	0.4%	4.1%	1.5%	1.3%	2.5%	0.9%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	1.9%	41.9%	0.0%	100.0%	
Road 42	42	50	48.1	N	0400-0500	57	26.9%	11.9%	0.5%	4.6%	1.6%	1.4%	2.8%	0.9%	0.0%	0.3%	0.4%	0.3%	0.7%	0.0%	2.1%	46.1%	0.0%	100.0%	
Road 42	42	50	47.6	N	0500-0600	80	32.6%	14.3%	0.1%	6.0%	2.2%	1.9%	3.7%	0.9%	0.0%	0.4%	0.6%	0.4%	0.9%	0.0%	2.8%	33.2%	0.0%	100.0%	
Road 42	42	50	48.2	N	0600-0700	143	36.7%	16.1%	0.1%	7.1%	2.8%	2.4%	4.8%	1.1%	0.0%	0.5%	0.7%	0.5%	1.0%	0.0%	3.6%	30.0%	0.0%	100.0%	
Road 42	42	50	46.1	N	0700-0800	336	32.1%	14.0%	0.1%	7.0%	2.5%	2.2%	4.3%	1.0%	0.1%	0.5%	0.7%	0.5%	1.1%	0.0%	3.3%	30.6%	0.0%	100.0%	
Road 42	42	50	39.6	N	0800-0900	374	37.2%	11.9%	0.1%	8.0%	2.9%	2.2%	4.4%	0.8%	0.1%	0.5%	0.7%	0.5%	1.1%	0.0%	2.2%	27.5%	0.0%	100.0%	
Road 42	42	50	39.9	N	0900-1000	386	31.2%	11.3%	0.1%	10.3%	3.7%	2.8%	5.5%	0.9%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	1.2%	30.9%	0.0%	100.0%	
Road 42	42	50	39.3	N	1000-1100	408	31.0%	10.8%	0.1%	10.3%	3.7%	2.8%	5.5%	0.9%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	1.2%	30.9%	0.0%	100.0%	
Road 42	42	50	40.6	N	1100-1200	297	27.3%	11.2%	0.1%	10.2%	3.7%	3.2%	6.3%	0.9%	0.1%	0.3%	0.3%	0.2%	0.4%	0.0%	0.8%	34.9%	0.0%	100.0%	
Road 42	42	50	39.8	N	1200-1300	319	23.0%	9.5%	0.1%	13.3%	4.8%	4.8%	9.4%	0.0%	0.0%	0.4%	0.4%	0.3%	0.6%	0.0%	0.7%	33.4%	0.0%	100.0%	
Road 42	42	50	39.5	N	1300-1400	311	24.9%	9.4%	0.1%	13.3%	4.8%	4.8%	9.4%	0.0%	0.0%	0.4%	0.4%	0.3%	0.6%	0.0%	0.7%	33.4%	0.0%	100.0%	
Road 42	42	50	38.4	N	1400-1500	341	22.7%	9.2%	0.1%	13.4%	5.1%	4.8%	9.5%	0.0%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	0.9%	31.5%	0.0%	100.0%	
Road 42	42	50	39.4	N	1500-1600	348	22.5%	9.1%	0.2%	16.6%	5.9%	4.2%	8.2%	0.0%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	0.8%	30.5%	0.0%	100.0%	
Road 42	42	50	39.4	N	1600-1700	332	24.2%	9.3%	0.2%	13.4%	5.1%	4.8%	9.5%	0.0%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	0.9%	31.5%	0.0%	100.0%	
Road 42	42	50	39.4	N	1700-1800	368	30.2%	9.4%	0.1%	13.3%	4.8%	3.0%	5.9%	0.0%	0.1%	0.4%	0.5%	0.4%	0.8%	0.0%	2.6%	28.4%	0.0%	100.0%	
Road 42	42	50	39.7	N	1800-1900	366	40.3%	9.5%	0.1%	9.1%	3.3%	1.9%	3.7%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	1.9%	28.0%	0.0%	100.0%	
Road 42	42	50	42.4	N	1900-2000	380	40.3%	8.7%	0.1%	8.1%	3.1%	1.9%	3.7%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	1.9%	28.0%	0.0%	100.0%	
Road 42	42	50	45.3	N	2000-2100	318	44.4%	18.8%	0.1%	8.9%	3.3%	2.0%	3.9%	0.0%	0.0%	0.1%	0.6%	0.4%	1.0%	0.0%	1.9%	14.9%	0.0%	100.0%	
Road 42	42	50	45.3	N	2100-2200	188	44.9%	18.6%	0.1%	9.0%	3.2%	2.1%	4.1%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	2.1%	14.9%	0.0%	100.0%	
Road 42	42	50	45.3	N	2200-2300	179	45.5%	18.6%	0.1%	9.0%	3.2%	2.1%	4.1%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	2.1%	14.9%	0.0%	100.0%	
Road 42	42	50	46.3	N	2300-0000	142	41.8%	18.8%	0.1%	7.4%	2.7%	2.4%	4.6%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	1.8%	19.3%	0.0%	100.0%	

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Traffic Data / Modeling Parameters For AERMOD (Year 2030)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars		02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles <=15t	07 - Medium Goods Vehicles 15-24t	08 - Public Light Buses	09 - Private Light Buses <=3.5t	10 - Private Light Buses >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchised Bus Single Deck	15 - Franchised Bus Double Deck	16 - Motorcycl	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total
							PC	TAXI		LGV3	LGV4	LGV5	HGV7	HGV8	PLB	PLV4	PV5	NFB6	NFB7	NFB8	FBS0	FBD0	MC	HGV9	NFB9	
Road 45	45	80	80.0	N	0000-0100	300	58.9%	26.4%	0.0%	2.2%	0.0%	0.7%	1.5%	0.0%	0.0%	0.0%	0.2%	0.5%	0.4%	0.0%	0.4%	3.0%	0.3%	0.0%	0.0%	100.0%
Road 45	45	80	80.0	N	0100-0200	195	58.1%	26.0%	0.0%	2.4%	0.0%	0.7%	1.5%	0.0%	0.0%	0.0%	0.3%	0.6%	0.4%	0.0%	0.4%	3.4%	0.4%	0.0%	0.0%	100.0%
Road 45	45	80	80.0	N	0200-0300	142	57.3%	25.5%	0.0%	2.6%	0.0%	0.8%	1.6%	0.0%	0.0%	0.0%	0.4%	0.7%	0.5%	1.1%	0.0%	4.4%	3.6%	0.4%	0.0%	100.0%
Road 45	45	80	80.0	N	0300-0400	111	56.5%	25.1%	0.0%	2.8%	0.0%	1.0%	1.7%	0.0%	0.1%	0.4%	0.6%	0.8%	1.2%	0.0%	4.3%	4.0%	4.0%	4.0%	0.0%	100.0%
Road 45	45	80	80.0	N	0400-0500	122	56.8%	24.7%	0.0%	3.1%	1.1%	1.0%	1.9%	0.0%	0.1%	0.5%	0.9%	0.8%	1.4%	0.0%	4.3%	4.3%	1.5%	0.0%	0.0%	100.0%
Road 45	45	80	80.0	N	0500-0600	210	54.8%	24.1%	0.0%	3.3%	1.2%	1.0%	2.0%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	4.3%	4.7%	0.5%	0.0%	0.0%	100.0%
Road 45	45	80	80.0	N	0600-0700	440	53.9%	23.6%	0.0%	3.5%	1.3%	1.1%	2.2%	0.0%	0.1%	0.7%	1.1%	0.8%	1.7%	0.0%	4.3%	5.0%	0.6%	0.0%	0.0%	100.0%
Road 45	45	80	80.0	N	0700-0800	902	53.0%	23.1%	0.0%	3.8%	1.4%	1.2%	2.3%	0.0%	0.1%	0.8%	1.2%	0.8%	1.8%	0.0%	4.3%	5.4%	0.6%	0.0%	0.0%	100.0%
Road 45	45	80	78.5	N	0800-0900	1041	59.4%	19.0%	0.0%	4.1%	1.5%	1.2%	2.3%	0.0%	0.1%	0.8%	1.2%	0.8%	1.8%	0.0%	3.8%	3.4%	0.6%	0.0%	0.0%	100.0%
Road 45	45	80	80.0	N	0900-1000	831	55.9%	20.3%	0.1%	6.0%	2.2%	1.6%	3.2%	0.0%	0.1%	0.5%	0.9%	0.7%	1.4%	0.0%	4.1%	2.2%	0.8%	0.0%	0.0%	100.0%
Road 45	45	80	80.0	N	1000-1100	708	53.7%	20.9%	0.1%	6.5%	2.3%	2.1%	4.1%	0.0%	0.1%	0.6%	0.9%	0.6%	1.3%	0.0%	4.1%	1.6%	1.1%	0.0%	0.0%	100.0%
Road 45	45	80	80.0	N	1100-1200	672	53.5%	22.0%	0.1%	6.5%	2.3%	2.0%	4.0%	0.0%	0.1%	1.0%	0.5%	0.4%	0.8%	0.0%	4.2%	1.5%	1.0%	0.0%	0.0%	100.0%
Road 45	45	80	77.7	N	1200-1300	1024	50.0%	19.2%	0.1%	8.3%	3.0%	3.0%	5.8%	0.0%	0.1%	0.8%	0.9%	0.6%	1.3%	0.0%	4.0%	1.5%	1.5%	0.0%	0.0%	100.0%
Road 45	45	80	77.3	N	1300-1400	1016	48.8%	18.7%	0.1%	8.9%	3.6%	3.1%	6.0%	0.0%	0.1%	0.7%	0.7%	0.5%	1.1%	0.0%	3.8%	1.5%	1.6%	0.0%	0.0%	100.0%
Road 45	45	80	75.9	N	1400-1500	1113	48.4%	19.6%	0.1%	9.7%	3.1%	3.0%	8.9%	0.0%	0.1%	0.8%	1.0%	0.7%	1.5%	0.0%	3.8%	1.8%	1.5%	0.0%	0.0%	100.0%
Road 45	45	80	75.5	N	1500-1600	1136	48.2%	19.4%	0.1%	10.1%	3.6%	2.6%	8.0%	0.0%	0.1%	0.8%	1.0%	0.7%	1.5%	0.0%	3.7%	1.7%	1.3%	0.0%	0.0%	100.0%
Road 45	45	80	73.7	N	1600-1700	1225	50.6%	17.4%	0.1%	7.9%	2.8%	2.5%	4.8%	0.0%	0.2%	1.2%	1.5%	1.6%	2.3%	0.0%	4.1%	2.4%	1.3%	0.0%	0.0%	100.0%
Road 45	45	80	71.5	N	1700-1800	1411	52.2%	17.2%	0.1%	6.9%	2.9%	1.6%	3.1%	0.0%	0.1%	0.8%	1.0%	1.5%	0.0%	4.0%	4.7%	0.8%	0.0%	0.0%	0.0%	100.0%
Road 45	45	80	69.3	N	1800-1900	1581	65.0%	15.3%	0.0%	4.2%	1.5%	0.9%	1.7%	0.0%	0.0%	0.1%	1.1%	0.8%	1.7%	0.0%	4.0%	3.1%	0.4%	0.0%	0.0%	100.0%
Road 45	45	80	75.1	N	1900-2000	1266	63.2%	19.8%	0.0%	3.2%	1.1%	0.8%	1.5%	0.0%	0.0%	0.1%	1.0%	0.7%	1.4%	0.0%	4.6%	2.3%	0.4%	0.0%	0.0%	100.0%
Road 45	45	80	80.0	N	2000-2100	985	58.2%	24.7%	0.0%	3.4%	1.2%	0.7%	1.5%	0.0%	0.0%	0.1%	0.8%	0.6%	1.2%	0.0%	4.8%	2.3%	0.4%	0.0%	0.0%	100.0%
Road 45	45	80	80.0	N	2100-2200	980	59.9%	24.6%	0.0%	3.9%	1.9%	0.8%	2.4%	0.0%	0.0%	0.1%	0.9%	0.6%	1.3%	0.0%	4.7%	2.7%	0.4%	0.0%	0.0%	100.0%
Road 45	45	80	80.0	N	2200-2300	956	58.8%	26.6%	0.0%	2.6%	0.9%	0.8%	1.6%	0.0%	0.0%	0.1%	0.4%	0.2%	0.5%	0.0%	4.6%	2.3%	0.4%	0.0%	0.0%	100.0%
Road 45	45	80	80.0	N	2300-0000	713	57.9%	26.1%	0.0%	2.9%	1.1%	0.9%	1.8%	0.0%	0.0%	0.1%	0.4%	0.3%	0.7%	0.0%	4.5%	2.6%	0.5%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	0000-0100	414	60.2%	27.0%	0.0%	2.8%	1.0%	0.5%	2.0%	0.0%	0.0%	0.4%	0.9%	0.4%	0.8%	1.0%	3.0%	2.4%	0.4%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	0100-0200	269	59.3%	26.5%	0.0%	3.1%	1.1%	1.0%	1.9%	0.0%	0.0%	0.3%	0.6%	0.4%	0.0%	0.4%	3.4%	0.5%	0.0%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	0200-0300	196	58.3%	26.0%	0.0%	3.4%	1.2%	1.1%	2.1%	0.0%	0.0%	0.4%	0.7%	0.8%	1.1%	0.0%	0.8%	3.7%	0.6%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	0300-0400	154	57.4%	25.5%	0.0%	3.7%	1.3%	1.2%	2.3%	0.0%	0.1%	0.4%	0.8%	0.6%	1.3%	0.0%	0.8%	4.0%	0.5%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	0400-0500	169	56.5%	25.0%	0.0%	4.0%	1.4%	1.3%	2.5%	0.0%	0.1%	0.5%	0.9%	0.8%	1.4%	0.0%	0.8%	4.4%	0.6%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	0500-0600	292	55.5%	24.4%	0.0%	4.3%	1.5%	1.3%	2.6%	0.0%	0.1%	0.6%	1.0%	0.7%	1.6%	0.0%	0.8%	4.7%	0.7%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	0600-0700	625	54.5%	23.9%	0.0%	4.6%	1.7%	1.4%	2.8%	0.0%	0.1%	0.7%	1.1%	0.8%	1.7%	0.0%	0.8%	5.1%	0.7%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	0700-0800	1260	52.3%	23.1%	0.1%	4.8%	1.9%	1.5%	3.0%	0.0%	0.1%	0.8%	1.2%	0.8%	1.9%	0.0%	0.8%	5.3%	0.8%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	0800-0900	1461	59.6%	19.1%	0.1%	5.3%	1.9%	1.5%	2.9%	0.0%	0.1%	0.8%	1.2%	0.8%	1.8%	0.0%	0.7%	3.5%	0.8%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	0900-1000	1179	55.5%	20.2%	0.1%	7.7%	2.8%	2.1%	4.1%	0.0%	0.1%	0.5%	0.9%	0.6%	1.4%	0.0%	0.7%	2.2%	1.1%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	1000-1100	1260	53.9%	20.6%	0.1%	8.3%	3.0%	2.6%	5.2%	0.0%	0.1%	0.6%	0.9%	0.6%	1.3%	0.0%	0.7%	1.6%	1.4%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	1100-1200	958	52.9%	21.8%	0.1%	8.3%	3.0%	2.6%	5.1%	0.0%	0.1%	1.0%	0.5%	0.4%	0.8%	0.0%	0.7%	1.5%	1.3%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	1200-1300	1406	50.9%	19.6%	0.1%	9.0%	3.2%	3.2%	6.3%	0.0%	0.1%	0.9%	0.9%	0.6%	1.3%	0.0%	0.8%	1.5%	1.6%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	1300-1400	1427	49.1%	18.7%	0.1%	9.8%	3.3%	3.3%	6.5%	0.0%	0.1%	0.7%	0.7%	0.5%	1.1%	0.0%	0.8%	1.5%	1.7%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	1400-1500	1493	48.3%	18.9%	0.1%	10.3%	3.7%	3.2%	6.9%	0.0%	0.1%	0.9%	1.0%	0.7%	1.5%	0.0%	0.8%	1.9%	1.6%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	1500-1600	1565	49.0%	19.7%	0.1%	10.9%	3.9%	2.8%	8.4%	0.0%	0.1%	0.9%	1.0%	0.7%	1.5%	0.0%	0.8%	1.8%	1.4%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	1600-1700	1679	51.7%	17.8%	0.1%	8.5%	3.1%	2.7%	5.2%	0.0%	0.2%	1.2%	1.5%	1.1%	2.3%	0.0%	0.8%	2.4%	1.4%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	1700-1800	1930	56.4%	17.6%	0.1%	7.5%	2.7%	1.7%	3.4%	0.0%	0.1%	0.8%	1.0%	0.8%	1.4%	0.0%	0.8%	4.8%	0.9%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	1800-1900	2153	66.8%	15.7%	0.0%	4.6%	1.6%	1.0%	1.9%	0.0%	0.0%	0.1%	1.2%	0.8%	1.8%	0.0%	0.8%	3.2%	0.5%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	1900-2000	1715	65.3%	20.4%	0.0%	3.5%	1.2%	0.8%	1.6%	0.0%	0.0%	0.1%	1.0%	0.7%	1.5%	0.0%	0.9%	2.4%	0.4%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	2000-2100	1806	63.1%	19.0%	0.0%	3.7%	1.3%	0.9%	1.6%	0.0%	0.0%	0.1%	1.0%	0.7%	1.5%	0.0%	0.9%	2.6%	0.4%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	2100-2200	1331	61.4%	25.4%	0.0%	3.7%	1.3%	0.9%	1.7%	0.0%	0.0%	0.1%	0.4%	0.3%	0.7%	0.0%	0.9%	2.8%	0.4%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	2200-2300	1295	60.8%	27.5%	0.0%	2.9%	1.0%	0.9%	1.8%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.9%	2.3%	0.5%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	2300-0000	966	59.8%	27.0%	0.0%	3.2%	1.2%	1.0%	2.0%	0.0%	0.0%	0.1%	0.5%	0.3%	0.7%	0.0%	0.9%	2.6%	0.5%	0.0%	0.0%	100.0%

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Traffic Data / Modeling Parameters For AERMOD (Year 2030)																									
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles <10t	07 - Medium Goods Vehicles >10t	08 - Public Buses	09 - Private Light <0.5t	10 - Private Light >0.5t	11 - Non-farmland Bus <+4t	12 - Non-farmland Bus >+4t	13 - Non-farmland Bus 1st 24	14 - Farmland d Bus Single 24	15 - Farmland d Bus Double 24	16 - Motorcycls	17 - Heavy Goods Vehicles	18 - Non-farmland Bus >+4t	Total
							PC	Taxi	LGV1	LGV3	LGV4	LGV6	HGV7	HGV8	PLB	PV4	PV5	NFB6	NFB7	NFB8	FSSD	FBD0	MC	HGV9	NFB9
Road 49	49	50	43.0	N	0000-0100	331	57.8%	25.9%	0.0%	2.3%	0.6%	0.7%	1.4%	0.0%	0.0%	0.2%	0.2%	0.0%	0.4%	0.8%	0.0%	5.8%	2.9%	0.4%	100.0%
Road 49	49	50	45.4	N	0100-0200	215	57.8%	25.5%	0.0%	2.5%	0.9%	0.8%	1.6%	0.0%	0.0%	0.2%	0.2%	0.0%	0.5%	0.5%	0.5%	5.7%	3.2%	0.0%	100.0%
Road 49	49	50	46	N	0200-0300	136	57.8%	27.0%	0.0%	3.2%	0.7%	0.9%	1.7%	0.0%	0.0%	0.2%	0.4%	0.1%	0.7%	0.4%	0.1%	3.6%	4.4%	0.0%	100.0%
Road 49	49	50	47.4	N	0300-0400	123	55.4%	24.6%	0.0%	3.0%	1.1%	0.9%	1.8%	0.0%	0.1%	0.4%	0.8%	0.6%	1.2%	0.5%	5.7%	3.9%	0.4%	100.0%	
Road 49	49	50	47.1	N	0400-0500	134	54.5%	24.1%	0.0%	3.2%	1.2%	1.0%	2.0%	0.0%	0.1%	0.5%	0.9%	0.8%	1.4%	0.5%	5.7%	4.2%	0.5%	100.0%	
Road 49	49	50	45.9	N	0500-0600	232	57.8%	23.6%	0.0%	3.3%	1.3%	2.1%	2.5%	0.0%	0.2%	0.6%	1.3%	0.8%	1.3%	0.7%	5.7%	4.2%	0.5%	100.0%	
Road 49	49	50	39.5	N	0600-0700	496	52.8%	23.1%	0.0%	3.7%	1.3%	1.2%	2.3%	0.0%	0.1%	0.7%	1.1%	0.8%	1.7%	0.5%	5.7%	4.9%	0.6%	100.0%	
Road 49	49	50	33.3	N	0700-0800	998	51.9%	22.6%	0.0%	4.0%	1.4%	1.3%	2.5%	0.0%	0.1%	0.8%	1.2%	0.8%	1.9%	0.5%	5.8%	5.3%	0.6%	100.0%	
Road 49	49	50	31.1	N	0800-0900	1169	50.2%	21.5%	0.0%	4.3%	1.5%	1.4%	2.8%	0.0%	0.2%	0.9%	1.3%	0.9%	2.1%	0.5%	5.8%	5.8%	0.6%	100.0%	
Road 49	49	50	34.0	N	0900-1000	923	54.5%	19.8%	0.1%	6.3%	2.3%	1.7%	3.4%	0.0%	0.1%	0.5%	0.9%	0.6%	1.4%	0.5%	5.3%	2.1%	0.9%	100.0%	
Road 49	49	50	35.5	N	1000-1100	787	52.3%	20.3%	0.1%	6.9%	2.5%	2.2%	4.3%	0.0%	0.1%	0.6%	0.9%	0.7%	1.3%	0.5%	5.4%	1.6%	1.1%	100.0%	
Road 49	49	50	38	N	1100-1200	527	51.5%	20.2%	0.1%	6.8%	2.5%	2.2%	4.2%	0.0%	0.1%	0.6%	0.9%	0.7%	1.3%	0.5%	5.4%	1.5%	1.2%	100.0%	
Road 49	49	50	38.1	N	1200-1300	563	50.1%	19.3%	0.1%	6.9%	2.5%	2.5%	4.9%	0.0%	0.1%	0.8%	0.9%	0.6%	1.3%	0.5%	7.3%	1.5%	1.3%	100.0%	
Road 49	49	50	38.1	N	1300-1400	567	49.1%	18.9%	0.1%	6.3%	3.0%	2.6%	5.1%	0.0%	0.1%	0.7%	0.5%	1.1%	0.5%	7.0%	1.5%	1.3%	100.0%		
Road 49	49	50	37.4	N	1400-1500	621	48.7%	17.8%	0.1%	6.3%	3.0%	2.6%	5.1%	0.0%	0.1%	0.7%	0.5%	1.1%	0.5%	7.0%	1.5%	1.3%	100.0%		
Road 49	49	50	38.1	N	1500-1600	622	48.6%	19.5%	0.1%	6.5%	3.1%	2.2%	4.2%	0.0%	0.1%	0.9%	1.0%	0.7%	1.5%	0.5%	6.8%	1.8%	1.1%	100.0%	
Road 49	49	50	36.6	N	1600-1700	677	50.6%	17.4%	0.1%	6.6%	2.4%	2.1%	4.0%	0.0%	0.2%	1.2%	1.5%	1.0%	2.3%	0.5%	7.2%	2.4%	1.1%	100.0%	
Road 49	49	50	36.6	N	1700-1800	688	51.6%	17.1%	0.1%	6.4%	2.5%	2.1%	4.0%	0.0%	0.2%	1.2%	1.5%	1.0%	2.3%	0.5%	7.2%	2.4%	1.1%	100.0%	
Road 49	49	50	36.7	N	1800-1900	887	50.9%	15.0%	0.0%	3.4%	1.2%	0.7%	1.4%	0.0%	0.0%	0.1%	0.1%	1.1%	0.8%	1.7%	0.3%	7.3%	0.3%	100.0%	
Road 49	49	50	36.7	N	1900-2000	717	61.6%	19.3%	0.0%	2.6%	0.9%	0.6%	1.2%	0.0%	0.0%	0.1%	0.9%	0.6%	1.4%	0.5%	8.1%	2.3%	0.3%	100.0%	
Road 49	49	50	38.8	N	2000-2100	558	56.7%	24.1%	0.0%	2.7%	1.0%	0.6%	1.2%	0.0%	0.0%	0.1%	0.8%	0.6%	1.2%	0.5%	8.5%	2.3%	0.3%	100.0%	
Road 49	49	50	38.0	N	2100-2200	593	58.3%	24.1%	0.0%	2.8%	1.3%	0.9%	1.3%	0.0%	0.0%	0.1%	0.4%	0.9%	0.8%	0.5%	8.0%	2.8%	0.3%	100.0%	
Road 49	49	50	39.0	N	2200-2300	542	57.3%	25.9%	0.0%	2.1%	0.8%	0.7%	1.3%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.1%	8.0%	2.2%	0.3%	100.0%	
Road 49	49	50	41.2	N	2300-0000	404	55.5%	25.5%	0.0%	2.4%	0.9%	0.8%	1.5%	0.0%	0.0%	0.1%	0.4%	0.3%	0.7%	0.1%	8.0%	2.5%	0.4%	100.0%	
Road 50	50	49	51.5	N	0000-0100	27	60.0%	20.2%	0.0%	0.2%	0.2%	0.3%	0.2%	0.0%	0.0%	0.0%	0.1%	0.2%	0.4%	0.0%	0.1%	0.1%	0.1%	100.0%	
Road 50	50	49	49.5	N	0100-0200	13	25.0%	11.3%	0.2%	20.3%	7.2%	6.4%	12.6%	0.0%	0.0%	0.1%	0.3%	0.2%	0.4%	0.0%	0.1%	14.4%	10.0%	100.0%	
Road 50	50	49	49.6	N	0200-0300	17	23.0%	10.2%	0.2%	20.3%	7.3%	6.4%	12.6%	0.0%	0.0%	0.1%	0.3%	0.2%	0.4%	0.0%	0.1%	15.4%	17.4%	100.0%	
Road 50	50	49	49.7	N	0300-0400	11	21.0%	9.5%	0.2%	20.3%	7.2%	6.4%	12.6%	0.0%	0.0%	0.1%	0.3%	0.2%	0.4%	0.0%	0.1%	15.4%	17.4%	100.0%	
Road 50	50	49	49.6	N	0400-0500	13	20.2%	8.9%	0.2%	21.6%	7.8%	6.8%	13.4%	0.0%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	0.1%	16.3%	10.0%	100.0%	
Road 50	50	49	49.4	N	0500-0600	21	20.3%	8.9%	0.2%	23.9%	8.6%	7.5%	14.7%	0.0%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.1%	17.6%	12.6%	100.0%	
Road 50	50	48	50	N	0600-0700	35	20.3%	8.9%	0.2%	23.9%	8.6%	7.5%	14.7%	0.0%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.1%	17.6%	12.6%	100.0%	
Road 50	50	47.1	N	0700-0800	98	19.3%	8.0%	0.3%	25.5%	9.2%	8.0%	15.7%	0.0%	0.0%	0.3%	0.4%	0.3%	0.6%	0.0%	0.0%	19.9%	11.4%	100.0%		
Road 50	50	48.6	N	0800-0900	115	20.2%	6.5%	0.3%	27.4%	9.5%	7.7%	15.1%	0.0%	0.0%	0.3%	0.4%	0.3%	0.6%	0.0%	0.0%	1.2%	10.2%	100.0%		
Road 50	50	46	N	0900-1000	118	20.2%	6.5%	0.3%	31.1%	10.7%	8.6%	16.2%	0.0%	0.0%	0.3%	0.4%	0.3%	0.6%	0.0%	0.0%	0.1%	10.2%	20.3%	100.0%	
Road 50	50	46.5	N	1000-1100	113	12.7%	4.9%	0.3%	30.2%	10.8%	9.6%	18.6%	0.0%	0.0%	0.1%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	0.4%	11.3%	100.0%	
Road 50	50	48.7	N	1100-1200	106	12.7%	6.2%	0.3%	30.2%	10.8%	9.4%	18.6%	0.0%	0.0%	0.2%	0.1%	0.1%	0.2%	0.0%	0.0%	0.4%	11.6%	100.0%		
Road 50	50	50.3	N	1200-1300	49	4.5%	1.7%	0.3%	30.0%	10.8%	10.0%	21.2%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.1%	0.1%	20.3%	100.0%	
Road 50	50	48.2	N	1300-1400	54	4.3%	1.7%	0.3%	31.4%	11.3%	10.6%	20.9%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.2%	18.9%	100.0%		
Road 50	50	48.2	N	1400-1500	54	4.3%	1.7%	0.3%	31.4%	11.3%	10.6%	20.9%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.2%	18.9%	100.0%		
Road 50	50	48.2	N	1500-1600	56	4.2%	1.7%	0.4%	35.8%	12.6%	11.7%	17.8%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.2%	17.6%	100.0%		
Road 50	50	48	50	N	1600-1700	32	2.2%	1.3%	1.7%	31.4%	11.3%	10.6%	20.9%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.2%	18.9%	100.0%	
Road 50	50	48.4	N	1700-1800	49	6.8%	2.1%	0.4%	34.8%	12.5%	7.9%	15.5%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.2%	0.0%	0.6%	18.9%	100.0%		
Road 50	50	48.8	N	1800-1900	37	11.8%	2.8%	0.3%	30.3%	11.1%	6.4%	12.7%	0.0%	0.0%	0.2%	0.0%	0.2%	0.1%	0.3%	0.0%	0.6%	22.7%	100.0%		
Road 50	50	49	50	N	1900-2000	22	9.7%	1.6%	0.3%	31.4%	11.3%	10.6%	20.9%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.1%	18.9%	100.0%	
Road 50	50	49.5	N	2000-2100	18	11.8%	8.9%	0.3%	32.1%	11.5%	7.1%	13.9%	0.0%	0.0%	0.2%	0.1%	0.3%	0.0%	0.0%	0.6%	14.2%	100.0%			
Road 50	50	49.4	N	2100-2200	18	11.3%	6.7%	0.3%	31.6%	11.5%	7.3%	14.4%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.6%	14.1%	100.0%			
Road 50	50	49	50	N	2200-2300	22	9.7%	1.6%	0.3%	31.4%	11.3%	10.6%	20.9%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.1%	18.9%	100.0%	
Road 50	50	49.6	N	2300-0000	14	13.0%	5.9%	0.3%	26.9%	9.6%	8.5%	16.7%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.6%	18.2%	100.0%			

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Traffic Data / Modeling Parameters For AERMOD (Year 2030)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles <=5t	07 - Medium Goods Vehicles 5-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchised Bus Single Deck	15 - Franchised Bus Double Deck	16 - Motorcyclist	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total	
Road 53	53	50	28.1	N	0000-0100	26	23.3%	10.4%	0.2%	16.7%	6.3%	5.5%	10.9%	22.5%	0.0%	0.1%	0.2%	0.3%	0.0%	0.0%	1.2%	2.7%	0.0%	0.0%	0.0%	
Road 53	53	50	28.7	N	0100-0200	18	22.0%	9.9%	0.2%	17.6%	5.0%	5.0%	10.9%	22.5%	0.0%	0.1%	0.2%	0.4%	0.0%	0.0%	1.2%	2.9%	0.0%	0.0%	0.0%	
Road 53	53	50	29.0	N	0200-0300	13	20.9%	9.3%	0.2%	18.5%	6.7%	5.8%	11.5%	21.8%	0.0%	0.1%	0.3%	0.2%	0.4%	0.0%	0.0%	1.3%	3.0%	0.0%	0.0%	
Road 53	53	50	29.2	N	0300-0400	11	19.2%	8.8%	0.2%	19.4%	7.0%	6.1%	12.0%	21.3%	0.0%	0.2%	0.4%	0.4%	0.0%	0.0%	1.4%	3.1%	0.0%	0.0%	0.0%	
Road 53	53	50	29.1	N	0400-0500	12	18.7%	8.3%	0.2%	20.2%	7.2%	6.3%	12.5%	20.5%	0.0%	0.2%	0.3%	0.5%	0.0%	0.0%	1.5%	3.3%	0.0%	0.0%	0.0%	
Road 53	53	50	28.3	N	0500-0600	22	17.7%	7.8%	0.2%	20.9%	7.5%	6.6%	12.9%	20.2%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	0.0%	1.5%	3.4%	0.0%	0.0%	
Road 53	53	50	26.3	N	0600-0700	50	16.8%	7.4%	0.2%	21.6%	7.8%	6.8%	13.3%	19.7%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	0.0%	1.6%	3.5%	0.0%	0.0%	
Road 53	53	50	24.4	N	0700-0800	104	15.9%	6.9%	0.2%	22.3%	8.0%	7.0%	13.7%	19.3%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.0%	1.6%	3.6%	0.0%	0.0%	
Road 53	53	50	24.2	N	0800-0900	117	18.2%	5.8%	0.3%	24.8%	8.0%	6.9%	13.7%	16.3%	0.0%	0.2%	0.4%	0.2%	0.5%	0.0%	0.0%	1.1%	3.6%	0.0%	0.0%	
Road 53	53	50	24.1	N	0900-1000	120	13.3%	4.8%	0.3%	26.0%	10.1%	7.6%	15.0%	15.5%	0.0%	0.1%	0.2%	0.2%	0.3%	0.0%	0.0%	0.5%	3.9%	0.0%	0.0%	
Road 53	53	50	24.2	N	1000-1100	113	11.6%	4.5%	0.3%	27.6%	9.9%	8.6%	17.3%	14.4%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	0.4%	4.5%	0.0%	0.0%	
Road 53	53	50	24.3	N	1100-1200	107	11.6%	4.8%	0.3%	27.5%	9.9%	8.6%	16.9%	15.0%	0.0%	0.2%	0.1%	0.1%	0.2%	0.0%	0.0%	0.3%	4.4%	0.0%	0.0%	
Road 53	53	50	24.1	N	1200-1300	130	25.1%	9.7%	0.2%	21.5%	7.7%	7.7%	15.2%	6.3%	0.1%	0.4%	0.4%	0.3%	0.7%	0.0%	0.0%	0.7%	4.0%	0.0%	0.0%	
Road 53	53	50	23.9	N	1300-1400	138	23.2%	9.0%	0.3%	24.6%	8.8%	7.6%	15.0%	5.6%	0.0%	0.3%	0.3%	0.2%	0.5%	0.0%	0.0%	0.7%	3.9%	0.0%	0.0%	
Road 53	53	50	23.9	N	1400-1500	143	24.3%	9.7%	0.2%	22.5%	8.1%	7.6%	15.0%	5.9%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	0.0%	0.9%	3.9%	0.0%	0.0%	
Road 53	53	50	23.8	N	1500-1600	147	23.8%	9.5%	0.3%	26.9%	9.3%	6.6%	12.9%	5.5%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	0.0%	0.9%	3.4%	0.0%	0.0%	
Road 53	53	50	23.9	N	1600-1700	146	27.0%	9.3%	0.2%	21.8%	7.8%	6.8%	13.4%	5.7%	0.1%	0.6%	0.8%	1.2%	0.0%	0.0%	1.3%	3.5%	0.0%	0.0%		
Road 53	53	50	23.9	N	1700-1800	153	10.1%	10.1%	0.2%	21.2%	7.6%	4.8%	9.4%	6.6%	0.1%	0.5%	0.6%	0.9%	0.0%	0.0%	2.8%	2.5%	0.0%	0.0%		
Road 53	53	50	24.2	N	1800-1900	144	45.5%	10.7%	0.2%	15.2%	5.4%	3.2%	6.2%	7.3%	0.2%	0.8%	1.2%	0.0%	0.2%	2.2%	1.6%	0.0%	0.0%	0.0%		
Road 53	53	50	24.6	N	1900-2000	110	46.2%	14.5%	0.1%	12.0%	4.3%	2.9%	5.6%	8.8%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	0.0%	1.7%	1.5%	0.0%	0.0%	
Road 53	53	50	24.9	N	2000-2100	87	42.2%	17.9%	0.1%	12.6%	4.5%	2.6%	5.5%	9.4%	0.0%	0.1%	0.6%	0.4%	0.9%	0.0%	0.0%	1.7%	1.4%	0.0%	0.0%	
Road 53	53	50	24.9	N	2100-2200	87	42.2%	17.7%	0.1%	12.8%	4.8%	2.6%	5.5%	9.4%	0.0%	0.3%	0.2%	0.0%	0.0%	0.0%	2.0%	1.5%	0.0%	0.0%	0.0%	
Road 53	53	50	25.0	N	2200-2300	82	43.9%	19.9%	0.1%	10.2%	3.7%	3.2%	6.4%	8.4%	0.0%	0.3%	0.2%	0.4%	0.0%	0.0%	1.7%	1.7%	0.0%	0.0%	0.0%	
Road 53	53	50	26.1	N	2300-0000	62	42.2%	19.0%	0.1%	11.1%	4.0%	3.5%	6.9%	8.3%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.0%	1.9%	1.8%	0.0%	0.0%	
Road 54	54	50	26.6	N	0000-0100	49	37.4%	16.6%	0.1%	11.7%	4.2%	3.7%	13.8%	6.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.0%	1.8%	2.0%	0.0%	0.0%	0.0%	
Road 54	54	50	27.9	N	0100-0200	33	35.9%	16.0%	0.1%	12.6%	4.5%	4.0%	7.8%	13.6%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.0%	2.0%	2.0%	0.0%	0.0%	
Road 54	54	50	28.4	N	0200-0300	24	34.4%	15.3%	0.1%	13.4%	4.8%	4.2%	8.3%	13.4%	0.0%	0.2%	0.4%	0.3%	0.7%	0.0%	0.0%	2.2%	2.2%	0.0%	0.0%	
Road 54	54	50	28.7	N	0300-0400	20	33.0%	14.7%	0.1%	14.2%	5.1%	4.5%	10.6%	13.2%	0.0%	0.3%	0.5%	0.3%	0.7%	0.0%	0.0%	2.3%	2.3%	0.0%	0.0%	
Road 54	54	50	28.5	N	0400-0500	22	31.7%	14.0%	0.2%	14.9%	5.4%	4.7%	9.2%	13.0%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	0.0%	2.5%	2.4%	0.0%	0.0%	
Road 54	54	50	27.3	N	0500-0600	39	30.4%	13.4%	0.2%	15.7%	5.6%	4.9%	9.7%	12.9%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	0.0%	2.6%	2.5%	0.0%	0.0%	
Road 54	54	50	24.8	N	0600-0700	86	29.1%	12.8%	0.2%	16.4%	5.9%	5.1%	10.1%	12.7%	0.0%	0.4%	0.6%	0.4%	0.9%	0.0%	0.0%	2.7%	2.6%	0.0%	0.0%	
Road 54	54	50	23.3	N	0700-0800	177	27.0%	12.0%	0.2%	17.7%	6.1%	5.4%	10.5%	6.0%	0.1%	0.4%	0.5%	0.7%	1.0%	0.0%	0.0%	2.9%	2.7%	0.0%	0.0%	
Road 54	54	50	23.2	N	0800-0900	202	31.6%	10.1%	0.2%	18.9%	6.8%	5.3%	10.4%	9.9%	0.1%	0.4%	0.6%	0.4%	0.9%	0.0%	0.0%	3.1%	2.8%	0.0%	0.0%	
Road 54	54	50	23.2	N	0900-1000	194	24.8%	9.0%	0.2%	22.8%	8.2%	6.2%	12.2%	10.7%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.0%	3.2%	2.8%	0.0%	0.0%	
Road 54	54	50	23.5	N	1000-1100	178	22.1%	8.6%	0.2%	23.1%	9.3%	7.3%	14.4%	10.2%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.0%	3.3%	2.8%	0.0%	0.0%	
Road 54	54	50	23.5	N	1100-1200	169	22.0%	9.1%	0.2%	23.0%	8.3%	7.2%	14.1%	10.6%	0.1%	0.4%	0.2%	0.2%	0.3%	0.0%	0.0%	3.4%	2.7%	0.0%	0.0%	
Road 54	54	50	24.0	N	1200-1300	124	10.8%	4.2%	0.3%	29.5%	10.6%	10.6%	20.8%	6.6%	0.0%	0.2%	0.2%	0.1%	0.3%	0.0%	0.0%	3.5%	3.0%	0.0%	0.0%	
Road 54	54	50	23.8	N	1300-1400	136	9.7%	3.3%	0.3%	32.7%	11.7%	10.1%	19.9%	5.7%	0.0%	0.1%	0.2%	0.0%	0.0%	0.3%	5.2%	0.0%	0.0%	0.0%	0.0%	
Road 54	54	50	23.8	N	1400-1500	137	10.3%	4.2%	0.3%	30.7%	11.0%	10.4%	20.4%	6.2%	0.0%	0.2%	0.2%	0.1%	0.3%	0.0%	0.0%	0.4%	5.3%	0.0%	0.0%	
Road 54	54	50	23.7	N	1500-1600	142	10.1%	4.1%	0.4%	35.1%	12.6%	8.9%	17.5%	5.7%	0.0%	0.2%	0.2%	0.1%	0.3%	0.0%	0.0%	0.4%	4.6%	0.0%	0.0%	
Road 54	54	50	23.8	N	1600-1700	135	12.0%	4.1%	0.3%	30.8%	11.1%	9.6%	16.9%	6.2%	0.0%	0.3%	0.4%	0.2%	0.5%	0.0%	0.0%	0.6%	4.9%	0.0%	0.0%	
Road 54	54	50	24.0	N	1700-1800	131	15.5%	4.9%	0.3%	32.2%	11.6%	7.3%	14.3%	7.6%	0.0%	0.2%	0.4%	0.4%	0.0%	0.0%	1.3%	3.7%	0.0%	0.0%	0.0%	
Road 54	54	50	24.5	N	1800-1900	106	25.3%	5.9%	0.3%	26.8%	9.6%	5.6%	11.0%	9.9%	0.0%	0.0%	0.4%	0.3%	0.7%	0.0%	0.0%	1.2%	2.9%	0.0%	0.0%	
Road 54	54	50	24.9	N	1900-2000	77	27.2%	8.5%	0.2%	22.4%	8.1%	5.4%	10.5%	12.6%	0.0%	0.0%	0.4%	0.3%	0.6%	0.0%	0.0%	1.0%	2.7%	0.0%	0.0%	
Road 54	54	50	25.6	N	2000-2100	62	24.5%	10.2%	0.2%	23.2%	8.3%	5.1%	10.1%	13.3%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	1.0%	2.6%	0.0%	0.0%	0.0%	
Road 54	54	50	25.6	N	2100-2200	62	24.7%	10.2%	0.2%	23.4%	8.4%	5.4%	10.6%	12.5%	0.0%	0.0%	0.2%	0.1%	0.3%	0.0%	0.0%	1.1%	2.8%	0.0%	0.0%	
Road 54	54	50	26.0	N	2200-2300	56	26.3%	11.9%	0.2%	19.4%	7.0%	6.2%	12.1%	12.2%	0.0%	0.0%	0.2%	0.1%	0.2%	0.0%	0.0%	1.0%	3.2%	0.0%	0.0%	
Road 54	54	50	26.8	N	2300-0000	44	24.6%	11.1%	0.2%	20.6%	7.4%	6.5%	12.8%	11.7%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	1.1%	3.4%	0.0%	0.0%	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Traffic Data / Modeling Parameters For AERMOD (Year 2030)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles <=5t	07 - Medium Goods Vehicles 5-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchised Bus Single Deck	15 - Franchised Bus Double Deck	16 - Motorcyclist	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total	
Road 103	103	80	80.0	N	0000-0100	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Road 103	103	80	80.0	N	0100-0200	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Road 103	103	80	80.0	N	0200-0300	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Road 103	103	80	80.0	N	0300-0400	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Road 103	103	80	80.0	N	0400-0500	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Road 103	103	80	80.0	N	0500-0600	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Road 103	103	80	80.0	N	0600-0700	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Road 103	103	80	80.0	N	0700-0800	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Road 103	103	80	80.0	N	0800-0900	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Road 103	103	80	80.0	N	0900-1000	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Road 103	103	80	80.0	N	1000-1100	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Road 103	103	80	80.0	N	1100-1200	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Road 103	103	80	80.0	N	1200-1300	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Road 103	103	80	80.0	N	1300-1400	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Road 103	103	80	80.0	N	1400-1500	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Road 103	103	80	80.0	N	1500-1600	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Road 103	103	80	80.0	N	1600-1700	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Road 103	103	80	80.0	N	1700-1800	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Road 103	103	80	80.0	N	1800-1900	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Road 103	103	80	80.0	N	1900-2000	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Road 103	103	80	80.0	N	2000-2100	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Road 103	103	80	80.0	N	2100-2200	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Road 103	103	80	80.0	N	2200-2300	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Road 103	103	80	80.0	N	2300-0000	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Road 104	104	80	80.0	N	0000-0100	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Road 104	104	80	80.0	N	0100-0200	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Road 104	104	80	80.0	N	0200-0300	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Road 104	104	80	80.0	N	0300-0400	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Road 104	104	80	80.0	N	0400-0500	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Road 104	104	80	80.0	N	0500-0600	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Road 104	104	80	80.0	N	0600-0700	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Road 104	104	80	80.0	N	0700-0800	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Road 104	104	80	80.0	N	0800-0900	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%</										

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2033)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles <=5t	07 - Medium Goods Vehicles 5-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchised d Bus Single Deck	15 - Franchised d Bus Double Deck	16 - Motorcycl	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total	
							PC	TAXI	LGV3	LGV4	LGVE	HGV7	HGV8	PLB	PV4	PV5	NFB6	NFB7	NFB8	FBS0	FBSD	MC	HGV9	NFB9		
Road 1	1	80	80.0	N	0000-0100	970	57.0%	25.0%	0.0%	3.5%	1.3%	1.1%	2.2%	0.0%	0.0%	0.2%	0.5%	0.4%	0.9%	0.0%	0.3%	0.6%	3.2%	0.8%	0.0%	
Road 1	1	80	80.0	N	0100-0200	630	56.1%	25.1%	0.0%	3.9%	1.4%	1.2%	2.4%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	0.3%	2.6%	0.8%	0.0%		
Road 1	1	80	80.0	N	0200-0300	461	55.1%	24.5%	0.0%	4.2%	1.5%	1.3%	2.6%	0.0%	0.0%	0.3%	0.7%	0.5%	1.1%	0.0%	3.8%	3.5%	0.7%	0.0%		
Road 1	1	80	80.0	N	0300-0400	364	54.1%	24.0%	0.0%	4.6%	1.7%	1.4%	2.8%	0.0%	0.1%	0.4%	0.8%	1.5%	0.0%	3.7%	3.8%	0.7%	0.0%			
Road 1	1	80	80.0	N	0400-0500	399	53.1%	23.5%	0.1%	5.0%	1.6%	1.6%	3.1%	0.0%	0.1%	0.5%	0.9%	1.3%	0.0%	3.7%	4.1%	0.8%	0.0%			
Road 1	1	80	80.0	N	0500-0600	691	52.1%	22.9%	0.1%	5.3%	1.9%	1.7%	3.3%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	3.7%	4.4%	0.9%	0.0%		
Road 1	1	80	80.0	N	0600-0700	1480	51.0%	22.3%	0.1%	5.7%	2.0%	1.8%	3.5%	0.0%	0.1%	0.7%	1.0%	0.7%	1.6%	0.0%	3.7%	4.8%	0.9%	0.0%		
Road 1	1	80	80.0	N	0700-0800	2991	50.0%	21.8%	0.1%	6.1%	2.2%	1.9%	3.7%	0.0%	0.1%	0.7%	1.1%	0.8%	1.7%	0.0%	3.7%	5.1%	1.0%	0.0%		
Road 1	1	80	77.7	N	0800-0900	3462	55.8%	17.8%	0.1%	6.6%	2.4%	1.8%	3.6%	0.0%	0.1%	0.8%	1.1%	0.8%	1.7%	0.0%	3.2%	3.0%	0.9%	0.0%		
Road 1	1	80	80.0	N	0900-1000	2842	51.1%	18.6%	0.1%	9.3%	3.4%	2.5%	5.0%	0.0%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	3.4%	2.0%	1.3%	0.0%		
Road 1	1	80	80.0	N	1000-1100	2455	48.4%	18.8%	0.1%	10.0%	3.6%	3.2%	6.3%	0.0%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	3.3%	1.5%	1.6%	0.0%		
Road 1	1	80	80.0	N	1100-1200	2327	48.3%	19.9%	0.1%	10.0%	3.6%	3.1%	6.1%	0.0%	0.1%	0.9%	0.5%	0.3%	0.7%	0.0%	3.4%	1.4%	1.6%	0.0%		
Road 1	1	80	78.8	N	1200-1300	3064	48.1%	18.5%	0.1%	9.4%	3.4%	3.4%	6.6%	0.0%	0.1%	0.9%	0.8%	0.6%	1.3%	0.0%	3.9%	1.4%	1.7%	0.0%		
Road 1	1	80	78.3	N	1300-1400	3115	46.6%	18.0%	0.1%	11.2%	4.0%	3.5%	6.6%	0.0%	0.1%	0.7%	0.7%	0.5%	1.0%	0.0%	3.7%	1.4%	1.6%	0.0%		
Road 1	1	80	77.0	N	1400-1500	3334	46.6%	18.8%	0.1%	9.9%	3.6%	3.4%	6.6%	0.0%	0.1%	0.8%	0.9%	0.6%	1.4%	0.0%	3.7%	1.8%	1.7%	0.0%		
Road 1	1	80	76.7	N	1500-1600	3407	46.3%	18.6%	0.1%	11.5%	4.1%	2.9%	6.7%	0.0%	0.1%	0.8%	1.0%	0.7%	1.4%	0.0%	3.6%	1.7%	1.5%	0.0%		
Road 1	1	80	75.1	N	1600-1700	3652	48.9%	16.9%	0.1%	9.0%	3.2%	2.8%	5.5%	0.0%	0.1%	1.2%	1.4%	1.0%	2.2%	0.0%	3.9%	2.3%	1.4%	0.0%		
Road 1	1	80	73.3	N	1700-1800	4174	16.6%	0.1%	9.0%	2.9%	1.8%	3.5%	0.0%	0.1%	0.6%	0.0%	0.7%	1.4%	0.0%	3.9%	4.6%	0.0%	0.0%			
Road 1	1	80	71.8	N	1800-1900	4625	64.0%	15.0%	0.1%	4.9%	1.7%	1.0%	2.0%	0.0%	0.1%	1.1%	0.8%	1.7%	0.0%	4.0%	3.1%	0.5%	0.0%			
Road 1	1	80	77.1	N	1900-2000	3693	62.4%	19.5%	0.0%	3.7%	1.3%	0.9%	1.7%	0.0%	0.0%	0.1%	0.9%	0.7%	1.4%	0.0%	4.5%	2.3%	0.5%	0.0%		
Road 1	1	80	80.0	N	2000-2100	2871	57.5%	24.4%	0.0%	3.9%	1.4%	0.8%	1.7%	0.0%	0.0%	0.1%	0.8%	0.6%	1.2%	0.0%	4.8%	2.3%	0.4%	0.0%		
Road 1	1	80	80.0	N	2100-2200	2859	58.8%	24.3%	0.0%	4.0%	1.4%	0.9%	1.8%	0.0%	0.0%	0.1%	0.4%	0.3%	0.9%	0.0%	4.2%	2.7%	0.5%	0.0%		
Road 1	1	80	80.0	N	2200-2300	2786	58.1%	26.3%	0.0%	3.1%	1.1%	1.0%	1.9%	0.0%	0.0%	0.1%	0.4%	0.2%	0.5%	0.0%	4.5%	2.2%	0.5%	0.0%		
Road 1	1	80	80.0	N	2300-0000	2841	57.2%	25.8%	0.0%	3.4%	1.2%	1.1%	2.1%	0.0%	0.0%	0.1%	0.4%	0.3%	0.7%	0.0%	4.5%	2.5%	0.6%	0.0%		
Road 2	2	80	80.0	N	0000-0100	974	53.3%	24.1%	0.1%	5.4%	1.9%	1.7%	3.4%	0.0%	0.0%	0.2%	0.7%	0.4%	0.9%	0.0%	3.2%	2.7%	0.9%	0.0%		
Road 2	2	80	80.0	N	0100-0200	637	52.4%	23.4%	0.1%	5.9%	2.1%	1.9%	3.7%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	4.1%	3.0%	1.3%	0.0%		
Road 2	2	80	80.0	N	0200-0300	488	51.2%	22.8%	0.1%	6.4%	2.3%	2.0%	4.0%	0.0%	0.0%	0.3%	0.6%	0.4%	1.0%	0.0%	4.1%	3.2%	1.4%	0.0%		
Road 2	2	80	80.0	N	0300-0400	372	50.0%	22.2%	0.1%	6.9%	2.2%	2.2%	4.3%	0.0%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	4.0%	3.5%	1.6%	0.0%		
Road 2	2	80	80.0	N	0400-0500	410	48.8%	21.6%	0.1%	7.4%	2.7%	2.3%	4.6%	0.0%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	4.0%	3.8%	1.7%	0.0%		
Road 2	2	80	80.0	N	0500-0600	712	47.7%	21.0%	0.1%	7.9%	2.8%	2.5%	4.9%	0.0%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	4.0%	4.1%	1.5%	0.0%		
Road 2	2	80	80.0	N	0600-0700	1531	48.6%	20.4%	0.1%	8.4%	3.0%	2.6%	5.2%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	3.9%	4.4%	1.5%	0.0%		
Road 2	2	80	78.8	N	0700-0800	3114	45.4%	19.8%	0.1%	8.8%	3.2%	2.8%	5.5%	0.0%	0.1%	0.7%	1.0%	0.7%	1.6%	0.0%	3.9%	4.6%	1.7%	0.0%		
Road 2	2	80	75.8	N	0800-0900	3612	50.5%	16.2%	0.1%	9.7%	3.5%	2.7%	5.3%	0.0%	0.1%	0.7%	1.0%	0.7%	1.5%	0.0%	3.4%	2.9%	1.6%	0.0%		
Road 2	2	80	76.3	N	0900-1000	3070	44.7%	16.2%	0.1%	13.3%	4.8%	3.6%	7.1%	0.0%	0.1%	0.4%	0.8%	0.5%	1.1%	0.0%	3.4%	1.7%	2.1%	0.0%		
Road 2	2	80	80.0	N	1000-1100	2699	41.6%	16.2%	0.1%	14.0%	5.0%	4.4%	8.7%	0.0%	0.1%	1.0%	0.7%	0.4%	1.0%	0.0%	3.1%	1.3%	2.5%	0.0%		
Road 2	2	80	80.0	N	1100-1200	2554	41.6%	17.1%	0.1%	13.9%	5.0%	4.4%	8.6%	0.0%	0.1%	0.8%	0.4%	0.3%	0.6%	0.0%	3.4%	1.2%	2.5%	0.0%		
Road 2	2	80	77.4	N	1200-1300	3082	40.0%	15.4%	0.1%	14.3%	5.1%	5.1%	10.1%	0.0%	0.1%	0.6%	0.7%	0.5%	1.0%	0.0%	2.9%	1.2%	2.9%	0.0%		
Road 2	2	80	75.5	N	1300-1400	3195	38.0%	14.6%	0.2%	16.7%	6.0%	5.2%	10.2%	0.0%	0.1%	0.5%	0.5%	0.4%	0.8%	0.0%	2.7%	1.2%	2.9%	0.0%		
Road 2	2	80	75.4	N	1400-1500	3370	38.6%	15.0%	0.2%	15.0%	5.4%	5.1%	10.0%	0.0%	0.1%	0.7%	0.8%	0.5%	1.2%	0.0%	2.7%	1.5%	2.8%	0.0%		
Road 2	2	80	75.0	N	1500-1600	3457	38.2%	15.3%	0.2%	17.3%	6.2%	4.4%	8.6%	0.0%	0.1%	0.7%	0.8%	0.5%	1.2%	0.0%	2.7%	1.4%	2.5%	0.0%		
Road 2	2	80	74.1	N	1600-1700	3609	41.4%	14.3%	0.1%	13.9%	5.5%	4.3%	8.5%	0.0%	0.1%	1.0%	1.2%	0.8%	1.9%	0.0%	3.0%	1.6%	2.4%	0.0%		
Road 2	2	80	73.2	N	1700-1800	3981	47.0%	14.7%	0.1%	12.8%	4.8%	2.9%	6.7%	0.0%	0.1%	0.7%	0.8%	0.6%	1.3%	0.0%	3.1%	1.6%	1.7%	0.0%		
Road 2	2	80	73.3	N	1800-1900	4188	59.2%	13.9%	0.1%	8.2%	2.9%	1.7%	3.4%	0.0%	0.0%	0.1%	1.0%	0.7%	1.6%	0.0%	3.3%	2.8%	1.1%	0.0%		
Road 2	2	80	78.8	N	1900-2000	3286	58.7%	18.4%	0.1%	6.3%	2.3%	1.5%	3.0%	0.0%	0.0%	0.1%	0.9%	0.6%	1.3%	0.0%	3.8%	2.2%	0.8%	0.0%		
Road 2	2	80	80.0	N	2000-2100	3641	54.0%	22.6%	0.1%	6.7%	2.4%	1.5%	2.9%	0.0%	0.0%	0.1%	0.8%	0.7%	1.2%	0.0%	4.0%	2.2%	0.8%	0.0%		
Road 2	2	80	80.0	N	2100-2200	3556	55.0%	22.8%	0.1%	6.8%	2.4%	1.6%	3.1%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	3.5%	2.5%	0.9%	0.0%		
Road 2	2	80	80.0	N	2200-2300	2470	54.9%	24.8%	0.1%	5.3%	1.8%	1.7%	3.3%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	3.8%	2.1%	0.9%	0.0%		
Road 2	2	80	80.0	N	2300-0000	1858	53.6%	24.2%	0.1%	5.9%	2.1%	1.9%	3.7%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	3.6%	2.4%	1.1%	0.0%		

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2033)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles <=5t	07 - Medium Goods Vehicles 5-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchised d Bus Single Deck	15 - Franchised d Bus Double Deck	16 - Motorcycl	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total	
							PC	TAXI	LGV3	LGV4	LGVE	HGV7	HGV8	PLB	PV4	PV5	NFB6	NFB7	NFB8	FBS0	FBSD	MC	HGV9	NFB9		
Road 5	5	50	45.7	N	0000-0100	409	57.1%	25.6%	0.0%	3.2%	1.1%	1.0%	2.0%	0.0%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	0.3%	0.6%	3.2%	0.8%	0.0%	
Road 5	5	50	47.2	N	0100-0200	266	56.2%	25.1%	0.0%	3.9%	1.2%	1.1%	2.2%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	0.3%	2.6%	0.8%	0.0%		
Road 5	5	50	47.9	N	0200-0300	194	55.3%	24.6%	0.0%	3.8%	1.4%	1.2%	2.3%	0.0%	0.0%	0.3%	0.7%	0.5%	1.1%	0.0%	4.6%	3.5%	0.6%	0.0%		
Road 5	5	50	48.4	N	0300-0400	154	54.3%	24.1%	0.0%	4.1%	1.5%	1.3%	2.5%	0.0%	0.1%	0.4%	0.8%	0.5%	1.2%	0.0%	4.6%	3.8%	0.7%	0.0%		
Road 5	5	50	48.2	N	0400-0500	168	53.4%	23.6%	0.0%	4.4%	1.6%	1.4%	2.7%	0.0%	0.1%	0.5%	0.8%	1.3%	0.0%	4.6%	4.1%	0.7%	0.0%			
Road 5	5	50	48.0	N	0500-0600	200	52.4%	23.1%	0.0%	4.7%	1.7%	1.5%	2.9%	0.0%	0.1%	0.6%	0.9%	1.4%	0.0%	4.5%	4.5%	0.8%	0.0%			
Road 5	5	50	43.2	N	0600-0700	621	51.4%	22.8%	0.1%	5.1%	1.8%	1.6%	3.1%	0.0%	0.1%	0.7%	1.1%	0.7%	1.6%	0.0%	4.5%	4.8%	0.8%	0.0%		
Road 5	5	50	37.8	N	0700-0800	1253	50.4%	22.0%	0.1%	5.4%	2.0%	1.7%	3.3%	0.0%	0.1%	0.7%	1.2%	0.8%	1.8%	0.0%	4.5%	5.2%	0.9%	0.0%		
Road 5	5	50	36.6	N	0800-0900	1448	50.4%	21.8%	0.1%	5.6%	2.1%	1.8%	3.5%	0.0%	0.1%	0.7%	1.1%	0.7%	1.8%	0.0%	4.5%	5.4%	0.9%	0.0%		
Road 5	5	50	38.1	N	0900-1000	1181	52.0%	19.9%	0.1%	8.4%	3.0%	2.3%	4.5%	0.0%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	4.2%	2.0%	1.2%	0.0%		
Road 5	5	50	39.0	N	1000-1100	1007	49.4%	19.2%	0.1%	9.1%	3.3%	2.9%	5.7%	0.0%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	4.1%	1.5%	1.5%	0.0%		
Road 5	5	50	39.4	N	1100-1200	964	49.4%	20.3%	0.1%	9.3%	3.3%	2.8%	5.6%	0.0%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	4.3%	1.5%	1.4%	0.0%		
Road 5	5	50	35.5	N	1200-1300	1605	52.3%	20.1%	0.1%	7.5%	2.7%	2.7%	5.3%	0.0%	0.1%	0.8%	0.9%	0.6%	1.4%	0.0%	2.5%	1.5%	1.4%	0.0%		
Road 5	5	50	35.3	N	1300-1400	1620	51.0%	19.7%	0.1%	9.0%	3.2%	2.8%	5.5%	0.0%	0.1%	0.7%	0.7%	0.5%	1.1%	0.0%	2.5%	1.6%	1.4%	0.0%		
Road 5	5	50	35.0	N	1400-1500	1746	50.4%	20.3%	0.1%	9.0%	3.2%	2.8%	5.5%	0.0%	0.1%	0.7%	0.7%	0.5%	1.1%	0.0%	2.5%	1.6%	1.4%	0.0%		
Road 5	5	50	34.4	N	1500-1600	1761	50.4%	19.3%	0.1%	9.2%	3.3%	2.9%	5.6%	0.0%	0.1%	0.9%	1.0%	0.7%	1.6%	0.0%	2.4%	1.8%	1.2%	0.0%		
Road 5	5	50	33.4	N	1600-1700	1927	52.8%	18.2%	0.1%	7.2%	2.6%	2.2%	4.4%	0.0%	0.2%	1.2%	1.6%	1.1%	2.4%	0.0%	2.6%	2.5%	1.1%	0.0%		
Road 5	5	50	33.0	N	1700-1800	2133	51.7%	16.1%	0.2%	6.1%	2.3%	1.4%	3.2%	0.0%	0.2%	1.4%	1.8%	1.3%	2.8%	0.0%	2.5%	2.4%	1.2%	0.0%		
Road 5	5	50	31.0	N	1800-1900	2522	66.8%	15.7%	0.0%	3.7%	1.3%	0.8%	1.5%	0.0%	0.0%	0.1%	1.2%	0.8%	1.8%	0.0%	2.5%	3.2%	0.4%	0.0%		
Road 5	5	50	34.0	N	1900-2000	2021	64.9%	20.3%	0.0%	2.8%	1.0%	0.7%	1.3%	0.0%	0.0%	0.1%	1.0%	0.7%	1.5%	0.0%	2.9%	2.4%	0.3%	0.0%		
Road 5	5	50	36.6	N	2000-2100	1570	59.9%	25.4%	0.0%	3.0%	1.1%	0.7%	1.3%	0.0%	0.0%	0.1%	0.8%	0.6%	1.3%	0.0%	3.0%	2.4%	0.3%	0.0%		
Road 5	5	50	37.0	N	2100-2200	1544	61.3%	25.3%	0.0%	3.1%	1.4%	0.7%	1.3%	0.0%	0.0%	0.1%	0.8%	0.6%	1.3%	0.0%	3.0%	2.4%	0.3%	0.0%		
Road 5	5	50	37.0	N	2200-2300	1527	60.4%	27.3%	0.0%	2.4%	0.8%	0.7%	1.5%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	2.9%	2.3%	0.4%	0.0%		
Road 5	5	50	39.1	N	2300-0000	1138	59.6%	26.0%	0.0%	2.6%	0.9%	0.8%	1.6%	0.0%	0.0%	0.1%	0.5%	0.3%	0.7%	0.0%	2.8%	2.6%	0.4%	0.0%		
Road 6	6	50	43.7	N	0000-0100	563	51.1%	23.0%	0.1%	8.1%	2.3%	2.3%	4.4%	0.0%	0.1%	0.5%	0.7%	0.5%	1.3%	0.0%	3.0%	2.7%	0.5%	0.0%		
Road 6	6	50	45.8	N	0100-0200	371	49.7%	22.2%	0.1%	7.7%	2.7%	2.4%	4.7%	0.0%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	3.8%	2.8%	1.7%	0.0%		
Road 6	6	50	46.9	N	0200-0300	274	48.3%	21.5%	0.1%	8.3%	3.0%	2.6%	5.1%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	3.7%	3.1%	2.0%	0.0%		
Road 6	6	50	47.5	N	0300-0400	219	46.6%	20.8%	0.1%	8.6%	3.2%	2.8%	5.5%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	3.7%	3.1%	2.0%	0.0%		
Road 6	6	50	47.2	N	0400-0500	242	45.7%	20.2%	0.1%	9.5%	3.4%	3.0%	5.8%	0.0%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	3.6%	3.5%	2.3%	0.0%		
Road 6	6	50	45.0	N	0500-0600	422	44.5%	19.6%	0.1%	10.1%	3.6%	3.2%	6.2%	0.0%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	3.6%	3.8%	2.1%	0.0%		
Road 6	6	50	39.8	N	0600-0700	911	42.3%	19.0%	0.1%	41.3%	17.3%	13.1%	21.6%	0.0%	0.1%	0.3%	0.4%	0.3%	0.5%	0.0%	3.1%	3.1%	3.1%	0.0%		
Road 6	6	50	33.2	N	0700-0800	1861	42.0%	18.3%	0.1%	11.3%	4.1%	3.5%	7.0%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	3.5%	4.3%	2.2%	0.0%		
Road 6	6	50	31.2	N	0800-0900	2164	46.6%	14.9%	0.1%	12.2%	4.4%	3.4%	6.7%	0.0%	0.1%	0.6%	0.9%	0.6%	1.4%	0.0%	3.1%	2.7%	2.1%	0.0%		
Road 6	6	50	32.4	N	0900-1000	1829	46.2%	14.6%	0.1%	14.6%	4.4%	3.3%	7.2%	0.0%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	3.0%	2.7%	2.0%	0.0%		
Road 6	6	50	33.5	N	1000-1100	1682	36.9%	14.3%	0.2%	16.9%	6.1%	5.4%	10.6%	0.0%	0.1%	0.4%	0.6%	0.4%	0.9%	0.0%	2.9%	1.1%	3.2%	0.0%		
Road 6	6	50	34.3	N	1100-1200	1590	36.9%	15.2%	0.2%	16.9%	6.1%	5.3%	10.4%	0.0%	0.1%	0.7%	0.4%	0.3%	0.6%	0.0%	3.0%	1.0%	3.2%	0.0%		
Road 6	6	50	34.1	N	1200-1300	1477	26.7%	10.3%	0.2%	17.8%	7.8%	7.7%	15.2%	0.0%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	3.3%	0.8%	4.5%	0.0%		
Road 6	6	50	34.0	N	1300-1400	1575	24.3%	10.3%	0.2%	18.7%	8.8%	8.7%	15.9%	0.0%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	3.3%	0.8%	4.5%	0.0%		
Road 6	6	50	32.9	N	1400-1500	1624	25.6%	10.3%	0.2%	22.8%	8.1%	7.6%	15.0%	0.0%	0.1%	0.4%	0.5%	0.4%	0.8%	0.0%	3.1%	1.0%	4.8%	0.0%		
Road 6	6	50	32.7	N	1500-1600	1676	25.2%	10.1%	0.3%	25.9%	9.3%	8.6%	12.9%	0.0%	0.1%	0.4%	0.5%	0.4%	0.8%	0.0%	3.0%	0.9%	3.8%	0.0%		
Road 6	6	50	32.7	N	1600-1700	1682	24.9%	9.6%	0.3%	28.0%	9.6%	8.7%	12.9%	0.0%	0.1%	0.4%	0.5%	0.4%	0.8%	0.0%	3.0%	0.9%	3.8%	0.0%		
Road 6	6	50	32.9	N	1700-1800	1750	34.2%	10.7%	0.2%	21.1%	7.6%	4.8%	9.4%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	3.8%	2.9%	2.9%	0.0%		
Road 6	6	50	34.3	N	1800-1900	1666	47.5%	11.2%	0.2%	15.0%	5.4%	5.1%	6.1%	0.0%	0.0%	0.1%	0.8%	0.6%	1.3%	0.0%	4.5%	2.3%	2.0%	0.0%		
Road 6	6	50	34.0	N	1900-2000	1672	48.0%	11.3%	0.2%	15.1%	5.4%	5.1%	6.1%	0.0%	0.0%	0.1%	0.8%	0.6%	1.3%	0.0%	4.5%	2.3%	2.0%	0.0%		
Road 6	6	50	39.0	N	2000-2100	991	44.6%	18.9%	0.1%	12.5%	4.5%	2.8%	5.4%	0.0%	0.0%	0.1%	0.6%	0.4%	1.0%	0.0%	5.6%	1.8%	1.6%	0.0%		
Road 6	6	50	39.0	N	2100-2200	992	45.3%	18.7%	0.1%	12.7%	4.6%	2.9%	5.4%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	4.9%	2.1%	1.7%	0.0%		
Road 6	6	50	39.0	N	2200-2300	943	46.8%	18.9%	0.1%	12.7%	4.6%	2.9%	5.4%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	5.0%	2.1%	1.7%	0.0%		
Road 6	6	50	41.4	N	2300-0000	720	44.2%	19.9%	0.1%	11.0%	3.9%	3.5%	6.8%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	5.3%	2.0%	2.0%	0.0%		

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2033)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles <=10t	07 - Medium Goods Vehicles >10t	08 - Public Light Buses	09 - Private Light Buses <=3.5t	10 - Private Light Buses >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchised Bus Single	15 - Franchised Bus Double Deck	16 - Motorcycl	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total	
Road 9	9	50	43.3	N	0000-0100	316	56.0%	22.2%	0.0%	4.0%	1.4%	1.3%	2.5%	0.0%	0.0%	0.2%	0.5%	0.4%	0.0%	4.1%	2.0%	0.7%	0.0%	100.0%		
Road 9	9	50	45.6	N	0100-0200	206	55.0%	24.6%	0.0%	4.4%	1.4%	1.4%	2.7%	0.0%	0.0%	0.3%	0.6%	0.4%	0.1%	5.3%	3.1%	1.7%	0.0%	100.0%		
Road 9	9	50	46.8	N	0200-0300	150	54.0%	24.1%	0.1%	4.8%	1.7%	1.5%	3.0%	0.0%	0.0%	0.3%	0.7%	0.8%	1.0%	0.0%	4.1%	3.4%	0.8%	0.0%	100.0%	
Road 9	9	50	47.4	N	0300-0400	159	52.9%	23.5%	0.1%	5.2%	1.6%	1.3%	3.0%	0.0%	0.1%	0.4%	0.8%	0.5%	1.2%	0.0%	4.0%	3.7%	0.8%	0.0%	100.0%	
Road 9	9	50	47.4	N	0400-0500	131	51.9%	22.9%	0.1%	5.6%	2.0%	1.8%	3.5%	0.0%	0.1%	0.5%	0.8%	0.8%	1.3%	0.0%	4.0%	4.0%	0.9%	0.0%	100.0%	
Road 9	9	50	45.0	N	0500-0600	227	50.8%	22.4%	0.1%	6.0%	2.2%	1.9%	3.7%	0.0%	0.1%	0.6%	0.9%	0.6%	1.4%	0.0%	4.4%	0.0%	4.3%	1.0%	0.0%	100.0%
Road 9	9	50	39.5	N	0600-0700	486	49.8%	21.8%	0.1%	6.4%	2.2%	2.0%	4.0%	0.0%	0.1%	0.6%	1.0%	0.7%	1.6%	0.0%	4.0%	4.7%	1.0%	0.0%	100.0%	
Road 9	9	50	33.3	N	0700-0800	864	48.7%	21.2%	0.1%	6.8%	2.5%	2.1%	4.2%	0.0%	0.1%	0.7%	1.1%	0.8%	1.7%	0.0%	3.9%	6.0%	1.1%	0.0%	100.0%	
Road 9	9	50	31.3	N	0800-0900	1139	54.3%	17.4%	0.1%	7.4%	2.7%	2.1%	4.1%	0.0%	0.1%	0.7%	1.1%	0.7%	1.6%	0.0%	3.5%	3.2%	1.1%	0.0%	100.0%	
Road 9	9	50	33.3	N	0900-1000	944	49.3%	17.9%	0.1%	10.4%	3.7%	2.8%	5.6%	0.0%	0.1%	0.5%	0.8%	0.8%	1.3%	0.0%	3.6%	1.9%	1.5%	0.0%	100.0%	
Road 9	9	50	34.7	N	1000-1100	819	46.3%	18.0%	0.1%	11.1%	4.0%	3.5%	6.9%	0.0%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	3.5%	1.4%	1.8%	0.0%	100.0%	
Road 9	9	50	35.4	N	1100-1200	776	46.3%	18.1%	0.1%	11.1%	4.0%	3.5%	6.8%	0.0%	0.1%	0.8%	0.5%	0.3%	0.7%	0.0%	3.6%	1.3%	1.8%	0.0%	100.0%	
Road 9	9	50	27.3	N	1200-1300	1214	39.9%	11.9%	0.2%	10.4%	7.0%	7.0%	13.7%	0.0%	0.1%	0.5%	0.5%	0.4%	0.8%	0.0%	3.2%	0.9%	3.6%	0.0%	100.0%	
Road 9	9	50	24.4	N	1300-1400	1283	28.8%	11.1%	0.2%	22.3%	8.0%	6.9%	13.6%	0.0%	0.1%	0.4%	0.4%	0.3%	0.6%	0.0%	2.9%	0.9%	3.5%	0.0%	100.0%	
Road 9	9	50	22.5	N	1400-1500	1333	29.7%	12.0%	0.2%	20.3%	7.2%	6.8%	13.5%	0.0%	0.1%	0.5%	0.5%	0.4%	0.9%	0.0%	3.0%	1.1%	3.6%	0.0%	100.0%	
Road 9	9	50	21.4	N	1500-1600	1373	29.3%	11.7%	0.2%	23.3%	8.4%	5.9%	11.6%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	2.9%	1.1%	3.0%	0.0%	100.0%	
Road 9	9	50	20.7	N	1600-1700	1395	32.6%	11.2%	0.2%	19.3%	6.8%	6.0%	11.8%	0.0%	0.1%	0.8%	0.0%	0.7%	1.5%	0.0%	3.4%	1.5%	3.1%	0.0%	100.0%	
Road 9	9	50	20.9	N	1700-1800	1475	12.0%	0.2%	18.4%	6.8%	4.2%	8.2%	0.0%	0.1%	0.6%	0.7%	0.5%	1.0%	0.0%	3.6%	3.3%	2.1%	0.0%	100.0%		
Road 9	9	50	25.4	N	1800-1900	1457	51.8%	12.2%	0.1%	12.6%	4.5%	2.6%	5.2%	0.0%	0.0%	0.1%	0.9%	0.8%	1.4%	0.0%	3.1%	2.5%	1.4%	0.0%	100.0%	
Road 9	9	50	31.1	N	1900-2000	1121	52.3%	16.4%	0.1%	9.9%	3.6%	2.4%	4.7%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	4.9%	1.9%	1.2%	0.0%	100.0%	
Road 9	9	50	34.2	N	2000-2100	877	48.0%	20.4%	0.1%	10.5%	3.6%	2.3%	4.5%	0.0%	0.0%	0.1%	0.7%	0.5%	1.0%	0.0%	5.1%	1.9%	1.2%	0.0%	100.0%	
Road 9	9	50	34.4	N	2100-2200	876	48.8%	20.3%	0.1%	10.8%	3.8%	2.4%	4.6%	0.0%	0.0%	0.2%	0.5%	0.4%	0.9%	0.0%	4.9%	2.2%	1.3%	0.0%	100.0%	
Road 9	9	50	34.9	N	2200-2300	838	49.2%	22.2%	0.1%	8.4%	3.0%	2.7%	5.2%	0.0%	0.0%	0.0%	0.3%	0.2%	0.5%	0.0%	4.9%	1.9%	1.4%	0.0%	100.0%	
Road 9	9	50	37.4	N	2300-0000	636	47.6%	21.5%	0.1%	8.2%	3.3%	2.9%	5.7%	0.0%	0.0%	0.1%	0.4%	0.2%	0.5%	0.0%	4.8%	2.1%	1.5%	0.0%	100.0%	
Road 10	10	50	48.9	Y	0000-0100	49	42.5%	21.3%	0.1%	10.4%	3.7%	3.3%	1.4%	0.0%	0.2%	0.4%	0.3%	0.7%	2.4%	0.0%	0.3%	2.4%	0.2%	100.0%		
Road 10	10	50	49.3	Y	0100-0200	32	45.9%	20.5%	0.1%	11.2%	4.0%	3.5%	7.0%	1.4%	0.0%	0.2%	0.5%	0.3%	0.8%	0.0%	0.0%	2.6%	1.8%	0.0%	100.0%	
Road 10	10	50	49.4	Y	0200-0300	24	44.3%	19.7%	0.1%	12.0%	4.3%	3.8%	7.4%	1.4%	0.0%	0.3%	0.6%	0.4%	0.8%	0.0%	0.0%	2.8%	1.9%	0.0%	100.0%	
Road 10	10	50	49.6	Y	0300-0400	19	42.7%	19.0%	0.1%	12.8%	4.6%	4.0%	7.9%	1.4%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	0.3%	2.1%	0.0%	100.0%		
Road 10	10	50	49.5	Y	0400-0500	21	41.2%	18.2%	0.1%	13.6%	4.9%	4.3%	8.4%	1.3%	0.0%	0.4%	0.7%	0.5%	1.0%	0.0%	0.0%	3.2%	2.2%	0.0%	100.0%	
Road 10	10	50	49.1	Y	0500-0600	38	39.7%	17.5%	0.1%	14.3%	5.1%	4.5%	8.8%	1.3%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	0.3%	2.4%	2.3%	0.0%	100.0%	
Road 10	10	50	48.1	Y	0600-0700	82	38.3%	16.8%	0.2%	15.0%	5.4%	4.7%	9.3%	1.3%	0.1%	0.5%	0.8%	0.8%	1.2%	0.0%	0.0%	3.6%	2.4%	0.0%	100.0%	
Road 10	10	50	45.9	Y	0700-0800	170	36.0%	16.0%	0.2%	16.0%	5.7%	5.0%	10.0%	1.0%	0.1%	0.6%	0.9%	0.9%	1.3%	0.0%	3.8%	2.5%	2.0%	0.0%	100.0%	
Road 10	10	50	45.1	Y	0800-0900	188	40.7%	13.0%	0.2%	17.0%	6.1%	4.7%	9.3%	1.0%	0.1%	0.6%	0.8%	0.6%	1.2%	0.0%	0.0%	2.4%	2.4%	0.0%	100.0%	
Road 10	10	50	45.3	Y	0900-1000	181	33.4%	12.1%	0.2%	21.5%	7.7%	5.9%	11.5%	1.1%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	0.0%	1.3%	3.0%	0.0%	100.0%	
Road 10	10	50	45.6	Y	1000-1100	169	30.1%	11.7%	0.2%	21.9%	7.9%	7.0%	13.7%	1.1%	0.0%	0.3%	0.5%	0.3%	0.8%	0.0%	0.0%	0.8%	3.6%	0.0%	100.0%	
Road 10	10	50	45.9	Y	1100-1200	156	30.1%	12.4%	0.2%	21.9%	7.9%	6.9%	13.5%	1.2%	0.1%	0.5%	0.3%	0.2%	0.5%	0.0%	0.0%	0.8%	3.5%	0.0%	100.0%	
Road 10	10	50	47.4	Y	1200-1300	82	19.9%	7.7%	0.3%	26.9%	9.7%	9.7%	19.0%	0.0%	0.0%	0.3%	0.3%	0.2%	0.5%	0.0%	0.0%	0.6%	5.0%	0.0%	100.0%	
Road 10	10	50	47.4	Y	1300-1400	90	18.0%	6.9%	0.3%	30.0%	10.0%	9.3%	18.3%	0.0%	0.0%	0.3%	0.3%	0.2%	0.4%	0.0%	0.0%	0.5%	4.8%	0.0%	100.0%	
Road 10	10	50	47.4	Y	1400-1500	91	18.9%	7.7%	0.3%	27.9%	10.0%	9.5%	18.6%	0.0%	0.0%	0.3%	0.4%	0.3%	0.6%	0.0%	0.0%	0.7%	4.9%	0.0%	100.0%	
Road 10	10	50	47.3	Y	1500-1600	94	18.5%	7.4%	0.3%	31.9%	11.4%	8.1%	15.9%	0.0%	0.0%	0.3%	0.4%	0.3%	0.6%	0.0%	0.0%	0.7%	4.1%	0.0%	100.0%	
Road 10	10	50	47.4	Y	1600-1700	92	21.5%	7.4%	0.3%	27.4%	9.9%	8.6%	16.9%	0.0%	0.1%	0.5%	0.6%	0.4%	1.0%	0.0%	0.0%	1.0%	4.4%	0.0%	100.0%	
Road 10	10	50	47.6	Y	1700-1800	92	27.1%	8.5%	0.3%	27.6%	10.0%	6.3%	12.4%	0.0%	0.0%	0.4%	0.5%	0.3%	0.7%	0.0%	0.0%	2.3%	3.2%	0.0%	100.0%	
Road 10	10	50	48.0	Y	1800-1900	80	40.9%	9.6%	0.2%	21.5%	7.7%	4.5%	8.8%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	0.0%	1.9%	2.3%	0.0%	100.0%	
Road 10	10	50	48.6	Y	1900-2000	59	43.4%	13.6%	0.2%	17.8%	6.4%	4.2%	8.4%	0.0%	0.0%	0.1%	0.7%	0.8%	1.0%	0.0%	0.0%	1.6%	2.2%	0.0%	100.0%	
Road 10	10	50	48.7	Y	2000-2100	60	46.1%	13.7%	0.2%	18.1%	6.7%	4.3%	8.5%	0.0%	0.0%	0.1%	0.6%	0.7%	1.0%	0.0%	0.0%	1.7%	2.1%	0.0%	100.0%	
Road 10	10	50	48.9	Y	2100-2200	47	39.9%	16.5%	0.2%	18.8%	6.7%	4.3%	8.5%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.0%	1.6%	2.2%	0.0%	100.0%	
Road 10	10	50	49.0	Y	2200-2300	43	41.4%	16.2%	0.2%	15.2%	5.4%	4.8%	9.5%	0.0%	0.0%	0.0%	0.2%	0.2%	0.4%	0.0%	0.0%	1.6%	2.5%	0.0%	100.0%	
Road 10	10	50	49.2	Y	2300-0000	34	39.2%	17.7%	0.2%	16.3%	5.9%	5.2%	10.2%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.0%	1.7%	2.7%	0.0%	100.0%	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2033)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Car	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles <=10t	07 - Medium Goods Vehicles >10t	08 - Public Buses	09 - Private Light <=3.5t	10 - Private Light >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4t-15t	13 - Non-franchised Bus 15t-24t	14 - Franchise d Bus Single	15 - Franchise d Bus Double Deck	16 - Motorcycl	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total	
Road 13	13	50	29.9	N	0000-0100	2	49.6%	22.3%	0.1%	9.7%	3.5%	3.1%	6.0%	0.0%	0.0%	0.2%	0.5%	0.4%	0.3%	0.0%	2.5%	1.6%	0.0%	100.0%		
Road 13	13	50	29.9	N	0100-0200	1	47.1%	22.3%	0.1%	10.5%	3.8%	3.5%	6.5%	0.0%	0.0%	0.2%	0.5%	0.4%	0.3%	0.0%	2.7%	1.7%	0.0%	100.0%		
Road 13	13	50	29.9	N	0200-0300	1	46.5%	20.7%	0.1%	11.2%	4.0%	3.5%	7.0%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	2.9%	1.8%	0.0%	100.0%		
Road 13	13	50	30.0	N	0300-0400	1	44.9%	19.9%	0.1%	12.0%	4.3%	3.8%	7.4%	0.0%	0.0%	0.4%	0.6%	0.4%	1.0%	0.0%	3.2%	1.9%	0.0%	100.0%		
Road 13	13	50	29.6	N	0400-0500	1	42.9%	19.2%	0.1%	12.2%	4.4%	3.8%	7.4%	0.0%	0.0%	0.4%	0.6%	0.4%	1.0%	0.0%	3.4%	2.0%	0.0%	100.0%		
Road 13	13	50	29.9	N	0500-0600	1	41.9%	18.4%	0.1%	13.4%	4.8%	4.2%	8.3%	0.0%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	3.6%	2.2%	0.0%	100.0%		
Road 13	13	50	29.8	N	0600-0700	3	40.4%	17.7%	0.1%	14.2%	5.1%	4.4%	8.7%	0.0%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	3.8%	2.3%	0.0%	100.0%		
Road 13	13	50	29.6	N	0700-0800	7	39.0%	17.0%	0.2%	14.9%	5.3%	4.6%	9.1%	0.0%	0.1%	0.6%	0.9%	0.6%	1.4%	0.0%	4.0%	2.4%	0.0%	100.0%		
Road 13	13	50	29.3	N	0800-0900	10	38.1%	16.8%	0.3%	15.6%	5.8%	4.8%	9.8%	0.0%	0.1%	0.6%	0.9%	0.6%	1.5%	0.0%	4.2%	2.5%	0.0%	100.0%		
Road 13	13	50	29.5	N	0900-1000	7	35.8%	13.0%	0.2%	20.5%	7.4%	5.6%	11.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.9%	0.0%	1.4%	2.9%	0.0%	100.0%		
Road 13	13	50	29.6	N	1000-1100	6	32.4%	12.6%	0.2%	21.0%	7.5%	6.7%	13.1%	0.0%	0.0%	0.4%	0.5%	0.4%	0.9%	0.0%	1.0%	3.4%	0.0%	100.0%		
Road 13	13	50	29.3	N	1100-1200	6	32.4%	12.6%	0.2%	21.0%	7.5%	6.7%	13.1%	0.0%	0.0%	0.4%	0.5%	0.4%	0.9%	0.0%	1.0%	3.4%	0.0%	100.0%		
Road 13	13	50	29.6	N	1200-1300	6	34.5%	13.3%	0.2%	18.6%	6.7%	6.7%	13.1%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	1.0%	3.4%	0.0%	100.0%		
Road 13	13	50	29.5	N	1300-1400	7	32.1%	12.4%	0.2%	21.4%	7.7%	6.6%	13.0%	0.0%	0.1%	0.5%	0.5%	0.3%	0.7%	0.0%	1.3%	3.4%	0.0%	100.0%		
Road 13	13	50	29.3	N	1400-1500	13	34.4%	13.5%	0.2%	22.4%	8.0%	7.1%	11.1%	0.0%	0.1%	0.6%	0.7%	0.5%	1.2%	0.0%	1.2%	3.4%	0.0%	100.0%		
Road 13	13	50	29.5	N	1500-1600	7	32.6%	13.1%	0.2%	22.4%	8.0%	5.7%	11.1%	0.0%	0.1%	0.6%	0.7%	0.5%	1.0%	0.0%	1.2%	2.9%	0.0%	100.0%		
Road 13	13	50	29.5	N	1600-1700	7	36.7%	12.5%	0.2%	18.4%	6.6%	5.8%	11.3%	0.0%	0.1%	0.9%	1.1%	0.7%	1.6%	0.0%	0.7%	1.7%	3.0%	0.0%	100.0%	
Road 13	13	50	29.5	N	1700-1800	13	34.4%	13.5%	0.2%	22.4%	8.0%	7.1%	11.1%	0.0%	0.1%	0.6%	0.7%	0.5%	1.2%	0.0%	1.2%	3.4%	0.0%	100.0%		
Road 13	13	50	29.5	N	1800-1900	8	56.2%	13.2%	0.1%	11.8%	4.2%	2.5%	4.8%	0.0%	0.0%	0.1%	1.0%	0.7%	1.5%	0.0%	0.7%	1.3%	0.0%	100.0%		
Road 13	13	50	29.7	N	1900-2000	6	56.8%	17.8%	0.1%	9.3%	3.3%	2.2%	4.4%	0.0%	0.0%	0.1%	0.9%	0.6%	1.3%	0.0%	0.2%	1.1%	0.0%	100.0%		
Road 13	13	50	29.7	N	2000-2100	5	52.3%	22.4%	0.1%	9.9%	3.5%	2.2%	4.5%	0.0%	0.0%	0.1%	0.9%	0.6%	1.1%	0.0%	0.2%	1.1%	0.0%	100.0%		
Road 13	13	50	29.7	N	2100-2200	5	52.9%	21.9%	0.1%	9.9%	3.6%	2.3%	4.5%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.2%	1.2%	0.0%	100.0%		
Road 13	13	50	29.7	N	2200-2300	4	53.4%	24.1%	0.1%	7.8%	2.8%	2.5%	4.9%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.0%	2.1%	1.3%	0.0%	100.0%	
Road 13	13	50	29.6	N	2300-0000	2	53.8%	23.3%	0.1%	8.6%	3.1%	2.7%	5.5%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.0%	2.3%	1.4%	0.0%	100.0%	
Road 14	14	40	42.4	N	0000-0100	379	22.9%	23.0%	0.1%	4.6%	1.7%	1.2%	2.5%	0.0%	0.0%	0.2%	0.5%	0.4%	0.3%	0.0%	4.6%	3.7%	0.0%	100.0%		
Road 14	14	40	40.7	N	0100-0200	253	49.9%	22.3%	0.1%	4.9%	1.8%	1.6%	3.1%	0.0%	0.0%	0.2%	0.5%	0.4%	0.6%	0.0%	3.3%	2.9%	0.0%	100.0%		
Road 14	14	50	47.7	N	0200-0300	191	47.6%	21.2%	0.1%	5.2%	1.9%	1.6%	3.2%	0.0%	0.0%	0.2%	0.5%	0.4%	0.9%	0.0%	3.2%	3.0%	0.0%	100.0%		
Road 14	14	50	48.1	N	0300-0400	155	45.4%	20.1%	0.1%	5.5%	2.4%	1.6%	3.4%	0.0%	0.0%	0.2%	0.4%	0.5%	0.9%	0.0%	3.2%	3.2%	0.0%	100.0%		
Road 14	14	50	47.7	N	0400-0500	169	44.9%	19.8%	0.1%	5.6%	2.2%	1.9%	3.7%	0.0%	0.1%	0.4%	0.7%	0.1%	0.3%	0.1%	3.5%	3.1%	0.0%	100.0%		
Road 14	14	50	46.7	N	0500-0600	280	46.0%	20.2%	0.1%	6.7%	2.4%	2.1%	4.1%	0.0%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	3.2%	3.9%	0.0%	100.0%		
Road 14	14	50	43.4	N	0600-0700	200	47.5%	20.5%	0.1%	7.6%	2.7%	2.3%	4.6%	0.0%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	3.2%	3.9%	0.0%	100.0%		
Road 14	14	50	37.4	N	0700-0800	1210	44.2%	19.2%	0.1%	7.7%	2.8%	2.4%	4.7%	0.0%	0.1%	0.6%	1.0%	0.5%	1.5%	0.0%	3.2%	4.5%	0.0%	100.0%		
Road 14	14	50	38.3	N	0800-0900	1392	46.5%	15.9%	0.1%	8.4%	3.0%	2.3%	4.9%	0.0%	0.1%	0.7%	1.0%	0.7%	1.5%	0.0%	2.9%	2.9%	0.0%	100.0%		
Road 14	14	50	37.4	N	0900-1000	1182	45.8%	15.1%	0.1%	8.5%	3.1%	2.5%	4.9%	0.0%	0.1%	0.7%	1.0%	0.7%	1.5%	0.0%	2.9%	2.9%	0.0%	100.0%		
Road 14	14	50	38.1	N	1000-1100	993	40.7%	15.8%	0.1%	12.0%	4.3%	3.8%	7.5%	0.0%	0.1%	0.4%	0.7%	0.5%	1.0%	0.0%	2.8%	1.2%	0.0%	100.0%		
Road 14	14	50	38.5	N	1100-1200	902	40.5%	16.7%	0.1%	12.0%	4.3%	3.7%	7.4%	0.0%	0.1%	0.7%	0.4%	0.3%	0.9%	0.0%	2.8%	1.1%	0.0%	100.0%		
Road 14	14	50	36.4	N	1200-1300	1044	46.2%	16.4%	0.1%	11.5%	4.6%	3.9%	7.5%	0.0%	0.1%	0.4%	0.3%	0.5%	0.9%	0.0%	2.8%	1.5%	0.0%	100.0%		
Road 14	14	50	34.4	N	1300-1400	1421	26.3%	10.1%	0.2%	21.9%	7.9%	6.8%	13.3%	0.0%	0.4%	0.4%	0.4%	0.3%	0.6%	0.0%	2.8%	0.8%	0.0%	100.0%		
Road 14	14	50	34.0	N	1400-1500	1471	27.2%	11.0%	0.2%	20.0%	7.2%	6.8%	13.3%	0.0%	0.1%	0.5%	0.4%	0.4%	0.6%	0.0%	2.7%	1.0%	0.0%	100.0%		
Road 14	14	50	33.8	N	1500-1600	1514	26.8%	10.8%	0.2%	23.0%	8.3%	5.8%	11.2%	0.0%	0.1%	0.5%	0.4%	0.4%	0.6%	0.0%	2.6%	1.0%	0.0%	100.0%		
Road 14	14	50	33.3	N	1600-1700	1531	30.6%	10.9%	0.1%	19.1%	7.7%	6.8%	11.7%	0.0%	0.1%	0.5%	0.4%	0.4%	0.6%	0.0%	1.9%	1.7%	0.0%	100.0%		
Road 14	14	50	33.8	N	1700-1800	1610	35.8%	11.2%	0.2%	18.4%	6.6%	4.2%	8.2%	0.0%	0.1%	0.5%	0.6%	0.4%	1.0%	0.0%	3.3%	1.1%	0.0%	100.0%		
Road 14	14	50	34.8	N	1800-1900	1512	48.5%	11.4%	0.1%	12.7%	4.6%	2.7%	5.2%	0.0%	0.0%	0.8%	0.8%	1.3%	0.0%	3.8%	2.3%	0.0%	100.0%			
Road 14	14	50	37.4	N	1900-2000	1107	47.4%	10.4%	0.1%	10.4%	3.9%	2.4%	4.9%	0.0%	0.1%	0.4%	0.7%	0.4%	0.9%	0.0%	4.2%	2.3%	0.0%	100.0%		
Road 14	14	50	39.5	N	2000-2100	919	46.7%	10.6%	0.1%	10.9%	3.9%	2.4%	4.7%	0.0%	0.0%	0.1%	0.7%	0.5%	1.0%	0.0%	4.4%	1.8%	0.0%	100.0%		
Road 14	14	50	39.5	N	2100-2200	919	47.0%	10.5%	0.1%	11.0%	4.0%	2.5%	5.0%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	4.3%	2.1%	0.0%	100.0%		
Road 14	14	50	39.2	N	2200-2300	878	47.5%	10.4%	0.1%	11.5%	4.0%	2.8%	5.4%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	4.3%	2.3%	0.0%	100.0%		
Road 14	14	50	42.0	N	2300-0000	672	45.5%	20.0%	0.1%	9.5%	3.4%	3.0%	5.9%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	4.5%	2.0%	0.0%	100.0%		

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2033)																									
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles <=5t	07 - Medium Goods Vehicles 5-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchise d Bus Single	15 - Franchise d Bus Double Deck	16 - Motorcycl	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total
Road 17	17	70	66.5	N	0000-0100	492	53.2%	23.0%	0.1%	6.5%	2.3%	2.1%	4.0%	0.1%	0.0%	0.2%	0.5%	0.2%	0.7%	0.0%	2.4%	2.7%	1.1%	0.0%	100.0%
Road 17	17	70	67.7	N	0100-0200	322	51.9%	23.2%	0.1%	7.1%	2.5%	2.2%	4.4%	0.1%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	2.3%	2.9%	1.1%	0.0%	100.0%
Road 17	17	70	68.3	N	0200-0300	237	50.6%	22.5%	0.1%	7.8%	2.7%	2.4%	4.7%	0.1%	0.0%	0.3%	0.6%	0.4%	1.0%	0.0%	2.3%	3.2%	1.2%	0.0%	100.0%
Road 17	17	70	68.6	N	0300-0400	189	49.3%	21.9%	0.1%	8.2%	3.0%	2.6%	5.1%	0.1%	0.0%	0.4%	0.7%	0.5%	1.1%	0.0%	2.3%	3.5%	1.3%	0.0%	100.0%
Road 17	17	70	68.9	N	0400-0500	209	48.0%	21.2%	0.1%	8.8%	3.2%	2.8%	5.4%	0.1%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	2.8%	3.7%	1.4%	0.0%	100.0%
Road 17	17	70	67.3	N	0500-0600	364	46.7%	20.6%	0.1%	9.4%	3.4%	2.9%	5.8%	0.1%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	2.2%	4.0%	1.5%	0.0%	100.0%
Road 17	17	70	64.0	N	0600-0700	787	45.4%	19.9%	0.1%	9.9%	3.6%	3.1%	6.1%	0.1%	0.1%	0.6%	0.9%	0.6%	1.4%	0.0%	2.2%	4.3%	1.6%	0.0%	100.0%
Road 17	17	70	37.2	N	0700-0800	1603	44.2%	19.2%	0.1%	10.5%	3.8%	3.3%	6.5%	0.1%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	2.2%	4.5%	1.7%	0.0%	100.0%
Road 17	17	70	22.4	N	0800-0900	1866	49.0%	15.7%	0.1%	11.4%	4.1%	3.2%	6.3%	0.1%	0.1%	0.7%	1.0%	0.7%	1.5%	0.0%	1.9%	2.8%	1.6%	0.0%	100.0%
Road 17	17	70	32.6	N	0900-1000	1611	42.7%	15.5%	0.2%	15.3%	5.5%	4.2%	8.2%	0.1%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	1.9%	1.7%	2.1%	0.0%	100.0%
Road 17	17	70	41.0	N	1000-1100	1427	39.4%	15.3%	0.2%	16.0%	5.7%	5.1%	10.0%	0.1%	0.1%	0.4%	0.6%	0.5%	1.0%	0.0%	1.8%	1.2%	2.6%	0.0%	100.0%
Road 17	17	70	44.6	N	1100-1200	1349	39.4%	16.2%	0.2%	16.0%	5.7%	5.0%	9.8%	0.1%	0.1%	0.7%	0.4%	0.3%	0.6%	0.0%	1.9%	1.1%	2.6%	0.0%	100.0%
Road 17	17	70	45.6	N	1200-1300	1173	25.8%	9.9%	0.2%	22.6%	8.1%	8.1%	15.9%	0.0%	0.1%	0.4%	0.4%	0.3%	0.7%	0.0%	2.4%	0.8%	4.2%	0.0%	100.0%
Road 17	17	70	41.9	N	1300-1400	1256	23.8%	9.2%	0.3%	25.6%	9.2%	7.9%	15.6%	0.0%	0.0%	0.3%	0.3%	0.2%	0.5%	0.0%	2.2%	0.7%	4.1%	0.0%	100.0%
Road 17	17	70	39.7	N	1400-1500	1250	24.7%	10.0%	0.2%	23.6%	8.5%	8.0%	15.7%	0.0%	0.1%	0.4%	0.5%	0.3%	0.8%	0.0%	2.2%	0.9%	4.1%	0.0%	100.0%
Road 17	17	70	38.0	N	1500-1600	1335	24.3%	9.8%	0.3%	27.0%	9.1%	6.8%	13.5%	0.0%	0.1%	0.4%	0.5%	0.3%	0.8%	0.0%	2.2%	0.9%	3.5%	0.0%	100.0%
Road 17	17	70	38.5	N	1600-1700	1333	27.5%	9.5%	0.2%	22.7%	8.1%	7.1%	13.9%	0.0%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	2.6%	1.3%	3.6%	0.0%	100.0%
Road 17	17	70	40.9	N	1700-1800	1377	31.4%	10.4%	0.2%	22.0%	8.0%	5.0%	9.9%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	2.8%	2.6%	3.0%	0.0%	100.0%
Road 17	17	70	47.8	N	1800-1900	1294	47.0%	11.0%	0.2%	16.0%	5.7%	3.3%	8.6%	0.0%	0.0%	0.1%	0.8%	0.2%	1.3%	0.0%	3.4%	2.2%	1.7%	0.0%	100.0%
Road 17	17	70	58.8	N	1900-2000	979	48.4%	15.1%	0.1%	12.8%	4.6%	3.1%	6.0%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	4.1%	1.8%	1.6%	0.0%	100.0%
Road 17	17	70	64.0	N	2000-2100	797	44.3%	18.1%	0.1%	13.5%	4.6%	3.0%	5.8%	0.0%	0.0%	0.1%	0.6%	0.4%	0.9%	0.0%	4.2%	1.6%	1.5%	0.0%	100.0%
Road 17	17	70	64.0	N	2100-2200	769	44.9%	18.6%	0.1%	13.7%	4.9%	3.3%	6.2%	0.0%	0.0%	0.2%	0.3%	0.2%	0.7%	0.0%	2.1%	1.6%	0.0%	0.0%	100.0%
Road 17	17	70	64.3	N	2200-2300	729	45.7%	20.7%	0.1%	10.8%	3.9%	3.4%	6.8%	0.0%	0.0%	0.0%	0.0%	0.2%	0.4%	0.0%	4.1%	1.8%	1.8%	0.0%	100.0%
Road 17	17	70	65.6	N	2300-0000	557	43.9%	19.8%	0.1%	11.8%	4.2%	3.7%	7.4%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	4.0%	1.9%	1.9%	0.0%	100.0%
Road 18	18	70	69.0	N	0000-0100	309	54.2%	24.3%	0.0%	4.8%	1.7%	1.5%	2.5%	0.0%	0.0%	0.2%	0.5%	0.2%	0.7%	0.0%	2.7%	0.8%	0.8%	0.0%	100.0%
Road 18	18	70	69.3	N	0100-0200	200	52.8%	23.6%	0.1%	5.1%	1.8%	1.6%	3.1%	0.2%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	3.9%	3.0%	2.6%	0.0%	100.0%
Road 18	18	70	69.5	N	0200-0300	148	51.4%	22.9%	0.1%	5.5%	2.0%	1.7%	3.4%	0.2%	0.0%	0.3%	0.6%	0.4%	1.0%	0.0%	3.8%	3.3%	3.3%	0.0%	100.0%
Road 18	18	70	69.6	N	0300-0400	118	50.0%	22.2%	0.1%	5.9%	2.1%	1.8%	3.6%	0.2%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	3.8%	3.5%	4.0%	0.0%	100.0%
Road 18	18	70	69.5	N	0400-0500	129	49.0%	21.7%	0.1%	6.3%	2.3%	2.0%	3.9%	0.2%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	3.8%	3.8%	3.8%	0.0%	100.0%
Road 18	18	70	69.2	N	0500-0600	222	48.5%	21.4%	0.1%	6.8%	2.5%	2.1%	4.2%	0.2%	0.1%	0.5%	0.9%	0.6%	1.4%	0.0%	3.8%	4.1%	2.7%	0.0%	100.0%
Road 18	18	70	68.3	N	0600-0700	473	47.8%	21.0%	0.1%	7.4%	2.6%	2.3%	4.5%	0.2%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	3.8%	4.5%	2.0%	0.0%	100.0%
Road 18	18	70	68.5	N	0700-0800	566	46.4%	20.2%	0.1%	7.8%	2.8%	2.4%	4.9%	0.2%	0.1%	0.6%	0.9%	0.8%	1.4%	0.0%	3.7%	4.7%	2.7%	0.0%	100.0%
Road 18	18	70	65.9	N	0800-0900	1117	51.8%	16.6%	0.1%	8.4%	3.0%	2.4%	4.6%	0.2%	0.1%	0.7%	1.3%	0.3%	3.6%	0.0%	3.3%	3.0%	2.5%	0.0%	100.0%
Road 18	18	70	66.5	N	0900-1000	940	46.3%	16.8%	0.1%	11.6%	4.2%	3.2%	6.2%	0.2%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	3.3%	1.8%	3.1%	0.0%	100.0%
Road 18	18	70	66.8	N	1000-1100	823	43.3%	16.8%	0.1%	12.3%	4.4%	3.9%	7.7%	0.2%	0.1%	0.5%	0.7%	0.5%	1.1%	0.0%	3.3%	1.3%	3.7%	0.0%	100.0%
Road 18	18	70	67.0	N	1100-1200	780	43.2%	17.3%	0.1%	12.3%	4.4%	3.8%	7.5%	0.2%	0.1%	0.8%	0.4%	0.3%	0.7%	0.0%	3.3%	1.2%	3.8%	0.0%	100.0%
Road 18	18	70	66.6	N	1200-1300	1013	29.1%	11.2%	0.2%	19.7%	7.1%	7.1%	13.9%	0.0%	0.1%	0.5%	0.5%	0.3%	0.8%	0.0%	3.6%	0.9%	5.0%	0.0%	100.0%
Road 18	18	70	65.3	N	1300-1400	1072	27.1%	10.4%	0.2%	22.6%	8.1%	7.0%	13.5%	0.0%	0.0%	0.4%	0.4%	0.3%	0.6%	0.0%	3.3%	0.8%	4.9%	0.0%	100.0%
Road 18	18	70	65.2	N	1400-1500	1111	28.0%	11.3%	0.2%	20.7%	7.4%	7.0%	13.7%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	3.4%	1.1%	4.9%	0.0%	100.0%
Road 18	18	70	65.1	N	1500-1600	1145	27.6%	11.1%	0.2%	23.7%	8.5%	6.0%	11.8%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	3.3%	1.0%	4.3%	0.0%	100.0%
Road 18	18	70	65.0	N	1600-1700	1159	30.8%	10.6%	0.2%	19.7%	7.1%	6.1%	12.1%	0.0%	0.1%	0.7%	0.9%	0.6%	1.4%	0.0%	3.8%	1.5%	4.4%	0.0%	100.0%
Road 18	18	70	65.1	N	1700-1800	1222	36.7%	11.5%	0.2%	18.9%	6.8%	4.3%	8.4%	0.0%	0.1%	0.5%	0.6%	0.4%	1.0%	0.0%	4.1%	3.2%	3.3%	0.0%	100.0%
Road 18	18	70	65.5	N	1800-1900	1193	49.7%	11.7%	0.1%	13.1%	4.7%	2.7%	5.4%	0.0%	0.0%	0.1%	0.9%	0.8%	1.3%	0.0%	4.7%	2.4%	2.6%	0.0%	100.0%
Road 18	18	70	66.6	N	1900-2000	909	50.7%	15.9%	0.1%	10.4%	3.7%	2.5%	4.9%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	5.7%	1.9%	1.7%	0.0%	100.0%
Road 18	18	70	67.3	N	2000-2100	821	47.1%	16.9%	0.1%	10.7%	3.9%	2.4%	4.6%	0.0%	0.0%	0.1%	0.7%	0.5%	1.0%	0.0%	5.9%	1.9%	1.7%	0.0%	100.0%
Road 18	18	70	67.4	N	2100-2200	712	47.3%	19.6%	0.1%	11.1%	4.0%	2.6%	5.0%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	5.2%	2.2%	1.8%	0.0%	100.0%
Road 18	18	70	67.5	N	2200-2300	680	47.7%	21.6%	0.1%	8.7%	3.1%	2.8%	5.5%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	5.7%	1.8%	2.0%	0.0%	100.0%
Road 18	18	70	68.1	N	2300-0000	518	46.0%	20.7%	0.1%	9.6%	3.4%	3.0%	6.0%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	5.8%	2.0%	2.3%	0.0%	100.0%

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2033)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles <=5t	07 - Medium Goods Vehicles 5-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchised Bus Single Deck	15 - Franchised Bus Double Deck	16 - Motorcycl	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total	
							PC	TAXI	LGV3	LGV4	LGV6	HGV5	HGV7	PLB	PV4	PV5	NFB6	NFB7	NFB8	FBSD	FBD0	MC	HGV6	NFB9		
Road 21	21	70	68.0	N	0000-0100	555	48.5%	22.0%	0.1%	7.9%	2.8%	2.5%	4.9%	0.1%	0.0%	0.2%	0.4%	0.3%	0.7%	0.0%	2.1%	2.5%	1.4%	0.0%	100.0%	
Road 21	21	70	66.6	N	0100-0200	371	46.7%	20.9%	0.1%	8.4%	3.0%	2.7%	5.2%	0.1%	0.0%	0.2%	0.4%	0.4%	0.8%	0.0%	2.0%	2.6%	0.3%	0.0%	100.0%	
Road 21	21	70	69.1	N	0300-0400	379	44.0%	18.9%	0.3%	8.9%	3.2%	2.8%	5.3%	0.1%	0.0%	0.2%	0.4%	0.4%	0.9%	0.0%	2.1%	2.6%	0.3%	0.0%	100.0%	
Road 21	21	70	69.1	N	0100-0400	227	42.6%	18.9%	0.1%	9.4%	3.4%	2.9%	5.5%	0.1%	0.0%	0.3%	0.6%	0.4%	0.0%	1.9%	3.0%	0.9%	0.0%	100.0%		
Road 21	21	70	69.0	N	0400-0500	250	41.8%	18.4%	0.1%	10.1%	3.6%	3.2%	6.2%	0.1%	0.1%	0.4%	0.7%	0.5%	1.0%	0.0%	1.9%	3.2%	0.9%	0.0%	100.0%	
Road 21	21	70	69.0	N	0500-0600	324	41.8%	18.4%	0.1%	11.2%	4.0%	3.5%	6.7%	0.1%	0.1%	0.4%	0.7%	0.5%	1.0%	0.0%	1.9%	3.2%	0.9%	0.0%	100.0%	
Road 21	21	70	66.6	N	0600-0700	898	41.3%	18.1%	0.1%	11.9%	4.3%	3.7%	7.4%	0.1%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	1.9%	3.4%	0.9%	0.0%	100.0%	
Road 21	21	70	61.7	N	0700-0800	1870	39.3%	17.1%	0.1%	12.2%	4.4%	3.9%	7.6%	0.1%	0.1%	0.5%	0.8%	0.6%	1.4%	0.0%	1.8%	1.4%	0.8%	0.0%	100.0%	
Road 21	21	70	66.6	N	0800-0900	2173	40.7%	17.1%	0.1%	13.1%	4.7%	4.1%	8.2%	0.1%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	1.9%	1.4%	0.8%	0.0%	100.0%	
Road 21	21	70	59.2	N	1000-1000	1930	37.3%	14.3%	0.2%	17.5%	6.3%	4.8%	9.4%	0.1%	0.0%	0.4%	0.6%	0.4%	0.9%	0.0%	1.6%	1.4%	0.6%	0.0%	100.0%	
Road 21	21	70	61.7	N	1000-1100	1739	33.8%	13.0%	0.2%	18.0%	6.5%	5.7%	11.2%	0.1%	0.0%	0.4%	0.6%	0.4%	0.8%	0.0%	1.5%	1.0%	0.7%	0.0%	100.0%	
Road 21	21	70	63.3	N	1100-1200	1445	33.5%	12.7%	0.2%	17.4%	6.6%	4.6%	10.2%	0.1%	0.0%	0.4%	0.6%	0.4%	0.8%	0.0%	1.5%	1.0%	0.7%	0.0%	100.0%	
Road 21	21	70	63.3	N	1200-1300	1453	21.8%	8.4%	0.2%	22.2%	8.3%	8.3%	16.4%	0.0%	0.0%	0.3%	0.4%	0.3%	0.6%	0.0%	1.9%	0.6%	0.1%	0.0%	100.0%	
Road 21	21	70	62.0	N	1300-1400	1560	20.6%	7.7%	0.3%	26.2%	9.4%	8.1%	16.0%	0.0%	0.0%	0.3%	0.3%	0.2%	0.4%	0.0%	1.8%	0.6%	0.7%	0.0%	100.0%	
Road 21	21	70	62.0	N	1400-1500	1560	20.6%	7.7%	0.3%	26.2%	9.4%	8.1%	16.0%	0.0%	0.0%	0.3%	0.3%	0.2%	0.4%	0.0%	1.8%	0.6%	0.7%	0.0%	100.0%	
Road 21	21	70	60.8	N	1500-1600	1648	20.6%	8.3%	0.3%	27.8%	10.0%	7.0%	17.0%	0.0%	0.0%	0.4%	0.4%	0.3%	0.6%	0.0%	1.8%	0.7%	0.7%	0.0%	100.0%	
Road 21	21	70	61.2	N	1600-1700	1630	23.5%	8.1%	0.2%	23.6%	8.5%	7.4%	14.5%	0.0%	0.1%	0.6%	0.7%	0.5%	1.1%	0.0%	2.1%	1.1%	8.1%	0.0%	100.0%	
Road 21	21	62.5	N	1700-1800	1658	29.0%	8.1%	0.2%	23.5%	8.4%	5.3%	10.0%	0.0%	0.1%	0.4%	0.5%	0.4%	0.8%	0.0%	2.4%	2.5%	7.0%	0.0%	100.0%		
Road 21	21	62.5	N	1800-1900	1520	41.9%	19.0%	17.3%	6.2%	8.8%	6.2%	8.8%	0.0%	0.0%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 21	21	65.7	N	1900-2000	1103	44.9%	14.1%	0.2%	14.5%	5.2%	3.5%	6.8%	0.0%	0.0%	0.1%	0.7%	0.5%	1.0%	0.0%	0.3%	1.7%	3.4%	0.0%	100.0%		
Road 21	21	65.7	N	2000-2100	869	40.0%	17.4%	0.2%	15.1%	5.4%	3.5%	6.6%	0.0%	0.0%	0.1%	0.6%	0.4%	0.8%	0.0%	0.3%	3.8%	1.6%	3.8%	0.0%	100.0%	
Road 21	21	66.6	N	0100-0200	872	41.4%	15.5%	0.3%	8.9%	6.0%	6.0%	6.0%	0.0%	0.0%	0.0%	0.2%	0.4%	0.3%	0.4%	0.0%	1.9%	3.0%	0.9%	0.0%	100.0%	
Road 21	21	68.8	N	2000-2300	823	42.3%	19.1%	0.1%	12.2%	4.4%	3.9%	7.6%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.3%	3.8%	1.6%	4.2%	0.0%	100.0%	
Road 21	21	67.5	N	2300-0000	637	40.2%	18.1%	0.1%	13.1%	4.7%	4.2%	8.2%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.3%	3.5%	1.8%	5.0%	0.0%	100.0%	
Road 22	22	50	29.2	N	0100-0200	48	14.1%	6.3%	0.1%	11.4%	10.0%	10.0%	0.0%	0.0%	0.0%	0.1%	0.2%	0.5%	0.0%	0.7%	0.0%	0.7%	0.0%	0.0%	100.0%	
Road 22	22	50	27.3	N	0100-0200	34	12.9%	5.8%	0.3%	32.4%	11.7%	10.2%	20.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.7%	5.3%	0.0%	100.0%	
Road 22	22	50	27.9	N	0200-0300	26	11.5%	5.3%	0.3%	33.1%	11.6%	10.4%	20.5%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.8%	5.3%	0.0%	100.0%	
Road 22	22	50	28.2	N	0300-0400	32	10.8%	4.9%	0.3%	33.0%	11.6%	10.6%	20.5%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.8%	5.3%	0.0%	100.0%	
Road 22	22	50	27.9	N	0400-0500	26	10.1%	4.5%	0.4%	34.1%	12.3%	10.7%	21.1%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	0.8%	5.5%	0.0%	100.0%	
Road 22	22	50	26.1	N	0500-0600	47	9.3%	4.1%	0.4%	34.6%	12.4%	10.8%	21.3%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	0.8%	5.6%	0.0%	100.0%	
Road 22	22	50	26.1	N	0600-0700	47	10.2%	4.1%	0.4%	34.6%	12.5%	10.9%	21.3%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	0.8%	5.6%	0.0%	100.0%	
Road 22	22	50	25.2	N	0700-0800	229	8.0%	3.5%	0.4%	35.3%	12.7%	11.1%	21.8%	0.0%	0.0%	0.0%	0.1%	0.3%	0.1%	0.3%	0.0%	0.8%	5.7%	0.0%	100.0%	
Road 22	22	50	21.5	N	0800-0900	273	8.7%	2.8%	0.4%	37.3%	13.4%	10.4%	20.5%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	0.5%	5.4%	0.0%	100.0%	
Road 22	22	50	21.0	N	0900-1000	300	6.0%	2.2%	0.4%	39.4%	14.1%	10.7%	21.1%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.2%	5.5%	0.0%	100.0%		
Road 22	22	50	21.0	N	1000-1100	293	5.0%	1.9%	0.4%	37.4%	13.4%	11.8%	23.4%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.2%	5.1%	0.0%	100.0%		
Road 22	22	50	21.3	N	1100-1200	275	5.0%	2.1%	0.4%	37.6%	13.5%	11.8%	23.1%	0.0%	0.0%	0.1%	0.1%	0.0%	0.1%	0.0%	0.1%	6.0%	0.0%	100.0%		
Road 22	22	50	21.2	N	1200-1300	283	5.5%	2.5%	0.4%	34.5%	12.4%	12.4%	24.3%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.2%	6.4%	0.0%	100.0%	
Road 22	22	50	20.7	N	1300-1400	316	5.8%	2.4%	0.4%	37.1%	13.4%	11.6%	23.5%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.2%	6.1%	0.0%	100.0%	
Road 22	22	50	20.7	N	1400-1500	315	6.2%	2.5%	0.4%	35.6%	12.6%	12.0%	23.7%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.2%	6.2%	0.0%	100.0%	
Road 22	22	50	20.5	N	1500-1600	328	6.0%	2.4%	0.4%	40.3%	14.5%	10.2%	20.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.2%	5.3%	0.0%	100.0%	
Road 22	22	50	20.9	N	1600-1700	307	7.3%	3.6%	0.3%	38.7%	13.3%	12.2%	23.3%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.3%	5.4%	0.0%	100.0%	
Road 22	22	50	21.4	N	1700-1800	284	9.5%	3.1%	0.4%	39.6%	14.2%	9.0%	17.8%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	0.8%	4.6%	0.0%	100.0%	
Road 22	22	50	22.8	N	1800-1900	209	17.7%	4.2%	0.4%	38.4%	13.1%	7.6%	14.9%	0.0%	0.0%	0.0%	0.3%	0.2%	0.5%	0.0%	0.0%	0.8%	3.9%	0.9%	100.0%	
Road 22	22	50	24.3	N	1900-2000	142	20.8%	6.4%	0.3%	42.4%	13.2%	10.2%	20.5%	0.0%	0.0%	0.0%	0.3%	0.2%	0.5%	0.0%	0.0%	0.8%	3.9%	0.9%	100.0%	
Road 22	22	50	24.3	N	2000-2100	112	18.4%	7.8%	0.4%	33.8%	12.1%	7.4%	14.6%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.0%	0.7%	3.8%	0.9%	100.0%	
Road 22	22	50	24.3	N	2100-2200	115	18.1%	7.6%	0.4%	33.6%	12.1%	7.7%	15.2%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.8%	4.0%	0.9%	100.0%	
Road 22	22	50	24.3	N	2200-2300	102	18.0%	7.6%	0.4%	33.6%	12.1%	7.7%	15.2%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.8%	4.0%	0.9%	100.0%	
Road 22	22	50	24.3	N	2300-0000	82	18.3%	7.8%	0.3%	29.3%	10.5%	9.3%	15.3%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.8%	4.8%	0.0%	100.0%	

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters for AERMOD (Year 2013)																										
Road Name	Road ID	Speed Limit (kmph)	Average Speed (km/hr)	Start Emission Estimated by Grid Brush Approach (TN)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <2t	04 - Light Goods Vehicles >2t	05 - Light Goods Vehicles >3t	06 - Medium Goods Vehicles >3t	07 - Medium Goods Vehicles >5t	08 - Public Light Bus <5t	09 - Private Light Bus >5t	10 - Private Light Bus >5t	11 - Non-Franchise Bus >5t	12 - Non-Franchise Bus 0.5 - 1t	13 - Non-Franchise Bus 1.5 - 1t	14 - Franchise Single Deck	15 - Franchise Double Deck	16 - Motorcycle	17 - Heavy Vehicles >4t	18 - Non-Franchise Bus >4t	Total	
Road 25	25	50	28.5	N	0000-0100	17	6.8%	3.1%	0.4%	36.3%	13.3%	11.5%	22.5%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.4%	5.9%	0.0%	100.0%		
	Road 25	25	50	29.0	N	0100-0200	12	6.2%	2.8%	0.4%	36.7%	13.2%	11.6%	22.7%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.4%	5.9%	0.0%	100.0%	
Road 25	25	50	29.0	N	0200-0300	10	5.8%	2.6%	0.4%	37.0%	13.1%	11.7%	22.8%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.4%	5.9%	0.0%	100.0%		
Road 25	25	50	29.3	N	0300-0400	8	5.1%	2.3%	0.4%	37.3%	13.0%	11.7%	23.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.4%	6.0%	0.0%	100.0%		
Road 25	25	50	29.2	N	0400-0500	10	4.7%	2.1%	0.4%	37.6%	13.5%	11.8%	23.2%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.4%	6.1%	0.0%	100.0%		
Road 25	25	50	29.5	N	0500-0600	18	4.3%	1.9%	0.4%	37.8%	13.6%	11.9%	23.3%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.4%	6.1%	0.0%	100.0%		
Road 25	25	50	28.5	N	0600-0700	40	4.0%	1.7%	0.4%	38.0%	13.7%	11.8%	23.4%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.4%	6.1%	0.0%	100.0%		
Road 25	25	50	24.5	N	0700-0800	87	3.7%	1.6%	0.4%	38.2%	13.7%	12.0%	23.5%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.4%	6.1%	0.0%	100.0%		
Road 25	25	50	24.2	N	0800-0900	104	4.0%	1.3%	0.4%	40.2%	14.4%	11.2%	22.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.2%	5.8%	0.0%	100.0%			
Road 25	25	50	24.2	N	0900-1000	117	2.0%	1.1%	0.3%	40.3%	14.3%	11.3%	22.2%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.2%	5.8%	0.0%	100.0%		
Road 25	25	50	24.0	N	1000-1100	115	2.2%	0.9%	0.4%	39.1%	14.0%	12.4%	24.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.4%	6.3%	0.0%	100.0%	
Road 25	25	50	24.1	N	1100-1200	108	2.2%	0.9%	0.4%	39.3%	14.1%	12.3%	24.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.4%	6.3%	0.0%	100.0%	
Road 25	25	50	24.2	N	1200-1300	108	2.0%	0.7%	0.8%	39.5%	14.2%	12.3%	24.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.4%	6.3%	0.0%	100.0%		
Road 25	25	50	23.9	N	1300-1400	127	1.8%	0.7%	0.4%	39.6%	14.3%	12.3%	24.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.4%	6.3%	0.0%	100.0%	
Road 25	25	50	23.9	N	1400-1500	120	1.9%	0.8%	0.4%	38.1%	13.7%	12.9%	25.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.1%	6.6%	0.0%	100.0%	
Road 25	25	50	24.0	N	1500-1600	126	1.7%	0.9%	0.4%	42.2%	15.3%	12.6%	23.2%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.1%	6.6%	0.0%	100.0%		
Road 25	25	50	24.0	N	1600-1700	116	2.3%	0.8%	0.4%	39.3%	14.1%	12.3%	24.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.1%	0.1%	0.4%	6.3%	0.0%	100.0%	
Road 25	25	50	24.3	N	1700-1800	104	3.2%	1.0%	0.5%	44.2%	15.9%	10.0%	19.7%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.3%	5.1%	0.0%	100.0%		
Road 25	25	50	24.8	N	1800-1900	71	6.1%	3.0%	0.8%	41.8%	15.6%	9.1%	18.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.1%	0.0%	0.3%	5.0%	0.0%	100.0%		
Road 25	25	50	26.2	N	1900-2000	46	7.3%	2.3%	0.4%	40.8%	14.6%	9.7%	19.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.3%	5.0%	0.0%	100.0%		
Road 25	25	50	27.0	N	2000-2100	37	6.6%	2.8%	0.4%	42.1%	15.5%	9.3%	18.3%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.3%	5.8%	0.0%	100.0%		
Road 25	25	50	28.8	N	2100-2200	18	6.5%	2.2%	0.4%	41.6%	15.8%	9.6%	18.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	5.8%	0.0%	100.0%		
Road 25	25	50	27.2	N	2200-2300	33	7.2%	3.3%	0.4%	36.0%	12.9%	11.4%	22.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.3%	5.9%	0.0%	100.0%		
Road 25	25	50	27.7	N	2300-0000	27	6.5%	2.9%	0.4%	36.5%	13.1%	11.6%	22.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	5.9%	0.0%	100.0%		
Road 25	25	50	28.2	N	0000-0100	16	6.0%	2.8%	0.3%	37.2%	13.4%	12.2%	22.9%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.3%	5.9%	0.0%	100.0%		
Road 25	25	50	29.1	N	0100-0200	11	5.4%	2.4%	0.4%	37.1%	13.3%	11.7%	23.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.3%	6.0%	0.0%	100.0%		
Road 26	26	50	29.3	N	0200-0300	9	4.9%	2.2%	0.4%	37.4%	13.3%	11.8%	23.2%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.3%	6.1%	0.0%	100.0%		
Road 26	26	50	29.4	N	0300-0400	7	4.0%	2.0%	0.3%	37.0%	13.0%	11.5%	22.9%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.3%	6.0%	0.0%	100.0%		
Road 26	26	50	29.3	N	0400-0500	9	4.1%	1.8%	0.4%	38.0%	13.6%	11.9%	23.4%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.3%	6.1%	0.0%	100.0%		
Road 26	26	50	28.6	N	0500-0600	16	3.8%	1.7%	0.4%	38.2%	13.7%	12.0%	23.5%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.3%	6.1%	0.0%	100.0%		
Road 26	26	50	28.8	N	0600-0700	37	3.5%	1.5%	0.4%	38.4%	13.8%	12.0%	23.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	6.2%	0.0%	100.0%			
Road 26	26	50	24.6	N	0700-0800	79	3.8%	1.5%	0.4%	38.5%	13.8%	12.1%	23.7%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.3%	6.2%	0.0%	100.0%		
Road 26	26	50	24.4	N	0800-0900	95	3.5%	1.1%	0.4%	40.5%	14.5%	11.3%	22.3%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.2%	5.8%	0.0%	100.0%		
Road 26	26	50	24.2	N	0900-1000	107	2.3%	0.8%	0.4%	41.7%	15.0%	11.4%	22.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.5%	0.0%	100.0%		
Road 26	26	50	24.0	N	1000-1100	106	1.9%	0.8%	0.7%	40.3%	14.3%	11.5%	22.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.5%	0.0%	100.0%		
Road 26	26	50	24.3	N	1100-1200	99	1.9%	0.8%	0.4%	39.5%	14.2%	12.4%	24.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.4%	6.3%	0.0%	100.0%
Road 26	26	50	24.2	N	1200-1300	105	5.8%	2.1%	0.4%	36.0%	12.6%	12.6%	24.7%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.2%	6.5%	0.0%	100.0%		
Road 26	26	50	24.0	N	1300-1400	118	5.4%	1.7%	0.4%	37.9%	13.1%	11.7%	23.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.2%	6.5%	0.0%	100.0%		
Road 26	26	50	24.0	N	1400-1500	117	5.3%	2.1%	0.4%	36.1%	13.0%	12.2%	24.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.2%	6.3%	0.0%	100.0%		
Road 26	26	50	24.0	N	1500-1600	122	5.1%	2.1%	0.4%	40.9%	14.7%	10.4%	20.4%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.2%	5.3%	0.0%	100.0%		
Road 26	26	50	24.1	N	1600-1700	114	5.2%	2.2%	0.4%	38.9%	14.2%	11.5%	20.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.3%	0.0%	100.0%		
Road 26	26	50	24.3	N	1700-1800	105	8.5%	2.7%	0.4%	40.6%	14.8%	9.2%	18.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.7%	4.7%	0.0%	100.0%		
Road 26	26	50	24.8	N	1800-1900	76	15.5%	3.6%	0.4%	37.8%	13.3%	7.9%	15.5%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.7%	4.0%	0.0%	100.0%		
Road 26	26	50	24.0	N	1900-2000	51	10.6%	3.1%	0.4%	37.8%	13.4%	12.6%	16.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.8%	4.1%	0.0%	100.0%		
Road 26	26	50	26.9	N	2000-2100	41	16.2%	6.0%	0.4%	35.3%	12.7%	7.8%	15.3%	0.0%	0.0%	0.0%	0.2%	0.2%	0.3%	0.0%	0.6%	4.0%	0.0%	100.0%		
Road 26	26	50	26.8	N	2100-2200	42	16.1%	6.1%	0.4%	35.1%	12.6%	8.1%	15.9%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.7%	4.1%	0.0%	100.0%		
Road 26	26	50	27.2	N	2200-2300	37	14.8%	5.7%	0.4%	34.7%	12.5%	8.4%	16.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	4.4%	0.0%	100.0%			
Road 26	26	50	27.7	N	2300-0000	30	15.9%	7.2%	0.3%	30.7%	11.0%	9.7%	19.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.7%	5.0%	0.0%	100.0%		

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters for AERMOD (Year 2013)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Brush Approach (t/yr)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <2.5t	04 - Light Goods Vehicles <2.5t	05 - Light Goods Vehicles <2.5t	06 - Medium Goods Vehicles <10t	07 - Heavy Goods Vehicles >10t	08 - Public Light Bus <12t	09 - Private Light Bus <12t	10 - Private Light Bus >12t	11 - Non-Franchised Bus <6.5t	12 - Non-Franchised Bus >6.5t	13 - Non-Franchised Bus >15t	14 - Franchise Single Deck	15 - Franchise Double Deck	16 - Motorcycle	17 - Heavy Vehicle >24t	18 - Non-Franchise Bus >24t	Total	
							PC	TAXI	LGVA	LGVA	LGVE	HGV7	HGV10	PLB	PLV	PLV	NFB	NFB7	NFB7	FRSD	FRSD	MC	HVNB	NFB7		
Road 29	29	80	80.0	N	0000-0100	705	56.1%	25.2%	0.0%	3.2%	1.1%	1.0%	2.2%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	0.3%	0.8%	2.8%	0.0%	100.0%		
Road 29	29	80	80.0	N	0100-0200	462	54.8%	24.4%	0.0%	3.3%	1.3%	1.1%	2.2%	0.6%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	3.8%	3.1%	3.0%	0.0%	100.0%	
Road 29	29	80	80.0	N	0200-0300	340	53.1%	23.8%	0.0%	3.4%	1.1%	1.2%	2.0%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	3.8%	3.1%	3.0%	0.0%	100.0%	
Road 29	29	80	80.0	N	0300-0400	271	52.0%	23.1%	0.0%	4.1%	1.1%	1.3%	2.5%	0.6%	0.1%	0.4%	0.8%	0.5%	1.1%	0.3%	3.7%	3.7%	4.0%	0.0%	100.0%	
Road 29	29	80	80.0	N	0400-0500	256	51.2%	22.7%	0.0%	4.4%	1.6%	1.4%	2.7%	0.6%	0.1%	0.5%	0.8%	0.6%	1.3%	0.3%	3.7%	4.0%	4.4%	0.0%	100.0%	
Road 29	29	80	80.0	N	0500-0600	504	51.1%	22.5%	0.1%	4.6%	1.7%	1.5%	3.0%	0.6%	0.1%	0.6%	0.9%	0.7%	1.4%	0.4%	3.7%	4.4%	3.0%	0.0%	100.0%	
Road 29	29	80	80.0	N	0600-0700	1066	50.7%	22.2%	0.1%	4.8%	1.9%	1.6%	3.6%	0.6%	0.1%	0.7%	0.9%	0.8%	1.6%	0.4%	3.7%	4.4%	2.8%	0.0%	100.0%	
Road 29	29	80	80.0	N	0700-0800	2173	49.3%	21.5%	0.1%	5.5%	2.0%	1.7%	3.4%	0.7%	0.1%	0.7%	1.1%	0.8%	1.7%	0.7%	3.7%	5.0%	2.8%	0.0%	100.0%	
Road 29	29	80	80.0	N	0800-0900	2503	55.2%	17.7%	0.1%	6.0%	2.2%	1.7%	3.3%	0.5%	0.1%	0.8%	1.1%	0.7%	1.6%	0.0%	3.3%	3.2%	2.6%	0.0%	100.0%	
Road 29	29	80	80.0	N	0900-1000	2053	50.6%	18.5%	0.1%	6.5%	2.3%	1.9%	3.0%	0.5%	0.1%	0.9%	0.9%	0.7%	1.3%	0.0%	3.4%	3.3%	2.3%	0.0%	100.0%	
Road 29	29	80	80.0	N	1000-1100	1776	47.7%	18.6%	0.1%	9.1%	3.3%	2.9%	5.7%	0.7%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	3.4%	1.5%	3.9%	0.0%	100.0%	
Road 29	29	80	80.0	N	1100-1200	1687	47.7%	18.6%	0.1%	9.0%	3.2%	2.8%	5.5%	0.7%	0.1%	0.9%	0.5%	0.3%	0.7%	0.0%	3.5%	1.3%	4.0%	0.0%	100.0%	
Road 29	29	80	80.0	N	1200-1300	1284	41.3%	18.6%	0.1%	9.0%	3.2%	2.8%	5.3%	0.7%	0.1%	0.8%	0.3%	0.2%	0.3%	0.0%	3.6%	1.3%	4.0%	0.0%	100.0%	
Road 29	29	80	80.0	N	1300-1400	1353	20.4%	7.9%	0.2%	21.3%	7.6%	6.6%	13.0%	0.7%	0.0%	0.3%	0.2%	0.4%	0.1%	13.8%	0.6%	6.5%	0.0%	100.0%		
Road 29	29	80	80.0	N	1400-1500	1398	21.1%	8.8%	0.2%	19.5%	7.0%	6.6%	13.0%	0.7%	0.0%	0.4%	0.4%	0.3%	0.6%	0.0%	14.2%	0.9%	6.4%	0.0%	100.0%	
Road 29	29	80	80.0	N	1500-1600	1438	20.2%	8.8%	0.2%	22.5%	6.7%	6.6%	13.0%	0.7%	0.0%	0.4%	0.4%	0.3%	0.6%	0.0%	14.2%	0.9%	6.4%	0.0%	100.0%	
Road 29	29	80	80.0	N	1600-1700	1466	23.2%	8.0%	0.2%	18.5%	6.6%	5.8%	11.3%	0.7%	0.1%	0.5%	0.7%	0.5%	1.0%	0.0%	16.0%	1.1%	5.9%	0.0%	100.0%	
Road 29	29	80	80.0	N	1700-1800	1541	27.6%	8.6%	0.2%	17.8%	6.4%	4.0%	7.9%	0.8%	0.1%	0.4%	0.5%	0.3%	0.7%	0.1%	17.4%	2.4%	4.8%	0.0%	100.0%	
Road 29	29	80	80.0	N	1800-1900	1550	37.9%	8.8%	0.2%	17.8%	6.4%	4.0%	7.9%	0.8%	0.1%	0.4%	0.5%	0.3%	0.7%	0.1%	20.4%	2.4%	4.8%	0.0%	100.0%	
Road 29	29	80	80.0	N	1900-2000	1156	37.9%	11.9%	0.1%	9.7%	3.5%	2.3%	4.6%	1.0%	0.0%	0.1%	0.6%	0.4%	0.9%	0.1%	23.5%	1.4%	2.1%	0.0%	100.0%	
Road 29	29	80	80.0	N	2000-2100	917	34.3%	14.6%	0.1%	10.1%	3.6%	2.2%	4.4%	1.1%	0.0%	0.1%	0.5%	0.3%	0.7%	0.2%	24.3%	1.4%	2.3%	0.0%	100.0%	
Road 29	29	80	80.0	N	2100-2200	895	35.7%	14.8%	0.1%	10.5%	3.6%	2.4%	4.8%	1.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	25.5%	1.5%	2.0%	0.0%	100.0%	
Road 29	29	80	80.0	N	2200-2300	867	35.6%	16.1%	0.1%	8.1%	2.9%	2.6%	5.1%	0.9%	0.0%	0.0%	0.2%	0.1%	0.3%	0.2%	23.6%	1.4%	2.6%	0.0%	100.0%	
Road 29	29	80	80.0	N	2300-0000	661	34.3%	15.4%	0.1%	8.9%	3.2%	2.8%	5.6%	0.9%	0.0%	0.1%	0.3%	0.2%	0.4%	0.2%	23.0%	1.5%	3.1%	0.0%	100.0%	
Road 30	30	70	70.0	N	0000-0100	568	52.3%	25.2%	0.0%	3.2%	1.1%	1.0%	2.2%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	0.3%	0.8%	2.8%	0.0%	100.0%		
Road 30	30	70	70.0	N	0100-0200	375	50.0%	22.4%	0.1%	6.7%	2.4%	2.1%	2.2%	0.1%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	2.2%	2.5%	5.0%	0.0%	100.0%	
Road 30	30	70	70.0	N	0200-0300	288	48.1%	21.4%	0.1%	7.2%	2.6%	2.3%	4.4%	0.1%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	2.1%	3.0%	6.4%	0.0%	100.0%	
Road 30	30	70	70.0	N	0300-0400	226	46.6%	20.5%	0.0%	7.2%	2.6%	2.3%	4.4%	0.1%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	2.1%	3.0%	6.4%	0.0%	100.0%	
Road 30	30	70	70.0	N	0400-0500	248	45.5%	20.0%	0.1%	8.2%	2.9%	2.6%	5.1%	0.1%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	2.2%	3.5%	7.3%	0.0%	100.0%	
Road 30	30	70	70.0	N	0500-0600	422	45.3%	19.9%	0.1%	9.0%	3.2%	2.8%	5.5%	0.1%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	2.1%	3.9%	4.9%	0.0%	100.0%	
Road 30	30	70	70.0	N	0600-0700	894	44.9%	19.7%	0.1%	9.3%	3.5%	3.0%	6.0%	0.1%	0.1%	0.6%	0.9%	0.8%	1.4%	0.0%	2.1%	3.7%	4.9%	0.0%	100.0%	
Road 30	30	70	70.0	N	0700-0800	1847	43.0%	17.7%	0.1%	10.1%	3.9%	3.0%	6.2%	0.2%	0.1%	0.6%	0.9%	0.7%	1.5%	0.0%	2.0%	4.4%	4.7%	0.0%	100.0%	
Road 30	30	67.8	67.8	N	0800-0900	2141	47.9%	15.3%	0.1%	11.0%	3.9%	3.1%	6.0%	0.0%	0.1%	0.7%	0.9%	0.6%	1.4%	0.0%	1.8%	2.8%	4.2%	0.0%	100.0%	
Road 30	30	68.4	68.4	N	0900-1000	1854	41.6%	15.1%	0.2%	14.7%	5.3%	4.0%	7.9%	0.1%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	1.6%	1.6%	5.1%	0.0%	100.0%	
Road 30	30	70	70.0	N	1000-1100	1648	38.3%	14.8%	0.2%	13.8%	5.3%	4.0%	7.9%	0.1%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	1.6%	1.6%	5.1%	0.0%	100.0%	
Road 30	30	70	70.0	N	1100-1200	1583	38.2%	15.7%	0.2%	15.3%	5.5%	4.8%	9.4%	0.1%	0.1%	0.7%	0.4%	0.3%	0.6%	0.0%	1.7%	1.1%	6.1%	0.0%	100.0%	
Road 30	30	70	70.0	N	1200-1300	1555	25.7%	9.9%	0.2%	21.4%	7.7%	7.7%	15.1%	0.1%	0.0%	0.4%	0.4%	0.3%	0.7%	0.0%	2.0%	0.9%	7.7%	0.0%	100.0%	
Road 30	30	70	70.0	N	1300-1400	1602	23.9%	9.9%	0.2%	24.3%	7.7%	7.7%	15.1%	0.1%	0.0%	0.4%	0.4%	0.3%	0.7%	0.0%	1.9%	0.9%	7.7%	0.0%	100.0%	
Road 30	30	68.2	68.2	N	1400-1500	1602	24.7%	10.0%	0.2%	22.4%	8.0%	7.6%	14.9%	0.0%	0.1%	0.4%	0.5%	0.3%	0.8%	0.0%	1.9%	0.9%	7.3%	0.0%	100.0%	
Road 30	30	68.5	68.5	N	1500-1600	1764	24.3%	9.8%	0.3%	25.7%	9.2%	8.5%	12.8%	0.1%	0.1%	0.4%	0.5%	0.3%	0.8%	0.0%	1.8%	0.9%	6.7%	0.0%	100.0%	
Road 30	30	70	70.0	N	1600-1700	1704	27.1%	9.5%	0.2%	21.7%	9.5%	8.2%	12.8%	0.1%	0.1%	0.4%	0.5%	0.3%	0.8%	0.0%	2.2%	1.2%	6.7%	0.0%	100.0%	
Road 30	30	69.3	69.3	N	1700-1800	1765	33.3%	10.4%	0.2%	21.0%	7.6%	4.8%	9.4%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	2.4%	2.9%	5.7%	0.0%	100.0%	
Road 30	30	70	70.0	N	1800-1900	1673	46.5%	10.9%	0.2%	15.0%	5.4%	3.1%	6.2%	0.0%	0.0%	0.1%	0.8%	0.6%	1.2%	0.0%	2.8%	2.2%	5.0%	0.0%	100.0%	
Road 30	30	70	70.0	N	1900-2000	1228	43.8%	12.0%	0.4%	12.8%	6.1%	4.8%	9.4%	0.0%	0.1%	0.7%	0.8%	0.6%	1.1%	0.0%	3.4%	1.8%	4.1%	0.0%	100.0%	
Road 30	30	70	70.0	N	2000-2100	974	44.6%	16.9%	0.1%	12.9%	4.6%	2.8%	5.6%	0.0%	0.0%	0.1%	0.6%	0.4%	1.0%	0.0%	3.6%	1.8%	3.0%	0.0%	100.0%	
Road 30	30	70	70.0	N	2100-2200	974	45.2%	18.1%	0.1%	15.1%	4.7%	3.0%	5.9%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	3.2%	2.1%	3.1%	0.0%	100.0%	
Road 30	30	70	70.0	N	2200-2300	927	45.2%	18.1%	0.1%	15.1%	4.7%	3.0%	5.9%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	3.2%	2.1%	3.1%	0.0%	100.0%	
Road 30	30	70	70.0	N	2300-0000	712	43.9%	19.8%	0.1%	11.2%	4.0%	3.5%	7.0%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	3.4%	1.9%	3.9%	0.0%	100.0%	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters for AERMOD (Year 2033)																										
Route Name	Bus Road ID	Speed (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Brush Approach (Yr)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Trucks & Buses <2.5t	04 - Light Goods Vehicles <2.5t	05 - Light Goods Vehicles >2.5t	06 - Medium & Heavy Trucks <10t	07 - Medium & Heavy Trucks 10-24t	08 - Public Light Bus <3.5t	09 - Private Light Bus <3.5t	10 - Private Light Bus >3.5t	11 - Non-Freight Bus <6.4t	12 - Non-Freight Bus 6.4-15t	13 - Non-Freight Bus 15-15t	14 - Single Deck Freight	15 - Double Deck Freight	16 - Motorcycle	17 - Heavy Trucks >24t	18 - Non-Freight Bus >24t	Total	
							PC	TAXI	LGTV	LGVA	LGVB	HGV7	HGV10	PLB	PV4	PV5	NFRB	NFR7	NFR8	NFR10	NFR15	MC	HGV24	NFRB		
							8.6%	3.8%	0.4%	35.2%	12.6%	11.1%	21.9%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.5%	5.8%	0.0%	100.0%	
							11	7.8%	3.5%	0.4%	35.7%	12.8%	11.3%	22.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.4%	5.8%	0.0%	100.0%	
							10	7.8%	3.5%	0.4%	35.7%	12.8%	11.3%	22.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.4%	5.8%	0.0%	100.0%	
							7	6.5%	2.9%	0.4%	36.5%	13.1%	11.5%	22.5%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.5%	5.9%	0.0%	100.0%	
							1040-0500	9	6.0%	2.6%	0.4%	36.8%	13.3%	11.6%	22.7%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.5%	5.9%	0.0%	100.0%
							16	5.3%	2.4%	0.4%	37.1%	13.2%	11.6%	22.9%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.5%	6.0%	0.0%	100.0%	
							36	5.1%	2.3%	0.4%	37.2%	13.0%	11.7%	23.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.1%	0.0%	0.5%	6.0%	0.0%	100.0%	
							0700-0800	77	4.7%	2.0%	0.4%	37.6%	13.3%	11.8%	23.1%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.5%	6.0%	0.0%	100.0%	
							92	5.1%	1.6%	0.4%	39.5%	14.2%	11.1%	21.7%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.3%	5.7%	0.0%	100.0%	
							50	3.4%	1.0%	0.4%	41.0%	14.7%	11.2%	22.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.3%	5.7%	0.0%	100.0%	
							1000-1100	101	2.8%	1.1%	0.4%	38.7%	13.3%	12.3%	24.2%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.1%	6.3%	0.0%	100.0%
							1100-1200	94	2.9%	1.2%	0.4%	39.0%	14.0%	12.2%	24.9%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.1%	6.3%	0.0%	100.0%
							1200-1300	94	2.9%	1.2%	0.4%	39.0%	14.0%	12.2%	24.9%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.1%	6.3%	0.0%	100.0%
							1300-1400	106	2.0%	0.8%	0.4%	39.6%	14.2%	12.3%	24.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	6.3%	0.0%	100.0%
							1400-1500	105	2.2%	0.9%	0.4%	38.0%	13.8%	12.8%	25.2%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	6.6%	0.0%	100.0%
							1500-1600	110	2.1%	0.9%	0.4%	38.0%	13.8%	12.8%	25.2%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	6.6%	0.0%	100.0%
							1600-1700	101	2.6%	0.9%	0.4%	39.1%	14.0%	12.2%	24.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.1%	6.3%	0.0%	100.0%
							1700-1800	91	3.6%	1.1%	0.5%	43.9%	15.8%	9.9%	19.5%	0.0%	0.1%	0.1%	0.0%	0.1%	0.0%	0.3%	5.1%	0.0%	100.0%	
							1800-1900	63	7.0%	2.3%	0.6%	7.0%	6.0%	17.7%	10.0%	0.0%	0.1%	0.2%	0.1%	0.0%	0.3%	5.1%	0.0%	100.0%		
							1900-2000	41	8.3%	2.6%	0.4%	40.2%	14.4%	9.6%	18.8%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.3%	4.9%	0.0%	100.0%	
							2000-2100	33	7.5%	3.2%	0.4%	41.5%	14.9%	9.2%	18.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.3%	4.7%	0.0%	100.0%	
							2100-2200	13	7.4%	3.1%	0.4%	41.0%	14.5%	9.4%	18.5%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.4%	0.0%	0.0%	100.0%	
							2200-2300	29	8.2%	3.7%	0.4%	35.4%	12.7%	11.2%	22.1%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.3%	5.8%	0.0%	100.0%
							2300-0000	24	7.3%	3.3%	0.4%	35.9%	12.9%	11.4%	22.4%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.3%	5.8%	0.0%	100.0%	
							0000-0100	100	46.8%	21.1%	1.5%	4.8%	2.3%	4.8%	2.3%	2.6%	0.2%	0.2%	0.2%	0.2%	0.2%	2.4%	0.8%	2.3%	100.0%	
							0100-0200	486	45.7%	20.4%	0.1%	8.0%	2.9%	2.5%	5.0%	0.8%	0.2%	0.5%	0.3%	0.8%	0.1%	9.0%	2.6%	1.3%	100.0%	
							0200-0300	359	44.4%	19.8%	0.1%	8.6%	3.1%	2.7%	5.3%	0.8%	0.3%	0.6%	0.4%	0.9%	0.1%	8.9%	2.8%	1.4%	100.0%	
							0300-0400	286	41.4%	19.3%	0.1%	9.9%	3.0%	2.8%	5.7%	0.8%	0.3%	0.7%	0.5%	0.9%	0.1%	8.5%	2.7%	1.5%	100.0%	
							0400-0500	317	41.9%	18.9%	0.1%	9.9%	3.5%	3.1%	6.1%	0.1%	0.4%	0.7%	0.5%	1.0%	0.1%	8.6%	3.3%	1.6%	100.0%	
							0500-0600	555	40.7%	17.5%	0.1%	10.5%	3.8%	3.3%	6.5%	0.6%	0.1%	0.5%	0.7%	0.5%	1.1%	0.1%	8.4%	3.5%	1.7%	100.0%
							0600-0700	1302	39.5%	13.7%	0.1%	11.5%	4.0%	3.5%	6.6%	0.6%	0.1%	0.8%	0.8%	1.2%	0.0%	8.3%	3.7%	1.8%	100.0%	
							0700-0800	1455	37.8%	0.1%	0.1%	11.7%	4.2%	3.7%	7.2%	0.5%	0.1%	0.9%	0.9%	0.6%	0.1%	8.4%	3.9%	1.9%	100.0%	
							0800-0900	2838	42.8%	17.3%	0.1%	12.8%	4.6%	3.6%	7.0%	0.5%	0.1%	0.8%	0.8%	0.6%	1.3%	0.0%	7.3%	2.5%	1.8%	100.0%
							0900-1000	2504	36.5%	13.2%	0.2%	16.6%	6.0%	4.6%	9.0%	0.6%	0.4%	0.8%	0.4%	0.9%	0.0%	7.0%	1.4%	2.3%	100.0%	
							1000-1100	238	33.3%	17.4%	0.2%	14.9%	5.9%	4.8%	9.5%	0.6%	0.4%	0.8%	0.5%	0.8%	0.0%	6.2%	1.0%	2.0%	100.0%	
							1100-1200	2117	33.3%	13.7%	0.2%	17.4%	6.2%	5.4%	10.7%	0.1%	0.6%	0.3%	0.2%	0.5%	0.0%	6.9%	1.6%	2.0%	100.0%	
							1200-1300	1517	38.9%	15.0%	0.1%	14.0%	5.0%	5.0%	9.9%	0.6%	0.1%	0.6%	0.7%	0.5%	1.0%	0.0%	4.8%	1.2%	2.6%	100.0%
							1300-1400	1570	37.1%	14.3%	0.2%	15.1%	5.4%	5.4%	10.2%	0.1%	0.4%	0.4%	0.8%	0.4%	0.0%	0.0%	4.1%	1.5%	2.6%	100.0%
							1400-1500	1657	37.6%	15.2%	0.2%	14.7%	5.3%	5.0%	9.8%	0.6%	0.1%	0.7%	0.8%	0.5%	1.1%	0.0%	4.5%	1.4%	2.6%	100.0%
							1500-1600	1699	37.3%	15.0%	0.2%	17.0%	6.1%	4.3%	8.5%	0.6%	0.1%	0.7%	0.8%	0.5%	1.2%	0.0%	4.4%	1.3%	2.2%	100.0%
							1600-1700	1776	40.0%	17.0%	0.2%	13.6%	4.7%	4.3%	8.4%	0.6%	0.1%	0.7%	0.8%	0.5%	1.0%	0.0%	4.6%	1.4%	2.2%	100.0%
							1700-1800	1562	45.7%	14.3%	0.1%	12.5%	4.5%	2.8%	5.6%	0.6%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	5.1%	3.9%	1.5%	100.0%
							1800-1900	2065	57.5%	15.3%	0.1%	8.0%	2.9%	1.7%	3.3%	0.6%	0.0%	0.1%	1.7%	0.7%	1.5%	0.0%	5.4%	2.7%	0.9%	100.0%
							1900-2000	1620	56.7%	17.6%	0.1%	10.1%	3.2%	1.5%	2.6%	0.5%	0.1%	0.8%	0.8%	1.1%	0.0%	5.1%	2.1%	0.8%	100.0%	
							2000-2100	1772	52.1%	22.1%	0.1%	6.5%	2.3%	1.4%	2.8%	0.8%	0.0%	0.1%	1.0%	0.5%	1.1%	0.0%	6.6%	2.1%	0.7%	100.0%
							2100-2200	1265	53.3%	22.0%	0.1%	6.6%	2.4%	1.5%	3.0%	0.7%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	5.8%	2.4%	0.8%	100.0%
							2200-2300	1224	53.3%	24.0%	0.1%	5.4%	2.2%	1.2%	2.2%	0.7%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	5.8%	2.8%	0.8%	100.0%
							2300-0000	520	51.9%	23.4%	0.1%	5.7%	2.1%	1.8%	3.6%	0.7%	0.0%	0.1%	0.4%	0.3%	0.6%	0.1%	6.2%	2.3%	0.9%	100.0%

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters for AERMOD (Year 2033)																											
Route Name	Bus Road ID	Speed (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Road Brush Approach (Yr)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Vehicles >2.5t	04 - Light Goods Vehicles >2.5t	05 - Light Goods Vehicles >2.5t	06 - Medium Vehicles >2.5t	07 - Medium Vehicles >2.5t	08 - Public Light Bus >3.5t	09 - Private Light Bus >3.5t	10 - Private Light Bus >3.5t	11 - Non-Franchise Bus >4.0t	12 - Non-Franchise Bus >4.0t	13 - Non-Franchise Bus >4.0t	14 - Franchise Single Deck	15 - Franchise Double Deck	16 - Motorcycle	17 - Heavy Vehicle >24t	18 - Non-Franchise >24t	Total		
							PC	TAXI	LGVA	LGVB	MDV	MDVB	PLB	PVB	PVB	NFB	NFB	NFB	NFB	MC	HC	NFB					
Road 31	31	80	80.0	N	0000-0100	95	45.1%	20.3%	0.1%	8.3%	3.0%	2.6%	5.1%	0.0%	0.2%	0.4%	0.3%	0.6%	0.1%	9.6%	2.3%	0.0%	100.0%				
Road 31	31	80	80.0	N	0100-0200	63	43.8%	19.6%	0.1%	9.0%	3.2%	2.8%	5.6%	0.7%	0.0%	0.2%	0.5%	0.3%	0.7%	0.1%	9.4%	2.5%	1.5%	100.0%			
Road 31	31	80	80.0	N	0200-0300	46	41.2%	18.0%	0.1%	6.7%	4.0%	3.0%	5.0%	0.7%	0.0%	0.2%	0.4%	0.3%	0.7%	0.1%	8.6%	3.3%	1.8%	100.0%			
Road 31	31	80	80.0	N	0300-0400	37	41.2%	18.3%	0.1%	10.3%	3.7%	3.3%	6.4%	0.7%	0.0%	0.3%	0.6%	0.4%	0.9%	0.1%	9.1%	2.9%	1.7%	100.0%			
Road 31	31	80	80.0	N	0400-0500	41	39.9%	17.6%	0.1%	11.0%	4.0%	3.5%	6.8%	0.7%	0.0%	0.4%	0.7%	0.5%	1.0%	0.1%	8.9%	3.1%	1.8%	100.0%			
Road 31	31	80	80.0	N	0500-0600	172	37.4%	17.6%	0.1%	11.7%	4.2%	3.7%	7.2%	0.7%	0.1%	0.4%	0.7%	0.5%	1.1%	0.1%	8.6%	3.3%	1.9%	100.0%			
Road 31	31	80	80.0	N	0600-0700	156	37.4%	17.6%	0.1%	12.3%	4.4%	3.8%	6.4%	0.7%	0.1%	0.4%	0.8%	0.2%	1.1%	0.1%	8.3%	3.3%	1.8%	100.0%			
Road 31	31	80	80.0	N	0700-0800	320	36.2%	15.8%	0.1%	13.0%	4.7%	4.1%	8.0%	0.7%	0.1%	0.5%	0.8%	0.6%	1.3%	0.1%	8.4%	3.7%	2.1%	100.0%			
Road 31	31	80	80.0	N	0800-0900	310	40.4%	15.9%	0.1%	14.1%	5.1%	4.0%	7.8%	0.5%	0.1%	0.6%	0.8%	0.5%	1.2%	0.0%	7.5%	2.3%	2.0%	100.0%			
Road 31	31	80	80.0	N	0900-1000	333	34.2%	12.3%	0.3%	13.1%	5.3%	4.8%	5.0%	0.4%	0.8%	0.4%	0.9%	0.4%	0.9%	0.0%	7.4%	2.0%	2.0%	100.0%			
Road 31	31	80	80.0	N	1000-1100	298	30.9%	12.0%	0.2%	18.9%	6.8%	6.0%	11.8%	0.6%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	6.8%	0.9%	3.1%	100.0%			
Road 31	31	80	80.0	N	1100-1200	282	30.9%	12.7%	0.2%	18.8%	6.8%	5.9%	11.8%	0.6%	0.1%	0.6%	0.3%	0.2%	0.5%	0.0%	7.0%	0.9%	3.0%	100.0%			
Road 31	31	80	80.0	N	1200-1300	254	34.1%	11.0%	0.1%	17.8%	7.1%	6.1%	10.4%	0.3%	0.1%	0.5%	0.3%	0.2%	0.5%	0.0%	7.1%	1.0%	3.0%	100.0%			
Road 31	31	80	80.0	N	1300-1400	258	32.2%	12.4%	0.2%	18.7%	6.7%	5.8%	11.4%	0.0%	0.1%	0.5%	0.5%	0.3%	0.7%	0.0%	6.5%	1.0%	3.0%	100.0%			
Road 31	31	80	80.0	N	1400-1500	278	32.9%	13.3%	0.2%	17.0%	6.1%	5.7%	11.3%	0.0%	0.1%	0.6%	0.7%	0.5%	1.0%	0.0%	6.6%	1.2%	2.9%	100.0%			
Road 31	31	80	80.0	N	1500-1600	285	32.1%	13.5%	0.1%	17.8%	6.2%	5.8%	11.4%	0.0%	0.1%	0.6%	0.7%	0.5%	1.0%	0.0%	6.6%	1.2%	2.9%	100.0%			
Road 31	31	80	80.0	N	1600-1700	295	35.6%	12.3%	0.2%	15.8%	5.1%	4.9%	9.7%	0.0%	0.1%	0.8%	1.0%	0.7%	1.6%	0.0%	7.3%	1.7%	2.5%	100.0%			
Road 31	31	80	80.0	N	1700-1800	320	41.1%	12.6%	0.2%	14.8%	5.3%	3.3%	6.6%	0.0%	0.1%	0.6%	0.7%	0.5%	1.1%	0.0%	7.7%	3.5%	1.7%	100.0%			
Road 31	31	80	80.0	N	1800-1900	328	53.0%	12.8%	0.3%	12.0%	5.2%	3.0%	4.0%	0.0%	0.1%	0.6%	0.6%	0.4%	0.8%	0.0%	8.8%	1.9%	0.9%	100.0%			
Road 31	31	80	80.0	N	1900-2000	257	52.6%	16.5%	0.1%	7.5%	2.7%	1.8%	3.5%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	9.8%	1.9%	0.9%	100.0%			
Road 31	31	80	80.0	N	2000-2100	201	48.2%	20.5%	0.1%	7.9%	2.8%	1.7%	3.4%	0.0%	0.0%	0.1%	0.7%	0.5%	1.0%	0.0%	10.2%	1.9%	0.9%	100.0%			
Road 31	31	80	80.0	N	2100-2200	300	49.6%	20.4%	0.1%	8.1%	3.0%	1.9%	3.7%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.1%	9.8%	1.0%	1.0%	100.0%			
Road 31	31	80	80.0	N	2200-2300	193	49.3%	22.3%	0.1%	6.3%	2.3%	2.0%	3.9%	0.0%	0.0%	0.0%	0.3%	0.2%	0.5%	0.1%	9.8%	1.9%	1.0%	100.0%			
Road 31	31	80	80.0	N	2300-0000	146	48.6%	21.6%	0.1%	7.0%	2.5%	2.2%	4.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.1%	9.6%	2.1%	1.1%	100.0%			
Road 32	32	80	80.0	N	0000-0100	445	42.3%	23.2%	0.1%	8.3%	3.2%	2.8%	5.5%	0.7%	0.0%	0.2%	0.5%	0.3%	0.7%	0.1%	9.4%	2.5%	1.5%	100.0%			
Road 32	32	80	80.0	N	0100-0200	424	45.9%	20.6%	0.1%	7.9%	2.8%	2.5%	4.9%	0.8%	0.0%	0.2%	0.5%	0.4%	0.8%	0.1%	9.0%	2.6%	1.3%	100.0%			
Road 32	32	80	80.0	N	0200-0300	313	44.7%	19.9%	0.1%	8.5%	3.0%	2.7%	5.3%	0.8%	0.0%	0.3%	0.6%	0.4%	0.9%	0.1%	8.8%	2.8%	1.4%	100.0%			
Road 32	32	80	80.0	N	0300-0400	269	43.4%	19.1%	0.1%	9.1%	3.2%	2.9%	5.6%	0.8%	0.0%	0.3%	0.6%	0.4%	0.9%	0.1%	8.6%	3.0%	1.5%	100.0%			
Road 32	32	80	80.0	N	0400-0500	276	42.2%	18.7%	0.1%	9.7%	3.5%	3.1%	6.0%	0.8%	0.0%	0.1%	0.4%	0.7%	0.5%	1.1%	0.1%	8.5%	3.3%	1.6%	100.0%		
Road 32	32	80	80.0	N	0500-0600	483	41.0%	18.0%	0.1%	10.3%	3.7%	3.2%	6.4%	0.6%	0.1%	0.5%	0.8%	0.5%	1.1%	0.1%	8.4%	3.5%	1.7%	100.0%			
Road 32	32	80	80.0	N	0600-0700	446	39.8%	17.4%	0.1%	10.8%	3.9%	3.4%	6.9%	0.6%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	8.2%	3.7%	1.8%	100.0%			
Road 32	32	80	80.0	N	0700-0800	415	38.6%	16.8%	0.1%	15.5%	4.6%	3.6%	7.1%	0.5%	0.1%	0.6%	0.7%	0.7%	1.3%	0.1%	7.9%	3.8%	1.9%	100.0%			
Road 32	32	80	80.0	N	0800-0900	2468	43.1%	13.8%	0.1%	12.6%	4.5%	3.5%	6.9%	0.5%	0.1%	0.6%	0.8%	0.6%	1.3%	0.0%	7.2%	2.5%	1.8%	100.0%			
Road 32	32	80	80.0	N	0900-1000	2172	36.8%	13.4%	0.2%	16.6%	5.9%	4.5%	8.9%	0.6%	0.0%	0.4%	0.8%	0.4%	0.9%	0.0%	7.0%	1.4%	2.3%	100.0%			
Road 32	32	80	80.0	N	1000-1100	1938	33.1%	11.0%	0.3%	17.2%	6.3%	5.7%	10.8%	0.6%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	6.5%	1.2%	3.0%	100.0%			
Road 32	32	80	80.0	N	1100-1200	1835	33.7%	13.3%	0.2%	17.2%	6.2%	5.4%	10.5%	0.6%	0.1%	0.6%	0.3%	0.2%	0.5%	0.0%	6.9%	1.2%	2.8%	100.0%			
Road 32	32	80	80.0	N	1200-1300	1263	39.9%	15.4%	0.1%	13.6%	4.9%	4.9%	9.6%	0.8%	0.1%	0.6%	0.7%	0.5%	1.0%	0.0%	4.3%	1.2%	2.5%	100.0%			
Road 32	32	80	80.0	N	1300-1400	1305	38.1%	14.7%	0.2%	15.9%	4.7%	4.7%	9.6%	0.7%	0.1%	0.6%	0.4%	0.8%	0.9%	0.0%	4.6%	1.1%	2.5%	100.0%			
Road 32	32	80	80.0	N	1400-1500	1379	38.5%	15.5%	0.1%	14.3%	5.1%	4.8%	9.5%	0.7%	0.1%	0.7%	0.8%	0.5%	1.2%	0.0%	4.1%	1.5%	2.5%	100.0%			
Road 32	32	80	80.0	N	1500-1600	1414	38.2%	15.3%	0.2%	16.5%	5.9%	4.2%	8.2%	0.7%	0.1%	0.7%	0.8%	0.5%	1.2%	0.0%	4.0%	1.4%	2.1%	100.0%			
Road 32	32	80	80.0	N	1600-1700	1481	41.3%	14.2%	0.1%	15.2%	5.1%	4.2%	8.1%	0.6%	0.1%	0.7%	0.8%	0.5%	1.2%	0.0%	4.1%	1.4%	2.1%	100.0%			
Road 32	32	80	80.0	N	1700-1800	1642	46.7%	14.6%	0.1%	12.1%	4.3%	2.7%	5.4%	0.7%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	4.6%	4.0%	1.4%	100.0%			
Road 32	32	80	80.0	N	1800-1900	1737	58.3%	13.7%	0.1%	7.7%	2.8%	1.6%	3.2%	0.7%	0.0%	0.1%	1.0%	0.7%	1.6%	0.0%	4.9%	2.8%	0.8%	100.0%			
Road 32	32	80	80.0	N	1900-2000	1172	57.1%	14.0%	0.1%	7.2%	2.8%	1.4%	2.6%	0.7%	0.0%	0.1%	1.0%	0.7%	1.6%	0.0%	5.0%	2.1%	0.8%	100.0%			
Road 32	32	80	80.0	N	2000-2000	1070	52.8%	22.4%	0.1%	6.2%	2.4%	1.4%	2.7%	0.9%	0.0%	0.1%	1.7%	0.5%	1.1%	0.0%	5.9%	2.1%	0.7%	100.0%			
Road 32	32	80	80.0	N	2100-2200	1055	54.6%	22.3%	0.1%	6.4%	2.3%	1.5%	2.9%	0.9%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	5.2%	2.5%	0.8%	100.0%			
Road 32	32	80	80.0	N	2200-2300	1031	53.0%	24.3%	0.1%	4.9%	2.0%	1.1%	1.8%	0.9%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	5.2%	2.8%	0.8%	100.0%			
Road 32	32	80	80.0	N	2300-0000	775	52.6%	23.7%	0.1%	5.5%	2.0%	1.7%	3.4%	0.8%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	5.6%	2.3%	0.9%	100.0%			

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2033)

Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=3.5t	04 - Light Goods Vehicles 3.5-5t	05 - Light Goods Vehicles >5t	06 - Medium Goods Vehicles <=15t	07 - Medium Goods Vehicles 15-24t	08 - Public Light Buses	09 - Private Light Buses <=3.5t	10 - Private Light Buses 3.5-15t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 6.4-15t	13 - Non-franchised Bus 15-24t	14 - Franchise d Bus Single Deck	15 - Franchise d Bus Double Deck	16 - Motorcycl	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total	
							PC	TAXI	LVG3	LVG4	LVG5	HGV7	HGV8	PLB	PV4	PV5	NFB6	NFB7	NFB8	FBSDD	FBSDD	MC	HGV9	NFB9		
Road 33	33	70	70.0	N	0000-0100	660	51.0%	22.9%	0.1%	6.5%	2.3%	2.1%	4.1%	0.2%	0.0%	0.2%	0.5%	0.3%	0.7%	0.0%	3.3%	2.6%	3.3%	0.0%	100.0%	
Road 33	33	70	70.0	N	0100-0200	428	49.1%	22.0%	0.1%	7.0%	2.5%	2.2%	4.4%	0.2%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	3.2%	2.8%	4.5%	0.0%	100.0%	
Road 33	33	70	70.0	N	0200-0300	326	47.3%	21.1%	0.1%	7.5%	2.7%	2.4%	4.7%	0.1%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	3.1%	3.0%	3.7%	0.0%	100.0%	
Road 33	33	70	70.0	N	0300-0400	263	45.5%	20.2%	0.1%	6.0%	2.9%	2.5%	4.9%	0.1%	0.0%	0.1%	0.4%	0.2%	1.0%	0.0%	3.1%	3.2%	6.6%	0.0%	100.0%	
Road 33	33	70	70.0	N	0400-0500	289	44.6%	19.7%	0.1%	8.6%	3.1%	2.7%	5.3%	0.1%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	3.0%	3.0%	3.9%	0.0%	100.0%	
Road 33	33	70	70.0	N	0500-0600	494	44.3%	19.5%	0.1%	9.4%	3.4%	2.9%	5.8%	0.2%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	3.1%	3.8%	4.5%	0.0%	100.0%	
Road 33	33	70	70.0	N	0600-0700	1050	43.8%	19.2%	0.1%	10.1%	3.6%	3.2%	6.2%	0.2%	0.1%	0.6%	0.9%	0.8%	1.4%	0.0%	3.1%	4.1%	3.0%	0.0%	100.0%	
Road 33	33	70	70.0	N	0700-0800	1167	42.0%	18.3%	0.1%	10.5%	3.8%	3.3%	6.5%	0.2%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	3.0%	4.3%	4.3%	0.0%	100.0%	
Road 33	33	70	70.0	N	0800-0900	2511	46.8%	15.0%	0.1%	11.4%	4.1%	3.2%	6.3%	0.1%	0.1%	0.6%	0.9%	0.8%	1.4%	0.0%	2.6%	2.7%	3.9%	0.0%	100.0%	
Road 33	33	70	70.0	N	0900-1000	2185	40.5%	14.7%	0.2%	15.2%	5.5%	4.1%	8.2%	0.1%	0.1%	0.4%	0.7%	0.8%	1.0%	0.0%	2.6%	1.6%	4.7%	0.0%	100.0%	
Road 33	33	70	70.0	N	1000-1100	1944	37.2%	14.4%	0.2%	15.9%	5.7%	5.0%	9.9%	0.1%	0.1%	0.4%	0.6%	0.4%	0.9%	0.0%	2.5%	1.1%	5.5%	0.0%	100.0%	
Road 33	33	70	70.0	N	1100-1200	1843	37.1%	15.3%	0.2%	15.8%	5.7%	4.9%	9.7%	0.1%	0.1%	0.7%	0.4%	0.3%	0.6%	0.0%	2.5%	1.0%	5.6%	0.0%	100.0%	
Road 33	33	70	70.0	N	1200-1300	1759	26.9%	10.4%	0.2%	20.6%	7.4%	7.4%	14.5%	0.0%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	2.7%	0.8%	7.0%	0.0%	100.0%	
Road 33	33	70	70.0	N	1300-1400	1870	24.9%	9.8%	0.2%	23.5%	8.4%	7.3%	14.3%	0.0%	0.0%	0.4%	0.4%	0.2%	0.5%	0.0%	2.5%	0.8%	6.8%	0.0%	100.0%	
Road 33	33	70	70.0	N	1400-1500	1529	25.9%	10.5%	0.2%	21.8%	7.8%	7.3%	14.4%	0.0%	0.1%	0.4%	0.5%	0.4%	0.8%	0.0%	2.6%	1.0%	6.7%	0.0%	100.0%	
Road 33	33	70	70.0	N	1500-1600	1989	25.5%	10.2%	0.3%	24.8%	8.8%	6.3%	12.3%	0.0%	0.1%	0.4%	0.5%	0.4%	0.8%	0.0%	2.5%	0.9%	6.1%	0.0%	100.0%	
Road 33	33	70	70.0	N	1600-1700	1999	28.7%	9.9%	0.2%	20.7%	7.4%	6.5%	12.7%	0.0%	0.1%	0.7%	0.8%	0.8%	1.3%	0.0%	2.9%	1.4%	6.2%	0.0%	100.0%	
Road 33	33	70	70.0	N	1700-1800	2065	34.5%	10.8%	0.2%	20.1%	7.2%	4.5%	8.9%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	3.2%	3.0%	6.1%	0.0%	100.0%	
Road 33	33	70	70.0	N	1800-1900	2001	47.5%	11.2%	0.1%	14.2%	5.1%	3.0%	5.8%	0.0%	0.0%	0.1%	0.8%	0.6%	1.3%	0.0%	3.7%	2.3%	4.4%	0.0%	100.0%	
Road 33	33	70	70.0	N	1900-2000	1497	49.5%	15.5%	0.1%	11.5%	4.1%	2.7%	5.4%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	4.5%	1.8%	2.4%	0.0%	100.0%	
Road 33	33	70	70.0	N	2000-2100	1175	45.2%	19.2%	0.1%	12.0%	4.3%	2.7%	5.2%	0.0%	0.0%	0.1%	0.6%	0.4%	1.0%	0.0%	4.7%	1.8%	2.8%	0.0%	100.0%	
Road 33	33	70	70.0	N	2100-2200	1178	45.9%	18.0%	0.1%	12.2%	4.4%	2.8%	5.5%	0.0%	0.0%	0.1%	0.6%	0.4%	1.2%	0.0%	4.2%	2.1%	2.7%	0.0%	100.0%	
Road 33	33	70	70.0	N	2200-2300	1120	46.5%	21.0%	0.1%	9.6%	3.5%	3.1%	6.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	4.6%	1.8%	2.9%	0.0%	100.0%
Road 33	33	70	70.0	N	2300-0000	827	44.6%	20.1%	0.1%	10.5%	3.8%	3.3%	6.5%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	4.4%	2.0%	3.4%	0.0%	100.0%	
Road 34	34	80	80.0	N	0100-0200	675	56.8%	25.5%	0.3%	3.1%	1.1%	1.0%	1.6%	0.0%	0.0%	0.4%	0.6%	0.4%	0.8%	0.0%	2.9%	2.1%	2.3%	0.0%	100.0%	
Road 34	34	80	80.0	N	0200-0300	442	55.4%	24.8%	0.0%	3.4%	1.2%	1.1%	2.1%	0.0%	0.0%	0.3%	0.6%	0.3%	0.9%	0.0%	2.9%	3.1%	3.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	0300-0400	326	54.0%	24.0%	0.0%	3.7%	1.3%	1.2%	2.3%	0.7%	0.0%	0.3%	0.7%	0.8%	1.0%	0.0%	2.8%	3.4%	4.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	0400-0500	259	52.6%	23.3%	0.0%	4.0%	1.4%	1.3%	2.5%	0.7%	0.1%	0.4%	0.8%	0.5%	1.2%	0.0%	2.8%	3.7%	4.9%	0.0%	100.0%	
Road 34	34	80	80.0	N	0500-0600	283	51.8%	22.9%	0.0%	4.3%	1.6%	1.4%	2.7%	0.7%	0.1%	0.5%	0.8%	0.8%	1.3%	0.0%	2.8%	4.0%	4.6%	0.0%	100.0%	
Road 34	34	80	80.0	N	0600-0700	482	51.7%	22.8%	0.0%	4.7%	1.7%	1.5%	2.9%	0.7%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	2.8%	4.4%	3.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	0700-0800	1019	51.4%	22.5%	0.1%	5.1%	1.8%	1.6%	3.1%	0.7%	0.1%	0.7%	1.1%	0.7%	1.6%	0.0%	2.8%	4.8%	1.9%	0.0%	100.0%	
Road 34	34	80	80.0	N	0800-0900	2176	51.3%	21.6%	0.1%	5.4%	1.9%	1.7%	3.3%	0.7%	0.1%	0.7%	1.1%	0.8%	1.7%	0.0%	2.8%	5.1%	2.9%	0.0%	100.0%	
Road 34	34	80	80.0	N	0900-1000	2395	55.9%	17.9%	0.1%	5.9%	2.1%	1.7%	3.2%	0.5%	0.1%	0.8%	0.3%	0.1%	0.8%	0.3%	2.9%	3.4%	2.8%	0.0%	100.0%	
Road 34	34	80	80.0	N	1000-1100	1963	51.3%	18.6%	0.1%	8.3%	3.0%	2.3%	4.5%	0.7%	0.1%	0.5%	0.9%	0.8%	1.3%	0.0%	2.6%	2.0%	3.3%	0.0%	100.0%	
Road 34	34	80	80.0	N	1100-1200	1696	48.6%	18.9%	0.1%	9.0%	3.2%	2.8%	5.6%	0.7%	0.1%	0.5%	0.8%	0.8%	1.2%	0.0%	2.6%	1.5%	4.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	1200-1300	1610	48.3%	19.9%	0.1%	8.9%	3.3%	2.8%	5.5%	0.7%	0.1%	0.9%	0.5%	0.3%	0.7%	0.0%	2.6%	1.4%	4.1%	0.0%	100.0%	
Road 34	34	80	80.0	N	1300-1400	1065	20.2%	7.8%	0.2%	18.9%	6.8%	6.8%	13.3%	0.9%	0.0%	0.3%	0.3%	0.2%	0.5%	0.0%	15.5%	0.6%	7.5%	0.0%	100.0%	
Road 34	34	80	80.0	N	1400-1500	1124	19.8%	7.3%	0.2%	21.7%	7.8%	6.7%	13.2%	0.8%	0.0%	0.5%	0.4%	0.3%	0.4%	0.1%	14.3%	0.6%	7.2%	0.0%	100.0%	
Road 34	34	80	80.0	N	1500-1600	1158	19.8%	7.9%	0.2%	20.0%	7.7%	6.8%	13.3%	0.8%	0.0%	0.5%	0.4%	0.3%	0.6%	0.0%	14.7%	0.7%	7.1%	0.0%	100.0%	
Road 34	34	80	80.0	N	1600-1700	1191	19.3%	7.8%	0.2%	23.0%	6.3%	5.8%	11.4%	0.8%	0.0%	0.3%	0.4%	0.3%	0.6%	0.1%	14.3%	0.7%	6.6%	0.0%	100.0%	
Road 34	34	80	80.0	N	1700-1800	1212	21.5%	7.4%	0.2%	18.9%	6.8%	5.9%	11.6%	0.8%	0.1%	0.5%	0.6%	0.4%	1.0%	0.0%	16.6%	1.0%	6.5%	0.0%	100.0%	
Road 34	34	80	80.0	N	1800-1900	1267	25.8%	8.1%	0.2%	18.4%	6.6%	4.2%	8.2%	0.8%	0.0%	0.4%	0.5%	0.3%	0.7%	0.0%	18.2%	2.2%	5.5%	0.0%	100.0%	
Road 34	34	80	80.0	N	1900-2000	1222	35.3%	8.3%	0.1%	12.9%	4.6%	2.7%	5.3%	1.0%	0.0%	0.1%	0.6%	0.4%	0.9%	0.1%	21.0%	1.7%	4.8%	0.0%	100.0%	
Road 34	34	80	80.0	N	2000-2100	937	35.9%	11.2%	0.1%	10.2%	4.8%	2.4%	4.8%	1.2%	0.0%	0.1%	0.5%	0.4%	0.8%	0.1%	24.9%	1.3%	2.4%	0.0%	100.0%	
Road 34	34	80	80.0	N	2100-2200	937	35.9%	11.2%	0.1%	10.2%	4.8%	2.4%	4.8%	1.2%	0.0%	0.1%	0.5%	0.4%	0.8%	0.1%	24.9%	1.3%	2.7%	0.0%	100.0%	
Road 34	34	80	80.0	N	2200-2300	725	33.8%	14.0%	0.1%	11.0%	3.9%	2.5%	5.0%	1.3%	0.0%	0.0%	0.2%	0.2%	0.4%	0.0%	23.2%	1.5%	2.8%	0.0%	100.0%	
Road 34	34	80	80.0	N	2300-0000	702	33.7%	15.2%	0.1%	8.5%	3.1%	2.7%	5.3%	1.2%	0.0%	0.0%	0.2%	0.1%	0.3%	0.2%	25.1%	1.3%	3.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	2300-0000	537	32.4%	14.6%	0.1%	9.3%	3.3%	3.0%	5.8%	1.2%	0.0%	0.1%	0.2%	0.2%	0.4%	0.2%	24.3%	1.4%	3.6%	0.0%	100.0%	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2033)

Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars		02 - Taxi	03 - Light Goods Vehicles <=3.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles <=15t	07 - Medium Goods Vehicles 15-24t	08 - Public Light Buses	09 - Private
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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2033)

Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles <=15t	07 - Medium Goods Vehicles 15-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchise d Bus Single Deck	15 - Franchise d Bus Double Deck	16 - Motorcycl	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total	
							PC	TAXI	LGV3	LGV4	LGV6	HGV7	HGV8	PLB	PV4	PV5	NFB6	NFB7	NFB8	FBS0	FBD0	MC	HGV9	NFB9		
Road 41	41	70	70.0	N	0000-0100	95	50.0%	22.5%	0.0%	3.5%	1.3%	1.1%	2.2%	1.1%	0.0%	0.2%	0.5%	0.3%	0.7%	0.0%	0.0%	2.5%	14.1%	0.0%	100.0%	
Road 41	41	70	70.0	N	0100-0200	66	45.8%	20.5%	0.0%	3.6%	1.1%	1.1%	2.2%	1.0%	0.0%	0.2%	0.5%	0.3%	0.8%	0.0%	0.0%	2.6%	20.0%	0.0%	100.0%	
Road 41	41	70	70.0	N	0200-0300	52	42.0%	18.7%	0.0%	3.7%	1.3%	1.2%	2.3%	0.0%	0.0%	0.3%	0.7%	0.4%	0.8%	0.0%	0.0%	2.7%	25.3%	0.0%	100.0%	
Road 41	41	70	70.0	N	0300-0400	44	38.6%	17.1%	0.0%	3.7%	1.3%	1.2%	2.3%	0.0%	0.0%	0.3%	0.6%	0.4%	0.8%	0.0%	0.0%	2.7%	30.0%	0.0%	100.0%	
Road 41	41	70	70.0	N	0400-0500	47	38.9%	17.2%	0.0%	4.1%	1.5%	1.3%	2.5%	0.9%	0.0%	0.4%	0.6%	0.4%	1.0%	0.0%	0.0%	3.0%	28.1%	0.0%	100.0%	
Road 41	41	70	70.0	N	0500-0600	72	43.1%	18.9%	0.1%	5.0%	1.8%	1.6%	3.1%	1.0%	0.1%	0.5%	0.8%	1.2%	0.0%	0.0%	3.7%	18.7%	0.0%	100.0%		
Road 41	41	70	70.0	N	0600-0700	140	46.6%	20.4%	0.1%	5.9%	2.1%	1.8%	3.6%	1.2%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	0.0%	4.4%	10.2%	0.0%	100.0%	
Road 41	41	70	70.0	N	0700-0800	306	42.1%	18.3%	0.1%	5.8%	2.1%	1.8%	3.6%	1.1%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	0.0%	4.3%	17.1%	0.0%	100.0%	
Road 41	41	70	70.0	N	0800-0900	347	47.9%	15.3%	0.1%	6.4%	2.3%	1.8%	3.5%	0.9%	0.1%	0.7%	0.9%	0.7%	1.4%	0.0%	0.0%	2.8%	15.2%	0.0%	100.0%	
Road 41	41	70	70.0	N	0900-1000	296	42.2%	15.3%	0.1%	8.7%	3.1%	2.4%	4.7%	1.0%	0.1%	0.4%	0.7%	0.8%	1.1%	0.0%	0.0%	1.6%	18.0%	0.0%	100.0%	
Road 41	41	70	70.0	N	1000-1100	264	38.8%	15.1%	0.1%	9.1%	3.3%	2.8%	5.7%	1.0%	0.1%	0.4%	0.8%	0.4%	1.0%	0.0%	0.0%	1.2%	20.3%	0.0%	100.0%	
Road 41	41	70	70.0	N	1100-1200	252	38.3%	15.8%	0.1%	9.0%	3.2%	2.8%	5.5%	1.1%	0.1%	0.7%	0.4%	0.3%	0.6%	0.0%	0.0%	1.1%	21.1%	0.0%	100.0%	
Road 41	41	70	70.0	N	1200-1300	282	28.1%	10.8%	0.2%	16.5%	5.6%	5.6%	10.9%	0.0%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	0.0%	0.8%	20.5%	0.0%	100.0%	
Road 41	41	70	70.0	N	1300-1400	295	26.5%	10.2%	0.2%	18.0%	6.8%	5.6%	10.9%	0.0%	0.0%	0.4%	0.4%	0.3%	0.6%	0.0%	0.0%	0.8%	19.7%	0.0%	100.0%	
Road 41	41	70	70.0	N	1400-1500	305	27.4%	11.1%	0.2%	18.5%	5.9%	5.6%	10.9%	0.0%	0.1%	0.5%	0.5%	0.4%	0.8%	0.0%	0.0%	1.0%	19.1%	0.0%	100.0%	
Road 41	41	70	70.0	N	1500-1600	313	27.2%	10.9%	0.2%	19.0%	6.8%	4.8%	9.5%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	0.0%	1.0%	18.3%	0.0%	100.0%	
Road 41	41	70	70.0	N	1600-1700	317	30.3%	10.4%	0.2%	16.7%	5.6%	4.9%	9.6%	0.0%	0.1%	0.7%	0.9%	0.6%	1.4%	0.0%	0.0%	1.4%	18.2%	0.0%	100.0%	
Road 41	41	70	70.0	N	1700-1800	338	35.9%	11.2%	0.2%	15.0%	5.4%	3.4%	8.7%	0.0%	0.1%	0.5%	0.6%	0.4%	1.0%	0.0%	0.0%	3.1%	16.5%	0.0%	100.0%	
Road 41	41	70	70.0	N	1800-1900	335	47.6%	11.2%	0.1%	10.2%	3.7%	2.1%	4.2%	0.0%	0.0%	0.1%	0.8%	0.6%	1.3%	0.0%	0.0%	2.3%	15.9%	0.0%	100.0%	
Road 41	41	70	70.0	N	1900-2000	232	53.4%	16.1%	0.1%	8.9%	3.2%	2.1%	4.2%	0.0%	0.0%	0.1%	0.8%	0.0%	1.2%	0.0%	0.0%	2.0%	6.6%	0.0%	100.0%	
Road 41	41	70	70.0	N	2000-2100	184	48.4%	20.6%	0.1%	9.3%	3.3%	2.0%	4.0%	0.0%	0.0%	0.1%	0.7%	0.5%	1.0%	0.0%	0.0%	1.9%	6.1%	0.0%	100.0%	
Road 41	41	70	70.0	N	2100-2200	185	49.0%	20.3%	0.1%	8.9%	3.3%	2.2%	4.2%	0.0%	0.0%	0.1%	0.7%	0.5%	1.0%	0.0%	0.0%	2.2%	6.1%	0.0%	100.0%	
Road 41	41	70	70.0	N	2200-2300	177	49.3%	22.3%	0.1%	7.3%	2.6%	2.3%	4.6%	0.0%	0.0%	0.0%	0.0%	0.3%	0.2%	0.5%	0.0%	0.0%	1.9%	8.5%	0.0%	100.0%
Road 41	41	70	70.0	N	2300-0000	137	46.7%	21.0%	0.1%	7.9%	2.8%	2.5%	4.9%	0.0%	0.0%	0.1%	0.4%	0.2%	0.5%	0.0%	0.0%	0.2%	10.7%	0.0%	100.0%	
Road 42	42	50	47.9	N	0000-0100	91	50.9%	22.2%	0.0%	3.8%	1.3%	1.1%	2.3%	0.1%	0.0%	0.2%	0.3%	0.2%	0.7%	0.0%	0.0%	2.4%	0.0%	2.8%	0.0%	100.0%
Road 42	42	50	48.4	N	0100-0200	63	46.9%	21.0%	0.0%	3.7%	1.3%	1.2%	2.3%	1.0%	0.0%	0.0%	0.2%	0.5%	0.4%	0.0%	0.0%	2.7%	18.0%	0.0%	100.0%	
Road 42	42	50	48.7	N	0200-0300	49	43.3%	19.3%	0.0%	3.7%	1.3%	1.2%	2.3%	1.0%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	0.0%	2.7%	23.0%	0.0%	100.0%	
Road 42	42	50	48.9	N	0300-0400	41	40.1%	17.8%	0.0%	3.8%	1.4%	1.2%	2.4%	0.9%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	0.0%	2.8%	27.4%	0.0%	100.0%	
Road 42	42	50	48.8	N	0400-0500	44	40.2%	17.8%	0.0%	4.2%	1.5%	1.3%	2.6%	1.0%	0.0%	0.4%	0.7%	0.5%	1.0%	0.0%	0.0%	3.1%	25.5%	0.0%	100.0%	
Road 42	42	50	48.3	N	0500-0600	69	44.1%	19.4%	0.1%	5.1%	1.8%	1.6%	3.1%	1.1%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	0.0%	3.8%	16.9%	0.0%	100.0%	
Road 42	42	50	48.9	N	0600-0700	135	47.2%	20.7%	0.1%	5.9%	2.1%	1.9%	3.6%	1.2%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	0.0%	4.4%	9.1%	0.0%	100.0%	
Road 42	42	50	47.8	N	0700-0800	292	48.0%	18.7%	0.1%	5.9%	2.1%	1.8%	3.6%	1.1%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	0.0%	4.4%	15.4%	0.0%	100.0%	
Road 42	42	50	41.8	N	0800-0900	332	48.8%	15.6%	0.1%	6.5%	2.3%	1.8%	3.6%	0.9%	0.1%	0.7%	1.0%	0.7%	1.5%	0.0%	0.0%	2.8%	13.7%	0.0%	100.0%	
Road 42	42	50	42.7	N	0900-1000	283	43.2%	15.7%	0.1%	8.9%	3.2%	2.4%	4.7%	1.1%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	0.0%	1.7%	16.2%	0.0%	100.0%	
Road 42	42	50	43.3	N	1000-1100	251	39.8%	15.5%	0.1%	9.3%	3.3%	2.9%	5.8%	1.1%	0.1%	0.4%	0.7%	0.3%	1.0%	0.0%	0.0%	1.2%	18.4%	0.0%	100.0%	
Road 42	42	50	43.5	N	1100-1200	240	39.4%	16.2%	0.1%	9.1%	3.3%	2.9%	5.6%	1.1%	0.1%	0.7%	0.4%	0.3%	0.9%	0.0%	0.0%	1.1%	19.2%	0.0%	100.0%	
Road 42	42	50	44.2	N	1200-1300	184	22.5%	8.7%	0.2%	16.6%	6.0%	5.9%	11.7%	0.0%	0.0%	0.4%	0.4%	0.3%	0.6%	0.0%	0.0%	0.7%	28.1%	0.0%	100.0%	
Road 42	42	50	43.9	N	1300-1400	193	21.1%	8.1%	0.2%	16.1%	6.9%	5.9%	11.7%	0.0%	0.0%	0.5%	0.3%	0.2%	0.5%	0.0%	0.0%	0.6%	25.0%	0.0%	100.0%	
Road 42	42	50	43.8	N	1400-1500	198	22.0%	8.8%	0.2%	17.7%	6.3%	6.0%	11.7%	0.0%	0.0%	0.4%	0.4%	0.3%	0.7%	0.0%	0.0%	0.8%	24.4%	0.0%	100.0%	
Road 42	42	50	43.7	N	1500-1600	203	21.8%	8.8%	0.2%	20.4%	7.3%	5.2%	10.2%	0.0%	0.0%	0.4%	0.4%	0.3%	0.7%	0.0%	0.0%	0.8%	23.5%	0.0%	100.0%	
Road 42	42	50	43.8	N	1600-1700	204	24.7%	8.5%	0.2%	17.1%	6.1%	5.3%	10.5%	0.0%	0.1%	0.6%	0.7%	0.8%	1.1%	0.0%	0.0%	1.2%	23.5%	0.0%	100.0%	
Road 42	42	50	43.9	N	1700-1800	213	29.9%	9.3%	0.2%	16.7%	6.0%	3.8%	7.4%	0.0%	0.1%	0.4%	0.5%	0.0%	2.6%	0.0%	0.0%	2.6%	22.0%	0.0%	100.0%	
Road 42	42	50	44.3	N	1800-1900	204	40.8%	9.6%	0.1%	11.7%	4.2%	2.4%	4.8%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	0.0%	1.9%	22.0%	0.0%	100.0%	
Road 42	42	50	46.8	N	1900-2000	134	48.5%	15.2%	0.1%	10.8%	3.9%	2.6%	5.1%	0.0%	0.0%	0.1%	0.7%	0.8%	1.1%	0.0%	0.0%	1.8%	9.6%	0.0%	100.0%	
Road 42	42	50	47.4	N	2000-2100	127	43.6%	18.5%	0.1%	11.1%	4.0%	2.5%	4.8%	0.0%	0.0%	0.1%	0.7%	0.8%	1.0%	0.0%	0.0%	1.7%	11.6%	0.0%	100.0%	
Road 42	42	50	47.3	N	2100-2200	107	44.0%	18.2%	0.1%	11.2%	4.0%	2.6%	5.1%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.0%	2.0%	11.6%	0.0%	100.0%	
Road 42	42	50	47.5	N	2200-2300	102	44.5%	20.1%	0.1%	8.9%	3.2%	2.8%	5.5%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.0%	1.7%	12.2%	0.0%	100.0%	
Road 42	42	50	47.9	N	2300-0000	81	41.3%	18.7%	0.1%	9.4%	3.4%	3.0%	5.8%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.0%	1.8%	15.2%	0.0%	100.0%	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2033)

Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles <=15t	07 - Medium Goods Vehicles 15-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus<=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchise d Bus Single	15 - Franchise d Bus Double Deck	16 - Motorcycl	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total
Road 45	45	80	80.0	N	0000-0100	420	57.8%	25.0%	0.0%	3.4%	1.2%	1.1%	2.1%	0.0%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	3.1%	2.9%	0.5%	0.0%	100.0%
Road 45	45	80	80.0	N	0100-0200	273	56.8%	25.4%	0.0%	3.7%	1.3%	1.2%	2.3%	0.0%	0.0%	0.3%	0.3%	0.4%	0.9%	0.0%	3.1%	3.2%	0.6%	0.0%	100.0%
Road 45	45	80	80.0	N	0200-0300	199	55.8%	24.9%	0.0%	4.0%	1.4%	1.3%	2.9%	0.0%	0.0%	0.4%	0.4%	0.7%	0.5%	1.1%	0.0%	3.1%	3.5%	0.7%	100.0%
Road 45	45	80	80.0	N	0300-0400	447	57.8%	24.4%	0.0%	4.4%	1.4%	1.7%	2.9%	0.0%	0.0%	0.4%	0.7%	0.5%	1.2%	0.0%	3.1%	3.9%	0.7%	0.0%	100.0%
Road 45	45	80	80.0	N	0400-0500	177	53.9%	23.8%	0.0%	4.7%	1.7%	1.5%	2.9%	0.0%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	3.1%	4.2%	0.8%	0.0%	100.0%
Road 45	45	80	80.0	N	0500-0600	298	52.9%	23.3%	0.1%	5.1%	1.8%	1.6%	3.1%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	3.0%	4.5%	0.8%	0.0%	100.0%
Road 45	45	80	80.0	N	0600-0700	639	51.8%	22.9%	0.1%	5.4%	1.9%	1.3%	3.3%	0.0%	0.2%	0.7%	1.2%	0.9%	1.4%	0.0%	3.0%	4.9%	0.9%	0.0%	100.0%
Road 45	45	80	73.9	N	0700-0800	1291	50.8%	22.3%	0.1%	5.8%	2.1%	1.8%	3.6%	0.0%	0.1%	0.7%	1.2%	0.8%	1.8%	0.0%	3.0%	5.2%	0.9%	0.0%	100.0%
Road 45	45	80	75.1	N	0800-0900	1445	56.7%	18.1%	0.1%	6.3%	2.3%	1.8%	3.8%	0.0%	0.1%	0.8%	1.1%	0.8%	1.7%	0.0%	2.7%	3.3%	0.9%	0.0%	100.0%
Road 45	45	80	74.5	N	0900-1000	1222	52.2%	18.9%	0.1%	6.9%	3.2%	2.4%	4.5%	0.0%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	2.8%	2.9%	1.2%	0.0%	100.0%
Road 45	45	80	77.3	N	1000-1100	1204	51.3%	19.6%	0.1%	6.9%	3.3%	2.0%	4.3%	0.0%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	2.8%	3.0%	1.2%	0.0%	100.0%
Road 45	45	80	78.5	N	1100-1200	999	49.3%	20.3%	0.1%	9.6%	3.4%	3.0%	5.9%	0.0%	0.1%	0.9%	0.5%	0.8%	0.8%	0.0%	2.8%	1.4%	1.5%	0.0%	100.0%
Road 45	45	73.9	73.9	N	1200-1300	1222	47.7%	18.2%	0.1%	10.0%	3.6%	3.6%	7.1%	0.0%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	3.3%	1.4%	1.8%	0.0%	100.0%
Road 45	45	72	72.0	N	1300-1400	1245	51.8%	17.6%	0.1%	11.4%	3.5%	4.5%	7.9%	0.0%	0.1%	0.7%	0.8%	0.7%	1.2%	0.0%	3.3%	1.4%	1.8%	0.0%	100.0%
Road 45	45	80	71.0	N	1400-1500	1331	45.8%	18.5%	0.1%	10.6%	3.8%	3.6%	7.0%	0.0%	0.1%	0.8%	0.9%	0.6%	1.4%	0.0%	3.2%	1.7%	1.8%	0.0%	100.0%
Road 45	45	70.6	70.6	N	1500-1600	1360	45.5%	18.3%	0.1%	12.2%	4.4%	3.1%	6.1%	0.0%	0.1%	0.8%	0.9%	0.6%	1.4%	0.0%	3.1%	1.6%	1.8%	0.0%	100.0%
Road 45	45	68	68.0	N	1600-1700	1433	44.8%	16.6%	0.1%	12.2%	4.4%	3.1%	6.1%	0.0%	0.1%	0.8%	0.9%	0.6%	1.4%	0.0%	3.1%	1.6%	1.8%	0.0%	100.0%
Road 45	45	59.6	N	1700-1800	1654	51.1%	16.6%	0.1%	8.6%	3.1%	3.9%	3.8%	0.0%	0.1%	0.8%	0.9%	0.8%	1.4%	0.0%	3.4%	4.6%	1.0%	0.0%	100.0%	
Road 45	45	49.2	N	1800-1900	1822	63.8%	15.0%	0.1%	5.3%	1.9%	1.1%	2.2%	0.0%	0.0%	0.1%	1.1%	0.8%	1.7%	0.0%	3.5%	3.0%	0.6%	0.0%	100.0%	
Road 45	45	71.7	N	1900-2000	1441	62.3%	19.5%	0.0%	4.0%	1.4%	1.0%	1.9%	0.0%	0.0%	0.1%	0.9%	0.7%	1.4%	0.0%	4.6%	2.3%	0.5%	0.0%	100.0%	
Road 45	45	77.3	N	2000-2100	1129	57.4%	24.9%	0.0%	4.0%	1.4%	1.0%	1.8%	0.0%	0.0%	0.1%	0.9%	0.7%	1.4%	0.0%	4.6%	2.3%	0.5%	0.0%	100.0%	
Road 45	45	80	78.5	N	2100-2200	1124	58.6%	24.0%	0.0%	4.3%	1.6%	1.0%	2.0%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	3.7%	2.7%	0.5%	0.0%	100.0%
Road 45	45	78.5	N	2200-2300	1094	58.1%	26.2%	0.0%	3.3%	1.2%	1.1%	2.1%	0.0%	0.0%	0.1%	0.4%	0.2%	0.5%	0.0%	4.6%	2.2%	0.5%	0.0%	100.0%	
Road 45	45	80	80.0	N	2300-0100	818	57.3%	22.8%	0.0%	3.7%	1.2%	1.3%	2.3%	0.0%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	4.0%	2.2%	0.5%	0.0%	100.0%
Road 46	46	80	80.0	N	0000-0100	219	58.4%	26.2%	0.0%	3.7%	1.3%	1.2%	2.3%	0.0%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	1.5%	2.9%	0.6%	0.0%	100.0%
Road 46	46	80	80.0	N	0100-0200	142	57.7%	0.0%	4.0%	1.4%	1.3%	2.9%	0.0%	0.0%	0.3%	0.3%	0.6%	0.4%	0.9%	0.0%	1.5%	3.3%	0.7%	0.0%	100.0%
Road 46	46	80	80.0	N	0200-0300	104	56.4%	0.0%	4.4%	1.4%	1.4%	2.7%	0.0%	0.0%	0.4%	0.4%	0.7%	0.5%	1.1%	0.0%	1.5%	3.6%	0.7%	0.0%	100.0%
Road 46	46	80	80.0	N	0300-0400	82	55.3%	24.6%	0.0%	4.7%	1.7%	1.5%	2.9%	0.0%	0.1%	0.4%	0.8%	1.2%	0.0%	1.5%	3.9%	0.8%	0.0%	100.0%	
Road 46	46	80	80.0	N	0400-0500	90	54.3%	24.0%	0.1%	5.1%	1.8%	1.6%	3.2%	0.0%	0.1%	0.5%	0.9%	0.6%	1.4%	0.0%	1.5%	4.2%	0.8%	0.0%	100.0%
Road 46	46	80	80.0	N	0500-0600	156	53.2%	23.4%	0.1%	5.5%	2.0%	1.7%	3.4%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	1.5%	4.5%	0.9%	0.0%	100.0%
Road 46	46	80	80.0	N	0600-0700	695	50.9%	22.3%	0.0%	6.0%	2.2%	1.8%	3.9%	0.0%	0.1%	0.7%	1.0%	0.9%	1.4%	0.0%	1.5%	4.8%	0.9%	0.0%	100.0%
Road 46	46	80	80.0	N	0700-0800	677	51.1%	22.3%	0.1%	6.3%	2.2%	2.0%	3.8%	0.0%	0.1%	0.7%	1.2%	0.8%	1.8%	0.0%	1.4%	5.2%	1.0%	0.0%	100.0%
Road 46	46	80	80.0	N	0800-0900	786	56.9%	18.2%	0.1%	6.8%	2.4%	1.8%	3.7%	0.0%	0.1%	0.8%	1.1%	0.8%	1.7%	0.0%	1.3%	3.3%	0.9%	0.0%	100.0%
Road 46	46	80	80.0	N	0900-1000	645	56.8%	18.5%	0.1%	6.8%	2.5%	2.4%	5.1%	0.0%	0.1%	0.8%	1.1%	0.8%	1.7%	0.0%	1.3%	2.9%	0.9%	0.0%	100.0%
Road 46	46	80	80.0	N	1000-1100	557	49.3%	19.2%	0.1%	10.3%	3.7%	3.3%	6.4%	0.0%	0.1%	0.5%	0.8%	1.2%	0.0%	1.3%	1.5%	1.7%	0.0%	100.0%	
Road 46	46	80	80.0	N	1100-1200	528	49.2%	20.3%	0.1%	10.2%	3.7%	3.2%	6.3%	0.0%	0.1%	0.9%	0.5%	0.3%	0.8%	0.0%	1.3%	1.4%	1.8%	0.0%	100.0%
Road 46	46	80	80.0	N	1200-1300	695	50.9%	22.3%	0.0%	6.0%	2.2%	1.8%	3.9%	0.0%	0.1%	0.7%	1.0%	0.9%	1.4%	0.0%	1.5%	4.8%	0.9%	0.0%	100.0%
Road 46	46	80	80.0	N	1300-1400	826	55.6%	21.4%	0.1%	6.7%	2.4%	2.1%	4.1%	0.0%	0.1%	0.8%	0.8%	0.6%	1.2%	0.0%	1.4%	1.7%	1.1%	0.0%	100.0%
Road 46	46	80	80.0	N	1400-1500	896	54.9%	22.2%	0.1%	5.9%	2.1%	2.0%	3.9%	0.0%	0.1%	1.0%	1.1%	0.8%	1.7%	0.0%	1.3%	2.1%	1.0%	0.0%	100.0%
Road 46	46	80	80.0	N	1500-1600	913	54.7%	22.0%	0.1%	6.6%	2.4%	1.7%	3.4%	0.0%	0.1%	1.0%	1.1%	0.8%	1.7%	0.0%	1.3%	2.9%	0.9%	0.0%	100.0%
Road 46	46	80	80.0	N	1600-1700	527	52.7%	18.7%	0.0%	6.7%	2.5%	1.8%	3.7%	0.0%	0.1%	0.9%	1.3%	0.9%	1.7%	0.0%	2.7%	2.0%	1.8%	0.0%	100.0%
Road 46	46	80	80.0	N	1700-1800	1172	60.4%	18.9%	0.0%	4.5%	1.6%	1.0%	2.0%	0.0%	0.1%	0.9%	1.1%	0.7%	1.6%	0.0%	1.4%	5.2%	0.5%	0.0%	100.0%
Road 46	46	80	80.0	N	1800-1900	1349	69.5%	16.3%	0.0%	2.6%	1.0%	0.6%	1.1%	0.0%	0.0%	0.1%	1.2%	0.8%	1.9%	0.0%	1.3%	3.3%	0.3%	0.0%	100.0%
Road 46	46	80	80.0	N	1900-2000	1085	62.0%	17.0%	0.0%	2.9%	1.1%	0.6%	1.1%	0.0%	0.0%	0.1%	1.2%	0.8%	1.9%	0.0%	1.3%	3.3%	0.3%	0.0%	100.0%
Road 46	46	80	80.0	N	2000-2100	842	62.1%	26.4%	0.2%	2.1%	0.8%	0.5%	0.9%	0.0%	0.0%	0.1%	0.9%	0.6%	1.3%	0.0%	1.6%	2.5%	0.2%	0.0%	100.0%
Road 46	46	80	80.0	N	2100-2200	840	63.3%	26.2%	0.2%	2.2%	0.8%	0.5%	1.0%	0.0%	0.0%	0.1%	0.4%	0.3%	0.7%	0.0%	1.4%	2.9%	0.3%	0.0%	100.0%
Road 46	46	80	80.0	N	2200-2300	721	63.0%	26.2%	0.2%	2.2%	0.8%	0.5%	1.0%	0.0%	0.0%	0.1%	0.4%	0.3%	0.7%	0.0%	1.4%	2.9%	0.3%	0.0%	100.0%
Road 46	46	80	80.0	N	2300-0000	601	61.7%	27.8%	0.0%	1.9%	0.7%	0.6%	1.2%	0.0%	0.0%	0.1%	0.5%	0.3%	0.7%	0.0%	1.5%	2.7%	0.3%	0.0%	100.0%

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters for AERMOD (Year 2033)																									
Route Name	Route ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission by Broad Brunt Approach (Y/N)	Hour	Total Vehicles (Vehicle)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles >3.5t	04 - Light Goods 2.5-3.5t	05 - Light Goods >3.5t	06 Medium Goods Vehicles >3.5t	07 - Medium Goods Vehicles >3.5t	08 - Public Buses	09 - Private Light <=3.5t	10 - Private Light >3.5t	11 - Non-Franchised Bus <=3.5t	12 - Non-Franchised Bus >3.5t	13 - Non-Franchised Bus 1st - 24t	14 - Franchised Bus Single <=3.5t	15 - Franchised Bus Double <=3.5t	16 - Motorcycle	17 - Heavy Goods Vehicle>	18 - Non-Franchised Bus >24t	Total
Road 49	49	50	43.4	N	0000-0100	317	58.6%	26.3%	0.0%	1.8%	0.6%	0.5%	1.0%	0.0%	0.2%	0.5%	0.0%	0.0%	0.8%	0.0%	6.0%	3.0%	0.3%	100.0%	
Road 49	49	50	43.4	N	0100-0200	305	57.2%	25.0%	0.0%	1.7%	0.5%	0.5%	0.9%	0.0%	0.2%	0.5%	0.0%	0.0%	0.8%	0.0%	6.0%	3.0%	0.3%	100.0%	
Road 49	49	50	46.8	N	0200-0300	149	57.2%	25.5%	0.0%	2.0%	0.7%	0.6%	1.2%	0.0%	0.4%	0.7%	0.5%	1.1%	0.0%	6.0%	3.6%	0.3%	100.0%		
Road 49	49	50	47.5	N	0300-0400	117	56.5%	25.1%	0.0%	2.2%	0.8%	0.7%	1.3%	0.0%	0.1%	0.4%	0.8%	0.6%	1.2%	0.0%	6.0%	4.0%	0.3%	100.0%	
Road 49	49	50	47.5	N	0400-0500	143	56.5%	25.1%	0.0%	2.2%	0.8%	0.7%	1.3%	0.0%	0.1%	0.4%	0.8%	0.6%	1.2%	0.0%	6.0%	4.0%	0.3%	100.0%	
Road 49	49	50	45.3	N	0500-0600	220	54.9%	24.2%	0.0%	2.5%	0.9%	0.8%	1.6%	0.0%	0.1%	0.6%	1.0%	1.7%	1.5%	0.0%	6.0%	4.7%	0.4%	100.0%	
Road 49	49	50	39.9	N	0600-0700	469	54.1%	23.7%	0.0%	2.7%	1.0%	0.9%	1.7%	0.0%	0.1%	0.7%	1.1%	0.8%	1.7%	0.0%	6.0%	5.1%	0.4%	100.0%	
Road 49	49	50	34.1	N	0700-0800	494	53.3%	23.6%	0.0%	2.9%	1.0%	0.9%	1.8%	0.0%	0.1%	0.8%	1.2%	0.8%	1.9%	0.0%	6.0%	5.5%	0.5%	100.0%	
Road 49	49	50	34.1	N	0800-0900	1085	51.1%	22.8%	0.0%	3.2%	1.1%	1.0%	2.0%	0.0%	0.1%	0.9%	1.3%	0.9%	2.0%	0.0%	6.0%	6.1%	0.5%	100.0%	
Road 49	49	50	35.0	N	0900-1000	859	56.9%	20.8%	0.0%	4.7%	1.7%	1.3%	2.5%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	5.7%	2.2%	0.7%	100.0%	
Road 49	49	50	36.5	N	1000-1100	728	54.9%	21.3%	0.1%	5.1%	1.8%	1.6%	3.2%	0.0%	0.1%	0.6%	0.9%	0.6%	1.4%	0.0%	5.8%	1.7%	0.8%	100.0%	
Road 49	49	50	37.0	N	1100-1200	691	54.9%	22.0%	0.1%	5.1%	1.8%	1.5%	3.2%	0.0%	0.1%	0.6%	0.9%	0.6%	1.4%	0.0%	5.8%	1.7%	0.8%	100.0%	
Road 49	49	50	38.1	N	1200-1300	568	50.4%	19.4%	0.1%	6.8%	2.4%	2.4%	4.8%	0.0%	0.1%	0.8%	0.9%	0.6%	1.3%	0.0%	7.2%	1.5%	1.3%	100.0%	
Road 49	49	50	38.0	N	1300-1400	571	49.3%	19.0%	0.1%	8.2%	2.9%	2.5%	5.0%	0.0%	0.1%	0.7%	1.0%	0.5%	1.1%	0.0%	7.0%	1.5%	1.3%	100.0%	
Road 49	49	50	38.0	N	1400-1500	616	48.8%	19.6%	0.1%	8.2%	2.9%	2.5%	5.0%	0.0%	0.1%	0.7%	1.0%	0.5%	1.1%	0.0%	7.0%	1.5%	1.3%	100.0%	
Road 49	49	50	37.3	N	1500-1600	628	48.8%	19.6%	0.1%	8.4%	3.0%	2.1%	4.2%	0.0%	0.1%	0.9%	1.0%	0.7%	1.5%	0.0%	6.7%	1.8%	1.1%	100.0%	
Road 49	49	50	36.6	N	1600-1700	689	60.0%	17.5%	0.1%	6.5%	2.3%	2.0%	4.0%	0.0%	0.2%	1.2%	1.5%	1.0%	2.3%	0.0%	7.3%	2.4%	1.0%	100.0%	
Road 49	49	50	36.6	N	1700-1800	793	54.8%	18.6%	0.1%	5.4%	1.8%	1.3%	2.5%	0.0%	0.1%	0.8%	0.9%	0.6%	1.3%	0.0%	7.2%	1.5%	1.3%	100.0%	
Road 49	49	50	34.6	N	1800-1900	989	60.0%	15.0%	0.0%	3.4%	1.2%	0.7%	1.4%	0.0%	0.0%	1.1%	1.5%	0.6%	1.7%	0.0%	7.1%	3.1%	0.4%	100.0%	
Road 49	49	50	36.7	N	1900-2000	725	61.7%	19.3%	0.0%	2.5%	0.9%	0.8%	1.2%	0.0%	0.0%	0.1%	0.9%	0.6%	1.4%	0.0%	8.0%	2.3%	0.3%	100.0%	
Road 49	49	50	36.7	N	2000-2100	565	56.8%	24.1%	0.0%	2.7%	1.0%	0.9%	1.2%	0.0%	0.0%	0.1%	0.8%	0.6%	1.4%	0.0%	8.4%	2.3%	0.3%	100.0%	
Road 49	49	50	38.9	N	2100-2200	559	58.4%	24.1%	0.0%	2.7%	1.0%	0.6%	1.2%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	7.2%	2.3%	0.3%	100.0%	
Road 49	49	50	39.0	N	2200-2300	548	57.4%	26.0%	0.0%	2.1%	0.8%	0.7%	1.3%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.1%	7.9%	2.2%	0.3%	100.0%	
Road 49	49	50	41.1	N	2300-0000	498	56.7%	25.5%	0.0%	2.4%	0.8%	0.7%	1.5%	0.0%	0.0%	0.1%	0.4%	0.3%	0.7%	0.1%	7.9%	2.5%	0.4%	100.0%	
Road 50	50	50	42.2	N	0000-0100	422	59.4%	27.8%	0.0%	2.1%	0.8%	0.7%	1.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.7%	0.1%	8.0%	2.8%	0.3%	100.0%	
Road 50	50	50	49.6	N	0100-0200	15	28.8%	12.7%	0.2%	22.7%	8.2%	7.2%	14.1%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.0%	1.6%	3.7%	0.7%	100.0%
Road 50	50	49.7	N	0200-0300	11	26.8%	11.9%	0.2%	23.7%	8.5%	7.5%	14.6%	0.0%	0.0%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	0.0%	1.7%	3.8%	0.0%	100.0%
Road 50	50	49.7	N	0300-0400	9	25.2%	11.5%	0.2%	24.6%	8.5%	7.5%	14.7%	0.0%	0.0%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	0.0%	1.6%	3.8%	0.0%	100.0%
Road 50	50	49.7	N	0400-0500	11	23.7%	10.5%	0.3%	25.4%	9.1%	8.0%	15.7%	0.0%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.0%	0.0%	1.8%	4.1%	0.0%	100.0%
Road 50	50	49.5	N	0500-0600	19	22.3%	9.8%	0.3%	26.2%	9.4%	8.2%	16.1%	0.0%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.0%	0.0%	1.9%	4.2%	0.0%	100.0%
Road 50	50	49.5	N	0600-0700	43	21.8%	8.4%	0.3%	26.9%	9.7%	8.6%	17.0%	0.0%	0.0%	0.3%	0.4%	0.3%	0.6%	0.0%	0.0%	0.0%	2.0%	4.3%	0.0%	100.0%
Road 50	50	47.4	N	0700-0800	91	19.8%	8.6%	0.3%	27.6%	9.9%	8.6%	17.0%	0.0%	0.0%	0.3%	0.5%	0.3%	0.7%	0.0%	0.0%	0.0%	2.0%	4.4%	0.0%	100.0%
Road 50	50	47.0	N	0800-0900	107	21.6%	6.9%	0.3%	29.3%	10.5%	8.2%	16.1%	0.0%	0.0%	0.3%	0.4%	0.3%	0.6%	0.0%	0.0%	0.0%	1.9%	4.2%	0.0%	100.0%
Road 50	50	46.8	N	0900-1000	110	15.8%	5.3%	0.1%	33.1%	11.2%	9.0%	17.2%	0.0%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.0%	0.0%	1.8%	4.3%	0.0%	100.0%
Road 50	50	46.9	N	1000-1100	105	13.6%	5.3%	0.3%	32.3%	11.6%	10.2%	20.1%	0.0%	0.0%	0.1%	0.2%	0.2%	0.3%	0.0%	0.0%	0.0%	0.4%	5.2%	0.0%	100.0%
Road 50	50	47.1	N	1100-1200	98	13.7%	5.6%	0.3%	32.4%	11.6%	10.1%	19.9%	0.0%	0.0%	0.2%	0.1%	0.1%	0.2%	0.0%	0.0%	0.0%	0.4%	5.3%	0.0%	100.0%
Road 50	50	48.0	N	1200-1300	41	6.4%	3.8%	0.2%	32.6%	12.2%	10.4%	20.5%	0.0%	0.0%	0.1%	0.2%	0.1%	0.2%	0.0%	0.0%	0.0%	0.2%	5.4%	0.0%	100.0%
Road 50	50	48.5	N	1300-1400	46	4.6%	1.9%	0.4%	38.1%	13.7%	11.8%	23.2%	0.0%	0.0%	0.1%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.1%	5.1%	0.0%	100.0%
Road 50	50	48.5	N	1400-1500	46	5.0%	2.0%	0.4%	36.3%	13.0%	12.3%	24.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.0%	0.2%	6.3%	0.0%	100.0%
Road 50	50	48.5	N	1500-1600	48	4.8%	1.9%	0.4%	41.1%	14.8%	10.4%	20.5%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.0%	0.2%	5.4%	0.0%	100.0%
Road 50	50	48.6	N	1600-1700	45	4.6%	1.9%	0.4%	37.1%	14.2%	12.8%	24.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.0%	0.2%	5.4%	0.0%	100.0%
Road 50	50	48.8	N	1700-1800	41	8.0%	2.5%	0.4%	40.9%	14.7%	9.3%	12.8%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.0%	0.7%	4.8%	0.0%	100.0%
Road 50	50	49.1	N	1800-1900	30	14.7%	3.5%	0.4%	36.3%	13.8%	8.0%	15.7%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.0%	0.0%	0.7%	4.1%	0.0%	100.0%
Road 50	50	49.4	N	1900-2000	33	17.1%	3.3%	0.4%	34.8%	12.4%	8.3%	16.2%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.0%	0.0%	0.8%	4.0%	0.0%	100.0%
Road 50	50	49.5	N	2000-2100	16	15.1%	6.5%	0.4%	35.9%	12.9%	7.9%	15.6%	0.0%	0.0%	0.0%	0.2%	0.2%	0.3%	0.0%	0.0%	0.0%	0.7%	4.1%	0.0%	100.0%
Road 50	50	49.5	N	2100-2200	16	15.3%	6.6%	0.4%	35.6%	12.8%	8.2%	16.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.0%	0.7%	4.2%	0.0%	100.0%
Road 50	50	49.6	N	2200-2300	14	16.1%	7.2%	0.5%	35.9%	12.9%	8.5%	16.2%	0.0%	0.0%	0.0%	0.2%	0.2%	0.3%	0.0%	0.0%	0.0%	0.7%	4.2%	0.0%	100.0%
Road 50	50	49.7	N	2300-0000	12	15.1%	6.8%	0.3%	31.1%	11.2%	9.9%	19.4%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.0%	0.7%	4.1%	0.0%	100.0%

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2033)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission by Broad Brunt Approach (Y/N)	Hour	Total Vehicles (Vehicle)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles >3.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles >3.5t	07 - Medium Goods Vehicles >3.5t	08 - Public Buses	09 - Private Light >3.5t	10 - Private Light >3.5t	11 - Non-Franchised Bus >3.5t	12 - Non-Franchised Bus 1st	13 - Non-Franchised Bus 2nd	14 - Franchised Bus Single	15 - Franchised Bus Double	16 - Motorcyclist	17 - Heavy Goods Vehicles	18 - Non-Franchised Bus >3.5t	Total	
Road 53	53	50	28.1	N	0000-0100	26	23.4	10.5%	LOV3	LOV4	LOV6	HGV7	HGV8	PLB	PV4	PV5	NFB6	NFB7	NFB8	FBSD	FBDG	MC	HGV9	NFB9		
Road 53	53	50	28.1	N	0100-0200	18	22.1	7.5%																	100.0%	
Road 53	53	50	29.0	N	0200-0300	13	20.9	9.3%	0.2%	18.4%	6.8%	5.5%	11.4%	22.0%	0.0%	0.1%	0.3%	0.2%	0.4%	0.0%	0.0%	0.3%	1.3%	3.0%	0.0%	100.0%
Road 53	53	50	29.2	N	0300-0400	11	19.8%	8.8%	0.2%	19.2%	6.9%	6.1%	11.9%	21.0%	0.0%	0.2%	0.3%	0.2%	0.4%	0.0%	0.0%	0.4%	1.4%	3.1%	0.0%	100.0%
Road 53	53	50	28.8	N	0400-0500	12	18.8%	8.8%	0.2%	22.4%	7.5%	6.8%	12.0%	20.0%	0.0%	0.2%	0.3%	0.2%	0.4%	0.0%	0.0%	0.4%	1.4%	3.1%	0.0%	100.0%
Road 53	53	50	28.3	N	0500-0600	22	17.8%	7.8%	0.2%	20.8%	6.5%	6.5%	12.8%	20.4%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	0.0%	0.5%	1.5%	3.3%	0.0%	100.0%
Road 53	53	50	28.3	N	0600-0700	49	16.9%	7.4%	0.2%	21.5%	7.7%	6.7%	13.2%	19.9%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	0.0%	0.6%	1.6%	3.5%	0.0%	100.0%
Road 53	53	50	28.4	N	0700-0800	60	16.0%	7.0%	0.2%	22.2%	8.0%	6.9%	13.8%	19.5%	0.0%	0.2%	0.4%	0.3%	0.8%	0.0%	0.0%	0.6%	1.6%	3.6%	0.0%	100.0%
Road 53	53	50	28.2	N	0800-0900	116	15.0%	6.0%	0.2%	24.7%	8.8%	7.8%	14.8%	18.0%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	0.0%	0.7%	1.7%	3.7%	0.0%	100.0%
Road 53	53	50	24.1	N	0900-1000	119	13.4%	4.9%	0.3%	27.9%	10.0%	7.6%	14.9%	15.6%	0.0%	0.1%	0.2%	0.2%	0.3%	0.0%	0.0%	0.5%	3.9%	0.0%	100.0%	
Road 53	53	50	24.2	N	1000-1100	112	11.7%	4.5%	0.3%	27.5%	9.9%	8.7%	17.2%	14.6%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	0.4%	4.5%	0.0%	100.0%	
Road 53	53	50	24.2	N	1100-1200	106	11.6%	4.5%	0.3%	27.4%	9.8%	8.6%	17.1%	14.5%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	0.4%	4.5%	0.0%	100.0%	
Road 53	53	50	24.1	N	1200-1300	128	24.7%	9.5%	0.2%	21.7%	7.8%	7.8%	15.3%	16.4%	0.0%	0.1%	0.4%	0.4%	0.3%	0.6%	0.0%	0.0%	0.7%	4.0%	0.0%	100.0%
Road 53	53	50	24.0	N	1300-1400	136	22.8%	8.8%	0.3%	24.8%	8.9%	7.7%	15.1%	15.5%	0.0%	0.3%	0.3%	0.2%	0.5%	0.0%	0.0%	0.0%	0.7%	3.9%	0.0%	100.0%
Road 53	53	50	23.8	N	1400-1500	141	22.8%	8.8%	0.3%	24.7%	8.9%	7.7%	15.1%	15.4%	0.0%	0.3%	0.3%	0.2%	0.5%	0.0%	0.0%	0.0%	0.7%	3.9%	0.0%	100.0%
Road 53	53	50	23.9	N	1500-1600	145	23.4%	9.4%	0.3%	26.1%	9.4%	6.6%	13.0%	5.5%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	0.0%	0.8%	3.4%	0.4%	100.0%	
Road 53	53	50	23.9	N	1600-1700	144	26.6%	9.2%	0.2%	22.0%	7.9%	6.9%	13.5%	5.8%	0.1%	0.6%	0.8%	0.5%	1.2%	0.0%	0.0%	1.3%	3.5%	0.6%	100.0%	
Road 53	53	50	23.8	N	1700-1800	150	23.3%	10.0%	0.2%	21.4%	7.8%	6.8%	13.0%	5.7%	0.1%	0.6%	0.7%	0.6%	1.0%	0.0%	0.0%	1.3%	3.5%	0.6%	100.0%	
Road 53	53	50	24.2	N	1800-1900	141	45.0%	10.6%	0.2%	15.4%	5.5%	3.2%	8.3%	7.4%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	0.0%	1.2%	2.1%	1.6%	0.0%	100.0%
Road 53	53	50	24.6	N	1900-2000	108	45.8%	14.3%	0.1%	12.2%	4.4%	2.9%	5.7%	9.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	0.0%	0.7%	1.7%	1.5%	0.0%	100.0%
Road 53	53	50	24.9	N	2000-2100	85	41.8%	17.7%	0.1%	12.4%	4.6%	2.8%	5.9%	10.0%	0.0%	0.1%	0.4%	0.2%	0.4%	0.0%	0.0%	0.7%	1.7%	1.5%	0.0%	100.0%
Road 53	53	50	24.9	N	2100-2200	85	42.4%	17.5%	0.1%	13.0%	4.7%	3.0%	5.9%	9.1%	0.0%	0.1%	0.4%	0.2%	0.5%	0.0%	0.0%	0.7%	1.9%	1.5%	0.0%	100.0%
Road 53	53	50	25.0	N	2200-2300	80	43.3%	19.7%	0.1%	10.4%	3.7%	3.3%	6.5%	8.5%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.0%	0.7%	1.7%	1.7%	0.0%	100.0%
Road 53	53	50	26.2	N	2300-0000	61	41.8%	18.8%	0.1%	11.3%	4.1%	3.6%	7.0%	8.4%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.0%	0.9%	1.8%	0.8%	0.0%	100.0%
Road 54	54	50	24.4	N	0000-0100	50	36.5%	11.0%	0.2%	24.5%	9.7%	7.7%	15.3%	17.2%	0.0%	0.2%	0.2%	0.2%	0.2%	0.0%	0.0%	0.2%	2.4%	2.8%	0.0%	100.0%
Road 54	54	50	27.8	N	0100-0200	33	35.0%	15.7%	0.1%	13.2%	4.7%	4.2%	8.2%	13.3%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.0%	2.0%	2.1%	0.0%	100.0%	
Road 54	54	50	28.3	N	0200-0300	25	33.6%	15.0%	0.1%	14.1%	5.0%	4.4%	8.7%	13.1%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.0%	2.1%	2.3%	0.0%	100.0%	
Road 54	54	50	28.6	N	0300-0400	20	32.0%	14.9%	0.3%	14.9%	5.3%	4.7%	9.2%	14.9%	0.0%	0.2%	0.4%	0.3%	0.7%	0.0%	0.0%	2.1%	2.3%	0.0%	100.0%	
Road 54	54	50	28.5	N	0400-0500	23	30.8%	13.6%	0.2%	15.6%	5.6%	4.9%	9.7%	12.7%	0.0%	0.3%	0.5%	0.3%	0.8%	0.0%	0.0%	2.4%	2.5%	0.0%	100.0%	
Road 54	54	50	27.2	N	0500-0600	40	29.5%	13.0%	0.2%	16.4%	5.9%	5.1%	10.1%	12.2%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	0.0%	2.5%	2.6%	0.0%	100.0%	
Road 54	54	50	28.4	N	0600-0700	68	28.4%	13.6%	0.2%	17.4%	6.4%	5.6%	10.6%	12.4%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	0.0%	2.6%	2.7%	0.0%	100.0%	
Road 54	54	50	23.4	N	0700-0800	182	27.0%	11.8%	0.2%	17.8%	6.4%	5.6%	11.0%	12.2%	0.1%	0.4%	0.6%	0.4%	0.9%	0.0%	0.0%	2.8%	2.9%	0.0%	100.0%	
Road 54	54	50	23.1	N	0800-0900	209	30.5%	9.8%	0.2%	16.8%	7.0%	5.5%	10.8%	12.6%	0.1%	0.4%	0.6%	0.4%	0.9%	0.0%	0.0%	1.9%	2.8%	0.8%	100.0%	
Road 54	54	50	23.2	N	0900-1000	201	28.3%	8.6%	0.2%	16.8%	7.2%	6.4%	11.2%	12.6%	0.1%	0.4%	0.6%	0.4%	0.9%	0.0%	0.0%	1.9%	2.8%	0.8%	100.0%	
Road 54	54	50	23.2	N	1000-1100	185	21.1%	8.2%	0.2%	23.8%	8.5%	7.6%	14.9%	9.8%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	0.0%	0.6%	3.9%	0.0%	100.0%	
Road 54	54	50	23.4	N	1100-1200	175	21.1%	8.7%	0.2%	23.7%	8.5%	7.4%	14.6%	10.2%	0.0%	0.4%	0.2%	0.1%	0.3%	0.0%	0.0%	0.6%	3.8%	0.0%	100.0%	
Road 54	54	50	23.4	N	1200-1300	126	11.1%	20.3%	0.2%	20.8%	8.5%	7.6%	14.6%	10.2%	0.0%	0.4%	0.2%	0.1%	0.3%	0.0%	0.0%	0.6%	3.8%	0.0%	100.0%	
Road 54	54	50	23.9	N	1300-1400	132	10.0%	3.9%	0.3%	32.4%	11.6%	10.0%	19.8%	5.8%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.3%	5.2%	0.0%	100.0%	
Road 54	54	50	23.8	N	1400-1500	133	10.4%	4.3%	0.3%	30.4%	10.9%	10.3%	20.2%	6.4%	0.0%	0.2%	0.2%	0.1%	0.3%	0.0%	0.0%	0.4%	5.3%	0.0%	100.0%	
Road 54	54	50	23.8	N	1500-1600	137	10.4%	4.2%	0.4%	34.8%	12.5%	8.6%	17.3%	5.8%	0.0%	0.2%	0.2%	0.1%	0.3%	0.0%	0.0%	0.4%	4.5%	0.0%	100.0%	
Road 54	54	50	23.8	N	1600-1700	131	12.3%	3.8%	0.3%	31.6%	11.6%	10.0%	16.0%	5.8%	0.0%	0.3%	0.3%	0.2%	0.3%	0.0%	0.0%	0.4%	4.5%	0.0%	100.0%	
Road 54	54	50	24.0	N	1700-1800	128	15.9%	5.0%	0.3%	31.9%	11.4%	7.2%	14.2%	7.8%	0.0%	0.2%	0.3%	0.2%	0.4%	0.0%	0.0%	1.4%	7.3%	0.0%	100.0%	
Road 54	54	50	24.5	N	1800-1900	104	25.8%	6.1%	0.3%	26.4%	9.5%	5.5%	10.8%	10.1%	0.0%	0.0%	0.5%	0.3%	0.7%	0.0%	0.0%	1.2%	2.8%	0.0%	100.0%	
Road 54	54	50	24.8	N	1900-2000	76	27.6%	6.1%	0.3%	22.2%	8.2%	5.3%	10.3%	10.3%	0.0%	0.0%	0.5%	0.3%	0.7%	0.0%	0.0%	1.2%	2.8%	0.0%	100.0%	
Road 54	54	50	25.7	N	2000-2100	60	24.9%	10.6%	0.2%	22.8%	8.2%	5.0%	9.9%	13.5%	0.0%	0.4%	0.5%	0.5%	0.5%	0.0%	0.0%	1.0%	2.6%	0.0%	100.0%	
Road 54	54	50	25.8	N	2100-2200	61	25.2%	10.4%	0.2%	23.0%	8.3%	5.3%	10.4%	11.2%	0.0%	0.0%	0.5%	0.5%	0.5%	0.0%	0.0%	1.1%	2.7%	0.0%	100.0%	
Road 54	54	50	26.1	N	2200-2300	55	26.1%	10.9%	0.2%	23.5%	8.5%	5.1%	10.9%	11.2%	0.0%	0.0%	0.5%	0.5%	0.5%	0.0%	0.0%	1.1%	2.7%	0.0%	100.0%	
Road 54	54	50	26.9	N	2300-0000	43	25.0%	11.3%	0.2%	20.2%	7.3%	6.4%	12.6%	11.9%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	1.1%	3.3%	0.0%	100.0%	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2033)																										
Route Name	Route ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles >3.5t	07 - Medium Goods Vehicles >3.5t	08 - Public Buses	09 - Private Light Vehicle <=3.5t	10 - Private Light Vehicle >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 1st	13 - Non-franchised Bus 24t	14 - Franchised Bus Single End	15 - Franchised Bus Double End	16 - Motorcycls	17 - Heavy Goods Vehicles	18 - Non-franchised Bus >24t	Total	
Route 51	51	80	80.0	N	0000-0100	623	58.0%	26.0%	0.0%	3.0%	1.1%	0.9%	1.8%	0.6%	0.0%	0.2%	0.5%	0.8%	0.0%	3.1%	2.9%	0.5%	0.0%	100.0%		
Route 51	51	80	80.0	N	0100-0200	405	57.1%	23.0%	0.0%	3.0%	1.2%	1.0%	1.2%	0.0%	0.0%	0.4%	0.3%	0.4%	0.0%	3.1%	2.9%	0.5%	0.0%	100.0%		
Route 51	51	80	80.0	N	0200-0300	295	56.2%	25.0%	0.0%	3.0%	1.3%	1.1%	2.2%	0.7%	0.0%	0.4%	0.7%	0.5%	1.1%	0.0%	3.1%	3.6%	0.6%	0.0%	100.0%	
Route 51	51	80	80.0	N	0300-0400	233	55.2%	24.0%	0.0%	3.0%	1.4%	1.2%	2.4%	0.7%	0.1%	0.4%	0.8%	0.6%	1.2%	0.0%	3.1%	3.9%	0.6%	0.0%	100.0%	
Route 51	51	80	80.0	N	0400-0500	245	56.0%	24.0%	0.0%	4.2%	1.5%	1.2%	2.6%	1.2%	0.0%	0.5%	0.8%	0.4%	1.4%	0.0%	3.1%	4.2%	0.6%	0.0%	100.0%	
Route 51	51	80	80.0	N	0500-0600	441	53.3%	23.5%	0.0%	4.5%	1.6%	1.4%	2.8%	0.7%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	3.1%	4.6%	0.7%	0.0%	100.0%	
Route 51	51	80	80.0	N	0600-0700	843	52.3%	22.5%	0.1%	4.8%	1.7%	1.5%	3.0%	0.7%	0.1%	0.7%	1.1%	0.7%	1.6%	0.0%	3.1%	4.9%	0.8%	0.0%	100.0%	
Route 51	51	80	80.0	N	0700-0800	904	51.4%	22.4%	0.1%	5.1%	1.8%	1.6%	3.2%	0.7%	0.1%	0.8%	1.2%	0.8%	1.8%	0.0%	3.0%	5.2%	0.8%	0.0%	100.0%	
Route 51	51	80	80.0	N	0800-0900	918	50.7%	18.4%	0.1%	5.3%	1.8%	1.7%	3.3%	0.7%	0.1%	0.8%	1.2%	0.8%	1.8%	0.0%	2.9%	5.3%	0.8%	0.0%	100.0%	
Route 51	51	80	80.0	N	0900-1000	1788	53.1%	19.2%	0.1%	8.0%	2.9%	2.2%	4.3%	0.7%	0.1%	0.5%	0.9%	0.6%	1.4%	0.0%	2.8%	2.1%	1.1%	0.0%	100.0%	
Route 51	51	80	80.0	N	1000-1100	1536	50.0%	19.6%	0.1%	8.6%	3.1%	2.7%	5.4%	0.7%	0.1%	0.6%	0.8%	0.6%	1.3%	0.0%	2.8%	2.1%	1.4%	0.0%	100.0%	
Route 51	51	80	80.0	N	1100-1200	1546	50.0%	19.6%	0.1%	8.6%	3.1%	2.7%	5.4%	0.7%	0.1%	0.6%	0.8%	0.6%	1.3%	0.0%	2.8%	2.1%	1.4%	0.0%	100.0%	
Route 51	51	80	80.0	N	1200-1300	962	49.4%	7.5%	0.2%	20.2%	7.3%	7.3%	14.3%	1.0%	0.0%	0.3%	0.3%	0.2%	0.4%	0.0%	17.2%	0.6%	3.7%	0.0%	100.0%	
Route 51	51	80	80.0	N	1300-1400	1019	48.8%	6.9%	0.2%	23.1%	8.3%	7.2%	14.1%	0.9%	0.0%	0.3%	0.3%	0.2%	0.4%	0.1%	15.8%	0.5%	3.7%	0.0%	100.0%	
Route 51	51	80	80.0	N	1400-1500	1056	48.1%	7.1%	0.2%	23.1%	8.3%	7.2%	14.2%	0.9%	0.0%	0.3%	0.3%	0.2%	0.4%	0.1%	15.8%	0.5%	3.7%	0.0%	100.0%	
Route 51	51	80	80.0	N	1500-1600	1080	48.5%	7.4%	0.3%	24.5%	8.6%	6.2%	12.2%	0.9%	0.0%	0.3%	0.4%	0.3%	0.6%	0.1%	15.8%	0.7%	3.2%	0.0%	100.0%	
Route 51	51	80	80.0	N	1600-1700	1098	20.6%	7.1%	0.2%	26.2%	7.3%	6.3%	12.4%	0.9%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	18.3%	1.0%	3.2%	0.0%	100.0%	
Route 51	51	80	80.0	N	1700-1800	1143	24.7%	4.6%	0.7%	24.7%	7.4%	6.4%	12.7%	0.9%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	18.3%	1.0%	3.2%	0.0%	100.0%	
Route 51	51	80	80.0	N	1800-1900	1091	34.3%	8.1%	0.1%	13.9%	5.0%	2.9%	5.7%	1.2%	0.0%	0.1%	0.6%	0.4%	0.9%	0.1%	23.6%	1.6%	1.5%	0.0%	100.0%	
Route 51	51	80	80.0	N	1900-2000	856	34.0%	10.0%	0.1%	10.7%	3.9%	2.6%	5.0%	1.4%	0.0%	0.1%	0.5%	0.4%	0.8%	0.1%	27.3%	1.3%	1.3%	0.0%	100.0%	
Route 51	51	80	80.0	N	2000-2100	679	30.7%	13.1%	0.1%	11.2%	4.0%	2.5%	4.0%	1.4%	0.0%	0.0%	0.4%	0.3%	0.7%	0.0%	26.1%	1.5%	1.4%	0.0%	100.0%	
Route 51	51	80	80.0	N	2100-2200	660	32.2%	13.3%	0.1%	11.7%	4.2%	2.6%	3.3%	1.4%	0.0%	0.0%	0.2%	0.2%	0.8%	0.0%	25.7%	1.5%	1.4%	0.0%	100.0%	
Route 51	51	80	80.0	N	2200-2300	638	32.1%	14.5%	0.1%	9.1%	3.3%	2.9%	5.7%	1.3%	0.0%	0.1%	0.2%	0.1%	0.3%	0.2%	27.6%	1.2%	1.5%	0.0%	100.0%	
Route 51	51	80	80.0	N	2300-0000	488	30.9%	13.9%	0.1%	9.9%	3.0%	3.1%	6.2%	1.3%	0.0%	0.1%	0.2%	0.2%	0.4%	0.2%	26.9%	1.4%	1.6%	0.0%	100.0%	
Route 52	52	40	40.0	N	0000-0100	67	3.5%	14.9%	0.0%	38.0%	13.8%	12.2%	23.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	12.1%	0.8%	6.3%	0.0%	100.0%	
Route 52	52	50	49.4	N	0100-0200	19	3.1%	1.4%	0.4%	38.6%	13.8%	12.2%	23.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.2%	6.2%	0.0%	100.0%	
Route 52	52	40	49.5	N	0200-0300	15	2.8%	1.3%	0.4%	38.8%	13.9%	12.3%	24.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.2%	6.3%	0.0%	100.0%	
Route 52	52	40	49.6	N	0300-0400	13	2.6%	1.2%	0.4%	39.0%	14.0%	12.3%	24.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.2%	6.3%	0.0%	100.0%	
Route 52	52	50	49.5	N	0400-0500	15	2.4%	1.0%	0.4%	39.1%	14.0%	12.3%	24.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.2%	6.3%	0.0%	100.0%	
Route 52	52	50	49.5	N	0500-0600	28	2.2%	1.0%	0.4%	39.2%	14.1%	12.3%	24.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.2%	6.3%	0.0%	100.0%	
Route 52	52	40	49.7	N	0600-0700	65	2.0%	0.9%	0.4%	39.3%	14.2%	12.3%	24.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.2%	6.3%	0.0%	100.0%	
Route 52	52	50	49.5	N	0700-0800	139	1.8%	0.8%	0.4%	39.5%	14.2%	12.4%	24.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.2%	6.3%	0.0%	100.0%	
Route 52	52	50	44.7	N	0800-0900	167	2.0%	0.8%	0.4%	41.4%	14.9%	11.8%	22.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	6.0%	0.0%	100.0%	
Route 52	52	50	44.7	N	0900-1000	180	1.5%	1.0%	0.4%	42.8%	15.5%	12.3%	24.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	6.0%	0.0%	100.0%	
Route 52	52	50	43.9	N	1000-1100	187	1.1%	0.4%	0.4%	39.8%	14.3%	12.6%	24.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	6.5%	0.0%	100.0%	
Route 52	52	50	44.3	N	1100-1200	175	1.1%	0.5%	0.4%	40.0%	14.4%	12.5%	24.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	6.4%	0.0%	100.0%	
Route 52	52	50	44.1	N	1200-1300	182	1.0%	0.5%	0.4%	39.4%	14.3%	12.5%	24.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	6.4%	0.0%	100.0%	
Route 52	52	50	43.5	N	1300-1400	205	2.8%	1.1%	0.4%	39.2%	14.1%	12.1%	23.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	2.2%	0.0%	100.0%	
Route 52	52	50	43.5	N	1400-1500	203	3.0%	1.2%	0.4%	37.4%	13.4%	12.7%	24.9%	0.0%	0.0%	0.1%	0.1%	0.0%	0.1%	0.0%	0.1%	6.5%	0.0%	100.0%		
Route 52	52	50	43.3	N	1500-1600	212	3.0%	1.2%	0.4%	42.9%	15.2%	10.7%	21.1%	0.0%	0.0%	0.1%	0.1%	0.0%	0.1%	0.0%	0.0%	6.1%	0.5%	0.0%	100.0%	
Route 52	52	50	43.0	N	1600-1700	196	3.6%	1.2%	0.4%	39.6%	13.8%	12.0%	24.6%	0.0%	0.0%	0.2%	0.2%	0.0%	0.1%	0.0%	0.0%	6.1%	0.5%	0.0%	100.0%	
Route 52	52	50	44.5	N	1700-1800	178	5.0%	1.6%	0.4%	42.9%	15.4%	9.7%	19.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.4%	5.0%	0.0%	100.0%	
Route 52	52	50	46.3	N	1800-1900	124	9.5%	2.2%	0.4%	41.7%	15.0%	8.7%	17.1%	0.0%	0.0%	0.2%	0.1%	0.3%	0.0%	0.0%	0.5%	4.4%	0.0%	100.0%		
Route 52	52	50	47.6	N	1900-2000	82	11.2%	2.3%	0.4%	42.9%	15.4%	8.1%	18.0%	0.0%	0.0%	0.3%	0.2%	0.1%	0.1%	0.0%	0.5%	4.4%	0.0%	100.0%		
Route 52	52	50	48.1	N	2000-2100	65	10.1%	4.3%	0.4%	39.7%	14.5%	8.7%	17.2%	0.0%	0.0%	0.0%	0.1%	0.2%	0.0%	0.4%	0.5%	4.4%	0.0%	100.0%		
Route 52	52	50	48.0	N	2100-2200	67	10.0%	4.1%	0.4%	39.2%	14.1%	9.0%	17.7%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.5%	4.6%	0.0%	100.0%		
Route 52	52	50	48.2	N	2200-2300	58	11.6%	3.7%	0.4%	39.7%	14.5%	8.7%	17.6%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.5%	4.6%	0.0%	100.0%		
Route 52	52	50	48.5	N	2300-0000	48	9.5%	4.5%	0.4%	34.3%	12.3%	10.5%	21.4%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.4%	5.6%	0.0%	100.0%		

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2033)																										
Route Name	Route ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Brood Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles <=2t	07 - Medium Goods Vehicles >2t	08 - Public Buses	09 - Private <=3t	10 - Private >3.5t	11 - Non-franchised Bus <=6t	12 - Non-franchised Bus 1st	13 - Non-franchised Bus 2nd	14 - Franchised Bus Single	15 - Franchised Bus Double	16 - Motorcyclist	17 - Heavy Goods Vehicles	18 - Non-franchised Bus >24t	Total	
Route 101	101	80	80.0	N	0000-0100	677	56.9%	25.5%	0.1%	5.2%	1.9%	1.6%	3.2%	0.0%	0.2%	0.2%	0.5%	0.8%	0.0%	0%	2.9%	0.8%	0%	100.0%		
Route 101	101	80	80.0	N	0100-0200	442	55.2%	24.9%	0.1%	5.2%	1.9%	1.6%	3.2%	0.0%	0.2%	0.2%	0.5%	0.8%	0.0%	0%	2.9%	0.8%	0%	100.0%		
Route 101	101	80	80.0	N	0200-0300	324	54.5%	24.3%	0.1%	6.1%	2.2%	1.9%	3.8%	0.0%	0.0%	0.3%	0.7%	0.5%	1.0%	0.0%	3.5%	1.0%	0%	100.0%		
Route 101	101	80	80.0	N	0300-0400	327	53.1%	23.7%	0.1%	6.6%	2.4%	2.1%	4.1%	0.0%	0.1%	0.4%	0.8%	0.5%	1.2%	0.0%	3.7%	1.1%	0%	100.0%		
Route 101	101	80	80.0	N	0400-0500	281	51.1%	23.1%	0.1%	7.1%	2.6%	2.2%	4.6%	0.0%	0.1%	0.6%	1.2%	0.6%	1.5%	0.0%	4.0%	1.2%	0%	100.0%		
Route 101	101	80	80.0	N	0500-0600	493	50.9%	22.4%	0.1%	7.6%	2.7%	2.4%	4.7%	0.0%	0.1%	0.6%	0.9%	0.6%	1.4%	0.0%	4.3%	1.2%	0%	100.0%		
Route 101	101	80	80.0	N	0600-0700	1060	49.7%	21.7%	0.1%	8.1%	2.9%	2.5%	5.0%	0.0%	0.1%	0.6%	1.0%	0.7%	1.6%	0.0%	4.6%	1.3%	0%	100.0%		
Route 101	101	80	80.0	N	0700-0800	2151	48.6%	21.1%	0.1%	8.6%	3.1%	2.7%	5.3%	0.0%	0.1%	0.7%	1.1%	0.8%	1.7%	0.0%	4.9%	1.4%	0%	100.0%		
Route 101	101	80	80.0	N	0800-0900	2636	47.3%	17.3%	0.1%	9.1%	3.3%	2.7%	5.8%	0.0%	0.1%	0.7%	1.1%	0.8%	1.7%	0.0%	5.1%	1.4%	0%	100.0%		
Route 101	101	80	80.0	N	0900-1000	2111	47.9%	17.4%	0.1%	12.8%	4.6%	3.5%	6.9%	0.0%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	1.9%	1.8%	0%	100.0%		
Route 101	101	80	80.0	N	1000-1100	1805	44.8%	17.4%	0.1%	13.6%	4.9%	4.3%	8.5%	0.0%	0.1%	0.5%	0.7%	0.5%	1.1%	0.0%	1.4%	2.2%	0%	100.0%		
Route 101	101	80	80.0	N	1100-1200	1749	44.4%	17.3%	0.1%	15.3%	4.9%	4.5%	8.3%	0.0%	0.1%	0.5%	0.7%	0.5%	1.1%	0.0%	1.3%	2.3%	0%	100.0%		
Route 101	101	80	80.0	N	1200-1300	1840	37.1%	14.3%	0.2%	17.1%	6.1%	6.1%	12.1%	0.0%	0.1%	0.6%	0.6%	0.4%	1.0%	0.0%	1.1%	3.1%	0%	100.0%		
Route 101	101	80	80.0	N	1300-1400	2083	34.9%	13.4%	0.2%	19.8%	7.1%	6.1%	12.0%	0.0%	0.1%	0.5%	0.5%	0.3%	0.8%	0.0%	1.1%	3.1%	0%	100.0%		
Route 101	101	80	80.0	N	1400-1500	2126	33.5%	13.0%	0.2%	21.4%	7.1%	6.1%	11.9%	0.0%	0.1%	0.5%	0.5%	0.3%	0.7%	0.0%	1.1%	3.1%	0%	100.0%		
Route 101	101	80	80.0	N	1500-1600	2190	35.2%	14.1%	0.2%	20.6%	7.4%	5.2%	10.3%	0.0%	0.1%	0.6%	0.7%	0.5%	1.1%	0.0%	1.3%	2.7%	0%	100.0%		
Route 101	101	80	80.0	N	1600-1700	2250	38.8%	13.4%	0.2%	16.8%	6.0%	5.3%	10.3%	0.0%	0.1%	0.9%	1.1%	0.8%	1.7%	0.0%	1.8%	2.7%	0%	100.0%		
Route 101	101	80	80.0	N	1700-1800	1836	44.0%	17.3%	0.1%	14.0%	4.9%	3.9%	8.3%	0.0%	0.1%	0.5%	0.7%	0.5%	1.1%	0.0%	1.3%	2.3%	0%	100.0%		
Route 101	101	80	80.0	N	1800-1900	2483	58.3%	13.7%	0.1%	10.4%	3.7%	2.2%	4.3%	0.0%	0.0%	0.1%	1.0%	0.7%	1.6%	0.0%	2.8%	1.1%	0%	100.0%		
Route 101	101	80	80.0	N	1900-2000	1522	58.6%	18.3%	0.1%	8.2%	2.9%	1.9%	3.8%	0.0%	0.0%	0.1%	0.9%	0.6%	1.3%	0.0%	2.2%	1.0%	0%	100.0%		
Route 101	101	80	80.0	N	2000-2100	1497	54.0%	22.9%	0.1%	8.1%	3.1%	1.9%	3.7%	0.0%	0.0%	0.1%	0.8%	0.6%	1.3%	0.0%	2.3%	1.0%	0%	100.0%		
Route 101	101	80	80.0	N	2100-2200	1503	54.6%	22.6%	0.1%	8.7%	3.1%	2.0%	4.0%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	2.5%	1.0%	0%	100.0%		
Route 101	101	80	80.0	N	2200-2300	1441	55.0%	24.8%	0.1%	6.8%	2.5%	2.2%	4.3%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	2.1%	1.1%	0%	100.0%		
Route 101	101	80	80.0	N	2300-0000	1089	53.4%	24.1%	0.1%	7.6%	2.7%	2.4%	4.7%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0%	2.4%	1.2%	0%	100.0%		
Route 102	102	80	80.0	N	0000-0100	560	50.0%	20.0%	0.1%	11.0%	4.0%	2.0%	2.0%	0.0%	0.0%	0.1%	0.2%	0.2%	0.2%	0.0%	0%	2.5%	0.5%	0%	100.0%	
Route 102	102	80	80.0	N	0100-0200	369	49.1%	22.0%	0.1%	9.8%	3.5%	3.1%	6.1%	0.0%	0.0%	0.2%	0.2%	0.5%	0.4%	0.8%	0.0%	2.8%	1.6%	0%	100.0%	
Route 102	102	80	80.0	N	0200-0300	273	47.6%	21.2%	0.1%	10.5%	3.8%	3.3%	6.5%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	3.0%	1.7%	0%	100.0%		
Route 102	102	80	80.0	N	0300-0400	219	46.1%	20.2%	0.1%	11.0%	4.1%	3.5%	6.9%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	3.2%	1.8%	0%	100.0%		
Route 102	102	80	80.0	N	0400-0500	244	44.6%	19.7%	0.1%	11.9%	4.3%	3.7%	7.4%	0.0%	0.1%	0.4%	0.5%	0.5%	1.1%	0.0%	3.5%	1.9%	0%	100.0%		
Route 102	102	80	80.0	N	0500-0600	428	43.1%	19.0%	0.1%	12.6%	4.5%	4.0%	7.8%	0.0%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	3.7%	2.0%	0%	100.0%		
Route 102	102	80	80.0	N	0600-0700	380	41.1%	18.3%	0.1%	13.2%	4.7%	4.2%	8.3%	0.0%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	3.9%	2.1%	0%	100.0%		
Route 102	102	80	80.0	N	0700-0800	1906	40.3%	17.5%	0.1%	14.0%	5.0%	4.4%	8.6%	0.0%	0.1%	0.6%	0.9%	0.6%	1.4%	0.0%	4.1%	2.3%	0%	100.0%		
Route 102	102	80	80.0	N	0800-0900	2232	44.4%	14.2%	0.2%	15.1%	5.4%	4.2%	8.3%	0.0%	0.1%	0.6%	0.9%	0.6%	1.3%	0.0%	2.6%	2.2%	0%	100.0%		
Route 102	102	80	80.0	N	0900-1000	1997	47.2%	13.5%	0.2%	13.2%	5.7%	4.4%	8.3%	0.0%	0.1%	0.6%	0.9%	0.6%	1.3%	0.0%	2.8%	2.5%	0%	100.0%		
Route 102	102	80	80.0	N	1000-1100	1801	33.9%	13.2%	0.2%	20.1%	7.2%	6.4%	12.5%	0.0%	0.0%	0.4%	0.6%	0.4%	0.8%	0.0%	1.0%	3.3%	0%	100.0%		
Route 102	102	80	80.0	N	1100-1200	1699	33.9%	14.0%	0.2%	20.1%	7.2%	6.3%	12.3%	0.0%	0.1%	0.6%	0.3%	0.2%	0.5%	0.0%	1.0%	3.2%	0%	100.0%		
Route 102	102	80	80.0	N	1200-1300	1867	41.0%	14.2%	0.2%	14.4%	5.8%	4.4%	8.3%	0.0%	0.1%	0.6%	0.9%	0.6%	1.3%	0.0%	2.8%	2.7%	0%	100.0%		
Route 102	102	80	80.0	N	1300-1400	1868	39.8%	15.3%	0.2%	16.8%	6.0%	5.2%	10.3%	0.0%	0.1%	0.6%	0.8%	0.4%	0.9%	0.0%	1.2%	2.7%	0%	100.0%		
Route 102	102	80	80.0	N	1400-1500	2077	40.3%	16.3%	0.2%	15.1%	5.4%	5.1%	10.1%	0.0%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	1.5%	2.6%	0%	100.0%		
Route 102	102	80	80.0	N	1500-1600	2132	39.9%	16.0%	0.2%	17.4%	6.3%	4.4%	8.7%	0.0%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	1.4%	2.3%	0%	100.0%		
Route 102	102	80	80.0	N	1600-1700	2222	43.9%	14.3%	0.1%	14.0%	5.8%	4.9%	8.3%	0.0%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	1.6%	2.6%	0%	100.0%		
Route 102	102	80	80.0	N	1700-1800	2456	49.1%	15.4%	0.1%	12.9%	4.6%	2.9%	5.7%	0.0%	0.1%	0.7%	0.9%	0.6%	1.3%	0.0%	0.4%	1.2%	0%	100.0%		
Route 102	102	80	80.0	N	1800-1900	2587	61.7%	14.5%	0.1%	8.3%	3.0%	1.7%	3.4%	0.0%	0.0%	0.1%	1.1%	0.8%	1.6%	0.0%	0.2%	0.9%	0%	100.0%		
Route 102	102	80	80.0	N	1900-2000	2024	61.8%	14.2%	0.1%	8.3%	3.0%	1.5%	3.4%	0.0%	0.0%	0.1%	1.1%	0.8%	1.6%	0.0%	0.2%	0.9%	0%	100.0%		
Route 102	102	80	80.0	N	2000-2100	1574	56.6%	24.0%	0.1%	6.8%	2.4%	1.5%	2.9%	0.0%	0.0%	0.1%	0.8%	0.6%	1.2%	0.0%	0.3%	0.8%	0%	100.0%		
Route 102	102	80	80.0	N	2100-2200	1578	57.4%	24.3%	0.1%	6.9%	2.5%	1.6%	3.1%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.2%	0.8%	0%	100.0%		
Route 102	102	80	80.0	N	2200-2300	1521	57.0%	24.0%	0.1%	7.1%	2.5%	1.5%	3.0%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.2%	0.8%	0%	100.0%		
Route 102	102	80	80.0	N	2300-0000	1144	56.1%	25.3%	0.1%	5.9%	2.1%	1.9%	3.7%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.2%	0.5%	0%	100.0%		

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2033)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Road Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles <=10t	07 - Medium Goods Vehicles >10t	08 - Public Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4-15t	13 - Non-franchised Bus 15-24t	14 - Franchise d Bus Single Deck	15 - Franchise d Bus Double Deck	16 - Motorcycl	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total	
Road 103	103	80	80.0	N	0000-0100	661	57.1%	25.7%	0.1%	5.0%	1.8%	1.6%	3.1%	0.0%	0.0%	0.2%	0.0%	0.4%	0.8%	0.0%	2.9%	0.8%	0.0%	100.0%		
Road 103	103	80	80.0	N	0100-0200	431	55.0%	26.0%	0.1%	5.5%	1.1%	1.3%	2.0%	0.0%	0.0%	0.3%	0.0%	0.4%	0.3%	0.0%	3.2%	1.0%	0.0%	100.0%		
Road 103	103	80	80.0	N	0200-0300	316	54.8%	24.4%	0.1%	6.0%	2.1%	1.9%	3.7%	0.0%	0.0%	0.3%	0.7%	0.5%	1.1%	0.0%	0.0%	3.5%	1.0%	0.0%	100.0%	
Road 103	103	80	80.0	N	0300-0400	251	53.6%	23.8%	0.1%	6.4%	2.3%	2.0%	4.0%	0.0%	0.1%	0.4%	0.0%	0.8%	1.2%	0.0%	0.0%	3.8%	1.3%	0.0%	100.0%	
Road 103	103	80	80.0	N	0400-0500	276	52.2%	22.2%	0.1%	6.9%	2.2%	2.4%	4.3%	0.0%	0.1%	0.5%	0.0%	0.9%	1.3%	0.0%	0.0%	4.1%	1.1%	0.0%	100.0%	
Road 103	103	80	80.0	N	0500-0600	480	51.2%	22.5%	0.1%	7.4%	2.7%	2.3%	4.6%	0.0%	0.1%	0.6%	0.0%	0.9%	1.7%	1.4%	0.0%	4.4%	1.2%	0.0%	100.0%	
Road 103	103	80	80.0	N	0600-0700	1033	50.0%	21.9%	0.1%	7.9%	2.8%	2.5%	4.9%	0.0%	0.1%	0.6%	1.0%	0.7%	1.6%	0.0%	0.0%	4.7%	1.3%	0.0%	100.0%	
Road 103	103	80	79.4	N	0700-0800	2095	48.8%	21.3%	0.1%	8.4%	3.0%	2.6%	5.2%	0.0%	0.1%	0.7%	1.1%	0.8%	1.7%	0.0%	0.0%	5.0%	1.5%	0.0%	100.0%	
Road 103	103	80	79.3	N	0800-0900	2441	54.1%	17.3%	0.1%	9.2%	3.2%	2.4%	5.0%	0.0%	0.1%	0.7%	1.1%	0.7%	1.6%	0.0%	0.0%	3.1%	1.3%	0.0%	100.0%	
Road 103	103	80	79.0	N	0900-1000	2051	48.4%	17.6%	0.1%	12.5%	4.5%	3.4%	6.7%	0.0%	0.1%	0.5%	0.8%	0.8%	1.2%	0.0%	0.0%	1.9%	1.7%	0.0%	100.0%	
Road 103	103	80	80.0	N	1000-1100	1794	45.3%	17.6%	0.1%	13.3%	4.8%	4.2%	8.3%	0.0%	0.1%	0.5%	0.7%	0.5%	1.1%	0.0%	0.0%	1.4%	2.2%	0.0%	100.0%	
Road 103	103	80	80.0	N	1100-1200	1697	45.2%	16.6%	0.1%	13.2%	4.7%	4.1%	8.1%	0.0%	0.1%	0.8%	0.5%	0.3%	0.7%	0.0%	0.0%	1.3%	2.1%	0.0%	100.0%	
Road 103	103	80	80.0	N	1200-1300	1524	46.5%	17.9%	0.1%	11.8%	4.2%	4.2%	8.3%	0.0%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	0.0%	1.4%	2.2%	0.0%	100.0%	
Road 103	103	80	80.0	N	1300-1400	1564	44.6%	17.2%	0.1%	13.9%	5.0%	4.3%	8.5%	0.0%	0.1%	0.6%	0.6%	0.4%	1.0%	0.0%	0.0%	1.4%	2.2%	0.0%	100.0%	
Road 103	103	80	80.0	N	1400-1500	1665	44.9%	18.2%	0.1%	12.4%	4.4%	4.2%	8.2%	0.0%	0.1%	0.8%	0.9%	0.8%	1.4%	0.0%	0.0%	1.7%	2.2%	0.0%	100.0%	
Road 103	103	80	80.0	N	1500-1600	1705	44.5%	17.9%	0.1%	14.3%	5.1%	3.6%	7.1%	0.0%	0.1%	0.8%	0.9%	0.6%	1.4%	0.0%	0.0%	1.6%	1.9%	0.0%	100.0%	
Road 103	103	80	80.0	N	1600-1700	1882	47.7%	16.4%	0.1%	11.3%	4.1%	3.5%	7.0%	0.0%	0.1%	1.1%	1.4%	1.6%	2.1%	0.0%	0.0%	2.2%	1.8%	0.0%	100.0%	
Road 103	103	80	80.0	N	1700-1800	2031	46.6%	0.1%	10.0%	3.7%	2.3%	4.5%	0.0%	0.1%	0.8%	0.0%	1.4%	1.6%	1.4%	0.0%	0.0%	4.6%	1.2%	0.0%	100.0%	
Road 103	103	80	79.5	N	1800-1900	2203	64.6%	15.2%	0.1%	6.4%	2.3%	1.3%	2.6%	0.0%	0.0%	0.1%	1.1%	0.8%	1.7%	0.0%	0.0%	3.1%	0.7%	0.0%	100.0%	
Road 103	103	80	80.0	N	1900-2000	1738	63.7%	20.0%	0.1%	4.9%	1.8%	1.2%	2.3%	0.0%	0.0%	0.1%	1.0%	1.7%	1.5%	0.0%	0.0%	2.4%	0.6%	0.0%	100.0%	
Road 103	103	80	80.0	N	2000-2100	1359	58.8%	25.0%	0.1%	5.2%	1.9%	1.1%	2.2%	0.0%	0.0%	0.1%	0.8%	0.6%	1.3%	0.0%	0.0%	2.3%	0.8%	0.0%	100.0%	
Road 103	103	80	80.0	N	2100-2200	1353	59.7%	24.7%	0.1%	5.3%	1.0%	1.2%	2.4%	0.0%	0.0%	0.2%	0.5%	0.0%	0.8%	0.0%	0.0%	2.2%	0.6%	0.0%	100.0%	
Road 103	103	80	80.0	N	2200-2300	1309	59.5%	26.9%	0.0%	4.1%	1.6%	1.3%	2.5%	0.0%	0.0%	0.1%	0.4%	0.2%	0.5%	0.0%	0.0%	2.3%	0.7%	0.0%	100.0%	
Road 103	103	80	80.0	N	2300-0000	981	58.3%	26.3%	0.0%	4.5%	1.6%	1.4%	2.6%	0.0%	0.0%	0.1%	0.4%	0.3%	0.7%	0.0%	0.0%	2.6%	0.7%	0.0%	100.0%	
Road 104	104	80	80.0	N	0000-0100	316	52.4%	24.1%	0.0%	4.9%	1.6%	1.4%	2.6%	0.0%	0.1%	0.4%	0.0%	0.0%	1.2%	0.0%	0.0%	3.6%	1.0%	0.0%	100.0%	
Road 104	104	80	80.0	N	0100-0200	252	47.6%	21.3%	0.1%	10.7%	3.9%	3.4%	6.7%	0.0%	0.0%	0.2%	0.5%	0.0%	0.4%	0.0%	0.0%	2.7%	1.7%	0.0%	100.0%	
Road 104	104	80	80.0	N	0200-0300	187	46.0%	20.5%	0.1%	11.5%	4.1%	3.6%	7.1%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	0.0%	2.9%	1.9%	0.0%	100.0%	
Road 104	104	80	80.0	N	0300-0400	159	44.5%	19.7%	0.1%	12.3%	4.4%	3.9%	7.6%	0.0%	0.0%	0.3%	0.6%	0.4%	1.0%	0.0%	0.0%	3.1%	0.8%	0.0%	100.0%	
Road 104	104	80	80.0	N	0400-0500	167	42.9%	19.0%	0.1%	13.0%	4.7%	4.1%	8.0%	0.0%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	0.0%	3.3%	2.1%	0.0%	100.0%	
Road 104	104	80	80.0	N	0500-0600	295	41.4%	16.2%	0.1%	13.8%	4.9%	4.3%	8.5%	0.0%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	0.0%	3.5%	2.2%	0.0%	100.0%	
Road 104	104	80	80.0	N	0600-0700	642	39.9%	17.5%	0.2%	14.5%	5.2%	4.5%	8.9%	0.0%	0.1%	0.5%	0.8%	0.8%	1.3%	0.0%	0.0%	3.7%	2.3%	0.0%	100.0%	
Road 104	104	80	80.0	N	0700-0800	1587	42.5%	16.8%	0.2%	15.2%	5.5%	4.8%	9.3%	0.0%	0.1%	0.6%	0.9%	1.3%	1.3%	0.0%	0.0%	3.9%	2.4%	0.0%	100.0%	
Road 104	104	80	80.0	N	0800-0900	1546	42.4%	13.6%	0.2%	16.3%	5.9%	4.6%	9.0%	0.0%	0.1%	0.6%	0.8%	0.6%	1.3%	0.0%	0.0%	2.5%	2.3%	0.0%	100.0%	
Road 104	104	80	80.0	N	0900-1000	1401	35.2%	12.8%	0.2%	20.9%	7.5%	5.7%	11.2%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	0.0%	1.4%	2.9%	0.0%	100.0%	
Road 104	104	80	80.0	N	1000-1100	1270	31.8%	12.3%	0.2%	21.4%	7.7%	6.8%	13.3%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	0.0%	1.5%	3.5%	0.0%	100.0%	
Road 104	104	80	80.0	N	1100-1200	1198	31.8%	13.1%	0.2%	21.4%	7.7%	6.7%	13.1%	0.0%	0.1%	0.6%	0.3%	0.2%	0.5%	0.0%	0.0%	0.9%	3.4%	0.0%	100.0%	
Road 104	104	80	80.0	N	1200-1300	1151	50.4%	19.4%	0.1%	9.5%	3.4%	3.4%	6.7%	0.0%	0.1%	0.8%	0.0%	0.6%	1.3%	0.0%	0.0%	1.5%	1.5%	0.0%	100.0%	
Road 104	104	80	80.0	N	1300-1400	1171	48.8%	18.6%	0.1%	11.4%	4.1%	3.5%	6.9%	0.0%	0.1%	0.7%	0.7%	0.5%	1.1%	0.0%	0.0%	1.5%	1.8%	0.0%	100.0%	
Road 104	104	80	80.0	N	1400-1500	1225	48.8%	18.7%	0.1%	10.0%	3.6%	3.4%	6.7%	0.0%	0.1%	0.8%	0.0%	0.7%	1.5%	0.0%	0.0%	1.8%	1.7%	0.0%	100.0%	
Road 104	104	80	80.0	N	1500-1600	1283	48.5%	16.5%	0.1%	11.6%	4.2%	2.9%	5.6%	0.0%	0.1%	0.9%	1.0%	0.7%	1.5%	0.0%	0.0%	1.8%	1.5%	0.0%	100.0%	
Road 104	104	80	80.0	N	1600-1700	1372	51.3%	17.7%	0.1%	9.1%	3.3%	2.8%	5.6%	0.0%	0.2%	1.2%	1.5%	1.6%	2.3%	0.0%	0.0%	2.4%	1.5%	0.0%	100.0%	
Road 104	104	80	80.0	N	1700-1800	1571	55.1%	17.5%	0.1%	8.1%	2.9%	1.8%	2.4%	0.0%	0.1%	0.8%	0.0%	0.7%	1.5%	0.0%	0.0%	4.8%	0.9%	0.0%	100.0%	
Road 104	104	80	80.0	N	1800-1900	1744	66.9%	15.7%	0.1%	4.9%	1.8%	1.0%	2.0%	0.0%	0.0%	0.1%	1.2%	0.8%	1.8%	0.0%	0.0%	3.2%	0.5%	0.0%	100.0%	
Road 104	104	80	80.0	N	1900-2000	1385	65.5%	20.5%	0.0%	3.7%	1.3%	0.9%	1.8%	0.0%	0.0%	0.1%	1.0%	0.7%	1.5%	0.0%	0.0%	2.4%	0.5%	0.0%	100.0%	
Road 104	104	80	80.0	N	2000-2100	1076	61.4%	20.5%	0.0%	25.7%	0.4%	0.9%	1.7%	0.0%	0.0%	0.1%	0.9%	0.6%	1.3%	0.0%	0.0%	2.4%	0.5%	0.0%	100.0%	
Road 104	104	80	80.0	N	2100-2200	1076	61.5%	25.4%	0.0%	4.0%	1.5%	0.9%	1.8%	0.0%	0.0%	0.1%	0.4%	0.3%	0.7%	0.0%	0.0%	2.8%	0.5%	0.0%	100.0%	
Road 104	104	80	80.0	N	2200-2300	1045	61.1%	27.6%	0.0%	3.1%	1.1%	1.0%	2.0%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.0%	2.3%	0.5%	0.0%	100.0%	
Road 104	104	80	80.0	N	2300-0000	781	60.1%	27.1%	0.0%	3.5%	1.3%	1.1%	2.2%	0.0%	0.0%	0.1%	0.5%	0.3%	0.7%	0.0%	0.0%	2.7%	0.6%	0.0%	100.0%	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2038)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - LGV Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - LGV Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles <=10t	07 - Medium Goods Vehicles >10t	08 - Public Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchised Bus Single Deck	15 - Franchised Bus Double Deck	16 - Motorcycl	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total	
Road 1	1	80	80.0	N	0000-0100	1001	57.3%	25.7%	0.0%	3.4%	1.2%	1.1%	21.8%	0.0%	0.0%	0.2%	0.5%	0.8%	0.4%	0.8%	0.0%	3.7%	2.9%	0.8%	0.0%	100.0%
						600	60.3%	25.2%	0.0%	2.3%	0.9%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.3%	2.5%
Road 1	1	80	80.0	N	0200-0300	475	55.3%	24.7%	0.1%	1.5%	1.5%	2.8%	0.0%	0.0%	0.4%	0.7%	0.5%	1.1%	0.7%	3.3%	3.5%	0.7%	0.0%	100.0%		
Road 1	1	80	80.0	N	0300-0400	375	54.4%	24.1%	0.1%	4.5%	1.6%	1.4%	2.8%	0.0%	0.1%	0.4%	0.8%	0.5%	1.2%	0.0%	3.6%	3.8%	0.7%	0.0%	100.0%	
Road 1	1	80	80.0	N	0400-0500	411	53.4%	23.8%	0.1%	4.8%	1.7%	1.5%	3.0%	0.0%	0.1%	0.5%	0.9%	0.5%	1.3%	0.0%	3.6%	4.1%	0.8%	0.0%	100.0%	
Road 1	1	80	80.0	N	0500-0600	712	52.4%	22.0%	0.2%	5.2%	2.0%	1.8%	3.2%	0.0%	0.2%	0.6%	1.1%	0.3%	5.2%	5.3%	0.2%	0.0%	0.0%	0.0%	100.0%	
Road 1	1	80	80.0	N	0600-0700	1525	51.4%	22.5%	0.1%	5.5%	2.0%	1.7%	3.4%	0.0%	0.1%	0.7%	1.1%	0.7%	1.6%	0.0%	3.6%	4.8%	0.9%	0.0%	100.0%	
Road 1	1	80	80.0	N	0700-0800	2080	50.3%	21.9%	0.1%	5.9%	2.1%	1.8%	3.6%	0.0%	0.1%	0.7%	1.1%	0.8%	1.7%	0.0%	3.5%	5.1%	0.9%	0.0%	100.0%	
Road 1	1	80	80.0	N	0800-0900	3605	49.2%	20.9%	0.1%	6.2%	2.2%	1.8%	3.9%	0.0%	0.1%	0.8%	1.2%	0.9%	3.3%	0.0%	3.3%	5.9%	0.9%	0.0%	100.0%	
Road 1	1	80	80.0	N	0900-1000	2920	51.6%	18.7%	0.1%	9.1%	3.3%	2.5%	4.9%	0.0%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	3.3%	2.0%	1.3%	0.0%	100.0%	
Road 1	1	80	80.0	N	1000-1100	2520	48.9%	19.0%	0.1%	9.8%	3.3%	3.1%	6.1%	0.0%	0.1%	0.5%	0.9%	0.8%	1.2%	0.0%	3.2%	1.5%	1.8%	0.0%	100.0%	
Road 1	1	80	80.0	N	1100-1200	2189	47.1%	19.1%	0.1%	10.1%	3.3%	3.0%	6.0%	0.0%	0.1%	0.6%	1.0%	0.8%	1.3%	0.0%	3.4%	1.4%	1.8%	0.0%	100.0%	
Road 1	1	80	77.1	N	1200-1300	3263	45.6%	17.8%	0.1%	10.9%	3.9%	3.9%	7.7%	0.0%	0.1%	0.7%	0.8%	0.5%	1.2%	0.0%	3.6%	1.4%	2.0%	0.0%	100.0%	
Road 1	1	80	76.5	N	1300-1400	3337	43.9%	16.9%	0.1%	12.9%	4.6%	4.6%	7.9%	0.0%	0.1%	0.6%	0.8%	0.4%	1.0%	0.0%	3.4%	1.3%	2.1%	0.0%	100.0%	
Road 1	1	80	75.0	N	1400-1500	3356	42.4%	11.5%	0.1%	13.5%	5.3%	5.3%	7.8%	0.0%	0.1%	0.6%	0.8%	0.3%	1.1%	0.0%	3.3%	1.2%	2.1%	0.0%	100.0%	
Road 1	1	80	74.8	N	1500-1600	3619	43.8%	17.8%	0.1%	13.3%	4.8%	3.4%	6.6%	0.0%	0.1%	0.6%	0.9%	0.6%	1.4%	0.0%	3.4%	1.6%	1.7%	0.0%	100.0%	
Road 1	1	80	73.4	N	1600-1700	3888	46.6%	16.1%	0.1%	15.0%	3.8%	3.3%	6.4%	0.0%	0.1%	1.1%	1.4%	1.0%	2.1%	0.0%	3.7%	2.2%	1.7%	0.0%	100.0%	
Road 1	1	80	71.1	N	1700-1800	4476	49.1%	16.7%	0.1%	14.1%	4.0%	3.0%	6.4%	0.0%	0.1%	1.1%	1.4%	1.0%	3.4%	0.0%	3.7%	1.4%	1.9%	0.0%	100.0%	
Road 1	1	80	70.5	N	1800-1900	3775	62.6%	14.7%	0.1%	5.8%	2.1%	1.2%	2.4%	0.0%	0.0%	0.1%	1.1%	0.8%	1.7%	0.0%	3.8%	3.0%	0.6%	0.0%	100.0%	
Road 1	1	80	76.3	N	1900-2000	3755	61.3%	19.2%	0.1%	4.4%	1.6%	1.1%	2.1%	0.0%	0.0%	0.1%	0.9%	0.6%	1.4%	0.0%	4.4%	2.3%	0.5%	0.0%	100.0%	
Road 1	1	80	80.0	N	2000-2100	2974	56.5%	24.0%	0.0%	4.7%	1.7%	1.0%	2.0%	0.0%	0.0%	0.1%	0.8%	1.2%	0.4%	4.2%	3.5%	0.5%	0.0%	100.0%		
Road 1	1	80	80.0	N	2100-2200	2842	57.7%	23.8%	0.1%	4.8%	1.7%	1.2%	2.0%	0.0%	0.0%	0.1%	0.8%	1.1%	0.4%	4.2%	3.5%	0.6%	0.0%	100.0%		
Road 1	1	80	80.0	N	2200-2300	2860	57.2%	25.9%	0.0%	3.7%	1.3%	1.2%	2.3%	0.0%	0.0%	0.1%	0.3%	0.5%	0.5%	4.4%	2.2%	0.6%	0.0%	100.0%		
Road 1	1	80	80.0	N	2300-0000	2411	56.1%	25.3%	0.0%	4.1%	1.5%	1.3%	2.6%	0.0%	0.0%	0.1%	0.4%	0.3%	0.9%	0.4%	2.9%	0.7%	0.0%	0.0%	100.0%	
Road 2	2	80	80.0	N	0000-0100	861	52.8%	26.7%	0.0%	5.8%	2.2%	1.8%	3.6%	0.0%	0.2%	0.5%	0.8%	0.4%	2.7%	0.0%	3.6%	2.7%	0.8%	0.0%	100.0%	
Road 2	2	80	80.0	N	0100-0200	629	51.6%	23.1%	0.1%	6.4%	2.3%	2.0%	4.0%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	4.2%	2.9%	1.3%	0.0%	100.0%	
Road 2	2	80	80.0	N	0200-0300	463	50.4%	22.5%	0.1%	6.9%	2.5%	2.2%	4.3%	0.0%	0.0%	0.3%	0.6%	0.4%	1.0%	0.0%	4.1%	3.2%	1.5%	0.0%	100.0%	
Road 2	2	80	80.0	N	0300-0400	268	47.8%	21.7%	0.1%	7.4%	2.6%	2.4%	4.6%	0.0%	0.0%	0.4%	0.7%	0.4%	1.1%	0.0%	3.5%	2.7%	1.5%	0.0%	100.0%	
Road 2	2	80	80.0	N	0400-0500	406	47.9%	21.2%	0.1%	8.0%	2.9%	2.5%	4.9%	0.0%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	4.0%	3.7%	1.7%	0.0%	100.0%	
Road 2	2	80	80.0	N	0500-0600	706	46.8%	20.6%	0.1%	8.5%	3.1%	2.7%	5.2%	0.0%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	4.0%	4.0%	1.8%	0.0%	100.0%	
Road 2	2	80	80.0	N	0600-0700	1511	45.7%	19.4%	0.1%	9.1%	3.2%	2.8%	5.6%	0.0%	0.1%	0.6%	1.0%	0.8%	1.2%	0.0%	4.3%	4.2%	2.0%	0.0%	100.0%	
Road 2	2	80	78.7	N	0700-0800	3096	44.4%	19.3%	0.1%	9.6%	3.4%	3.0%	5.9%	0.0%	0.1%	0.7%	1.0%	0.7%	1.5%	0.0%	3.9%	4.5%	1.8%	0.0%	100.0%	
Road 2	2	80	75.7	N	0800-0900	3594	49.4%	15.9%	0.1%	10.4%	3.7%	2.9%	5.7%	0.0%	0.1%	0.7%	1.0%	0.7%	1.5%	0.0%	3.8%	2.9%	1.7%	0.0%	100.0%	
Road 2	2	80	78.1	N	0900-1000	3076	46.3%	14.7%	0.1%	10.5%	3.8%	3.2%	6.0%	0.0%	0.1%	0.8%	1.2%	0.4%	1.7%	0.0%	3.8%	2.8%	1.7%	0.0%	100.0%	
Road 2	2	80	80.0	N	1000-1100	2715	40.3%	15.6%	0.2%	14.8%	5.3%	4.7%	9.2%	0.0%	0.1%	0.4%	0.7%	0.5%	1.0%	0.0%	3.3%	1.2%	2.7%	0.0%	100.0%	
Road 2	2	80	80.0	N	1100-1200	2568	40.2%	16.6%	0.2%	14.8%	5.3%	4.6%	9.1%	0.0%	0.1%	0.4%	0.7%	0.5%	0.6%	0.0%	3.4%	1.1%	2.7%	0.0%	100.0%	
Road 2	2	80	77.1	N	1200-1300	1147	40.6%	15.7%	0.1%	13.9%	5.0%	5.0%	9.8%	0.0%	0.1%	0.6%	0.7%	0.5%	1.1%	0.0%	2.8%	1.2%	2.8%	0.0%	100.0%	
Road 2	2	80	78.0	N	1300-1400	3258	42.8%	16.7%	0.1%	13.9%	5.0%	4.8%	9.8%	0.0%	0.1%	0.6%	0.7%	0.5%	1.1%	0.0%	2.8%	1.0%	2.8%	0.0%	100.0%	
Road 2	2	80	75.0	N	1400-1500	3440	39.2%	15.9%	0.2%	14.6%	5.3%	5.0%	9.7%	0.0%	0.1%	0.7%	0.8%	0.5%	1.2%	0.0%	2.7%	1.5%	2.8%	0.0%	100.0%	
Road 2	2	80	74.7	N	1500-1600	3528	38.8%	15.6%	0.2%	18.9%	6.1%	4.3%	8.4%	0.0%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	2.6%	1.4%	2.4%	0.0%	100.0%	
Road 2	2	80	73.1	N	1600-1700	3685	38.9%	15.6%	0.2%	18.9%	6.1%	4.3%	8.4%	0.0%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	2.6%	1.4%	2.4%	0.0%	100.0%	
Road 2	2	80	72.7	N	1700-1800	4082	47.6%	14.9%	0.1%	12.4%	4.5%	2.8%	5.5%	0.0%	0.1%	0.7%	0.8%	0.6%	1.3%	0.0%	3.0%	1.4%	1.6%	0.0%	100.0%	
Road 2	2	80	72.7	N	1800-1900	4310	54.9%	14.0%	0.1%	7.9%	2.9%	1.7%	3.3%	0.0%	0.0%	0.0%	0.1%	1.0%	0.7%	1.6%	0.0%	3.2%	2.8%	1.0%	0.0%	100.0%
Road 2	2	80	78.1	N	1900-2000	3385	43.8%	15.9%	0.1%	8.1%	2.9%	1.8%	3.5%	0.0%	0.0%	0.0%	0.1%	1.0%	0.7%	1.6%	0.0%	2.9%	2.8%	1.0%	0.0%	100.0%
Road 2	2	80	80.0	N	2000-2100	2638	54.4%	23.1%	0.1%	6.5%	2.3%	1.4%	2.8%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	3.9%	2.2%	0.8%	0.0%	100.0%	
Road 2	2	80	80.0	N	2100-2200	2633	55.4%	22.9%	0.1%	6.6%	2.4%	1.5%	3.0%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	3.4%	2.5%	0.9%	0.0%	100.0%	
Road 2	2	80	80.0	N	2200-2300	2545	54.6%	22.9%	0.1%	6.6%	2.4%	1.5%	3.0%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	3.4%	2.5%	0.9%	0.0%	100.0%	
Road 2	2	80	80.0	N	2300-0000	1914	54.0%	24.3%	0.1%	5.7%	2.0%	1.8%	3.5%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	3.7%	2.4%	0.9%	0.0%	100.0%	

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2038)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Road Bruce (g/sec)	Estimated by AERMOD (Y/N)	Hour	Total Vehicles (veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <3.5t	04 - Light Goods Vehicles 3.5-5.5t	05 - Light Goods Vehicles 5.5-7.5t	06 - Medium Goods Vehicles >7.5t	07 - Medium Goods Vehicles >10.5t	08 - Public Buses	09 - Private Light >3.5t	10 - Private Light >3.5t	11 - Non-franchised Bus <4t	12 - Non-franchised Bus 4t-5t	13 - Non-franchised Bus 5t-6t	14 - Franchised Bus Single Deck	15 - Franchised Bus Double Deck	16 - Motorcyclist	17 - Franchised Goods Vehicles >4t	18 - Non-franchised Bus >4t	Total
Road 7	7	70	70.0	N	0000-0100	320	56.6%	25.4%	0.0%	3.7%	1.3%	1.2%	2.3%	0.0%	0.0%	0.2%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Road 7	7	70	70.0	N	0100-0200	320	56.6%	25.4%	0.0%	3.7%	1.3%	1.2%	2.3%	0.0%	0.0%	0.2%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Road 7	7	70	70.0	N	0200-0300	152	54.7%	24.4%	0.0%	4.4%	1.6%	1.4%	2.7%	0.0%	0.0%	0.3%	0.7%	0.5%	1.0%	0.0%	0.0%	0.0%	0.3%	0.7%	0.0%	100.0%
Road 7	7	70	70.0	N	0300-0400	130	53.7%	23.8%	0.0%	4.8%	1.7%	1.5%	2.9%	0.0%	0.1%	0.4%	0.8%	0.5%	1.2%	0.0%	0.4%	0.38%	0.6%	0.0%	0.0%	100.0%
Road 7	7	70	70.0	N	0400-0500	460	56.6%	25.4%	0.0%	3.7%	1.3%	1.2%	2.3%	0.0%	0.1%	0.6%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Road 7	7	70	70.0	N	0500-0600	229	51.6%	22.2%	0.1%	5.5%	2.0%	1.7%	3.4%	0.0%	0.1%	0.6%	1.0%	0.7%	1.4%	0.0%	0.39%	0.44%	0.9%	0.0%	0.0%	100.0%
Road 7	7	70	70.0	N	0600-0700	490	50.6%	22.7%	0.1%	5.9%	2.1%	1.8%	3.6%	0.0%	0.1%	0.6%	1.0%	0.7%	1.6%	0.0%	0.39%	0.47%	0.9%	0.0%	0.0%	100.0%
Road 7	7	69.3	N	0700-0800	991	49.3%	21.6%	0.1%	6.3%	2.3%	2.0%	3.9%	0.0%	0.1%	0.7%	1.1%	0.8%	1.7%	0.0%	0.39%	0.51%	1.0%	0.0%	0.0%	100.0%	
Road 7	7	68.7	N	0800-0900	1144	47.5%	19.3%	0.1%	6.3%	2.3%	2.0%	3.9%	0.0%	0.1%	0.7%	1.1%	0.8%	1.7%	0.0%	0.39%	0.51%	1.0%	0.0%	0.0%	100.0%	
Road 7	7	69.6	N	0900-1000	944	50.5%	18.3%	0.1%	9.6%	3.5%	2.6%	5.2%	0.0%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	0.36%	0.20%	1.3%	0.0%	0.0%	100.0%	
Road 7	7	70.0	70.0	N	1000-1100	817	47.8%	16.6%	0.1%	10.3%	3.7%	3.3%	6.4%	0.0%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	0.35%	1.5%	1.7%	0.0%	0.0%	100.0%
Road 7	7	70.0	70.0	N	1100-1200	774	47.0%	15.6%	0.1%	11.0%	4.0%	3.2%	6.1%	0.0%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	0.35%	1.5%	1.7%	0.0%	0.0%	100.0%
Road 7	7	66.0	N	1200-1300	1071	41.4%	15.9%	0.1%	13.3%	4.8%	4.8%	9.4%	0.0%	0.1%	0.7%	0.7%	0.5%	1.1%	0.0%	0.36%	1.2%	2.5%	0.0%	0.0%	100.0%	
Road 7	7	65.2	N	1300-1400	1396	38.5%	15.2%	0.2%	15.6%	5.8%	4.8%	9.5%	0.0%	0.1%	0.6%	0.8%	0.4%	0.9%	0.0%	0.34%	1.2%	2.5%	0.0%	0.0%	100.0%	
Road 7	7	64.2	N	1400-1500	1370	39.2%	15.0%	0.2%	16.3%	5.9%	4.7%	9.2%	0.0%	0.1%	0.6%	0.8%	0.4%	0.9%	0.0%	0.34%	1.2%	2.5%	0.0%	0.0%	100.0%	
Road 7	7	63.8	N	1500-1600	1200	39.6%	15.9%	0.2%	16.2%	5.8%	4.1%	8.0%	0.0%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	0.33%	1.4%	2.1%	0.0%	0.0%	100.0%	
Road 7	7	62.9	N	1600-1700	1259	42.7%	14.7%	0.1%	12.9%	4.6%	4.0%	7.9%	0.0%	0.1%	1.0%	1.3%	0.9%	1.9%	0.0%	0.38%	1.2%	2.0%	0.0%	0.0%	100.0%	
Road 7	7	61.5	N	1700-1800	1400	48.1%	13.0%	0.1%	14.6%	5.1%	4.1%	7.8%	0.0%	0.1%	1.1%	1.4%	1.0%	2.1%	0.0%	0.37%	1.1%	2.0%	0.0%	0.0%	100.0%	
Road 7	7	61.5	N	1800-1500	1458	49.9%	14.1%	0.1%	7.5%	2.7%	1.6%	3.1%	0.0%	0.0%	0.1%	1.0%	0.7%	1.6%	0.0%	0.4%	0.29%	0.6%	0.0%	0.0%	100.0%	
Road 7	7	66.7	N	1900-2000	1174	59.0%	18.5%	0.1%	5.7%	2.1%	1.4%	2.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.4%	0.6%	1.4%	0.4%	2.2%	0.7%	0.0%	100.0%
Road 7	7	70.0	70.0	N	2100-2200	915	54.3%	16.1%	0.1%	7.2%	2.5%	2.1%	2.8%	0.0%	0.0%	0.1%	0.5%	0.5%	0.7%	0.0%	0.40%	0.23%	1.0%	0.0%	0.0%	100.0%
Road 7	7	70.0	70.0	N	2100-2200	911	55.4%	22.9%	0.1%	6.2%	2.2%	1.4%	2.8%	0.0%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.43%	2.5%	0.7%	0.0%	100.0%
Road 7	7	70.0	70.0	N	2200-2300	883	55.2%	25.0%	0.1%	4.8%	1.7%	1.5%	3.0%	0.0%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.4%	2.1%	0.6%	0.0%	100.0%
Road 7	7	70.0	70.0	N	2300-0000	661	54.0%	24.3%	0.1%	5.3%	1.9%	1.7%	3.3%	0.0%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.46%	2.4%	0.9%	0.0%	100.0%
Road 8	8	70	70.0	N	0000-0100	32	41.2%	8.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Road 8	8	70	70.0	N	0100-0200	21	41.0%	18.3%	0.1%	5.3%	1.9%	1.7%	3.3%	0.0%	0.0%	0.2%	0.4%	0.3%	0.7%	0.2%	0.23%	2.3%	0.9%	0.0%	0.0%	100.0%
Road 8	8	70	70.0	N	0200-0300	15	40.1%	17.9%	0.1%	5.8%	2.1%	1.8%	3.6%	0.0%	0.0%	0.3%	0.5%	0.4%	0.8%	0.2%	0.24%	2.5%	0.9%	0.0%	0.0%	100.0%
Road 8	8	70	70.0	N	0300-0400	12	40.2%	22.4%	0.0%	5.3%	2.0%	2.0%	3.9%	0.0%	0.0%	0.2%	0.3%	0.2%	0.8%	0.2%	0.23%	2.8%	0.9%	0.0%	0.0%	100.0%
Road 8	8	70	70.0	N	0400-0500	13	38.3%	16.9%	0.1%	6.7%	2.4%	2.1%	4.1%	0.0%	0.0%	0.4%	0.6%	0.4%	1.0%	0.2%	0.22%	3.0%	1.1%	0.0%	0.0%	100.0%
Road 8	8	70	70.0	N	0500-0600	23	37.4%	16.5%	0.1%	7.1%	2.6%	2.2%	4.4%	0.0%	0.1%	0.4%	0.7%	0.5%	1.0%	0.2%	0.22%	3.2%	1.1%	0.0%	0.0%	100.0%
Road 8	8	70	70.0	N	0600-0700	10	36.4%	15.5%	0.0%	7.6%	2.9%	2.4%	4.7%	0.0%	0.0%	0.4%	0.7%	0.4%	0.9%	0.2%	0.22%	3.4%	1.1%	0.0%	0.0%	100.0%
Road 8	8	70	70.0	N	0700-0800	101	35.6%	15.5%	0.1%	8.1%	2.9%	2.5%	5.0%	0.0%	0.1%	0.5%	0.8%	0.6%	1.2%	0.2%	0.22%	3.6%	1.3%	0.0%	0.0%	100.0%
Road 8	8	70	70.0	N	0800-0900	114	40.6%	13.0%	0.1%	8.9%	3.2%	2.5%	4.9%	0.0%	0.1%	0.6%	0.8%	0.6%	1.2%	0.1%	0.19%	2.4%	1.3%	0.0%	0.0%	100.0%
Road 8	8	70	70.0	N	0900-1000	98	40.6%	13.0%	0.1%	8.9%	3.3%	2.4%	4.9%	0.0%	0.1%	0.6%	0.8%	0.6%	1.2%	0.1%	0.19%	2.4%	1.3%	0.0%	0.0%	100.0%
Road 8	8	70	70.0	N	1000-1100	86	33.1%	12.9%	0.1%	12.8%	4.6%	4.1%	8.0%	0.0%	0.0%	0.4%	0.5%	0.4%	0.8%	0.1%	0.19%	3.0%	2.1%	0.0%	0.0%	100.0%
Road 8	8	70	70.0	N	1100-1200	82	32.9%	13.6%	0.1%	12.7%	4.5%	4.0%	7.8%	0.0%	0.1%	0.6%	0.3%	0.2%	0.5%	0.1%	0.19%	3.0%	2.0%	0.0%	0.0%	100.0%
Road 8	8	70	70.0	N	1200-1300	239	28.4%	10.9%	0.1%	16.6%	5.1%	4.6%	8.0%	0.0%	0.1%	0.4%	0.5%	0.4%	0.6%	0.0%	0.11%	0.9%	3.1%	0.0%	0.0%	100.0%
Road 8	8	70	70.0	N	1300-1400	239	28.4%	10.9%	0.2%	15.2%	6.9%	6.0%	11.7%	0.0%	0.1%	0.4%	0.4%	0.3%	0.6%	0.0%	0.11%	0.9%	3.1%	0.0%	0.0%	100.0%
Road 8	8	70	70.0	N	1400-1500	250	29.1%	11.8%	0.2%	17.4%	6.3%	5.9%	11.6%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	0.11%	1.1%	3.0%	0.0%	0.0%	100.0%
Road 8	8	70	70.0	N	1500-1600	257	28.7%	11.5%	0.2%	20.1%	7.2%	5.1%	10.0%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	0.10%	1.0%	2.6%	0.0%	0.0%	100.0%
Road 8	8	70	70.0	N	1600-1700	265	31.4%	16.8%	0.1%	16.3%	5.8%	5.1%	10.3%	0.0%	0.1%	0.7%	0.8%	0.6%	1.1%	0.0%	0.10%	1.0%	2.6%	0.0%	0.0%	100.0%
Road 8	8	70	70.0	N	1700-1800	286	36.6%	11.4%	0.2%	15.3%	5.5%	3.5%	6.8%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	0.13%	3.1%	0.0%	0.0%	0.0%	100.0%
Road 8	8	70	70.0	N	1800-1900	290	47.7%	11.2%	0.1%	10.2%	3.7%	2.1%	4.2%	0.0%	0.0%	0.1%	0.8%	0.6%	1.3%	0.1%	0.45%	3.2%	1.1%	0.0%	0.0%	100.0%
Road 8	8	70	70.0	N	1900-2000	312	47.1%	7.8%	0.1%	21.7%	1.8%	1.7%	3.7%	0.0%	0.0%	0.1%	0.8%	0.6%	1.3%	0.1%	0.45%	3.2%	1.1%	0.0%	0.0%	100.0%
Road 8	8	70	70.0	N	2000-2100	180	41.0%	18.2%	0.1%	8.2%	3.0%	1.8%	3.6%	0.0%	0.1%	0.6%	0.4%	0.9%	0.1%	0.75%	1.7%	0.0%	0.0%	0.0%	0.0%	100.0%
Road 8	8	70	70.0	N	2100-2200	177	44.5%	18.4%	0.1%	8.5%	3.1%	2.0%	3.8%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.56%	2.0%	1.0%	0.0%	0.0%	100.0%
Road 8	8	70	70.0	N	2200-2300	171	44.2%	18.0%	0.1%	8.5%	3.1%	2.0%	3.8%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.56%	2.0%	1.0%	0.0%	0.0%	100.0%
Road 8	8	70	70.0	N	2300-0000	129	43.0%	19.4%	0.1%	3.3%	2.6%	2.3%	4.5%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.1%	0.56%	1.9%	1.2%	0.0%	0.0%	100.0%

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2038)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles <=5t	07 - Medium Goods Vehicles >5-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchise d Bus Single Deck	15 - Franchise d Bus Double Deck	16 - Motorcycl	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total	
Road 13	13	50	29.9	N	0000-0100	2	49.6%	22.3%	0.1%	9.7%	3.5%	3.1%	6.0%	0.0%	0.0%	0.2%	0.3%	0.7%	0.0%	0.2%	2.5%	1.6%	0.0%	100.0%		
Road 13	13	50	29.9	N	0100-0200	1	48.0%	21.5%	0.1%	10.5%	3.3%	6.5%	0.0%	0.0%	0.2%	0.3%	0.4%	0.9%	0.0%	0.2%	2.5%	1.6%	0.0%	100.0%		
Road 13	13	50	29.9	N	0200-0300	1	46.5%	20.7%	0.1%	11.2%	4.0%	3.5%	7.0%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	0.0%	2.9%	1.8%	0.0%	100.0%	
Road 13	13	50	30.0	N	0300-0400	1	44.9%	19.6%	0.1%	12.0%	4.3%	3.8%	7.4%	0.0%	0.0%	0.4%	0.6%	0.4%	1.0%	0.0%	0.0%	3.2%	1.9%	0.0%	100.0%	
Road 13	13	50	29.9	N	0400-0500	1	43.4%	19.2%	0.1%	12.7%	4.8%	4.0%	7.9%	0.0%	0.1%	0.4%	0.7%	0.4%	1.1%	0.0%	0.0%	3.4%	2.1%	0.0%	100.0%	
Road 13	13	50	29.9	N	0500-0600	1	41.9%	18.4%	0.1%	13.4%	4.8%	4.2%	8.3%	0.0%	0.1%	0.5%	0.8%	1.2%	0.0%	0.0%	3.6%	2.2%	0.0%	100.0%		
Road 13	13	50	29.8	N	0600-0700	3	40.4%	17.7%	0.1%	14.2%	5.1%	4.4%	8.7%	0.0%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	0.0%	3.8%	2.3%	0.0%	100.0%	
Road 13	13	50	29.6	N	0700-0800	7	39.0%	17.0%	0.2%	14.9%	5.3%	4.6%	9.1%	0.0%	0.1%	0.6%	0.9%	0.6%	1.4%	0.0%	0.0%	4.0%	2.4%	0.0%	100.0%	
Road 13	13	50	29.5	N	0800-0900	8	43.0%	13.8%	0.2%	16.0%	5.7%	4.5%	8.8%	0.0%	0.1%	0.6%	0.8%	0.8%	1.3%	0.0%	0.0%	2.5%	2.3%	0.0%	100.0%	
Road 13	13	50	29.5	N	0900-1000	7	35.8%	13.0%	0.2%	20.5%	7.4%	5.6%	11.0%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	0.0%	1.4%	2.9%	0.0%	100.0%	
Road 13	13	50	29.6	N	1000-1100	6	32.4%	12.6%	0.2%	21.0%	7.5%	6.7%	13.1%	0.0%	0.0%	0.4%	0.5%	0.4%	0.8%	0.0%	0.0%	1.0%	3.4%	0.0%	100.0%	
Road 13	13	50	29.6	N	1100-1200	6	32.4%	13.4%	0.2%	21.0%	7.5%	6.6%	12.9%	0.0%	0.1%	0.6%	0.3%	0.2%	0.5%	0.0%	0.0%	0.9%	3.4%	0.0%	100.0%	
Road 13	13	50	29.6	N	1200-1300	6	34.5%	13.3%	0.2%	18.6%	6.7%	6.7%	13.1%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	0.0%	1.0%	3.4%	0.0%	100.0%	
Road 13	13	50	29.5	N	1300-1400	7	32.2%	12.4%	0.2%	21.4%	7.7%	6.6%	13.0%	0.0%	0.1%	0.5%	0.5%	0.3%	0.7%	0.0%	0.0%	1.0%	3.4%	0.0%	100.0%	
Road 13	13	50	29.5	N	1400-1500	7	33.3%	13.4%	0.2%	19.5%	7.0%	6.6%	12.9%	0.0%	0.1%	0.6%	0.7%	0.5%	1.0%	0.0%	0.0%	1.2%	3.4%	0.0%	100.0%	
Road 13	13	50	29.5	N	1500-1600	7	32.6%	13.1%	0.2%	22.4%	8.0%	5.7%	11.1%	0.0%	0.1%	0.6%	0.7%	1.0%	0.0%	0.0%	0.1%	2.9%	0.0%	100.0%		
Road 13	13	50	29.5	N	1600-1700	7	36.2%	12.5%	0.2%	18.4%	6.8%	5.8%	11.3%	0.0%	0.1%	0.9%	1.1%	0.7%	1.6%	0.0%	0.0%	1.7%	3.0%	0.0%	100.0%	
Road 13	13	50	29.5	N	1700-1800	8	42.3%	13.2%	0.2%	17.4%	6.0%	3.9%	7.8%	0.0%	0.1%	0.6%	0.7%	0.5%	1.1%	0.0%	0.0%	3.6%	2.0%	0.0%	100.0%	
Road 13	13	50	29.5	N	1800-1900	8	56.2%	13.2%	0.1%	11.8%	4.2%	2.5%	4.8%	0.0%	0.0%	0.1%	1.0%	0.7%	1.5%	0.0%	0.0%	2.7%	1.3%	0.0%	100.0%	
Road 13	13	50	29.7	N	1900-2000	6	56.8%	17.8%	0.1%	9.3%	3.3%	2.2%	4.4%	0.0%	0.0%	0.1%	0.9%	0.6%	1.3%	0.0%	0.0%	2.1%	1.1%	0.0%	100.0%	
Road 13	13	50	29.7	N	2000-2100	5	52.3%	22.2%	0.1%	9.8%	3.5%	2.2%	4.3%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	0.0%	2.1%	1.1%	0.0%	100.0%	
Road 13	13	50	29.7	N	2100-2200	5	52.3%	21.9%	0.1%	9.9%	2.8%	2.4%	4.9%	0.0%	0.0%	0.2%	0.5%	0.3%	0.6%	0.0%	2.5%	2.6%	1.2%	0.0%	100.0%	
Road 13	13	50	29.7	N	2200-2300	4	53.4%	24.1%	0.1%	7.8%	2.8%	2.5%	4.9%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.0%	2.1%	1.3%	0.0%	100.0%	
Road 13	13	50	29.8	N	2300-0000	3	51.8%	23.3%	0.1%	8.6%	3.1%	2.7%	5.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.0%	2.3%	1.4%	0.0%	100.0%	
Road 14	14	50	45.1	N	0000-0100	441	52.5%	23.6%	0.1%	4.9%	1.8%	1.6%	3.2%	0.0%	0.0%	0.2%	0.2%	0.3%	0.2%	0.0%	3.0%	2.6%	0.0%	100.0%		
Road 14	14	50	46.6	N	0100-0200	284	50.3%	22.5%	0.1%	5.3%	1.9%	1.7%	3.3%	0.0%	0.0%	0.2%	0.3%	0.4%	0.8%	0.0%	2.9%	2.9%	0.0%	100.0%		
Road 14	14	50	47.4	N	0200-0300	221	48.1%	21.4%	0.1%	5.6%	2.0%	1.8%	3.5%	0.0%	0.1%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	2.8%	3.0%	0.0%	100.0%	
Road 14	14	50	47.8	N	0300-0400	179	46.1%	20.4%	0.1%	5.9%	2.1%	1.9%	3.7%	0.0%	0.0%	0.4%	0.7%	0.5%	1.0%	0.0%	2.2%	3.1%	0.0%	100.0%		
Road 14	14	50	47.6	N	0400-0500	195	45.4%	20.1%	0.1%	6.4%	2.3%	2.0%	4.0%	0.0%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	2.7%	3.5%	10.5%	0.0%	100.0%	
Road 14	14	50	46.1	N	0500-0600	326	46.2%	20.3%	0.1%	7.1%	2.6%	2.2%	4.4%	0.0%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	2.9%	3.6%	0.0%	100.0%		
Road 14	14	50	46.2	N	0600-0700	680	46.5%	20.4%	0.1%	7.8%	2.8%	2.5%	4.8%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	2.8%	4.4%	4.0%	0.0%	100.0%	
Road 14	14	50	36.1	N	0700-0800	1131	44.3%	19.3%	0.1%	8.1%	2.9%	2.5%	5.0%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	2.7%	4.5%	6.3%	0.0%	100.0%	
Road 14	14	50	34.8	N	0800-0900	1631	49.6%	15.9%	0.1%	8.9%	3.2%	2.5%	4.9%	0.0%	0.1%	0.7%	1.0%	0.7%	1.5%	0.0%	2.4%	2.9%	5.6%	0.0%	100.0%	
Road 14	14	50	36.0	N	0900-1000	1389	43.8%	15.9%	0.1%	12.1%	4.3%	3.3%	6.5%	0.0%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	2.4%	1.7%	6.8%	0.0%	100.0%	
Road 14	14	50	36.8	N	1000-1100	1226	40.6%	16.7%	0.1%	12.7%	4.8%	4.0%	7.9%	0.0%	0.1%	0.4%	0.7%	0.5%	1.0%	0.0%	2.4%	1.2%	7.6%	0.0%	100.0%	
Road 14	14	50	37.3	N	1100-1200	1164	40.4%	16.7%	0.1%	12.6%	4.5%	3.9%	7.8%	0.0%	0.1%	0.7%	0.4%	0.3%	0.9%	0.0%	2.4%	1.1%	8.1%	0.0%	100.0%	
Road 14	14	50	34.4	N	1200-1300	1455	31.5%	12.1%	0.2%	17.4%	6.3%	6.2%	12.3%	0.0%	0.1%	0.5%	0.5%	0.4%	0.8%	0.0%	2.7%	0.9%	8.1%	0.0%	100.0%	
Road 14	14	50	33.8	N	1300-1400	1528	29.5%	11.4%	0.2%	20.1%	7.2%	6.2%	12.5%	0.0%	0.1%	0.4%	0.4%	0.3%	0.6%	0.0%	2.5%	0.9%	7.8%	0.0%	100.0%	
Road 14	14	50	33.4	N	1400-1500	1590	30.4%	12.3%	0.2%	18.3%	6.9%	6.0%	12.3%	0.0%	0.1%	0.5%	0.6%	0.5%	0.9%	0.0%	2.3%	1.1%	7.6%	0.0%	100.0%	
Road 14	14	50	33.2	N	1500-1600	1634	30.0%	12.1%	0.2%	21.1%	7.6%	5.3%	10.5%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	2.4%	1.1%	7.1%	0.0%	100.0%	
Road 14	14	50	33.0	N	1600-1700	1668	33.3%	11.5%	0.2%	17.3%	6.8%	5.4%	10.6%	0.0%	0.1%	0.8%	1.0%	0.7%	1.5%	0.0%	2.8%	1.6%	7.0%	0.0%	100.0%	
Road 14	14	50	33.0	N	1700-1800	1780	39.1%	12.2%	0.2%	16.4%	5.9%	3.7%	7.3%	0.0%	0.1%	0.6%	0.7%	1.0%	0.3%	3.0%	3.4%	5.9%	0.0%	100.0%		
Road 14	14	50	33.7	N	1800-1900	1781	51.7%	12.1%	0.1%	11.1%	4.0%	2.3%	4.6%	0.0%	0.0%	0.1%	0.9%	0.6%	1.4%	0.0%	3.4%	2.5%	5.2%	0.0%	100.0%	
Road 14	14	50	37.0	N	1900-2000	1340	53.5%	16.7%	0.1%	8.9%	3.2%	2.1%	4.2%	0.0%	0.0%	0.1%	0.8%	0.8%	1.2%	0.0%	4.1%	2.0%	2.5%	0.0%	100.0%	
Road 14	14	50	38.8	N	2000-2100	1051	49.8%	20.8%	0.1%	9.4%	3.4%	2.1%	4.1%	0.0%	0.0%	0.1%	0.7%	0.6%	1.0%	0.0%	4.0%	2.0%	2.8%	0.0%	100.0%	
Road 14	14	50	38.9	N	2100-2200	1051	49.7%	20.6%	0.1%	9.6%	3.4%	2.2%	4.3%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	3.7%	2.3%	2.9%	0.0%	100.0%	
Road 14	14	50	39.2	N	2200-2300	1008	50.0%	22.6%	0.1%	7.5%	2.7%	2.4%	4.7%	0.0%	0.0%	0.0%	0.3%	0.2%	0.5%	0.0%	4.1%	1.9%	3.0%	0.0%	100.0%	
Road 14	14	50	41.1	N	2300-0000	768	48.2%	21.7%	0.1%	8.2%	2.9%	2.6%	5.1%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	4.0%	2.1%	3.7%	0.0%	100.0%	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2038)																											
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Car	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles <=5t	07 - Medium Goods Vehicles 5-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4-15t	13 - Non-franchised Bus 15-24t	14 - Franchised Bus Single Deck	15 - Franchised Bus Double Deck	16 - Motorcycl	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total		
Road 17	17	70	66.6	N	0000-0100	461	51.1%	22.3%	0.1%	7.7%	2.8%	2.4%	4.8%		0.0%	0.2%	0.3%	0.7%	0.0%	2.5%	1.6%	0.0%	100.0%				
Road 17	17	67.8	68.3	N	0100-0200	303	49.7%	22.2%	0.1%	8.4%	3.0%	3.0%	5.0%		0.0%	0.2%	0.3%	0.7%	0.0%	2.5%	1.6%	0.0%	100.0%				
Road 17	17	68.3	68.3	N	0200-0300	224	48.3%	21.5%	0.1%	9.0%	3.2%	2.8%	5.6%		0.0%	0.3%	0.6%	0.4%	0.9%	0.5%	2.3%	3.1%	1.5%	100.0%			
Road 17	17	68.6	68.6	N	0300-0400	179	46.9%	20.8%	0.1%	9.7%	3.5%	3.0%	6.0%		0.0%	0.4%	0.4%	0.7%	0.8%	1.0%	0.4%	2.3%	3.3%	1.8%	100.0%		
Road 17	17	68.1	68.1	N	0400-0500	388	50.1%	20.1%	0.1%	10.3%	3.2%	3.4%	6.4%		0.0%	0.4%	0.5%	0.8%	1.2%	2.3%	3.8%	2.7%	3.1%	1.9%	100.0%		
Road 17	17	67.3	67.3	N	0500-0600	347	44.2%	19.4%	0.1%	11.0%	3.9%	3.4%	6.8%		0.1%	0.5%	0.8%	0.8%	1.2%	0.3%	3.8%	1.8%	1.0%	100.0%			
Road 17	17	64.1	64.1	N	0600-0700	751	42.8%	18.8%	0.1%	11.6%	4.2%	3.6%	7.2%	0.1%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	2.3%	4.0%	1.9%	0.0%	100.0%		
Road 17	17	38.8	38.8	N	0700-0800	1535	41.5%	18.1%	0.1%	12.2%	4.4%	3.8%	7.5%	0.1%	0.1%	0.6%	0.9%	0.7%	1.4%	0.0%	2.2%	4.2%	2.0%	0.0%	100.0%		
Road 17	17	34.1	34.1	N	0800-0900	1790	40.6%	17.9%	0.1%	12.8%	4.6%	4.0%	7.8%	0.1%	0.1%	0.6%	1.0%	0.8%	1.3%	0.0%	2.1%	4.3%	2.1%	0.0%	100.0%		
Road 17	17	32.2	32.2	N	0900-1000	1575	39.3%	14.3%	0.2%	17.4%	6.3%	4.7%	9.3%	0.1%	0.0%	0.4%	0.7%	0.5%	1.0%	0.0%	1.9%	1.5%	2.4%	0.0%	100.0%		
Road 17	17	39.7	39.7	N	1000-1100	1469	35.9%	14.0%	0.2%	18.1%	6.5%	5.7%	11.3%	0.1%	0.1%	0.4%	0.6%	0.4%	0.9%	0.0%	1.8%	1.1%	3.0%	0.0%	100.0%		
Road 17	17	43.1	43.1	N	1100-1200	1311	31.9%	14.8%	0.1%	18.9%	6.8%	6.1%	11.9%	0.1%	0.1%	0.4%	0.7%	0.5%	1.0%	0.0%	1.7%	1.0%	2.9%	0.0%	100.0%		
Road 17	17	44.3	44.3	N	1200-1300	1213	26.7%	10.3%	0.2%	22.1%	8.0%	7.9%	15.6%	0.0%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	2.3%	0.8%	4.1%	0.0%	100.0%		
Road 17	17	39.6	39.6	N	1300-1400	1297	24.6%	9.5%	0.3%	25.1%	9.0%	7.8%	15.3%	0.0%	0.0%	0.4%	0.4%	0.2%	0.5%	0.0%	2.1%	1.0%	4.0%	0.0%	100.0%		
Road 17	17	37.1	37.1	N	1400-1500	1336	21.5%	10.3%	0.2%	25.5%	10.3%	8.4%	16.2%	0.0%	0.0%	0.4%	0.5%	0.4%	0.8%	0.0%	2.2%	1.0%	4.3%	0.0%	100.0%		
Road 17	17	35.6	35.6	N	1500-1600	1380	25.1%	10.1%	0.3%	26.5%	9.5%	6.7%	13.2%	0.0%	0.1%	0.4%	0.5%	0.4%	0.8%	0.0%	2.1%	0.9%	4.4%	0.0%	100.0%		
Road 17	17	35.8	35.8	N	1600-1700	1381	28.4%	0.8%	0.2%	22.2%	8.0%	6.9%	13.6%	0.0%	0.1%	0.7%	0.8%	0.6%	1.3%	0.0%	2.5%	1.3%	3.6%	0.0%	100.0%		
Road 17	17	38.1	38.1	N	1700-1800	1413	34.3%	0.8%	0.2%	22.2%	8.0%	6.9%	13.6%	0.0%	0.1%	0.7%	0.8%	0.6%	1.3%	0.0%	2.5%	1.3%	3.6%	0.0%	100.0%		
Road 17	17	45.9	45.9	N	1800-1900	1356	48.0%	11.3%	0.2%	15.5%	5.6%	3.2%	6.3%	0.0%	0.0%	0.1%	0.8%	0.8%	1.3%	0.0%	3.2%	2.3%	1.7%	0.0%	100.0%		
Road 17	17	58.3	58.3	N	1900-2000	1029	49.2%	15.4%	0.1%	13.2%	4.4%	2.9%	5.8%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	3.9%	1.8%	1.5%	0.0%	100.0%		
Road 17	17	63.1	63.1	N	2000-2100	805	45.1%	19.1%	0.1%	13.0%	7.7%	2.3%	5.1%	0.0%	0.0%	0.1%	0.5%	0.4%	0.9%	0.0%	1.9%	1.0%	2.5%	0.0%	100.0%		
Road 17	17	63.7	63.7	N	2100-2200	807	45.7%	18.9%	0.1%	12.4%	4.7%	3.0%	6.0%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	3.5%	2.1%	1.6%	0.0%	100.0%		
Road 17	17	64.1	64.1	N	2200-2300	766	46.5%	21.0%	0.1%	10.4%	3.7%	3.3%	6.5%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	3.9%	1.8%	1.7%	0.0%	100.0%		
Road 17	17	65.4	65.4	N	2300-0000	585	44.7%	20.1%	0.1%	11.4%	4.1%	3.6%	7.1%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	3.8%	2.0%	1.9%	0.0%	100.0%		
Road 18	18	68.1	68.1	N	0000-0100	512	51.2%	23.9%	0.1%	7.7%	2.8%	2.4%	4.8%		0.0%	0.2%	0.3%	0.7%	0.0%	2.5%	1.6%	0.0%	100.0%				
Road 18	18	69.2	69.2	N	0100-0200	231	52.5%	22.5%	0.1%	5.6%	2.0%	1.8%	3.5%	0.2%	0.0%	0.3%	0.6%	0.4%	0.9%	0.4%	3.0%	3.0%	2.5%	0.0%	100.0%		
Road 18	18	69.4	69.4	N	0200-0300	211	53.1%	22.8%	0.1%	6.0%	2.2%	1.9%	3.7%	0.2%	0.0%	0.3%	0.6%	0.4%	1.0%	0.3%	3.4%	3.2%	3.1%	0.0%	100.0%		
Road 18	18	69.5	69.5	N	0300-0400	156	55.6%	23.6%	0.1%	6.6%	2.6%	2.0%	4.0%	0.2%	0.0%	0.3%	0.6%	0.4%	1.0%	0.3%	3.5%	3.7%	3.7%	0.0%	100.0%		
Road 18	18	69.0	69.0	N	0400-0500	149	48.6%	21.5%	0.1%	7.0%	2.5%	2.2%	4.3%	0.2%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	3.2%	3.8%	3.6%	0.0%	100.0%		
Road 18	18	69.1	69.1	N	0500-0600	267	48.0%	21.1%	0.1%	7.5%	2.7%	2.4%	4.6%	0.2%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	3.2%	4.1%	2.6%	0.0%	100.0%		
Road 18	18	68.8	68.8	N	0600-0700	520	47.8%	19.2%	0.1%	8.1%	2.8%	2.5%	4.9%	0.2%	0.0%	0.5%	0.8%	0.7%	1.4%	0.0%	4.4%	2.8%	2.5%	0.0%	100.0%		
Road 18	18	65.9	65.9	N	0700-0800	1123	45.3%	19.9%	0.1%	8.5%	3.1%	2.7%	5.2%	0.2%	0.0%	0.7%	1.0%	0.7%	1.6%	0.0%	3.2%	4.7%	2.6%	0.0%	100.0%		
Road 18	18	65.3	65.3	N	0800-0900	1300	51.0%	16.3%	0.1%	9.2%	3.3%	2.6%	5.1%	0.2%	0.1%	0.7%	1.0%	0.7%	1.5%	0.0%	2.8%	3.0%	2.4%	0.0%	100.0%		
Road 18	18	65.8	65.8	N	0900-1000	1402	45.3%	16.4%	0.1%	12.6%	4.5%	3.4%	6.8%	0.2%	0.1%	0.8%	1.1%	0.8%	1.6%	0.0%	2.9%	3.6%	2.8%	0.0%	100.0%		
Road 18	18	66.2	66.2	N	1000-1100	968	42.1%	16.4%	0.1%	13.3%	4.8%	4.2%	8.3%	0.2%	0.1%	0.5%	0.7%	0.5%	1.1%	0.0%	2.8%	1.3%	3.6%	0.0%	100.0%		
Road 18	18	68.4	68.4	N	1100-1200	917	42.0%	17.3%	0.1%	13.4%	4.8%	4.2%	8.2%	0.2%	0.1%	0.8%	0.4%	0.3%	0.6%	0.0%	2.8%	1.2%	3.7%	0.0%	100.0%		
Road 18	18	65.1	65.1	N	1200-1300	1283	42.0%	16.4%	0.1%	12.6%	4.5%	3.4%	6.8%	0.2%	0.1%	0.8%	1.1%	0.8%	1.6%	0.0%	2.9%	3.6%	2.8%	0.0%	100.0%		
Road 18	18	65.2	65.2	N	1300-1400	1139	36.6%	11.8%	0.2%	20.6%	7.4%	6.4%	12.5%	0.0%	0.1%	0.4%	0.4%	0.3%	0.7%	0.0%	3.1%	0.9%	4.5%	0.0%	100.0%		
Road 18	18	65.0	65.0	N	1400-1500	1187	31.5%	12.7%	0.2%	18.7%	6.7%	6.3%	12.4%	0.0%	0.1%	0.5%	0.6%	0.4%	1.0%	0.0%	3.2%	1.2%	4.4%	0.0%	100.0%		
Road 18	18	64.9	64.9	N	1500-1600	1221	31.1%	12.5%	0.2%	21.5%	7.7%	5.4%	10.7%	0.0%	0.1%	0.5%	0.6%	0.4%	1.0%	0.0%	3.1%	1.1%	3.9%	0.0%	100.0%		
Road 18	18	64.8	64.8	N	1600-1700	1249	34.4%	11.8%	0.2%	21.5%	7.7%	5.4%	10.7%	0.0%	0.1%	0.5%	0.6%	0.4%	1.0%	0.0%	3.1%	1.1%	3.9%	0.0%	100.0%		
Road 18	18	64.8	64.8	N	1700-1800	1327	40.2%	12.6%	0.2%	16.7%	6.0%	3.8%	7.4%	0.0%	0.1%	0.6%	0.7%	0.5%	1.1%	0.0%	3.8%	3.5%	3.0%	0.0%	100.0%		
Road 18	18	65.0	65.0	N	1800-1900	1341	53.1%	12.5%	0.1%	11.3%	4.0%	2.3%	4.6%	0.0%	0.0%	0.5%	0.8%	1.4%	0.0%	4.2%	2.5%	2.2%	0.0%	100.0%			
Road 18	18	66.1	66.1	N	1900-2000	1017	43.7%	12.6%	0.1%	12.7%	2.8%	2.1%	4.9%	0.1%	0.1%	0.8%	1.1%	0.8%	1.6%	0.0%	4.3%	3.9%	3.1%	0.0%	100.0%		
Road 18	18	67.1	67.1	N	2000-2100	1037	49.9%	20.9%	0.1%	9.3%	3.4%	2.1%	4.0%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	5.2%	2.0%	1.5%	0.0%	100.0%		
Road 18	18	67.1	67.1	N	2100-2200	886	50.1%	20.7%	0.1%	9.5%	3.4%	2.2%	4.3%	0.0%	0.0%	0.1%	0.4%	0.2%	0.5%	0.0%	4.6%	2.3%	1.6%	0.0%	100.0%		
Road 18	18	67.0	67.0	N	2200-2300	743	46.4%	24.8%	0.1%	7.8%	2.4%	2.4%	4.5%	0.0%	0.0%	0.1%	0.5%	0.4%	0.9%	0.0%	7.6%	1.8%	1.4%	0.0%	100.0%		
Road 18	18	67.9	67.9	N	2300-0000	586	48.8%	22.0%	0.1%	8.2%	2.9%	2.6%	5.1%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.4%	4.9%	2.2%	2.0%	0.0%	100.0%		

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2038)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles <=5t	07 - Medium Goods Vehicles 5-24t	08 - Public Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4-15t	13 - Non-franchised Bus 15-24t	14 - Franchise d Bus Single	15 - Franchise d Bus Double Deck	16 - Motorcycl	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total	
Road 21	21	70	68.1	N	0000-0100	525	46.8%	21.0%	1.0%	0.1%	0.1%	3.2%	2.9%	5.7%	0.1%	0.0%	0.2%	0.4%	0.3%	0.7%	0.0%	2.2%	2.4%	0.0%	100.0%	
Road 21	21	70	68.7	N	0100-0200	353	44.5%	19.9%	0.1%	0.1%	0.1%	3.3%	1.0%	0.1%	0.0%	0.2%	0.3%	0.7%	0.0%	2.1%	2.5%	6.8%	0.0%	100.0%		
Road 21	21	70	69.0	N	0200-0300	266	42.3%	16.8%	0.1%	10.2%	3.7%	3.2%	6.3%	0.1%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	2.1%	2.7%	8.6%	0.0%	100.0%	
Road 21	21	70	69.1	N	0300-0400	217	40.2%	17.8%	0.1%	10.2%	3.6%	3.4%	6.6%	0.1%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	2.0%	2.8%	10.2%	0.0%	100.0%	
Road 21	21	70	69.0	N	0400-0500	240	39.2%	17.3%	0.1%	11.5%	4.1%	3.6%	7.1%	0.1%	0.0%	0.4%	0.6%	0.4%	1.0%	0.0%	2.0%	3.0%	9.5%	0.0%	100.0%	
Road 21	21	70	68.4	N	0500-0600	408	39.2%	17.2%	0.1%	12.5%	4.5%	3.9%	7.7%	0.1%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	2.3%	6.3%	5.5%	0.0%	100.0%	
Road 21	21	70	66.6	N	0600-0700	865	38.8%	17.0%	0.1%	13.5%	4.9%	4.2%	8.3%	0.1%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	2.0%	3.6%	4.3%	0.0%	100.0%	
Road 21	21	70	62.0	N	0700-0800	1809	36.7%	16.0%	0.1%	14.0%	5.0%	4.4%	8.6%	0.1%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	1.9%	3.6%	6.2%	0.0%	100.0%	
Road 21	21	70	57.0	N	0800-0900	2102	40.8%	13.1%	0.2%	15.1%	5.4%	4.2%	8.3%	0.0%	0.1%	0.6%	0.8%	1.2%	0.0%	1.7%	2.4%	5.5%	0.0%	100.0%		
Road 21	21	70	58.9	N	0900-1000	1903	33.9%	12.3%	0.2%	16.4%	7.0%	5.3%	10.4%	0.1%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	1.6%	1.3%	6.4%	0.0%	100.0%	
Road 21	21	70	61.1	N	1000-1100	1728	30.6%	11.9%	0.2%	19.8%	7.1%	6.3%	12.4%	0.1%	0.0%	0.3%	0.5%	0.3%	0.8%	0.0%	1.5%	0.9%	7.3%	0.0%	100.0%	
Road 21	21	70	63.0	N	1100-1200	1634	30.5%	12.6%	0.2%	19.7%	7.1%	6.2%	12.1%	0.1%	0.1%	0.8%	0.3%	0.2%	0.5%	0.0%	1.9%	0.0%	7.5%	0.0%	100.0%	
Road 21	21	70	63.1	N	1200-1300	1505	22.9%	8.8%	0.2%	22.7%	8.1%	8.1%	16.0%	0.0%	0.0%	0.4%	0.4%	0.3%	0.6%	0.0%	1.9%	0.7%	8.9%	0.0%	100.0%	
Road 21	21	70	61.2	N	1300-1400	1613	21.1%	8.1%	0.3%	25.7%	9.2%	7.9%	15.6%	0.0%	0.0%	0.3%	0.3%	0.2%	0.5%	0.0%	1.7%	0.6%	8.5%	0.0%	100.0%	
Road 21	21	70	60.5	N	1400-1500	1653	22.0%	8.9%	0.2%	23.7%	8.5%	8.0%	15.8%	0.0%	0.0%	0.4%	0.4%	0.3%	0.7%	0.0%	1.8%	0.8%	8.4%	0.0%	100.0%	
Road 21	21	70	59.9	N	1500-1600	1707	21.6%	8.7%	0.3%	27.2%	9.8%	6.9%	13.5%	0.0%	0.0%	0.4%	0.4%	0.3%	0.7%	0.0%	1.7%	0.8%	7.7%	0.0%	100.0%	
Road 21	21	70	60.2	N	1600-1700	1693	24.7%	8.5%	0.2%	23.0%	8.3%	7.2%	14.1%	0.0%	0.1%	0.6%	0.7%	0.6%	1.1%	0.0%	2.0%	1.2%	7.9%	0.0%	100.0%	
Road 21	21	70	61.4	N	1700-1800	1731	9.9%	0.2%	22.0%	8.2%	5.2%	10.1%	0.0%	0.1%	0.4%	0.5%	0.4%	0.8%	0.0%	2.3%	2.6%	6.7%	0.0%	100.0%		
Road 21	21	70	63.6	N	1800-1900	1602	43.2%	10.2%	0.2%	16.6%	6.9%	3.5%	8.8%	0.0%	0.0%	0.1%	0.8%	0.1%	0.0%	2.7%	2.1%	6.2%	0.0%	100.0%		
Road 21	21	70	65.5	N	1900-2000	1168	46.1%	14.4%	0.1%	13.8%	5.0%	3.3%	6.5%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	3.4%	1.7%	3.3%	0.0%	100.0%	
Road 21	21	70	66.5	N	2000-2100	920	42.0%	17.9%	0.2%	14.5%	5.2%	3.2%	6.3%	0.0%	0.0%	0.1%	0.6%	0.4%	0.9%	0.0%	3.5%	1.7%	3.8%	0.0%	100.0%	
Road 21	21	70	69.5	N	2100-2200	923	42.6%	17.6%	0.2%	14.8%	5.3%	3.4%	6.5%	0.0%	0.0%	0.1%	0.6%	0.4%	0.9%	0.0%	3.1%	1.9%	3.3%	0.0%	100.0%	
Road 21	21	70	66.7	N	2200-2300	873	43.4%	19.6%	0.1%	11.6%	4.2%	3.7%	7.3%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	3.4%	1.7%	4.0%	0.0%	100.0%	
Road 21	21	70	67.4	N	2300-0000	674	41.3%	18.6%	0.1%	12.6%	4.5%	4.0%	7.8%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	3.3%	1.8%	4.8%	0.0%	100.0%	
Road 22	22	50	28.2	N	0000-0100	48	14.1%	6.3%	0.3%	31.7%	11.4%	10.2%	19.3%	0.0%	0.0%	0.1%	0.2%	0.1%	0.2%	0.0%	0.7%	0.4%	12.4%	0.0%	100.0%	
Road 22	22	50	27.3	N	0100-0200	34	12.9%	5.8%	0.3%	32.4%	11.7%	10.2%	20.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.7%	5.3%	0.0%	100.0%	
Road 22	22	50	27.9	N	0200-0300	26	11.9%	5.3%	0.3%	33.1%	11.9%	10.4%	20.5%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.8%	5.3%	0.0%	100.0%	
Road 22	22	50	28.2	N	0300-0400	22	10.9%	4.9%	0.4%	33.6%	12.1%	10.6%	20.9%	0.0%	0.0%	0.1%	0.2%	0.1%	0.2%	0.0%	0.0%	0.5%	5.4%	0.0%	100.0%	
Road 22	22	50	27.9	N	0400-0500	26	10.1%	4.5%	0.4%	34.1%	12.3%	10.7%	21.1%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	0.8%	5.5%	0.0%	100.0%	
Road 22	22	50	28.1	N	0500-0600	47	9.3%	4.1%	0.4%	34.6%	12.4%	10.8%	21.3%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	0.8%	5.6%	0.0%	100.0%	
Road 22	22	50	24.2	N	0600-0700	107	8.7%	3.8%	0.4%	35.0%	12.6%	11.0%	21.5%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	0.8%	5.6%	0.0%	100.0%	
Road 22	22	50	21.5	N	0700-0800	229	8.0%	3.5%	0.4%	35.3%	12.7%	11.1%	21.8%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	0.5%	5.7%	0.0%	100.0%	
Road 22	22	50	22.2	N	0800-0900	273	8.7%	2.8%	0.4%	37.3%	13.4%	10.4%	20.5%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	0.5%	5.4%	0.0%	100.0%	
Road 22	22	50	21.0	N	0900-1000	300	6.0%	2.2%	0.4%	39.4%	14.1%	10.7%	21.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.2%	5.5%	0.0%	100.0%	
Road 22	22	50	21.0	N	1000-1100	293	5.0%	1.9%	0.4%	37.4%	13.4%	11.8%	23.4%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.2%	6.1%	0.0%	100.0%	
Road 22	22	50	21.3	N	1100-1200	275	5.0%	2.1%	0.4%	37.6%	13.3%	11.8%	23.1%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.1%	0.0%	0.1%	6.0%	0.0%	100.0%	
Road 22	22	50	21.2	N	1200-1300	283	6.5%	2.5%	0.4%	34.5%	12.4%	12.4%	24.3%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.2%	6.4%	0.0%	100.0%	
Road 22	22	50	20.7	N	1300-1400	316	5.8%	2.2%	0.4%	37.4%	13.2%	11.6%	22.8%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.2%	5.9%	0.0%	100.0%	
Road 22	22	50	20.7	N	1400-1500	315	6.2%	2.1%	0.4%	35.6%	12.8%	12.0%	23.7%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.2%	6.2%	0.0%	100.0%	
Road 22	22	50	20.5	N	1500-1600	328	6.0%	2.4%	0.4%	40.3%	14.0%	10.2%	20.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.2%	5.3%	0.0%	100.0%	
Road 22	22	50	20.9	N	1600-1700	307	7.3%	2.5%	0.4%	36.2%	13.0%	11.3%	22.2%	0.0%	0.0%	0.2%	0.2%	0.1%	0.3%	0.0%	0.0%	0.3%	5.8%	0.0%	100.0%	
Road 22	22	50	21.4	N	1700-1800	284	9.8%	3.1%	0.4%	39.6%	14.2%	9.9%	17.6%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	0.8%	4.6%	0.0%	100.0%	
Road 22	22	50	22.8	N	1800-1900	209	17.7%	4.2%	0.4%	36.4%	13.1%	7.6%	14.9%	0.0%	0.0%	0.0%	0.0%	0.3%	0.2%	0.5%	0.0%	0.0%	8.9%	3.9%	0.0%	100.0%
Road 22	22	50	23.8	N	1900-2000	142	20.4%	6.4%	0.3%	32.5%	11.7%	7.8%	15.2%	0.0%	0.0%	0.0%	0.0%	0.3%	0.2%	0.5%	0.0%	0.0%	8.8%	4.0%	0.0%	100.0%
Road 22	22	50	24.3	N	2000-2100	126	18.2%	6.8%	0.4%	32.8%	12.1%	7.4%	14.6%	0.0%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.0%	8.7%	3.8%	0.0%	100.0%
Road 22	22	50	24.3	N	2100-2200	115	18.3%	7.6%	0.4%	33.6%	12.1%	7.7%	15.2%	0.0%	0.0%	0.0%	0.0%	0.1%	0.2%	0.0%	0.0%	0.8%	4.0%	0.0%	100.0%	
Road 22	22	50	24.4	N	2200-2300	102	19.8%	9.0%	0.3%	28.3%	10.2%	9.0%	17.7%	0.0%	0.0%	0.0%	0.0%	0.1%	0.2%	0.0%	0.0%	0.8%	4.6%	0.0%	100.0%	
Road 22	22	50	24.7	N	2300-0000	82	18.1%	8.2%	0.3%	29.3%	10.5%	9.3%	18.3%	0.0%	0.0%	0.0%	0.0%	0.1%	0.2%	0.0%	0.0%	0.7%	4.8%	0.0%	100.0%	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2038)																									
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles <=5t	07 - Medium Goods Vehicles 5-24t	08 - Public Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4-15t	13 - Non-franchised Bus 15-24t	14 - Franchise d Bus Single	15 - Franchise d Bus Double Deck	16 - Motorcycl	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total
							PC	TAXI	LGVS	LGVA	LGVB	HGV7	HGV8	PLB	PV4	PV5	NFB6	NFB7	NFB8	FBS8	FBD8	MC	HGV9	NFB9	
Road 25	25	50	28.5	N	0000-0100	17	6.8%	3.1%	0.4%	36.9%	13.0%	11.5%	22.9%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.3%	0.4%	5.9%	0.0%	100.0%
Road 25	25	50	29.0	N	0100-0200	12	6.2%	2.8%	0.4%	36.7%	13.2%	11.6%	22.7%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.1%	0.3%	0.4%	5.9%	0.0%	100.0%
Road 25	25	50	29.5	N	0200-0300	17	6.2%	2.8%	0.4%	36.7%	13.2%	11.6%	22.7%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.1%	0.3%	0.4%	5.9%	0.0%	100.0%
Road 25	25	50	29.3	N	0300-0400	8	5.1%	2.3%	0.4%	37.3%	13.4%	11.7%	23.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.4%	0.6%	6.0%	0.0%	100.0%
Road 25	25	50	29.2	N	0400-0500	10	4.7%	2.1%	0.4%	37.6%	13.5%	11.8%	23.2%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.4%	0.6%	6.1%	0.0%	100.0%
Road 25	25	50	29.5	N	0500-0600	13	5.9%	2.3%	0.4%	37.6%	13.5%	11.8%	23.2%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.4%	0.6%	6.1%	0.0%	100.0%
Road 25	25	50	29.5	N	0600-0700	40	4.0%	1.7%	0.4%	38.0%	13.7%	11.9%	23.4%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.4%	0.6%	6.1%	0.0%	100.0%
Road 25	25	50	29.2	N	0700-0800	87	3.7%	1.6%	0.4%	38.2%	13.7%	12.0%	23.5%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.4%	0.6%	6.1%	0.0%	100.0%
Road 25	25	50	24.0	N	0800-0900	104	3.0%	1.3%	0.4%	40.2%	14.0%	12.2%	23.1%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.4%	0.8%	6.2%	0.0%	100.0%
Road 25	25	50	24.0	N	0900-1000	117	2.7%	1.0%	0.4%	41.5%	14.9%	11.3%	23.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	5.8%	0.0%	100.0%	
Road 25	25	50	24.0	N	1000-1100	115	2.2%	0.9%	0.4%	39.1%	14.0%	12.4%	24.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	6.4%	0.0%	0.0%	100.0%	
Road 25	25	50	24.0	N	1100-1200	108	2.2%	0.9%	0.4%	39.3%	14.3%	12.5%	24.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	6.4%	0.0%	0.0%	100.0%	
Road 25	25	50	24.1	N	1200-1300	108	2.0%	0.8%	0.4%	37.1%	13.3%	13.3%	26.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	6.8%	0.0%	0.0%	100.0%
Road 25	25	50	23.9	N	1300-1400	122	1.8%	0.7%	0.4%	39.8%	14.3%	12.3%	24.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.3%	0.0%	0.0%	100.0%
Road 25	25	50	23.50	N	1400-1500	126	0.8%	0.3%	0.5%	43.2%	15.9%	10.7%	25.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.8%	0.0%	0.0%	100.0%
Road 25	25	50	23.9	N	1500-1600	126	1.9%	0.7%	0.5%	43.2%	15.9%	10.7%	25.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.3%	0.0%	0.0%	100.0%
Road 25	25	50	24.0	N	1600-1700	116	2.3%	0.8%	0.4%	39.9%	14.1%	12.3%	24.1%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	6.3%	0.0%	0.0%	100.0%
Road 25	25	50	24.3	N	1700-1800	94	3.2%	1.0%	0.5%	44.2%	15.9%	10.0%	19.7%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	6.3%	0.1%	6.3%	100.0%
Road 25	25	50	24.0	N	1800-1900	88	3.7%	1.1%	0.5%	43.8%	16.0%	9.1%	18.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.3%	0.1%	6.3%	100.0%
Road 25	25	50	26.2	N	1900-2000	46	7.3%	2.3%	0.4%	40.8%	14.6%	9.7%	19.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.3%	5.0%	0.0%	100.0%
Road 25	25	50	27.0	N	2000-2100	37	6.0%	2.8%	0.4%	42.1%	15.1%	9.3%	18.3%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.3%	4.8%	0.0%	100.0%
Road 25	25	50	28.0	N	2100-2200	38	6.5%	2.7%	0.4%	41.6%	14.9%	9.6%	18.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	4.9%	0.0%	100.0%
Road 25	25	50	27.2	N	2200-2300	33	7.2%	3.3%	0.4%	36.0%	12.9%	11.4%	22.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	5.9%	0.0%	100.0%
Road 25	25	50	27.7	N	2300-0000	27	6.5%	2.9%	0.4%	35.5%	13.1%	11.6%	22.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	5.9%	0.0%	100.0%
Road 25	25	50	28.1	N	0000-0100	21	6.5%	2.9%	0.4%	35.5%	13.1%	11.6%	22.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	5.9%	0.0%	100.0%
Road 26	26	50	29.1	N	0100-0200	11	5.4%	2.4%	0.4%	37.1%	13.3%	11.7%	23.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.3%	6.0%	0.0%	100.0%
Road 26	26	50	29.3	N	0200-0300	9	4.9%	2.2%	0.4%	37.4%	13.4%	11.8%	23.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.3%	6.1%	0.0%	100.0%
Road 26	26	50	29.4	N	0300-0400	7	4.5%	2.0%	0.4%	37.7%	13.5%	11.9%	23.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	6.1%	0.0%	100.0%
Road 26	26	50	29.3	N	0400-0500	9	4.1%	1.8%	0.4%	38.0%	13.6%	11.9%	23.4%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.3%	6.1%	0.0%	100.0%
Road 26	26	50	28.6	N	0500-0600	16	3.8%	1.7%	0.4%	38.2%	13.7%	12.0%	23.5%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.3%	6.1%	0.0%	100.0%
Road 26	26	50	28.7	N	0600-0700	17	3.8%	1.7%	0.4%	38.2%	13.7%	12.0%	23.5%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.3%	6.1%	0.0%	100.0%
Road 26	26	50	28.6	N	0700-0800	79	3.2%	1.4%	0.4%	38.5%	13.8%	12.1%	23.7%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.3%	6.2%	0.0%	100.0%
Road 26	26	50	24.4	N	0800-0900	95	3.5%	1.1%	0.4%	40.5%	14.5%	11.3%	22.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	5.8%	0.0%	100.0%
Road 26	26	50	24.2	N	0900-1000	97	2.9%	0.8%	0.4%	41.7%	15.0%	11.4%	22.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	5.8%	0.0%	100.0%
Road 26	26	50	24.0	N	1000-1100	106	3.1%	0.9%	0.4%	41.9%	15.1%	11.5%	22.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	5.8%	0.0%	100.0%
Road 26	26	50	24.3	N	1100-1200	99	1.9%	0.8%	0.4%	39.5%	14.2%	12.4%	24.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	6.3%	0.0%	100.0%
Road 26	26	50	24.2	N	1200-1300	105	5.6%	2.1%	0.4%	35.0%	12.6%	12.8%	24.7%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.2%	6.5%	0.0%	100.0%
Road 26	26	50	24.0	N	1300-1400	119	3.1%	1.0%	0.4%	37.0%	13.5%	11.5%	23.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	6.3%	0.0%	100.0%
Road 26	26	50	24.0	N	1400-1500	117	5.3%	2.1%	0.4%	36.1%	13.0%	12.2%	24.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.2%	6.3%	0.0%	100.0%
Road 26	26	50	24.0	N	1500-1600	122	5.1%	2.1%	0.4%	40.9%	14.7%	10.0%	20.4%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.2%	6.3%	0.0%	100.0%
Road 26	26	50	24.0	N	1600-1700	124	5.6%	2.2%	0.4%	38.6%	14.2%	12.2%	24.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	6.3%	0.0%	100.0%
Road 26	26	50	24.3	N	1700-1800	105	8.5%	2.7%	0.4%	40.6%	14.6%	9.2%	18.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.7%	4.7%	0.0%	100.0%
Road 26	26	50	24.8	N	1800-1900	76	15.5%	3.6%	0.4%	37.8%	15.3%	7.9%	15.5%	0.0%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.7%	4.0%	0.0%	100.0%
Road 26	26	50	26.0	N	1900-2000	101	15.8%	3.6%	0.4%	34.0%	16.0%	10.0%	16.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	4.0%	0.0%	100.0%
Road 26	26	50	26.8	N	2000-2100	41	16.2%	6.9%	0.4%	35.3%	12.7%	7.8%	15.3%	0.0%	0.0%	0.0%	0.0%	0.2%	0.2%	0.3%	0.0%	0.7%	4.0%	0.0%	100.0%
Road 26	26	50	28.8	N	2100-2200	42	16.1%	6.7%	0.4%	35.1%	12.6%	8.1%	15.9%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.7%	4.1%	0.0%	100.0%
Road 26	26	50	27.0	N	2200-2300	37	15.2%	6.5%	0.4%	35.0%	12.6%	8.1%	16.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	4.1%	0.0%	100.0%
Road 26	26	50	27.7	N	2300-0000	30	15.9%	7.2%	0.3%	30.7%	11.0%	9.7%	19.1%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.7%	5.0%	0.0%	100.0%

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2038)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles <=5t	07 - Medium Goods Vehicles >5-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchise d Bus Single Deck	15 - Franchise d Bus Double Deck	16 - Motorcycl	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total	
Road 29	29	80	80.0	N	0000-0100	717	52.2%	24.2%	0.0%	3.2%	1.1%	1.7%	2.0%	0.0%	0.0%	0.2%	0.5%	0.4%	0.0%	3.8%	3.2%	2.8%	2.1%	0.0%	100.0%	
Road 29	29	80	80.0	N	0100-0200	470	54.8%	24.5%	0.0%	3.3%	1.3%	1.1%	2.2%	0.0%	0.0%	0.3%	0.0%	0.4%	0.0%	3.7%	3.1%	2.9%	0.0%	0.0%	100.0%	
Road 29	29	80	80.0	N	0200-0300	346	53.5%	23.8%	0.0%	3.8%	1.4%	1.2%	2.3%	0.0%	0.0%	0.3%	0.7%	0.8%	1.0%	0.0%	3.7%	3.4%	3.8%	0.0%	100.0%	
Road 29	29	80	80.0	N	0300-0400	275	52.1%	23.1%	0.0%	4.1%	1.3%	2.0%	2.6%	0.0%	0.1%	0.4%	0.8%	0.5%	1.1%	0.0%	3.6%	3.7%	4.7%	0.0%	100.0%	
Road 29	29	80	80.0	N	0400-0500	303	51.3%	22.7%	0.0%	4.4%	1.8%	1.4%	2.7%	0.0%	0.1%	0.5%	0.8%	0.3%	1.3%	0.0%	3.8%	4.0%	4.4%	0.0%	100.0%	
Road 29	29	80	80.0	N	0500-0600	512	51.2%	22.2%	0.1%	4.8%	1.6%	1.5%	3.0%	0.0%	0.1%	0.6%	0.9%	0.7%	1.4%	0.0%	3.6%	4.4%	2.9%	0.0%	100.0%	
Road 29	29	80	80.0	N	0600-0700	1084	50.8%	22.5%	0.1%	5.2%	1.9%	1.6%	3.2%	0.7%	0.1%	0.7%	1.0%	0.7%	1.6%	0.0%	3.7%	4.8%	1.9%	0.0%	100.0%	
Road 29	29	80	80.0	N	0700-0800	2210	49.3%	21.5%	0.1%	6.5%	2.0%	1.7%	3.4%	0.7%	0.1%	0.7%	1.1%	0.8%	1.7%	0.0%	3.6%	5.0%	2.8%	0.0%	100.0%	
Road 29	29	80	80.0	N	0800-0900	2547	55.3%	17.7%	0.1%	6.0%	2.2%	1.7%	3.3%	0.5%	0.1%	0.8%	1.1%	0.8%	1.6%	0.0%	3.2%	3.2%	2.5%	0.0%	100.0%	
Road 29	29	80	80.0	N	0900-1000	2090	50.7%	18.4%	0.1%	6.5%	3.0%	2.3%	4.5%	0.6%	0.1%	0.5%	0.9%	0.8%	1.3%	0.0%	3.3%	2.0%	3.2%	0.0%	100.0%	
Road 29	29	80	80.0	N	1000-1100	1807	48.0%	18.6%	0.1%	9.1%	3.3%	2.9%	5.7%	0.7%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	3.3%	1.5%	3.8%	0.0%	100.0%	
Road 29	29	80	80.0	N	1100-1200	1715	47.7%	19.7%	0.1%	9.0%	3.3%	2.8%	5.5%	0.7%	0.1%	0.9%	0.5%	0.3%	0.7%	0.0%	3.4%	1.3%	3.9%	0.0%	100.0%	
Road 29	29	80	80.0	N	1200-1300	1556	28.2%	10.9%	0.2%	16.2%	5.8%	5.8%	11.4%	0.6%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	12.4%	0.8%	5.7%	0.0%	100.0%	
Road 29	29	80	80.0	N	1300-1400	1625	29.8%	10.2%	0.2%	18.8%	6.7%	5.8%	11.4%	0.6%	0.0%	0.4%	0.4%	0.3%	0.6%	0.1%	11.5%	0.8%	5.6%	0.0%	100.0%	
Road 29	29	80	80.0	N	1400-1500	1684	27.3%	11.0%	0.2%	17.1%	6.1%	5.8%	11.4%	0.6%	0.1%	0.5%	0.5%	0.4%	0.8%	0.0%	11.7%	1.0%	5.5%	0.0%	100.0%	
Road 29	29	80	80.0	N	1500-1600	1738	27.0%	10.9%	0.2%	19.7%	7.1%	5.0%	9.8%	0.6%	0.1%	0.5%	0.6%	0.4%	0.8%	0.1%	11.4%	1.0%	5.0%	0.0%	100.0%	
Road 29	29	80	80.0	N	1600-1700	1796	29.6%	10.2%	0.2%	16.0%	5.7%	5.0%	9.8%	0.6%	0.1%	0.7%	0.9%	0.8%	1.3%	0.0%	13.0%	1.4%	4.9%	0.0%	100.0%	
Road 29	29	80	80.0	N	1700-1800	1333	10.8%	10.8%	0.0%	16.0%	6.4%	3.4%	6.7%	0.8%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	13.0%	3.0%	3.9%	0.0%	100.0%	
Road 29	29	80	80.0	N	1800-1900	1949	45.2%	10.6%	0.1%	10.1%	3.6%	2.1%	4.1%	0.6%	0.0%	0.1%	0.8%	0.5%	1.2%	0.1%	15.4%	2.2%	3.3%	0.0%	100.0%	
Road 29	29	80	80.0	N	1900-2000	1517	45.2%	14.1%	0.1%	7.8%	2.8%	1.9%	3.7%	0.8%	0.0%	0.1%	0.7%	0.5%	1.0%	0.1%	17.9%	1.7%	1.7%	0.0%	100.0%	
Road 29	29	80	80.0	N	2000-2100	1196	41.1%	17.4%	0.1%	8.2%	2.9%	1.8%	3.6%	0.6%	0.0%	0.1%	0.6%	0.4%	0.9%	0.0%	18.6%	1.6%	1.8%	0.0%	100.0%	
Road 29	29	80	80.0	N	2100-2200	1174	42.8%	17.1%	0.1%	8.5%	3.0%	2.0%	3.6%	0.6%	0.0%	0.1%	0.6%	0.7%	0.9%	0.0%	18.3%	1.9%	1.9%	0.0%	100.0%	
Road 29	29	80	80.0	N	2200-2300	1139	42.3%	19.1%	0.1%	6.6%	2.4%	2.1%	4.1%	0.7%	0.0%	0.0%	0.3%	0.2%	0.4%	0.1%	18.0%	1.6%	2.0%	0.0%	100.0%	
Road 30	30	70	70.0	N	0000-0100	864	41.0%	18.8%	0.1%	7.2%	2.6%	2.3%	4.5%	0.7%	0.0%	0.1%	0.3%	0.2%	0.5%	0.1%	17.6%	1.8%	2.5%	0.0%	100.0%	
Road 30	30	70	70.0	N	0100-0200	560	50.4%	22.4%	0.0%	2.3%	0.2%	2.3%	0.2%	0.0%	0.0%	0.2%	0.0%	0.2%	0.0%	2.3%	2.3%	2.3%	0.0%	100.0%		
Road 30	30	70	70.0	N	0200-0300	366	48.4%	21.7%	0.1%	7.7%	2.8%	2.4%	4.8%	0.1%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	2.2%	2.7%	5.3%	0.0%	100.0%	
Road 30	30	70	70.0	N	0300-0400	274	46.4%	20.7%	0.1%	8.2%	2.9%	2.6%	5.0%	0.1%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	2.2%	2.9%	6.7%	0.0%	100.0%	
Road 30	30	70	70.0	N	0400-0500	221	44.5%	19.8%	0.1%	8.6%	3.1%	2.7%	5.3%	0.1%	0.0%	0.3%	0.6%	0.4%	1.0%	0.0%	3.3%	6.1%	0.4%	0.0%	100.0%	
Road 30	30	70	70.0	N	0500-0600	244	43.6%	19.3%	0.1%	9.3%	3.3%	2.9%	5.7%	0.1%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	2.1%	3.4%	7.6%	0.0%	100.0%	
Road 30	30	70	70.0	N	0600-0700	415	43.4%	19.1%	0.1%	10.1%	3.6%	3.2%	6.2%	0.1%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	2.1%	3.7%	5.2%	0.0%	100.0%	
Road 30	30	70	70.0	N	0700-0800	882	43.0%	18.8%	0.1%	10.9%	3.9%	3.4%	6.7%	0.1%	0.1%	0.6%	0.9%	0.8%	1.3%	0.0%	2.1%	4.0%	3.4%	0.0%	100.0%	
Road 30	30	70	70.0	N	0800-0900	1277	43.7%	17.9%	0.1%	11.4%	4.1%	3.6%	7.0%	0.1%	0.1%	0.6%	0.9%	0.7%	1.4%	0.0%	2.0%	4.2%	4.9%	0.0%	100.0%	
Road 30	30	70	67.7	N	0900-1000	2120	45.7%	14.6%	0.1%	12.3%	4.4%	3.4%	6.8%	0.0%	0.1%	0.6%	0.9%	0.6%	1.4%	0.0%	1.8%	2.7%	4.5%	0.0%	100.0%	
Road 30	30	70	68.1	N	1000-1100	1862	39.1%	14.4%	0.2%	16.3%	5.8%	4.4%	8.7%	0.1%	0.0%	0.4%	0.7%	0.5%	1.0%	0.0%	1.8%	1.5%	5.3%	0.0%	100.0%	
Road 30	30	70	70.0	N	1100-1200	1667	35.8%	13.9%	0.2%	10.9%	6.1%	5.4%	10.5%	0.1%	0.0%	0.4%	0.6%	0.4%	0.8%	0.0%	1.7%	1.1%	6.2%	0.0%	100.0%	
Road 30	30	70	70.0	N	1200-1300	1578	35.7%	14.7%	0.2%	18.8%	6.0%	5.3%	10.3%	0.1%	0.1%	0.6%	0.4%	0.2%	0.5%	0.0%	1.7%	1.0%	6.3%	0.0%	100.0%	
Road 30	30	70	68.9	N	1300-1400	1585	27.0%	10.4%	0.2%	20.8%	7.5%	7.4%	14.6%	0.0%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	1.9%	0.8%	7.4%	0.0%	100.0%	
Road 30	30	68.9	N	1400-1500	1608	25.0%	9.6%	0.2%	23.7%	8.5%	7.5%	14.4%	0.0%	0.0%	0.4%	0.4%	0.2%	0.5%	0.0%	1.7%	0.8%	7.1%	0.0%	100.0%		
Road 30	30	68.5	N	1500-1600	1739	25.0%	10.3%	0.2%	21.7%	7.8%	7.4%	14.5%	0.0%	0.1%	0.4%	0.5%	0.4%	0.8%	0.0%	1.8%	1.0%	7.0%	0.0%	100.0%		
Road 30	30	68.2	N	1600-1700	1793	25.6%	10.3%	0.3%	24.9%	9.0%	6.3%	12.4%	0.0%	0.1%	0.4%	0.5%	0.4%	0.8%	0.0%	1.7%	0.9%	6.4%	0.0%	100.0%		
Road 30	30	70	68.2	N	1700-1800	1880	28.8%	9.9%	0.3%	20.8%	7.6%	6.5%	12.8%	0.0%	0.1%	0.7%	0.8%	0.8%	1.3%	0.0%	2.0%	1.4%	6.5%	0.0%	100.0%	
Road 30	30	68.5	N	1800-1800	1875	34.7%	10.8%	0.2%	20.3%	7.3%	4.6%	9.0%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	2.2%	3.0%	5.4%	0.0%	100.0%		
Road 30	30	70	70.0	N	1900-1900	1796	47.9%	11.2%	0.1%	14.3%	5.1%	3.0%	5.9%	0.0%	0.0%	0.1%	0.8%	0.6%	1.3%	0.0%	2.6%	2.3%	4.7%	0.0%	100.0%	
Road 30	30	70	70.0	N	2000-2000	1337	50.0%	15.7%	0.1%	11.6%	4.2%	2.8%	5.5%	0.0%	0.0%	0.1%	0.8%	0.5%	1.1%	0.0%	3.2%	1.8%	2.5%	0.0%	100.0%	
Road 30	30	70	70.0	N	2100-2100	1201	41.2%	16.2%	0.1%	12.2%	4.4%	2.7%	5.3%	0.0%	0.0%	0.1%	0.6%	0.4%	1.0%	0.0%	3.3%	1.8%	2.8%	0.0%	100.0%	
Road 30	30	70	70.0	N	2200-2200	1052	46.4%	16.2%	0.1%	12.4%	4.4%	2.8%	5.6%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	2.9%	2.1%	2.9%	0.0%	100.0%	
Road 30	30	70	70.0	N	2300-2300	1001	47.0%	21.3%	0.1%	9.8%	3.5%	3.1%	6.1%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	3.2%	1.8%	3.1%	0.0%	100.0%	
Road 30	30	70	70.0	N	2300-0000	767	45.1%	20.3%	0.1%	10.6%	3.8%	3.4%	6.6%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	3.1%	2.0%	3.7%	0.0%	100.0%	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2038)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles <=5t	07 - Medium Goods Vehicles 5-24t	08 - Public Light Bus	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchised Bus Single Deck	15 - Franchised Bus Double Deck	16 - Motorcycl	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total	
Road 33	33	70	70.0	N	0000-0100	652	49.2%	22.1%	0.1%	7.6%	2.7%	2.4%	4.7%	0.2%	0.0%	0.2%	0.5%	0.3%	0.7%	0.0%	3.3%	2.5%	3.0%	0.0%	100.0%	
Road 33	33	70	70.0	N	0100-0200	434	47.3%	21.2%	0.1%	8.1%	3.1%	2.7%	5.4%	0.2%	0.0%	0.3%	0.5%	0.4%	0.0%	3.3%	2.7%	4.7%	0.0%	0.0%	100.0%	
Road 33	33	70	70.0	N	0200-0300	324	45.6%	20.2%	0.1%	8.7%	3.1%	2.7%	5.4%	0.2%	0.0%	0.3%	0.6%	0.4%	0.9%	0.3%	3.2%	2.9%	6.0%	0.0%	100.0%	
Road 33	33	70	70.0	N	0300-0400	262	43.6%	19.4%	0.1%	9.2%	3.3%	2.9%	5.7%	0.1%	0.0%	0.3%	0.6%	0.4%	1.0%	0.3%	3.1%	3.1%	7.1%	0.0%	100.0%	
Road 33	33	70	70.0	N	0400-0500	289	45.9%	18.9%	0.1%	9.6%	3.5%	3.1%	6.0%	0.1%	0.0%	0.4%	0.7%	0.5%	1.1%	0.3%	3.0%	3.3%	6.70%	0.0%	100.0%	
Road 33	33	70	70.0	N	0500-0600	495	42.2%	18.8%	0.1%	10.7%	3.8%	3.4%	6.5%	0.1%	0.0%	0.5%	0.8%	0.6%	1.2%	0.7%	3.0%	3.7%	7.0%	0.0%	100.0%	
Road 33	33	70	70.0	N	0600-0700	1054	41.6%	18.2%	0.1%	11.5%	4.1%	3.6%	7.1%	0.2%	0.1%	0.5%	0.9%	0.6%	1.3%	0.3%	3.0%	3.9%	3.3%	0.0%	100.0%	
Road 33	33	70	70.0	N	0700-0800	2181	39.8%	17.3%	0.1%	12.0%	4.3%	3.8%	7.4%	0.2%	0.1%	0.6%	0.9%	0.6%	1.4%	0.3%	3.0%	4.1%	4.8%	0.0%	100.0%	
Road 33	33	70	70.0	N	0800-0900	1533	38.1%	16.3%	0.1%	12.3%	4.7%	3.9%	7.7%	0.2%	0.1%	0.6%	0.9%	0.6%	1.4%	0.3%	3.0%	4.1%	4.8%	0.0%	100.0%	
Road 33	33	70	70.0	N	0900-1000	2238	37.7%	17.3%	0.2%	17.1%	6.1%	4.6%	9.1%	0.1%	0.0%	0.4%	0.6%	0.4%	1.0%	0.2%	2.5%	1.5%	4.9%	0.0%	100.0%	
Road 33	33	70	70.0	N	1000-1100	2009	34.4%	13.3%	0.2%	17.6%	6.3%	5.6%	11.0%	0.1%	0.0%	0.4%	0.6%	0.4%	0.9%	0.2%	2.4%	1.0%	5.7%	0.0%	100.0%	
Road 33	33	70	70.0	N	1100-1200	1961	34.1%	12.6%	0.1%	18.1%	6.5%	5.8%	11.3%	0.1%	0.0%	0.4%	0.6%	0.4%	0.9%	0.2%	2.4%	1.0%	5.7%	0.0%	100.0%	
Road 33	33	70	70.0	N	1200-1300	1838	28.2%	10.0%	0.2%	20.0%	7.2%	7.2%	14.1%	0.1%	0.0%	0.1%	0.4%	0.5%	0.3%	0.7%	0.4%	2.8%	0.8%	6.6%	0.0%	100.0%
Road 33	33	70	70.0	N	1300-1400	1949	25.2%	10.1%	0.2%	22.8%	8.2%	7.1%	13.9%	0.0%	0.0%	0.4%	0.4%	0.3%	0.6%	0.2%	2.4%	0.8%	6.5%	0.0%	100.0%	
Road 33	33	70	70.0	N	1400-1500	2016	27.3%	10.5%	0.2%	23.5%	8.5%	7.3%	14.5%	0.0%	0.0%	0.4%	0.4%	0.3%	0.6%	0.2%	2.5%	1.0%	6.5%	0.0%	100.0%	
Road 33	33	70	70.0	N	1500-1600	2077	26.8%	10.7%	0.3%	24.0%	8.6%	6.1%	12.0%	0.0%	0.1%	0.5%	0.6%	0.4%	0.8%	0.2%	2.4%	1.0%	5.9%	0.0%	100.0%	
Road 33	33	70	70.0	N	1600-1700	2095	30.0%	10.3%	0.2%	20.0%	7.2%	6.2%	12.3%	0.0%	0.1%	0.7%	0.9%	0.6%	1.3%	0.2%	2.8%	1.4%	5.9%	0.0%	100.0%	
Road 33	33	70	70.0	N	1700-1800	1918	30.6%	10.1%	0.2%	20.5%	7.4%	6.4%	12.6%	0.0%	0.1%	0.7%	0.9%	0.6%	1.3%	0.2%	2.8%	1.4%	5.9%	0.0%	100.0%	
Road 33	33	70	70.0	N	1800-1900	2131	48.5%	11.5%	0.1%	13.5%	4.8%	2.8%	5.5%	0.0%	0.0%	0.1%	0.9%	0.6%	1.3%	0.3%	3.5%	2.3%	4.1%	0.0%	100.0%	
Road 33	33	70	70.0	N	1900-2000	1601	50.7%	15.9%	0.1%	10.8%	3.9%	2.6%	5.1%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.1%	1.9%	2.3%	0.0%	0.0%	100.0%	
Road 33	33	70	70.0	N	2000-2100	1256	46.3%	19.7%	0.1%	11.4%	4.1%	2.5%	4.9%	0.0%	0.0%	0.1%	0.7%	0.5%	1.0%	0.2%	4.4%	1.9%	2.5%	0.0%	100.0%	
Road 33	33	70	70.0	N	2100-2200	1237	47.5%	19.8%	0.2%	11.6%	4.2%	2.7%	5.2%	0.0%	0.0%	0.1%	0.7%	0.5%	1.2%	0.2%	4.5%	2.2%	2.2%	0.0%	100.0%	
Road 33	33	70	70.0	N	2200-2300	1189	47.6%	21.5%	0.1%	9.1%	3.3%	2.9%	5.7%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	4.3%	1.8%	2.7%	0.0%	100.0%	
Road 33	33	70	70.0	N	2300-0000	916	45.8%	20.6%	0.1%	9.9%	3.6%	3.2%	6.2%	0.0%	0.0%	0.0%	0.3%	0.2%	0.5%	0.0%	4.1%	2.0%	3.2%	0.0%	100.0%	
Road 34	34	80	80.0	N	0000-0100	566	56.6%	20.0%	0.1%	4.0%	1.1%	0.9%	1.5%	0.0%	0.0%	0.0%	0.4%	0.3%	0.4%	0.0%	2.9%	2.2%	0.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	0100-0200	449	55.5%	24.8%	0.0%	3.4%	1.2%	1.1%	2.1%	0.6%	0.0%	0.3%	0.6%	0.4%	0.0%	2.8%	3.1%	0.0%	0.0%	100.0%		
Road 34	34	80	80.0	N	0200-0300	331	54.1%	24.1%	0.0%	3.7%	1.3%	1.2%	2.3%	0.6%	0.0%	0.3%	0.7%	0.5%	1.0%	0.2%	2.8%	3.4%	0.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	0300-0400	263	52.7%	21.0%	0.0%	4.0%	1.4%	1.2%	2.5%	0.6%	0.0%	0.3%	0.6%	0.4%	0.2%	2.7%	3.2%	0.0%	0.0%	100.0%		
Road 34	34	80	80.0	N	0400-0500	287	51.5%	23.0%	0.0%	4.3%	1.5%	1.3%	2.6%	0.7%	0.1%	0.5%	0.9%	0.6%	1.3%	0.2%	2.7%	4.0%	4.5%	0.0%	100.0%	
Road 34	34	80	80.0	N	0500-0600	489	51.8%	22.8%	0.0%	4.7%	1.7%	1.5%	2.9%	0.7%	0.1%	0.6%	1.0%	0.7%	1.5%	0.2%	2.8%	4.4%	3.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	0600-0700	1100	50.0%	21.0%	0.1%	5.1%	1.8%	1.6%	3.1%	0.7%	0.1%	0.5%	0.9%	0.6%	1.5%	0.2%	2.8%	4.8%	3.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	0700-0800	2110	50.0%	21.8%	0.1%	5.4%	1.9%	1.7%	3.3%	0.7%	0.1%	0.7%	1.1%	0.8%	1.7%	0.2%	2.7%	5.1%	2.9%	0.0%	100.0%	
Road 34	34	80	80.0	N	0800-0900	2432	56.0%	19.0%	0.1%	5.9%	2.1%	1.6%	3.2%	0.5%	0.1%	0.8%	1.1%	0.8%	1.7%	0.2%	2.4%	3.3%	2.6%	0.0%	100.0%	
Road 34	34	80	80.0	N	0900-1000	1992	51.4%	16.7%	0.1%	8.3%	3.0%	2.3%	4.4%	0.7%	0.1%	0.5%	0.9%	0.6%	1.3%	0.2%	2.5%	2.0%	3.3%	0.0%	100.0%	
Road 34	34	80	80.0	N	1000-1100	8721	48.7%	18.9%	0.2%	8.7%	3.2%	2.8%	5.0%	0.2%	0.0%	0.4%	0.6%	0.5%	0.9%	0.2%	2.8%	2.2%	3.3%	0.0%	100.0%	
Road 34	34	80	80.0	N	1100-1200	1634	48.5%	20.0%	0.1%	8.8%	3.2%	2.8%	5.4%	0.7%	0.1%	0.9%	0.5%	0.3%	0.7%	0.2%	2.6%	1.4%	4.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	1200-1300	1327	27.8%	10.7%	0.2%	16.1%	5.8%	5.8%	11.4%	0.7%	0.1%	0.4%	0.5%	0.3%	0.7%	0.2%	12.5%	0.8%	6.2%	0.0%	100.0%	
Road 34	34	80	80.0	N	1300-1400	1386	26.3%	10.4%	0.2%	16.8%	6.0%	6.0%	11.7%	0.7%	0.1%	0.4%	0.5%	0.3%	0.7%	0.2%	11.8%	0.8%	5.8%	0.0%	100.0%	
Road 34	34	80	80.0	N	1400-1500	1444	27.0%	10.9%	0.2%	17.0%	6.1%	5.8%	11.3%	0.7%	0.1%	0.5%	0.5%	0.4%	0.8%	0.1%	11.8%	1.0%	5.9%	0.0%	100.0%	
Road 34	34	80	80.0	N	1500-1600	1481	26.7%	10.7%	0.2%	19.6%	7.0%	6.0%	9.8%	0.7%	0.1%	0.5%	0.4%	0.8%	0.1%	11.5%	1.0%	5.4%	0.0%	100.0%		
Road 34	34	80	80.0	N	1600-1700	1530	26.3%	10.7%	0.2%	19.6%	7.0%	6.0%	9.8%	0.7%	0.1%	0.5%	0.4%	0.8%	0.1%	11.5%	1.0%	5.4%	0.0%	100.0%		
Road 34	34	80	80.0	N	1700-1800	1643	34.2%	10.7%	0.2%	15.0%	5.4%	5.4%	6.7%	0.7%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	14.0%	2.9%	4.3%	0.0%	100.0%	
Road 34	34	80	80.0	N	1800-1900	1659	44.8%	10.5%	0.1%	10.1%	3.6%	2.1%	4.1%	0.8%	0.0%	0.1%	0.8%	0.5%	1.2%	0.1%	15.5%	2.1%	3.6%	0.0%	100.0%	
Road 34	34	80	80.0	N	1900-2000	1788	44.8%	10.5%	0.1%	10.1%	3.6%	2.1%	4.1%	0.8%	0.0%	0.1%	0.8%	0.5%	1.2%	0.1%	15.5%	2.1%	3.6%	0.0%	100.0%	
Road 34	34	80	80.0	N	2000-2100	1017	40.8%	17.3%	0.1%	8.2%	2.9%	1.8%	3.6%	1.0%	0.0%	0.1%	0.6%	0.4%	0.9%	0.0%	18.8%	1.6%	2.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	2100-2200	997	42.2%	17.3%	0.1%	8.5%	3.0%	2.0%	3.8%	0.9%	0.0%	0.0%	0.3%	0.2%	0.5%	0.0%	16.6%	1.9%	2.1%	0.0%	100.0%	
Road 34	34	80	80.0	N	2200-2300	968	42.2%	17.3%	0.1%	8.5%	3.0%	2.0%	3.8%	0.9%	0.0%	0.0%	0.3%	0.2%	0.5%	0.0%	16.6%	1.9%	2.1%	0.0%	100.0%	
Road 34	34	80	80.0	N	2300-0000	734	40.7%	18.5%	0.1%	7.2%	2.6%	2.3%	4.5%	0.8%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.1%	17.5%	1.8%	2.7%	0.0%	100.0%

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2038)																												
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles <=5t	07 - Medium Goods Vehicles 5-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4-15t	13 - Non-franchised Bus 15-24t	14 - Franchised Bus Single Deck	15 - Franchised Bus Double Deck	16 - Motorcycl	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total			
Road 37	37	50	50.0	Y	0000-0100	2	49.6%	22.3%	0.1%	0.9%	3.5%	3.1%	6.0%	0.0%	0.0%	0.2%	0.3%	0.2%	0.7%	0.0%	2.5%	1.6%	0.0%	100.0%				
Road 37	37	50	50.0	Y	0100-0200	1	48.0%	21.5%	0.1%	10.5%	3.8%	3.3%	6.5%	0.0%	0.0%	0.2%	0.3%	0.4%	0.5%	0.3%	0.7%	1.7%	0.0%	100.0%				
Road 37	37	50	50.0	Y	0200-0300	1	46.5%	20.7%	0.1%	11.2%	4.0%	3.5%	7.0%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	2.9%	1.8%	0.0%	100.0%				
Road 37	37	50	50.0	Y	0300-0400	1	44.9%	19.9%	0.1%	12.0%	4.3%	3.8%	7.4%	0.0%	0.0%	0.4%	0.6%	0.4%	1.0%	0.0%	3.2%	2.1%	0.0%	100.0%				
Road 37	37	50	50.0	Y	0400-0500	1	43.4%	19.2%	0.1%	12.7%	4.8%	4.0%	7.9%	0.0%	0.1%	0.4%	0.7%	0.3%	1.1%	0.0%	3.4%	2.1%	0.0%	100.0%				
Road 37	37	50	50.0	Y	0500-0600	1	41.9%	18.4%	0.1%	13.4%	4.8%	4.2%	8.3%	0.0%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	3.6%	2.2%	0.0%	100.0%				
Road 37	37	50	49.9	Y	0600-0700	3	40.4%	17.7%	0.1%	14.2%	5.1%	4.4%	8.7%	0.0%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	3.8%	2.3%	0.0%	100.0%				
Road 37	37	50	49.8	Y	0700-0800	7	39.0%	17.0%	0.2%	14.9%	5.3%	4.6%	9.1%	0.0%	0.1%	0.6%	0.9%	0.6%	1.4%	0.0%	4.0%	2.4%	0.0%	100.0%				
Road 37	37	50	49.8	Y	0800-0900	8	43.0%	13.8%	0.2%	16.0%	5.7%	4.5%	8.8%	0.0%	0.1%	0.6%	0.8%	0.6%	1.3%	0.0%	2.5%	2.3%	0.0%	100.0%				
Road 37	37	50	49.8	Y	0900-1000	7	35.8%	13.0%	0.2%	20.5%	7.4%	5.6%	11.0%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	1.4%	2.9%	0.0%	100.0%				
Road 37	37	50	49.8	Y	1000-1100	6	32.4%	12.6%	0.2%	21.0%	7.5%	6.7%	13.1%	0.0%	0.0%	0.4%	0.5%	0.4%	0.8%	0.0%	1.0%	3.4%	0.0%	100.0%				
Road 37	37	50	49.8	Y	1100-1200	6	32.4%	13.4%	0.2%	21.0%	7.5%	6.6%	12.9%	0.0%	0.1%	0.6%	0.3%	0.2%	0.5%	0.0%	0.9%	3.4%	0.0%	100.0%				
Road 37	37	50	49.8	Y	1200-1300	6	34.5%	13.3%	0.2%	18.6%	6.7%	6.7%	13.1%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	1.0%	3.4%	0.0%	100.0%				
Road 37	37	50	49.8	Y	1300-1400	7	32.2%	12.4%	0.2%	21.4%	7.7%	6.6%	13.0%	0.0%	0.1%	0.5%	0.5%	0.3%	0.7%	0.0%	1.0%	3.4%	0.0%	100.0%				
Road 37	37	50	49.8	Y	1400-1500	7	33.1%	13.4%	0.2%	19.5%	7.0%	6.6%	12.9%	0.0%	0.1%	0.6%	0.7%	0.5%	1.0%	0.0%	1.2%	2.9%	0.0%	100.0%				
Road 37	37	50	49.8	Y	1500-1600	7	32.6%	13.1%	0.2%	22.4%	8.8%	5.7%	11.1%	0.0%	0.1%	0.6%	0.7%	0.6%	1.0%	0.0%	1.2%	2.9%	0.0%	100.0%				
Road 37	37	50	49.8	Y	1600-1700	7	36.2%	12.5%	0.2%	18.4%	6.6%	5.8%	11.3%	0.0%	0.1%	0.9%	1.1%	0.7%	1.6%	0.0%	1.7%	3.0%	0.0%	100.0%				
Road 37	37	50	49.8	Y	1700-1800	8	42.3%	13.2%	0.2%	19.0%	6.9%	3.9%	7.8%	0.0%	0.1%	0.6%	0.7%	0.5%	1.1%	0.0%	3.6%	2.0%	0.0%	100.0%				
Road 37	37	50	49.9	Y	1800-1900	6	56.8%	17.8%	0.1%	9.3%	3.3%	2.2%	4.4%	0.0%	0.0%	0.1%	0.9%	0.6%	1.3%	0.0%	0.2%	1.1%	1.1%	0.0%	100.0%			
Road 37	37	50	49.9	Y	1900-2000	5	52.3%	22.2%	0.1%	9.8%	3.5%	2.2%	4.3%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	0.2%	2.1%	1.1%	0.0%	100.0%			
Road 37	37	50	49.9	Y	2000-2100	5	51.9%	21.8%	0.1%	9.9%	3.5%	2.2%	4.3%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	0.2%	2.4%	1.2%	0.0%	100.0%			
Road 37	37	50	49.9	Y	2100-2200	4	53.4%	24.1%	0.1%	7.8%	2.8%	2.5%	4.9%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.2%	1.1%	1.3%	0.0%	100.0%			
Road 37	37	50	49.9	Y	2200-2300	3	51.8%	23.3%	0.1%	8.6%	3.1%	2.7%	5.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.2%	2.3%	1.4%	0.0%	100.0%			
Road 38	38	50	49.8	Y	0000-0100	42	48.6%	21.8%	0.1%	8.8%	3.3%	3.1%	6.2%	0.0%	0.0%	0.2%	0.3%	0.2%	0.7%	0.0%	2.4%	1.5%	0.0%	100.0%				
Road 38	38	50	49.2	Y	0100-0200	34	47.0%	21.0%	0.1%	10.6%	3.8%	3.3%	6.6%	1.3%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	2.7%	1.7%	0.0%	100.0%				
Road 38	38	50	49.4	Y	0200-0300	25	45.4%	20.2%	0.1%	11.4%	4.1%	3.6%	7.0%	1.3%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	2.9%	1.8%	0.0%	100.0%				
Road 38	38	50	49.5	Y	0300-0400	20	43.9%	19.5%	0.1%	12.1%	4.4%	3.8%	7.5%	1.3%	0.0%	0.3%	0.6%	0.4%	1.0%	0.0%	3.1%	2.0%	0.0%	100.0%				
Road 38	38	50	49.5	Y	0400-0500	23	42.3%	18.7%	0.1%	12.9%	4.6%	4.0%	8.0%	1.3%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	3.3%	2.1%	0.0%	100.0%				
Road 38	38	50	49.1	Y	0500-0600	40	40.9%	16.0%	0.1%	13.6%	4.9%	4.3%	8.4%	1.3%	0.1%	0.5%	0.8%	0.6%	1.1%	0.0%	3.5%	2.2%	0.0%	100.0%				
Road 38	38	50	47.9	Y	0600-0700	87	39.4%	17.3%	0.1%	14.3%	5.1%	4.5%	8.8%	1.2%	0.1%	0.5%	0.8%	0.8%	1.2%	0.0%	3.7%	2.3%	0.0%	100.0%				
Road 38	38	50	45.7	Y	0700-0800	319	38.0%	16.6%	0.2%	15.0%	5.4%	4.7%	9.2%	1.2%	0.1%	0.6%	0.9%	0.8%	1.3%	0.0%	3.9%	2.4%	0.0%	100.0%				
Road 38	38	50	44.9	Y	0800-0900	210	42.0%	13.4%	0.2%	16.2%	5.8%	4.5%	8.9%	1.0%	0.1%	0.6%	0.8%	0.6%	1.2%	0.0%	2.4%	2.3%	0.0%	100.0%				
Road 38	38	50	45.2	Y	0900-1000	190	34.8%	12.6%	0.2%	20.7%	7.4%	5.6%	11.1%	1.1%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	1.4%	2.9%	0.0%	100.0%				
Road 38	38	50	45.5	Y	1000-1100	173	31.4%	12.2%	0.2%	21.2%	7.6%	6.7%	13.2%	1.1%	0.0%	0.3%	0.6%	0.4%	0.8%	0.0%	1.0%	3.5%	0.0%	100.0%				
Road 38	38	50	45.8	Y	1100-1200	163	31.4%	13.0%	0.2%	21.1%	7.6%	6.6%	13.0%	1.1%	0.1%	0.6%	0.3%	0.2%	0.5%	0.0%	0.9%	3.4%	0.0%	100.0%				
Road 38	38	50	47.7	Y	1200-1300	76	12.6%	4.8%	0.3%	31.1%	11.2%	11.1%	21.9%	0.0%	0.0%	0.2%	0.2%	0.1%	0.3%	0.0%	0.4%	5.7%	0.0%	100.0%				
Road 38	38	50	47.5	Y	1300-1400	84	11.2%	4.3%	0.4%	34.1%	12.2%	10.6%	20.8%	0.0%	0.0%	0.2%	0.1%	0.2%	0.1%	0.2%	0.0%	5.4%	0.0%	100.0%				
Road 38	38	50	47.4	Y	1400-1500	85	11.9%	4.8%	0.3%	32.1%	11.5%	10.9%	21.4%	0.0%	0.0%	0.2%	0.2%	0.2%	0.4%	0.0%	5.4%	5.9%	0.0%	100.0%				
Road 38	38	50	47.4	Y	1500-1600	88	11.7%	4.7%	0.4%	36.5%	13.1%	9.3%	18.2%	0.0%	0.0%	0.2%	0.2%	0.4%	0.4%	0.0%	0.4%	4.8%	0.0%	100.0%				
Road 38	38	50	47.5	Y	1600-1700	84	13.9%	4.8%	0.3%	32.2%	11.6%	11.0%	19.8%	0.0%	0.0%	0.3%	0.4%	0.3%	0.6%	0.0%	0.7%	5.2%	0.0%	100.0%				
Road 38	38	50	47.8	Y	1700-1800	82	18.1%	5.7%	0.4%	34.0%	12.2%	7.7%	15.1%	0.0%	0.0%	0.3%	0.3%	0.2%	0.5%	0.0%	1.6%	4.0%	0.0%	100.0%				
Road 38	38	50	48.3	Y	1800-1900	65	29.8%	7.0%	0.3%	28.6%	10.3%	6.0%	11.7%	0.0%	0.0%	0.5%	0.4%	0.8%	0.0%	1.4%	3.1%	0.0%	100.0%					
Road 38	38	50	48.8	Y	1900-2000	46	32.9%	10.3%	0.3%	24.5%	8.8%	5.9%	11.5%	0.0%	0.0%	0.1%	0.5%	0.3%	0.8%	0.0%	1.2%	3.0%	0.0%	100.0%				
Road 38	38	50	49.0	Y	2000-2100	36	29.9%	12.7%	0.3%	25.7%	9.2%	5.7%	11.1%	0.0%	0.0%	0.0%	0.4%	0.3%	0.6%	0.0%	1.2%	2.9%	0.0%	100.0%				
Road 38	38	50	49.1	Y	2100-2200	37	29.9%	12.4%	0.3%	25.6%	9.2%	5.9%	11.6%	0.0%	0.0%	0.0%	0.2%	0.1%	0.3%	0.0%	1.4%	3.0%	0.0%	100.0%				
Road 38	38	50	49.1	Y	2200-2300	33	31.6%	14.3%	0.2%	21.1%	7.6%	6.7%	13.2%	0.0%	0.0%	0.0%	0.2%	0.1%	0.3%	0.0%	1.2%	3.4%	0.0%	100.0%				
Road 38	38	50	49.3	Y	2300-0000	26	29.5%	13.3%	0.2%	22.5%	8.0%	7.1%	13.9%	0.0%	0.0%	0.1%	0.2%	0.2%	0.3%	0.0%	1.3%	3.6%	0.0%	100.0%				

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2038)																												
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles <=5t	07 - Medium Goods Vehicles 5-24t	08 - Public Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus >4t	13 - Non-franchised Bus 15-24t	14 - Franchised d Bus Single	15 - Franchised d Bus Double Deck	16 - Motorcycl	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total			
							PC	TAXI	LGVS	LGVS	LGVB	HGV1	HGV2	PLB	PV4	PV5	NFB	NFB7	NFB8	FBSB	FBSB	FBD	MC	HGV9	NFB9			
Road 41	41	70	70.0	N	0000-0100	104	50.8%	22.8%	0.1%	3.5%	1.3%	1.1%	2.2%	0.0%	0.0%	0.2%	0.5%	0.3%	0.7%	0.0%	0.2%	13.0%	0.0%	100.0%				
Road 41	41	70	70.0	N	0100-0200	72	46.8%	20.9%	0.0%	3.6%	1.3%	1.1%	2.3%	0.9%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	0.2%	16.5%	0.0%	100.0%				
Road 41	41	70	70.0	N	0200-0300	78	41.1%	20.9%	0.0%	3.7%	1.1%	1.1%	2.3%	0.9%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	0.2%	16.5%	0.0%	100.0%				
Road 41	41	70	70.0	N	0300-0400	47	39.8%	17.7%	0.1%	3.8%	1.4%	1.2%	2.3%	0.9%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	0.2%	27.9%	0.0%	100.0%				
Road 41	41	70	70.0	N	0400-0500	51	40.0%	17.7%	0.2%	4.2%	1.5%	1.3%	2.6%	0.9%	0.0%	0.4%	0.7%	0.5%	1.0%	0.0%	0.3%	31.1%	26.2%	100.0%				
Road 41	41	70	70.0	N	0500-0600	58	49.3%	19.3%	0.0%	5.0%	1.7%	1.5%	2.9%	0.9%	0.0%	0.5%	0.8%	0.5%	1.2%	0.0%	0.3%	3.8%	29.0%	100.0%				
Road 41	41	70	70.0	N	0600-0700	153	47.2%	20.6%	0.1%	5.9%	2.1%	1.8%	3.6%	1.1%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	0.4%	9.4%	100.0%	100.0%				
Road 41	41	70	70.0	N	0700-0800	333	42.9%	18.7%	0.1%	5.8%	2.1%	1.8%	3.6%	1.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	0.4%	15.8%	100.0%	100.0%				
Road 41	41	70	70.0	N	0800-0900	311	45.6%	18.7%	0.1%	5.8%	2.1%	1.8%	3.6%	1.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	0.4%	2.8%	100.0%	100.0%				
Road 41	41	70	70.0	N	0900-1000	322	43.1%	15.6%	0.1%	8.8%	3.2%	2.4%	4.7%	1.0%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	0.7%	16.6%	0.0%	100.0%				
Road 41	41	70	70.0	N	1000-1100	286	39.7%	15.4%	0.1%	9.2%	3.3%	2.9%	5.7%	1.0%	0.1%	0.4%	0.7%	0.5%	1.0%	0.0%	1.2%	16.9%	0.0%	100.0%				
Road 41	41	70	70.0	N	1100-1200	213	36.8%	15.4%	0.1%	9.2%	3.3%	2.9%	5.7%	1.0%	0.1%	0.4%	0.7%	0.5%	1.0%	0.0%	1.2%	16.9%	0.0%	100.0%				
Road 41	41	70	70.0	N	1200-1300	397	50.4%	11.7%	0.2%	14.5%	5.2%	5.2%	10.2%	0.0%	0.1%	0.5%	0.5%	0.4%	0.5%	0.0%	0.9%	19.4%	0.0%	100.0%				
Road 41	41	70	70.0	N	1300-1400	309	28.8%	11.1%	0.2%	16.6%	6.1%	5.2%	10.3%	0.0%	0.1%	0.4%	0.4%	0.3%	0.6%	0.0%	0.9%	16.7%	0.0%	100.0%				
Road 41	41	70	70.0	N	1400-1500	369	28.8%	11.1%	0.2%	16.6%	6.1%	5.2%	10.3%	0.0%	0.1%	0.4%	0.4%	0.3%	0.6%	0.0%	0.9%	16.7%	0.0%	100.0%				
Road 41	41	70	70.0	N	1500-1600	339	29.4%	11.8%	0.2%	17.8%	7.4%	5.5%	8.9%	0.0%	0.1%	0.5%	0.5%	0.4%	0.9%	0.0%	1.1%	15.1%	0.0%	100.0%				
Road 41	41	70	70.0	N	1600-1700	316	32.6%	11.2%	0.2%	14.6%	5.2%	4.6%	9.0%	0.0%	0.1%	0.5%	0.5%	0.7%	1.5%	0.0%	1.5%	17.1%	0.0%	100.0%				
Road 41	41	70	70.0	N	1700-1800	359	38.1%	12.0%	0.1%	13.8%	5.5%	3.1%	6.2%	0.0%	0.1%	0.5%	0.7%	0.5%	1.0%	0.0%	0.3%	15.4%	0.0%	100.0%				
Road 41	41	70	70.0	N	1800-1900	354	41.7%	12.0%	0.1%	9.3%	1.0%	0.3%	0.8%	0.0%	0.1%	0.5%	0.7%	0.5%	1.0%	0.0%	2.4%	100.0%	100.0%					
Road 41	41	70	70.0	N	1900-2000	256	55.3%	17.3%	0.1%	8.0%	2.9%	1.9%	3.7%	0.0%	0.0%	0.1%	0.8%	0.6%	1.3%	0.0%	2.0%	6.0%	0.0%	100.0%				
Road 41	41	70	70.0	N	2000-2100	262	50.2%	21.3%	0.1%	8.3%	3.0%	1.8%	3.6%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	2.0%	7.3%	0.0%	100.0%				
Road 41	41	70	70.0	N	2100-2200	203	50.8%	21.0%	0.1%	8.4%	3.0%	1.8%	3.6%	0.0%	0.0%	0.1%	0.4%	0.5%	0.9%	0.0%	2.3%	7.4%	0.0%	100.0%				
Road 41	41	70	70.0	N	2200-2300	195	51.0%	23.1%	0.1%	6.1%	2.4%	2.1%	4.1%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	2.0%	7.7%	0.0%	100.0%				
Road 41	41	70	70.0	N	2300-0000	150	48.5%	21.9%	0.1%	7.6%	2.8%	2.3%	4.4%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	2.1%	9.7%	0.0%	100.0%				
Road 42	42	47.4	47.4	N	0000-0100	81	22.7%	14.2%	0.1%	3.6%	1.2%	1.2%	1.1%	0.2%	0.0%	0.1%	0.2%	0.3%	0.5%	0.0%	0.2%	22.7%	0.0%	100.0%				
Road 42	42	48.4	48.4	N	0100-0200	63	46.6%	20.8%	0.0%	3.9%	1.4%	1.2%	2.4%	1.0%	0.0%	0.2%	0.5%	0.3%	0.8%	0.0%	0.2%	16.1%	0.0%	100.0%				
Road 42	42	48.8	48.8	N	0200-0300	49	42.9%	19.1%	0.0%	4.0%	1.4%	1.3%	2.5%	1.0%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	0.2%	23.0%	0.0%	100.0%				
Road 42	42	48.9	48.9	N	0300-0400	41	47.6%	17.5%	0.0%	3.6%	1.2%	1.2%	2.5%	1.0%	0.0%	0.2%	0.5%	0.3%	0.8%	0.0%	0.2%	2.8%	0.0%	100.0%				
Road 42	42	48.8	48.8	N	0400-0500	44	39.8%	17.5%	0.0%	4.5%	1.6%	1.4%	2.8%	1.0%	0.0%	0.4%	0.7%	0.5%	1.0%	0.0%	0.3%	25.6%	0.0%	100.0%				
Road 42	42	48.3	48.3	N	0500-0600	69	43.6%	19.2%	0.1%	5.4%	1.9%	1.7%	3.3%	1.1%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	0.3%	16.9%	0.0%	100.0%				
Road 42	42	48.9	48.9	N	0600-0700	115	46.6%	20.8%	0.0%	2.8%	2.0%	3.9%	1.5%	0.0%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	0.2%	44.0%	0.0%	100.0%				
Road 42	42	42.6	42.6	N	0700-0800	293	42.5%	18.5%	0.1%	6.2%	2.2%	1.9%	3.8%	1.1%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	0.3%	15.5%	0.0%	100.0%				
Road 42	42	41.7	41.7	N	0800-0900	333	48.3%	15.4%	0.1%	6.9%	2.5%	1.9%	3.8%	0.9%	0.1%	0.4%	0.9%	0.7%	1.4%	0.0%	0.2%	13.7%	0.0%	100.0%				
Road 42	42	42.6	42.6	N	0900-1000	285	42.5%	15.4%	0.1%	9.3%	3.4%	2.5%	5.0%	1.1%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	0.1%	16.2%	0.0%	100.0%				
Road 42	42	42.6	42.6	N	1000-1100	983	52.5%	18.3%	0.1%	12.5%	4.5%	3.9%	6.1%	1.1%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	0.1%	9.8%	0.0%	100.0%				
Road 42	42	43.5	43.5	N	1100-1200	242	38.7%	15.9%	0.1%	9.6%	3.5%	3.0%	5.9%	1.1%	0.1%	0.7%	0.4%	0.3%	0.6%	0.0%	0.1%	19.1%	0.0%	100.0%				
Road 42	42	44.5	44.5	N	1200-1300	177	23.5%	9.1%	0.2%	15.7%	5.8%	5.8%	11.0%	0.0%	0.0%	0.4%	0.4%	0.3%	0.6%	0.0%	0.7%	26.9%	0.0%	100.0%				
Road 42	42	44.5	44.5	N	1300-1400	185	23.5%	9.1%	0.2%	15.7%	5.8%	5.8%	11.0%	0.0%	0.0%	0.4%	0.4%	0.3%	0.6%	0.0%	0.7%	26.9%	0.0%	100.0%				
Road 42	42	44.0	44.0	N	1400-1500	190	23.0%	9.3%	0.2%	16.7%	6.0%	5.7%	11.1%	0.0%	0.0%	0.4%	0.5%	0.3%	0.7%	0.0%	0.9%	22.2%	0.0%	100.0%				
Road 42	42	44.0	44.0	N	1500-1600	195	22.8%	9.2%	0.2%	19.3%	6.9%	4.9%	9.6%	0.0%	0.0%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	0.8%	24.3%	0.0%	100.0%			
Road 42	42	44.0	44.0	N	1600-1700	186	23.0%	9.2%	0.2%	16.7%	6.0%	5.7%	11.1%	0.0%	0.0%	0.4%	0.5%	0.3%	0.7%	0.0%	0.9%	22.2%	0.0%	100.0%				
Road 42	42	44.0	44.0	N	1700-1800	204	30.9%	9.7%	0.2%	15.7%	5.8%	3.5%	7.0%	0.0%	0.1%	0.4%	0.5%	0.4%	0.8%	0.0%	0.2%	27.1%	0.0%	100.0%				
Road 42	42	44.5	44.5	N	1800-1900	159	41.8%	9.8%	0.1%	10.8%	3.9%	2.3%	4.4%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	0.2%	22.4%	0.0%	100.0%				
Road 42	42	44.5	44.5	N	1900-2000	103	40.8%	10.8%	0.1%	10.8%	3.9%	2.3%	4.4%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	0.2%	22.4%	0.0%	100.0%				
Road 42	42	44.0	44.0	N	2000-2100	104	44.6%	18.9%	0.1%	10.3%	3.7%	2.3%	4.5%	0.0%	0.0%	0.1%	0.6%	0.4%	1.0%	0.0%	0.1%	11.7%	0.0%	100.0%				
Road 42	42	50.4	50.4	N	2100-2200	105	45.1%	18.6%	0.1%	10.4%	3.7%	2.4%	4.7%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.2%	11.7%	0.0%	100.0%				
Road 42	42	42.6	42.6	N	2200-2300	105	45.9%	18.6%	0.1%	10.4%	3.7%	2.4%	4.7%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.2%	11.7%	0.0%	100.0%				
Road 42	42	45.0	45.0	N	2300-0000	79	42.4%	19.1%	0.1%	8.7%	3.1%	2.8%	5.4%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.1%	15.4%	0.0%	100.0%				

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2038)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=3.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles <=15t	07 - Medium Goods Vehicles 15-24t	08 - Public Light Buses	09 - Private Light Buses <=3.5t	10 - Private Light Buses >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4-15t	13 - Non-franchised Bus 15-24t	14 - Franchised Bus Single Deck	15 - Franchised Bus Double Deck	16 - Motorcycles	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total	
Road 45	45	80	80.0	N	0000-0100	423	58.0%	26.1%	0.0%	3.2%	1.2%	1.0%	2.0%	0.0%	0.0%	0.2%	0.5%	0.4%	0.3%	0.6%	0.4%	0.9%	0.0%	0.3%	0.5%	100.0%
Road 45	45	80	80.0	N	0100-0200	275	57.1%	25.5%	0.0%	3.3%	1.3%	1.1%	2.2%	0.0%	0.0%	0.3%	0.6%	0.4%	0.3%	0.6%	0.4%	0.9%	0.0%	0.3%	0.5%	100.0%
Road 45	45	80	80.0	N	0200-0300	200	56.2%	25.0%	0.0%	3.8%	1.4%	1.2%	2.4%	0.0%	0.0%	0.4%	0.7%	0.8%	1.1%	0.9%	3.1%	3.6%	0.6%	0.0%	0.0%	100.0%
Road 45	45	80	80.0	N	0300-0400	158	55.2%	24.5%	0.0%	4.2%	1.5%	1.3%	2.6%	0.0%	0.1%	0.4%	0.8%	1.2%	1.0%	3.1%	3.9%	0.7%	0.0%	0.0%	100.0%	
Road 45	45	80	80.0	N	0400-0500	173	54.0%	24.0%	0.0%	4.5%	1.6%	1.4%	2.8%	0.0%	0.1%	0.5%	0.9%	0.8%	1.4%	0.9%	3.0%	4.2%	0.7%	0.0%	0.0%	100.0%
Road 45	45	80	80.0	N	0500-0600	300	53.2%	23.4%	0.1%	4.8%	1.7%	1.5%	3.0%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	3.0%	4.5%	0.8%	0.0%	0.0%	100.0%
Road 45	45	80	80.0	N	0600-0700	642	52.2%	22.9%	0.1%	5.2%	1.9%	1.6%	3.2%	0.0%	0.1%	0.7%	1.1%	0.7%	1.6%	0.0%	3.0%	4.9%	0.8%	0.0%	0.0%	100.0%
Road 45	45	80	73.9	N	0700-0800	1296	51.2%	22.3%	0.1%	6.5%	2.0%	1.7%	3.4%	0.0%	0.1%	0.8%	1.2%	0.8%	1.8%	0.0%	3.0%	5.2%	0.9%	0.0%	0.0%	100.0%
Road 45	45	80	70.1	N	0800-0900	1500	57.2%	18.3%	0.0%	6.0%	2.2%	1.7%	3.3%	0.0%	0.1%	0.8%	0.8%	1.1%	0.8%	0.0%	2.7%	3.3%	0.9%	0.0%	0.0%	100.0%
Road 45	45	80	74.6	N	0900-1000	1222	52.7%	19.2%	0.1%	8.6%	3.1%	2.3%	4.6%	0.0%	0.1%	0.5%	0.9%	0.8%	1.4%	0.0%	2.8%	2.1%	1.2%	0.0%	0.0%	100.0%
Road 45	45	80	77.4	N	1000-1100	1052	50.1%	19.5%	0.1%	9.2%	3.3%	2.8%	5.6%	0.0%	0.1%	0.5%	0.8%	0.8%	1.3%	0.0%	2.8%	1.5%	1.5%	0.0%	0.0%	100.0%
Road 45	45	80	78.6	N	1100-1200	997	50.0%	20.6%	0.1%	9.2%	3.3%	2.9%	5.6%	0.0%	0.1%	0.9%	0.5%	0.3%	0.8%	0.0%	2.8%	1.4%	1.5%	0.0%	0.0%	100.0%
Road 45	45	80	73.3	N	1200-1300	1220	47.1%	16.1%	0.1%	10.1%	3.6%	3.6%	7.1%	0.0%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	3.3%	1.4%	1.9%	0.0%	0.0%	100.0%
Road 45	45	80	72.6	N	1300-1400	1245	45.5%	17.5%	0.1%	12.1%	4.3%	3.7%	7.3%	0.0%	0.1%	0.7%	0.7%	0.8%	1.0%	0.0%	3.2%	1.4%	1.9%	0.0%	0.0%	100.0%
Road 45	45	80	71.0	N	1400-1500	1339	45.6%	19.4%	0.1%	10.7%	3.8%	3.8%	7.1%	0.0%	0.1%	0.8%	0.9%	0.8%	1.4%	0.0%	3.2%	1.7%	1.9%	0.0%	0.0%	100.0%
Road 45	45	80	70.5	N	1500-1600	1359	45.3%	18.2%	0.1%	12.4%	4.3%	3.1%	8.2%	0.0%	0.1%	0.8%	0.9%	0.6%	1.4%	0.0%	3.1%	1.6%	1.6%	0.0%	0.0%	100.0%
Road 45	45	80	68.7	N	1600-1700	1451	48.0%	16.6%	0.1%	9.7%	3.5%	3.0%	6.0%	0.0%	0.1%	1.1%	1.4%	1.6%	2.2%	0.0%	3.4%	2.3%	1.6%	0.0%	0.0%	100.0%
Road 45	45	80	59.7	N	1700-1800	1651	16.6%	0.1%	0.7%	3.1%	2.0%	3.9%	0.0%	0.1%	0.8%	0.9%	0.6%	1.4%	0.0%	3.4%	4.5%	1.0%	0.0%	0.0%	100.0%	
Road 45	45	80	49.6	N	1800-1900	1816	63.6%	11.4%	0.1%	5.3%	1.9%	1.1%	2.2%	0.0%	0.0%	0.1%	1.1%	0.8%	1.7%	0.0%	3.5%	3.0%	0.6%	0.0%	0.0%	100.0%
Road 45	45	80	71.8	N	1900-2000	1446	62.2%	19.5%	0.0%	4.0%	1.5%	1.0%	1.9%	0.0%	0.0%	0.1%	0.9%	0.6%	1.4%	0.0%	4.0%	2.3%	0.5%	0.0%	0.0%	100.0%
Road 45	45	80	77.6	N	2000-2100	1121	57.3%	24.3%	0.0%	4.3%	1.5%	0.9%	1.9%	0.0%	0.0%	0.1%	0.8%	0.6%	1.2%	0.0%	4.2%	2.3%	0.5%	0.0%	0.0%	100.0%
Road 45	45	80	78.0	N	2100-2200	1121	58.5%	24.2%	0.0%	4.4%	1.6%	1.0%	2.0%	0.0%	0.0%	0.1%	0.8%	0.6%	1.2%	0.0%	4.2%	2.3%	0.5%	0.0%	0.0%	100.0%
Road 45	45	80	78.6	N	2200-2300	1091	58.0%	26.2%	0.0%	3.4%	1.3%	1.2%	2.1%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	4.0%	2.2%	0.6%	0.0%	0.0%	100.0%
Road 45	45	80	80.0	N	2300-0000	815	57.0%	25.7%	0.0%	3.8%	1.4%	1.2%	2.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.7%	0.0%	4.0%	2.5%	0.6%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	0000-0100	226	58.9%	26.4%	0.0%	3.4%	1.2%	1.1%	2.3%	0.0%	0.0%	0.4%	0.9%	0.4%	0.5%	0.0%	3.0%	3.0%	0.6%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	0100-0200	147	57.9%	25.9%	0.0%	3.7%	1.3%	1.2%	2.3%	0.0%	0.0%	0.3%	0.6%	0.4%	1.0%	0.0%	1.4%	3.3%	0.6%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	0200-0300	107	57.0%	25.4%	0.0%	4.0%	1.4%	1.3%	2.5%	0.0%	0.0%	0.4%	0.7%	0.8%	1.1%	0.0%	1.4%	3.6%	0.6%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	0300-0400	84	56.0%	24.8%	0.0%	4.2%	1.6%	1.4%	2.7%	0.0%	0.1%	0.4%	0.8%	0.8%	1.2%	0.0%	3.9%	4.0%	0.7%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	0400-0500	93	55.0%	24.3%	0.0%	4.7%	1.7%	1.5%	2.9%	0.0%	0.1%	0.5%	0.9%	0.8%	1.4%	0.0%	1.4%	4.3%	0.8%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	0500-0600	160	53.9%	23.7%	0.1%	5.0%	1.8%	1.6%	3.1%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	1.4%	4.6%	0.8%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	0600-0700	343	52.9%	23.2%	0.1%	5.4%	1.9%	1.7%	3.3%	0.0%	0.1%	0.7%	1.1%	0.8%	1.7%	0.0%	1.4%	5.0%	0.9%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	0700-0800	80	52.0%	22.6%	0.1%	5.8%	2.1%	1.8%	3.5%	0.0%	0.1%	0.8%	1.0%	0.8%	1.8%	0.0%	1.4%	5.3%	0.9%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	0800-0900	804	57.8%	18.5%	0.1%	6.3%	2.2%	1.8%	3.4%	0.0%	0.1%	0.8%	1.1%	0.8%	1.7%	0.0%	1.2%	3.4%	0.9%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	0900-1000	656	53.2%	19.3%	0.1%	8.9%	3.2%	2.4%	4.8%	0.0%	0.1%	0.5%	0.9%	0.8%	1.4%	0.0%	1.3%	2.1%	1.2%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	1000-1100	569	50.6%	19.6%	0.1%	9.6%	3.4%	3.0%	6.0%	0.0%	0.1%	0.6%	0.8%	0.6%	1.3%	0.0%	1.3%	1.5%	1.6%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	1100-1200	535	50.4%	20.8%	0.1%	9.5%	3.4%	3.0%	5.9%	0.0%	0.1%	0.9%	0.5%	0.4%	0.8%	0.0%	1.3%	1.4%	1.5%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	1200-1300	742	54.0%	20.8%	0.1%	6.9%	2.6%	2.5%	4.9%	0.0%	0.1%	0.9%	0.9%	0.6%	1.4%	0.0%	1.5%	1.6%	1.3%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	1300-1400	747	52.8%	20.1%	0.0%	8.4%	3.0%	2.6%	5.1%	0.0%	0.1%	0.9%	0.8%	0.5%	1.1%	0.0%	1.5%	1.6%	1.3%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	1400-1500	807	52.3%	21.2%	0.1%	7.3%	2.6%	2.5%	4.9%	0.0%	0.1%	0.9%	1.0%	0.7%	1.6%	0.0%	2.3%	2.0%	0.9%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	1500-1600	823	52.1%	20.9%	0.1%	8.5%	3.1%	2.2%	4.2%	0.0%	0.1%	0.9%	1.1%	0.7%	1.6%	0.0%	1.4%	1.9%	1.1%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	1600-1700	893	54.4%	18.7%	0.1%	6.6%	2.4%	2.1%	4.0%	0.0%	0.2%	1.3%	1.6%	1.1%	2.4%	0.0%	1.6%	2.6%	1.1%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	1700-1800	1039	58.5%	18.3%	0.1%	6.7%	2.1%	1.3%	2.5%	0.0%	0.1%	0.8%	1.0%	0.7%	1.6%	0.0%	1.5%	5.0%	0.7%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	1800-1900	1181	68.1%	16.0%	0.0%	3.4%	1.2%	0.7%	1.4%	0.0%	0.0%	0.1%	1.2%	0.8%	1.8%	0.0%	1.5%	3.2%	0.4%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	1900-2000	947	66.1%	20.7%	0.0%	2.6%	0.9%	0.6%	1.2%	0.0%	0.0%	0.1%	1.0%	0.7%	1.5%	0.0%	1.7%	2.4%	0.3%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	2000-2100	1067	66.1%	20.7%	0.0%	2.7%	1.0%	0.6%	1.2%	0.0%	0.0%	0.1%	1.0%	0.6%	1.3%	0.0%	1.8%	2.4%	0.4%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	2100-2200	733	62.3%	25.8%	0.0%	2.6%	1.0%	0.6%	1.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.7%	0.0%	1.6%	2.6%	0.3%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	2200-2300	716	61.5%	27.8%	0.0%	2.1%	0.6%	0.7%	1.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	1.7%	2.4%	0.3%	0.0%	0.0%	100.0%
Road 46	46	80	80.0	N	2300-0000	533	60.7%	27.3%	0.0%	2.4%	0.9%	0.8%	1.5%	0.0%	0.0%	0.1%	0.5%	0.3%	0.7%	0.0%	1.7%	2.7%	0.4%	0.0%	0.0%	100.0%

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2038)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Road Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles <=10t	07 - Medium Goods Vehicles >10t	08 - Public Buses	09 - Private Light Buses <=3.5t	10 - Private Light Buses >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4-15t	13 - Non-franchised Bus >15t	14 - Franchise d Bus Single Deck	15 - Franchise d Bus Double Deck	16 - Motorcycl	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total	
Road 53	53	50	28.2	N	0000-0100	26	23.6%	10.6%	0.2%	16.4%	5.5%	5.2%	10.2%	23.5%	0.0%	0.1%	0.2%	0.1%	0.3%	0.2%	0.4%	0.0%	1.2%	2.2%	0.0%	100.0%
Road 53	53	50	28.7	N	0100-0200	17	22.3%	10.0%	0.2%	17.3%	5.5%	10.7%	22.2%	0.0%	0.1%	0.2%	0.4%	0.0%	0.1%	0.2%	0.4%	0.0%	1.3%	2.9%	0.0%	100.0%
Road 53	53	50	29.0	N	0200-0300	13	21.1%	9.4%	0.2%	18.2%	6.5%	5.7%	11.3%	22.2%	0.0%	0.1%	0.3%	0.2%	0.4%	0.0%	0.0%	1.3%	2.9%	0.0%	100.0%	
Road 53	53	50	29.2	N	0300-0400	11	20.0%	8.9%	0.2%	19.0%	6.6%	6.0%	11.8%	21.7%	0.0%	0.2%	0.3%	0.2%	0.4%	0.0%	0.0%	1.4%	3.1%	0.0%	100.0%	
Road 53	53	50	29.1	N	0400-0500	12	19.0%	8.4%	0.2%	19.8%	7.1%	6.2%	12.2%	21.1%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	0.0%	1.5%	3.2%	0.0%	100.0%	
Road 53	53	50	28.4	N	0500-0600	22	18.0%	7.9%	0.2%	20.6%	7.4%	6.5%	12.7%	20.6%	0.0%	0.2%	0.3%	0.4%	0.5%	0.0%	0.0%	1.5%	3.3%	0.0%	100.0%	
Road 53	53	50	26.3	N	0600-0700	49	17.1%	7.5%	0.2%	21.3%	7.6%	6.7%	13.1%	20.1%	0.0%	0.2%	0.4%	0.2%	0.5%	0.0%	0.0%	1.6%	3.4%	0.0%	100.0%	
Road 53	53	50	24.5	N	0700-0800	102	16.2%	7.0%	0.2%	22.0%	7.7%	6.6%	13.5%	19.7%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.0%	1.7%	3.5%	0.0%	100.0%	
Road 53	53	50	24.3	N	0800-0900	115	18.5%	5.9%	0.3%	24.5%	8.8%	6.8%	13.5%	15.7%	0.0%	0.3%	0.4%	0.3%	0.6%	0.0%	0.1%	1.1%	3.5%	0.0%	100.0%	
Road 53	53	50	24.2	N	0900-1000	118	13.6%	4.9%	0.3%	27.7%	10.0%	7.5%	14.8%	15.9%	0.0%	0.1%	0.2%	0.2%	0.3%	0.0%	0.0%	0.5%	3.9%	0.0%	100.0%	
Road 53	53	50	24.2	N	1000-1100	111	11.8%	4.6%	0.3%	27.4%	9.8%	8.7%	17.1%	14.8%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	0.4%	4.5%	0.0%	100.0%	
Road 53	53	50	24.3	N	1100-1200	105	11.8%	4.9%	0.3%	27.2%	9.8%	8.5%	16.7%	15.4%	0.0%	0.2%	0.1%	0.1%	0.2%	0.0%	0.0%	0.3%	4.4%	0.0%	100.0%	
Road 53	53	50	24.0	N	1200-1300	131	24.0%	9.9%	0.2%	22.1%	8.0%	7.9%	15.6%	6.3%	0.0%	0.4%	0.4%	0.9%	0.0%	0.0%	0.7%	4.1%	0.0%	100.0%		
Road 53	53	50	23.9	N	1300-1400	140	22.2%	8.8%	0.3%	25.2%	9.0%	7.8%	15.3%	5.5%	0.0%	0.3%	0.3%	0.2%	0.5%	0.0%	0.0%	0.7%	4.0%	0.0%	100.0%	
Road 53	53	50	23.8	N	1400-1500	144	23.1%	9.3%	0.2%	23.1%	8.3%	7.8%	15.4%	5.9%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	0.0%	0.9%	4.0%	0.0%	100.0%	
Road 53	53	50	23.8	N	1500-1600	148	22.8%	9.1%	0.3%	26.6%	9.6%	6.7%	13.3%	5.4%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	0.0%	0.8%	3.5%	0.0%	100.0%	
Road 53	53	50	23.8	N	1600-1700	147	25.9%	8.9%	0.2%	22.4%	8.1%	7.0%	13.8%	5.7%	0.1%	0.6%	0.8%	0.5%	1.2%	0.0%	0.0%	1.2%	3.6%	0.0%	100.0%	
Road 53	53	50	23.9	N	1700-1800	143	9.8%	0.2%	21.0%	7.9%	5.0%	8.9%	6.8%	0.1%	0.4%	0.6%	0.8%	0.0%	0.2%	2.7%	2.6%	0.0%	100.0%			
Road 53	53	50	24.2	N	1800-1900	143	44.3%	10.4%	0.2%	15.9%	9.3%	3.3%	6.5%	7.3%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	0.2%	1.7%	0.0%	100.0%		
Road 53	53	50	24.6	N	1900-2000	109	45.2%	14.2%	0.1%	12.6%	4.5%	3.0%	5.9%	8.9%	0.0%	0.1%	0.7%	0.5%	1.0%	0.0%	0.0%	1.7%	1.5%	0.0%	100.0%	
Road 53	53	50	24.9	N	2000-2100	86	41.2%	17.5%	0.1%	13.2%	4.7%	2.9%	5.7%	9.5%	0.0%	0.1%	0.6%	0.4%	0.9%	0.0%	0.0%	1.6%	1.5%	0.0%	100.0%	
Road 53	53	50	24.9	N	2100-2200	86	41.8%	17.3%	0.1%	13.4%	4.8%	3.1%	6.0%	0.0%	0.0%	0.2%	0.3%	0.4%	0.8%	0.0%	0.0%	1.9%	1.6%	0.0%	100.0%	
Road 53	53	50	25.0	N	2200-2300	81	43.0%	19.4%	0.1%	10.7%	3.8%	3.4%	6.7%	8.5%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.0%	1.7%	1.7%	0.0%	100.0%	
Road 53	53	50	26.1	N	2300-0000	62	41.3%	18.6%	0.1%	11.7%	4.2%	3.7%	7.3%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.0%	1.8%	1.9%	0.0%	100.0%		
Road 54	54	50	26.8	N	0000-0100	50	36.5%	16.4%	0.1%	12.4%	4.4%	3.5%	7.3%	13.6%	0.0%	0.1%	0.2%	0.2%	0.5%	0.0%	0.0%	1.8%	2.4%	0.0%	100.0%	
Road 54	54	50	27.8	N	0100-0200	33	35.0%	15.6%	0.1%	13.2%	4.8%	4.2%	8.2%	13.3%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.0%	2.0%	2.1%	0.0%	100.0%	
Road 54	54	50	28.3	N	0200-0300	25	33.5%	14.9%	0.1%	14.1%	5.1%	4.4%	8.7%	13.1%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.0%	2.1%	2.3%	0.0%	100.0%	
Road 54	54	50	28.6	N	0300-0400	20	32.1%	14.3%	0.2%	14.9%	5.3%	4.7%	9.2%	12.9%	0.0%	0.3%	0.5%	0.4%	0.9%	0.0%	0.0%	2.3%	2.4%	0.0%	100.0%	
Road 54	54	50	28.5	N	0400-0500	23	30.8%	13.6%	0.2%	15.7%	5.6%	4.9%	9.7%	12.8%	0.0%	0.3%	0.5%	0.3%	0.8%	0.0%	0.0%	2.4%	2.5%	0.0%	100.0%	
Road 54	54	50	27.2	N	0500-0600	40	29.9%	13.0%	0.2%	16.4%	5.9%	5.1%	10.1%	12.6%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	0.0%	2.5%	2.6%	0.0%	100.0%	
Road 54	54	50	24.8	N	0600-0700	88	28.2%	12.3%	0.2%	17.1%	6.2%	5.4%	10.6%	12.4%	0.0%	0.4%	0.6%	0.4%	0.9%	0.0%	0.0%	2.6%	2.8%	0.0%	100.0%	
Road 54	54	50	23.2	N	0700-0800	185	27.0%	11.8%	0.2%	17.8%	6.4%	5.6%	11.0%	12.2%	0.1%	0.4%	0.6%	0.4%	0.9%	0.0%	0.0%	2.8%	2.9%	0.0%	100.0%	
Road 54	54	50	23.1	N	0800-0900	208	30.5%	9.7%	0.2%	19.6%	7.1%	5.5%	10.8%	9.6%	0.1%	0.4%	0.6%	0.4%	0.9%	0.0%	0.0%	1.8%	2.8%	0.0%	100.0%	
Road 54	54	50	23.1	N	0900-1000	200	23.8%	8.6%	0.2%	23.6%	8.5%	6.4%	12.7%	10.3%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.0%	0.9%	3.3%	0.0%	100.0%	
Road 54	54	50	23.2	N	1000-1100	185	21.1%	8.2%	0.2%	23.6%	9.3%	7.6%	14.9%	9.8%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	0.0%	0.9%	3.9%	0.0%	100.0%	
Road 54	54	50	23.4	N	1100-1200	175	21.1%	8.7%	0.2%	23.7%	8.5%	7.4%	14.6%	10.3%	0.0%	0.4%	0.2%	0.1%	0.3%	0.0%	0.0%	0.6%	3.8%	0.0%	100.0%	
Road 54	54	50	24.0	N	1200-1300	121	11.1%	4.3%	0.3%	29.3%	10.5%	10.5%	20.7%	6.8%	0.0%	0.2%	0.2%	0.1%	0.3%	0.0%	0.0%	0.3%	5.4%	0.0%	100.0%	
Road 54	54	50	23.8	N	1300-1400	132	10.0%	3.8%	0.3%	32.5%	11.7%	10.9%	19.6%	5.8%	0.0%	0.1%	0.1%	0.3%	0.0%	0.0%	0.3%	5.2%	0.0%	100.0%		
Road 54	54	50	23.8	N	1400-1500	133	43.0%	30.4%	0.1%	30.4%	10.3%	20.2%	6.4%	0.0%	0.0%	0.1%	0.3%	0.0%	0.0%	0.4%	1.1%	0.0%	0.4%	5.3%	0.0%	100.0%
Road 54	54	50	23.8	N	1500-1600	138	10.4%	4.2%	0.4%	34.8%	12.5%	8.8%	17.3%	5.8%	0.0%	0.2%	0.2%	0.1%	0.3%	0.0%	0.0%	0.4%	4.5%	0.0%	100.0%	
Road 54	54	50	23.9	N	1600-1700	132	12.3%	4.2%	0.3%	30.6%	11.0%	9.5%	18.8%	6.4%	0.0%	0.3%	0.4%	0.3%	0.5%	0.0%	0.0%	0.6%	4.9%	0.0%	100.0%	
Road 54	54	50	24.0	N	1700-1800	128	15.9%	5.0%	0.3%	31.9%	11.0%	7.2%	14.2%	7.8%	0.0%	0.2%	0.5%	0.8%	1.4%	0.0%	0.0%	1.4%	3.7%	0.0%	100.0%	
Road 54	54	50	24.5	N	1800-1900	104	25.7%	6.0%	0.3%	26.5%	9.5%	5.5%	10.8%	10.1%	0.0%	0.3%	0.3%	0.7%	0.0%	0.0%	1.2%	2.8%	0.0%	100.0%		
Road 54	54	50	24.9	N	1900-2000	76	27.6%	8.6%	0.2%	22.1%	7.9%	5.3%	10.4%	12.8%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.0%	1.0%	2.7%	0.0%	100.0%	
Road 54	54	50	25.7	N	2000-2100	58	27.6%	10.9%	0.2%	22.9%	8.2%	5.9%	9.9%	13.5%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.0%	1.2%	2.8%	0.0%	100.0%	
Road 54	54	50	25.7	N	2100-2200	61	25.1%	10.4%	0.2%	23.1%	8.3%	5.3%	10.4%	12.7%	0.0%	0.0%	0.2%	0.1%	0.3%	0.0%	0.0%	1.1%	2.7%	0.0%	100.0%	
Road 54	54	50	26.1	N	2200-2300	55	26.7%	12.1%	0.2%	19.1%	6.9%	5.1%	11.9%	12.4%	0.0%	0.0%	0.2%	0.1%	0.2%	0.0%	0.0%	1.3%	3.1%	0.0%	100.0%	
Road 54	54	50	26.9	N	2300-0000	43	25.0%	11.2%	0.2%	20.3%	7.3%	6.4%	12.6%	11.8%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	1.1%	3.3%	0.0%	100.0%	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2038)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles <=10t	07 - Medium Goods Vehicles 10-15t	08 - Public Light Buses	09 - Private Light Buses <=3.5t	10 - Private Light Buses >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4-15t	13 - Non-franchised Bus >15t	14 - Franchise d Bus Single Deck	15 - Franchise d Bus Double Deck	16 - Motorcycl	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total	
Road 103	103	80	80.0	N	0000-0100	819	57.3%	25.7%	0.1%	4.9%	1.8%	1.6%	3.1%	0.0%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	2.9%	0.8%	0.0%	0.0%	100.0%	
Road 103	103	80	80.0	N	0100-0200	534	56.2%	25.1%	0.1%	5.1%	1.7%	1.3%	2.9%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	3.2%	0.9%	0.0%	0.0%	100.0%	
Road 103	103	80	80.0	N	0200-0300	392	55.0%	24.5%	0.1%	5.8%	2.1%	1.8%	3.6%	0.0%	0.0%	0.3%	0.7%	0.5%	1.1%	0.0%	3.5%	0.9%	0.0%	0.0%	100.0%	
Road 103	103	80	80.0	N	0300-0400	310	53.8%	23.9%	0.1%	6.3%	2.3%	2.0%	3.9%	0.0%	0.1%	0.4%	0.8%	0.5%	1.2%	0.0%	3.8%	1.3%	1.0%	0.0%	100.0%	
Road 103	103	80	80.0	N	0400-0500	341	55.2%	23.3%	0.1%	6.2%	2.1%	2.0%	3.8%	0.0%	0.1%	0.5%	0.9%	0.6%	1.4%	0.0%	4.1%	1.5%	1.0%	0.0%	100.0%	
Road 103	103	80	80.0	N	0500-0600	584	51.4%	22.6%	0.1%	7.3%	2.6%	2.3%	4.5%	0.0%	0.1%	0.8%	0.9%	0.7%	1.4%	0.0%	4.4%	1.2%	0.0%	0.0%	100.0%	
Road 103	103	80	80.0	N	0600-0700	1276	50.2%	22.0%	0.1%	7.7%	2.8%	2.4%	4.8%	0.0%	0.1%	0.6%	1.0%	0.7%	1.6%	0.0%	4.7%	1.2%	0.0%	0.0%	100.0%	
Road 103	103	80	75.1	N	0700-0800	2589	49.6%	21.4%	0.1%	8.2%	2.9%	2.6%	5.1%	0.0%	0.1%	0.7%	1.1%	0.8%	1.7%	0.0%	5.0%	1.3%	0.0%	0.0%	100.0%	
Road 103	103	80	71.1	N	0800-0900	3015	47.4%	19.8%	0.1%	8.7%	3.0%	2.8%	5.6%	0.0%	0.1%	0.7%	1.1%	0.9%	1.9%	0.0%	5.3%	1.3%	0.0%	0.0%	100.0%	
Road 103	103	80	74.6	N	0900-1000	2528	48.8%	17.7%	0.1%	8.2%	4.4%	3.3%	6.6%	0.0%	0.1%	0.5%	0.8%	1.3%	0.0%	1.9%	1.7%	0.0%	0.0%	100.0%		
Road 103	103	80	77.0	N	1000-1100	2210	45.7%	17.7%	0.1%	13.0%	4.7%	4.1%	8.1%	0.0%	0.1%	0.5%	0.8%	0.5%	1.1%	0.0%	1.4%	2.1%	0.0%	0.0%	100.0%	
Road 103	103	80	78.3	N	1100-1200	2691	45.9%	17.7%	0.1%	13.0%	4.7%	4.1%	8.1%	0.0%	0.1%	0.5%	0.8%	0.5%	1.1%	0.0%	1.4%	2.1%	0.0%	0.0%	100.0%	
Road 103	103	80	77.0	N	1200-1300	2039	46.8%	18.0%	0.1%	11.6%	4.2%	4.2%	8.2%	0.0%	0.1%	0.7%	0.8%	1.2%	0.0%	1.4%	2.1%	0.0%	0.0%	100.0%		
Road 103	103	80	78.0	N	1300-1400	2091	44.9%	17.3%	0.1%	13.7%	4.9%	4.3%	8.4%	0.0%	0.1%	0.6%	0.8%	1.4%	0.0%	1.4%	1.2%	0.0%	0.0%	100.0%		
Road 103	103	80	78.5	N	1400-1500	2227	42.5%	17.2%	0.1%	14.2%	4.9%	4.3%	8.4%	0.0%	0.1%	0.8%	1.2%	1.2%	1.4%	0.0%	1.4%	2.1%	0.0%	0.0%	100.0%	
Road 103	103	80	76.4	N	1500-1600	2281	44.8%	18.0%	0.1%	14.1%	5.1%	3.6%	7.0%	0.0%	0.1%	0.6%	0.9%	1.6%	0.0%	1.6%	1.8%	0.0%	0.0%	100.0%		
Road 103	103	80	78.0	N	1600-1700	2412	47.9%	16.5%	0.1%	14.2%	4.0%	3.5%	6.9%	0.0%	0.1%	1.1%	1.4%	1.0%	2.1%	0.0%	2.3%	1.8%	0.0%	0.0%	100.0%	
Road 103	103	80	74.0	N	1700-1800	1032	46.1%	16.7%	0.1%	13.6%	4.2%	3.5%	6.9%	0.0%	0.1%	0.8%	1.2%	1.2%	1.4%	0.0%	4.6%	1.2%	0.0%	0.0%	100.0%	
Road 103	103	80	73.1	N	1800-1900	2558	64.8%	15.2%	0.1%	6.2%	2.2%	1.3%	2.6%	0.0%	0.1%	0.1%	1.1%	0.8%	1.7%	0.0%	3.1%	0.7%	0.0%	0.0%	100.0%	
Road 103	103	80	78.7	N	1900-2000	2335	63.9%	20.0%	0.1%	4.8%	1.7%	1.1%	2.2%	0.0%	0.0%	0.1%	1.0%	0.7%	1.5%	0.0%	2.4%	0.6%	0.0%	0.0%	100.0%	
Road 103	103	80	80.0	N	2000-2100	1814	59.9%	28.8%	0.1%	5.1%	1.8%	1.2%	2.3%	0.0%	0.0%	0.1%	1.5%	1.0%	0.5%	0.0%	2.4%	0.6%	0.0%	0.0%	100.0%	
Road 103	103	80	80.0	N	2100-2200	1817	59.9%	24.8%	0.1%	5.2%	1.9%	1.2%	2.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.8%	0.0%	2.7%	0.6%	0.0%	0.0%	100.0%	
Road 103	103	80	80.0	N	2200-2300	1719	59.6%	27.0%	0.0%	4.0%	1.4%	1.3%	2.5%	0.0%	0.0%	0.1%	0.4%	0.2%	0.5%	0.0%	2.3%	0.7%	0.0%	0.0%	100.0%	
Road 103	103	80	80.0	N	2300-0000	1358	35.5%	26.3%	0.0%	4.5%	1.6%	1.4%	2.6%	0.0%	0.0%	0.1%	0.4%	0.3%	0.7%	0.0%	2.6%	0.7%	0.0%	0.0%	100.0%	
Road 104	104	80	80.0	N	0000-0100	869	59.0%	27.3%	0.0%	4.5%	1.6%	1.4%	2.6%	0.0%	0.0%	0.1%	0.4%	0.3%	0.7%	0.0%	2.6%	0.7%	0.0%	0.0%	100.0%	
Road 104	104	80	80.0	N	0100-0200	330	48.1%	21.5%	0.1%	10.4%	3.7%	3.3%	6.4%	0.0%	0.2%	0.2%	0.5%	0.4%	0.8%	0.0%	2.7%	1.7%	0.0%	0.0%	100.0%	
Road 104	104	80	80.0	N	0200-0300	265	46.6%	20.8%	0.1%	11.2%	4.0%	3.5%	6.9%	0.0%	0.3%	0.3%	0.6%	0.4%	0.9%	0.0%	2.9%	1.8%	0.0%	0.0%	100.0%	
Road 104	104	80	80.0	N	0300-0400	196	46.0%	19.0%	0.1%	11.0%	4.1%	3.7%	7.4%	0.0%	0.4%	0.4%	0.7%	0.5%	1.0%	0.0%	3.2%	1.7%	0.0%	0.0%	100.0%	
Road 104	104	80	80.0	N	0400-0500	219	43.5%	19.2%	0.1%	12.6%	4.5%	4.0%	7.8%	0.0%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	3.4%	2.0%	0.0%	0.0%	100.0%	
Road 104	104	80	80.0	N	0500-0600	385	42.0%	18.5%	0.1%	13.4%	4.8%	4.2%	8.2%	0.0%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	3.6%	2.2%	0.0%	0.0%	100.0%	
Road 104	104	80	80.0	N	0600-0700	1217	47.8%	17.8%	0.1%	14.1%	5.1%	4.4%	8.1%	0.0%	0.1%	0.8%	1.2%	1.2%	1.4%	0.0%	4.3%	2.1%	0.0%	0.0%	100.0%	
Road 104	104	80	80.0	N	0700-0800	2719	39.1%	17.0%	0.2%	14.8%	5.3%	4.6%	9.1%	0.0%	0.1%	0.6%	0.9%	0.6%	1.4%	0.0%	4.0%	2.4%	0.0%	0.0%	100.0%	
Road 104	104	80	78.4	N	0800-0900	2014	43.1%	13.8%	0.2%	15.9%	5.7%	4.4%	8.7%	0.0%	0.1%	0.6%	0.8%	0.8%	1.3%	0.0%	2.5%	2.3%	0.0%	0.0%	100.0%	
Road 104	104	80	79.0	N	0900-1000	1817	59.9%	28.8%	0.1%	5.1%	1.8%	1.2%	2.3%	0.0%	0.0%	0.1%	1.5%	1.0%	0.5%	0.0%	2.4%	0.6%	0.0%	0.0%	100.0%	
Road 104	104	80	80.0	N	1000-1100	1644	32.5%	12.6%	0.2%	20.9%	7.5%	6.6%	12.1%	0.0%	0.4%	0.5%	0.4%	0.8%	0.0%	1.9%	3.4%	0.0%	0.0%	100.0%		
Road 104	104	80	80.0	N	1100-1200	1551	32.6%	13.4%	0.2%	20.9%	7.5%	6.6%	12.9%	0.0%	0.1%	0.6%	0.3%	0.2%	0.5%	0.0%	0.9%	3.4%	0.0%	0.0%	100.0%	
Road 104	104	80	80.0	N	1200-1300	1672	39.1%	13.8%	0.2%	15.9%	5.7%	4.4%	8.7%	0.0%	0.1%	0.6%	0.8%	0.8%	1.3%	0.0%	2.5%	2.3%	0.0%	0.0%	100.0%	
Road 104	104	80	80.0	N	1300-1400	1296	48.4%	18.6%	0.1%	11.6%	4.2%	3.6%	7.1%	0.0%	0.1%	0.7%	0.7%	0.5%	1.1%	0.0%	1.5%	1.9%	0.0%	0.0%	100.0%	
Road 104	104	80	80.0	N	1400-1500	1388	48.3%	19.6%	0.1%	10.3%	3.7%	3.5%	6.9%	0.0%	0.1%	0.8%	1.0%	0.7%	1.5%	0.0%	1.8%	1.8%	0.0%	0.0%	100.0%	
Road 104	104	80	80.0	N	1500-1600	1419	48.0%	19.3%	0.1%	11.9%	4.2%	3.0%	5.9%	0.0%	0.1%	0.8%	1.0%	0.7%	1.5%	0.0%	1.8%	1.8%	0.0%	0.0%	100.0%	
Road 104	104	80	80.0	N	1600-1700	1415	47.9%	19.3%	0.1%	12.5%	4.9%	5.8%	7.1%	0.0%	0.1%	0.8%	1.0%	0.7%	1.5%	0.0%	1.8%	1.8%	0.0%	0.0%	100.0%	
Road 104	104	80	80.0	N	1700-1800	1732	55.8%	17.4%	0.1%	8.3%	3.0%	1.9%	3.7%	0.0%	0.1%	0.8%	1.0%	0.7%	1.5%	0.0%	4.8%	0.0%	0.0%	0.0%	100.0%	
Road 104	104	80	80.0	N	1800-1900	1518	66.7%	15.7%	0.1%	5.1%	1.8%	1.1%	2.1%	0.0%	0.1%	1.2%	0.8%	1.8%	0.0%	3.2%	0.5%	0.0%	0.0%	100.0%		
Road 104	104	80	80.0	N	1900-2000	1143	60.3%	15.7%	0.1%	3.9%	1.5%	1.0%	1.8%	0.0%	0.1%	0.8%	1.0%	0.7%	1.5%	0.0%	2.4%	1.5%	0.0%	0.0%	100.0%	
Road 104	104	80	80.0	N	2000-2100	1182	60.4%	25.6%	0.0%	4.1%	1.5%	1.0%	1.8%	0.0%	0.1%	0.8%	1.3%	1.3%	0.0%	2.4%	0.5%	0.0%	0.0%	100.0%		
Road 104	104	80	80.0	N	2100-2200	1183	61.3%	25.4%	0.0%	4.2%	1.5%	1.0%	1.9%	0.0%	0.0%	0.1%	0.4%	0.3%	0.7%	0.0%	2.8%	0.5%	0.0%	0.0%	100.0%	
Road 104	104	80	80.0	N	2200-2300	1249	62.6%	25.6%	0.0%	4.2%	1.5%	1.0%	1.9%	0.0%	0.0%	0.1%	0.4%	0.3%	0.7%	0.0%	2.8%	0.5%	0.0%	0.0%	100.0%	
Road 104	104	80	80.0	N	2300-0000	808	59.9%	27.0%	0.0%	3.8%	1.3%	1.1%	2.2%	0.0%	0.0%	0.1%	0.5%	0.3%	0.7%	0.0%	2.6%	0.6%	0.0%	0.0%	100.0%	

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters for AERMOD (Year 2043)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Brush Road Approach (t/yr)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles >2.5-5t	05 - Light Goods Vehicles >5-10t	06 - Medium Goods Vehicles >10t	07 - Medium Goods Vehicles >11-24t	08 - Public Light Bus <=5t	09 - Private Light Bus <=5t	10 - Private Light Bus >5-11t	11 - Non-franchised Bus >11-24t	12 - Non-franchised Bus >5-11t	13 - Non-franchised Bus >15-24t	14 - Franchise Single Deck	15 - Franchise Double Deck	16 - Motorcyclist	17 - Heavy Vehicles >24t	18 - Non-franchised Bus >24t	Total	
							PC	TAXI	LGVA	LGVA	LGVE	HGV1	HGV2	PLB	Pv4	Pv5	NFBF	NFBF	NFBF	NFBF	FRD	FRD	MC	NFBF		
Road 1	1	80	80.0	N	0000-0100	1049	57.1%	25.7%	0.0%	3.6%	1.3%	1.1%	0.0%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	3.5%	2.9%	0.8%	0.0%	100.0%		
Road 1	1	80	80.0	N	0100-0200	682	56.2%	25.1%	0.0%	3.9%	1.4%	1.2%	2.4%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	3.5%	3.2%	0.6%	0.0%	100.0%	
Road 1	1	80	80.0	N	0200-0300	488	55.6%	24.6%	0.0%	4.0%	1.5%	1.3%	2.4%	0.0%	0.0%	0.3%	0.7%	0.5%	0.7%	0.0%	3.5%	3.2%	0.7%	0.0%	100.0%	
Road 1	1	80	80.0	N	0300-0400	393	54.2%	24.1%	0.0%	4.7%	1.7%	1.5%	2.9%	0.0%	0.1%	0.4%	0.8%	0.5%	1.2%	0.0%	3.5%	3.8%	0.8%	0.0%	100.0%	
Road 1	1	80	80.0	N	0400-0500	431	53.2%	23.5%	0.1%	5.0%	1.8%	1.8%	3.1%	0.0%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	3.4%	4.1%	0.8%	0.0%	100.0%	
Road 1	1	80	80.0	N	0500-0600	748	52.2%	22.9%	0.1%	5.3%	2.1%	1.9%	3.5%	0.0%	0.1%	0.6%	1.1%	0.7%	1.3%	0.0%	3.4%	4.5%	0.9%	0.0%	100.0%	
Road 1	1	80	80.0	N	0600-0700	1602	51.1%	22.4%	0.1%	5.8%	2.1%	1.8%	3.5%	0.0%	0.1%	0.7%	1.1%	0.7%	1.6%	0.0%	3.4%	4.8%	0.9%	0.0%	100.0%	
Road 1	1	80	79.0	N	0700-0800	1337	50.1%	21.8%	0.1%	6.1%	2.2%	1.9%	3.8%	0.0%	0.1%	0.7%	1.1%	0.8%	1.7%	0.0%	3.4%	5.1%	1.0%	0.0%	100.0%	
Road 1	1	80	78.0	N	0800-0900	1748	49.1%	21.2%	0.1%	6.4%	2.3%	2.0%	4.1%	0.0%	0.1%	0.8%	1.2%	0.9%	1.9%	0.0%	3.4%	5.4%	1.1%	0.0%	100.0%	
Road 1	1	80	75.0	N	0900-1000	1708	51.2%	16.6%	0.1%	9.4%	3.4%	2.6%	5.0%	0.0%	0.1%	0.5%	0.9%	1.3%	0.0%	3.1%	2.0%	1.3%	0.0%	100.0%		
Road 1	1	80	80.0	N	1000-1100	2261	48.4%	18.8%	0.1%	10.1%	3.6%	3.2%	6.3%	0.0%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	3.1%	1.5%	1.7%	0.0%	100.0%	
Road 1	1	80	80.0	N	1100-1200	2242	48.3%	19.9%	0.1%	10.1%	3.6%	3.1%	6.2%	0.0%	0.1%	0.9%	0.5%	0.3%	0.7%	0.0%	3.2%	1.4%	1.8%	0.0%	100.0%	
Road 1	1	75.0	80.0	N	1200-1300	1481	42.0%	20.1%	0.1%	12.0%	4.2%	3.8%	6.9%	0.0%	0.1%	0.7%	0.4%	0.3%	0.5%	0.0%	3.2%	1.3%	2.3%	0.0%	100.0%	
Road 1	1	80	74.0	N	1300-1400	3595	41.0%	15.8%	0.2%	14.8%	5.3%	4.6%	9.0%	0.0%	0.1%	0.6%	0.6%	0.4%	0.9%	0.0%	3.2%	1.2%	2.4%	0.0%	100.0%	
Road 1	1	80	73.0	N	1400-1500	3842	41.3%	16.7%	0.1%	15.2%	4.7%	4.5%	8.8%	0.0%	0.1%	0.7%	0.8%	0.6%	1.3%	0.0%	3.2%	1.6%	2.3%	0.0%	100.0%	
Road 1	1	72.0	80.0	N	1500-1600	3902	41.0%	16.8%	0.1%	15.3%	4.7%	4.5%	8.9%	0.0%	0.1%	0.7%	0.8%	0.6%	1.3%	0.0%	3.2%	1.6%	2.3%	0.0%	100.0%	
Road 1	1	80	71.0	N	1600-1700	4155	44.0%	15.2%	0.1%	12.2%	4.4%	3.8%	7.5%	0.0%	0.1%	1.0%	1.3%	0.9%	2.0%	0.0%	3.5%	2.1%	2.0%	0.0%	100.0%	
Road 1	1	80	69.0	N	1700-1800	4999	49.4%	15.4%	0.1%	11.0%	4.0%	2.5%	4.9%	0.0%	0.1%	0.7%	0.9%	0.8%	1.3%	0.0%	3.6%	4.2%	1.3%	0.0%	100.0%	
Road 1	1	80	69.0	N	1800-1900	4931	50.9%	15.2%	0.1%	10.8%	4.0%	2.5%	4.9%	0.0%	0.1%	0.7%	0.9%	0.8%	1.3%	0.0%	3.6%	4.2%	1.3%	0.0%	100.0%	
Road 1	1	75.5	N	1900-2000	3898	60.0%	18.8%	0.1%	5.3%	1.6%	1.3%	2.5%	0.0%	0.0%	0.1%	0.9%	0.6%	1.4%	0.4%	0.3%	2.2%	0.7%	0.0%	100.0%		
Road 1	1	80	80.0	N	2000-2100	3036	55.2%	23.4%	0.1%	5.9%	2.0%	1.2%	2.4%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	4.5%	2.2%	0.6%	0.0%	100.0%	
Road 1	1	80	80.0	N	2100-2200	3035	56.1%	23.3%	0.1%	5.7%	1.7%	1.3%	2.6%	0.0%	0.1%	0.4%	0.8%	0.5%	1.0%	0.0%	4.5%	2.2%	0.7%	0.0%	100.0%	
Road 1	1	80	80.0	N	2200-2300	2934	56.0%	25.3%	0.0%	4.4%	1.6%	1.4%	2.8%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	4.3%	2.2%	0.7%	0.0%	100.0%	
Road 1	1	80	80.0	N	2300-0000	2201	54.9%	24.7%	0.1%	4.9%	1.8%	1.6%	3.1%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	4.2%	2.4%	0.8%	0.0%	100.0%	
Road 2	2	80	80.0	N	0000-0100	862	52.3%	22.5%	0.0%	3.8%	1.3%	1.2%	2.3%	0.0%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	3.5%	3.0%	0.7%	0.0%	100.0%	
Road 2	2	80	80.0	N	0100-0200	624	51.0%	22.8%	0.1%	6.8%	2.4%	2.1%	4.2%	0.0%	0.0%	0.2%	0.6%	0.4%	0.8%	0.0%	4.2%	2.9%	1.4%	0.0%	100.0%	
Road 2	2	80	80.0	N	0200-0300	469	49.7%	22.1%	0.1%	7.3%	2.6%	2.3%	4.5%	0.0%	0.0%	0.3%	0.6%	0.4%	1.0%	0.0%	4.2%	3.1%	1.6%	0.0%	100.0%	
Road 2	2	80	80.0	N	0300-0400	366	48.0%	21.5%	0.1%	8.0%	2.8%	2.5%	5.0%	0.0%	0.0%	0.3%	0.6%	0.4%	1.1%	0.0%	4.1%	3.0%	1.7%	0.0%	100.0%	
Road 2	2	80	80.0	N	0400-0500	404	47.2%	20.9%	0.1%	8.4%	3.0%	2.6%	5.2%	0.0%	0.1%	0.4%	0.8%	0.5%	1.2%	0.0%	4.1%	3.7%	1.8%	0.0%	100.0%	
Road 2	2	80	80.0	N	0500-0600	703	46.1%	20.3%	0.1%	9.0%	3.2%	2.8%	5.5%	0.0%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	4.0%	3.9%	1.7%	0.0%	100.0%	
Road 2	2	80	80.0	N	0600-0700	1516	44.9%	19.7%	0.1%	9.6%	3.4%	3.0%	5.5%	0.0%	0.1%	0.6%	0.9%	0.7%	1.4%	0.0%	4.0%	4.2%	1.8%	0.0%	100.0%	
Road 2	2	80	80.0	N	0700-0800	3088	43.6%	18.1%	0.1%	10.8%	3.7%	3.2%	6.5%	0.0%	0.1%	0.8%	1.0%	0.8%	1.6%	0.0%	3.8%	4.1%	1.9%	0.0%	100.0%	
Road 2	2	80	75.6	N	0800-0900	3586	48.5%	15.5%	0.1%	11.0%	3.9%	3.1%	6.0%	0.0%	0.1%	0.7%	0.9%	0.7%	1.4%	0.0%	3.5%	2.8%	1.8%	0.0%	100.0%	
Road 2	2	80	77.8	N	0900-1000	3899	42.4%	15.4%	0.2%	14.8%	5.5%	4.6%	7.9%	0.0%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	3.4%	1.6%	2.3%	0.0%	100.0%	
Road 2	2	80	77.8	N	1000-1100	2776	39.2%	4.8%	0.2%	13.0%	4.9%	4.2%	7.9%	0.0%	0.1%	0.4%	0.7%	0.5%	1.2%	0.0%	3.4%	1.5%	2.3%	0.0%	100.0%	
Road 2	2	80	80.0	N	1100-1200	2585	39.1%	16.1%	0.2%	15.4%	5.5%	4.8%	9.5%	0.0%	0.1%	0.7%	0.4%	0.3%	0.6%	0.0%	3.4%	1.1%	2.8%	0.0%	100.0%	
Road 2	2	80	76.8	N	1200-1300	2201	41.2%	15.5%	0.1%	15.6%	4.9%	4.9%	9.6%	0.0%	0.1%	0.7%	0.7%	0.5%	1.1%	0.0%	2.8%	1.2%	2.7%	0.0%	100.0%	
Road 2	2	75.0	80.0	N	1300-1400	3312	39.1%	15.5%	0.2%	15.0%	5.1%	4.9%	9.5%	0.0%	0.1%	0.8%	0.4%	0.3%	0.5%	0.0%	2.8%	1.2%	2.7%	0.0%	100.0%	
Road 2	2	80	74.8	N	1400-1500	3500	39.7%	16.1%	0.1%	14.3%	5.1%	4.9%	9.5%	0.0%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	2.9%	1.5%	2.7%	0.0%	100.0%	
Road 2	2	80	74.4	N	1500-1600	3189	39.4%	15.8%	0.2%	16.5%	5.9%	4.2%	8.2%	0.0%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	2.6%	1.4%	2.4%	0.0%	100.0%	
Road 2	2	80	73.4	N	1600-1700	3755	42.0%	14.7%	0.2%	14.0%	5.8%	4.8%	9.4%	0.0%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	2.9%	1.4%	2.3%	0.0%	100.0%	
Road 2	2	80	72.3	N	1700-1800	4168	41.8%	15.0%	0.1%	12.1%	4.3%	2.7%	5.4%	0.0%	0.1%	0.7%	0.8%	0.6%	1.3%	0.0%	3.0%	1.4%	1.6%	0.0%	100.0%	
Road 2	2	80	72.2	N	1800-1900	4145	40.0%	14.1%	0.1%	7.7%	2.8%	1.6%	3.2%	0.0%	0.0%	0.1%	1.1%	0.7%	1.6%	0.0%	3.1%	2.9%	1.0%	0.0%	100.0%	
Road 2	2	80	71.0	N	1900-2000	3427	38.9%	14.8%	0.1%	14.0%	5.8%	4.1%	8.2%	0.0%	0.1%	0.7%	0.8%	0.6%	1.4%	0.0%	2.8%	1.3%	2.3%	0.0%	100.0%	
Road 2	2	80	80.0	N	2000-2100	2705	54.7%	23.2%	0.1%	6.3%	2.3%	1.4%	2.7%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	3.8%	2.2%	0.8%	0.0%	100.0%	
Road 2	2	80	80.0	N	2100-2200	2700	55.7%	23.1%	0.1%	6.4%	2.3%	1.5%	2.9%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	3.4%	2.5%	0.8%	0.0%	100.0%	
Road 2	2	80	80.0	N	2200-2300	2611	56.1%	22.9%	0.1%	5.8%	2.1%	1.5%	3.1%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	3.4%	2.5%	0.8%	0.0%	100.0%	
Road 2	2	80	80.0	N	2300-0000	1963	54.3%	23.4%	0.1%	5.5%	2.0%	1.7%	3.4%	0.0%	0.1%	0.1%	0.4%	0.3%	0.6%	0.0%	3.6%	2.4%	1.0%	0.0%	100.0%	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters for AERMOD (Year 2043)																										
Route Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Brush Approach (t/yr)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.8t	04 - Light Goods Vehicles >2.8t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles >3.5t	07 - Medium Goods Vehicles >5.4t	08 - Public Light Bus <=3.5t	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-Franchise Bus >5.4t	12 - Non-Franchise Bus 6.5 - 15t	13 - Non-Franchise Bus 15 - 24t	14 - Franchise Single Deck	15 - Franchise Double Deck	16 - Motorcycles	17 - Heavy Vehicles >24t	18 - Non-Franchise Bus >24t	Total	
Route 1	1	50	45.7	N	0000-0100	414	57.9%	26.0%	0.0%	2.7%	1.0%	0.8%	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	2.9%	0.4%	0.0%	100.0%		
Route 5	5	50	47.2	N	0100-0200	268	57.1%	25.5%	0.0%	2.9%	1.1%	0.9%	1.8%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	4.6%	3.2%	0.5%	0.0%	100.0%	
Route 5	5	50	47.8	N	0200-0300	166	54.1%	25.3%	0.0%	2.9%	1.2%	1.1%	0.9%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	4.6%	3.2%	0.5%	0.0%	100.0%	
Route 5	5	50	48.4	N	0300-0400	154	55.3%	24.6%	0.0%	3.5%	1.2%	1.1%	2.1%	0.0%	0.1%	0.4%	0.8%	0.6%	1.2%	0.0%	4.6%	3.9%	0.6%	0.0%	100.0%	
Route 5	5	50	48.2	N	0400-0500	169	54.4%	24.1%	0.0%	3.8%	1.3%	1.2%	2.3%	0.0%	0.1%	0.5%	0.9%	0.6%	1.4%	0.0%	4.5%	4.2%	0.6%	0.0%	100.0%	
Route 5	5	50	46.9	N	0500-0600	291	53.5%	23.8%	0.0%	4.0%	1.5%	1.3%	2.5%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	4.5%	4.6%	0.7%	0.0%	100.0%	
Route 5	5	50	47.9	N	0600-0700	631	52.6%	23.0%	0.0%	5.2%	1.8%	1.6%	3.7%	0.0%	0.1%	0.7%	1.3%	0.8%	1.4%	0.0%	4.3%	4.8%	0.8%	0.0%	100.0%	
Route 5	5	50	37.9	N	0700-0800	1255	51.7%	22.5%	0.0%	4.6%	1.7%	1.4%	2.8%	0.0%	0.1%	0.8%	1.2%	0.8%	1.8%	0.0%	4.5%	5.3%	0.7%	0.0%	100.0%	
Route 5	5	50	36.8	N	0800-0900	1449	57.8%	18.5%	0.1%	5.0%	1.8%	1.4%	2.8%	0.0%	0.1%	0.8%	1.1%	0.8%	1.7%	0.0%	4.0%	3.4%	0.7%	0.0%	100.0%	
Route 5	5	50	38.2	N	0900-1000	1175	51.9%	21.3%	0.1%	5.0%	1.8%	1.4%	2.8%	0.0%	0.1%	0.8%	1.1%	0.8%	1.4%	0.0%	4.0%	3.4%	0.7%	0.0%	100.0%	
Route 5	5	50	39.2	N	1000-1100	1002	51.4%	20.0%	0.1%	7.9%	2.8%	2.5%	4.9%	0.0%	0.1%	0.6%	0.8%	0.6%	1.3%	0.0%	4.2%	1.6%	1.3%	0.0%	100.0%	
Route 5	5	50	39.6	N	1100-1200	991	51.2%	21.1%	0.1%	7.8%	2.8%	2.4%	4.8%	0.0%	0.1%	0.9%	0.5%	0.4%	0.8%	0.0%	4.3%	1.4%	1.3%	0.0%	100.0%	
Route 5	5	50	35.4	N	1200-1300	1610	52.0%	20.5%	0.1%	7.9%	2.8%	2.5%	4.9%	0.0%	0.1%	0.6%	0.8%	0.6%	1.3%	0.0%	4.2%	1.6%	1.3%	0.0%	100.0%	
Route 5	5	50	35.4	N	1300-1400	1621	52.1%	20.1%	0.1%	8.4%	3.0%	2.6%	5.1%	0.0%	0.1%	0.7%	0.7%	0.5%	1.1%	0.0%	2.5%	1.6%	1.3%	0.0%	100.0%	
Route 5	5	50	34.6	N	1400-1500	1770	51.6%	20.9%	0.1%	7.4%	2.8%	2.5%	4.9%	0.0%	0.1%	0.9%	1.0%	0.7%	1.6%	0.0%	2.4%	1.9%	1.3%	0.0%	100.0%	
Route 5	5	50	34.4	N	1500-1600	1767	51.4%	20.8%	0.1%	7.4%	2.8%	2.5%	4.9%	0.0%	0.1%	0.9%	1.0%	0.7%	1.6%	0.0%	2.4%	1.9%	1.3%	0.0%	100.0%	
Route 5	5	50	33.5	N	1600-1700	1936	53.6%	18.5%	0.1%	6.6%	2.4%	2.1%	4.1%	0.0%	0.2%	1.3%	1.6%	1.1%	2.4%	0.0%	2.6%	2.5%	1.1%	0.0%	100.0%	
Route 5	5	50	32.2	N	1700-1800	2372	57.8%	18.1%	0.1%	5.8%	2.1%	1.3%	2.6%	0.0%	0.1%	0.8%	1.0%	0.7%	1.5%	0.0%	2.5%	5.0%	0.7%	0.0%	100.0%	
Route 5	5	50	33.8	N	1800-1900	2551	62.1%	15.5%	0.0%	0.7%	0.4%	0.2%	0.5%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	2.3%	3.2%	0.5%	0.0%	100.0%	
Route 5	5	50	33.8	N	1900-2000	2051	65.3%	20.5%	0.0%	2.6%	0.9%	0.6%	1.2%	0.0%	0.0%	0.1%	1.0%	0.7%	1.5%	0.0%	2.8%	2.4%	0.3%	0.0%	100.0%	
Route 5	5	50	38.5	N	2000-2100	1593	60.3%	25.6%	0.0%	2.7%	1.0%	0.8%	1.2%	0.0%	0.0%	0.1%	0.8%	0.6%	1.3%	0.0%	3.0%	2.4%	0.3%	0.0%	100.0%	
Route 5	5	50	36.6	N	2100-2200	1588	61.6%	25.5%	0.0%	0.6%	0.3%	0.3%	0.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	3.0%	2.4%	0.3%	0.0%	100.0%	
Route 5	5	50	36.9	N	2200-2300	1550	60.8%	27.5%	0.0%	2.2%	0.8%	0.7%	1.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	2.8%	2.3%	0.4%	0.0%	100.0%	
Route 5	5	50	39.0	N	2300-0000	1155	59.9%	27.0%	0.0%	2.4%	0.9%	0.8%	1.5%	0.0%	0.0%	0.1%	0.5%	0.3%	0.7%	0.0%	2.8%	2.7%	0.4%	0.0%	100.0%	
Route 6	6	40	43.8	N	0000-0100	538	58.2%	28.6%	0.0%	2.4%	0.9%	0.8%	1.5%	0.0%	0.0%	0.1%	0.5%	0.3%	0.6%	0.0%	2.8%	2.7%	0.4%	0.0%	100.0%	
Route 6	6	40	45.9	N	0100-0200	356	46.4%	20.8%	0.1%	9.7%	3.5%	3.0%	6.0%	0.0%	0.0%	0.2%	0.5%	0.3%	0.8%	0.0%	4.0%	2.6%	2.1%	0.0%	100.0%	
Route 6	6	40	46.9	N	0200-0300	264	44.9%	20.0%	0.1%	10.4%	3.7%	3.3%	6.4%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	3.9%	2.8%	2.4%	0.0%	100.0%	
Route 6	6	40	47.5	N	0300-0400	212	43.4%	19.3%	0.1%	11.1%	4.0%	3.5%	6.8%	0.0%	0.0%	0.3%	0.6%	0.4%	1.0%	0.0%	3.8%	3.1%	2.7%	0.0%	100.0%	
Route 6	6	40	47.2	N	0400-0500	235	48.0%	17.8%	0.1%	11.7%	4.3%	3.8%	7.2%	0.0%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	3.7%	3.1%	2.7%	0.0%	100.0%	
Route 6	6	40	45.0	N	0500-0600	412	46.8%	17.9%	0.1%	12.5%	4.5%	3.9%	7.7%	0.0%	0.1%	0.5%	0.8%	0.5%	1.1%	0.0%	3.7%	3.5%	2.5%	0.0%	100.0%	
Route 6	6	40	39.5	N	0600-0700	891	39.5%	17.3%	0.1%	13.2%	4.7%	4.1%	8.1%	0.0%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	3.6%	3.7%	2.3%	0.0%	100.0%	
Route 6	6	40	38.0	N	0700-0800	1834	38.1%	16.4%	0.1%	13.9%	5.1%	4.3%	8.5%	0.0%	0.1%	0.3%	0.9%	0.7%	1.3%	0.0%	3.3%	3.9%	2.3%	0.0%	100.0%	
Route 6	6	40	30.9	N	0800-0900	2137	42.2%	13.5%	0.2%	15.0%	5.4%	4.2%	8.2%	0.0%	0.1%	0.6%	0.8%	0.6%	1.3%	0.0%	3.1%	2.5%	2.5%	0.0%	100.0%	
Route 6	6	40	31.7	N	0900-1000	1919	35.4%	12.8%	0.2%	19.3%	6.8%	5.3%	10.4%	0.0%	0.0%	0.3%	0.8%	0.4%	0.9%	0.0%	2.9%	1.4%	3.1%	0.0%	100.0%	
Route 6	6	40	31.0	N	1000-1100	1712	32.1%	13.7%	0.2%	22.7%	8.1%	6.3%	11.9%	0.0%	0.0%	0.3%	0.8%	0.4%	0.9%	0.0%	2.7%	1.3%	3.1%	0.0%	100.0%	
Route 6	6	40	33.5	N	1100-1200	1635	32.1%	13.2%	0.2%	19.9%	7.1%	6.1%	12.2%	0.0%	0.1%	0.6%	0.3%	0.2%	0.5%	0.0%	2.9%	0.9%	3.6%	0.0%	100.0%	
Route 6	6	40	33.4	N	1200-1300	1593	29.1%	11.2%	0.2%	20.4%	7.3%	7.3%	14.4%	0.0%	0.1%	0.5%	0.5%	0.3%	0.8%	0.0%	3.0%	0.9%	4.2%	0.0%	100.0%	
Route 6	6	40	32.0	N	1300-1400	1669	27.0%	10.8%	0.2%	23.3%	8.2%	6.9%	12.5%	0.0%	0.1%	0.4%	0.5%	0.3%	0.8%	0.0%	2.8%	0.8%	4.3%	0.0%	100.0%	
Route 6	6	40	32.2	N	1400-1500	1770	27.9%	11.3%	0.2%	21.3%	7.6%	7.2%	14.2%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	2.8%	1.0%	4.1%	0.0%	100.0%	
Route 6	6	40	31.9	N	1500-1600	1804	27.5%	11.0%	0.3%	24.4%	8.8%	6.2%	12.2%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	2.8%	1.0%	3.6%	0.0%	100.0%	
Route 6	6	40	31.8	N	1600-1700	1821	26.9%	10.8%	0.3%	23.3%	9.2%	6.3%	12.2%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	2.8%	1.0%	3.6%	0.0%	100.0%	
Route 6	6	40	32.0	N	1700-1800	1916	36.7%	11.5%	0.2%	19.5%	7.0%	6.4%	8.7%	0.0%	0.1%	0.5%	0.6%	0.4%	1.0%	0.0%	3.5%	3.2%	2.6%	0.0%	100.0%	
Route 6	6	40	33.2	N	1800-1900	1880	50.0%	11.7%	0.1%	13.6%	4.8%	2.8%	5.6%	0.0%	0.0%	0.1%	0.9%	0.6%	1.3%	0.0%	4.0%	2.4%	1.8%	0.0%	100.0%	
Route 6	6	40	36.3	N	1900-2000	1401	50.9%	14.0%	0.0%	10.9%	3.5%	2.6%	5.0%	0.0%	0.0%	0.1%	0.8%	0.6%	1.3%	0.0%	3.8%	1.9%	1.3%	0.0%	100.0%	
Route 6	6	40	38.3	N	2000-2100	1112	46.7%	19.8%	0.1%	11.4%	4.1%	2.5%	4.9%	0.0%	0.0%	0.1%	0.7%	0.5%	1.0%	0.0%	5.0%	1.9%	1.5%	0.0%	100.0%	
Route 6	6	40	38.4	N	2100-2200	1112	47.4%	19.6%	0.1%	11.5%	4.1%	2.7%	5.2%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	4.4%	2.2%	1.5%	0.0%	100.0%	
Route 6	6	40	38.2	N	2200-2300	1061	47.1%	19.5%	0.1%	11.5%	4.2%	2.8%	5.2%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	4.4%	2.2%	1.5%	0.0%	100.0%	
Route 6	6	40	40.5	N	2300-0000	088	46.3%	20.8%	0.1%	10.0%	3.6%	3.2%	6.2%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	4.7%	2.0%	1.9%	0.0%	100.0%	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters for AERMOD (Year 2043)																								
Route Name	Speed Limit (km/hr)	Start Emission Estimated by Brush Approach (Yr)	Hour	Total Vehicles (Veh/HR)	01 - Private Cars	02 - Taxi	03 - Light-Good Vehicles +25t	04 - Light-Good Vehicles +25t	05 - Light-Good Vehicles +25t	06 - Medium-Good Vehicles +25t	07 - Medium-Good Vehicles +25t	08 - Public Light Bus +25t	09 - Private Light Bus +25t	10 - Private Light Bus +25t	11 - Non-franchise Bus 6.1-24t	12 - Non-franchise Bus 6.1-24t	13 - Non-franchise Bus 15-24t	14 - Franchise Single Deck	15 - Franchise Double Deck	16 - Motorcycles	17 - Heavy Trucks +24t	18 - Non-franchise Bus +24t	Total	
					PC	TX	LVG	LVG	LVG	LVG	LVG	PLB	PV4	PV5	NFB	NFB	NFB	FBD	FBD	FBD	NFB	NFB		
Route 3	70	70.0	N	0000-0100	401	55.7%	25.0%	0.0%	3.8%	1.4%	1.2%	2.4%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	5.1%	2.8%	0.6%	100.0%		
Route 3	70	70.0	N	0100-0200	261	54.7%	24.4%	0.0%	4.2%	1.5%	1.3%	2.6%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	5.1%	3.1%	0.7%	100.0%	
Route 3	70	70.0	N	0200-0300	191	53.0%	23.0%	0.0%	4.0%	1.4%	1.2%	2.4%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	5.1%	3.1%	0.7%	100.0%	
Route 3	70	70.0	N	0300-0400	151	52.7%	23.4%	0.1%	5.0%	1.6%	1.6%	3.1%	0.0%	0.1%	0.4%	0.8%	0.5%	1.2%	0.0%	5.0%	3.7%	0.8%	100.0%	
Route 3	70	70.0	N	0400-0500	165	51.7%	22.6%	0.1%	5.3%	1.9%	1.7%	3.3%	0.0%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	4.0%	0.9%	0.0%	100.0%	
Route 3	70	70.0	N	0500-0600	287	50.7%	22.8%	0.1%	5.7%	2.1%	1.8%	3.5%	0.0%	0.1%	0.6%	0.9%	0.6%	1.4%	0.0%	5.0%	4.3%	0.9%	100.0%	
Route 3	70	70.0	N	0600-0700	419	49.8%	21.7%	0.1%	6.0%	2.3%	2.0%	3.9%	0.0%	0.1%	0.7%	1.0%	0.7%	1.6%	0.0%	4.0%	4.9%	1.0%	100.0%	
Route 3	65.0	N	0700-0800	1244	48.6%	21.2%	0.1%	6.5%	2.3%	2.0%	4.0%	0.0%	0.1%	0.7%	1.1%	0.8%	1.7%	0.0%	4.0%	5.0%	1.0%	100.0%		
Route 3	61.9	N	0800-0900	1438	54.2%	17.4%	0.1%	7.1%	2.6%	2.0%	3.9%	0.0%	0.1%	0.7%	1.1%	0.7%	1.6%	0.0%	4.3%	3.1%	1.0%	100.0%		
Route 3	61.9	N	0900-1000	1188	49.6%	17.0%	0.1%	7.0%	3.0%	2.7%	3.1%	0.0%	0.1%	0.6%	0.9%	0.7%	1.6%	0.0%	4.0%	3.0%	1.0%	100.0%		
Route 3	67.5	N	1000-1100	1030	46.6%	18.1%	0.1%	10.7%	3.8%	3.4%	6.7%	0.0%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	4.4%	1.4%	1.7%	100.0%		
Route 3	68.5	N	1100-1200	976	46.5%	19.1%	0.1%	10.6%	3.8%	3.3%	6.5%	0.0%	0.1%	0.8%	0.5%	0.3%	0.7%	0.0%	4.5%	1.3%	1.7%	100.0%		
Route 3	70	70.0	N	1200-1300	1617	36.2%	14.9%	0.2%	10.2%	4.4%	3.4%	5.0%	0.0%	0.1%	0.5%	0.4%	0.5%	0.0%	4.0%	1.1%	1.9%	100.0%		
Route 3	70	70.0	N	1300-1400	1680	36.2%	14.0%	0.2%	17.4%	6.3%	5.4%	10.6%	0.0%	0.1%	0.5%	0.5%	0.4%	0.8%	0.0%	3.8%	1.1%	2.8%	100.0%	
Route 3	70	70.0	N	1400-1500	1788	36.8%	14.9%	0.2%	15.7%	5.6%	5.3%	10.4%	0.0%	0.1%	0.6%	0.7%	0.5%	1.1%	0.0%	3.8%	1.4%	2.7%	100.0%	
Route 3	70	70.0	N	1500-1600	1815	36.2%	14.1%	0.2%	10.2%	4.4%	3.4%	5.0%	0.0%	0.1%	0.5%	0.4%	0.5%	0.0%	4.0%	1.1%	1.9%	100.0%		
Route 3	70	70.0	N	1600-1700	1889	39.6%	13.7%	0.2%	14.6%	5.2%	4.6%	9.0%	0.0%	0.1%	0.9%	1.2%	0.8%	1.8%	0.0%	4.2%	1.9%	2.3%	100.0%	
Route 3	70	70.0	N	1700-1800	2074	45.3%	14.1%	0.1%	13.4%	4.8%	3.0%	6.0%	0.0%	0.1%	0.6%	0.8%	0.6%	1.2%	0.0%	4.4%	1.9%	1.6%	100.0%	
Route 3	70	70.0	N	1800-1900	1162	57.4%	8.7%	0.1%	8.7%	3.1%	2.8%	4.6%	0.0%	0.1%	0.7%	1.0%	0.7%	1.6%	0.0%	4.2%	1.9%	1.6%	100.0%	
Route 3	70	70.0	N	1900-2000	1697	56.9%	17.8%	0.1%	6.7%	2.4%	1.6%	3.2%	0.0%	0.1%	0.9%	0.6%	0.3%	0.3%	0.0%	5.5%	2.1%	0.8%	100.0%	
Route 3	70	63.9	N	2000-2100	1324	52.3%	22.6%	0.1%	7.1%	2.6%	1.6%	3.1%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	5.7%	2.1%	0.8%	100.0%	
Route 3	70	64.3	N	2100-2200	1319	53.8%	22.2%	0.1%	7.2%	2.6%	1.7%	3.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	6.1%	1.1%	0.9%	100.0%	
Route 3	70	65.0	N	2200-2300	1275	53.3%	24.1%	0.1%	5.6%	2.0%	1.8%	3.5%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	5.5%	2.1%	0.9%	100.0%	
Route 3	70	69.8	N	2300-0000	1600	52.0%	23.4%	0.1%	6.2%	2.2%	2.0%	3.9%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	5.4%	2.3%	1.0%	100.0%	
Route 4	80	80.0	N	0000-0100	348	56.1%	25.0%	0.0%	3.8%	1.4%	1.2%	2.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	5.1%	2.8%	0.6%	100.0%	
Route 4	80	80.0	N	0100-0200	421	57.1%	25.5%	0.0%	3.8%	1.4%	1.2%	2.3%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	2.5%	3.2%	0.6%	100.0%	
Route 4	80	80.0	N	0200-0300	308	56.1%	25.0%	0.0%	4.1%	1.5%	1.3%	2.5%	0.0%	0.0%	0.4%	0.7%	0.5%	1.1%	0.0%	2.5%	3.6%	0.7%	100.0%	
Route 4	80	80.0	N	0300-0400	243	55.1%	24.5%	0.0%	4.5%	1.6%	1.4%	2.8%	0.0%	0.1%	0.4%	0.8%	0.6%	1.2%	0.0%	2.5%	3.9%	0.7%	100.0%	
Route 4	80	80.0	N	0400-0500	366	54.0%	23.6%	0.1%	5.0%	1.7%	1.6%	3.1%	0.0%	0.1%	0.5%	0.9%	0.7%	1.4%	0.0%	2.0%	4.0%	0.8%	100.0%	
Route 4	80	80.0	N	0500-0600	461	53.1%	23.4%	0.1%	5.2%	1.9%	1.6%	3.2%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	2.5%	4.5%	0.8%	100.0%	
Route 4	80	80.0	N	0600-0700	387	52.1%	22.8%	0.1%	5.5%	2.0%	1.7%	3.4%	0.0%	0.1%	0.7%	1.1%	0.7%	1.6%	0.0%	2.4%	4.9%	0.9%	100.0%	
Route 4	80	80.0	N	0700-0800	2194	51.0%	22.9%	0.1%	5.0%	2.2%	2.1%	3.8%	0.0%	0.1%	0.6%	0.9%	0.7%	1.6%	0.0%	2.4%	4.8%	0.8%	100.0%	
Route 4	80	77.6	N	0800-0900	2310	56.9%	18.2%	0.1%	6.4%	2.3%	1.8%	3.5%	0.0%	0.1%	0.8%	1.1%	0.8%	1.7%	0.0%	2.2%	3.3%	0.9%	100.0%	
Route 4	80	80.0	N	0900-1000	1890	52.3%	19.0%	0.1%	9.1%	3.3%	2.5%	4.9%	0.0%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	2.2%	2.0%	1.3%	100.0%	
Route 4	80	80.0	N	1000-1100	1631	49.0%	18.8%	0.1%	10.2%	3.8%	3.1%	6.1%	0.0%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	2.0%	1.8%	1.0%	100.0%	
Route 4	80	80.0	N	1100-1200	1545	49.2%	20.4%	0.1%	9.7%	3.5%	3.0%	6.0%	0.0%	0.1%	0.9%	0.6%	0.3%	0.8%	0.0%	2.3%	1.4%	1.6%	100.0%	
Route 4	80	80.0	N	1200-1300	1675	46.8%	18.0%	0.1%	10.5%	3.8%	3.8%	7.4%	0.0%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	2.6%	1.4%	1.9%	100.0%	
Route 4	80	78.5	N	1300-1400	1515	47.5%	17.4%	0.1%	12.4%	4.4%	3.9%	6.4%	0.0%	0.1%	0.8%	0.4%	0.3%	0.4%	0.0%	2.1%	1.4%	1.6%	100.0%	
Route 4	80	78.3	N	1400-1500	2043	45.3%	18.3%	0.1%	11.1%	4.0%	3.8%	7.4%	0.0%	0.1%	0.8%	0.9%	0.6%	1.4%	0.0%	2.6%	1.7%	1.9%	100.0%	
Route 4	80	78.0	N	1500-1600	2090	45.8%	18.0%	0.1%	12.8%	4.6%	3.3%	6.4%	0.0%	0.1%	0.8%	0.9%	0.6%	1.4%	0.0%	2.6%	1.6%	1.7%	100.0%	
Route 4	80	78.0	N	1600-1700	1326	47.8%	10.1%	0.1%	3.6%	1.2%	1.0%	2.0%	0.0%	0.1%	0.2%	0.3%	0.2%	0.4%	0.0%	2.1%	2.2%	0.5%	100.0%	
Route 4	80	75.2	N	1700-1800	2526	52.9%	16.5%	0.1%	9.0%	3.2%	2.0%	4.0%	0.0%	0.1%	0.8%	0.9%	0.6%	1.4%	0.0%	2.9%	4.5%	1.1%	100.0%	
Route 4	80	74.0	N	1800-1900	2769	63.7%	15.0%	0.1%	5.6%	2.0%	1.2%	2.3%	0.0%	0.0%	0.1%	1.1%	0.8%	1.7%	0.0%	2.9%	3.0%	0.6%	100.0%	
Route 4	80	73.0	N	1900-2000	1201	49.1%	19.0%	0.0%	4.1%	1.5%	1.0%	2.1%	0.0%	0.1%	0.4%	0.7%	0.5%	1.2%	0.0%	2.4%	3.3%	0.6%	100.0%	
Route 4	80	70.0	N	2000-2100	1712	57.5%	24.4%	0.0%	4.5%	1.6%	1.0%	1.9%	0.0%	0.1%	0.8%	0.9%	0.6%	1.2%	0.0%	3.5%	3.3%	0.5%	100.0%	
Route 4	80	80.0	N	2100-2200	1207	58.6%	24.2%	0.0%	4.6%	1.6%	1.1%	2.1%	0.0%	0.1%	0.4%	0.4%	0.3%	0.6%	0.0%	3.1%	2.7%	0.5%	100.0%	
Route 4	80	80.0	N	2200-2300	1659	58.1%	23.6%	0.0%	4.6%	1.6%	1.1%	2.1%	0.0%	0.1%	0.4%	0.4%	0.3%	0.6%	0.0%	3.4%	2.5%	0.6%	100.0%	
Route 4	80	80.0	N	2300-0000	1241	57.1%	25.7%	0.0%	3.9%	1.4%	1.3%	2.5%	0.0%	0.1%	0.4%	0.3%	0.7%	0.3%	0.3%	3.3%	2.5%	0.6%	100.0%	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2043)																										
Road Name	Road ID	Speed (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Yr)	Hour	Total Vehicles (Veh/HR)	01 - Private Cars	02 - Taxi	03 - Light-Good Vehicles +2-5t	04 - Light-Good Vehicles +2-5t	05 - Light-Good Vehicles +2-5t	06 - Medium-Good Vehicles +2-5t	07 - Medium-Good Vehicles +2-5t	08 - Public Light Bus +3-5t	09 - Private Light Bus +3-5t	10 - Private Light Bus +3-5t	11 - Non-franchised Bus 6.0-15.24t	12 - Non-franchised Bus 6.0-15.24t	13 - Non-franchised Bus 15-24t	14 - Franchise Single Deck	15 - Franchise Double Deck	16 - Motorcycles	17 - Heavy Commercial Vehicles +24t	18 - Non-franchised Bus +24t	Total	
							PC	TAXI	LGV1	LGV4	LGV6	MDV1	MDV4	PLB	PV4	PV5	NFB1	NFB7	NFB8	F15-24t	F24t	MC	HCV	NFB24t		
Route 7	7	70.0	N	0000-0100	370	56.8%	25.5%	0.0%	0.0%	3.8%	1.4%	1.2%	2.3%	0.0%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	3.5%	2.9%	0.8%	100.0%		
Route 7	7	70.0	N	0100-0200	240	55.9%	25.0%	0.0%	4.1%	1.5%	1.3%	2.6%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	3.5%	3.2%	0.7%	100.0%			
Route 7	7	70.0	N	0200-0300	176	54.0%	24.0%	0.0%	4.4%	1.4%	1.2%	2.4%	0.0%	0.0%	0.3%	0.5%	0.3%	0.7%	0.0%	3.5%	3.2%	0.7%	100.0%			
Route 7	7	70.0	N	0300-0400	139	53.8%	23.9%	0.1%	4.9%	1.6%	1.5%	3.0%	0.0%	0.1%	0.4%	0.8%	0.5%	1.2%	0.0%	3.5%	3.8%	0.8%	100.0%			
Route 7	7	70.0	N	0400-0500	152	52.8%	23.3%	0.1%	5.3%	1.9%	1.7%	3.2%	0.0%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	3.4%	4.1%	1.0%	100.0%			
Route 7	7	70.0	N	0500-0600	264	51.8%	22.8%	0.1%	5.6%	2.0%	1.8%	3.5%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	3.4%	4.4%	0.9%	100.0%			
Route 7	7	70.0	N	0600-0700	566	50.7%	22.0%	0.1%	5.7%	2.1%	1.9%	3.7%	0.0%	0.1%	0.7%	1.1%	0.8%	1.9%	0.0%	3.4%	4.9%	0.9%	100.0%			
Route 7	7	66.9	N	0700-0800	1145	49.6%	21.6%	0.1%	6.4%	2.3%	2.0%	4.0%	0.0%	0.1%	0.7%	1.1%	0.8%	1.7%	0.0%	3.4%	5.1%	1.0%	100.0%			
Route 7	7	64.1	N	0800-0900	1126	55.4%	17.7%	0.1%	7.0%	2.5%	2.0%	3.8%	0.0%	0.1%	0.8%	1.1%	0.8%	1.6%	0.0%	3.0%	3.2%	1.0%	100.0%			
Route 7	7	70.0	N	0900-1000	1093	50.1%	18.3%	0.1%	7.2%	2.6%	2.1%	3.7%	0.0%	0.1%	0.8%	1.1%	0.8%	1.6%	0.0%	3.0%	3.2%	1.0%	100.0%			
Route 7	7	69.2	N	1000-1100	946	47.8%	18.5%	0.1%	10.5%	3.8%	3.3%	6.6%	0.0%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	3.1%	1.4%	1.7%	100.0%			
Route 7	7	70.0	N	1100-1200	896	47.6%	19.6%	0.1%	10.5%	3.8%	3.3%	6.4%	0.0%	0.1%	0.9%	0.5%	0.3%	0.7%	0.0%	3.1%	1.3%	1.7%	100.0%			
Route 7	7	70.0	N	1200-1300	1188	39.0%	14.6%	0.3%	10.2%	4.0%	3.2%	6.2%	0.0%	0.1%	0.9%	0.5%	0.3%	0.7%	0.0%	3.1%	1.2%	1.8%	100.0%			
Route 7	7	53.8	N	1300-1400	1441	37.6%	14.5%	0.2%	17.1%	6.1%	5.3%	10.4%	0.4%	0.0%	0.5%	0.5%	0.4%	0.8%	0.0%	2.6%	1.1%	2.7%	100.0%			
Route 7	7	46.1	N	1400-1500	1518	38.2%	15.5%	0.2%	15.3%	5.5%	5.2%	10.2%	0.0%	0.1%	0.7%	0.8%	0.5%	1.2%	0.0%	2.6%	1.4%	2.7%	100.0%			
Route 7	7	63.1	N	1500-1600	1558	37.8%	17.4%	0.2%	16.0%	6.4%	4.5%	10.3%	0.0%	0.1%	0.7%	0.8%	0.5%	1.2%	0.0%	2.6%	1.4%	2.7%	100.0%			
Route 7	7	36.6	N	1600-1700	1624	41.1%	14.2%	0.1%	14.2%	5.1%	4.5%	8.7%	0.0%	0.1%	1.0%	1.2%	0.8%	1.8%	0.0%	2.9%	1.9%	2.3%	100.0%			
Route 7	7	30.3	N	1700-1800	1789	46.7%	14.6%	0.1%	13.1%	4.7%	3.0%	5.8%	0.0%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	3.0%	4.0%	1.5%	100.0%			
Route 7	7	61.7	N	1800-1900	1874	58.1%	8.5%	0.0%	10.0%	3.8%	3.0%	5.8%	0.0%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	3.0%	4.0%	1.5%	100.0%			
Route 7	7	62.1	N	1900-2000	1470	58.5%	18.3%	0.1%	6.5%	2.5%	1.6%	3.1%	0.0%	0.0%	0.1%	0.9%	0.6%	1.3%	0.0%	3.7%	2.2%	0.8%	100.0%			
Route 7	7	67.2	N	2000-2100	1146	53.8%	22.9%	0.1%	6.9%	2.5%	1.5%	3.0%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	3.9%	2.1%	0.8%	100.0%			
Route 7	7	67.4	N	2100-2200	1144	54.6%	22.2%	0.1%	7.0%	2.6%	1.6%	3.2%	0.0%	0.0%	0.1%	0.8%	0.3%	0.6%	0.0%	3.8%	2.0%	0.8%	100.0%			
Route 7	7	68.1	N	2200-2300	1105	54.8%	24.7%	0.1%	5.5%	2.0%	1.7%	3.4%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	3.7%	2.1%	0.9%	100.0%			
Route 7	7	70.0	N	2300-0000	831	53.3%	24.1%	0.1%	6.1%	2.2%	1.9%	3.8%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	3.7%	2.4%	1.0%	100.0%			
Route 8	8	70.0	N	0000-0100	420	56.8%	25.5%	0.0%	0.0%	3.8%	1.4%	1.2%	2.3%	0.0%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	3.5%	2.9%	0.8%	100.0%		
Route 8	8	70.0	N	0100-0200	20	41.1%	18.4%	0.1%	5.0%	1.5%	1.6%	3.1%	0.0%	0.0%	0.2%	0.4%	0.3%	0.7%	0.0%	2.3%	2.3%	0.8%	100.0%			
Route 8	8	70.0	N	0200-0300	15	40.3%	17.0%	0.1%	5.5%	2.0%	1.7%	3.4%	0.0%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	2.3%	2.6%	0.9%	100.0%			
Route 8	8	70.0	N	0300-0400	12	39.4%	15.7%	0.1%	5.9%	2.1%	1.9%	3.7%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	2.3%	2.8%	1.0%	100.0%			
Route 8	8	70.0	N	0400-0500	13	38.0%	14.3%	0.0%	6.3%	2.5%	2.0%	3.9%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	2.3%	2.9%	1.0%	100.0%			
Route 8	8	70.0	N	0500-0600	23	37.7%	16.6%	0.1%	6.8%	2.4%	2.1%	4.2%	0.0%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	2.2%	2.9%	1.2%	100.0%			
Route 8	8	70.0	N	0600-0700	49	36.8%	18.1%	0.1%	7.2%	2.6%	2.3%	4.5%	0.0%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	2.2%	3.4%	1.2%	100.0%			
Route 8	8	70.0	N	0700-0800	98	35.0%	18.6%	0.1%	7.5%	2.7%	2.4%	4.7%	0.0%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	2.3%	3.7%	1.2%	100.0%			
Route 8	8	70.0	N	0800-0900	112	40.9%	13.1%	0.1%	8.5%	3.1%	2.4%	4.7%	0.0%	0.1%	0.6%	0.8%	0.6%	1.2%	0.0%	2.1%	2.4%	1.2%	100.0%			
Route 8	8	70.0	N	0900-1000	95	36.0%	13.1%	0.1%	11.6%	4.2%	3.2%	6.2%	0.0%	0.0%	0.4%	0.8%	0.4%	0.9%	0.0%	2.0%	3.4%	1.6%	100.0%			
Route 8	8	70.0	N	1000-1100	84	33.0%	13.0%	0.1%	13.4%	3.9%	3.1%	6.2%	0.0%	0.0%	0.4%	0.8%	0.4%	0.9%	0.0%	1.8%	3.0%	1.6%	100.0%			
Route 8	8	70.0	N	1100-1200	80	33.4%	13.7%	0.1%	12.2%	4.4%	3.8%	7.5%	0.0%	0.1%	0.6%	0.3%	0.2%	0.5%	0.1%	2.0%	3.0%	2.0%	100.0%			
Route 8	8	70.0	N	1200-1300	229	27.6%	11.4%	0.2%	16.8%	6.1%	6.0%	11.9%	0.0%	0.1%	0.5%	0.5%	0.4%	0.8%	0.0%	11.8%	0.9%	3.1%	100.0%			
Route 8	8	70.0	N	1300-1400	240	27.7%	10.5%	0.2%	14.0%	6.7%	6.0%	11.8%	0.0%	0.1%	0.4%	0.5%	0.4%	0.8%	0.0%	11.8%	0.9%	3.1%	100.0%			
Route 8	8	70.0	N	1400-1500	250	28.6%	11.6%	0.2%	17.7%	6.4%	6.0%	11.8%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	11.2%	1.1%	3.1%	100.0%			
Route 8	8	70.0	N	1500-1600	257	28.3%	11.3%	0.2%	20.4%	7.3%	5.2%	10.2%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.1%	10.9%	1.0%	2.7%	100.0%			
Route 8	8	70.0	N	1600-1700	365	31.0%	16.6%	0.2%	19.0%	6.0%	5.2%	10.2%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.1%	10.9%	1.0%	2.7%	100.0%			
Route 8	8	70.0	N	1700-1800	285	36.1%	11.3%	0.2%	15.6%	5.6%	5.3%	6.9%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	13.2%	1.1%	0.8%	100.0%			
Route 8	8	70.0	N	1800-1900	288	47.3%	11.1%	0.1%	10.5%	3.8%	2.2%	4.3%	0.0%	0.0%	0.1%	0.8%	0.6%	1.3%	0.1%	14.6%	2.3%	1.1%	100.0%			
Route 8	8	70.0	N	1900-2000	117	40.9%	12.9%	0.1%	8.0%	3.8%	1.9%	4.5%	0.0%	0.0%	0.1%	0.8%	0.6%	1.3%	0.1%	14.6%	2.3%	1.1%	100.0%			
Route 8	8	70.0	N	2000-2100	178	42.6%	18.1%	0.1%	8.4%	3.0%	1.9%	3.7%	0.0%	0.0%	0.1%	0.8%	0.6%	1.3%	0.0%	17.6%	1.7%	1.0%	100.0%			
Route 8	8	70.0	N	2100-2200	175	44.1%	18.2%	0.1%	8.7%	3.1%	2.0%	3.9%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	15.5%	2.0%	1.0%	100.0%			
Route 8	8	70.0	N	2200-2300	179	45.1%	18.2%	0.1%	8.7%	3.1%	2.0%	3.9%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	15.5%	2.0%	1.0%	100.0%			
Route 8	8	70.0	N	2300-0000	128	42.6%	19.2%	0.1%	7.4%	2.7%	2.4%	4.6%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.1%	16.7%	1.9%	1.2%	100.0%			

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2043)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Car	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles <=10t	07 - Medium Goods Vehicles >10t	08 - Public Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4t-15t	13 - Non-franchised Bus 15t-24t	14 - Franchised Bus Single Deck	15 - Franchised Bus Double Deck	16 - Motorcycl	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total	
Road 9	9	50	40.0	N	0000-0100	472	55.2%	25.1%	0.0%	0.7%	1.7%	1.5%	2.9%	0.0%	0.0%	0.2%	0.5%	0.4%	0.8%	2.8%	2.0%	0.8%	0.0%	0.0%	100.0%	
Road 9	9	50	43.4	N	0100-0200	308	54.8%	24.5%	0.1%	5.1%	1.8%	1.9%	3.2%	0.0%	0.0%	0.3%	0.6%	0.9%	0.0%	2.7%	3.1%	0.8%	0.0%	0.0%	100.0%	
Road 9	9	50	45.2	N	0200-0300	226	53.7%	23.9%	0.1%	5.6%	2.0%	1.7%	3.4%	0.0%	0.0%	0.3%	0.7%	0.8%	1.0%	0.0%	2.7%	3.4%	0.9%	0.0%	0.0%	100.0%
Road 9	9	50	46.1	N	0300-0400	179	52.6%	23.3%	0.1%	6.0%	2.2%	1.9%	3.7%	0.0%	0.1%	0.4%	0.8%	0.8%	1.2%	0.0%	2.7%	3.7%	1.0%	0.0%	0.0%	100.0%
Road 9	9	50	45.0	N	0400-0500	197	51.4%	22.7%	0.1%	6.4%	2.3%	2.0%	4.0%	0.0%	0.1%	0.5%	0.8%	0.8%	1.3%	0.0%	2.7%	4.0%	1.0%	0.0%	0.0%	100.0%
Road 9	9	50	42.5	N	0500-0600	342	50.3%	22.1%	0.1%	6.9%	2.5%	2.2%	4.3%	0.0%	0.1%	0.6%	0.9%	0.6%	1.4%	0.0%	2.6%	4.3%	1.1%	0.0%	0.0%	100.0%
Road 9	9	50	36.5	N	0600-0700	734	49.2%	21.5%	0.1%	7.4%	2.6%	2.3%	4.5%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	2.6%	4.6%	1.2%	0.0%	0.0%	100.0%
Road 9	9	50	26.9	N	0700-0800	1488	48.0%	20.9%	0.1%	7.8%	2.8%	2.4%	4.8%	0.0%	0.1%	0.7%	1.1%	0.8%	1.7%	0.0%	2.6%	4.9%	1.3%	0.0%	0.0%	100.0%
Road 9	9	50	18.1	N	0800-0900	1728	53.4%	17.1%	0.1%	8.5%	3.0%	2.4%	4.7%	0.0%	0.1%	0.7%	1.0%	0.7%	1.6%	0.0%	2.3%	3.1%	1.2%	0.0%	0.0%	100.0%
Road 9	9	50	26.4	N	0900-1000	1446	48.0%	17.4%	0.1%	11.8%	4.2%	3.2%	6.3%	0.0%	0.1%	0.5%	0.8%	0.8%	1.2%	0.0%	2.3%	1.9%	1.6%	0.0%	0.0%	100.0%
Road 9	9	50	28.7	N	1000-1100	1262	45.0%	17.5%	0.1%	12.5%	4.5%	4.0%	7.8%	0.0%	0.1%	0.5%	0.7%	0.5%	1.1%	0.0%	2.3%	1.4%	2.0%	0.0%	0.0%	100.0%
Road 9	9	50	29.8	N	1100-1200	1195	44.9%	18.5%	0.1%	12.4%	4.5%	3.9%	7.7%	0.0%	0.1%	0.8%	0.5%	0.3%	0.7%	0.0%	2.4%	1.3%	2.0%	0.0%	0.0%	100.0%
Road 9	9	50	18.1	N	1200-1300	1508	37.1%	14.3%	0.2%	16.1%	5.8%	5.8%	11.4%	0.0%	0.1%	0.6%	0.6%	0.4%	1.0%	0.0%	2.6%	1.1%	3.0%	0.0%	0.0%	100.0%
Road 9	9	50	14.8	N	1300-1400	1575	35.9%	13.5%	0.2%	18.7%	6.7%	5.8%	11.4%	0.0%	0.1%	0.5%	0.5%	0.3%	0.8%	0.0%	2.4%	1.1%	3.0%	0.0%	0.0%	100.0%
Road 9	9	50	11.9	N	1400-1500	1653	35.7%	14.5%	0.2%	18.9%	6.1%	5.7%	11.2%	0.0%	0.1%	0.6%	0.7%	0.5%	1.1%	0.0%	2.4%	1.3%	2.9%	0.0%	0.0%	100.0%
Road 9	9	50	10.6	N	1500-1600	1698	35.3%	14.2%	0.2%	19.5%	7.0%	4.9%	9.7%	0.0%	0.1%	0.6%	0.7%	0.5%	1.1%	0.0%	2.3%	1.3%	2.5%	0.0%	0.0%	100.0%
Road 9	9	50	10.0	N	1600-1700	1755	38.7%	13.3%	0.2%	16.8%	5.7%	4.9%	9.7%	0.0%	0.1%	0.9%	1.1%	0.8%	1.7%	0.0%	2.7%	1.8%	2.5%	0.0%	0.0%	100.0%
Road 9	9	50	10.0	N	1700-1800	1911	44.0%	13.9%	0.2%	16.0%	5.0%	3.3%	8.5%	0.0%	0.1%	0.6%	0.8%	1.2%	0.0%	2.8%	3.8%	1.7%	0.0%	0.0%	100.0%	
Road 9	9	50	10.0	N	1800-1900	1967	57.2%	13.4%	0.1%	9.7%	3.5%	2.0%	4.0%	0.0%	0.0%	0.1%	1.0%	0.7%	1.5%	0.0%	3.1%	2.7%	1.0%	0.0%	0.0%	100.0%
Road 9	9	50	26.0	N	1900-2000	1534	57.1%	11.7%	0.1%	7.5%	2.7%	1.8%	3.5%	0.0%	0.0%	0.1%	0.9%	0.6%	1.3%	0.0%	3.6%	2.1%	0.9%	0.0%	0.0%	100.0%
Road 9	9	50	30.8	N	2000-2100	1196	52.5%	22.3%	0.1%	7.9%	2.6%	1.7%	3.4%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	3.7%	2.1%	0.9%	0.0%	0.0%	100.0%
Road 9	9	50	31.0	N	2100-2200	1195	53.4%	22.1%	0.1%	9.1%	3.0%	3.1%	6.0%	0.0%	0.0%	0.2%	0.5%	0.3%	0.6%	0.0%	2.4%	1.9%	0.0%	0.0%	0.0%	100.0%
Road 9	9	50	31.6	N	2200-2300	1151	53.5%	24.2%	0.1%	6.3%	2.3%	2.0%	3.9%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	3.6%	2.1%	1.0%	0.0%	0.0%	100.0%
Road 9	9	50	34.9	N	2300-0000	868	52.1%	23.5%	0.1%	7.0%	2.5%	2.2%	4.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	3.5%	2.3%	1.1%	0.0%	0.0%	100.0%
Road 10	10	50	48.1	Y	0000-0100	41	47.0%	21.1%	0.1%	10.6%	3.8%	3.4%	1.6%	0.0%	0.0%	0.1%	0.4%	0.7%	0.2%	0.0%	0.3%	0.2%	0.2%	0.0%	0.0%	100.0%
Road 10	10	50	49.4	Y	0100-0200	27	45.4%	20.3%	0.1%	11.5%	4.1%	3.6%	7.1%	1.6%	0.0%	0.2%	0.5%	0.3%	0.7%	0.0%	0.0%	2.6%	1.9%	0.0%	0.0%	100.0%
Road 10	10	50	49.5	Y	0200-0300	20	43.8%	19.5%	0.1%	12.3%	4.4%	3.9%	7.6%	1.6%	0.0%	0.3%	0.6%	0.4%	0.8%	0.0%	0.0%	2.8%	2.0%	0.0%	0.0%	100.0%
Road 10	10	50	49.6	Y	0300-0400	16	42.2%	18.7%	0.1%	13.0%	4.7%	4.1%	9.1%	1.6%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	0.3%	3.0%	2.1%	0.0%	0.0%	100.0%
Road 10	10	50	49.6	Y	0400-0500	18	40.7%	18.0%	0.1%	13.8%	5.0%	4.3%	8.5%	1.6%	0.0%	0.4%	0.7%	0.5%	1.0%	0.0%	0.0%	3.2%	2.2%	0.0%	0.0%	100.0%
Road 10	10	50	49.2	Y	0500-0600	32	39.2%	17.2%	0.2%	14.6%	5.2%	4.6%	9.0%	1.6%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	0.3%	3.3%	2.3%	0.0%	0.0%	100.0%
Road 10	10	50	48.3	Y	0600-0700	71	37.7%	16.5%	0.2%	16.3%	5.5%	4.8%	9.4%	1.5%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	3.5%	2.5%	0.0%	0.0%	0.0%	100.0%
Road 10	10	50	46.2	Y	0700-0800	145	42.4%	15.0%	0.2%	16.0%	5.8%	5.0%	9.9%	1.3%	0.0%	0.5%	0.7%	0.3%	0.7%	0.0%	3.7%	2.6%	0.0%	0.0%	0.0%	100.0%
Road 10	10	50	45.8	Y	0800-0900	170	40.1%	12.8%	0.2%	17.3%	6.2%	4.8%	9.5%	1.2%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	2.3%	4.0%	2.5%	0.0%	0.0%	100.0%
Road 10	10	50	46.0	Y	0900-1000	156	32.8%	11.9%	0.2%	21.8%	7.8%	5.9%	11.7%	1.3%	0.0%	0.3%	0.6%	0.4%	0.8%	0.0%	0.0%	1.3%	3.0%	0.0%	0.0%	100.0%
Road 10	10	50	46.2	Y	1000-1100	142	29.3%	11.5%	0.2%	22.2%	8.0%	7.1%	13.9%	1.3%	0.0%	0.3%	0.3%	0.3%	0.7%	0.0%	0.0%	0.9%	3.6%	0.0%	0.0%	100.0%
Road 10	10	50	46.5	Y	1100-1200	134	29.6%	12.2%	0.2%	22.2%	8.9%	6.9%	13.6%	1.3%	0.1%	0.5%	0.3%	0.2%	0.5%	0.0%	0.0%	0.8%	3.6%	0.0%	0.0%	100.0%
Road 10	10	50	48.5	Y	1200-1300	55	31.0%	11.9%	0.2%	20.6%	7.4%	7.4%	14.5%	0.0%	0.1%	0.5%	0.5%	0.4%	0.8%	0.0%	0.0%	0.9%	3.8%	0.0%	0.0%	100.0%
Road 10	10	50	48.4	Y	1300-1400	59	28.7%	11.1%	0.2%	23.5%	8.4%	7.5%	14.5%	0.0%	0.1%	0.4%	0.4%	0.3%	0.6%	0.0%	0.0%	0.9%	3.7%	0.0%	0.0%	100.0%
Road 10	10	50	48.4	Y	1400-1500	61	29.7%	12.0%	0.2%	23.5%	7.7%	7.3%	14.3%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	0.0%	1.1%	3.7%	0.0%	0.0%	100.0%
Road 10	10	50	48.4	Y	1500-1600	63	29.2%	11.7%	0.3%	24.7%	8.0%	6.2%	12.3%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	0.0%	1.1%	3.2%	0.0%	0.0%	100.0%
Road 10	10	50	48.4	Y	1600-1700	63	32.8%	11.3%	0.2%	20.5%	7.4%	6.4%	12.6%	0.0%	0.1%	0.8%	1.0%	0.7%	1.5%	0.0%	0.0%	1.5%	3.3%	0.0%	0.0%	100.0%
Road 10	10	50	48.4	Y	1700-1800	66	39.0%	12.2%	0.2%	19.7%	7.1%	4.5%	8.8%	0.0%	0.1%	0.6%	0.7%	0.5%	1.0%	0.0%	0.0%	3.4%	2.3%	0.0%	0.0%	100.0%
Road 10	10	50	48.5	Y	1800-1900	65	53.1%	12.5%	0.1%	13.7%	4.9%	2.9%	5.6%	0.0%	0.0%	0.1%	0.9%	0.6%	1.4%	0.0%	0.0%	2.5%	1.5%	0.0%	0.0%	100.0%
Road 10	10	50	48.9	Y	1900-2000	49	54.3%	17.0%	0.1%	10.9%	3.9%	2.6%	5.1%	0.0%	0.0%	0.1%	0.8%	0.8%	1.2%	0.0%	0.0%	2.0%	1.3%	0.0%	0.0%	100.0%
Road 10	10	50	49.1	Y	2000-2100	21	51.6%	21.1%	0.1%	11.5%	4.1%	2.5%	5.0%	0.0%	0.0%	0.1%	0.7%	0.6%	1.1%	0.0%	0.0%	2.0%	1.3%	0.0%	0.0%	100.0%
Road 10	10	50	49.2	Y	2100-2200	39	50.4%	20.8%	0.1%	11.6%	4.2%	2.7%	5.3%	0.0%	0.0%	0.1%	0.4%	0.2%	0.5%	0.0%	0.0%	2.3%	1.4%	0.0%	0.0%	100.0%
Road 10	10	50	49.2	Y	2200-2300	37	51.1%	23.1%	0.1%	9.2%	3.3%	2.9%	5.7%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.0%	2.0%	1.5%	0.0%	0.0%	100.0%
Road 10	10	50	49.4	Y	2300-0000	28	49.3%	22.2%	0.1%	10.1%	3.8%	3.2%	6.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.0%	2.2%	1.6%	0.0%	0.0%	100.0%

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2043)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Car	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicle >3.5t	06 - Medium Goods Vehicle <=10t	07 - Medium Goods Vehicle >10t	08 - Public Buses	09 - Private <=3.5t	10 - Private >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus >4t	13 - Non-franchised 1st Bus 15-24t	14 - Franchise d Bus Single Deck 24t	15 - Franchise d Bus Double Deck	16 - Motorcycl	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total	
							PC	TAXI	LGVS	LGVA	LGVB	HGV7	HGV8	PLB	PV4	PV5	NFB8	NFB7	NFB8	FBS8	FBD8	MC	HGV9	NFB9		
Road 13	13	50	29.9	N	0000-0100	2	49.6%	22.3%	0.1%	9.7%	3.5%	3.1%	6.0%	0.0%	0.0%	0.2%	0.5%	0.3%	0.7%	0.0%	0.2%	1.5%	1.6%	0.0%	100.0%	
Road 13	13	50	29.9	N	0100-0200	1	48.0%	21.5%	0.1%	10.5%	3.8%	3.5%	6.5%	0.0%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	0.2%	2.7%	1.7%	0.0%	100.0%	
Road 13	13	50	29.9	N	0200-0300	1	47.2%	21.0%	0.1%	11.2%	4.0%	3.5%	7.0%	0.0%	0.0%	0.3%	0.7%	0.4%	0.9%	0.0%	0.2%	3.1%	2.0%	0.0%	100.0%	
Road 13	13	50	29.9	N	0300-0400	1	44.9%	19.9%	0.1%	12.0%	4.3%	3.8%	7.4%	0.0%	0.0%	0.4%	0.8%	0.4%	1.0%	0.0%	0.3%	3.2%	1.9%	0.0%	100.0%	
Road 13	13	50	29.9	N	0400-0500	1	43.4%	19.2%	0.1%	12.7%	4.6%	4.0%	7.9%	0.0%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	0.3%	3.4%	2.1%	0.0%	100.0%	
Road 13	13	50	29.9	N	0500-0600	1	42.8%	18.4%	0.1%	13.4%	4.9%	4.2%	8.3%	0.0%	0.1%	0.4%	0.8%	0.5%	1.2%	0.0%	0.3%	3.6%	2.2%	0.0%	100.0%	
Road 13	13	50	29.9	N	0600-0700	3	40.4%	17.7%	0.1%	14.2%	5.1%	4.4%	8.7%	0.0%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	0.3%	3.8%	2.3%	0.0%	100.0%	
Road 13	13	50	29.9	N	0700-0800	7	39.0%	17.0%	0.2%	14.9%	5.3%	4.6%	9.1%	0.0%	0.1%	0.6%	0.9%	0.6%	1.4%	0.0%	0.4%	4.0%	2.4%	0.0%	100.0%	
Road 13	13	50	29.9	N	0800-0900	5	38.6%	16.8%	0.1%	15.6%	5.6%	4.8%	9.6%	0.0%	0.1%	0.6%	0.9%	0.6%	1.4%	0.0%	0.4%	4.2%	2.5%	0.0%	100.0%	
Road 13	13	50	29.5	N	0900-1000	7	35.8%	13.0%	0.2%	20.5%	7.4%	5.6%	11.0%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	0.4%	1.4%	2.9%	0.0%	100.0%	
Road 13	13	50	29.6	N	1000-1100	6	32.4%	12.6%	0.2%	21.0%	7.5%	6.7%	13.1%	0.0%	0.0%	0.4%	0.4%	0.5%	0.4%	0.8%	0.0%	0.3%	3.4%	0.0%	100.0%	
Road 13	13	50	29.6	N	1100-1200	5	32.4%	12.6%	0.2%	21.0%	7.5%	6.7%	13.1%	0.0%	0.0%	0.4%	0.4%	0.5%	0.4%	0.8%	0.0%	0.3%	3.4%	0.0%	100.0%	
Road 13	13	50	29.6	N	1200-1300	6	34.5%	13.3%	0.2%	18.6%	6.7%	6.7%	13.1%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	0.4%	1.0%	3.4%	0.0%	100.0%	
Road 13	13	50	29.5	N	1300-1400	7	32.2%	12.4%	0.2%	21.4%	7.7%	6.6%	13.0%	0.0%	0.1%	0.5%	0.5%	0.3%	0.7%	0.0%	0.4%	1.0%	3.4%	0.0%	100.0%	
Road 13	13	50	29.5	N	1400-1500	7	32.0%	12.3%	0.2%	21.5%	7.6%	6.6%	13.0%	0.0%	0.1%	0.5%	0.5%	0.3%	0.7%	0.0%	0.4%	1.0%	3.4%	0.0%	100.0%	
Road 13	13	50	29.5	N	1500-1600	7	32.6%	13.1%	0.2%	22.4%	6.0%	5.7%	11.1%	0.0%	0.1%	0.6%	0.7%	0.5%	1.0%	0.0%	0.4%	1.2%	2.9%	0.0%	100.0%	
Road 13	13	50	29.5	N	1600-1700	7	36.2%	12.5%	0.2%	18.4%	6.6%	5.8%	11.3%	0.0%	0.1%	0.6%	0.9%	1.1%	0.7%	1.6%	0.0%	0.3%	3.6%	0.0%	100.0%	
Road 13	13	50	29.5	N	1700-1800	8	42.4%	13.3%	0.2%	17.4%	6.3%	5.9%	7.8%	0.0%	0.1%	0.6%	1.1%	0.7%	1.6%	0.0%	0.3%	3.9%	2.0%	0.0%	100.0%	
Road 13	13	50	29.5	N	1800-1900	8	43.2%	13.9%	0.2%	18.2%	6.3%	5.9%	7.8%	0.0%	0.1%	0.6%	1.1%	0.7%	1.6%	0.0%	0.3%	4.0%	2.1%	0.0%	100.0%	
Road 13	13	50	29.7	N	1900-2000	6	56.8%	17.8%	0.1%	9.3%	3.3%	2.2%	4.4%	0.0%	0.0%	0.1%	0.9%	0.6%	1.3%	0.0%	0.2%	2.1%	1.1%	0.0%	100.0%	
Road 13	13	50	29.7	N	2000-2100	5	52.3%	22.2%	0.1%	9.8%	3.5%	2.2%	4.3%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	0.3%	2.1%	1.1%	0.0%	100.0%	
Road 13	13	50	29.7	N	2100-2200	5	52.9%	21.9%	0.1%	9.9%	2.5%	4.5%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.4%	0.2%	2.4%	1.0%	0.0%	100.0%	
Road 13	13	50	29.7	N	2200-2300	4	53.4%	24.1%	0.1%	7.8%	2.8%	2.5%	4.9%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.2%	2.1%	1.3%	0.0%	100.0%	
Road 13	13	50	29.8	N	2300-0000	3	53.8%	23.3%	0.1%	8.6%	3.1%	2.7%	5.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.3%	2.4%	1.4%	0.0%	100.0%	
Road 14	14	44	34.1	N	0000-0100	1	40.0%	20.0%	0.1%	10.0%	3.3%	3.1%	6.0%	0.0%	0.0%	0.2%	0.5%	0.3%	0.7%	0.0%	0.2%	1.5%	1.6%	0.0%	100.0%	
Road 14	14	40	48.0	N	0100-0200	351	51.2%	22.9%	0.1%	5.3%	1.9%	1.7%	3.3%	0.0%	0.0%	0.3%	0.6%	0.4%	0.8%	0.0%	0.2%	2.4%	2.9%	6.1%	100.0%	
Road 14	14	50	46.9	N	0200-0300	362	49.1%	21.9%	0.1%	5.7%	2.0%	1.8%	3.5%	0.0%	0.0%	0.3%	0.6%	0.4%	0.8%	0.0%	0.2%	2.3%	3.1%	7.9%	100.0%	
Road 14	14	47.5	N	0300-0400	212	47.2%	6.9%	0.2%	6.0%	2.0%	1.6%	3.0%	0.0%	0.0%	0.1%	0.3%	0.3%	0.6%	0.0%	0.2%	2.3%	3.7%	7.9%	100.0%		
Road 14	14	47	47.2	N	0400-0500	231	46.5%	20.5%	0.1%	6.5%	2.3%	2.0%	4.0%	0.0%	0.1%	0.4%	0.8%	0.5%	1.2%	0.0%	0.2%	3.5%	0.9%	100.0%		
Road 14	14	50	45.5	N	0500-0600	389	47.0%	20.7%	0.1%	7.2%	2.6%	2.3%	4.4%	0.0%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	0.2%	4.0%	0.9%	100.0%		
Road 14	14	46.1	N	0600-0700	416	47.1%	20.8%	0.1%	7.1%	2.6%	2.3%	4.4%	0.0%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	0.2%	4.1%	1.0%	0.9%	100.0%		
Road 14	14	34.8	N	0700-0800	1691	45.0%	19.6%	0.1%	8.2%	2.9%	2.6%	5.0%	0.0%	0.1%	0.7%	1.0%	0.7%	1.6%	0.0%	0.2%	4.3%	4.6%	5.5%	100.0%		
Road 14	14	50	32.4	N	0800-0900	1552	50.3%	16.1%	0.1%	8.9%	3.2%	2.5%	4.9%	0.0%	0.1%	0.7%	1.0%	0.7%	1.5%	0.0%	0.2%	2.9%	4.9%	0.0%	100.0%	
Road 14	14	50	34.2	N	0900-1000	1599	44.5%	16.2%	0.1%	12.2%	4.4%	3.3%	6.5%	0.0%	0.1%	0.4%	0.4%	0.5%	1.1%	0.0%	0.2%	1.7%	6.0%	0.0%	100.0%	
Road 14	14	50	35.1	N	1000-1100	1463	46.9%	16.3%	0.1%	13.0%	4.6%	3.3%	6.5%	0.0%	0.1%	0.4%	0.5%	0.4%	0.9%	0.0%	0.2%	1.8%	6.1%	0.0%	100.0%	
Road 14	14	50	35.8	N	1100-1200	1388	44.1%	17.0%	0.1%	12.7%	4.6%	4.0%	7.8%	0.0%	0.1%	0.7%	0.4%	0.3%	0.6%	0.0%	0.2%	1.2%	1.1%	0.0%	100.0%	
Road 14	14	50	33.6	N	1200-1300	1612	35.0%	13.5%	0.2%	15.7%	5.8%	5.6%	11.1%	0.0%	0.1%	0.6%	0.6%	0.4%	0.9%	0.0%	0.2%	1.4%	1.0%	0.0%	100.0%	
Road 14	14	50	33.1	N	1300-1400	1662	35.1%	13.7%	0.2%	16.3%	5.8%	5.6%	11.1%	0.0%	0.1%	0.6%	0.6%	0.4%	0.9%	0.0%	0.2%	1.3%	1.0%	0.0%	100.0%	
Road 14	14	50	32.5	N	1400-1500	1759	33.8%	13.7%	0.2%	16.5%	5.9%	5.6%	11.0%	0.0%	0.1%	0.6%	0.7%	0.5%	1.0%	0.0%	0.2%	1.3%	0.9%	0.0%	100.0%	
Road 14	14	50	32.3	N	1500-1600	1806	33.5%	13.4%	0.2%	19.0%	6.8%	4.8%	9.5%	0.0%	0.1%	0.6%	0.7%	0.5%	1.0%	0.0%	0.2%	1.2%	0.6%	0.0%	100.0%	
Road 14	14	50	32.1	N	1600-1700	1552	36.7%	15.2%	0.2%	15.7%	5.7%	5.6%	11.0%	0.0%	0.1%	0.6%	0.7%	0.5%	1.0%	0.0%	0.2%	1.3%	0.9%	0.0%	100.0%	
Road 14	14	50	31.7	N	1700-1800	2017	42.5%	13.3%	0.2%	14.5%	6.2%	3.3%	6.5%	0.0%	0.1%	0.6%	0.7%	0.5%	1.1%	0.0%	0.2%	2.7%	3.1%	5.2%	100.0%	
Road 14	14	50	32.1	N	1800-1900	2066	54.9%	12.9%	0.1%	9.6%	3.4%	2.9%	3.9%	0.0%	0.0%	0.1%	0.7%	1.5%	0.0%	0.2%	2.9%	2.6%	4.5%	100.0%		
Road 14	14	50	35.7	N	1900-2000	1572	46.1%	13.1%	0.1%	10.8%	3.9%	3.3%	6.5%	0.0%	0.1%	0.7%	1.0%	0.8%	1.3%	0.0%	0.2%	2.9%	3.3%	5.2%	100.0%	
Road 14	14	50	37.8	N	2000-2100	1231	51.4%	21.8%	0.1%	8.0%	2.9%	1.8%	3.5%	0.0%	0.0%	0.1%	1.0%	0.7%	1.1%	0.0%	0.3%	2.1%	2.4%	0.0%	100.0%	
Road 14	14	50	37.9	N	2100-2200	1230	52.3%	21.9%	0.1%	8.2%	2.9%	1.9%	3.7%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.3%	2.2%	2.5%	0.0%	100.0%	
Road 14	14	50	38.1	N	2200-2300	1284	52.9%	22.0%	0.1%	8.4%	2.9%	2.0%	4.0%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.3%	2.3%	2.6%	0.0%	100.0%	
Road 14	14	50	37.9	N	2300-0000	898	50.8%	22.9%	0.1%	7.0%	2.5%	2.2%	4.4%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.3%	2.4%	2.2%	0.0%	100.0%	

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2043)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles <=5t	07 - Medium Goods Vehicles >5t	08 - Public Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4-15t	13 - Non-franchised Bus >15t	Franchise d Bus Single Deck	Franchise d Bus Double Deck	16 - Motorcycl	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total	
Road 17	17	70	66.8	N	0000-0100	437	49.9%	22.4%	0.1%	8.4%	3.0%	2.7%	5.2%	0.1%	0.0%	0.2%	0.5%	0.3%	0.7%	0.0%	2.7%	2.5%	1.4%	0.7%	2.5%	
Road 17	17	70	67.8	N	0100-0200	288	48.4%	21.7%	0.1%	9.1%	3.3%	2.9%	5.7%	0.1%	0.0%	0.2%	0.5%	0.4%	0.9%	0.0%	2.6%	2.7%	1.5%	0.0%	100.0%	
Road 17	17	70	68.4	N	0200-0300	213	47.0%	20.9%	0.1%	9.8%	3.5%	3.1%	6.1%	0.1%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	2.6%	3.0%	1.6%	0.0%	100.0%	
Road 17	17	70	68.7	N	0300-0400	170	46.3%	20.2%	0.1%	10.5%	3.8%	3.3%	8.5%	0.1%	0.0%	0.4%	0.7%	0.5%	1.0%	0.0%	2.5%	3.2%	1.7%	0.0%	100.0%	
Road 17	17	70	68.5	N	0400-0500	189	44.2%	19.5%	0.1%	11.2%	4.0%	3.5%	8.9%	0.1%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	2.5%	3.4%	1.8%	0.0%	100.0%	
Road 17	17	70	67.4	N	0500-0600	332	42.8%	18.8%	0.1%	11.9%	4.3%	3.7%	7.3%	0.1%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	2.4%	3.7%	1.9%	0.0%	100.0%	
Road 17	17	70	64.3	N	0600-0700	720	41.4%	18.1%	0.1%	12.5%	4.5%	3.9%	7.7%	0.1%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	2.4%	3.9%	2.0%	0.0%	100.0%	
Road 17	17	70	41.1	N	0700-0800	1474	40.0%	17.4%	0.1%	13.2%	4.7%	4.1%	8.1%	0.1%	0.1%	0.6%	0.9%	0.6%	1.4%	0.0%	2.3%	4.1%	2.1%	0.0%	100.0%	
Road 17	17	70	26.8	N	0800-0900	1720	44.3%	14.2%	0.1%	14.2%	5.1%	4.0%	7.8%	0.1%	0.1%	0.6%	0.9%	0.6%	1.3%	0.0%	2.1%	2.6%	2.0%	0.0%	100.0%	
Road 17	17	70	33.7	N	0900-1000	1529	37.5%	13.6%	0.2%	18.5%	6.7%	5.0%	9.9%	0.1%	0.0%	0.4%	0.6%	0.4%	1.0%	0.0%	2.0%	1.5%	2.6%	0.0%	100.0%	
Road 17	17	70	40.6	N	1000-1100	1374	34.3%	13.3%	0.2%	19.1%	6.9%	6.1%	12.0%	0.1%	0.0%	0.4%	0.6%	0.4%	0.9%	0.0%	1.9%	1.0%	3.1%	0.0%	100.0%	
Road 17	17	70	43.0	N	1100-1200	1297	34.2%	14.1%	0.2%	19.1%	6.9%	6.0%	11.8%	0.1%	0.1%	0.6%	0.3%	0.2%	0.5%	0.0%	1.9%	1.0%	3.1%	0.0%	100.0%	
Road 17	17	70	43.0	N	1200-1300	1256	28.0%	10.8%	0.2%	21.4%	7.7%	7.7%	15.1%	0.0%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	2.2%	0.8%	3.9%	0.0%	100.0%	
Road 17	17	70	37.7	N	1300-1400	1338	25.9%	10.0%	0.3%	24.4%	8.8%	7.6%	14.8%	0.0%	0.0%	0.4%	0.4%	0.3%	0.6%	0.0%	2.0%	0.8%	3.9%	0.0%	100.0%	
Road 17	17	70	35.2	N	1400-1500	1381	26.8%	10.9%	0.2%	22.4%	8.0%	7.6%	14.9%	0.0%	0.1%	0.5%	0.5%	0.4%	0.8%	0.0%	2.1%	1.0%	3.9%	0.0%	100.0%	
Road 17	17	70	33.4	N	1500-1600	1426	26.4%	10.6%	0.3%	25.6%	9.2%	6.5%	12.8%	0.0%	0.1%	0.5%	0.5%	0.4%	0.8%	0.0%	2.0%	1.0%	3.3%	0.0%	100.0%	
Road 17	17	70	33.4	N	1600-1700	1433	29.8%	10.3%	0.2%	21.4%	7.7%	6.7%	13.2%	0.0%	0.1%	0.7%	0.9%	0.6%	1.3%	0.0%	2.4%	1.4%	3.4%	0.0%	100.0%	
Road 17	17	70	35.2	N	1700-1800	1405	35.2%	11.2%	0.2%	20.0%	7.6%	4.7%	9.2%	0.0%	0.1%	0.5%	0.6%	0.4%	1.0%	0.0%	2.0%	1.2%	2.4%	0.0%	100.0%	
Road 17	17	70	43.7	N	1800-1900	1432	49.4%	11.6%	0.2%	14.7%	5.3%	3.1%	6.0%	0.0%	0.0%	0.1%	0.9%	0.6%	1.3%	0.0%	3.1%	2.4%	1.6%	0.0%	100.0%	
Road 17	17	70	56.6	N	1900-2000	1090	50.5%	15.8%	0.1%	11.7%	4.2%	2.8%	5.5%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	3.6%	1.9%	1.4%	0.0%	100.0%	
Road 17	17	70	63.4	N	2000-2100	853	46.3%	19.6%	0.1%	12.3%	4.4%	2.7%	5.3%	0.0%	0.0%	0.1%	0.7%	0.5%	1.0%	0.0%	3.6%	1.6%	1.4%	0.0%	100.0%	
Road 17	17	70	63.4	N	2100-2200	853	46.9%	19.6%	0.1%	12.3%	4.4%	2.7%	5.3%	0.0%	0.0%	0.1%	0.7%	0.5%	1.0%	0.0%	3.6%	1.6%	1.4%	0.0%	100.0%	
Road 17	17	70	63.8	N	2200-2300	813	47.6%	21.5%	0.1%	9.8%	3.6%	3.1%	6.1%	0.0%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	3.7%	1.8%	1.6%	0.0%	100.0%
Road 17	17	70	65.2	N	2300-0000	620	45.9%	20.7%	0.1%	10.8%	3.9%	3.4%	6.7%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	3.6%	2.0%	1.8%	0.0%	100.0%	
Road 18	18	70	68.6	N	0000-0100	42	54.0%	24.2%	0.1%	4.8%	1.9%	1.7%	3.3%	0.2%	0.0%	0.3%	0.6%	0.2%	2.7%	0.0%	2.2%	0.8%	0.8%	0.0%	100.0%	
Road 18	18	70	69.1	N	0100-0200	274	52.6%	23.5%	0.1%	5.8%	2.1%	1.8%	3.6%	0.2%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	2.9%	3.0%	2.3%	0.0%	100.0%	
Road 18	18	70	69.3	N	0200-0300	202	51.2%	22.8%	0.1%	6.3%	2.3%	2.0%	3.9%	0.2%	0.0%	0.3%	0.6%	0.4%	1.0%	0.0%	2.8%	3.2%	2.8%	0.0%	100.0%	
Road 18	18	70	69.4	N	0300-0400	161	49.8%	22.1%	0.1%	6.8%	2.4%	2.1%	4.2%	0.2%	0.0%	0.4%	0.7%	0.5%	1.1%	0.0%	2.8%	3.4%	0.4%	0.0%	100.0%	
Road 18	18	70	69.4	N	0400-0500	177	48.7%	21.5%	0.1%	7.3%	2.6%	2.3%	4.5%	0.2%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	2.7%	3.8%	3.2%	0.0%	100.0%	
Road 18	18	70	68.9	N	0500-0600	306	48.0%	21.1%	0.1%	7.8%	2.6%	2.5%	4.8%	0.2%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	2.7%	4.1%	2.5%	0.0%	100.0%	
Road 18	18	70	67.7	N	0600-0700	654	47.1%	20.6%	0.1%	8.4%	3.0%	2.6%	5.2%	0.2%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	2.7%	4.4%	1.9%	0.0%	100.0%	
Road 18	18	70	65.1	N	0700-0800	1335	45.6%	19.9%	0.1%	8.9%	3.2%	2.8%	5.5%	0.2%	0.1%	0.7%	1.0%	0.7%	1.6%	0.0%	2.7%	4.7%	2.5%	0.0%	100.0%	
Road 18	18	70	64.4	N	0800-0900	1548	50.9%	16.3%	0.1%	9.6%	3.6%	2.7%	5.3%	0.1%	0.1%	0.7%	1.4%	0.7%	1.5%	0.0%	2.4%	3.0%	2.3%	0.0%	100.0%	
Road 18	18	70	65.0	N	0900-1000	1316	45.0%	16.3%	0.1%	13.1%	4.7%	3.6%	7.0%	0.2%	0.1%	0.4%	0.8%	0.5%	1.2%	0.0%	2.4%	1.7%	2.9%	0.0%	100.0%	
Road 18	18	70	65.5	N	1000-1100	1158	41.8%	16.2%	0.1%	13.8%	5.0%	4.4%	8.6%	0.2%	0.1%	0.5%	0.7%	0.5%	1.0%	0.0%	2.3%	1.3%	2.4%	0.0%	100.0%	
Road 18	18	70	66.8	N	1100-1200	1096	41.7%	17.2%	0.1%	13.8%	4.9%	4.3%	8.5%	0.2%	0.1%	0.6%	0.4%	0.3%	0.9%	0.0%	2.4%	1.2%	3.5%	0.0%	100.0%	
Road 18	18	70	65.1	N	1200-1300	1190	36.4%	14.0%	0.2%	15.9%	5.7%	5.7%	11.2%	0.0%	0.1%	0.6%	0.6%	0.4%	1.0%	0.0%	3.1%	1.1%	4.1%	0.0%	100.0%	
Road 18	18	70	64.9	N	1300-1400	1242	34.3%	13.3%	0.2%	16.5%	6.6%	5.7%	12.0%	0.0%	0.1%	0.5%	0.5%	0.3%	0.7%	0.0%	2.9%	1.0%	4.1%	0.0%	100.0%	
Road 18	18	70	64.7	N	1400-1500	1302	35.1%	14.2%	0.2%	16.7%	6.0%	5.6%	11.1%	0.0%	0.1%	0.6%	0.7%	0.5%	1.1%	0.0%	2.9%	1.3%	4.0%	0.0%	100.0%	
Road 18	18	70	64.6	N	1500-1600	1337	34.7%	13.9%	0.2%	19.2%	6.0%	4.9%	9.6%	0.0%	0.1%	0.6%	0.7%	0.1%	0.1%	0.2%	2.8%	1.3%	3.5%	0.0%	100.0%	
Road 18	18	70	64.4	N	1600-1700	1383	38.0%	13.1%	0.2%	15.6%	5.6%	4.9%	9.6%	0.0%	0.1%	0.9%	1.1%	0.8%	1.7%	0.0%	3.2%	1.8%	3.5%	0.0%	100.0%	
Road 18	18	70	64.3	N	1700-1800	1504	43.8%	13.1%	0.2%	14.5%	5.2%	3.3%	6.5%	0.0%	0.1%	0.6%	0.8%	0.5%	1.2%	0.0%	3.4%	3.8%	2.6%	0.0%	100.0%	
Road 18	18	70	64.4	N	1800-1900	1548	56.3%	13.2%	0.1%	9.5%	3.4%	2.0%	3.9%	0.0%	0.0%	0.1%	1.0%	0.7%	1.5%	0.0%	3.7%	2.7%	1.9%	0.0%	100.0%	
Road 18	18	70	65.8	N	1900-2000	1201	56.4%	17.7%	0.1%	7.4%	2.7%	1.8%	3.5%	0.0%	0.0%	0.1%	0.9%	0.8%	1.3%	0.0%	4.3%	2.1%	1.2%	0.0%	100.0%	
Road 18	18	70	66.7	N	2000-2100	938	51.8%	22.0%	0.1%	7.9%	2.8%	1.7%	3.4%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	4.5%	2.1%	1.3%	0.0%	100.0%	
Road 18	18	70	66.7	N	2100-2200	936	52.8%	21.8%	0.1%	8.0%	2.9%	1.8%	3.6%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	4.0%	2.4%	1.3%	0.0%	100.0%	
Road 18	18	70	66.9	N	2200-2300	902	52.8%	23.9%	0.1%	6.2%	2.2%	2.0%	3.9%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	4.0%	2.0%	1.4%	0.0%	100.0%	
Road 18	18	70	67.5	N	2300-0000	681	51.4%	23.2%	0.1%	6.9%	2.5%	2.2%	4.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	4.2%	2.3%	1.7%	0.0%	100.0%	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2043)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles <=5t	07 - Medium Goods Vehicles 5-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchised Bus Single Deck	15 - Franchised Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total	
Road 21	21	70	68.1	N	0000-0100	500	45.0%	20.4%	1.1%	9.7%	3.5%	3.1%	6.1%	0.1%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	2.3%	2.3%	5.5%	0.0%	100.0%	
Road 21	21	69.0	68.2	N	0100-0200	317	42.3%	10.3%	0.3%	3.7%	3.3%	3.4%	6.7%	0.1%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	2.2%	2.4%	5.1%	0.0%	100.0%	
Road 21	21	69.0	69.2	N	0200-0300	255	41.0%	18.3%	0.1%	10.9%	3.9%	3.4%	6.7%	0.1%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	2.2%	2.6%	9.0%	0.0%	100.0%	
Road 21	21	69.0	69.2	N	0300-0400	208	38.9%	17.3%	0.1%	11.4%	4.1%	3.6%	7.0%	0.1%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	2.1%	2.7%	10.7%	0.0%	100.0%	
Road 21	21	69.1	69.3	N	0400-0500	189	37.0%	16.8%	0.1%	12.2%	4.4%	3.8%	7.5%	0.1%	0.0%	0.4%	0.6%	0.4%	0.9%	0.0%	2.0%	2.9%	10.0%	0.0%	100.0%	
Road 21	21	69.1	69.4	N	0500-0600	391	37.8%	16.8%	0.1%	13.3%	4.8%	4.2%	8.1%	0.1%	0.1%	0.4%	0.7%	0.5%	1.0%	0.0%	2.0%	3.0%	11.8%	0.0%	100.0%	
Road 21	21	66.7	66.7	N	0600-0700	831	37.4%	16.4%	0.2%	14.4%	5.2%	4.5%	8.8%	0.1%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	2.1%	3.5%	4.5%	0.0%	100.0%	
Road 21	21	62.8	61.0	N	0700-0800	1741	35.8%	15.4%	0.2%	14.8%	5.3%	4.6%	9.1%	0.1%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	2.0%	3.6%	6.4%	0.0%	100.0%	
Road 21	21	62.8	62.9	N	0800-0900	1624	39.9%	12.0%	0.2%	13.8%	5.3%	4.5%	10.9%	0.1%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	2.0%	3.6%	4.5%	0.0%	100.0%	
Road 21	21	59.4	60.0	N	0900-1000	1850	32.3%	11.7%	0.2%	20.3%	7.3%	5.5%	10.9%	0.1%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	1.6%	1.3%	6.7%	0.0%	100.0%	
Road 21	21	61.6	61.6	N	1000-1100	1686	29.9%	11.3%	0.2%	20.7%	7.4%	6.6%	12.9%	0.1%	0.0%	0.3%	0.5%	0.3%	0.7%	0.1%	1.5%	0.9%	7.6%	0.0%	100.0%	
Road 21	21	63.1	63.1	N	1100-1200	1584	29.0%	12.0%	0.2%	20.4%	7.4%	6.6%	12.9%	0.1%	0.1%	0.3%	0.5%	0.3%	0.7%	0.1%	1.6%	0.8%	7.6%	0.0%	100.0%	
Road 21	21	62.9	62.9	N	1200-1300	1545	24.1%	9.9%	0.2%	22.1%	7.9%	7.9%	15.6%	0.0%	0.0%	0.4%	0.4%	0.3%	0.6%	0.1%	1.8%	1.0%	8.6%	0.0%	100.0%	
Road 21	21	60.7	60.7	N	1300-1400	1652	22.2%	8.5%	0.3%	25.0%	9.0%	7.8%	15.2%	0.0%	0.0%	0.3%	0.3%	0.2%	0.5%	0.0%	1.7%	0.7%	8.3%	0.0%	100.0%	
Road 21	21	59.3	59.3	N	1400-1500	1668	23.1%	8.5%	0.3%	25.2%	9.3%	7.8%	15.3%	0.0%	0.0%	0.3%	0.3%	0.2%	0.5%	0.0%	1.9%	0.7%	8.3%	0.0%	100.0%	
Road 21	21	59.3	59.3	N	1500-1600	1751	22.8%	9.1%	0.3%	26.5%	9.5%	6.7%	13.2%	0.0%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	1.7%	0.8%	7.5%	0.0%	100.0%	
Road 21	21	59.0	59.5	N	1600-1700	1743	25.6%	8.9%	0.2%	22.3%	8.6%	7.0%	13.7%	0.0%	0.1%	0.6%	0.8%	0.5%	1.2%	0.0%	2.6%	1.2%	7.6%	0.0%	100.0%	
Road 21	21	63.4	63.4	N	1700-1800	1761	31.6%	8.8%	0.2%	22.7%	9.1%	7.2%	13.8%	0.0%	0.1%	0.6%	0.8%	0.5%	1.2%	0.0%	2.3%	1.5%	7.5%	0.0%	100.0%	
Road 21	21	63.4	63.4	N	1800-1900	1676	44.6%	10.5%	0.2%	15.9%	5.7%	3.3%	6.5%	0.0%	0.0%	0.1%	0.8%	0.5%	1.0%	0.0%	2.6%	2.1%	5.9%	0.0%	100.0%	
Road 21	21	66.4	66.4	N	1900-2000	1228	47.4%	14.8%	0.1%	13.3%	4.7%	3.1%	6.2%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	3.2%	1.7%	3.1%	0.0%	100.0%	
Road 21	21	66.4	66.4	N	2000-2100	966	43.2%	18.3%	0.1%	13.8%	4.9%	3.0%	6.0%	0.0%	0.1%	0.1%	0.6%	0.4%	0.9%	0.0%	3.4%	1.7%	3.1%	0.0%	100.0%	
Road 21	21	60.3	60.3	N	2100-2200	970	43.8%	18.1%	0.1%	13.9%	5.0%	3.2%	6.3%	0.0%	0.0%	0.1%	0.2%	0.5%	0.0%	0.0%	3.5%	1.7%	3.1%	0.0%	100.0%	
Road 21	21	66.5	66.5	N	2200-2300	918	44.6%	20.2%	0.1%	11.0%	4.0%	3.5%	6.9%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	3.3%	1.7%	3.8%	0.0%	100.0%	
Road 21	21	67.3	67.3	N	2300-0000	707	42.5%	19.1%	0.1%	12.0%	4.3%	3.8%	7.5%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	3.1%	1.9%	4.5%	0.0%	100.0%	
Road 22	22	50	48.2	N	0000-0100	48	14.1%	6.3%	0.1%	11.2%	0.7%	0.7%	10.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 22	22	50	48.2	N	0100-0200	34	12.1%	6.3%	0.3%	32.4%	11.7%	10.2%	20.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.7%	0.5%	0.3%	0.0%	100.0%	
Road 22	22	50	48.2	N	0200-0300	26	11.8%	5.8%	0.3%	33.1%	11.9%	10.4%	20.5%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.6%	0.8%	0.5%	0.0%	100.0%	
Road 22	22	50	48.2	N	0300-0400	22	10.5%	5.6%	0.4%	33.9%	12.4%	10.8%	20.8%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.8%	0.8%	0.6%	0.0%	100.0%		
Road 22	22	50	48.2	N	0400-0500	26	10.1%	4.5%	0.4%	34.1%	12.3%	10.7%	21.1%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.8%	0.8%	0.5%	0.0%	100.0%	
Road 22	22	50	48.2	N	0500-0600	47	9.3%	4.1%	0.4%	34.6%	12.4%	10.8%	21.3%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.6%	0.8%	0.5%	0.0%	100.0%	
Road 22	22	50	48.2	N	0600-0700	107	12.4%	4.5%	0.4%	35.0%	12.7%	11.0%	21.5%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.6%	0.8%	0.5%	0.0%	100.0%	
Road 22	22	50	48.2	N	0700-0800	229	8.0%	3.5%	0.4%	35.3%	12.7%	11.1%	21.8%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.6%	0.8%	0.5%	0.0%	100.0%	
Road 22	22	50	48.2	N	0800-0900	273	8.7%	2.8%	0.4%	37.3%	13.4%	10.4%	20.5%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.5%	0.5%	0.4%	0.0%	100.0%	
Road 22	22	50	48.2	N	0900-1000	300	6.0%	2.2%	0.4%	39.4%	14.1%	10.7%	21.1%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.2%	0.5%	0.5%	0.0%	100.0%	
Road 22	22	50	48.2	N	1000-1100	393	5.0%	1.9%	0.4%	39.3%	13.1%	11.8%	21.4%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.1%	0.2%	0.4%	0.0%	100.0%	
Road 22	22	50	48.2	N	1100-1200	275	5.0%	2.1%	0.4%	37.6%	13.5%	11.8%	21.3%	0.0%	0.0%	0.1%	0.1%	0.0%	0.1%	0.0%	0.1%	0.6%	0.0%	0.0%	100.0%	
Road 22	22	50	48.2	N	1200-1300	283	6.5%	2.5%	0.4%	34.5%	12.4%	12.4%	24.3%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.2%	0.6%	0.4%	0.0%	100.0%	
Road 22	22	50	48.2	N	1300-1400	316	5.8%	2.4%	0.4%	35.7%	13.2%	11.8%	21.6%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.2%	0.6%	0.4%	0.0%	100.0%	
Road 22	22	50	48.2	N	1400-1500	315	6.2%	2.5%	0.4%	35.6%	12.9%	12.0%	23.7%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.2%	0.6%	0.4%	0.0%	100.0%	
Road 22	22	50	48.2	N	1500-1600	328	6.0%	2.4%	0.4%	40.3%	14.5%	10.2%	20.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.2%	0.5%	0.3%	0.0%	100.0%	
Road 22	22	50	48.2	N	1600-1700	327	7.3%	3.0%	0.2%	37.3%	13.3%	12.2%	23.3%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.3%	0.5%	0.3%	0.0%	100.0%	
Road 22	22	50	48.2	N	1700-1800	284	9.9%	3.1%	0.4%	39.6%	13.4%	10.9%	17.6%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.6%	0.8%	0.4%	0.0%	100.0%	
Road 22	22	50	48.2	N	1800-1900	209	17.7%	4.2%	0.4%	36.4%	13.1%	7.6%	14.9%	0.0%	0.0%	0.0%	0.3%	0.2%	0.5%	0.0%	0.8%	3.9%	0.9%	0.0%	100.0%	
Road 22	22	50	48.2	N	1900-2000	143	30.8%	3.8%	0.4%	32.2%	12.1%	7.8%	14.2%	0.0%	0.0%	0.0%	0.3%	0.2%	0.5%	0.0%	0.8%	3.9%	0.9%	0.0%	100.0%	
Road 22	22	50	48.2	N	2000-2100	112	18.4%	7.8%	0.4%	33.8%	12.1%	7.4%	14.6%	0.0%	0.0%	0.0%	0.3%	0.3%	0.2%	0.4%	0.0%	0.7%	3.9%	0.0%	100.0%	
Road 22	22	50	48.2	N	2100-2200	115	18.3%	7.6%	0.4%	33.6%	12.1%	7.7%	15.2%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.9%	4.0%	0.0%	100.0%	
Road 22	22	50	48.2	N	2200-2300	103	20.4%	7.8%	0.4%	32.8%	12.1%	7.8%	15.3%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.9%	4.0%	0.0%	100.0%	
Road 22	22	50	48.2	N	2300-0000	82	18.1%	8.2%	0.3%	29.3%	10.5%	9.3%	15.3%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.8%	4.8%	0.0%	100.0%	

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2043)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles <=5t	07 - Medium Goods Vehicles 5-24t	08 - Public Light Buses	09 - Private Light Buses <=3.5t	10 - Private Light Buses >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchised Bus Single	15 - Franchised Bus Double Deck	16 - Motorcycl	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total	
Road 25	25	50	28.5	N	0000-0100	17	6.8%	3.1%	0.4%	36.3%	13.0%	11.5%	22.5%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.3%	5.9%	0.0%	100.0%	
Road 25	25	50	29.0	N	0100-0200	12	6.2%	2.8%	0.4%	36.7%	13.0%	11.6%	22.7%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.4%	5.9%	0.0%	100.0%	
Road 25	25	50	29.2	N	0200-0300	10	5.6%	2.5%	0.4%	37.0%	13.3%	11.1%	22.9%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.4%	6.0%	0.0%	100.0%	
Road 25	25	50	29.3	N	0300-0400	8	5.1%	2.3%	0.4%	37.3%	13.3%	11.1%	23.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.4%	6.0%	0.0%	100.0%		
Road 25	25	50	29.2	N	0400-0500	10	4.3%	2.1%	0.4%	37.6%	13.5%	11.8%	23.2%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.4%	6.1%	0.0%	100.0%		
Road 25	25	50	28.5	N	0500-0600	18	4.3%	1.9%	0.4%	37.8%	13.6%	11.9%	23.3%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.4%	6.1%	0.0%	100.0%		
Road 25	25	50	28.5	N	0600-0700	40	4.0%	1.7%	0.4%	38.0%	13.7%	11.9%	23.4%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.4%	6.1%	0.0%	100.0%		
Road 25	25	50	24.5	N	0700-0800	87	1.7%	1.6%	0.4%	38.2%	13.7%	12.0%	23.5%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.4%	6.1%	0.0%	100.0%		
Road 25	25	50	24.0	N	0800-0900	104	4.0%	1.3%	0.4%	40.2%	14.4%	11.2%	22.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.2%	5.8%	0.0%	100.0%		
Road 25	25	50	24.0	N	0900-1000	117	2.7%	1.0%	0.4%	41.5%	14.4%	11.3%	22.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	5.8%	0.0%	100.0%		
Road 25	25	50	24.0	N	1000-1100	115	2.2%	0.9%	0.4%	39.1%	14.0%	12.4%	24.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	6.4%	0.0%	100.0%		
Road 25	25	50	24.1	N	1100-1200	108	2.2%	0.9%	0.4%	39.3%	14.1%	12.3%	24.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	6.3%	0.0%	100.0%		
Road 25	25	50	24.1	N	1200-1300	108	2.0%	0.8%	0.4%	37.1%	13.3%	13.3%	26.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	6.8%	0.0%	100.0%		
Road 25	25	50	23.9	N	1300-1400	122	1.8%	0.7%	0.4%	39.8%	14.3%	12.3%	24.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	6.3%	0.0%	100.0%			
Road 25	25	50	23.9	N	1400-1500	120	1.9%	0.8%	0.4%	39.1%	13.7%	12.9%	25.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	6.6%	0.0%	100.0%				
Road 25	25	50	23.9	N	1500-1600	126	1.9%	0.7%	0.5%	43.2%	15.5%	10.9%	21.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	5.6%	0.0%	100.0%		
Road 25	25	50	24.0	N	1600-1700	116	2.3%	0.8%	0.4%	39.3%	14.1%	12.3%	24.1%	0.0%	0.0%	0.1%	0.1%	0.0%	0.1%	0.0%	0.1%	6.3%	0.0%	100.0%		
Road 25	25	50	24.3	N	1700-1800	91	1.0%	0.5%	0.4%	44.0%	15.9%	10.0%	19.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	6.1%	0.0%	100.0%		
Road 25	25	50	24.8	N	1800-1900	71	6.1%	1.4%	0.5%	43.8%	15.7%	9.1%	16.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.3%	4.7%	0.0%	100.0%		
Road 25	25	50	26.2	N	1900-2000	46	7.3%	2.3%	0.4%	40.8%	14.6%	9.7%	19.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.3%	5.0%	0.0%	100.0%		
Road 25	25	50	27.0	N	2000-2100	37	6.6%	2.6%	0.4%	42.1%	15.1%	9.3%	16.3%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.3%	4.9%	0.0%	100.0%		
Road 25	25	50	26.9	N	2100-2200	38	6.5%	2.1%	0.4%	41.9%	14.9%	9.6%	16.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	2.5%	4.9%	0.0%	100.0%		
Road 25	25	50	27.2	N	2200-2300	33	7.2%	3.3%	0.4%	36.0%	12.9%	11.4%	22.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.3%	5.9%	0.0%	100.0%		
Road 25	25	50	27.7	N	2300-0000	27	6.5%	2.9%	0.4%	36.5%	13.1%	11.6%	22.7%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.3%	5.9%	0.0%	100.0%			
Road 26	26	50	28.7	N	0000-0100	16	6.0%	2.7%	0.4%	36.8%	13.2%	11.6%	22.8%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.3%	6.0%	0.0%	100.0%		
Road 26	26	50	29.1	N	0100-0200	11	5.4%	2.4%	0.4%	37.1%	13.3%	11.7%	23.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.3%	6.0%	0.0%	100.0%		
Road 26	26	50	29.3	N	0200-0300	9	4.9%	2.2%	0.4%	37.4%	13.4%	11.8%	23.2%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.3%	6.1%	0.0%	100.0%		
Road 26	26	50	29.4	N	0300-0400	7	4.5%	2.0%	0.4%	37.7%	13.5%	11.9%	23.3%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.3%	6.1%	0.0%	100.0%		
Road 26	26	50	29.3	N	0400-0500	9	4.1%	1.8%	0.4%	38.0%	13.6%	11.9%	23.4%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.3%	6.1%	0.0%	100.0%		
Road 26	26	50	28.6	N	0500-0600	16	3.8%	1.7%	0.4%	38.2%	13.7%	12.0%	23.5%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.3%	6.1%	0.0%	100.0%			
Road 26	26	50	28.8	N	0600-0700	37	3.5%	1.5%	0.4%	38.4%	13.8%	12.0%	23.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.3%	6.2%	0.0%	100.0%		
Road 26	26	50	24.8	N	0700-0800	80	1.4%	0.8%	0.5%	43.8%	15.8%	12.1%	23.7%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.3%	4.7%	0.0%	100.0%			
Road 26	26	50	24.8	N	0800-0900	95	3.5%	1.1%	0.4%	40.5%	14.5%	11.3%	22.3%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.2%	5.8%	0.0%	100.0%			
Road 26	26	50	24.2	N	0900-1000	107	2.3%	0.8%	0.4%	41.7%	15.0%	11.4%	22.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	5.8%	0.0%	100.0%		
Road 26	26	50	24.2	N	1000-1100	106	1.9%	0.7%	0.4%	39.3%	14.1%	12.5%	24.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	6.4%	0.0%	100.0%			
Road 26	26	50	24.3	N	1100-1200	99	1.9%	0.8%	0.4%	39.5%	14.2%	12.4%	24.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	6.3%	0.0%	100.0%			
Road 26	26	50	24.2	N	1200-1300	105	5.6%	2.1%	0.4%	35.0%	12.6%	12.6%	24.7%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.2%	6.5%	0.0%	100.0%			
Road 26	26	50	24.0	N	1300-1400	118	4.9%	1.9%	0.4%	37.9%	13.6%	11.7%	23.1%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	6.0%	0.0%	100.0%			
Road 26	26	50	24.0	N	1400-1500	117	5.3%	2.1%	0.4%	38.1%	13.0%	12.2%	24.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.2%	6.3%	0.0%	100.0%		
Road 26	26	50	24.0	N	1500-1600	122	5.1%	2.1%	0.4%	40.9%	14.7%	10.4%	20.4%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.2%	5.3%	0.0%	100.0%			
Road 26	26	50	24.1	N	1600-1700	114	6.2%	2.2%	0.4%	36.9%	13.2%	11.5%	22.6%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.3%	5.9%	0.0%	100.0%		
Road 26	26	50	24.3	N	1700-1800	92	4.6%	2.2%	0.4%	40.6%	14.6%	9.2%	16.1%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.7%	4.7%	0.0%	100.0%			
Road 26	26	50	24.8	N	1800-1900	76	15.5%	3.6%	0.4%	37.8%	13.6%	7.9%	15.5%	0.0%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.7%	4.0%	0.0%	100.0%	
Road 26	26	50	26.0	N	1900-2000	51	17.9%	5.6%	0.4%	34.0%	12.2%	8.1%	16.0%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.7%	4.2%	0.0%	100.0%		
Road 26	26	50	26.8	N	2000-2100	42	16.2%	6.9%	0.4%	35.3%	12.7%	7.8%	15.3%	0.0%	0.0%	0.0%	0.2%	0.2%	0.3%	0.0%	0.6%	4.0%	0.0%	100.0%		
Road 26	26	50	26.8	N	2100-2200	42	16.1%	6.7%	0.4%	35.1%	12.6%	8.1%	15.9%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.7%	4.1%	0.0%	100.0%		
Road 26	26	50	27.1	N	2200-2300	37	17.5%	7.9%	0.3%	29.7%	10.7%	9.4%	16.6%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.7%	4.9%	0.0%	100.0%		
Road 26	26	50	27.7	N	2300-0000	30	13.9%	7.2%	0.3%	30.7%	11.0%	9.7%	19.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.7%	5.0%	0.0%	100.0%		

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2043)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars <5t	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles <=5t	07 - Medium Goods Vehicles 5-24t	08 - Public Buses	09 - Private Light Buses <=3.5t	10 - Private Light Buses >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus >4t	13 - Non-franchised Bus 15-24t	14 - Franchised d Bus Single	15 - Franchised d Bus Double Deck	16 - Motorcycl	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total	
Road 29	29	80	80.0	N	0000-0100	692	56.0%	25.1%	0.0%	3.2%	1.2%	1.0%	2.0%	0.6%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	3.9%	2.8%	2.1%	0.0%	100.0%	
Road 29	29	80	80.0	N	0100-0200	453	54.6%	24.4%	0.0%	3.5%	1.3%	1.1%	2.2%	0.6%	0.0%	0.3%	0.6%	0.4%	0.9%	0.3%	3.9%	3.1%	3.0%	0.0%	100.0%	
Road 29	29	80	80.0	N	0200-0300	334	33.2%	23.0%	0.0%	3.8%	1.4%	1.2%	2.4%	0.6%	0.0%	0.3%	0.7%	0.6%	1.0%	0.0%	3.8%	3.4%	3.9%	0.0%	100.0%	
Road 29	29	80	80.0	N	0300-0400	268	51.8%	23.0%	0.0%	4.1%	1.5%	1.3%	2.5%	0.6%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	3.7%	3.6%	4.9%	0.0%	100.0%	
Road 29	29	80	80.0	N	0400-0500	280	51.1%	22.6%	0.0%	4.4%	1.6%	1.4%	2.7%	0.6%	0.1%	0.5%	0.8%	0.8%	1.3%	0.0%	3.7%	4.0%	4.5%	0.0%	100.0%	
Road 29	29	80	80.0	N	0500-0600	405	60.6%	22.4%	0.0%	4.6%	1.6%	1.4%	3.0%	0.6%	0.1%	0.5%	0.9%	0.9%	1.4%	0.0%	3.4%	4.4%	5.0%	0.0%	100.0%	
Road 29	29	80	80.0	N	0600-0700	1047	50.6%	22.8%	0.1%	5.2%	1.9%	1.6%	3.2%	0.7%	0.1%	0.6%	1.0%	0.7%	1.6%	0.0%	3.8%	4.7%	4.9%	0.0%	100.0%	
Road 29	29	80	80.0	N	0700-0800	2135	49.1%	21.4%	0.1%	5.5%	2.0%	1.7%	3.4%	0.7%	0.1%	0.7%	1.1%	0.8%	1.7%	0.0%	3.7%	5.0%	2.9%	0.0%	100.0%	
Road 29	29	80	80.0	N	0800-0900	2459	51.1%	17.8%	0.2%	6.1%	2.3%	2.0%	4.0%	0.8%	0.1%	0.8%	1.3%	1.0%	2.3%	0.0%	3.2%	5.4%	3.4%	0.0%	100.0%	
Road 29	29	80	80.0	N	0900-1000	2020	50.4%	18.3%	0.1%	8.1%	3.1%	2.3%	4.6%	0.7%	0.1%	0.5%	0.8%	1.3%	0.0%	3.5%	2.0%	3.3%	0.0%	100.0%		
Road 29	29	80	80.0	N	1000-1100	1747	47.7%	18.5%	0.1%	9.2%	3.3%	2.9%	5.7%	0.7%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	3.4%	1.4%	3.9%	0.0%	100.0%	
Road 29	29	80	80.0	N	1100-1200	1569	51.6%	19.6%	0.1%	9.5%	3.2%	2.8%	5.6%	0.7%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	3.3%	1.3%	4.0%	0.0%	100.0%	
Road 29	29	80	80.0	N	1200-1300	1757	50.0%	11.6%	0.2%	15.5%	5.7%	5.7%	11.1%	0.6%	0.0%	0.5%	0.5%	0.4%	0.0%	10.0%	0.9%	5.3%	0.0%	100.0%		
Road 29	29	80	80.0	N	1300-1400	1832	28.4%	10.9%	0.2%	18.4%	6.6%	5.7%	11.2%	0.5%	0.1%	0.4%	0.4%	0.3%	0.6%	0.0%	10.2%	0.9%	5.2%	0.0%	100.0%	
Road 29	29	80	80.0	N	1400-1500	2154	26.0%	1.9%	0.2%	16.7%	6.0%	5.6%	11.4%	0.5%	0.1%	0.5%	0.5%	0.4%	0.3%	0.6%	0.0%	10.4%	5.2%	0.0%	100.0%	
Road 29	29	80	80.0	N	1500-1600	1963	18.8%	11.6%	0.1%	19.2%	6.3%	4.9%	9.9%	0.5%	0.1%	0.5%	0.5%	0.4%	0.6%	0.1%	1.0%	4.7%	0.0%	100.0%		
Road 29	29	80	80.0	N	1600-1700	2033	31.5%	10.9%	0.2%	15.6%	5.6%	4.9%	9.6%	0.5%	0.1%	0.7%	0.9%	0.6%	1.4%	0.0%	11.5%	1.5%	4.6%	0.0%	100.0%	
Road 29	29	80	80.0	N	1700-1800	2194	36.6%	11.4%	0.2%	14.6%	5.2%	3.3%	6.9%	0.5%	0.1%	0.5%	0.6%	0.4%	1.0%	0.0%	12.2%	3.1%	3.6%	0.0%	100.0%	
Road 29	29	80	80.0	N	1800-1900	2233	41.2%	11.2%	0.2%	14.5%	5.0%	0.7%	4.0%	0.5%	0.0%	0.1%	0.7%	0.4%	1.0%	0.0%	12.3%	2.9%	3.0%	0.0%	100.0%	
Road 29	29	80	80.0	N	1900-2000	1740	47.4%	14.9%	0.1%	7.5%	2.7%	1.6%	3.5%	0.7%	0.0%	0.1%	0.7%	0.4%	1.1%	0.0%	15.6%	1.7%	1.6%	0.0%	100.0%	
Road 29	29	80	80.0	N	2000-2100	1370	43.7%	18.3%	0.1%	7.9%	2.8%	1.7%	3.4%	0.7%	0.0%	0.1%	0.6%	0.5%	0.9%	0.0%	18.3%	1.7%	1.7%	0.0%	100.0%	
Road 29	29	80	80.0	N	2100-2200	1344	47.9%	18.5%	0.1%	8.2%	2.9%	1.9%	3.7%	0.7%	0.0%	0.1%	0.3%	0.2%	0.9%	0.0%	18.3%	2.0%	1.8%	0.0%	100.0%	
Road 29	29	80	80.0	N	2200-2300	1370	44.4%	20.1%	0.1%	6.3%	2.3%	2.0%	3.9%	0.6%	0.0%	0.0%	0.3%	0.2%	0.4%	0.1%	15.7%	1.7%	1.9%	0.0%	100.0%	
Road 29	29	80	80.0	N	2300-0000	990	43.1%	19.4%	0.1%	7.0%	2.5%	2.2%	4.3%	0.6%	0.0%	0.1%	0.3%	0.2%	0.5%	0.1%	15.4%	1.9%	2.2%	0.0%	100.0%	
Road 30	30	70	70.0	N	0000-0100	424	48.4%	22.4%	0.0%	2.8%	1.2%	0.9%	1.4%	0.2%	0.0%	0.1%	0.2%	0.1%	0.2%	0.0%	2.8%	2.1%	2.3%	0.0%	100.0%	
Road 30	30	70	70.0	N	0100-0200	365	48.0%	21.5%	0.1%	7.9%	2.8%	2.5%	4.9%	0.1%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	2.2%	2.7%	5.3%	0.0%	100.0%	
Road 30	30	70	70.0	N	0200-0300	274	46.0%	20.5%	0.1%	8.4%	3.0%	2.7%	5.2%	0.1%	0.0%	0.3%	0.6%	0.5%	0.9%	0.0%	2.2%	2.9%	6.8%	0.0%	100.0%	
Road 30	30	70	70.0	N	0300-0400	221	47.6%	18.6%	0.1%	8.9%	3.2%	2.8%	5.5%	0.1%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	2.1%	3.1%	7.0%	0.0%	100.0%	
Road 30	30	70	70.0	N	0400-0500	244	43.1%	19.0%	0.1%	9.5%	3.4%	3.0%	5.9%	0.1%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	2.1%	3.3%	7.6%	0.0%	100.0%	
Road 30	30	70	70.0	N	0500-0600	415	42.9%	18.9%	0.1%	10.5%	3.8%	3.3%	6.4%	0.1%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	2.1%	3.7%	5.2%	0.0%	100.0%	
Road 30	30	70	70.0	N	0600-0700	483	42.4%	18.6%	0.1%	11.5%	4.0%	3.5%	6.6%	0.1%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	2.1%	3.9%	4.0%	0.0%	100.0%	
Road 30	30	66.9	66.9	N	0700-0800	630	45.3%	17.7%	0.1%	11.7%	4.2%	3.7%	7.2%	0.1%	0.1%	0.6%	0.9%	0.6%	1.4%	0.0%	2.0%	4.1%	5.0%	0.0%	100.0%	
Road 30	30	67.6	67.6	N	0800-0900	2124	45.1%	14.4%	0.1%	12.7%	4.6%	3.6%	7.0%	0.0%	0.1%	0.6%	0.9%	0.8%	1.3%	0.0%	1.8%	2.6%	4.5%	0.0%	100.0%	
Road 30	30	66.9	66.9	N	0900-1000	1873	35.3%	14.0%	0.2%	16.7%	6.0%	4.6%	8.9%	0.1%	0.0%	0.4%	0.6%	0.4%	1.0%	0.0%	1.7%	1.9%	5.4%	0.0%	100.0%	
Road 30	30	70	70.0	N	1000-1100	1580	35.1%	13.6%	0.2%	17.8%	6.2%	5.1%	10.8%	0.1%	0.0%	0.4%	0.7%	0.5%	1.1%	0.0%	1.7%	1.9%	7.0%	0.0%	100.0%	
Road 30	30	70	70.0	N	1100-1200	1590	35.0%	14.4%	0.2%	17.2%	6.2%	5.4%	10.0%	0.1%	0.0%	0.4%	0.4%	0.2%	0.5%	0.0%	1.7%	1.0%	6.3%	0.0%	100.0%	
Road 30	30	69.3	69.3	N	1200-1300	1877	28.8%	11.1%	0.2%	19.9%	7.1%	7.1%	14.0%	0.0%	0.1%	0.5%	0.5%	0.3%	0.8%	0.0%	1.8%	0.9%	7.0%	0.0%	100.0%	
Road 30	30	70	70.0	N	1300-1400	1778	35.4%	14.5%	0.2%	22.7%	6.8%	5.3%	13.8%	0.0%	0.4%	0.5%	0.4%	0.2%	0.5%	0.0%	1.7%	1.2%	7.0%	0.0%	100.0%	
Road 30	30	70	70.0	N	1400-1500	1839	27.7%	11.2%	0.2%	20.8%	7.5%	7.0%	13.8%	0.0%	0.1%	0.5%	0.6%	0.4%	0.8%	0.0%	1.7%	1.0%	6.7%	0.0%	100.0%	
Road 30	30	67.6	67.6	N	1500-1600	1885	27.3%	11.0%	0.2%	23.9%	8.6%	6.1%	11.9%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	1.6%	1.0%	6.1%	0.0%	100.0%	
Road 30	30	67.6	67.6	N	1600-1700	1912	30.1%	10.5%	0.2%	19.1%	7.6%	6.1%	12.2%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	1.4%	1.2%	6.2%	0.0%	100.0%	
Road 30	30	70	70.0	N	1700-1800	2028	35.5%	11.4%	0.2%	19.2%	6.9%	4.3%	8.8%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	2.1%	3.1%	5.1%	0.0%	100.0%	
Road 30	30	69.2	69.2	N	1800-1900	1590	45.8%	11.7%	0.1%	13.3%	4.8%	2.8%	5.5%	0.0%	0.0%	0.1%	0.9%	0.6%	1.3%	0.0%	2.4%	2.4%	4.3%	0.0%	100.0%	
Road 30	30	70	70.0	N	1900-2000	1441	45.4%	10.8%	0.1%	14.4%	4.8%	2.8%	5.1%	0.0%	0.0%	0.1%	0.9%	0.6%	1.3%	0.0%	2.4%	2.4%	4.3%	0.0%	100.0%	
Road 30	30	70	70.0	N	2000-2100	1145	47.3%	20.7%	0.1%	11.3%	4.1%	2.5%	4.9%	0.0%	0.0%	0.1%	0.7%	0.9%	1.0%	0.0%	3.1%	1.9%	2.6%	0.0%	100.0%	
Road 30	30	70	70.0	N	2100-2200	1148	47.9%	19.8%	0.1%	11.5%	4.1%	2.6%	5.2%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	2.7%	2.2%	2.6%	0.0%	100.0%	
Road 30	30	70	70.0	N	2200-2300	1095	47.9%	19.8%	0.1%	11.5%	4.1%	2.6%	5.2%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	2.7%	2.2%	2.6%	0.0%	100.0%	
Road 30	30	70	70.0	N	2300-0000	837	46.6%	21.0%	0.1%	9.9%	3.5%	3.1%	6.2%	0.0%	0.0%	0.1%	0.4%	0.2%	0.5%	0.0%	2.9%	2.1%	3.4%	0.0%	100.0%	

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2043)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles <=15t	07 - Medium Goods Vehicles 15-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchised Bus Single Deck	15 - Franchised Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total	
Road 33	33	70	70.0	N	0000-0100	652	48.6%	21.9%	0.1%	7.8%	2.8%	2.5%	4.9%	0.2%	0.0%	0.2%	0.4%	0.3%	0.7%	0.0%	3.3%	2.5%	3.5%	0.0%	100.0%	
Road 33	33	70	70.0	N	0100-0200	434	46.9%	21.0%	0.1%	8.4%	3.0%	2.7%	5.2%	0.2%	0.0%	0.2%	0.3%	0.4%	0.9%	0.0%	3.2%	2.8%	1.8%	0.0%	100.0%	
Road 33	33	70	70.0	N	0200-0300	325	45.0%	20.1%	0.1%	9.0%	3.2%	2.8%	5.5%	0.2%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	3.2%	2.8%	6.0%	0.0%	100.0%	
Road 33	33	70	70.0	N	0300-0400	262	43.2%	19.2%	0.1%	9.5%	3.4%	3.0%	5.0%	0.1%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	3.1%	3.0%	7.2%	0.0%	100.0%	
Road 33	33	70	70.0	N	0400-0500	289	42.1%	18.6%	0.1%	10.2%	3.7%	3.2%	6.3%	0.1%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	3.0%	3.3%	6.7%	0.0%	100.0%	
Road 33	33	70	70.0	N	0500-0600	496	41.7%	18.4%	0.1%	11.0%	4.0%	3.5%	6.8%	0.2%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	3.0%	3.6%	4.8%	0.0%	100.0%	
Road 33	33	70	70.0	N	0600-0700	1059	41.1%	18.0%	0.1%	11.8%	4.3%	3.7%	7.3%	0.2%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	3.0%	3.8%	3.3%	0.0%	100.0%	
Road 33	33	70	70.0	N	0700-0800	1192	39.3%	17.1%	0.1%	12.3%	4.4%	3.8%	7.6%	0.2%	0.1%	0.6%	0.9%	0.6%	1.4%	0.0%	2.9%	4.0%	4.6%	0.0%	100.0%	
Road 33	33	70	70.0	N	0800-0900	2544	43.7%	14.0%	0.1%	13.4%	4.8%	3.7%	7.4%	0.1%	0.1%	0.6%	0.9%	0.8%	1.3%	0.0%	2.6%	2.5%	4.2%	0.0%	100.0%	
Road 33	33	70	70.0	N	0900-1000	2258	37.1%	13.5%	0.2%	17.5%	6.3%	4.8%	9.4%	0.1%	0.0%	0.4%	0.6%	0.4%	1.0%	0.0%	2.5%	1.4%	5.0%	0.0%	100.0%	
Road 33	33	70	70.0	N	1000-1100	2036	33.7%	13.1%	0.2%	18.0%	6.5%	5.7%	11.3%	0.1%	0.0%	0.4%	0.6%	0.4%	0.8%	0.0%	2.4%	1.0%	5.7%	0.0%	100.0%	
Road 33	33	70	70.0	N	1100-1200	1921	33.7%	13.9%	0.2%	18.0%	6.5%	5.6%	11.0%	0.1%	0.1%	0.6%	0.3%	0.2%	0.5%	0.0%	2.4%	0.9%	5.8%	0.0%	100.0%	
Road 33	33	70	70.0	N	1200-1300	1907	36.0%	11.5%	0.2%	19.1%	6.8%	13.4%	0.0%	0.1%	0.5%	0.5%	0.4%	0.8%	0.0%	2.5%	0.9%	6.5%	0.0%	100.0%		
Road 33	33	70	70.0	N	1300-1400	2016	27.9%	10.8%	0.2%	21.9%	7.8%	6.8%	13.3%	0.0%	0.1%	0.4%	0.4%	0.3%	0.6%	0.0%	2.3%	0.9%	6.3%	0.0%	100.0%	
Road 33	33	70	70.0	N	1400-1500	2096	28.8%	11.7%	0.2%	20.0%	7.2%	6.8%	13.3%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	2.4%	1.1%	6.2%	0.0%	100.0%	
Road 33	33	70	70.0	N	1500-1600	2152	28.4%	11.4%	0.2%	23.0%	8.2%	5.8%	11.4%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	2.3%	1.0%	5.6%	0.0%	100.0%	
Road 33	33	70	70.0	N	1600-1700	2182	31.7%	10.9%	0.2%	19.0%	6.8%	5.9%	11.7%	0.0%	0.1%	0.8%	0.9%	0.6%	1.4%	0.0%	2.7%	1.5%	6.7%	0.0%	100.0%	
Road 33	33	70	70.0	N	1700-1800	1907	11.8%	0.2%	0.02%	0.0%	4.1%	8.1%	0.0%	0.1%	0.5%	0.7%	0.5%	1.0%	0.0%	2.9%	3.2%	4.6%	0.0%	100.0%		
Road 33	33	70	70.0	N	1800-1900	2267	50.7%	11.9%	0.1%	12.5%	4.5%	2.6%	5.1%	0.0%	0.0%	0.1%	0.9%	0.6%	1.4%	0.0%	3.3%	2.4%	3.8%	0.0%	100.0%	
Road 33	33	70	70.0	N	1900-2000	1713	52.2%	16.3%	0.1%	10.0%	3.6%	2.4%	4.7%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	4.0%	1.9%	2.1%	0.0%	100.0%	
Road 33	33	70	70.0	N	2000-2100	1342	47.7%	20.3%	0.1%	10.6%	3.6%	2.3%	4.6%	0.0%	0.0%	0.1%	0.7%	0.5%	1.0%	0.0%	4.1%	1.9%	2.3%	0.0%	100.0%	
Road 33	33	70	70.0	N	2100-2200	1343	48.3%	20.1%	0.1%	10.7%	3.9%	2.5%	4.9%	0.0%	0.0%	0.2%	0.5%	0.0%	0.2%	0.5%	0.0%	3.6%	2.2%	4.4%	0.0%	100.0%
Road 33	33	70	70.0	N	2200-2300	1284	49.0%	22.1%	0.1%	8.4%	3.0%	2.7%	5.3%	0.0%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	4.0%	1.9%	2.5%	0.0%	100.0%
Road 33	33	70	70.0	N	2300-0000	979	47.2%	21.3%	0.1%	9.2%	3.3%	2.9%	5.7%	0.0%	0.0%	0.1%	0.4%	0.2%	0.5%	0.0%	3.9%	2.1%	3.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	0000-0100	661	56.7%	29.4%	0.0%	3.2%	1.1%	1.0%	2.6%	0.0%	0.0%	0.2%	0.4%	0.6%	0.2%	1.1%	0.9%	2.9%	3.1%	3.1%	0.0%	100.0%
Road 34	34	80	80.0	N	0100-0200	433	55.2%	24.7%	0.0%	3.5%	1.2%	1.1%	2.1%	0.7%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	2.9%	3.1%	3.1%	0.0%	100.0%	
Road 34	34	80	80.0	N	0200-0300	319	53.8%	24.0%	0.0%	3.7%	1.3%	1.2%	2.3%	0.7%	0.0%	0.3%	0.7%	0.8%	1.0%	0.0%	2.9%	3.4%	4.1%	0.0%	100.0%	
Road 34	34	80	80.0	N	0300-0400	254	52.4%	23.3%	0.0%	4.0%	1.4%	1.3%	2.5%	0.0%	0.1%	0.4%	0.6%	0.5%	1.2%	0.0%	2.8%	3.7%	5.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	0400-0500	277	51.7%	22.8%	0.0%	4.3%	1.6%	1.4%	2.7%	0.7%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	2.8%	4.0%	4.7%	0.0%	100.0%	
Road 34	34	80	80.0	N	0500-0600	472	51.6%	22.7%	0.0%	4.8%	1.7%	1.5%	2.9%	0.7%	0.1%	0.6%	0.9%	0.7%	1.4%	0.0%	2.9%	4.4%	3.1%	0.0%	100.0%	
Road 34	34	80	80.0	N	0600-0700	998	51.2%	22.4%	0.1%	5.1%	1.8%	1.6%	3.2%	0.7%	0.1%	0.7%	1.1%	0.7%	1.6%	0.0%	2.9%	4.8%	1.9%	0.0%	100.0%	
Road 34	34	80	80.0	N	0700-0800	2036	49.7%	21.7%	0.1%	5.4%	2.0%	1.7%	3.3%	0.7%	0.1%	0.7%	1.1%	0.8%	1.7%	0.0%	2.9%	5.1%	3.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	0800-0900	2347	55.7%	17.8%	0.1%	5.9%	2.1%	1.7%	3.3%	0.6%	0.1%	0.8%	1.1%	0.8%	1.7%	0.0%	2.5%	3.2%	2.7%	0.0%	100.0%	
Road 34	34	80	80.0	N	0900-1000	1925	51.1%	18.6%	0.1%	8.4%	3.0%	2.3%	4.5%	0.7%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	2.6%	2.0%	3.4%	0.0%	100.0%	
Road 34	34	80	80.0	N	1000-1100	1664	48.4%	18.8%	0.1%	9.0%	3.2%	2.9%	5.6%	0.7%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	2.6%	1.5%	4.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	1100-1200	1580	48.2%	19.8%	0.1%	9.0%	3.3%	2.8%	5.5%	0.7%	0.1%	0.9%	0.5%	0.3%	0.7%	0.0%	2.7%	1.4%	4.1%	0.0%	100.0%	
Road 34	34	80	80.0	N	1200-1300	1529	50.3%	11.6%	0.2%	16.6%	5.6%	5.6%	11.0%	0.6%	0.1%	0.5%	0.5%	0.4%	0.8%	0.0%	10.8%	0.9%	5.7%	0.0%	100.0%	
Road 34	34	80	80.0	N	1300-1400	1593	28.5%	11.0%	0.2%	16.2%	6.5%	5.6%	11.1%	0.6%	0.1%	0.4%	0.4%	0.3%	0.6%	0.0%	10.1%	0.9%	6.6%	0.0%	100.0%	
Road 34	34	80	80.0	N	1400-1500	1664	29.5%	10.3%	0.2%	16.8%	6.9%	5.6%	11.0%	0.6%	0.1%	0.4%	0.4%	0.3%	0.6%	0.0%	10.3%	1.1%	5.4%	0.0%	100.0%	
Road 34	34	80	80.0	N	1500-1600	1706	28.9%	11.6%	0.2%	19.0%	6.8%	4.8%	9.5%	0.6%	0.1%	0.5%	0.6%	0.4%	0.9%	0.1%	10.0%	1.0%	5.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	1600-1700	1768	31.6%	10.9%	0.2%	16.4%	5.8%	4.8%	9.5%	0.6%	0.1%	0.7%	0.9%	0.6%	1.4%	0.0%	11.4%	1.5%	4.9%	0.0%	100.0%	
Road 34	34	80	80.0	N	1700-1800	1909	36.6%	11.4%	0.2%	14.5%	5.2%	3.3%	6.4%	0.6%	0.1%	0.5%	0.6%	0.1%	0.5%	0.0%	12.1%	3.1%	3.9%	0.0%	100.0%	
Road 34	34	80	80.0	N	1800-1900	1945	47.6%	11.2%	0.1%	9.6%	3.4%	2.0%	3.9%	0.6%	0.0%	0.1%	0.8%	0.3%	1.3%	0.0%	13.2%	2.3%	3.2%	0.0%	100.0%	
Road 34	34	80	80.0	N	1900-2000	1513	47.5%	14.9%	0.1%	7.5%	2.7%	1.8%	3.5%	0.6%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	15.4%	1.8%	1.6%	0.0%	100.0%	
Road 34	34	80	80.0	N	2000-2100	1212	47.1%	15.8%	0.1%	7.8%	2.8%	1.7%	3.4%	0.8%	0.0%	0.1%	0.6%	0.4%	0.9%	0.0%	16.1%	1.7%	1.8%	0.0%	100.0%	
Road 34	34	80	80.0	N	2100-2200	1173	44.8%	18.5%	0.1%	8.1%	2.9%	1.9%	3.7%	0.8%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	14.4%	2.0%	1.9%	0.0%	100.0%	
Road 34	34	80	80.0	N	2200-2300	1137	44.5%	20.1%	0.1%	6.3%	2.2%	2.0%	3.9%	0.7%	0.0%	0.0%	0.3%	0.2%	0.4%	0.1%	15.5%	1.7%	2.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	2300-0000	861	43.2%	19.4%	0.1%	6.9%	2.5%	2.2%	4.3%	0.7%	0.0%	0.1%	0.3%	0.2%	0.5%	0.1%	15.2%	1.9%	2.4%	0.0%	100.0%	

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2043)																									
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles <=5t	07 - Medium Goods Vehicles 5-24t	08 - Public Light Buses	09 - Private Light Buses <=3.5t	10 - Private Light Buses >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchised Bus Single Deck	15 - Franchised Bus Double Deck	16 - Motorcycls	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total
Road 41	41	70	70.0	N	0000-0100	114	53.0%	23.8%	0.0%	2.7%	1.0%	0.8%	1.7%	0.0%	0.0%	0.2%	0.5%	0.2%	0.7%	0.0%	0.2%	11.5%	0.0%	100.0%	
					0100-0200	78	49.1%	22.0%	0.0%	2.8%	1.0%	0.5%	1.7%	0.0%	0.0%	0.2%	0.5%	0.4%	0.9%	0.0%	2.8%	16.9%	0.0%	100.0%	
					0200-0300	61	45.6%	20.3%	0.0%	2.9%	1.0%	0.5%	1.8%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	2.9%	21.7%	0.0%	100.0%	
Road 41	41	70	70.0	N	0300-0400	51	42.4%	18.8%	0.0%	2.9%	1.1%	0.9%	1.8%	0.8%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	3.0%	26.0%	0.0%	100.0%	
Road 41	41	70	70.0	N	0400-0500	54	42.6%	18.8%	0.0%	3.2%	1.2%	1.0%	2.0%	0.8%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	3.4%	24.3%	0.0%	100.0%	
Road 41	41	70	70.0	N	0500-0600	84	46.5%	20.5%	0.0%	3.9%	1.4%	1.2%	2.4%	0.9%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	4.0%	15.9%	0.0%	100.0%	
Road 41	41	70	70.0	N	0600-0700	166	49.7%	21.8%	0.0%	4.5%	1.6%	1.4%	2.8%	1.0%	0.1%	0.6%	1.0%	0.7%	1.6%	0.0%	4.7%	8.5%	0.0%	100.0%	
Road 41	41	70	70.0	N	0700-0800	358	45.5%	19.8%	0.0%	4.5%	1.6%	1.4%	2.8%	0.0%	0.1%	0.7%	1.0%	0.7%	1.6%	0.0%	4.7%	14.6%	0.0%	100.0%	
Road 41	41	70	70.0	N	0800-0900	407	51.8%	16.6%	0.0%	5.0%	1.8%	1.4%	2.7%	0.7%	0.1%	0.7%	1.0%	0.7%	1.5%	0.0%	3.0%	12.9%	0.0%	100.0%	
Road 41	41	70	70.0	N	0900-1000	340	46.6%	16.9%	0.1%	6.9%	2.5%	1.9%	3.7%	0.0%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	0.8%	15.6%	0.0%	100.0%	
Road 41	41	70	70.0	N	1000-1100	299	43.4%	16.8%	0.1%	7.3%	2.6%	2.3%	4.6%	0.9%	0.1%	0.5%	0.7%	0.5%	1.1%	0.0%	1.3%	17.8%	0.0%	100.0%	
Road 41	41	70	70.0	N	1100-1200	286	42.9%	17.7%	0.1%	7.2%	2.6%	2.3%	4.4%	0.9%	0.1%	0.8%	0.4%	0.3%	0.7%	0.0%	1.2%	18.5%	0.0%	100.0%	
Road 41	41	70	70.0	N	1200-1300	315	34.5%	13.3%	0.1%	12.6%	4.5%	4.5%	8.8%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	0.6%	18.1%	0.0%	100.0%	
Road 41	41	70	70.0	N	1300-1400	325	32.9%	12.7%	0.2%	14.7%	5.3%	4.6%	9.0%	0.0%	0.1%	0.5%	0.5%	0.3%	0.7%	0.0%	1.0%	17.6%	0.0%	100.0%	
Road 41	41	70	70.0	N	1400-1500	340	33.7%	13.6%	0.1%	13.3%	4.8%	4.5%	8.9%	0.0%	0.1%	0.6%	0.7%	0.5%	1.0%	0.0%	1.3%	16.9%	0.0%	100.0%	
Road 41	41	70	70.0	N	1500-1600	348	33.5%	13.4%	0.2%	15.4%	5.3%	3.9%	7.7%	0.0%	0.1%	0.6%	0.7%	0.5%	1.0%	0.0%	1.2%	16.3%	0.0%	100.0%	
Road 41	41	70	70.0	N	1600-1700	360	36.6%	12.6%	0.1%	12.5%	4.5%	3.9%	7.7%	0.0%	0.1%	0.9%	1.1%	0.7%	1.6%	0.0%	0.7%	15.8%	0.0%	100.0%	
Road 41	41	70	70.0	N	1700-1800	391	42.0%	13.2%	0.1%	11.7%	4.2%	2.6%	5.2%	0.0%	0.1%	0.6%	0.7%	0.5%	1.1%	0.0%	3.6%	14.0%	0.0%	100.0%	
Road 41	41	70	70.0	N	1800-1900	407	53.7%	12.6%	0.1%	7.6%	2.7%	1.6%	3.1%	0.0%	0.0%	0.1%	0.9%	0.7%	1.4%	0.0%	0.2%	13.0%	0.0%	100.0%	
Road 41	41	70	70.0	N	1900-2000	292	58.2%	18.2%	0.1%	6.4%	2.3%	1.5%	3.0%	0.0%	0.0%	0.1%	0.9%	0.6%	1.3%	0.0%	0.2%	5.2%	0.0%	100.0%	
Road 41	41	70	70.0	N	2000-2100	230	53.0%	22.5%	0.1%	6.7%	2.4%	1.5%	2.9%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	0.2%	2.1%	6.4%	0.0%	100.0%
Road 41	41	70	70.0	N	2100-2200	231	53.7%	22.2%	0.1%	8.6%	2.4%	1.8%	3.1%	0.0%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	2.9%	6.4%	0.0%	100.0%	
Road 41	41	70	70.0	N	2200-2300	223	53.7%	24.3%	0.1%	5.3%	1.9%	1.7%	3.3%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.2%	1.6%	6.6%	0.0%	100.0%
Road 41	41	70	70.0	N	2300-0000	171	51.4%	23.2%	0.1%	5.7%	2.1%	1.8%	3.6%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.2%	2.3%	8.5%	0.0%	100.0%
Road 42	42	50	47.9	N	0000-0100	88	51.3%	23.0%	0.0%	3.2%	1.1%	1.0%	2.4%	0.0%	0.0%	0.2%	0.7%	0.2%	0.4%	0.0%	2.6%	11.2%	0.0%	100.0%	
Road 42	42	50	48.5	N	0100-0200	61	47.2%	21.1%	0.0%	3.2%	1.2%	1.0%	2.0%	1.1%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	0.7%	18.6%	0.0%	100.0%	
Road 42	42	50	48.7	N	0200-0300	48	43.5%	19.4%	0.0%	3.3%	1.2%	1.0%	2.1%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	0.7%	28.7%	0.0%	100.0%		
Road 42	42	50	48.9	N	0300-0400	40	40.2%	17.8%	0.0%	3.2%	1.1%	1.1%	2.1%	1.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	2.8%	28.1%	0.0%	100.0%	
Road 42	42	50	48.8	N	0400-0500	43	40.4%	17.9%	0.0%	3.7%	1.3%	1.2%	2.3%	1.0%	0.0%	0.4%	0.7%	0.5%	1.0%	0.0%	3.1%	28.4%	0.0%	100.0%	
Road 42	42	50	48.3	N	0500-0600	66	44.5%	19.6%	0.0%	4.5%	1.6%	1.4%	2.8%	1.1%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	3.8%	17.4%	0.0%	100.0%	
Road 42	42	50	47.0	N	0600-0700	129	47.9%	21.0%	0.1%	5.3%	1.9%	1.7%	3.3%	1.3%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	4.5%	9.4%	0.0%	100.0%	
Road 42	42	50	47.9	N	0700-0800	182	52.0%	19.2%	0.1%	5.2%	1.9%	1.6%	3.2%	1.2%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	4.4%	16.0%	0.0%	100.0%	
Road 42	42	50	43.1	N	0800-0900	318	49.5%	15.8%	0.1%	5.8%	2.1%	1.6%	3.3%	0.9%	0.1%	0.7%	1.5%	0.0%	0.2%	0.9%	0.7%	13.4%	0.0%	100.0%	
Road 42	42	50	43.0	N	0900-1000	269	44.1%	16.0%	0.1%	8.0%	2.9%	2.2%	4.3%	1.2%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	0.7%	16.5%	0.0%	100.0%	
Road 42	42	50	43.6	N	1000-1100	238	40.7%	15.8%	0.1%	8.3%	3.0%	2.6%	5.2%	1.1%	0.1%	0.4%	0.7%	0.5%	1.0%	0.0%	1.2%	19.2%	0.0%	100.0%	
Road 42	42	50	43.9	N	1100-1200	228	40.2%	16.6%	0.1%	8.2%	2.9%	2.6%	5.0%	1.2%	0.1%	0.7%	0.4%	0.3%	0.9%	0.0%	1.1%	19.9%	0.0%	100.0%	
Road 42	42	50	44.9	N	1200-1300	163	26.5%	10.2%	0.1%	13.2%	4.8%	4.7%	9.3%	0.0%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	0.8%	28.4%	0.0%	100.0%	
Road 42	42	50	44.8	N	1300-1400	169	25.1%	9.7%	0.2%	16.5%	5.6%	4.6%	9.4%	0.0%	0.0%	0.4%	0.4%	0.2%	0.5%	0.0%	0.8%	27.5%	0.0%	100.0%	
Road 42	42	50	44.6	N	1400-1500	175	26.0%	10.5%	0.1%	14.2%	5.1%	4.8%	9.4%	0.0%	0.1%	0.5%	0.5%	0.4%	0.8%	0.0%	1.0%	26.7%	0.0%	100.0%	
Road 42	42	50	44.6	N	1500-1600	179	25.8%	10.4%	0.2%	16.4%	5.6%	4.2%	8.2%	0.0%	0.1%	0.5%	0.5%	0.4%	0.8%	0.0%	0.9%	25.8%	0.0%	100.0%	
Road 42	42	50	44.5	N	1600-1700	182	28.7%	9.9%	0.1%	13.5%	4.9%	4.2%	8.3%	0.0%	0.1%	0.7%	0.8%	0.6%	1.3%	0.0%	0.4%	25.5%	0.0%	100.0%	
Road 42	42	50	44.5	N	1700-1800	193	34.0%	10.6%	0.1%	12.9%	4.6%	2.9%	6.8%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	2.9%	23.5%	0.0%	100.0%	
Road 42	42	50	44.7	N	1800-1900	194	44.7%	10.5%	0.1%	8.7%	3.1%	1.8%	3.6%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	0.2%	22.8%	0.0%	100.0%	
Road 42	42	50	47.0	N	1900-2000	128	52.7%	16.5%	0.1%	8.0%	2.9%	1.9%	3.7%	0.0%	0.0%	0.1%	0.8%	0.6%	1.2%	0.0%	0.1%	19.9%	9.6%	0.0%	100.0%
Road 42	42	50	47.6	N	2000-2100	128	52.7%	16.5%	0.1%	8.2%	3.0%	1.8%	3.6%	0.0%	0.0%	0.1%	0.7%	0.5%	1.0%	0.0%	0.1%	19.7%	11.7%	0.0%	100.0%
Road 42	42	50	47.5	N	2100-2200	103	48.0%	19.8%	0.1%	8.3%	3.0%	1.9%	3.8%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.2%	21.7%	0.0%	100.0%	
Road 42	42	50	47.6	N	2200-2300	99	48.1%	21.7%	0.1%	6.5%	2.3%	2.1%	4.1%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.1%	19.9%	12.2%	0.0%	100.0%
Road 42	42	50	48.1	N	2300-0000	77	45.1%	20.3%	0.1%	6.9%	2.5%	2.2%	4.3%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.2%	15.4%	0.0%	100.0%	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2043)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Car	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles <=5t	07 - Medium Goods Vehicles 5-24t	08 - Public Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus >4t	13 - Non-franchised Bus 15-24t	14 - Franchised d Bus Single	15 - Franchised d Bus Double Deck	16 - Motorcycl	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total	
							PC	TAXI	LGVS	LGVA	LGVB	HGV1	HGV2	PLB	PV4	PV5	NFB	NFB7	NFB8	FBSB	FBD	MC	HGV9	NFB9		
Road 45	45	80	80.0	N	0000-0100	446	57.6%	25.0%	0.0%	1.3%	1.3%	1.1%	22.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.9%	2.9%	0.0%	0.0%	100.0%	
Road 45	45	80	80.0	N	0100-0200	290	56.7%	25.3%	0.0%	1.3%	1.4%	1.2%	24.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.9%	3.3%	0.0%	0.0%	100.0%	
Road 45	45	80	80.0	N	0200-0300	212	55.7%	24.7%	0.0%	1.3%	1.7%	2.3%	26.0%	0.0%	0.0%	0.4%	0.7%	0.6%	1.1%	0.0%	2.9%	3.5%	0.7%	0.0%	100.0%	
Road 45	45	80	80.0	N	0300-0400	167	47.7%	24.3%	0.0%	4.0%	1.6%	1.4%	2.9%	0.0%	0.1%	0.4%	0.8%	0.0%	1.2%	0.0%	2.9%	3.9%	0.7%	0.0%	100.0%	
Road 45	45	80	80.0	N	0400-0500	181	53.7%	23.7%	0.1%	4.7%	1.0%	1.5%	3.0%	0.0%	0.1%	0.5%	0.9%	0.8%	1.3%	0.0%	2.9%	4.2%	0.8%	0.0%	100.0%	
Road 45	45	80	80.0	N	0500-0600	223	55.3%	23.8%	0.0%	5.3%	1.3%	1.6%	3.3%	0.0%	0.1%	0.6%	1.0%	0.9%	1.2%	0.0%	2.9%	4.5%	0.9%	0.0%	100.0%	
Road 45	45	80	80.0	N	0600-0700	681	51.6%	22.6%	0.1%	5.9%	2.8%	1.8%	3.5%	0.0%	0.1%	0.7%	1.1%	0.7%	1.6%	0.0%	2.8%	4.8%	0.9%	0.0%	100.0%	
Road 45	45	80	80.0	N	0700-0800	1375	50.6%	22.0%	0.1%	6.0%	2.2%	1.9%	3.7%	0.0%	0.1%	0.7%	1.2%	0.8%	1.9%	0.0%	2.8%	5.2%	1.0%	0.0%	100.0%	
Road 45	45	80	80.0	N	0800-0900	1103	51.0%	21.0%	0.0%	6.0%	2.2%	1.8%	3.6%	0.0%	0.1%	0.7%	1.1%	0.8%	1.9%	0.0%	2.8%	5.2%	1.0%	0.0%	100.0%	
Road 45	45	72.3	N	0900-1000	1306	51.7%	18.8%	0.1%	9.3%	3.3%	2.5%	5.0%	0.0%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	2.6%	2.0%	1.3%	0.0%	100.0%		
Road 45	45	72.3	N	1000-1100	1128	49.0%	19.0%	0.1%	10.0%	3.6%	3.2%	6.2%	0.0%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	2.6%	1.5%	1.6%	0.0%	100.0%		
Road 45	45	72.3	N	1100-1200	969	45%	19.0%	0.1%	10.0%	3.6%	3.2%	6.2%	0.0%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	2.6%	1.5%	1.6%	0.0%	100.0%		
Road 45	45	75.9	N	1200-1300	1243	47.5%	18.3%	0.1%	10.0%	3.6%	3.6%	7.0%	0.0%	0.1%	0.5%	0.8%	0.8%	1.2%	0.0%	3.3%	1.4%	1.8%	0.0%	100.0%		
Road 45	45	72.3	N	1300-1400	1267	45.9%	17.7%	0.1%	11.5%	3.3%	3.7%	7.2%	0.0%	0.1%	0.7%	0.7%	0.5%	1.0%	0.0%	3.1%	1.4%	1.9%	0.0%	100.0%		
Road 45	45	70.1	N	1400-1500	1054	45.9%	17.7%	0.1%	10.5%	3.3%	3.6%	7.0%	0.0%	0.1%	0.6%	0.8%	0.8%	1.0%	0.0%	3.1%	1.7%	1.9%	0.0%	100.0%		
Road 45	45	70.1	N	1500-1600	1384	45.6%	18.3%	0.1%	12.2%	3.4%	1.1%	6.1%	0.0%	0.1%	0.8%	0.9%	0.9%	1.3%	0.0%	3.2%	1.4%	0.0%	0.0%	100.0%		
Road 45	45	66.3	N	1600-1700	1479	48.3%	16.7%	0.1%	9.6%	3.4%	3.0%	5.9%	0.0%	0.1%	1.1%	1.4%	1.0%	2.2%	0.0%	3.4%	2.3%	1.5%	0.0%	100.0%		
Road 45	45	66.3	N	1700-1800	1684	51.7%	16.8%	0.1%	8.5%	3.1%	1.9%	3.8%	0.0%	0.1%	0.8%	0.9%	0.9%	1.4%	0.0%	3.4%	4.6%	1.0%	0.0%	100.0%		
Road 45	45	66.3	N	1800-1900	1556	49%	16.9%	0.1%	8.5%	3.1%	1.9%	3.8%	0.0%	0.1%	0.8%	0.9%	0.9%	1.4%	0.0%	3.4%	4.6%	1.0%	0.0%	100.0%		
Road 45	45	71.2	N	1900-2000	1478	62.4%	19.5%	0.0%	14.0%	0.4%	1.4%	0.9%	1.9%	0.0%	0.0%	0.1%	0.9%	0.7%	0.4%	3.9%	2.3%	0.5%	0.0%	100.0%		
Road 45	45	77.2	N	2000-2100	1150	57.5%	24.4%	0.0%	4.2%	1.5%	0.9%	1.8%	0.0%	0.0%	0.1%	0.8%	0.8%	1.2%	0.0%	4.1%	2.3%	0.5%	0.0%	100.0%		
Road 45	45	77.6	N	2100-2200	1146	58.7%	24.3%	0.0%	3.2%	1.2%	0.9%	1.0%	0.0%	0.0%	0.1%	0.4%	0.6%	0.8%	0.0%	1.7%	2.7%	0.5%	0.0%	100.0%		
Road 45	45	78.2	N	2200-2300	1115	58.2%	26.3%	0.0%	3.3%	1.2%	1.1%	2.1%	0.0%	0.0%	0.1%	0.4%	0.2%	0.5%	0.0%	3.9%	2.2%	0.5%	0.0%	100.0%		
Road 45	45	78.2	N	2300-0000	884	57.2%	25.8%	0.0%	3.7%	1.3%	1.2%	2.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.7%	0.0%	3.9%	3.5%	0.6%	0.0%	100.0%		
Road 46	46	80	80.0	N	0000-0100	202	42.0%	2.0%	3.2%	0.2%	0.2%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 46	46	80	80.0	N	0100-0200	131	58.0%	25.9%	0.0%	3.6%	1.3%	1.1%	2.2%	0.0%	0.0%	0.3%	0.6%	0.4%	1.0%	0.0%	1.6%	3.3%	0.6%	0.0%	100.0%	
Road 46	46	80	80.0	N	0200-0300	96	57.0%	25.4%	0.0%	3.9%	1.4%	1.2%	2.4%	0.0%	0.0%	0.4%	0.7%	0.5%	1.1%	0.0%	1.6%	3.6%	0.6%	0.0%	100.0%	
Road 46	46	80	80.0	N	0300-0400	75	49.9%	24.9%	0.0%	4.2%	1.5%	1.3%	2.6%	0.0%	0.0%	0.4%	0.6%	0.5%	0.8%	0.0%	1.9%	3.7%	0.6%	0.0%	100.0%	
Road 46	46	80	80.0	N	0400-0500	83	55.1%	24.3%	0.0%	4.5%	1.6%	1.4%	2.9%	0.0%	0.1%	0.5%	0.9%	0.8%	1.4%	0.0%	1.6%	4.3%	0.7%	0.0%	100.0%	
Road 46	46	80	80.0	N	0500-0600	143	54.1%	23.8%	0.1%	4.9%	1.8%	1.5%	3.0%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	1.6%	4.6%	0.8%	0.0%	100.0%	
Road 46	46	80	80.0	N	0600-0700	213	53.1%	23.2%	0.1%	5.2%	1.9%	1.6%	3.2%	0.0%	0.1%	0.6%	1.0%	0.9%	1.7%	0.0%	1.6%	5.0%	0.9%	0.0%	100.0%	
Road 46	46	80	80.0	N	0700-0800	618	52.0%	22.7%	0.1%	5.6%	2.0%	1.7%	3.4%	0.0%	0.0%	0.8%	1.2%	0.9%	1.8%	0.0%	5.3%	5.9%	0.9%	0.0%	100.0%	
Road 46	46	80	80.0	N	0800-0900	717	58.0%	18.5%	0.1%	6.1%	2.2%	1.7%	3.3%	0.0%	0.1%	0.8%	1.1%	0.8%	1.7%	0.0%	1.4%	3.4%	0.9%	0.0%	100.0%	
Road 46	46	80	80.0	N	0900-1000	564	55.5%	18.4%	0.1%	8.6%	3.1%	2.4%	4.6%	0.0%	0.1%	0.5%	0.9%	0.8%	1.4%	0.0%	1.5%	2.1%	1.2%	0.0%	100.0%	
Road 46	46	80	80.0	N	1000-1100	1183	59.8%	19.8%	0.0%	9.3%	3.0%	2.0%	5.8%	0.0%	0.1%	0.6%	1.0%	0.9%	1.8%	0.0%	1.9%	3.3%	1.3%	0.0%	100.0%	
Road 46	46	80	80.0	N	1100-1200	924	50.7%	20.9%	0.1%	9.3%	3.3%	2.9%	5.7%	0.0%	0.1%	0.9%	0.5%	0.4%	0.8%	0.0%	1.5%	1.4%	1.5%	0.0%	100.0%	
Road 46	46	80	80.0	N	1200-1300	632	45.5%	17.5%	0.1%	11.6%	4.2%	4.2%	8.2%	0.0%	0.1%	0.7%	0.8%	0.5%	1.2%	0.0%	1.8%	1.3%	2.1%	0.0%	100.0%	
Road 46	46	80	80.0	N	1300-1400	648	45.6%	17.5%	0.0%	13.8%	4.6%	4.6%	8.2%	0.0%	0.1%	0.8%	0.5%	0.8%	0.0%	1.8%	1.3%	2.2%	0.0%	100.0%		
Road 46	46	80	80.0	N	1400-1500	690	43.9%	17.8%	0.1%	12.3%	4.4%	4.1%	8.2%	0.0%	0.1%	0.8%	0.9%	0.6%	1.3%	0.0%	1.7%	1.7%	2.1%	0.0%	100.0%	
Road 46	46	80	80.0	N	1500-1600	766	43.6%	17.5%	0.1%	14.2%	5.1%	3.6%	7.1%	0.0%	0.1%	0.8%	0.9%	0.6%	1.4%	0.0%	1.7%	1.6%	1.8%	0.0%	100.0%	
Road 46	46	80	80.0	N	1600-1700	1617	48.1%	16.1%	0.1%	11.2%	6.9%	6.9%	11.2%	0.0%	0.1%	1.1%	1.1%	1.1%	2.1%	0.0%	2.2%	2.2%	2.2%	0.0%	100.0%	
Road 46	46	80	80.0	N	1700-1800	842	51.9%	16.2%	0.1%	10.1%	3.6%	2.3%	4.5%	0.0%	0.1%	0.7%	0.9%	0.6%	1.4%	0.0%	1.9%	4.5%	1.2%	0.0%	100.0%	
Road 46	46	80	80.0	N	1800-1900	933	63.3%	14.9%	0.1%	6.3%	2.3%	1.5%	2.8%	0.0%	0.0%	0.1%	1.1%	0.8%	1.7%	0.0%	2.0%	3.0%	0.7%	0.0%	100.0%	
Road 46	46	80	80.0	N	1900-2000	822	60.5%	14.9%	0.0%	4.8%	1.3%	1.4%	2.3%	0.0%	0.0%	0.1%	1.1%	0.8%	1.4%	0.0%	2.0%	3.0%	0.7%	0.0%	100.0%	
Road 46	46	80	80.0	N	2000-2100	562	57.4%	24.4%	0.1%	5.1%	1.8%	1.1%	2.6%	0.0%	0.0%	0.1%	0.8%	0.8%	1.2%	0.0%	2.4%	2.3%	0.6%	0.0%	100.0%	
Road 46	46	80	80.0	N	2100-2200	561	58.4%	24.2%	0.1%	5.2%	1.9%	1.2%	2.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	2.1%	2.7%	0.6%	0.0%	100.0%	
Road 46	46	80	80.0	N	2200-2300	844	62.8%	14.9%	0.0%	4.8%	1.3%	1.4%	2.3%	0.0%	0.0%	0.1%	1.1%	0.8%	1.4%	0.0%	2.0%	3.0%	0.7%	0.0%	100.0%	
Road 46	46	80	80.0	N	2300-0000	488	57.0%	25.7%	0.0%	4.5%	1.6%	1.4%	2.9%	0.0%	0.1%	0.4%	0.3%	0.7%	0.0%	2.2%	2.5%	0.7%	0.0%	100.0%		

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2043)																												
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles <=5t	07 - Medium Goods Vehicles >5-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchise d Bus Single Deck	15 - Franchise d Bus Double Deck	16 - Motorcycl	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total			
Road 49	49	50	43.2	N	0000-0100	321	57.7%	25.9%	0.0%	2.3%	0.0%	0.7%	1.4%	0.0%	0.0%	0.2%	0.5%	0.4%	0.8%	1.2%	0.0%	5.9%	2.9%	0.4%	0.0%	100.0%		
Road 49	49	50	45.6	N	0100-0200	208	56.9%	25.5%	0.0%	2.5%	0.0%	0.8%	1.5%	0.0%	0.0%	0.3%	0.6%	0.4%	0.0%	5.9%	2.3%	0.4%	0.0%	100.0%				
Road 49	49	50	46.8	N	0200-0300	152	56.1%	25.0%	0.0%	2.7%	1.0%	0.9%	1.7%	0.0%	0.0%	0.4%	0.7%	0.5%	1.1%	0.0%	5.9%	3.6%	0.4%	0.0%	100.0%			
Road 49	49	50	47.4	N	0300-0400	119	55.3%	24.5%	0.0%	3.0%	1.1%	0.9%	1.8%	0.0%	0.1%	0.4%	0.8%	0.6%	1.2%	0.0%	5.9%	3.9%	0.5%	0.0%	100.0%			
Road 49	49	50	47.2	N	0400-0500	130	54.5%	24.1%	0.0%	3.2%	1.2%	1.0%	2.0%	0.0%	0.1%	0.5%	0.9%	0.7%	1.4%	0.0%	5.8%	4.2%	0.5%	0.0%	100.0%			
Road 49	49	50	45.1	N	0500-0600	225	53.6%	23.8%	0.0%	3.5%	1.2%	1.1%	2.1%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	5.8%	4.6%	0.6%	0.0%	100.0%			
Road 49	49	50	39.7	N	0600-0700	480	52.7%	23.1%	0.0%	3.7%	1.3%	1.2%	2.3%	0.0%	0.1%	0.7%	1.1%	0.8%	1.7%	0.0%	5.8%	4.9%	0.6%	0.0%	100.0%			
Road 49	49	50	33.7	N	0700-0800	867	51.8%	22.6%	0.0%	4.0%	1.4%	1.2%	2.4%	0.0%	0.1%	0.8%	1.2%	0.8%	1.8%	0.0%	5.8%	5.3%	0.6%	0.0%	100.0%			
Road 49	50	31.9	49.0	N	0800-0900	1115	58.1%	18.6%	0.0%	4.3%	1.6%	1.2%	2.4%	0.0%	0.1%	0.8%	1.1%	0.8%	1.0%	5.2%	3.4%	0.6%	0.0%	100.0%				
Road 49	50	34.4	49.0	N	0900-1000	894	54.5%	19.8%	0.1%	6.3%	2.3%	1.7%	3.4%	0.0%	0.1%	0.5%	0.9%	0.8%	1.4%	0.0%	5.5%	2.1%	0.9%	0.0%	100.0%			
Road 49	50	35.8	49.0	N	1000-1100	762	52.3%	20.3%	0.1%	6.8%	2.4%	2.2%	4.3%	0.0%	0.1%	0.6%	0.9%	0.8%	1.3%	0.0%	5.5%	1.6%	1.1%	0.0%	100.0%			
Road 49	50	36.4	49.0	N	1100-1200	724	52.0%	21.4%	0.1%	6.8%	2.4%	2.1%	4.2%	0.0%	0.1%	0.9%	0.5%	0.4%	0.8%	0.0%	5.7%	1.5%	1.1%	0.0%	100.0%			
Road 49	50	37.8	49.0	N	1200-1300	602	52.5%	20.2%	0.1%	5.8%	2.1%	2.1%	4.1%	0.0%	0.1%	0.8%	0.9%	0.6%	1.4%	0.0%	5.6%	1.6%	1.1%	0.0%	100.0%			
Road 49	50	37.8	49.0	N	1300-1400	603	51.6%	19.9%	0.1%	7.0%	2.5%	2.2%	4.3%	0.0%	0.1%	0.7%	0.7%	0.8%	1.1%	0.0%	6.8%	1.6%	1.1%	0.0%	100.0%			
Road 49	50	37.2	49.0	N	1400-1500	623	51.0%	20.6%	0.1%	6.1%	2.2%	2.1%	4.1%	0.0%	0.1%	0.9%	1.0%	0.7%	1.6%	0.0%	6.8%	1.9%	1.1%	0.0%	100.0%			
Road 49	50	37.0	49.0	N	1500-1600	664	50.9%	20.4%	0.1%	7.1%	2.6%	1.8%	3.5%	0.0%	0.1%	0.9%	0.6%	0.7%	1.6%	0.0%	6.4%	1.8%	0.9%	0.0%	100.0%			
Road 49	50	36.2	49.0	N	1600-1700	726	52.7%	18.2%	0.1%	5.5%	2.0%	1.7%	3.4%	0.0%	0.2%	1.2%	1.5%	1.4%	2.4%	0.0%	6.8%	2.5%	0.9%	0.0%	100.0%			
Road 49	50	35.1	49.0	N	1700-1800	849	51.6%	17.6%	0.0%	4.7%	1.7%	1.1%	2.1%	0.0%	0.1%	0.8%	0.0%	0.7%	1.5%	0.0%	6.7%	4.0%	0.6%	0.0%	100.0%			
Road 49	50	33.8	49.0	N	1800-1900	972	65.3%	15.3%	0.0%	2.8%	1.0%	0.6%	1.1%	0.0%	0.0%	0.1%	1.1%	0.8%	1.7%	0.0%	6.5%	3.1%	0.3%	0.0%	100.0%			
Road 49	50	36.1	49.0	N	1900-2000	786	62.8%	19.7%	0.0%	2.1%	0.8%	0.5%	1.0%	0.0%	0.0%	0.1%	0.9%	0.7%	1.4%	0.0%	7.3%	2.3%	0.3%	0.0%	100.0%			
Road 49	50	36.2	49.0	N	2000-2100	612	57.9%	24.6%	0.0%	2.2%	0.8%	0.5%	1.0%	0.0%	0.0%	0.1%	0.8%	0.6%	1.2%	0.0%	7.7%	2.3%	0.3%	0.0%	100.0%			
Road 49	50	38.4	49.0	N	2100-2200	606	59.5%	24.6%	0.0%	2.3%	0.8%	0.5%	1.0%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	6.9%	2.7%	0.3%	0.0%	100.0%			
Road 49	50	38.5	49.0	N	2200-2300	594	58.4%	26.4%	0.0%	1.7%	0.6%	0.6%	1.1%	0.0%	0.0%	0.1%	0.4%	0.2%	0.5%	0.1%	7.3%	2.2%	0.3%	0.0%	100.0%			
Road 49	50	40.5	49.0	N	2300-0000	442	57.2%	26.0%	0.0%	2.0%	0.7%	1.2%	1.2%	0.0%	0.0%	0.1%	0.4%	0.3%	0.4%	0.1%	7.3%	2.6%	0.3%	0.0%	100.0%			
Road 50	49	50	43.2	N	0000-0100	321	57.7%	25.9%	0.0%	2.3%	0.0%	0.7%	1.4%	0.0%	0.0%	0.2%	0.5%	0.4%	0.8%	1.2%	0.0%	5.9%	2.9%	0.4%	0.0%	100.0%		
Road 50	49	50	45.6	N	0100-0200	208	56.9%	25.5%	0.0%	2.5%	0.0%	0.8%	1.5%	0.0%	0.0%	0.3%	0.6%	0.4%	0.0%	5.9%	2.3%	0.4%	0.0%	100.0%				
Road 50	49	50	46.8	N	0200-0300	152	56.1%	25.0%	0.0%	2.7%	1.0%	0.9%	1.7%	0.0%	0.0%	0.4%	0.7%	0.5%	1.1%	0.0%	5.9%	3.6%	0.4%	0.0%	100.0%			
Road 50	49	50	47.4	N	0300-0400	119	55.3%	24.5%	0.0%	3.0%	1.1%	0.9%	1.8%	0.0%	0.1%	0.4%	0.8%	0.6%	1.2%	0.0%	5.9%	3.9%	0.5%	0.0%	100.0%			
Road 50	49	50	47.2	N	0400-0500	130	54.5%	24.1%	0.0%	3.2%	1.2%	1.0%	2.0%	0.0%	0.1%	0.5%	0.9%	0.7%	1.4%	0.0%	5.8%	4.2%	0.5%	0.0%	100.0%			
Road 50	49	50	45.1	N	0500-0600	225	53.6%	23.8%	0.0%	3.5%	1.2%	1.1%	2.1%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	5.8%	4.6%	0.6%	0.0%	100.0%			
Road 50	49	50	39.7	N	0600-0700	480	52.7%	23.1%	0.0%	3.7%	1.3%	1.2%	2.3%	0.0%	0.1%	0.7%	1.1%	0.8%	1.7%	0.0%	5.8%	4.9%	0.6%	0.0%	100.0%			
Road 50	49	50	33.7	N	0700-0800	867	51.8%	22.6%	0.0%	4.0%	1.4%	1.2%	2.4%	0.0%	0.1%	0.8%	1.2%	0.8%	1.8%	0.0%	5.8%	5.3%	0.6%	0.0%	100.0%			
Road 50	49	50	31.9	N	0800-0900	1115	58.1%	18.6%	0.0%	4.3%	1.6%	1.2%	2.4%	0.0%	0.1%	0.8%	1.1%	0.8%	1.0%	5.2%	3.4%	0.6%	0.0%	100.0%				
Road 50	49	50	34.4	N	0900-1000	894	54.5%	19.8%	0.1%	6.3%	2.3%	1.7%	3.4%	0.0%	0.1%	0.5%	0.9%	0.8%	1.4%	0.0%	5.5%	2.1%	0.9%	0.0%	100.0%			
Road 50	49	50	35.8	N	1000-1100	762	52.3%	20.3%	0.1%	6.8%	2.4%	2.2%	4.3%	0.0%	0.1%	0.6%	0.9%	0.8%	1.3%	0.0%	5.5%	1.6%	1.1%	0.0%	100.0%			
Road 50	49	50	36.4	N	1100-1200	724	52.0%	21.4%	0.1%	6.8%	2.4%	2.1%	4.2%	0.0%	0.1%	0.9%	0.5%	0.4%	0.8%	0.0%	5.7%	1.5%	1.1%	0.0%	100.0%			
Road 50	49	50	37.8	N	1200-1300	602	52.5%	20.2%	0.1%	5.8%	2.1%	2.1%	4.1%	0.0%	0.1%	0.8%	0.9%	0.6%	1.4%	0.0%	5.6%	1.6%	1.1%	0.0%	100.0%			
Road 50	49	50	37.8	N	1300-1400	603	51.6%	19.9%	0.1%	7.0%	2.5%	2.2%	4.3%	0.0%	0.1%	0.7%	0.7%	0.8%	1.1%	0.0%	6.8%	1.6%	1.1%	0.0%	100.0%			
Road 50	49	50	37.2	N	1400-1500	623	51.0%	20.6%	0.1%	6.1%	2.2%	2.1%	4.1%	0.0%	0.1%	0.9%	1.0%	0.7%	1.6%	0.0%	6.8%	1.9%	1.1%	0.0%	100.0%			
Road 50	49	50	37.0	N	1500-1600	664	50.9%	20.4%	0.1%	7.1%	2.6%	1.8%	3.5%	0.0%	0.1%	0.9%	0.6%	0.7%	1.6%	0.0%	6.4%	1.8%	0.9%	0.0%	100.0%			
Road 50	49	50	36.2	N	1600-1700	726	52.7%	18.2%	0.1%	5.5%	2.0%	1.7%	3.4%	0.0%	0.2%	1.2%	1.5%	1.4%	2.4%	0.0%	6.8%	2.5%	0.9%	0.0%	100.0%			
Road 50	49	50	35.1	N	1700-1800	849	51.6%	17.6%	0.0%	4.7%	1.7%	1.1%	2.1%	0.0%	0.1%	0.8%	0.0%	0.7%	1.5%	0.0%	6.7%	4.0%	0.6%	0.0%	100.0%			
Road 50	49	50	33.8	N	1800-1900	972	65.3%	15.3%	0.0%	2.8%	1.0%	0.6%	1.1%	0.0%	0.0%	0.1%	1.1%	0.8%	1.7%	0.0%	6.5%	3.1%	0.3%	0.0%	100.0%			
Road 50	49	50	36.1	N	1900-2000	786	62.8%	19.7%	0.0%	2.1%	0.8%	0.5%	1.0%	0.0%	0.0%	0.1%	0.9%	0.7%	1.4%	0.0%	7.3%	2.3%	0.3%	0.0%	100.0%			
Road 50	49	50	36.2	N	2000-2100	612	57.9%	24.6%	0.0%	2.2%	0.8%	0.5%	1.0%	0.0%	0.0%	0.1%	0.8%	0.6%	1.2%	0.0%	7.7%	2.3%	0.3%	0.0%	100.0%			
Road 50	49	50	38.4	N	2100-2200	606	59.5%	24.6%	0.0%	2.3%	0.8%	0.5%	1.0%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	6.9%	2.7%	0.3%	0.0%	100.0%			
Road 50	49	50	38.5	N	2200-2300	594	58.4%	26.4%	0.0%	1.7%	0.6%	0.6%	1.1%	0.0%	0.0%	0.1%	0.4%	0.2%	0.5%	0.1%	7.3%	2.2%	0.3%	0.0%	100.0%			
Road 50	49	50	40.5	N	2300-0000	442	57.2%	26.0%	0.0%	2.0%	0.7%	1.2%	1.2%	0.0%	0.0%	0.1%	0.4%	0.3%	0.4%	0.1%	7.3%	2.6%	0.3%	0.0%	100.0%			
Road 50	49	50	43.2	N	0000-0100	321	57.7%	25.9%	0.0%	2.3%	0.0%	0.7%	1.4%	0.0%	0.0%	0.2%	0.5%	0.4%	0.8%	1.2%	0.0%	5.9%	2.9%	0.4%	0.0%	100.0%		
Road 50	49	50	45.6	N	0100-0200	208	56.9%	25.5%	0.0%	2.5%	0.0%	0.8%	1.5%	0.0%	0.0%	0.3%	0.6%	0.4%	0.0%	5.9%	2.3%	0.4%	0.0%	100.0%				
Road 50	49	50	46.8	N	0200-0300	152	56.1%	25.0%	0.0%	2.7%	1.0%	0.9%	1.7%	0.0%	0.0%	0.4%	0.7%	0.5%	1.1%	0.0%	5.9%	3.6%	0.4%	0.0%	100.0%			
Road 50	49	50	47.4	N	0300-0400	119	55.3%	24.5%	0.0%	3.0%	1.1%	0.9%	1.8%	0.0%	0.1%	0.4%	0.8%	0.6%	1.2%	0.0%	5.9%	3.9%	0.5%	0.0%	100.0%			
Road 50	49	50	47.2	N	0400-0500	130	54.5%	24.1%	0.0%	3.2%	1.2%	1.0%	2.0%	0.0%	0.1%	0.5%	0.9%	0.7%	1.4%	0.0%	5.8%	4.2%	0.5%	0.0%	100.0%			
Road 50	49	50	45.1	N	0500-0600	225	53.6%	23.8%	0.0%	3.5%	1.2%	1.1%	2.1%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	5.8%	4.6%	0.6%	0.0%	100.0%			
Road 50	49	50	39.7	N	0600-0700	480	52.7%	23.1%	0.0%	3.7%	1.3%	1.2%	2.3%	0.0%														

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters For AERMOD (Year 2023)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Road Vehicle Approach (V/N)	Hour	Total Vehicles (Vehicle)	01 - Private Cars		03 - Light Goods Vehicles <=3.5t	04 - Light Goods Vehicles 3.5-5.5t	05 - Light Goods Vehicles 5.5-8t	06 - Medium Goods Vehicles >=8t	07 - Heavy Goods Vehicles >=12t	08 - Public Light Buses	09 - Private Light Buses >=3.5t	10 - Private Light Buses >=5.5t	11 - Non-farmland Bus <=6.4t	12 - Non-farmland Bus 6.4-15t	13 - Non-farmland Bus 15-24t	14 - Farmland Bus Single Deck	15 - Farmland Bus Double Deck	16 - Motorcyclist	17 - Heavy Vehicles >=24t	18 - Non-farmland Bus >=24t	Total	
							02 - Taxi	02 - Taxi																		
							PC	Taxi	LGV3	LGV4	LGV6	HGV7	HGV8	PLB	PV4	PV5	NFB6	NFB7	NFB8	FBSD	FBDD	MC9	HGV9	NFB9		
Road 1	1	80	80.0	N	0000-0100	971	56.9%	25.5%	0.0%	3.5%	1.3%	1.1%	2.2%	0.0%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	0.3%	2.9%	0.8%	0.0%	100.0%	
Road 1	1	80	80.0	N	0100-0200	632	55.9%	25.0%	0.0%	3.3%	1.4%	1.2%	2.4%	0.0%	0.0%	0.3%	0.3%	0.4%	0.9%	0.0%	3.8%	3.2%	0.9%	0.0%	100.0%	
Road 1	1	80	80.0	N	0200-0300	462	54.4%	24.4%	0.0%	3.2%	1.5%	1.3%	2.8%	0.0%	0.0%	0.3%	0.3%	0.4%	1.1%	0.3%	3.1%	2.8%	1.1%	0.0%	100.0%	
Road 1	1	80	80.0	N	0300-0400	365	53.8%	23.9%	0.0%	4.6%	1.6%	1.4%	2.8%	0.0%	0.1%	0.4%	0.8%	0.5%	1.2%	0.0%	3.7%	3.8%	1.3%	0.0%	100.0%	
Road 1	1	80	80.0	N	0400-0500	401	52.8%	23.4%	0.1%	4.9%	1.8%	1.6%	3.0%	0.0%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	3.7%	4.1%	1.3%	0.0%	100.0%	
Road 1	1	80	80.0	N	0500-0600	693	55.1%	22.6%	0.1%	4.9%	1.7%	1.3%	3.3%	0.0%	0.1%	0.6%	1.0%	0.5%	1.4%	0.0%	4.4%	4.1%	1.3%	0.0%	100.0%	
Road 1	1	80	80.0	N	0600-0700	1482	51.1%	22.3%	0.1%	5.7%	2.0%	1.6%	3.5%	0.0%	0.1%	0.7%	1.0%	0.7%	1.6%	0.3%	3.7%	4.8%	1.0%	0.0%	100.0%	
Road 1	1	80	80.0	N	0700-0800	2989	49.9%	21.7%	0.1%	6.1%	2.2%	1.9%	3.7%	0.0%	0.1%	0.7%	1.1%	0.8%	1.7%	0.3%	3.6%	5.1%	1.2%	0.0%	100.0%	
Road 1	1	77.6	80.0	N	0800-0900	3469	55.1%	17.8%	0.1%	6.1%	2.2%	1.8%	3.7%	0.0%	0.1%	0.8%	1.0%	0.7%	1.7%	0.3%	3.2%	5.2%	1.2%	0.0%	100.0%	
Road 1	1	80	80.0	N	0900-1000	2948	51.0%	18.5%	0.1%	9.3%	3.3%	2.5%	5.0%	0.0%	0.1%	0.5%	0.9%	0.6%	1.3%	0.3%	3.4%	2.0%	1.6%	0.0%	100.0%	
Road 1	1	80	80.0	N	1000-1100	2463	48.3%	18.1%	0.1%	10.0%	3.6%	3.2%	6.2%	0.0%	0.1%	0.5%	0.8%	0.6%	1.2%	0.3%	3.3%	1.5%	1.9%	0.0%	100.0%	
Road 1	1	80.0	80.0	N	1100-1200	3334	48.3%	18.6%	0.8%	9.0%	3.4%	3.1%	6.8%	0.0%	0.1%	0.5%	0.8%	0.7%	1.3%	0.3%	3.3%	1.5%	1.9%	0.0%	100.0%	
Road 1	1	80	78.7	N	1200-1300	3071	48.0%	18.5%	0.1%	9.4%	3.4%	3.1%	6.8%	0.0%	0.1%	0.8%	0.8%	0.6%	1.3%	0.3%	3.8%	1.4%	2.0%	0.0%	100.0%	
Road 1	1	80	78.2	N	1300-1400	3112	46.5%	17.9%	0.1%	11.2%	4.0%	3.5%	6.8%	0.0%	0.1%	0.7%	0.7%	0.5%	1.0%	0.3%	3.7%	1.4%	2.0%	0.0%	100.0%	
Road 1	1	76.5	78.0	N	1400-1500	3342	46.5%	18.5%	0.8%	10.5%	4.0%	3.4%	6.8%	0.0%	0.1%	0.8%	0.8%	0.6%	1.3%	0.3%	3.7%	1.4%	2.0%	0.0%	100.0%	
Road 1	1	76.5	78.0	N	1500-1600	3414	46.2%	18.0%	0.1%	11.5%	4.1%	2.9%	5.7%	0.0%	0.1%	0.8%	0.9%	0.7%	1.4%	0.3%	3.8%	1.7%	2.0%	0.0%	100.0%	
Road 1	1	80	75.1	N	1600-1700	3659	48.8%	16.8%	0.1%	9.0%	3.2%	2.8%	6.5%	0.0%	0.1%	1.2%	1.4%	1.0%	2.2%	0.3%	3.9%	2.3%	1.6%	0.0%	100.0%	
Road 1	1	80	73.2	N	1700-1800	4183	53.5%	16.7%	0.1%	7.9%	2.9%	1.8%	5.5%	0.0%	0.1%	0.8%	0.9%	0.7%	1.4%	0.3%	3.9%	4.6%	1.1%	0.0%	100.0%	
Road 1	1	71.5	80.0	N	1800-1900	4623	63.9%	14.9%	0.1%	7.0%	2.9%	1.8%	5.5%	0.0%	0.1%	0.9%	1.0%	0.7%	1.7%	0.3%	4.1%	4.7%	1.1%	0.0%	100.0%	
Road 1	1	80	77.1	N	1900-2000	6695	62.3%	15.5%	0.0%	3.7%	1.3%	0.9%	1.7%	0.0%	0.0%	0.0%	0.1%	0.8%	0.7%	1.4%	0.3%	4.5%	2.3%	0.5%	0.0%	100.0%
Road 1	1	80	80.0	N	2000-2100	2875	57.5%	24.4%	0.0%	3.3%	1.4%	0.9%	1.7%	0.0%	0.0%	0.1%	0.8%	0.7%	1.2%	0.3%	4.8%	2.3%	0.5%	0.0%	100.0%	
Road 1	1	80	80.0	N	2100-2200	2861	58.0%	24.8%	0.0%	4.9%	1.8%	0.9%	1.7%	0.0%	0.0%	0.1%	0.4%	0.9%	0.5%	0.7%	4.8%	2.7%	0.5%	0.0%	100.0%	
Road 1	1	80	80.0	N	2200-2300	2788	58.1%	26.3%	0.0%	3.1%	1.1%	1.0%	1.9%	0.0%	0.0%	0.1%	0.4%	0.2%	0.5%	0.0%	4.5%	2.2%	0.6%	0.0%	100.0%	
Road 1	1	80	80.0	N	2300-0000	2083	57.1%	25.9%	0.0%	3.4%	1.2%	1.1%	2.1%	0.0%	0.0%	0.1%	0.4%	0.3%	0.7%	0.0%	4.5%	2.5%	0.6%	0.0%	100.0%	
Road 2	2	80	80.0	N	0000-0100	974	53.1%	24.4%	0.1%	3.4%	1.7%	0.4%	1.1%	0.0%	0.0%	0.2%	0.1%	0.4%	0.2%	0.1%	4.1%	2.1%	0.5%	0.0%	100.0%	
Road 2	2	80	80.0	N	0100-0200	637	52.4%	23.4%	0.1%	5.9%	2.1%	1.9%	3.7%	0.0%	0.0%	0.3%	0.3%	0.6%	0.4%	0.9%	0.0%	4.1%	3.0%	1.3%	0.0%	100.0%
Road 2	2	80	80.0	N	0200-0300	468	51.2%	22.8%	0.1%	6.4%	2.3%	2.0%	4.0%	0.0%	0.0%	0.3%	0.6%	0.4%	1.0%	0.0%	4.1%	3.2%	1.4%	0.0%	100.0%	
Road 2	2	80	80.0	N	0300-0400	372	50.0%	22.5%	0.0%	7.2%	2.2%	2.2%	4.2%	0.0%	0.0%	0.3%	0.4%	0.7%	0.5%	0.0%	4.1%	3.2%	1.4%	0.0%	100.0%	
Road 2	2	80	80.0	N	0400-0500	410	48.8%	21.0%	0.1%	7.4%	2.2%	2.2%	4.2%	0.0%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	4.0%	3.3%	1.7%	0.0%	100.0%	
Road 2	2	80	80.0	N	0500-0600	712	47.7%	21.0%	0.1%	7.9%	2.8%	2.5%	4.9%	0.0%	0.1%	0.5%	0.9%	0.6%	1.3%	0.3%	4.0%	4.1%	1.5%	0.0%	100.0%	
Road 2	2	80	80.0	N	0600-0700	1533	46.7%	21.4%	0.1%	7.4%	2.8%	2.2%	4.9%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.3%	4.4%	4.5%	1.5%	0.0%	100.0%	
Road 2	2	80	78.8	N	0700-0800	3314	45.4%	19.8%	0.1%	8.9%	3.2%	2.8%	5.5%	0.0%	0.1%	0.7%	1.0%	0.7%	1.6%	0.3%	3.9%	4.6%	1.5%	0.0%	100.0%	
Road 2	2	80	75.8	N	0800-0900	3622	50.5%	16.2%	0.1%	8.7%	3.5%	2.7%	5.3%	0.0%	0.1%	0.7%	1.0%	0.7%	1.5%	0.3%	3.4%	2.9%	1.6%	0.0%	100.0%	
Road 2	2	80	75.0	N	0900-1000	3070	47.6%	16.2%	0.1%	13.3%	4.8%	3.6%	7.1%	0.0%	0.1%	0.4%	0.8%	0.3%	1.1%	0.3%	3.4%	1.7%	1.1%	0.0%	100.0%	
Road 2	2	80	80.0	N	1000-1100	2699	41.8%	14.7%	0.1%	5.1%	4.4%	3.7%	8.0%	0.0%	0.1%	0.4%	0.9%	0.4%	0.5%	0.0%	3.8%	1.4%	0.5%	0.0%	100.0%	
Road 2	2	80	80.0	N	1100-1200	2554	41.6%	17.1%	0.1%	13.9%	5.0%	4.4%	8.6%	0.0%	0.1%	0.8%	0.4%	0.3%	0.6%	0.0%	3.4%	1.2%	2.5%	0.0%	100.0%	
Road 2	2	80	77.4	N	1200-1300	3082	40.0%	15.4%	0.1%	14.3%	5.1%	5.1%	10.1%	0.0%	0.1%	0.6%	0.7%	0.5%	1.0%	0.0%	2.9%	1.2%	2.9%	0.0%	100.0%	
Road 2	2	80	75.0	N	1300-1400	3195	38.4%	14.7%	0.1%	13.0%	5.2%	4.7%	9.2%	0.0%	0.1%	0.8%	0.7%	0.5%	1.0%	0.0%	2.9%	1.2%	2.9%	0.0%	100.0%	
Road 2	2	80	75.4	N	1400-1500	3370	38.6%	15.6%	0.2%	15.0%	5.4%	5.1%	10.0%	0.0%	0.1%	0.7%	0.8%	0.5%	1.2%	0.2%	2.7%	1.5%	2.8%	0.0%	100.0%	
Road 2	2	80	75.0	N	1500-1600	3457	38.2%	15.3%	0.2%	17.3%	6.2%	4.4%	8.6%	0.0%	0.1%	0.7%	0.8%	0.5%	1.2%	0.0%	2.7%	1.4%	2.6%	0.0%	100.0%	
Road 2	2	80	74.1	N	1600-1700	3669	41.4%	14.3%	0.1%	14.0%	5.6%	4.3%	9.8%	0.0%	0.1%	0.8%	0.7%	0.5%	1.2%	0.0%	2.9%	1.2%	2.9%	0.0%	100.0%	
Road 2	2	80	73.2	N	1700-1800	3983	40.0%	14.7%	0.1%	12.8%	4.6%	2.9%	5.7%	0.0%	0.1%	0.7%	0.8%	0.6%	1.3%	0.3%	3.1%	4.0%	1.7%	0.0%	100.0%	
Road 2	2	80	73.0	N	1800-1900	4183	59.2%	13.9%	0.1%	8.2%	2.9%	1.7%	3.4%	0.0%	0.0%	0.1%	1.0%	0.7%	1.6%	0.0%	3.3%	2.8%	1.1%	0.0%	100.0%	
Road 2	2	80	71.9	N	1900-2000	3388	58.1%	14.4%	0.1%	10.1%	3.5%	1.8%	3.4%	0.0%	0.1%	0.8%	1.1%	0.8%	1.2%	0.0%	2.2%	2.8%	1.1%	0.0%	100.0%	
Road 2	2	80	71.8	N	2000-2100	2561	54.6%	22.9%	0.1%	6.7%	2.4%	1.5%	2.9%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.2%	4.0%	2.2%	0.8%	0.0%	100.0%	
Road 2	2	80	80.0	N	2100-2200	2556	55.0%	22.8%	0.1%	6.9%	2.4%	1.6%	3.1%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	3.5%	2.5%	0.9%	0.0%	100.0%	
Road 2	2	80	80.0	N	2200-2300	2473	54.4%	23.3%	0.1%	5.4%	2.4%	1.7%	3.3%	0.0%	0.0%	0.1%	0.3%	0.3%	0.5%	0.0%	3.1%	2.3%	0.9%	0.0%	100.0%	
Road 2	2	80	80.0	N	2300-0000	1859	53.6%	24.2%	0.1%	5.8%	2.1%	1.9%	3.7%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	3.8%	2.4%	1.1%	0.0%	100.0%	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Traffic Data / Modeling Parameters For AERMOD (Year 2043)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Brood Blue Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <15t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles <15t	07 - Medium Goods Vehicles 15-24t	08 - Public Buses	09 - Private >3.5t	10 - Private >3.5t	11 - Non-franchised Bus <4t	12 - Non-franchised Bus 4-15t	13 - Non-franchised Bus 15-24t	14 - Franchised Bus Single	15 - Franchised Bus Double	16 - Motorcycle	17 - Heavy Goods Vehicles <4t	18 - Non-franchised >24t	Total	
							PC	TAXI	LGV3	LGV4	LGV6	HGV5	HGV7	PLB	PV4	PV5	NFB6	NFB7	NFB8	FBS0	FBD0	MC	HGV9	NFB9		
Road 105	105	50	47.8	N	0000-0100	103	52.5%	23.6%	0.1%	7.9%	2.8%	2.5%	4.9%	0.0%	0.0%	0.2%	0.5%	0.3%	0.7%	0.0%	0.0%	0.2%	1.3%	0.0%	100.0%	
Road 105	105	50	48.5	N	0100-0200	68	51.1%	22.8%	0.1%	6.8%	3.1%	2.7%	5.3%	0.0%	0.0%	0.3%	0.4%	0.5%	0.6%	0.0%	0.0%	2.9%	1.4%	0.0%	100.0%	
Road 105	105	50	48.9	N	0200-0300	50	49.0%	23.0%	0.1%	4.9%	3.0%	2.7%	4.0%	0.0%	0.0%	0.1%	0.3%	0.4%	0.5%	0.0%	0.0%	2.9%	1.4%	0.0%	100.0%	
Road 105	105	50	49.1	N	0300-0400	40	48.2%	21.4%	0.1%	9.9%	3.6%	3.1%	6.1%	0.0%	0.0%	0.4%	0.7%	0.5%	1.1%	0.0%	0.0%	3.4%	1.6%	0.0%	100.0%	
Road 105	105	50	49.0	N	0400-0500	44	46.8%	20.7%	0.1%	10.6%	3.8%	3.3%	6.5%	0.0%	0.1%	0.4%	0.8%	0.5%	1.2%	0.0%	0.0%	3.6%	1.7%	0.0%	100.0%	
Road 105	105	50	49.2	N	0500-0600	77	48.2%	21.0%	0.1%	11.2%	4.0%	3.5%	7.7%	0.0%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	0.0%	3.7%	1.8%	0.0%	100.0%	
Road 105	105	50	48.1	N	0600-0700	168	43.9%	19.2%	0.1%	11.8%	4.3%	3.7%	7.3%	0.0%	0.1%	0.6%	0.9%	0.6%	1.4%	0.0%	0.0%	4.1%	1.9%	0.0%	100.0%	
Road 105	105	50	42.0	N	0700-0800	343	42.6%	18.5%	0.1%	12.5%	4.5%	3.9%	7.7%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	0.0%	4.4%	2.0%	0.0%	100.0%	
Road 105	105	50	42.0	N	0800-0900	601	42.6%	18.5%	0.1%	12.5%	4.5%	3.9%	7.7%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	0.0%	4.4%	2.0%	0.0%	100.0%	
Road 105	105	50	41.4	N	0900-1000	353	40.5%	14.6%	0.2%	17.7%	6.4%	4.8%	8.4%	0.0%	0.1%	0.4%	0.7%	0.5%	1.0%	0.0%	0.0%	1.6%	2.5%	0.0%	100.0%	
Road 105	105	50	42.0	N	1000-1100	316	36.7%	13.4%	0.2%	18.6%	6.6%	5.8%	11.5%	0.0%	0.1%	0.4%	0.6%	0.4%	0.9%	0.0%	0.0%	1.1%	3.0%	0.0%	100.0%	
Road 105	105	50	42.2	N	1100-1200	288	36.2%	12.7%	0.2%	18.6%	6.6%	5.8%	11.5%	0.0%	0.1%	0.4%	0.6%	0.4%	0.9%	0.0%	0.0%	1.1%	3.0%	0.0%	100.0%	
Road 105	105	50	46.3	N	1200-1300	120	8.1%	3.1%	0.4%	33.6%	12.1%	12.0%	23.7%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.2%	6.2%	0.0%	100.0%	
Road 105	105	50	45.58	N	1300-1400	134	7.2%	2.8%	0.4%	36.6%	13.1%	11.3%	22.2%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.2%	5.8%	0.0%	100.0%	
Road 105	105	50	45.7	N	1400-1500	134	7.2%	2.8%	0.4%	36.6%	13.1%	11.3%	22.2%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.2%	5.8%	0.0%	100.0%	
Road 105	105	50	45.7	N	1500-1600	139	7.5%	3.0%	0.4%	39.3%	14.1%	10.0%	19.6%	0.0%	0.0%	0.1%	0.1%	0.2%	0.1%	0.0%	0.0%	0.3%	5.1%	0.0%	100.0%	
Road 105	105	50	46.0	N	1600-1700	131	9.1%	3.1%	0.4%	35.1%	12.6%	11.0%	21.6%	0.0%	0.0%	0.2%	0.3%	0.2%	0.4%	0.0%	0.0%	0.4%	5.6%	0.0%	100.0%	
Road 105	105	50	46.4	N	1700-1800	122	9.1%	3.1%	0.4%	35.1%	12.6%	11.0%	21.6%	0.0%	0.0%	0.2%	0.3%	0.2%	0.4%	0.0%	0.0%	0.4%	5.6%	0.0%	100.0%	
Road 105	105	50	47.4	N	1800-1900	92	21.3%	5.0%	0.4%	34.1%	12.3%	7.1%	14.0%	0.0%	0.0%	0.0%	0.4%	0.3%	0.6%	0.0%	0.0%	0.0%	3.7%	0.0%	100.0%	
Road 105	105	50	48.3	N	1900-2000	63	24.1%	7.6%	0.3%	30.1%	10.8%	7.2%	14.1%	0.0%	0.0%	0.0%	0.4%	0.3%	0.6%	0.0%	0.0%	0.9%	3.7%	0.0%	100.0%	
Road 105	105	50	48.6	N	2000-2100	50	21.9%	9.3%	0.3%	31.3%	11.9%	9.6%	13.6%	0.0%	0.0%	0.0%	0.3%	0.2%	0.5%	0.0%	0.0%	0.9%	3.5%	0.0%	100.0%	
Road 105	105	50	48.6	N	2100-2200	51	21.8%	9.0%	0.3%	31.2%	11.8%	9.5%	13.5%	0.0%	0.0%	0.0%	0.3%	0.1%	0.2%	0.0%	0.0%	0.9%	3.5%	0.0%	100.0%	
Road 105	105	50	48.7	N	2200-2300	46	23.4%	10.0%	0.3%	26.1%	9.4%	8.3%	16.3%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.9%	4.3%	0.0%	100.0%	
Road 105	105	50	49.0	N	2300-0000	37	21.5%	9.7%	0.3%	27.2%	9.8%	8.6%	17.0%	0.0%	0.0%	0.0%	0.2%	0.1%	0.2%	0.0%	0.0%	1.0%	4.4%	0.0%	100.0%	
Road 106	106	50	47.2	N	0000-0100	269	54.4%	24.1%	0.1%	8.3%	2.9%	2.5%	4.9%	0.0%	0.0%	0.2%	0.5%	0.3%	0.7%	0.0%	0.0%	0.2%	1.3%	0.0%	100.0%	
Road 106	106	50	46.3	N	0100-0200	176	53.8%	24.1%	0.1%	6.8%	2.5%	2.2%	4.2%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	0.0%	3.0%	1.1%	0.0%	100.0%	
Road 106	106	50	47.2	N	0200-0300	130	52.5%	23.4%	0.1%	7.4%	2.7%	2.3%	4.6%	0.0%	0.0%	0.3%	0.7%	0.5%	1.0%	0.0%	0.0%	3.3%	1.2%	0.0%	100.0%	
Road 106	106	50	47.8	N	0300-0400	103	51.7%	22.7%	0.1%	8.1%	2.9%	2.5%	4.9%	0.0%	0.0%	0.1%	0.5%	0.3%	0.7%	0.0%	0.0%	0.2%	1.3%	0.0%	100.0%	
Road 106	106	50	47.5	N	0400-0500	114	49.9%	22.1%	0.1%	8.5%	3.1%	2.7%	5.3%	0.0%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	0.0%	3.9%	1.4%	0.0%	100.0%	
Road 106	106	50	45.5	N	0500-0600	199	48.6%	21.4%	0.1%	9.1%	3.3%	2.9%	5.6%	0.0%	0.1%	0.5%	0.9%	0.6%	1.4%	0.0%	0.0%	4.2%	1.5%	0.0%	100.0%	
Road 106	106	50	45.4	N	0600-0700	429	50.7%	23.5%	0.1%	8.1%	3.0%	2.6%	5.1%	0.0%	0.1%	0.5%	0.9%	0.7%	1.5%	0.0%	0.0%	4.0%	1.5%	0.0%	100.0%	
Road 106	106	50	34.8	N	0700-0800	873	46.0%	20.0%	0.1%	10.2%	3.7%	3.2%	6.3%	0.0%	0.1%	0.7%	1.0%	0.7%	1.6%	0.0%	0.0%	4.7%	1.6%	0.0%	100.0%	
Road 106	106	50	32.8	N	0800-0900	1019	50.9%	16.3%	0.1%	11.0%	4.0%	3.1%	6.1%	0.0%	0.1%	0.7%	1.0%	0.7%	1.5%	0.0%	0.0%	5.0%	1.6%	0.0%	100.0%	
Road 106	106	50	34.1	N	0900-1000	874	46.0%	20.0%	0.1%	10.2%	3.7%	3.2%	6.3%	0.0%	0.1%	0.7%	1.0%	0.7%	1.6%	0.0%	0.0%	4.7%	1.6%	0.0%	100.0%	
Road 106	106	50	35.1	N	1000-1100	773	41.3%	16.0%	0.2%	15.7%	5.6%	5.0%	9.8%	0.0%	0.1%	0.4%	0.7%	0.5%	1.0%	0.0%	0.0%	1.3%	2.6%	0.0%	100.0%	
Road 106	106	50	35.7	N	1100-1200	731	41.3%	17.0%	0.2%	15.6%	5.6%	4.9%	9.6%	0.0%	0.1%	0.7%	0.4%	0.3%	0.6%	0.0%	0.0%	1.2%	2.5%	0.0%	100.0%	
Road 106	106	50	30.9	N	1200-1300	1039	37.1%	14.3%	0.2%	17.1%	6.1%	6.1%	12.1%	0.0%	0.1%	0.6%	0.6%	0.6%	1.0%	0.0%	0.0%	1.1%	3.2%	0.0%	100.0%	
Road 106	106	50	30.1	N	1300-1400	1080	34.0%	14.0%	0.2%	15.8%	7.1%	6.1%	12.1%	0.0%	0.1%	0.6%	0.5%	0.3%	0.8%	0.0%	0.0%	1.0%	1.1%	0.0%	100.0%	
Road 106	106	50	29.4	N	1400-1500	1140	35.6%	14.4%	0.2%	17.9%	6.4%	6.1%	11.9%	0.0%	0.1%	0.6%	0.7%	0.5%	1.1%	0.0%	0.0%	1.3%	3.1%	0.0%	100.0%	
Road 106	106	50	29.1	N	1500-1600	1173	35.2%	14.1%	0.2%	20.6%	7.4%	5.2%	10.3%	0.0%	0.1%	0.6%	0.7%	0.5%	1.1%	0.0%	0.0%	1.3%	3.1%	0.0%	100.0%	
Road 106	106	50	28.6	N	1600-1700	1205	38.8%	13.8%	0.2%	18.8%	7.3%	5.3%	11.3%	0.0%	0.1%	0.6%	0.7%	0.5%	1.1%	0.0%	0.0%	1.3%	3.1%	0.0%	100.0%	
Road 106	106	50	28.6	N	1700-1800	1304	44.9%	14.0%	0.2%	15.7%	5.7%	3.6%	7.0%	0.0%	0.1%	0.6%	0.8%	0.5%	1.2%	0.0%	0.0%	1.3%	1.8%	0.0%	100.0%	
Road 106	106	50	29.4	N	1800-1900	1330	58.3%	13.7%	0.1%	10.4%	3.8%	2.2%	4.3%	0.0%	0.0%	0.1%	1.0%	0.7%	1.6%	0.0%	0.0%	2.8%	1.1%	0.0%	100.0%	
Road 106	106	50	33.3	N	1900-2000	1029	58.0%	20.3%	0.1%	8.2%	2.9%	2.5%	4.9%	0.0%	0.0%	0.2%	0.5%	0.3%	0.7%	0.0%	0.0%	2.8%	1.2%	0.0%	100.0%	
Road 106	106	50	36.1	N	2000-2100	801	53.9%	22.9%	0.1%	8.6%	3.1%	1.9%	3.7%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	0.0%	2.2%	1.0%	0.0%	100.0%	
Road 106	106	50	36.1	N	2100-2200	805	54.6%	22.6%	0.1%	8.7%	3.1%	2.0%	4.0%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.0%	2.5%	1.0%	0.0%	100.0%	
Road 106	106	50	36.5	N	2200-2300	771	55.0%	23.0%	0.1%	8.5%	3.0%	2.3%	4.2%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.0%	2.5%	1.0%	0.0%	100.0%	
Road 106	106	50	36.7	N	2300-0000	583	53.4%	24.1%	0.1%	7.6%	2.7%	2.4%	4.7%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.0%	2.4%	1.2%	0.0%	100.0%	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters For AEMOD (Year 2033)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Approach (tN)	Hour	Total Vehicles (tN)	01 - Private Cars	02 - Taxi	03 - Light-Green Vehicles >2-4t	04 - Light-Green Vehicles 2.5-3.5t	05 - Light-Green Vehicles 3.5t	06 - Medium-Green Vehicles >3.5t	07 - Light-Green Vehicles 1-19t	08 - Public Light-Green Vehicles >19t	09 - Private Light-Green Vehicles >3.5t	10 - Private Light-Green Vehicles >3.5t	11 - Non-franchised Bus >4-15	12 - Non-franchised Bus >4-15	13 - Non-franchised Bus >24t	14 - Franchised Single Deck	15 - Franchised 8 Bus Double Deck	16 - Motorcyclist	17 - Heavy Goods Vehicles >4t	18 - Non-franchised Bus >24t	Total	
							PC	TAXI	LGV3	LGV4	LGV5	HGV7	HGV8	PLB	PV4	PV5	NFB8	NFB7	NFB6	FBSD	FBSD	MC	HGV0	NFB9		
Road 7	7	70.0	N	0000-0100	802	56.2%	25.2%	0.0%	3.6%	1.3%	1.1%	2.2%	0.0%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	4.3%	2.8%	1.2%	0.0%	100.0%		
Road 7	7	70.0	N	0100-0200	197	55.0%	24.6%	0.0%	3.9%	1.4%	1.2%	2.4%	0.0%	0.0%	0.3%	0.6%	0.4%	0.0%	0.0%	4.3%	3.1%	1.6%	0.0%	100.0%		
Road 7	7	70.0	N	0200-0300	431	51.0%	24.0%	0.1%	3.7%	1.5%	1.3%	2.4%	0.0%	0.0%	0.3%	0.7%	0.5%	0.3%	0.0%	4.3%	3.1%	2.2%	0.0%	100.0%		
Road 7	7	70.0	N	0300-0400	115	52.7%	23.4%	0.0%	4.6%	1.7%	1.5%	2.9%	0.0%	0.1%	0.4%	0.8%	0.5%	1.2%	0.0%	4.2%	3.7%	2.4%	0.0%	100.0%		
Road 7	7	70.0	N	0400-0500	125	51.8%	22.0%	0.1%	5.0%	1.8%	1.6%	3.1%	0.0%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	4.2%	4.0%	2.3%	0.0%	100.0%		
Road 7	7	70.0	N	0500-0600	216	50.6%	22.2%	0.1%	5.4%	1.9%	1.7%	3.3%	0.0%	0.1%	0.6%	0.9%	0.7%	1.3%	0.0%	4.3%	4.1%	2.4%	0.0%	100.0%		
Road 7	7	70.0	N	0600-0700	461	53.0%	22.0%	0.1%	5.8%	2.1%	1.8%	3.6%	0.0%	0.1%	0.6%	1.0%	0.7%	1.6%	0.0%	4.2%	4.7%	1.3%	0.0%	100.0%		
Road 7	7	70.0	N	0700-0800	935	49.1%	21.4%	0.1%	6.2%	2.2%	1.9%	3.8%	0.0%	0.1%	0.7%	1.1%	0.8%	1.7%	0.0%	4.1%	5.0%	1.6%	0.0%	100.0%		
Road 7	7	67.0	N	0800-0900	1081	46.8%	20.8%	0.1%	6.5%	2.3%	2.0%	4.0%	0.0%	0.1%	0.8%	1.2%	0.9%	1.8%	0.0%	4.0%	5.3%	1.7%	0.0%	100.0%		
Road 7	7	70.0	N	0900-1000	890	50.1%	18.2%	0.1%	9.4%	3.4%	2.6%	5.1%	0.0%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	3.8%	1.9%	2.1%	0.0%	100.0%		
Road 7	7	70.0	N	1000-1100	771	47.1%	18.4%	0.1%	10.1%	3.6%	3.2%	6.3%	0.0%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	3.8%	4.4%	2.6%	0.0%	100.0%		
Road 7	7	70.0	N	1100-1200	701	42.7%	19.4%	0.1%	10.3%	3.7%	3.1%	6.5%	0.0%	0.1%	0.6%	0.9%	0.3%	0.1%	0.0%	4.5%	1.3%	2.6%	0.0%	100.0%		
Road 7	7	70.0	N	1200-1300	802	45.1%	17.4%	0.1%	10.4%	3.7%	3.1%	7.3%	0.0%	0.1%	0.7%	0.9%	0.0%	0.2%	0.0%	4.8%	1.4%	2.8%	0.0%	100.0%		
Road 7	7	70.0	N	1300-1400	822	43.6%	18.8%	0.1%	12.3%	4.4%	3.8%	7.5%	0.0%	0.1%	0.6%	0.6%	0.4%	0.0%	0.0%	4.6%	1.2%	0.0%	0.0%	100.0%		
Road 7	7	69.8	N	1400-1500	876	43.7%	17.7%	0.1%	10.9%	3.9%	3.7%	7.3%	0.0%	0.1%	0.8%	0.9%	0.6%	1.3%	0.0%	4.5%	1.6%	2.7%	0.0%	100.0%		
Road 7	7	68.0	N	1500-1600	1086	41.5%	17.3%	0.1%	12.4%	4.0%	4.0%	7.7%	0.0%	0.1%	0.9%	1.0%	0.6%	1.3%	0.0%	4.4%	1.4%	2.8%	0.0%	100.0%		
Road 7	7	68.5	N	1600-1700	955	46.2%	15.0%	0.1%	10.0%	3.6%	3.1%	6.1%	0.0%	0.1%	1.1%	1.4%	0.9%	2.1%	0.0%	4.9%	2.2%	2.4%	0.0%	100.0%		
Road 7	7	67.3	N	1700-1800	1081	51.1%	16.0%	0.1%	8.9%	3.2%	2.0%	4.0%	0.0%	0.1%	0.7%	0.9%	0.6%	1.4%	0.0%	5.0%	4.4%	1.7%	0.0%	100.0%		
Road 7	7	66.0	N	1800-1900	1184	50.3%	14.5%	0.1%	5.9%	2.0%	1.5%	3.0%	0.0%	0.1%	1.1%	0.8%	0.5%	1.1%	0.0%	4.8%	3.8%	1.9%	0.0%	100.0%		
Road 7	7	60.0	N	1900-2000	939	60.5%	18.0%	0.0%	4.2%	1.5%	1.0%	2.0%	0.0%	0.0%	0.1%	0.6%	0.6%	1.4%	0.0%	5.8%	2.2%	0.8%	0.0%	100.0%		
Road 7	7	70.0	N	2000-2100	732	55.7%	23.0%	0.0%	4.4%	1.6%	1.0%	1.9%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	6.1%	2.2%	0.8%	0.0%	100.0%		
Road 7	7	70.0	N	2100-2200	728	57.0%	23.0%	0.0%	4.1%	1.6%	1.0%	1.9%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	6.1%	2.2%	0.8%	0.0%	100.0%		
Road 7	7	70.0	N	2200-2300	709	56.4%	25.5%	0.0%	3.5%	1.3%	1.1%	2.2%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	5.8%	5.2%	0.8%	0.0%	100.0%		
Road 7	7	70.0	N	2300-0000	531	53.3%	24.9%	0.0%	3.9%	1.4%	1.2%	2.4%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	5.7%	2.4%	1.0%	0.0%	100.0%		
Road 8	8	70.0	N	0000-0100	80	10.8%	10.0%	0.0%	4.4%	1.8%	1.5%	2.0%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	2.4%	1.1%	0.4%	0.0%	100.0%		
Road 8	8	70.0	N	0100-0200	20	41.1%	18.4%	0.1%	4.8%	1.7%	1.5%	3.0%	0.0%	0.0%	0.2%	0.4%	0.3%	0.7%	0.0%	2.4%	2.3%	0.8%	0.0%	100.0%		
Road 8	8	70.0	N	0200-0300	14	40.2%	17.9%	0.1%	5.2%	1.9%	1.6%	3.2%	0.0%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	2.2%	2.4%	2.5%	0.8%	0.0%	100.0%	
Road 8	8	70.0	N	0300-0400	11	36.4%	17.5%	0.1%	5.6%	2.0%	1.7%	3.4%	0.0%	0.0%	0.4%	0.6%	0.5%	1.0%	0.0%	2.0%	2.4%	2.8%	0.9%	0.0%	100.0%	
Road 8	8	70.0	N	0400-0500	13	38.6%	17.0%	0.1%	6.0%	2.2%	1.9%	3.7%	0.0%	0.0%	0.4%	0.6%	0.4%	0.0%	0.2%	2.3%	0.0%	1.0%	0.0%	100.0%		
Road 8	8	70.0	N	0500-0600	22	37.7%	16.6%	0.1%	6.6%	2.3%	2.0%	4.0%	0.0%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	2.3%	2.3%	3.2%	1.0%	0.0%	100.0%	
Road 8	8	70.0	N	0600-0700	47	38.8%	16.1%	0.1%	6.9%	2.5%	2.2%	4.3%	0.0%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	2.3%	3.4%	1.1%	0.0%	100.0%		
Road 8	8	70.0	N	0700-0800	70	37.5%	15.8%	0.1%	7.3%	2.6%	2.3%	4.6%	0.0%	0.1%	0.6%	0.9%	0.6%	1.3%	0.0%	2.0%	3.6%	1.2%	0.0%	100.0%		
Road 8	8	70.0	N	0800-0900	108	41.0%	13.1%	0.1%	8.2%	2.9%	2.3%	4.5%	0.0%	0.1%	0.6%	0.8%	0.6%	1.2%	0.0%	2.1%	2.1%	2.4%	1.2%	0.0%	100.0%	
Road 8	8	70.0	N	0900-1000	82	38.2%	13.2%	0.1%	11.1%	4.0%	3.0%	5.9%	0.0%	0.0%	0.4%	0.6%	0.4%	0.0%	0.0%	2.10%	1.4%	1.6%	0.0%	100.0%		
Road 8	8	70.0	N	1000-1100	111	33.9%	11.0%	0.2%	13.9%	4.1%	3.0%	6.2%	0.0%	0.0%	0.5%	0.7%	0.5%	0.0%	0.0%	2.31%	0.9%	1.6%	0.0%	100.0%		
Road 8	8	70.0	N	1100-1200	77	33.6%	13.9%	0.1%	11.7%	4.2%	3.6%	7.2%	0.0%	0.1%	0.6%	0.3%	0.2%	0.5%	0.1%	2.1%	0.9%	1.9%	0.0%	100.0%		
Road 8	8	70.0	N	1200-1300	219	29.5%	11.5%	0.2%	16.5%	5.9%	5.9%	11.6%	0.0%	0.1%	0.5%	0.5%	0.4%	0.8%	0.0%	12.4%	0.9%	3.0%	0.0%	100.0%		
Road 8	8	70.0	N	1300-1400	1029	26.0%	10.1%	0.2%	19.1%	6.1%	6.1%	12.2%	0.0%	0.1%	0.5%	0.5%	0.4%	0.8%	0.0%	12.4%	0.9%	3.0%	0.0%	100.0%		
Road 8	8	70.0	N	1400-1500	239	28.9%	11.7%	0.2%	17.3%	6.2%	5.9%	11.5%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	11.7%	1.1%	3.0%	0.0%	100.0%		
Road 8	8	70.0	N	1500-1600	245	28.6%	11.5%	0.2%	20.0%	7.2%	5.1%	9.9%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.1%	11.6%	1.0%	2.6%	0.0%	100.0%		
Road 8	8	70.0	N	1600-1700	254	28.2%	11.0%	0.2%	21.2%	6.8%	5.8%	10.6%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.1%	11.5%	1.0%	2.6%	0.0%	100.0%		
Road 8	8	70.0	N	1700-1800	274	36.3%	11.3%	0.2%	15.2%	5.5%	5.4%	6.8%	0.0%	0.1%	0.5%	0.6%	0.4%	1.0%	0.0%	13.8%	3.1%	1.8%	0.0%	100.0%		
Road 8	8	70.0	N	1800-1900	278	44.1%	18.2%	0.1%	10.1%	3.6%	2.1%	4.2%	0.0%	0.0%	0.1%	0.8%	0.6%	1.3%	0.1%	15.2%	2.3%	1.1%	0.0%	100.0%		
Road 8	8	70.0	N	1900-2000	319	40.8%	6.2%	7.8%	1.4%	1.8%	1.6%	2.0%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.1%	17.6%	1.1%	1.7%	0.0%	100.0%		
Road 8	8	70.0	N	2000-2100	172	42.6%	18.1%	0.1%	8.2%	2.9%	1.8%	3.5%	0.0%	0.0%	0.1%	0.6%	0.4%	0.9%	0.0%	18.2%	1.7%	0.9%	0.0%	100.0%		
Road 8	8	70.0	N	2100-2200	169	44.1%	18.2%	0.1%	8.4%	3.0%	1.9%	3.8%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	16.3%	1.6%	2.0%	0.0%	100.0%		
Road 8	8	70.0	N	2200-2300	164	44.1%	18.2%	0.1%	8.4%	3.0%	1.9%	3.8%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	16.3%	1.6%	2.0%	0.0%	100.0%		
Road 8	8	70.0	N	2300-0000	124	42.6%	19.2%	0.1%	7.2%	2.6%	2.3%	4.5%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.1%	17.3%	1.9%	2.2%	0.0%	100.0%		

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters For AEMOD (Year 2033)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Road Street Approach (t/yr)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light-Good Vehicles 2-5-3.5t	04 - Light-Good Vehicles 2-5-3.5t	05 - Light-Good Vehicles 3-5t	06 - Medium-Good Vehicles 3-5t	07 - Heavy-Good Vehicles 3-5t	08 - Public Light Buses	09 - Private Light Buses >3.5t	10 - Private Light Buses >3.5t	11 - Non-Freight Bus <4.15	12 - Non-Freight Bus <4.15	13 - Non-Freight Bus <4.15	14 - Freight Single Deck	15 - Freight 8 Bus Double Deck	16 - Motorcyclist	17 - Heavy-Good Vehicles >4t	18 - Non-Freight Bus >4t	Total	
							PC	TAXI	LGV2	LGV4	LGV6	HGV7	HGV8	PLB	PVA	PVS	NFB6	NFB7	NFB8	FBSD	FBSD	MC	HGV10	NFB9		
Road 11	11	50	45.7	Y	0000-0100	883	52.3%	23.5%	0.0%	4.6%	1.7%	5.1%	2.9%	0.2%	0.0%	0.2%	0.5%	0.3%	0.7%	0.4%	3.4%	2.6%	6.0%	0.0%	100.0%	
Road 11	11	50	47.0	Y	0100-0200	256	49.9%	22.3%	0.1%	5.0%	1.8%	1.6%	3.1%	0.2%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	3.3%	2.8%	8.0%	0.0%	100.0%	
Road 11	11	47.1	Y	0200-0300	213	48.3%	21.0%	21.0%	0.1%	4.7%	1.7%	1.7%	3.2%	0.2%	0.0%	0.2%	0.4%	0.4%	0.7%	0.0%	3.0%	2.5%	7.0%	0.0%	100.0%	
Road 11	11	48.1	Y	0300-0400	157	45.5%	20.1%	1.1%	5.5%	2.0%	1.7%	3.4%	0.2%	0.0%	0.4%	0.7%	0.5%	1.0%	0.0%	3.1%	3.1%	3.2%	12.6%	0.0%	100.0%	
Road 11	11	50	47.9	Y	0400-0500	120	44.9%	19.9%	0.1%	6.0%	2.2%	1.9%	3.7%	0.2%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	3.1%	3.5%	11.8%	0.0%	100.0%	
Road 11	11	48.6	Y	0500-0600	103	43.8%	19.3%	0.1%	6.3%	2.4%	2.0%	3.8%	0.2%	0.0%	0.3%	0.7%	0.6%	1.2%	0.0%	3.2%	3.2%	7.6%	0.0%	100.0%		
Road 11	11	50	43.2	Y	0600-0700	587	46.6%	20.4%	1.1%	7.4%	2.7%	2.3%	4.6%	0.2%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	3.3%	4.4%	4.3%	0.0%	100.0%	
Road 11	11	50	37.3	Y	0700-0800	1224	44.2%	19.3%	0.1%	7.7%	2.8%	2.4%	4.7%	0.2%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	3.2%	4.5%	7.0%	0.0%	100.0%	
Road 11	11	39.2	Y	0800-0900	1408	40.8%	15.8%	0.0%	8.1%	3.0%	2.6%	4.8%	0.2%	0.1%	0.8%	1.1%	0.7%	1.5%	0.0%	3.1%	4.6%	6.0%	0.0%	100.0%		
Road 11	11	50	37.2	Y	0900-1000	1196	44.0%	16.0%	0.1%	11.5%	4.1%	3.1%	6.1%	0.2%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	2.8%	1.7%	7.5%	0.0%	100.0%	
Road 11	11	50	38.0	Y	1000-1100	1655	40.8%	15.8%	0.1%	12.1%	4.3%	3.8%	7.5%	0.2%	0.1%	0.4%	0.7%	0.5%	1.0%	0.0%	2.7%	1.2%	8.7%	0.0%	100.0%	
Road 11	11	50	37.7	Y	1100-1200	1033	40.5%	15.0%	0.1%	12.0%	4.5%	3.7%	7.4%	0.2%	0.1%	0.4%	0.7%	0.5%	1.0%	0.0%	2.7%	1.3%	8.6%	0.0%	100.0%	
Road 11	11	34.9	Y	1200-1300	1038	38.0%	11.0%	0.2%	18.67%	6.8%	6.8%	13.3%	0.0%	0.1%	0.1%	0.5%	0.5%	0.82%	0.0%	0.2%	2.8%	0.8%	8.7%	0.0%	100.0%	
Road 11	11	34.2	Y	1300-1400	1444	26.7%	10.3%	0.2%	21.7%	7.8%	6.7%	13.2%	0.0%	0.0%	0.4%	0.4%	0.4%	0.3%	0.6%	0.0%	2.6%	0.8%	8.3%	0.0%	100.0%	
Road 11	11	33.9	Y	1400-1500	1495	27.6%	11.2%	0.2%	19.8%	7.1%	6.7%	13.2%	0.0%	0.1%	0.5%	0.6%	0.4%	0.8%	0.0%	2.7%	1.0%	8.2%	0.0%	100.0%		
Road 11	11	34.0	Y	1500-1600	1038	38.0%	11.0%	0.2%	18.67%	6.8%	6.8%	13.3%	0.0%	0.1%	0.1%	0.5%	0.5%	0.82%	0.0%	0.2%	2.8%	0.8%	8.7%	0.0%	100.0%	
Road 11	11	33.8	Y	1600-1700	1558	30.5%	10.2%	0.2%	18.8%	6.6%	5.9%	11.6%	0.0%	0.1%	0.7%	0.9%	0.6%	1.4%	0.0%	3.0%	1.4%	7.6%	0.0%	100.0%		
Road 11	11	33.7	Y	1700-1800	1642	36.2%	11.3%	0.2%	18.1%	6.5%	4.1%	8.1%	0.0%	0.1%	0.5%	0.6%	0.4%	1.0%	0.0%	3.3%	1.4%	6.4%	0.0%	100.0%		
Road 11	11	34.1	Y	1800-1900	1158	35.0%	11.5%	0.1%	12.2%	4.5%	4.6%	9.8%	0.0%	0.0%	0.5%	0.6%	0.5%	0.2%	0.0%	3.0%	1.3%	6.0%	0.0%	100.0%		
Road 11	11	33.7	Y	1900-2000	1199	51.6%	16.0%	0.1%	10.2%	3.7%	2.4%	4.8%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	4.5%	1.9%	2.8%	0.0%	100.0%		
Road 11	11	36.4	Y	2000-2100	941	46.1%	18.6%	0.1%	10.5%	3.8%	2.4%	4.6%	0.0%	0.0%	0.1%	0.7%	0.5%	1.5%	0.0%	4.7%	1.9%	3.2%	0.0%	100.0%		
Road 11	11	39.4	Y	2100-2200	941	47.4%	16.6%	0.1%	10.8%	3.9%	2.4%	4.6%	0.0%	0.0%	0.1%	0.3%	0.2%	0.2%	0.0%	4.2%	3.2%	3.2%	0.0%	100.0%		
Road 11	11	39.7	Y	2200-2300	900	47.8%	21.6%	0.1%	8.5%	3.1%	2.7%	5.3%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	4.6%	1.8%	3.4%	0.0%	100.0%		
Road 11	11	41.8	Y	2300-0000	689	45.9%	20.7%	0.1%	9.3%	3.3%	2.9%	5.8%	0.0%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.4%	4.4%	2.0%	4.2%	0.0%	100.0%	
Road 12	12	27.6	Y	0000-0100	20	21.6%	0.0%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 12	12	27.6	Y	0100-0200	20	11.1%	1.4%	0.0%	0.7%	0.2%	0.2%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.2%	0.9%	0.7%	0.0%	100.0%	
Road 12	12	27.6	Y	0200-0300	19	2.2%	1.0%	0.0%	0.6%	0.2%	0.2%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	95.3%	0.0%	100.0%	
Road 12	12	27.7	Y	0300-0400	19	1.8%	0.0%	0.0%	0.5%	0.2%	0.1%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	95.2%	0.0%	100.0%	
Road 12	12	27.6	Y	0400-0500	19	1.8%	0.0%	0.0%	0.6%	0.2%	0.2%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	95.7%	0.0%	100.0%	
Road 12	12	27.6	Y	0500-0600	20	3.1%	1.4%	0.0%	1.0%	0.4%	0.3%	0.6%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.3%	92.8%	0.0%	100.0%		
Road 12	12	27.5	Y	0600-0700	22	6.0%	2.6%	0.0%	2.1%	0.8%	0.7%	1.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.6%	85.5%	0.0%	100.0%		
Road 12	12	24.1	Y	0700-0800	77	3.3%	1.3%	0.0%	1.3%	0.4%	0.4%	0.8%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.2%	93.4%	0.0%	100.0%		
Road 12	12	24.1	Y	0800-0900	78	4.2%	1.3%	0.0%	1.6%	0.6%	0.4%	0.9%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.2%	90.4%	0.0%	100.0%		
Road 12	12	24.1	Y	0900-1000	78	3.2%	1.2%	0.0%	1.8%	0.7%	0.5%	1.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.1%	91.2%	0.0%	100.0%		
Road 12	12	24.1	Y	1000-1100	78	2.6%	1.0%	0.0%	2.0%	0.8%	0.6%	1.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.1%	92.0%	0.0%	100.0%		
Road 12	12	24.1	Y	1100-1200	77	2.5%	1.0%	0.0%	1.6%	0.6%	0.5%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	91.5%	0.0%	100.0%		
Road 12	12	24.1	Y	1200-1300	77	2.8%	1.1%	0.0%	1.5%	0.5%	0.5%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	92.1%	0.0%	100.0%		
Road 12	12	24.1	Y	1300-1400	78	2.8%	1.8%	0.0%	1.5%	0.5%	0.5%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	91.0%	0.0%	100.0%		
Road 12	12	24.1	Y	1400-1500	78	2.9%	1.2%	0.0%	1.7%	0.6%	0.6%	1.2%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.1%	0.0%	0.1%	91.4%	0.0%	100.0%		
Road 12	12	24.1	Y	1500-1600	78	3.0%	1.2%	0.0%	2.0%	0.7%	0.5%	1.6%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.1%	0.0%	0.1%	91.1%	0.0%	100.0%		
Road 12	12	24.1	Y	1600-1700	78	2.4%	1.2%	0.0%	1.8%	0.7%	0.6%	1.2%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.1%	91.0%	0.0%	100.0%		
Road 12	12	24.1	Y	1700-1800	79	4.2%	1.3%	0.0%	1.7%	0.6%	0.4%	0.8%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.4%	90.3%	0.0%	100.0%		
Road 12	12	24.1	Y	1800-1900	79	5.6%	1.3%	0.0%	1.2%	0.4%	0.2%	0.5%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.3%	90.2%	0.0%	100.0%		
Road 12	12	24.1	Y	1900-2000	79	3.4%	1.3%	0.0%	1.3%	0.4%	0.3%	0.8%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.3%	90.0%	0.0%	100.0%		
Road 12	12	24.1	Y	2000-2100	23	10.6%	4.5%	0.0%	2.0%	0.7%	0.4%	0.9%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.4%	80.0%	0.0%	100.0%		
Road 12	12	24.1	Y	2100-2200	23	10.7%	4.4%	0.0%	2.0%	0.7%	0.5%	0.9%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.5%	79.9%	0.0%	100.0%		
Road 12	12	27.5	Y	2200-2300	23	10.6%	4.5%	0.0%	2.0%	0.7%	0.5%	0.9%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.5%	79.9%	0.0%	100.0%		
Road 12	12	27.4	Y	2300-0000	22	8.1%	3.6%	0.0%	1.3%	0.5%	0.4%	0.8%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.4%	78.7%	0.0%	100.0%		

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters For ARMOED (Year 2033)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Light Bus Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <2.5t	04 - Light Goods 2.5-3.5t	05 - Light Goods 3.5t	06 - Medium Goods Vehicles <6t	07 - Medium Goods Vehicles 6-16t	08 - Public Buses	09 - Private Light Buses <0.5t	10 - Private Light Buses 0.5-1.5t	11 - Non-franchised Buses <4t	12 - Non-franchised Buses 4-11.5t	13 - Non-franchised Buses 11.5-24t	14 - Franchise Buses Single Deck	15 - Franchise Buses Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Buses >24t	Total	
							PC	TAXI	LGV	LGVA	LGVB	HGV	HGV2	PLB	PV4	PV5	NFB6	NFB7	NFB8	FBSD	FBDD	MC	HGV3	NFB9		
Road 15	15	50	48.1	N	0000-0100	73	43.1%	19.6%	0.0%	4.6%	1.7%	1.5%	2.9%	0.0%	0.0%	0.2%	0.4%	0.3%	0.6%	0.1%	1.3%	2.2%	20.0%	0.0%	100.0%	
Road 15	15	50	48.5	N	0100-0200	53	38.6%	17.3%	0.0%	4.4%	1.6%	1.4%	2.8%	0.0%	0.0%	0.2%	0.4%	0.3%	0.6%	0.1%	1.2%	2.2%	28.6%	0.0%	100.0%	
Road 15	15	50	48.7	N	0200-0300	43	36.1%	15.0%	0.0%	4.3%	1.6%	1.4%	3.1%	0.0%	0.0%	0.2%	0.4%	0.3%	0.7%	0.1%	1.1%	2.2%	30.0%	0.0%	100.0%	
Road 15	15	50	48.8	N	0300-0400	37	30.7%	13.6%	0.0%	4.4%	1.6%	1.4%	2.7%	0.0%	0.0%	0.2%	0.4%	0.3%	0.7%	0.1%	1.0%	2.2%	40.0%	0.0%	100.0%	
Road 15	15	50	48.8	N	0400-0500	39	31.6%	13.8%	0.1%	4.9%	1.8%	1.6%	3.1%	0.0%	0.0%	0.3%	0.5%	0.4%	0.8%	0.1%	1.0%	1.4%	38.3%	0.0%	100.0%	
Road 15	15	50	48.9	N	0500-0600	58	35.5%	20.9%	0.1%	6.3%	2.3%	2.0%	3.5%	0.0%	0.0%	0.3%	0.5%	0.5%	0.9%	0.1%	1.2%	2.4%	30.0%	0.0%	100.0%	
Road 15	15	50	47.2	N	0600-0700	107	40.8%	17.9%	0.1%	7.7%	2.8%	2.4%	4.8%	0.0%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	1.4%	3.8%	15.0%	0.0%	100.0%	
Road 15	15	50	43.1	N	0700-0800	244	35.0%	15.5%	0.1%	7.3%	2.6%	2.3%	4.5%	0.0%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	1.2%	3.6%	24.0%	0.0%	100.0%	
Road 15	15	50	42.4	N	0800-0900	175	40.0%	16.2%	0.1%	8.1%	2.9%	2.6%	4.9%	0.0%	0.1%	0.5%	0.8%	0.7%	1.2%	0.0%	1.1%	4.3%	21.0%	0.0%	100.0%	
Road 15	15	50	43.0	N	0900-1000	243	34.6%	12.5%	0.1%	10.7%	3.9%	3.9%	5.7%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	1.0%	1.3%	24.4%	0.0%	100.0%	
Road 15	15	50	43.4	N	1000-1100	221	31.1%	12.1%	0.1%	11.0%	3.9%	3.5%	6.8%	0.0%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	1.0%	0.9%	27.5%	0.0%	100.0%	
Road 15	15	50	43.6	N	1100-1200	212	30.6%	12.0%	0.1%	10.8%	3.9%	3.4%	6.8%	0.0%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	1.0%	0.9%	27.0%	0.0%	100.0%	
Road 15	15	50	43.8	N	1200-1300	132	21.6%	12.0%	0.1%	12.0%	6.1%	4.1%	12.0%	0.0%	0.0%	0.1%	0.3%	0.4%	0.3%	0.7%	0.2%	0.6%	20.3%	0.0%	100.0%	
Road 15	15	50	39.7	N	1300-1400	349	23.7%	9.1%	0.2%	19.6%	7.1%	6.1%	12.0%	0.0%	0.0%	0.3%	0.3%	0.2%	0.5%	0.0%	0.6%	0.7%	19.4%	0.0%	100.0%	
Road 15	15	50	39.6	N	1400-1500	359	24.6%	10.0%	0.2%	18.1%	6.5%	6.1%	12.0%	0.0%	0.1%	0.4%	0.5%	0.3%	0.8%	0.0%	0.6%	0.9%	18.9%	0.0%	100.0%	
Road 15	15	50	39.6	N	1500-1600	369	24.6%	9.9%	0.2%	18.1%	6.5%	6.2%	12.0%	0.0%	0.1%	0.4%	0.5%	0.3%	0.8%	0.0%	0.6%	0.9%	18.9%	0.0%	100.0%	
Road 15	15	50	39.5	N	1600-1700	372	27.4%	9.4%	0.2%	17.3%	6.2%	6.4%	10.6%	0.0%	0.1%	0.3%	0.8%	0.6%	1.2%	0.0%	0.7%	1.3%	18.1%	0.0%	100.0%	
Road 15	15	50	39.6	N	1700-1800	388	32.9%	10.3%	0.2%	16.6%	6.0%	5.8%	7.6%	0.0%	0.1%	0.5%	0.8%	0.4%	0.9%	0.0%	0.8%	2.8%	16.6%	0.0%	100.0%	
Road 15	15	50	40.0	N	1800-1900	379	44.5%	12.4%	0.1%	11.9%	4.2%	4.2%	4.2%	0.0%	0.2%	0.5%	0.9%	0.2%	0.5%	0.0%	0.2%	2.1%	16.6%	0.0%	100.0%	
Road 15	15	50	43.8	N	1900-2000	260	50.4%	15.8%	0.1%	10.3%	3.7%	2.4%	4.8%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	1.2%	1.9%	6.9%	0.0%	100.0%	
Road 15	15	50	45.0	N	2000-2100	207	45.6%	19.9%	0.1%	10.0%	3.8%	2.4%	4.6%	0.0%	0.0%	0.1%	0.6%	0.4%	1.0%	0.0%	1.2%	1.8%	8.4%	0.0%	100.0%	
Road 15	15	50	42.0	N	2100-2200	288	46.1%	19.1%	0.1%	10.7%	3.6%	2.5%	4.0%	0.0%	0.0%	0.1%	0.7%	0.2%	0.5%	0.1%	1.1%	0.8%	8.4%	0.0%	100.0%	
Road 15	15	50	45.3	N	2200-2300	198	46.6%	21.1%	0.1%	8.5%	3.0%	2.7%	5.3%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	1.2%	1.8%	8.8%	0.0%	100.0%	
Road 15	15	50	46.2	N	2300-0000	154	43.9%	19.8%	0.1%	8.1%	3.3%	2.9%	5.7%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	1.1%	1.9%	11.0%	0.0%	100.0%	
Road 16	16	60	57.8	N	0000-0100	305	54.7%	17.8%	0.0%	4.0%	1.7%	1.5%	0.5%	0.0%	0.0%	0.0%	0.1%	0.2%	0.5%	0.1%	1.5%	3.3%	1.0%	0.0%	100.0%	
Road 16	16	66.5	N	0100-0200	320	52.8%	22.6%	0.1%	5.1%	1.8%	1.6%	3.1%	0.2%	0.0%	0.0%	0.3%	0.6%	0.3%	0.4%	0.9%	3.9%	3.0%	2.6%	0.0%	100.0%	
Road 16	16	70	66.9	N	0200-0300	148	51.4%	23.9%	0.1%	5.5%	2.0%	1.7%	3.4%	0.2%	0.0%	0.3%	0.6%	0.4%	1.0%	0.0%	3.8%	3.3%	3.3%	0.0%	100.0%	
Road 16	16	69.1	N	0300-0400	119	49.0%	19.8%	0.1%	5.5%	2.1%	1.8%	3.5%	0.2%	0.0%	0.2%	0.5%	0.5%	0.5%	1.5%	0.0%	3.3%	3.0%	3.0%	0.0%	100.0%	
Road 16	16	69.0	N	0400-0500	129	48.0%	21.7%	0.1%	6.3%	2.3%	2.0%	3.9%	0.2%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	3.8%	3.8%	3.8%	0.0%	100.0%		
Road 16	16	66.3	N	0500-0600	222	48.3%	21.4%	0.1%	6.8%	2.5%	2.1%	4.2%	0.2%	0.1%	0.5%	0.9%	0.6%	1.4%	0.0%	3.8%	4.1%	2.7%	0.0%	100.0%		
Road 16	16	66.4	N	0600-0700	473	47.8%	27.0%	0.1%	7.4%	2.6%	2.3%	4.2%	0.1%	0.0%	0.6%	1.0%	0.7%	1.5%	0.0%	3.6%	4.5%	2.7%	0.0%	100.0%		
Road 16	16	61.2	N	0700-0800	566	46.4%	20.2%	0.1%	7.8%	2.8%	2.4%	4.8%	0.1%	0.0%	0.6%	1.1%	0.8%	1.6%	0.0%	3.6%	4.5%	2.7%	0.0%	100.0%		
Road 16	16	56.1	N	0800-0900	1117	51.8%	16.0%	0.1%	8.4%	3.0%	2.4%	4.6%	0.2%	0.1%	0.7%	1.0%	0.7%	1.5%	0.0%	3.3%	3.0%	2.5%	0.0%	100.0%		
Road 16	16	60.0	N	0900-1000	940	46.3%	16.8%	0.1%	11.6%	4.2%	3.2%	6.2%	0.2%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	3.3%	1.8%	3.1%	0.0%	100.0%		
Road 16	16	63.3	N	1000-1100	823	43.3%	12.4%	0.1%	12.4%	4.3%	3.2%	4.3%	0.2%	0.0%	0.3%	0.6%	0.4%	0.8%	0.0%	3.3%	1.8%	3.1%	0.0%	100.0%		
Road 16	16	63.7	N	1100-1200	780	43.2%	17.0%	0.1%	12.3%	4.4%	3.8%	7.5%	0.2%	0.1%	0.8%	0.4%	0.3%	0.7%	0.0%	3.3%	1.2%	3.8%	0.0%	100.0%		
Road 16	16	52.8	N	1200-1300	1013	29.1%	11.2%	0.2%	19.7%	7.1%	1.1%	13.9%	0.0%	0.1%	0.3%	0.5%	0.3%	0.8%	0.0%	3.6%	3.6%	5.0%	0.0%	100.0%		
Road 16	16	50.0	N	1300-1400	1072	27.1%	10.7%	0.2%	21.0%	7.0%	1.1%	16.1%	0.0%	0.1%	0.3%	0.5%	0.3%	0.8%	0.0%	3.6%	3.6%	5.0%	0.0%	100.0%		
Road 16	16	48.7	N	1400-1500	1111	28.0%	11.3%	0.2%	20.7%	7.4%	1.0%	13.7%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	3.4%	1.1%	4.9%	0.0%	100.0%		
Road 16	16	47.9	N	1500-1600	1145	27.6%	11.1%	0.2%	23.7%	8.5%	6.0%	11.8%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	3.3%	1.0%	4.3%	0.0%	100.0%		
Road 16	16	47.4	N	1600-1700	1059	28.0%	10.9%	0.2%	22.8%	8.1%	7.0%	11.8%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	3.3%	1.0%	4.3%	0.0%	100.0%		
Road 16	16	47.7	N	1700-1800	1222	36.7%	11.5%	0.2%	19.8%	6.8%	4.3%	8.4%	0.0%	0.1%	0.5%	0.6%	0.4%	1.0%	0.0%	4.1%	3.2%	3.3%	0.0%	100.0%		
Road 16	16	51.5	N	1800-1900	1193	46.9%	11.7%	0.1%	13.1%	4.7%	2.7%	5.4%	0.0%	0.0%	0.1%	0.9%	0.6%	1.3%	0.0%	4.7%	2.4%	2.6%	0.0%	100.0%		
Road 16	16	62.5	N	1900-2000	960	59.3%	10.9%	0.1%	9.7%	3.7%	2.2%	4.8%	0.0%	0.0%	0.1%	0.5%	0.3%	0.8%	0.0%	4.2%	5.7%	2.6%	0.0%	100.0%		
Road 16	16	64.4	N	2000-2100	712	46.6%	11.9%	0.1%	10.9%	3.9%	2.4%	4.7%	0.0%	0.0%	0.1%	0.7%	0.5%	1.0%	0.0%	5.9%	1.9%	1.7%	0.0%	100.0%		
Road 16	16	64.5	N	2100-2200	712	47.3%	19.8%	0.1%	11.1%	4.0%	2.6%	5.0%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	5.2%	2.2%	1.8%	0.0%	100.0%		
Road 16	16	64.7	N	2200-2300	680	47.1%	8.1%	0.1%	11.6%	3.1%	2.0%	5.2%	0.0%	0.0%	0.1%	0.2%	0.2%	0.4%	0.0%	5.2%	2.0%	1.6%	0.0%	100.0%		
Road 16	16	65.9	N	2300-0000	518	46.0%	20.7%	0.1%	9.6%	3.4%	3.0%	6.0%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	5.6%	2.0%	2.3%	0.0%	100.0%		

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters For AERMOD (Year 2033)																											
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Light Bus Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars		02 - Taxi	03 - Light Goods Vehicles >2.5t	04 - Light Goods 2.5-3.5t	05 - Light Goods 3.5t	06 - Medium Goods Vehicles >4t	07 - Medium Goods Vehicles 4-6t	08 - Public Buses	09 - Private Light Buses >0.5t	10 - Private Light Buses 0.5-1t	11 - Non-franchised Buses >4t	12 - Non-franchised Buses 1.4-4.5t	13 - Non-franchised Buses 15-24t	14 - Franchised Buses Single Deck	15 - Franchised Buses Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicles	18 - Non-franchised Buses >24t	Total	
							PC	TAXI																			LGV3
Road 19	19	70	68.3	N	0000-0100	496	52.8%	23.7%	0.1%	6.4%	2.3%	2.0%	4.0%	0.0%	0.0%	0.2%	0.5%	0.3%	0.6%	0.4%	0.8%	0.0%	2.4%	2.7%	1.8%	0.0%	100.0%
Road 19	19	70	68.9	N	0100-0200	326	51.2%	22.9%	0.1%	7.0%	2.5%	2.2%	4.3%	0.1%	0.0%	0.3%	0.6%	0.4%	0.8%	0.3%	2.3%	2.9%	2.2%	0.0%	100.0%		
Road 19	19	70	68.1	N	0200-0300	241	48.8%	22.2%	0.1%	8.8%	2.2%	2.1%	4.0%	0.1%	0.0%	0.3%	0.6%	0.4%	0.8%	0.3%	2.4%	3.0%	2.3%	0.0%	100.0%		
Road 19	19	70	69.3	N	0300-0400	387	48.4%	21.5%	0.1%	8.1%	2.9%	2.5%	5.0%	0.1%	0.0%	0.4%	0.7%	0.5%	1.1%	0.3%	2.2%	3.4%	2.2%	0.0%	100.0%		
Road 19	19	70	69.2	N	0400-0500	212	47.2%	20.5%	0.1%	8.7%	3.1%	2.7%	5.5%	0.1%	0.1%	0.4%	0.8%	0.5%	1.2%	0.0%	2.2%	3.7%	3.1%	0.0%	100.0%		
Road 19	19	70	68.7	N	0500-0600	368	45.2%	19.8%	0.1%	9.3%	3.3%	2.9%	6.0%	0.1%	0.1%	0.5%	0.9%	0.6%	1.4%	0.0%	2.2%	4.2%	3.5%	0.0%	100.0%		
Road 19	19	70	67.1	N	0600-0700	900	45.2%	19.8%	0.1%	9.9%	3.6%	3.1%	6.1%	0.1%	0.1%	0.6%	0.9%	0.6%	1.4%	0.0%	2.2%	4.2%	2.1%	0.0%	100.0%		
Road 19	19	70	64.0	N	0700-0800	1617	43.8%	19.1%	0.1%	10.4%	3.7%	3.3%	6.4%	0.1%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	2.1%	4.5%	2.5%	0.0%	100.0%		
Road 19	19	70	63.1	N	0800-0900	1231	42.1%	17.8%	0.1%	11.8%	4.1%	3.2%	4.8%	0.1%	0.1%	0.7%	1.1%	0.8%	1.5%	0.0%	2.0%	4.5%	2.5%	0.0%	100.0%		
Road 19	19	70	63.7	N	0900-1000	1625	42.3%	15.4%	0.2%	15.2%	5.4%	4.1%	8.1%	0.1%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	1.9%	1.6%	3.0%	0.0%	100.0%		
Road 19	19	70	64.3	N	1000-1100	1441	39.0%	15.2%	0.2%	15.9%	5.7%	5.0%	9.9%	0.1%	0.1%	0.4%	0.6%	0.4%	1.0%	0.0%	1.8%	1.2%	3.6%	0.0%	100.0%		
Road 19	19	70	64.6	N	1100-1200	1180	39.0%	16.1%	0.2%	15.8%	6.2%	5.0%	10.0%	0.1%	0.1%	0.5%	0.7%	0.5%	1.0%	0.0%	1.8%	1.1%	3.6%	0.0%	100.0%		
Road 19	19	70	64.7	N	1200-1300	1223	38.8%	15.3%	0.2%	15.8%	8.0%	6.0%	15.8%	0.0%	0.1%	0.5%	0.4%	0.3%	0.6%	0.0%	2.4%	0.8%	5.4%	0.0%	100.0%		
Road 19	19	70	64.2	N	1300-1400	1270	23.5%	9.1%	0.3%	25.3%	9.1%	7.8%	15.4%	0.0%	0.0%	0.3%	0.3%	0.2%	0.5%	0.0%	2.2%	0.7%	5.1%	0.0%	100.0%		
Road 19	19	70	64.3	N	1400-1500	1306	24.4%	9.9%	0.2%	23.3%	8.4%	7.9%	15.5%	0.0%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	2.2%	0.9%	5.1%	0.0%	100.0%		
Road 19	19	70	64.1	N	1500-1600	1189	24.4%	9.9%	0.2%	23.3%	8.4%	7.9%	15.5%	0.0%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	2.2%	0.9%	5.1%	0.0%	100.0%		
Road 19	19	70	64.1	N	1700-1800	1347	27.3%	9.4%	0.2%	22.5%	8.1%	7.0%	13.8%	0.0%	0.1%	0.6%	0.8%	0.6%	1.2%	0.0%	2.5%	1.3%	4.6%	0.0%	100.0%		
Road 19	19	70	64.3	N	1700-1800	1191	33.1%	10.3%	0.2%	22.0%	7.9%	5.0%	9.8%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.2%	2.8%	2.8%	3.8%	0.0%	100.0%		
Road 19	19	70	64.3	N	1800-1900	1358	45.0%	15.8%	0.2%	18.2%	5.7%	3.8%	3.9%	0.0%	0.0%	0.3%	0.2%	0.2%	0.3%	0.0%	2.3%	2.2%	3.0%	0.0%	100.0%		
Road 19	19	70	66.3	N	1900-2000	983	48.2%	15.5%	0.1%	12.8%	4.6%	3.0%	6.0%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	4.0%	1.8%	1.9%	0.0%	100.0%		
Road 19	19	70	67.1	N	2000-2100	770	44.1%	18.7%	0.1%	13.4%	4.8%	3.0%	5.8%	0.0%	0.1%	0.1%	0.6%	0.4%	0.9%	0.0%	4.2%	1.8%	2.0%	0.0%	100.0%		
Road 19	19	70	67.1	N	2100-2200	772	44.1%	18.8%	0.1%	13.6%	4.9%	3.1%	6.1%	0.0%	0.0%	0.1%	0.6%	0.4%	0.9%	0.0%	4.2%	1.8%	2.0%	0.0%	100.0%		
Road 19	19	70	67.3	N	2200-2300	732	45.5%	20.6%	0.1%	10.8%	3.9%	3.4%	6.7%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	4.1%	1.7%	2.3%	0.0%	100.0%		
Road 19	19	70	67.9	N	2300-0000	561	43.6%	19.6%	0.1%	11.7%	4.2%	3.7%	7.3%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	4.0%	1.9%	2.6%	0.0%	100.0%		
Road 20	20	50	48.8	N	0000-0100	44	41.8%	9.3%	0.2%	8.8%	3.2%	2.4%	3.2%	0.0%	0.0%	0.0%	0.1%	0.3%	0.2%	0.3%	0.0%	1.3%	0.4%	0.0%	0.0%	100.0%	
Road 20	20	50	49.1	N	0100-0200	31	20.6%	9.2%	0.3%	27.6%	9.9%	8.7%	17.1%	0.0%	0.0%	0.1%	0.2%	0.2%	0.3%	0.0%	0.3%	0.2%	4.5%	0.0%	0.0%	100.0%	
Road 20	20	50	49.3	N	0200-0300	24	19.2%	8.6%	0.3%	28.5%	10.2%	9.0%	17.6%	0.0%	0.0%	0.1%	0.2%	0.2%	0.3%	0.0%	0.3%	0.2%	4.6%	0.0%	0.0%	100.0%	
Road 20	20	50	49.4	N	0300-0400	20	18.2%	8.2%	0.3%	29.2%	10.5%	9.3%	18.2%	0.0%	0.0%	0.1%	0.2%	0.2%	0.3%	0.0%	0.3%	0.2%	4.7%	0.0%	0.0%	100.0%	
Road 20	20	50	49.3	N	0400-0500	23	16.6%	7.3%	0.3%	29.9%	10.7%	9.4%	18.5%	0.0%	0.0%	0.2%	0.2%	0.2%	0.4%	0.0%	0.3%	0.3%	4.8%	0.0%	0.0%	100.0%	
Road 20	20	50	48.8	N	0500-0600	41	15.5%	6.8%	0.3%	30.6%	11.0%	8.6%	18.9%	0.0%	0.0%	0.2%	0.3%	0.2%	0.4%	0.0%	0.3%	0.4%	4.9%	0.0%	0.0%	100.0%	
Road 20	20	50	47.3	N	0600-0700	33	14.5%	6.3%	0.3%	31.2%	11.2%	8.8%	19.2%	0.0%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	0.4%	0.4%	5.0%	0.0%	0.0%	100.0%	
Road 20	20	50	47.4	N	0700-0800	37	13.4%	6.0%	0.3%	31.4%	11.4%	8.9%	19.4%	0.0%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	0.4%	0.4%	5.0%	0.0%	0.0%	100.0%	
Road 20	20	50	43.1	N	0800-0900	234	14.7%	4.7%	0.4%	33.5%	12.0%	8.4%	18.5%	0.0%	0.0%	0.2%	0.3%	0.2%	0.4%	0.0%	0.9%	0.4%	4.8%	0.0%	0.0%	100.0%	
Road 20	20	42.5	N	0900-1000	249	10.4%	3.8%	0.4%	36.6%	13.1%	10.0%	19.6%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.6%	0.1%	5.1%	0.0%	0.0%	100.0%		
Road 20	20	50	43.1	N	1000-1100	241	8.8%	3.4%	0.4%	38.6%	13.2%	8.8%	19.8%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.6%	0.1%	5.0%	0.0%	0.0%	100.0%	
Road 20	20	43.5	N	1100-1200	226	8.9%	3.7%	0.4%	35.3%	12.7%	11.0%	21.7%	0.0%	0.0%	0.2%	0.1%	0.1%	0.1%	0.0%	0.2%	0.5%	5.7%	0.0%	0.0%	100.0%		
Road 20	20	50	42.5	N	1200-1300	209	6.6%	2.6%	0.4%	34.4%	12.4%	12.3%	24.3%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.2%	6.3%	0.0%	0.0%	100.0%		
Road 20	20	50	43.4	N	1300-1400	214	5.7%	2.3%	0.4%	34.7%	11.6%	11.7%	24.6%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.2%	6.1%	0.0%	0.0%	100.0%		
Road 20	20	50	42.7	N	1400-1500	233	6.1%	2.5%	0.4%	35.5%	12.7%	12.0%	25.6%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.2%	6.2%	0.0%	0.0%	100.0%		
Road 20	20	50	42.5	N	1500-1600	243	6.1%	2.5%	0.4%	40.3%	14.5%	10.2%	20.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.2%	5.2%	0.0%	0.0%	100.0%		
Road 20	20	50	43.0	N	1600-1700	227	7.4%	2.8%	0.4%	38.1%	13.2%	11.5%	23.2%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.2%	5.3%	0.0%	0.0%	100.0%		
Road 20	20	50	43.7	N	1700-1800	210	10.0%	3.1%	0.4%	39.5%	14.2%	8.9%	17.6%	0.0%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.9%	4.6%	0.0%	0.0%	100.0%	
Road 20	20	50	45.6	N	1800-1900	155	18.0%	4.2%	0.4%	36.2%	13.0%	7.6%	14.8%	0.0%	0.0%	0.0%	0.3%	0.2%	0.5%	0.0%	0.9%	3.9%	0.0%	0.0%	100.0%		
Road 20	20	50	47.0	N	1900-2000	105	17.0%	4.5%	0.4%	32.8%	12.3%	11.8%	17.7%	0.0%	0.0%	0.0%	0.3%	0.2%	0.5%	0.0%	0.8%	3.8%	0.0%	0.0%	100.0%		
Road 20	20	50	47.0	N	2000-2100	83	16.8%	7.9%	0.4%	33.6%	12.1%	7.4%	14.6%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.7%	3.8%	0.0%	0.0%	100.0%		
Road 20	20	50	47.6	N	2100-2200	85	18.6%	7.7%	0.3%	33.4%	12.0%	7.7%	15.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.8%	3.9%	0.0%	0.0%	100.0%		
Road 20	20	50	47.8	N	2200-2300	82	17.8%	7.8%	0.3%	33.2%	11.9%	7.8%	15.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.8%	3.9%	0.0%	0.0%	100.0%		
Road 20	20	50	48.2	N	2300-0000	61	18.3%	8.3%	0.3%	29.2%	10.5%	9.2%	15.2%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.8%	4.7%	0.0%	0.0%	100.0%		

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters for AERMOD (Year 2033)

Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles >15t	07 - Medium Goods Vehicles >24t	08 - Public Light Bus >24t	09 - Private Light Bus >3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchise d Bus Single Deck	15 - Franchise d Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicle >24t	18 - Non-franchised Bus >24t	Total
							DC	TAXI	LG1	LG2	LG3	MG1	MG2	PLB	PL4	PV1	NFB1	NFB2	NFB3	NFB4	MC	HGV1	NFB5		
Road 21	21	70	68.1	N	0000-0100	540	50.3%	22.6%	0.1	8.1%	2.9%	2.5%	5.0%	0.1%	0.0%	0.2%	0.5%	0.3%	0.7%	0.0%	2.2%	2.5%	2.0%	0.0%	100.0%
Road 21	21	70	68.7	N	0100-0200	358	48.7%	21.8%	0.1	8.8%	3.1%	2.8%	5.4%	0.1	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	2.1%	2.8%	2.4%	0.0%	100.0%
Road 21	21	70	69.0	N	0200-0300	265	47.1%	21.0%	0.1	9.4%	3.4%	3.0%	5.8%	0.1	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	2.1%	3.0%	2.9%	0.0%	100.0%
Road 21	21	69	69.2	N	0300-0400	212	45.5%	20.2%	0.1	10.2%	3.5%	3.2%	6.0%	0.1	0.0%	0.4%	0.7%	0.5%	1.0%	0.0%	2.0%	3.2%	3.0%	0.0%	100.0%
Road 21	21	69	69.1	N	0400-0500	235	44.2%	19.5%	0.1	10.7%	3.8%	3.4%	8.6%	0.1	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	2.0%	3.4%	3.3%	0.0%	100.0%
Road 21	21	70	68.5	N	0500-0600	409	43.2%	19.0%	0.1	11.4%	4.1%	3.6%	7.0%	0.1	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	2.0%	3.7%	2.7%	0.0%	100.0%
Road 21	21	68	67.0	N	0600-0700	483	42.0%	18.4%	0.1	12.1%	4.4%	3.8%	7.5%	0.1	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	1.9%	3.9%	2.4%	0.0%	100.0%
Road 21	21	70	63.1	N	0700-0800	1813	40.5%	17.0%	0.1	12.7%	4.6%	4.0%	7.8%	0.1	0.1%	0.6%	0.9%	0.6%	1.4%	0.0%	1.9%	4.1%	2.8%	0.0%	100.0%
Road 21	21	70	58.5	N	0800-0900	2114	44.9%	14.4%	0.1	13.8%	4.9%	3.9%	7.6%	0.0	0.1%	0.6%	0.9%	0.6%	1.3%	0.0%	1.7%	2.6%	2.6%	0.0%	100.0%
Road 21	21	61	61.0	N	0900-1000	1874	38.1%	13.8%	0.2	18.0%	6.5%	4.9%	9.8%	0.1	0.0%	0.4%	0.6%	0.4%	1.0%	0.0%	1.6%	1.5%	3.3%	0.0%	100.0%
Road 21	21	70	63.1	N	1000-1100	1682	34.7%	13.5%	0.2	18.6%	6.7%	5.9%	11.8%	0.1	0.0%	0.4%	0.6%	0.4%	0.9%	0.0%	1.5%	1.1%	3.9%	0.0%	100.0%
Road 21	21	70	63.5	N	1100-1200	1589	34.7%	14.3%	0.2	18.6%	6.7%	5.8%	11.4%	0.1	0.1%	0.6%	0.3%	0.2%	0.5%	0.0%	1.6%	1.0%	3.9%	0.0%	100.0%
Road 21	21	70	63.7	N	1200-1300	1396	22.7%	8.7%	0.3%	24.2%	8.7%	8.7%	17.0%	0.0	0.0%	0.4%	0.4%	0.3%	0.6%	0.0%	2.0%	0.7%	5.5%	0.0%	100.0%
Road 21	21	70	63.2	N	1300-1400	1501	20.8%	8.0%	0.3%	27.2%	9.8%	8.4%	16.6%	0.0	0.0%	0.3%	0.3%	0.2%	0.5%	0.0%	1.8%	0.6%	5.3%	0.0%	100.0%
Road 21	21	70	63.1	N	1400-1500	1539	21.7%	8.8%	0.3	25.2%	9.3%	8.5%	16.7%	0.0	0.0%	0.4%	0.4%	0.3%	0.7%	0.0%	1.8%	0.9%	5.3%	0.0%	100.0%
Road 21	21	70	63.7	N	1500-1600	1591	21.3%	8.6%	0.3	28.8%	10.3%	7.3%	14.3%	0.0	0.0%	0.4%	0.4%	0.3%	0.7%	0.0%	1.8%	0.8%	4.6%	0.0%	100.0%
Road 21	21	70	63.0	N	1600-1700	1573	24.4%	8.4%	0.3	24.4%	8.8%	7.6%	15.0%	0.0	0.1%	0.6%	0.7%	0.5%	1.1%	0.0%	2.2%	1.1%	4.8%	0.0%	100.0%
Road 21	21	70	63.3	N	1700-1800	1601	30.1%	9.4%	0.3	24.3%	8.7%	5.5%	10.8%	0.0	0.1%	0.4%	0.5%	0.4%	0.8%	0.0%	2.2%	2.6%	3.7%	0.0%	100.0%
Road 21	21	70	64.3	N	1800-1900	1463	43.5%	10.2%	0.2	16.0%	6.5%	3.8%	7.4%	0.0	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	3.0%	2.1%	2.9%	0.0%	100.0%
Road 21	21	65	65.8	N	1900-2000	1088	45.5%	14.3%	0.2	14.7%	5.3%	3.5%	6.9%	0.0	0.0%	0.1%	0.7%	0.5%	1.0%	0.0%	3.6%	1.7%	2.1%	0.0%	100.0%
Road 21	21	70	66.7	N	2000-2100	854	41.6%	17.7%	0.2	15.4%	5.5%	3.4%	6.7%	0.0	0.0%	0.1%	0.6%	0.4%	0.9%	0.0%	3.8%	1.7%	2.2%	0.0%	100.0%
Road 21	21	70	66.7	N	2100-2200	858	42.1%	17.4%	0.2	15.6%	5.6%	3.6%	7.0%	0.0	0.0%	0.0%	0.3%	0.2%	0.5%	0.0%	3.3%	1.9%	2.3%	0.0%	100.0%
Road 21	21	70	66.9	N	2200-2300	808	43.1%	19.5%	0.1	12.4%	4.5%	3.9%	7.7%	0.0	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	3.7%	1.7%	2.5%	0.0%	100.0%
Road 21	21	70	67.6	N	2300-0000	622	41.1%	18.5%	0.1	13.4%	4.2%	4.3%	8.4%	0.0	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	3.6%	1.8%	2.9%	0.0%	100.0%
Road 22	22	50	26.2	N	0000-0100	48	14.1%	6.3%	0.3	31.7%	11.4%	10.0%	19.7%	0.0	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.7%	5.2%	0.0%	100.0%	
Road 22	22	50	27.3	N	0100-0200	34	12.9%	5.8%	0.3	32.4%	11.7%	10.2%	20.1%	0.0	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	5.3%	0.0%	100.0%	
Road 22	22	50	27.9	N	0200-0300	26	11.9%	5.3%	0.3	33.1%	11.1%	10.4%	20.5%	0.0	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	5.3%	0.0%	100.0%
Road 22	22	50	29.2	N	0300-0400	22	10.9%	4.9%	0.4	33.6%	12.1%	10.6%	20.8%	0.0	0.0%	0.1%	0.2%	0.1%	0.2%	0.0%	0.0%	0.8%	5.4%	0.0%	100.0%
Road 22	22	50	27.9	N	0400-0500	26	10.1%	4.5%	0.4	34.1%	12.3%	10.1%	21.1%	0.0	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	0.8%	5.5%	0.0%	100.0%
Road 22	22	50	26.1	N	0500-0600	47	9.3%	4.1%	0.4	34.6%	12.4%	10.8%	21.3%	0.0	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	0.8%	5.6%	0.0%	100.0%
Road 22	22	50	24.2	N	0600-0700	87	8.7%	3.8%	0.4	35.0%	12.6%	11.0%	21.5%	0.0	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	1.6%	11.0%	0.0%	100.0%
Road 22	22	50	22.2	N	0700-0800	229	8.0%	3.5%	0.4	35.3%	12.7%	11.1%	21.8%	0.0	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	0.8%	5.7%	0.0%	100.0%
Road 22	22	50	21.5	N	0800-0900	273	8.7%	2.8%	0.4	37.3%	13.4%	10.4%	20.5%	0.0	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	0.5%	5.4%	0.0%	100.0%
Road 22	22	50	21.0	N	0900-1000	309	6.0%	2.2%	0.4	39.4%	14.1%	10.7%	21.1%	0.0	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.2%	5.6%	0.0%	100.0%
Road 22	22	50	21.0	N	1000-1100	293	5.0%	1.9%	0.4	37.4%	13.4%	11.9%	23.4%	0.0	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.2%	6.1%	0.0%	100.0%
Road 22	22	50	21.3	N	1100-1200	275	5.0%	2.1%	0.4	37.6%	13.5%	11.8%	23.1%	0.0	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.1%	6.0%	0.0%	100.0%
Road 22	22	50	21.2	N	1200-1300	289	6.5%	2.5%	0.4	34.1%	12.5%	12.8%	25.4%	0.0	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.2%	6.4%	0.0%	100.0%
Road 22	22	50	20.7	N	1300-1400	316	5.8%	2.2%	0.4	37.4%	13.4%	11.6%	22.3%	0.0	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.2%	5.9%	0.0%	100.0%
Road 22	22	50	20.7	N	1400-1500	315	6.2%	2.4%	0.4	35.6%	12.8%	12.0%	23.7%	0.0	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.2%	6.2%	0.0%	100.0%
Road 22	22	50	20.5	N	1500-1600	328	6.0%	2.4%	0.4	40.3%	14.5%	10.2%	20.1%	0.0	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.2%	5.3%	0.0%	100.0%
Road 22	22	50	20.9	N	1600-1700	307	7.7%	2.5%	0.4	36.2%	13.3%	11.3%	22.2%	0.0	0.0%	0.2%	0.2%	0.1%	0.3%	0.0%	0.0%	0.3%	5.8%	0.0%	100.0%
Road 22	22	50	21.4	N	1700-1800	284	9.9%	3.1%	0.4	39.6%	14.2%	10.9%	17.6%	0.0	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	0.6%	4.6%	0.0%	100.0%
Road 22	22	50	22.8	N	1800-1900	209	17.7%	4.2%	0.4	36.4%	13.1%	7.6%	14.9%	0.0	0.0%	0.0%	0.3%	0.2%	0.5%	0.0%	0.0%	0.8%	3.9%	0.0%	100.0%
Road 22	22	50	23.8	N	1900-2000	142	19.0%	6.4%	0.4	36.1%	12.5%	12.8%	25.4%	0.0	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.2%	6.4%	0.0%	100.0%
Road 22	22	50	24.3	N	2000-2100	112	18.4%	7.8%	0.4	33.8%	12.1%	7.4%	14.6%	0.0	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.0%	0.7%	3.8%	0.0%	100.0%
Road 22	22	50	24.3	N	2100-2200	115	18.3%	7.6%	0.4	33.6%	12.1%	7.7%	15.2%	0.0	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.8%	4.0%	0.0%	100.0%
Road 22	22	50	24.4	N	2200-2300	102	19.8%	9.0%	0.3	28.3%	10.2%	8.0%	17.7%	0.0	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.8%	4.6%	0.0%	100.0%
Road 22	22	50	24.7	N	2300-0000	82	18.1%	8.2%	0.3	29.3%	10.5%	9.3%	16.3%	0.0	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	4.8%	0.0%	100.0%

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters for AERMOD (Year 2033)

Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles >15t	07 - Medium Goods Vehicles >24t	08 - Public Light Bus >3.5t	09 - Private Light Bus >3.5t	10 - Private Light Bus <=3.5t	11 - Non-Franchised Bus <=4t	12 - Non-Franchised Bus 4.5 - 15t	13 - Non-Franchised Bus 15-24t	14 - Franchise d Bus Single Deck	15 - Franchise d Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicle >24t	18 - Non-Franchised Bus >24t	Total
Road 25	25	50	26.5	N	0000-0100	17	6.8%	3.1%	0.4%	36.3%	13.0%	11.5%	22.5%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.3%	5.9%	0.0%	100.0%
Road 25	25	50	29.0	N	0100-0200	12	6.2%	2.8%	0.4%	36.7%	13.2%	11.6%	22.7%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	0.0%	0.0%	0.4%	5.9%	0.0%	100.0%
Road 25	25	50	29.2	N	0200-0300	10	5.6%	2.5%	0.4%	37.0%	13.3%	11.7%	23.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.4%	6.0%	0.0%	100.0%
Road 25	25	50	29.5	N	0300-0400	10	5.6%	2.5%	0.4%	37.3%	13.3%	11.7%	23.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.4%	6.1%	0.0%	100.0%
Road 25	25	50	29.2	N	0400-0500	10	4.7%	2.1%	0.4%	37.6%	13.5%	11.8%	23.2%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.4%	6.1%	0.0%	100.0%
Road 25	25	50	28.5	N	0500-0600	18	4.3%	1.9%	0.4%	37.8%	13.6%	11.9%	23.3%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.4%	6.1%	0.0%	100.0%
Road 25	25	50	28.5	N	0600-0700	10	4.0%	1.7%	0.4%	38.0%	13.7%	12.0%	23.5%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.4%	6.1%	0.0%	100.0%
Road 25	25	50	24.5	N	0700-0800	87	3.7%	1.6%	0.4%	38.2%	13.7%	12.0%	23.5%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.4%	6.1%	0.0%	100.0%
Road 25	25	50	24.2	N	0800-0900	104	4.0%	1.3%	0.4%	40.2%	14.4%	12.1%	22.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.2%	5.8%	0.0%	100.0%
Road 25	25	50	24.0	N	0900-1000	117	2.7%	1.0%	0.4%	41.5%	14.7%	12.3%	22.3%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.2%	5.8%	0.0%	100.0%
Road 25	25	50	24.0	N	1000-1100	115	2.2%	0.9%	0.4%	38.1%	14.0%	12.4%	24.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.4%	0.0%	100.0%	
Road 25	25	50	24.1	N	1100-1200	108	2.2%	0.9%	0.4%	39.3%	14.1%	12.3%	24.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.3%	0.0%	100.0%	
Road 25	25	50	24.1	N	1200-1300	108	2.0%	0.8%	0.4%	37.1%	13.3%	13.3%	26.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	6.8%	0.0%	100.0%	
Road 25	25	50	23.1	N	1300-1400	122	1.8%	0.7%	0.4%	38.4%	13.4%	12.3%	24.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	6.8%	0.0%	100.0%	
Road 25	25	50	23.9	N	1400-1500	120	1.9%	0.8%	0.4%	38.1%	13.7%	12.9%	25.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	6.8%	0.0%	100.0%	
Road 25	25	50	23.9	N	1500-1600	126	1.9%	0.7%	0.5%	43.2%	15.5%	10.9%	21.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	6.6%	0.0%	100.0%	
Road 25	25	50	24.1	N	1600-1700	135	6.1%	3.1%	0.5%	41.3%	14.3%	12.1%	23.3%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.3%	5.1%	0.0%	100.0%
Road 25	25	50	24.3	N	1700-1800	104	3.2%	1.0%	0.5%	44.2%	16.9%	10.0%	19.7%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.3%	5.1%	0.0%	100.0%
Road 25	25	50	24.8	N	1800-1900	71	6.1%	1.4%	0.5%	43.8%	15.7%	9.1%	16.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.3%	4.7%	0.0%	100.0%
Road 25	25	50	26.0	N	1900-2000	39	6.5%	2.3%	0.5%	40.9%	14.6%	9.3%	18.3%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.3%	4.7%	0.0%	100.0%
Road 25	25	50	27.0	N	2000-2100	37	6.6%	2.2%	0.4%	42.1%	15.1%	9.3%	18.3%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.3%	4.8%	0.0%	100.0%
Road 25	25	50	26.9	N	2100-2200	38	6.5%	2.7%	0.4%	41.6%	14.9%	9.6%	18.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.3%	4.9%	0.0%	100.0%
Road 25	25	50	27.2	N	2200-2300	34	7.2%	3.3%	0.4%	36.0%	12.9%	11.4%	22.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.3%	5.9%	0.0%	100.0%
Road 25	25	50	27.5	N	2300-0000	35	7.8%	3.9%	0.4%	36.0%	12.9%	11.4%	22.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.3%	5.9%	0.0%	100.0%
Road 26	26	50	27.8	N	0000-0100	16	6.0%	2.7%	0.4%	36.8%	13.2%	11.6%	22.9%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.3%	6.0%	0.0%	100.0%
Road 26	26	50	29.1	N	0100-0200	11	5.4%	2.4%	0.4%	37.1%	13.3%	11.7%	23.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.3%	6.0%	0.0%	100.0%
Road 26	26	50	29.3	N	0200-0300	9	4.9%	2.2%	0.4%	37.4%	13.4%	11.8%	23.1%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.3%	6.1%	0.0%	100.0%
Road 26	26	50	29.4	N	0300-0400	7	4.5%	2.0%	0.4%	37.7%	13.5%	11.9%	23.3%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.3%	6.1%	0.0%	100.0%
Road 26	26	50	29.3	N	0400-0500	9	4.1%	1.8%	0.4%	38.0%	13.6%	11.9%	23.4%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.3%	6.1%	0.0%	100.0%
Road 26	26	50	28.8	N	0500-0600	17	3.8%	1.7%	0.4%	38.3%	13.7%	12.0%	23.5%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.3%	6.1%	0.0%	100.0%
Road 26	26	50	28.8	N	0600-0700	37	3.5%	1.5%	0.4%	38.4%	13.8%	12.0%	23.6%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.3%	6.2%	0.0%	100.0%
Road 26	26	50	24.6	N	0700-0800	79	3.2%	1.1%	0.4%	38.5%	13.8%	12.1%	23.7%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.3%	6.2%	0.0%	100.0%
Road 26	26	50	24.6	N	0800-0900	95	3.5%	1.1%	0.4%	40.5%	14.5%	11.3%	22.3%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.2%	5.8%	0.0%	100.0%
Road 26	26	50	24.6	N	0900-1000	95	3.5%	1.1%	0.4%	38.5%	13.8%	12.1%	23.7%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.2%	5.8%	0.0%	100.0%
Road 26	26	50	24.2	N	1000-1100	106	1.9%	0.7%	0.4%	39.3%	14.1%	12.5%	24.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	6.4%	0.0%	100.0%	
Road 26	26	50	24.3	N	1100-1200	99	1.9%	0.8%	0.4%	39.5%	14.2%	12.4%	24.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	6.3%	0.0%	100.0%	
Road 26	26	50	24.3	N	1200-1300	102	1.9%	0.7%	0.4%	39.5%	14.2%	12.5%	24.5%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	6.3%	0.0%	100.0%	
Road 26	26	50	24.0	N	1300-1400	118	4.9%	1.9%	0.4%	37.9%	13.6%	11.7%	23.1%	0.0%	0.0%	0.1%	0.1%	0.0%	0.1%	0.0%	0.0%	0.1%	6.0%	0.0%	100.0%
Road 26	26	50	24.0	N	1400-1500	117	5.3%	2.1%	0.4%	36.1%	13.0%	12.2%	24.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.2%	6.3%	0.0%	100.0%
Road 26	26	50	24.0	N	1500-1600	121	5.3%	1.2%	0.4%	40.9%	14.7%	12.3%	22.3%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.2%	5.8%	0.0%	100.0%
Road 26	26	50	24.1	N	1600-1700	114	6.2%	2.2%	0.4%	36.9%	13.2%	11.5%	22.6%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	0.3%	5.9%	0.0%	100.0%
Road 26	26	50	24.3	N	1700-1800	105	8.5%	2.7%	0.4%	40.6%	14.6%	9.2%	18.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.7%	4.7%	0.0%	100.0%
Road 26	26	50	24.8	N	1800-1900	76	15.5%	3.8%	0.4%	37.8%	13.5%	7.8%	15.5%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.0%	0.7%	4.0%	0.0%	100.0%
Road 26	26	50	26.0	N	1900-2000	41	16.9%	3.8%	0.4%	37.8%	13.5%	7.8%	15.5%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.0%	0.7%	4.0%	0.0%	100.0%
Road 26	26	50	26.9	N	2000-2100	41	16.2%	6.9%	0.4%	35.3%	12.7%	7.8%	15.3%	0.0%	0.0%	0.0%	0.2%	0.2%	0.3%	0.0%	0.0%	0.6%	4.0%	0.0%	100.0%
Road 26	26	50	26.8	N	2100-2200	42	16.1%	6.7%	0.4%	35.1%	12.6%	8.1%	15.9%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.7%	4.1%	0.0%	100.0%
Road 26	26	50	27.1	N	2200-2300	42	16.1%	6.7%	0.4%	35.1%	12.6%	8.1%	15.9%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.7%	4.1%	0.0%	100.0%
Road 26	26	50	27.7	N	2300-0000	30	15.9%	7.2%	0.3%	30.7%	11.0%	9.7%	19.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.7%	5.0%	0.0%	100.0%

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters for AERMOD (Year 2033)

Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles	01 - Private Cars	02 - Taxi	03 - LGV Light Goods Vehicles <=2.5t	04 - LGV Light Goods Vehicles 2.5-3.5t	05 - LGV Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles >15t	07 - Medium Goods Vehicles >24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus<=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchise d Bus Single Deck	15 - Franchise d Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total
							PC	TAXI	LGV3	LGV4	LGV6	HGV7	HGV8	FLB	PV4	PV6	NFB6	NFB7	NFB8	FBSDD	FBDSD	MC	HGV9	NFB9	
Road 29	29	80	80.0	N	0100-0100	705	55.1%	25.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.8%	1.1%	0.0%	100.0%
Road 29	29	80	80.0	N	0100-0200	462	54.8%	24.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.1%	3.0%	0.0%	100.0%
Road 29	29	80	80.0	N	0200-0300	340	53.4%	23.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.7%	3.4%	0.0%	100.0%
Road 29	29	80	80.0	N	0300-0400	271	52.0%	23.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.7%	3.7%	0.0%	100.0%
Road 29	29	80	80.0	N	0400-0500	266	51.2%	22.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.7%	4.0%	0.0%	100.0%
Road 29	29	80	80.0	N	0500-0600	504	51.1%	22.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.7%	4.4%	0.0%	100.0%
Road 29	29	80	80.0	N	0600-0700	1066	50.7%	22.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.7%	4.7%	1.9%	100.0%
Road 29	29	80	80.0	N	0700-0800	1173	49.3%	21.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.7%	5.4%	3.4%	100.0%
Road 29	29	80	80.0	N	0800-0900	2503	55.2%	17.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.3%	3.2%	0.0%	100.0%
Road 29	29	80	80.0	N	0900-1000	2055	50.6%	18.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.4%	2.0%	0.0%	100.0%
Road 29	29	80	80.0	N	1000-1100	1778	47.9%	18.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.5%	1.5%	0.0%	100.0%
Road 29	29	80	80.0	N	1100-1200	1687	47.7%	19.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.5%	1.3%	0.0%	100.0%
Road 29	29	80	80.0	N	1200-1300	1284	21.8%	8.4%	0.2%	18.5%	6.6%	6.6%	13.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	15.0%	0.6%	6.7%	100.0%
Road 29	29	80	80.0	N	1300-1400	1353	20.4%	7.9%	0.2%	21.3%	7.6%	6.6%	13.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.0%	0.1%	6.7%	100.0%
Road 29	29	80	80.0	N	1400-1500	1388	21.1%	8.6%	0.2%	16.5%	7.9%	6.6%	13.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	14.2%	0.8%	5.4%	100.0%
Road 29	29	80	80.0	N	1500-1600	1436	20.9%	8.4%	0.2%	22.5%	8.1%	5.7%	11.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	13.8%	0.8%	5.9%	100.0%
Road 29	29	80	80.0	N	1600-1700	1466	23.2%	8.0%	0.2%	18.8%	6.8%	5.8%	11.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.0%	0.1%	6.7%	100.0%
Road 29	29	80	80.0	N	1700-1800	1541	27.0%	9.8%	0.2%	17.8%	6.4%	4.0%	7.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	17.0%	2.4%	4.8%	100.0%
Road 29	29	80	80.0	N	1800-1900	1500	37.6%	8.8%	0.1%	12.4%	4.4%	2.6%	5.1%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.0%	1.8%	4.2%	100.0%
Road 29	29	80	80.0	N	1900-2000	1156	37.9%	11.9%	0.1%	9.7%	3.5%	2.3%	4.6%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	23.5%	1.4%	2.1%	100.0%
Road 29	29	80	80.0	N	2000-2100	937	34.3%	14.6%	0.1%	10.1%	3.6%	2.2%	4.4%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	24.0%	1.0%	0.3%	100.0%
Road 29	29	80	80.0	N	2100-2200	895	35.7%	14.8%	0.1%	10.5%	3.8%	2.4%	4.8%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	21.9%	1.6%	2.5%	100.0%
Road 29	29	80	80.0	N	2200-2300	867	35.6%	16.1%	0.1%	8.1%	2.9%	2.6%	5.1%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	23.6%	1.4%	2.6%	100.0%
Road 29	29	80	80.0	N	2300-0000	661	34.3%	15.4%	0.1%	0.9%	3.2%	2.8%	5.6%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	23.6%	0.1%	0.1%	100.0%
Road 30	30	70	70.0	N	0000-0100	569	51.6%	23.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.2%	2.6%	4.2%	100.0%
Road 30	30	70	70.0	N	0100-0200	379	49.5%	22.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.2%	2.8%	5.9%	100.0%
Road 30	30	70	70.0	N	0200-0300	284	47.5%	21.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	3.0%	5.6%	100.0%
Road 30	30	70	70.0	N	0300-0400	229	45.5%	20.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	3.2%	9.2%	100.0%
Road 30	30	70	70.0	N	0400-0500	252	44.7%	19.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	3.5%	8.6%	100.0%
Road 30	30	70	70.0	N	0500-0600	426	44.9%	19.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%	3.6%	5.8%	100.0%
Road 30	30	70	70.0	N	0600-0700	897	44.4%	19.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	3.9%	5.7%	100.0%
Road 30	30	70	70.0	N	0700-0800	1861	42.7%	18.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	4.4%	5.4%	100.0%
Road 30	30	70	70.0	N	0800-0900	2155	47.6%	15.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%	2.8%	4.9%	100.0%
Road 30	30	70	70.0	N	0900-1000	1868	41.3%	14.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%	1.6%	4.8%	100.0%
Road 30	30	70	70.0	N	1000-1100	1662	38.0%	14.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.7%	1.2%	6.7%	100.0%
Road 30	30	70	70.0	N	1100-1200	1575	37.9%	15.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.7%	1.1%	6.9%	100.0%
Road 30	30	70	70.0	N	1200-1300	1519	25.5%	9.8%	0.2%	21.2%	7.6%	7.6%	14.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.0%	0.8%	7.3%	100.0%
Road 30	30	70	70.0	N	1300-1400	1619	23.3%	9.1%	0.3%	24.1%	8.7%	7.5%	14.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%	0.7%	8.2%	100.0%
Road 30	30	70	70.0	N	1400-1500	1666	24.5%	9.9%	0.2%	22.8%	9.0%	7.5%	14.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.9%	0.9%	8.1%	100.0%
Road 30	30	70	70.0	N	1500-1600	1718	24.1%	9.7%	0.3%	25.5%	9.1%	6.4%	12.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%	0.9%	8.4%	100.0%
Road 30	30	70	70.0	N	1600-1700	2148	27.7%	9.4%	0.2%	21.3%	7.7%	6.7%	13.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%	1.3%	7.5%	100.0%
Road 30	30	70	70.0	N	1700-1800	1779	33.0%	10.3%	0.2%	20.9%	7.5%	4.7%	9.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	2.8%	6.4%	100.0%
Road 30	30	70	70.0	N	1800-1900	1687	46.1%	10.8%	0.2%	14.9%	5.4%	3.1%	6.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.8%	2.2%	5.8%	100.0%
Road 30	30	70	70.0	N	1900-2000	1243	48.0%	15.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.2%	1.9%	4.4%	100.0%
Road 30	30	70	70.0	N	2000-2100	977	44.4%	16.8%	0.1%	12.8%	5.8%	2.8%	5.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.6%	1.8%	3.3%	100.0%
Road 30	30	70	70.0	N	2100-2200	980	45.0%	16.6%	0.1%	13.0%	4.7%	3.0%	5.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.1%	2.1%	3.4%	100.0%
Road 30	30	70	70.0	N	2200-2300	939	45.7%	20.7%	0.1%	10.3%	3.7%	3.3%	6.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%	0.7%	3.7%	100.0%
Road 30	30	70	70.0	N	2300-0000	735	43.2%	19.7%	0.1%	11.2%	4.4%	3.5%	7.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.3%	1.9%	4.4%	100.0%

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters for AERMOD (Year 2033)

Parameters For Scenario (Year 2050)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Generated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles >15t	07 - Medium Goods Vehicles >24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchise d Bus Double Deck	15 - Franchise d Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicle >24t	18 - Non-franchised Bus >24t	Total	
							PC	TAXI	LGV3	LGV4	LGV6	HGV7	HGV8	FLB	PV4	PV6	NFB6	NFB7	NFB8	FBSDD	FBDSD	MC	HGV9	NFB9		
Road 33	33	70	70.0	N	0100-0100	675	49.9%	22.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
Road 33	33	70	70.0	N	0100-0200	452	47.5%	21.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
Road 33	33	70	70.0	N	0200-0300	341	45.3%	20.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
Road 33	33	70	70.0	N	0300-0400	277	43.1%	19.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
Road 33	33	70	70.0	N	0400-0500	304	42.4%	18.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%		
Road 33	33	70	70.0	N	0500-0600	509	43.0%	19.0%	0.1%	0.3%	2.8%	5.6%	0.1%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	3.0%	3.7%	7.2%	0.0%	100.0%		
Road 33	33	70	70.0	N	0600-0700	1065	43.2%	19.9%	0.1%	0.9%	3.3%	3.1%	6.1%	0.2%	0.1%	0.6%	0.9%	0.8%	1.4%	0.0%	3.0%	4.0%	4.4%	0.0%	100.0%	
Road 33	33	70	70.0	N	0700-0800	1774	43.3%	19.0%	0.1%	1.0%	3.3%	6.3%	1.0%	0.1%	0.6%	0.9%	0.8%	1.4%	0.0%	2.8%	4.2%	4.7%	0.0%	100.0%		
Road 33	33	70	70.0	N	0800-0900	2568	45.8%	14.6%	0.1%	11.2%	4.0%	3.1%	6.2%	0.1%	0.1%	0.6%	0.9%	0.8%	1.4%	0.0%	2.7%	3.7%	6.0%	0.0%	100.0%	
Road 33	33	70	70.0	N	0900-1000	2241	39.4%	14.3%	0.2%	14.9%	5.3%	4.6%	8.0%	0.1%	0.0%	0.4%	0.7%	0.5%	1.0%	0.0%	2.5%	1.5%	7.1%	0.0%	100.0%	
Road 33	33	70	70.0	N	1000-1100	2056	36.0%	14.6%	0.3%	15.4%	4.9%	4.3%	8.0%	0.1%	0.0%	0.4%	0.7%	0.5%	1.0%	0.0%	2.2%	1.5%	7.2%	0.0%	100.0%	
Road 33	33	70	70.0	N	1100-1200	1899	36.0%	14.8%	0.2%	15.3%	5.5%	4.8%	9.4%	0.1%	0.1%	0.7%	0.4%	0.3%	0.5%	0.0%	2.5%	1.0%	8.4%	0.0%	100.0%	
Road 33	33	70	70.0	N	1200-1300	1851	25.1%	10.0%	0.2%	20.0%	7.2%	7.2%	14.1%	0.0%	0.1%	0.4%	0.4%	0.3%	0.7%	0.0%	2.6%	0.8%	0.9%	0.0%	100.0%	
Road 33	33	70	70.0	N	1300-1400	1926	25.1%	10.3%	0.2%	20.3%	7.1%	13.0%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	2.4%	0.8%	0.9%	0.0%	100.0%		
Road 33	33	70	70.0	N	1400-1500	1986	25.1%	10.2%	0.2%	21.0%	7.5%	11.1%	14.0%	0.0%	0.1%	0.4%	0.5%	0.3%	0.8%	0.0%	2.5%	0.9%	5.3%	0.0%	100.0%	
Road 33	33	70	70.0	N	1500-1600	2045	24.8%	10.0%	0.3%	21.4%	8.7%	6.1%	12.0%	0.0%	0.1%	0.4%	0.5%	0.4%	0.8%	0.0%	2.4%	0.9%	8.7%	0.0%	100.0%	
Road 33	33	70	70.0	N	1600-1700	2056	27.9%	9.8%	0.2%	20.1%	7.2%	6.3%	12.4%	0.0%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	2.8%	1.3%	8.7%	0.0%	100.0%	
Road 33	33	70	70.0	N	1700-1800	2142	28.0%	10.0%	0.3%	19.8%	7.1%	6.3%	12.4%	0.0%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	2.8%	1.3%	8.7%	0.0%	100.0%	
Road 33	33	70	70.0	N	1800-1900	2057	47.2%	10.9%	0.1%	13.8%	4.9%	2.9%	5.6%	0.0%	0.1%	0.8%	0.6%	1.2%	0.0%	3.6%	2.2%	7.0%	0.0%	100.0%		
Road 33	33	70	70.0	N	1900-2000	1511	49.0%	15.3%	0.1%	11.3%	4.1%	2.7%	5.3%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	4.5%	1.8%	3.3%	0.0%	100.0%	
Road 33	33	70	70.0	N	2000-2100	1190	49.0%	18.9%	0.1%	11.3%	4.1%	2.7%	5.3%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	4.5%	1.8%	3.3%	0.0%	100.0%	
Road 33	33	70	70.0	N	2100-2200	1191	45.3%	19.8%	0.1%	11.2%	4.3%	2.8%	5.5%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	4.1%	2.1%	3.9%	0.0%	100.0%		
Road 33	33	70	70.0	N	2200-2300	1135	45.9%	20.7%	0.1%	9.5%	3.4%	3.0%	5.9%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	4.5%	1.8%	4.1%	0.0%	100.0%	
Road 33	33	70	70.0	N	2300-0000	672	45.9%	19.8%	0.1%	9.5%	3.4%	3.0%	5.9%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	4.5%	1.8%	4.1%	0.0%	100.0%	
Road 34	34	80	80.0	N	0100-0100	675	54.8%	25.5%	0.0%	3.1%	1.1%	1.0%	2.0%	0.0%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	2.9%	2.1%	0.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	0100-0200	442	55.4%	24.8%	0.0%	3.4%	1.2%	1.1%	2.1%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	2.9%	3.1%	3.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	0200-0300	346	54.0%	24.0%	0.0%	3.7%	1.3%	1.2%	2.5%	0.0%	0.0%	0.3%	0.9%	0.5%	0.0%	0.0%	2.8%	3.4%	4.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	0300-0400	2539	52.8%	23.9%	0.0%	4.0%	1.4%	1.4%	4.0%	0.0%	0.0%	0.3%	0.9%	0.5%	0.0%	0.0%	2.8%	3.7%	4.9%	0.0%	100.0%	
Road 34	34	80	80.0	N	0400-0500	283	51.8%	22.9%	0.0%	4.3%	1.6%	1.4%	2.7%	0.0%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	2.8%	4.0%	4.6%	0.0%	100.0%	
Road 34	34	80	80.0	N	0500-0600	482	51.7%	22.8%	0.0%	4.7%	1.7%	1.5%	2.9%	0.0%	0.1%	0.6%	0.9%	0.7%	1.5%	0.0%	2.8%	4.4%	3.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	0600-0700	1519	41.4%	15.1%	0.1%	5.1%	1.9%	1.3%	3.1%	0.0%	0.1%	0.7%	1.1%	0.7%	1.5%	0.0%	2.8%	4.4%	3.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	0700-0800	2078	49.9%	21.7%	0.1%	5.4%	1.9%	1.7%	3.3%	0.0%	0.1%	0.7%	1.1%	0.8%	1.7%	0.0%	2.8%	5.1%	2.9%	0.0%	100.0%	
Road 34	34	80	80.0	N	0800-0900	2395	55.9%	17.9%	0.1%	5.5%	2.1%	1.7%	3.2%	0.5%	0.1%	0.8%	1.7%	0.0%	2.5%	3.2%	2.8%	2.6%	0.0%	100.0%		
Road 34	34	80	80.0	N	0900-1000	1963	56.8%	18.9%	0.1%	5.8%	2.3%	1.8%	3.5%	0.5%	0.1%	0.8%	1.7%	0.0%	2.5%	3.2%	2.8%	2.6%	0.0%	100.0%		
Road 34	34	80	80.0	N	1000-1100	1696	48.6%	19.0%	0.1%	9.0%	3.2%	2.8%	5.6%	0.7%	0.1%	0.5%	0.8%	1.2%	0.0%	2.8%	1.5%	4.0%	0.0%	100.0%		
Road 34	34	80	80.0	N	1100-1200	1610	48.3%	19.9%	0.1%	8.9%	3.2%	2.8%	5.5%	0.7%	0.1%	0.9%	0.5%	0.3%	0.7%	0.0%	2.8%	1.4%	4.1%	0.0%	100.0%	
Road 34	34	80	80.0	N	1200-1300	1610	48.3%	20.2%	0.1%	8.9%	3.2%	2.8%	5.5%	0.7%	0.1%	0.9%	0.5%	0.3%	0.7%	0.0%	2.8%	1.4%	4.1%	0.0%	100.0%	
Road 34	34	80	80.0	N	1300-1400	1124	44.8%	23.9%	0.2%	21.7%	7.8%	6.7%	13.2%	0.0%	0.0%	0.3%	0.3%	0.4%	0.1%	14.3%	0.6%	7.2%	0.0%	100.0%		
Road 34	34	80	80.0	N	1400-1500	1159	19.6%	7.9%	0.2%	20.0%	7.2%	6.8%	13.3%	0.9%	0.0%	0.3%	0.4%	0.3%	0.0%	14.7%	0.7%	7.1%	0.0%	100.0%		
Road 34	34	80	80.0	N	1500-1600	1911	19.3%	7.8%	0.2%	23.0%	8.3%	5.8%	11.4%	0.8%	0.0%	0.3%	0.4%	0.3%	0.6%	0.1%	14.3%	0.7%	6.8%	0.0%	100.0%	
Road 34	34	80	80.0	N	1600-1700	1212	21.4%	7.8%	0.2%	18.8%	6.1%	5.8%	11.8%	0.8%	0.0%	0.3%	0.4%	0.3%	0.6%	0.1%	16.8%	1.0%	6.5%	0.0%	100.0%	
Road 34	34	80	80.0	N	1700-1800	1267	25.8%	8.1%	0.2%	18.4%	6.6%	4.2%	8.2%	0.9%	0.0%	0.4%	0.5%	0.3%	0.7%	0.1%	18.2%	2.2%	5.5%	0.0%	100.0%	
Road 34	34	80	80.0	N	1800-1900	1222	35.3%	8.3%	0.1%	12.9%	4.6%	2.7%	5.3%	1.0%	0.0%	0.1%	0.6%	0.4%	0.9%	0.1%	21.0%	1.7%	4.8%	0.0%	100.0%	
Road 34	34	80	80.0	N	1900-2000	917	35.3%	10.2%	0.1%	12.1%	4.6%	2.7%	5.3%	1.0%	0.0%	0.1%	0.6%	0.4%	0.9%	0.1%	24.0%	1.7%	4.4%	0.0%	100.0%	
Road 34	34	80	80.0	N	2000-2100	745	32.4%	13.7%	0.1%	10.5%	3.8%	2.3%	4.6%	1.3%	0.0%	0.1%	0.5%	0.3%	0.7%	0.0%	25.7%	1.3%	2.7%	0.0%	100.0%	
Road 34	34	80	80.0	N	2100-2200	725	33.8%	14.0%	0.1%	11.0%	3.9%	2.5%	5.0%	1.3%	0.0%	0.0%	0.2%	0.2%	0.4%	0.0%	23.2%	1.5%	2.8%	0.0%	100.0%	
Road 34	34	80	80.0	N	2200-2300	723	35.2%	14.3%	0.1%	10.8%	3.9%	2.5%	5.0%	1.3%	0.0%	0.0%	0.2%	0.2%	0.4%	0.0%	23.2%	1.5%	2.8%	0.0%	100.0%	
Road 34	34	80	80.0	N	2300-0000	537	32.4%	14.6%	0.1%	9.3%	3.3%	3.0%	5.8%	1.2%	0.0%	0.1%	0.2%	0.2%	0.4%	0.0%	24.3%	1.4%	3.6%	0.0%	100.0%	

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters for AERMOD (Year 2033)

Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles >15t	07 - Medium Goods Vehicles >24t	08 - Public Light Bus >24t	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchise d Bus Single Deck	15 - Franchise d Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total
							PC	TAXI	LGV3	LGV4	LGV6	HGV7	HGV8	FLB	PV4	PV6	NFB6	NFB7	NFB8	FBS0	FBS0	MC	HGV9	NFB9	
Road 37	37	50	50.0	Y	0000-0100	2	49.6%	22.3%	0.1%	9.7%	3.5%	3.1%	6.0%	0.0%	0.0%	0.2%	0.5%	0.3%	0.7%	0.0%	2.5%	1.6%	0.0%	100.0%	
Road 37	37	50	50.0	Y	0100-0200	1	48.0%	21.5%	0.1%	10.5%	3.8%	3.3%	6.5%	0.0%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	2.7%	1.7%	0.0%	100.0%	
Road 37	37	50	50.0	Y	0200-0300	1	46.5%	20.7%	0.1%	11.2%	4.0%	3.5%	7.0%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	2.9%	1.8%	0.0%	100.0%	
Road 37	37	50	50.0	Y	0300-0400	1	43.8%	19.9%	0.1%	12.0%	4.3%	3.8%	7.4%	0.0%	0.0%	0.4%	0.6%	0.4%	0.9%	0.0%	3.2%	1.9%	0.0%	100.0%	
Road 37	37	50	50.0	Y	0400-0500	1	43.4%	19.2%	0.1%	12.7%	4.6%	4.0%	7.9%	0.0%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	3.4%	2.1%	0.0%	100.0%	
Road 37	37	50	50.0	Y	0500-0600	1	41.9%	18.4%	0.1%	13.4%	4.8%	4.2%	8.3%	0.0%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	3.6%	2.2%	0.0%	100.0%	
Road 37	37	50	49.9	Y	0600-0700	3	40.4%	17.7%	0.1%	14.2%	5.1%	4.4%	8.7%	0.0%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	3.8%	2.3%	0.0%	100.0%	
Road 37	37	50	49.8	Y	0700-0800	7	39.0%	17.0%	0.2%	14.9%	5.3%	4.6%	9.1%	0.0%	0.1%	0.6%	0.9%	0.6%	1.4%	0.0%	4.0%	2.4%	0.0%	100.0%	
Road 37	37	50	49.8	Y	0800-0900	8	43.0%	13.8%	0.2%	16.0%	5.7%	4.5%	8.8%	0.0%	0.1%	0.6%	0.8%	0.6%	1.3%	0.0%	0.0%	2.5%	2.3%	0.0%	100.0%
Road 37	37	50	49.8	Y	0900-1000	7	35.8%	13.0%	0.2%	20.5%	7.4%	5.6%	11.0%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	1.4%	2.9%	0.0%	100.0%	
Road 37	37	50	49.8	Y	1000-1100	6	32.4%	12.6%	0.2%	21.0%	7.5%	6.7%	13.1%	0.0%	0.0%	0.4%	0.5%	0.4%	0.8%	0.0%	1.0%	3.4%	0.0%	100.0%	
Road 37	37	50	49.8	Y	1100-1200	6	32.4%	13.4%	0.2%	21.0%	7.5%	6.6%	12.9%	0.0%	0.1%	0.6%	0.3%	0.2%	0.5%	0.0%	0.0%	3.4%	0.0%	100.0%	
Road 37	37	50	49.8	Y	1200-1300	6	34.5%	13.3%	0.2%	18.6%	6.7%	6.7%	13.1%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	1.0%	3.4%	0.0%	100.0%	
Road 37	37	50	49.8	Y	1300-1400	7	32.2%	12.4%	0.2%	21.4%	7.7%	6.6%	13.0%	0.0%	0.1%	0.5%	0.5%	0.3%	0.7%	0.0%	1.0%	3.4%	0.0%	100.0%	
Road 37	37	50	49.8	Y	1400-1500	7	33.1%	13.4%	0.2%	16.9%	7.0%	6.6%	12.9%	0.0%	0.1%	0.6%	0.7%	0.5%	1.0%	0.0%	1.2%	3.4%	0.0%	100.0%	
Road 37	37	50	49.8	Y	1500-1600	7	32.6%	13.1%	0.2%	22.4%	8.0%	5.7%	11.1%	0.0%	0.1%	0.6%	0.7%	0.5%	1.0%	0.0%	1.2%	2.9%	0.0%	100.0%	
Road 37	37	50	49.8	Y	1600-1700	7	36.2%	12.5%	0.2%	18.4%	6.8%	5.8%	11.3%	0.0%	0.1%	0.9%	1.1%	0.7%	1.6%	0.0%	1.7%	3.0%	0.0%	100.0%	
Road 37	37	50	49.8	Y	1700-1800	8	42.4%	13.3%	0.2%	17.4%	6.3%	3.9%	7.8%	0.0%	0.1%	0.6%	0.7%	0.5%	1.1%	0.0%	3.6%	2.0%	0.0%	100.0%	
Road 37	37	50	49.8	Y	1800-1900	8	56.2%	13.2%	0.1%	11.8%	4.2%	2.5%	4.8%	0.0%	0.0%	0.1%	1.0%	0.7%	1.5%	0.0%	0.2%	1.3%	0.0%	100.0%	
Road 37	37	50	49.9	Y	1900-2000	6	56.8%	17.8%	0.1%	9.3%	3.3%	2.2%	4.4%	0.0%	0.0%	0.1%	0.9%	0.6%	1.3%	0.0%	0.2%	1.1%	0.0%	100.0%	
Road 37	37	50	49.9	Y	2000-2100	5	52.3%	22.2%	0.1%	9.8%	3.3%	2.2%	4.3%	0.0%	0.0%	0.1%	0.9%	0.6%	1.1%	0.0%	0.2%	1.1%	0.0%	100.0%	
Road 37	37	50	49.9	Y	2100-2200	5	52.9%	21.9%	0.1%	9.9%	3.6%	2.3%	4.5%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.2%	1.2%	0.0%	100.0%	
Road 37	37	50	49.9	Y	2200-2300	4	53.4%	24.1%	0.1%	7.8%	2.8%	2.5%	4.9%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.2%	1.1%	0.0%	100.0%	
Road 37	37	50	49.9	Y	2300-0000	3	51.8%	23.5%	0.1%	5.8%	3.1%	2.7%	5.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.2%	1.4%	0.0%	100.0%	
Road 38	38	50	48.1	Y	0000-0100	69	37.5%	16.8%	0.1%	1.2%	2.6%	2.3%	4.5%	1.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	1.9%	25.0%	0.0%	100.0%	
Road 38	38	50	48.5	Y	0100-0200	51	32.3%	14.5%	0.1%	6.9%	2.5%	2.2%	4.3%	0.0%	0.0%	0.2%	0.4%	0.2%	0.5%	0.0%	1.8%	33.2%	0.0%	100.0%	
Road 38	38	50	48.6	Y	0200-0300	42	28.1%	12.5%	0.1%	6.7%	2.4%	2.1%	4.1%	0.0%	0.0%	0.2%	0.4%	0.2%	0.5%	0.0%	1.8%	40.0%	0.0%	100.0%	
Road 38	38	50	48.6	Y	0300-0400	37	24.8%	11.0%	0.1%	6.5%	2.2%	2.0%	4.0%	0.7%	0.0%	0.2%	0.4%	0.2%	0.5%	0.0%	1.7%	45.4%	0.0%	100.0%	
Road 38	38	50	48.7	Y	0400-0500	40	25.1%	11.1%	0.1%	7.2%	2.6%	2.3%	4.5%	0.7%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	2.0%	42.8%	0.0%	100.0%	
Road 38	38	50	48.3	Y	0500-0600	57	29.6%	13.0%	0.1%	9.3%	3.4%	2.9%	5.8%	0.0%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	2.5%	30.4%	0.0%	100.0%	
Road 38	38	50	47.1	Y	0600-0700	35	33.8%	14.8%	0.1%	11.7%	4.4%	3.7%	7.2%	1.0%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	3.7%	17.6%	0.0%	100.0%	
Road 38	38	50	42.7	Y	0700-0800	245	28.7%	12.5%	0.1%	10.8%	3.9%	3.4%	6.6%	0.0%	0.1%	0.4%	0.7%	0.5%	1.0%	0.0%	2.9%	27.7%	0.0%	100.0%	
Road 38	38	50	41.9	Y	0800-0900	276	33.0%	10.5%	0.1%	12.0%	4.3%	3.4%	6.6%	0.7%	0.1%	0.4%	0.6%	0.4%	1.0%	0.0%	0.0%	24.8%	0.0%	100.0%	
Road 38	38	50	42.2	Y	0900-1000	255	26.8%	9.7%	0.2%	15.1%	5.4%	4.1%	8.1%	0.8%	0.0%	0.3%	0.5%	0.3%	0.7%	0.0%	1.0%	27.0%	0.0%	100.0%	
Road 38	38	50	42.5	Y	1000-1100	237	23.6%	9.2%	0.2%	15.1%	5.4%	4.8%	9.4%	0.8%	0.0%	0.3%	0.4%	0.3%	0.6%	0.0%	0.7%	29.3%	0.0%	100.0%	
Road 38	38	50	42.8	Y	1100-1200	227	23.3%	9.6%	0.2%	14.8%	5.3%	4.6%	9.1%	0.0%	0.1%	0.4%	0.2%	0.4%	0.0%	0.0%	0.7%	30.4%	0.0%	100.0%	
Road 38	38	50	44.1	Y	1200-1300	148	6.1%	2.4%	0.3%	6.3%	0.6%	0.6%	0.9%	0.0%	0.0%	0.1%	0.4%	0.2%	0.5%	0.0%	0.8%	46.3%	0.0%	100.0%	
Road 38	38	50	44.2	Y	1300-1400	137	5.7%	2.2%	0.2%	20.8%	7.5%	6.5%	12.7%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.2%	43.8%	0.0%	100.0%	
Road 38	38	50	44.2	Y	1400-1500	158	6.1%	2.5%	0.2%	18.8%	7.1%	6.7%	13.2%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.2%	43.8%	0.0%	100.0%	
Road 38	38	50	44.1	Y	1500-1600	161	6.0%	2.4%	0.2%	22.8%	8.2%	5.8%	11.4%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.2%	42.4%	0.0%	100.0%	
Road 38	38	50	44.3	Y	1600-1700	156	7.0%	2.4%	0.2%	19.8%	7.1%	6.2%	12.2%	0.0%	0.0%	0.2%	0.2%	0.1%	0.3%	0.0%	0.2%	43.9%	0.0%	100.0%	
Road 38	38	50	44.5	Y	1700-1800	151	9.1%	2.8%	0.2%	20.7%	7.1%	6.7%	9.2%	0.0%	0.0%	0.1%	0.2%	0.1%	0.2%	0.0%	0.8%	44.4%	0.0%	100.0%	
Road 38	38	50	45.2	Y	1800-1900	132	13.8%	3.2%	0.2%	16.0%	5.7%	3.3%	6.6%	0.0%	0.0%	0.0%	0.2%	0.2%	0.4%	0.0%	0.7%	49.7%	0.0%	100.0%	
Road 38	38	50	45.0	Y	1900-2000	65	21.9%	6.9%	0.3%	12.9%	4.0%	3.7%	6.6%	0.0%	0.0%	0.0%	0.2%	0.2%	0.4%	0.0%	0.7%	48.0%	0.0%	100.0%	
Road 38	38	50	48.2	Y	2000-2100	54	18.7%	7.9%	0.2%	19.4%	7.0%	4.3%	8.4%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.7%	32.5%	0.0%	100.0%	
Road 38	38	50	48.2	Y	2100-2200	55	18.7%	7.7%	0.2%	19.5%	7.0%	4.5%	8.8%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	32.3%	0.0%	100.0%	
Road 38	38	50	46.3	Y	2200-2300	52	19.3%	8.7%	0.2%	15.6%	5.6%	5.0%	9.8%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	34.6%	0.0%	100.0%	
Road 38	38	50	46.5	Y	2300-0000	44	16.3%	7.4%	0.2%	15.2%	5.8%	4.8%	9.5%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	39.8%	0.0%	100.0%	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters for AERMOD (Year 2033)

Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles >15t	07 - Medium Goods Vehicles >24t	08 - Public Light Bus >3.5t	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchise d Bus Single Deck	15 - Franchise d Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicle >24t	18 - Non-franchised Bus >24t	Total
							PC	TAXI	LGV3	LGV4	LGV6	HGV7	HGV8	FLB	PV4	PV6	NFB6	NFB7	NFB8	FBS0	FBS0	MC	HGV9	NFB9	
Road 41	41	70	70.0	N	0000-0100	110	43.4%	19.5%	0.0%	3.1%	1.1%	1.0%	1.9%	0.0%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	2.2%	25.6%	0.0%	100.0%	
Road 41	41	70	70.0	N	0100-0200	81	37.5%	16.8%	0.0%	2.9%	1.1%	0.9%	1.8%	0.8%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	2.1%	34.4%	0.0%	100.0%	
Road 41	41	70	70.0	N	0200-0300	67	32.7%	14.6%	0.0%	2.9%	1.0%	0.9%	1.8%	0.7%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	2.1%	41.7%	0.0%	100.0%	
Road 41	41	70	70.0	N	0300-0400	59	28.9%	12.5%	0.0%	2.8%	1.0%	0.9%	1.7%	0.7%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	2.0%	47.5%	0.0%	100.0%	
Road 41	41	70	70.0	N	0400-0500	62	29.6%	13.1%	0.0%	3.1%	1.1%	1.0%	1.9%	0.7%	0.0%	0.3%	0.5%	0.3%	0.7%	0.0%	2.3%	45.2%	0.0%	100.0%	
Road 41	41	70	70.0	N	0500-0600	87	35.8%	15.7%	0.0%	4.1%	1.5%	1.3%	2.6%	0.0%	0.1%	0.4%	0.7%	0.5%	1.0%	0.0%	3.1%	32.5%	0.0%	100.0%	
Road 41	41	70	70.0	N	0600-0700	154	42.2%	19.5%	0.0%	4.2%	1.7%	1.5%	3.0%	0.1%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	3.8%	30.0%	0.0%	100.0%	
Road 41	41	70	70.0	N	0700-0800	363	35.2%	15.5%	0.1%	4.9%	1.8%	1.5%	3.0%	0.0%	0.1%	0.4%	0.6%	0.6%	1.2%	0.0%	3.6%	30.0%	0.0%	100.0%	
Road 41	41	70	70.0	N	0800-0900	404	41.2%	13.2%	0.1%	5.5%	2.0%	1.5%	3.0%	0.7%	0.1%	0.6%	0.8%	0.6%	1.2%	0.0%	2.4%	27.0%	0.0%	100.0%	
Road 41	41	70	70.0	N	0900-1000	353	29.5%	12.5%	0.0%	5.2%	2.2%	1.5%	3.0%	0.7%	0.1%	0.6%	0.8%	0.6%	1.2%	0.0%	2.0%	24.0%	0.0%	100.0%	
Road 41	41	70	70.0	N	1000-1100	320	32.0%	12.4%	0.1%	5.5%	2.7%	2.4%	4.7%	0.9%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	1.0%	34.3%	0.0%	100.0%	
Road 41	41	70	70.0	N	1100-1200	309	31.3%	12.9%	0.1%	7.3%	2.6%	2.3%	4.5%	0.9%	0.1%	0.6%	0.3%	0.2%	0.5%	0.0%	0.0%	0.9%	35.5%	0.0%	100.0%
Road 41	41	70	70.0	N	1200-1300	338	23.4%	0.0%	0.1%	12.9%	4.6%	4.6%	8.1%	0.1%	0.0%	0.4%	0.4%	0.3%	0.6%	0.0%	0.7%	33.7%	0.0%	100.0%	
Road 41	41	70	70.0	N	1300-1400	351	22.2%	0.0%	0.1%	12.9%	4.2%	4.7%	8.2%	0.1%	0.0%	0.4%	0.4%	0.3%	0.6%	0.0%	0.7%	33.7%	0.0%	100.0%	
Road 41	41	70	70.0	N	1400-1500	361	23.1%	9.4%	0.1%	13.9%	5.0%	4.7%	9.2%	0.0%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	0.9%	31.7%	0.0%	100.0%	
Road 41	41	70	70.0	N	1500-1600	369	23.0%	9.2%	0.2%	16.1%	5.8%	4.1%	8.0%	0.0%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	0.8%	30.8%	0.0%	100.0%	
Road 41	41	70	70.0	N	1600-1700	344	21.2%	1.8%	0.2%	13.3%	6.2%	4.2%	8.3%	0.0%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	0.7%	30.0%	0.0%	100.0%	
Road 41	41	70	70.0	N	1700-1800	392	30.7%	9.6%	0.1%	12.9%	4.6%	2.9%	5.7%	0.0%	0.1%	0.4%	0.5%	0.4%	0.8%	0.0%	2.6%	28.5%	0.0%	100.0%	
Road 41	41	70	70.0	N	1800-1900	391	40.7%	9.6%	0.1%	8.7%	3.1%	1.8%	3.6%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	1.9%	28.0%	0.0%	100.0%	
Road 41	41	70	70.0	N	1900-2000	347	30.8%	15.7%	0.0%	8.4%	3.0%	1.8%	3.6%	0.0%	0.0%	0.1%	0.6%	0.5%	1.0%	0.0%	1.9%	28.0%	0.0%	100.0%	
Road 41	41	70	70.0	N	2000-2100	198	44.8%	19.0%	0.0%	8.8%	3.1%	1.9%	3.7%	0.0%	0.0%	0.1%	0.6%	0.4%	1.0%	0.0%	1.8%	14.9%	0.0%	100.0%	
Road 41	41	70	70.0	N	2100-2200	199	45.4%	18.8%	0.0%	8.7%	3.1%	2.0%	3.9%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	2.1%	14.9%	0.0%	100.0%	
Road 41	41	70	70.0	N	2200-2300	191	45.5%	20.6%	0.1%	6.8%	2.4%	2.2%	4.2%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	1.8%	15.5%	0.0%	100.0%	
Road 41	41	70	70.0	N	2300-0000	155	42.2%	20.6%	0.0%	6.8%	2.4%	2.2%	4.4%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	1.7%	15.5%	0.0%	100.0%	
Road 42	42	50	47.2	N	0000-0100	106	41.9%	19.7%	0.0%	3.1%	1.1%	1.0%	1.9%	0.0%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	2.2%	27.4%	0.0%	100.0%	
Road 42	42	50	47.2	N	0100-0200	78	38.1%	17.0%	0.0%	3.0%	1.1%	0.9%	1.8%	0.0%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	2.2%	33.4%	0.0%	100.0%	
Road 42	42	50	48.0	N	0200-0300	64	33.6%	14.9%	0.0%	2.9%	1.0%	0.9%	1.8%	0.0%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	2.1%	40.7%	0.0%	100.0%	
Road 42	42	50	48.0	N	0300-0400	56	29.6%	13.1%	0.0%	2.8%	1.0%	0.9%	1.7%	0.7%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	2.1%	46.4%	0.0%	100.0%	
Road 42	42	50	48.1	N	0400-0500	59	30.2%	13.4%	0.0%	3.2%	1.1%	1.0%	2.0%	0.7%	0.0%	0.3%	0.5%	0.3%	0.8%	0.0%	2.3%	44.1%	0.0%	100.0%	
Road 42	42	50	47.2	N	0500-0600	64	33.6%	14.9%	0.0%	2.9%	1.0%	0.9%	1.8%	0.0%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	2.1%	40.7%	0.0%	100.0%	
Road 42	42	50	48.2	N	0600-0700	149	42.5%	16.8%	0.1%	5.3%	1.9%	1.7%	3.3%	0.1%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	0.4%	31.1%	0.0%	100.0%	
Road 42	42	50	48.0	N	0700-0800	349	36.0%	15.7%	0.1%	4.9%	1.8%	1.5%	3.0%	0.1%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	3.7%	29.1%	0.0%	100.0%	
Road 42	42	50	39.5	N	0800-0900	389	41.8%	13.4%	0.1%	5.6%	2.0%	1.6%	3.1%	0.8%	0.1%	0.6%	0.8%	0.6%	1.2%	0.0%	2.4%	26.2%	0.0%	100.0%	
Road 42	42	50	40.0	N	0900-1000	349	40.0%	13.4%	0.1%	5.6%	2.0%	1.6%	3.1%	0.8%	0.1%	0.6%	0.8%	0.6%	1.2%	0.0%	2.4%	26.2%	0.0%	100.0%	
Road 42	42	50	40.6	N	1000-1100	307	32.5%	12.6%	0.1%	7.6%	2.7%	2.4%	4.7%	0.0%	0.0%	0.4%	0.5%	0.4%	0.8%	0.0%	1.0%	33.4%	0.0%	100.0%	
Road 42	42	50	40.9	N	1100-1200	296	31.9%	13.1%	0.1%	7.4%	2.7%	2.3%	4.5%	0.0%	0.1%	0.6%	0.3%	0.2%	0.5%	0.0%	0.9%	34.5%	0.0%	100.0%	
Road 42	42	50	41.2	N	1200-1300	249	17.2%	0.0%	0.1%	12.9%	4.2%	4.0%	8.0%	0.0%	0.0%	0.3%	0.2%	0.2%	0.4%	0.0%	0.7%	30.0%	0.0%	100.0%	
Road 42	42	50	41.3	N	1300-1400	250	16.4%	0.3%	0.2%	14.8%	5.3%	4.6%	9.0%	0.0%	0.0%	0.2%	0.2%	0.2%	0.4%	0.0%	0.5%	41.9%	0.0%	100.0%	
Road 42	42	50	41.2	N	1400-1500	255	17.2%	0.0%	0.1%	13.8%	4.9%	4.7%	9.1%	0.0%	0.0%	0.3%	0.3%	0.2%	0.5%	0.0%	0.6%	41.2%	0.0%	100.0%	
Road 42	42	50	41.1	N	1500-1600	260	17.1%	0.0%	0.1%	13.8%	4.9%	4.7%	9.0%	0.0%	0.0%	0.3%	0.3%	0.2%	0.5%	0.0%	0.6%	41.0%	0.0%	100.0%	
Road 42	42	50	41.2	N	1600-1700	260	19.3%	6.7%	0.1%	13.4%	4.8%	4.2%	8.2%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	0.9%	40.1%	0.0%	100.0%	
Road 42	42	50	41.3	N	1700-1800	267	21.3%	7.4%	0.1%	13.2%	4.7%	3.0%	5.9%	0.0%	0.0%	0.3%	0.4%	0.3%	0.6%	0.0%	2.0%	38.5%	0.0%	100.0%	
Road 42	42	50	41.7	N	1800-1900	260	17.0%	7.5%	0.1%	9.1%	3.3%	1.9%	3.7%	0.0%	0.0%	0.0%	0.6%	0.4%	0.9%	0.0%	1.5%	38.9%	0.0%	100.0%	
Road 42	42	50	46.0	N	1900-2000	149	46.0%	13.4%	0.1%	7.7%	2.7%	2.4%	4.8%	0.0%	0.0%	0.1%	0.7%	0.5%	1.0%	0.0%	0.7%	23.0%	0.0%	100.0%	
Road 42	42	50	46.7	N	2000-2100	121	38.3%	16.3%	0.0%	7.8%	3.5%	2.2%	4.2%	0.0%	0.0%	0.1%	0.5%	0.4%	0.8%	0.0%	1.5%	22.3%	0.0%	100.0%	
Road 42	42	50	46.7	N	2100-2200	122	38.8%	16.0%	0.1%	9.9%	3.8%	2.3%	4.5%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	1.8%	28.2%	0.0%	100.0%	
Road 42	42	50	46.0	N	2200-2300	117	46.0%	13.4%	0.1%	7.7%	2.7%	2.4%	4.8%	0.0%	0.0%	0.1%	0.7%	0.5%	1.0%	0.0%	0.7%	23.0%	0.0%	100.0%	
Road 42	42	50	47.2	N	2300-0000	95	35.1%	15.8%	0.1%	7.9%	2.8%	2.5%	4.8%	0.0%	0.0%	0.1%	0.3%	0.2%	0.4%	0.0%	1.6%	22.2%	0.0%	100.0%	

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters for AERMOD (Year 2033)

Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - LGT - Light Goods Vehicles <=2.5t	04 - LGT - Light Goods Vehicles 2.5-3.5t	05 - LGT - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles <=10t	07 - Medium Goods Vehicles 10-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus<=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchise d Bus Single Deck	15 - Franchise d Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total
							PC	TAXI	LGV3	LGV4	LGV5	HGV7	HGV8	FLB	PV4	PV5	NFB6	NFB7	NFB8	FBS0	FBS1	MC	HGV9	NFB9	
Road 45	45	80	80.0	N	0100-0100	420	57.3%	25.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 45	45	80	80.0	N	0100-0200	273	56.8%	25.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 45	45	80	80.0	N	0200-0300	159	55.8%	24.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 45	45	80	80.0	N	0300-0400	157	54.9%	24.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 45	45	80	80.0	N	0400-0500	172	53.9%	23.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 45	45	80	80.0	N	0500-0600	298	52.9%	23.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 45	45	80	80.0	N	0600-0700	639	51.9%	22.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 45	45	80	73.9	N	0700-0800	1291	50.8%	22.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 45	45	80	70.1	N	0800-0900	1495	56.7%	18.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 45	45	80	74.5	N	0900-1000	1222	52.2%	18.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 45	45	80	77.3	N	1000-1100	1054	49.5%	19.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 45	45	80	78.5	N	1100-1200	999	49.3%	20.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 45	45	80	73.3	N	1200-1300	1222	47.3%	18.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 45	45	80	72.7	N	1300-1400	1245	45.7%	17.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 45	45	80	71.0	N	1400-1500	1331	45.8%	18.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 45	45	80	70.6	N	1500-1600	1360	45.5%	18.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 45	45	80	68.7	N	1600-1700	1453	48.2%	16.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 45	45	80	69.6	N	1700-1800	1654	51.1%	16.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 45	45	80	49.2	N	1800-1900	1822	63.8%	15.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 45	45	80	71.7	N	1900-2000	1451	62.3%	19.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 45	45	80	77.1	N	2000-2100	1129	57.4%	24.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 45	45	80	78.0	N	2100-2200	1124	58.6%	24.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 45	45	80	78.5	N	2200-2300	1094	58.1%	26.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 45	45	80	80.0	N	2300-0000	818	57.1%	25.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 46	46	80	80.0	N	0000-0100	219	58.4%	26.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 46	46	80	80.0	N	0100-0200	142	57.4%	25.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 46	46	80	80.0	N	0200-0300	104	56.4%	25.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 46	46	80	80.0	N	0300-0400	82	55.3%	24.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 46	46	80	80.0	N	0400-0500	50	54.3%	24.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 46	46	80	80.0	N	0500-0600	156	53.2%	23.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 46	46	80	80.0	N	0600-0700	335	52.2%	22.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 46	46	80	80.0	N	0700-0800	677	51.1%	22.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 46	46	80	80.0	N	0800-0900	788	56.9%	18.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 46	46	80	80.0	N	0900-1000	645	52.1%	18.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 46	46	80	80.0	N	1000-1100	557	49.3%	19.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 46	46	80	80.0	N	1100-1200	528	49.2%	20.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 46	46	80	80.0	N	1200-1300	825	56.5%	21.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 46	46	80	80.0	N	1300-1400	826	55.0%	21.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 46	46	80	80.0	N	1400-1500	896	54.9%	22.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 46	46	80	80.0	N	1500-1600	913	54.7%	22.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 46	46	80	80.0	N	1600-1700	997	56.1%	19.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 46	46	80	80.0	N	1700-1800	1172	60.4%	18.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 46	46	80	80.0	N	1800-1900	1349	69.5%	16.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 46	46	80	80.0	N	1900-2000	1085	67.2%	21.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 46	46	80	80.0	N	2000-2100	842	62.1%	26.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 46	46	80	80.0	N	2100-2200	840	63.3%	26.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 46	46	80	80.0	N	2200-2300	821	62.5%	28.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 46	46	80	80.0	N	2300-0000	610	61.7%	27.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters for AERMOD (Year 2033)

Parameters For Scenario (Year 2050)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Generated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles <=10t	07 - Medium Goods Vehicles >10t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchise d Bus Double Deck	15 - Franchise d Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicle >24t	18 - Non-franchised Bus >24t	Total	
PC	TAXI	LGV3	LGV4	LGV5	HGV7	HGV8	FLB	PV4	PV5	NFB6	NFB7	NFB8	FBS0	FBS1	MC	HGV9	NFB9									
Road 49	49	50	43.4	N	0000-0100	217	58.4%	28.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 49	49	50	45.7	N	0100-0200	205	57.9%	25.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 49	49	50	46.8	N	0200-0300	149	57.2%	25.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 49	49	50	47.5	N	0300-0400	117	56.5%	25.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 49	49	50	48.2	N	0400-0500	248	55.9%	24.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 49	49	50	45.3	N	0500-0600	220	54.9%	24.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 49	49	50	39.9	N	0600-0700	469	54.1%	23.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 49	49	50	34.4	N	0700-0800	2681	54.0%	23.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 49	49	50	32.5	N	0800-0900	1085	59.9%	19.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 49	49	50	36.0	N	0900-1000	859	56.9%	20.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 49	49	50	38.5	N	1000-1100	718	58.1%	21.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 49	49	50	37.0	N	1100-1200	691	54.6%	22.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 49	49	50	38.1	N	1200-1300	568	50.4%	19.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 49	49	50	38.0	N	1300-1400	571	49.3%	19.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 49	49	50	38.2	N	1400-1500	1985	52.9%	19.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 49	49	50	37.3	N	1500-1600	628	48.8%	19.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 49	49	50	36.6	N	1600-1700	683	50.8%	17.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 49	49	50	39.9	N	1700-1800	589	51.0%	16.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 49	49	50	34.6	N	1800-1900	898	64.0%	15.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 49	49	50	36.7	N	1900-2000	725	61.7%	19.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 49	49	50	38.7	N	2000-2100	565	58.8%	24.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 49	49	50	38.9	N	2100-2200	559	58.4%	24.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 49	49	50	39.0	N	2200-2300	548	57.4%	26.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 49	49	50	49.3	N	2300-0000	408	56.7%	25.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 50	50	49.3	N	0000-0100	24	53.0%	12.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 50	50	49.6	N	0100-0200	17	25.3%	11.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 50	50	49.6	N	0200-0300	13	23.0%	10.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 50	50	49.6	N	0300-0400	11	23.9%	10.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 50	50	49.6	N	0400-0500	13	20.2%	8.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 50	50	49.6	N	0500-0600	21	20.3%	8.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 50	50	49.6	N	0600-0700	45	20.7%	8.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 50	50	47.1	N	0700-0800	98	18.3%	8.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 50	50	46.6	N	0800-0900	115	20.2%	6.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 50	50	46.5	N	0900-1000	117	14.9%	5.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 50	50	46.5	N	1000-1100	302	16.8%	10.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 50	50	46.7	N	1100-1200	106	12.7%	5.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 50	50	48.1	N	1200-1300	49	4.5%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 50	50	48.2	N	1300-1400	44	4.0%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 50	50	48.2	N	1400-1500	53	4.3%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 50	50	48.2	N	1500-1600	55	4.2%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 50	50	48.3	N	1600-1700	52	19.8%	11.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 50	50	48.4	N	1700-1800	48	6.8%	2.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 50	50	49.5	N	1800-1900	37	11.8%	2.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 50	50	49.5	N	1900-2000	22	14.8%	2.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 50	50	49.5	N	2000-2100	18	13.8%	5.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 50	50	49.4	N	2100-2200	18	13.7%	5.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 50	50	49.5	N	2200-2300	16	14.8%	6.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 50	50	49.5	N	2300-0000	16	14.8%	6.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters for AERMOD (Year 2033)

Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5-4t	06 - Medium Goods Vehicles >15t	07 - Medium Goods Vehicles >24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 6.4-15t	13 - Non-franchised Bus 15-24t	14 - Franchise d Bus Single Deck	15 - Franchise d Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total
							PC	TAXI	LGV3	LGV4	LGV6	HGV7	HGV8	FLB	PV4	PV6	NFB6	NFB7	NFB8	FBS0	FBS1	MC	HGV9	NFB9	
Road 53	53	50	28.1	N	0100-0100	26	23.4%	10.5%	0.2%	16.6%	13.0%	0.2%	0.3%	0.0%	0.1%	0.2%	0.0%	0.1%	0.3%	0.0%	1.2%	2.7%	0.0%	100.0%	
Road 53	53	50	28.7	N	0100-0200	18	22.1%	9.9%	0.2%	17.5%	6.3%	5.5%	10.9%	22.6%	0.0%	0.1%	0.2%	0.4%	0.0%	0.0%	0.3%	1.3%	2.8%	0.0%	100.0%
Road 53	53	50	29.0	N	0200-0300	13	20.9%	9.3%	0.2%	18.4%	6.6%	5.8%	11.4%	22.0%	0.0%	0.1%	0.3%	0.2%	0.4%	0.0%	0.0%	1.3%	3.0%	0.0%	100.0%
Road 53	53	50	29.2	N	0300-0400	11	19.8%	8.8%	0.2%	16.2%	6.8%	6.1%	11.9%	21.5%	0.0%	0.2%	0.3%	0.2%	0.4%	0.0%	0.0%	1.4%	3.1%	0.0%	100.0%
Road 53	53	50	29.1	N	0400-0500	12	18.8%	8.3%	0.2%	20.0%	7.2%	6.3%	12.4%	20.9%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	0.0%	1.5%	3.2%	0.0%	100.0%
Road 53	53	50	28.3	N	0500-0600	22	17.8%	7.8%	0.2%	20.8%	7.5%	6.5%	12.8%	20.4%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	0.0%	1.5%	3.3%	0.0%	100.0%
Road 53	53	50	26.3	N	0600-0700	49	16.5%	7.4%	0.2%	21.5%	7.7%	6.7%	13.2%	19.9%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	0.0%	1.6%	3.5%	0.0%	100.0%
Road 53	53	50	24.4	N	0700-0800	103	15.0%	7.0%	0.2%	22.2%	8.0%	6.6%	13.6%	19.5%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.0%	1.6%	3.6%	0.0%	100.0%
Road 53	53	50	24.2	N	0800-0900	116	18.3%	5.8%	0.3%	24.7%	8.9%	6.9%	13.6%	15.5%	0.0%	0.2%	0.4%	0.3%	0.5%	0.0%	0.0%	1.1%	3.5%	0.0%	100.0%
Road 53	53	50	24.1	N	0900-1000	119	13.4%	4.9%	0.3%	27.9%	10.6%	7.6%	14.9%	15.6%	0.0%	0.1%	0.2%	0.2%	0.3%	0.0%	0.0%	0.5%	3.9%	0.0%	100.0%
Road 53	53	50	24.2	N	1000-1100	122	11.7%	4.5%	0.3%	27.5%	9.9%	8.7%	17.2%	14.0%	0.0%	0.1%	0.2%	0.1%	0.2%	0.0%	0.0%	0.4%	4.5%	0.0%	100.0%
Road 53	53	50	24.3	N	1100-1200	105	11.6%	4.8%	0.3%	27.4%	9.9%	8.6%	16.9%	15.2%	0.0%	0.2%	0.1%	0.1%	0.2%	0.0%	0.0%	0.3%	4.4%	0.0%	100.0%
Road 53	53	50	24.1	N	1200-1300	128	24.7%	9.5%	0.2%	21.7%	7.8%	7.8%	15.3%	6.4%	0.1%	0.4%	0.4%	0.3%	0.6%	0.0%	0.0%	0.7%	4.0%	0.0%	100.0%
Road 53	53	50	24.0	N	1300-1400	136	22.8%	8.8%	0.3%	24.8%	8.9%	7.7%	15.1%	5.6%	0.0%	0.3%	0.3%	0.2%	0.5%	0.0%	0.0%	0.7%	3.9%	0.0%	100.0%
Road 53	53	50	23.9	N	1400-1500	141	23.7%	9.8%	0.3%	22.7%	8.2%	7.7%	15.1%	6.0%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	0.0%	0.9%	3.9%	0.0%	100.0%
Road 53	53	50	23.9	N	1500-1600	145	23.4%	9.4%	0.3%	26.1%	9.4%	8.6%	13.0%	5.3%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	0.0%	0.8%	3.4%	0.0%	100.0%
Road 53	53	50	23.9	N	1600-1700	144	26.8%	9.2%	0.2%	22.0%	7.9%	6.9%	13.5%	5.8%	0.1%	0.6%	0.8%	0.9%	1.2%	0.0%	0.0%	1.3%	3.5%	0.0%	100.0%
Road 53	53	50	23.9	N	1700-1800	150	23.0%	9.2%	0.2%	21.6%	7.2%	6.9%	12.9%	6.7%	0.1%	0.5%	0.8%	0.9%	1.2%	0.0%	0.0%	2.8%	2.5%	0.0%	100.0%
Road 53	53	50	24.2	N	1800-1900	141	45.0%	10.6%	0.2%	15.4%	5.3%	3.2%	6.3%	7.4%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	0.2%	1.1%	1.6%	0.0%	100.0%
Road 53	53	50	24.6	N	1900-2000	108	45.8%	14.3%	0.1%	12.2%	4.4%	2.9%	5.7%	9.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	0.0%	1.7%	1.5%	0.0%	100.0%
Road 53	53	50	24.9	N	2000-2100	85	41.8%	17.7%	0.1%	12.8%	4.6%	2.8%	5.5%	9.6%	0.0%	0.1%	0.8%	0.4%	0.9%	0.0%	0.0%	1.7%	1.4%	0.0%	100.0%
Road 53	53	50	24.9	N	2100-2200	85	42.4%	17.5%	0.1%	13.0%	4.7%	3.0%	5.9%	9.1%	0.0%	0.0%	0.3%	0.2%	0.5%	0.0%	0.0%	1.9%	1.5%	0.0%	100.0%
Road 53	53	50	25.0	N	2200-2300	80	43.5%	19.7%	0.1%	10.4%	3.7%	3.3%	6.5%	8.5%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.0%	1.7%	1.7%	0.0%	100.0%
Road 53	53	50	25.2	N	2300-0000	61	41.8%	18.8%	0.1%	11.3%	4.1%	3.6%	7.0%	8.4%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.0%	1.9%	1.8%	0.0%	100.0%
Road 54	54	50	28.7	N	0000-0100	50	36.5%	16.4%	0.1%	12.4%	4.4%	3.9%	7.7%	13.5%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.0%	1.8%	2.0%	0.0%	100.0%
Road 54	54	50	27.8	N	0100-0200	33	35.0%	15.7%	0.1%	13.2%	4.7%	4.2%	8.2%	13.3%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.0%	2.0%	2.1%	0.0%	100.0%
Road 54	54	50	28.3	N	0200-0300	25	33.6%	15.0%	0.1%	14.1%	5.0%	4.4%	8.7%	13.1%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.0%	2.1%	2.3%	0.0%	100.0%
Road 54	54	50	28.6	N	0300-0400	20	32.2%	14.3%	0.2%	14.9%	5.3%	4.7%	9.2%	12.9%	0.0%	0.3%	0.5%	0.3%	0.7%	0.0%	0.0%	2.3%	2.4%	0.0%	100.0%
Road 54	54	50	28.5	N	0400-0500	23	30.8%	13.6%	0.2%	15.6%	5.6%	4.9%	9.7%	12.7%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	0.0%	2.4%	2.5%	0.0%	100.0%
Road 54	54	50	27.2	N	0500-0600	40	29.5%	13.0%	0.2%	16.4%	5.8%	5.1%	10.1%	12.5%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	0.0%	2.5%	2.6%	0.0%	100.0%
Road 54	54	50	24.8	N	0600-0700	88	28.4%	12.4%	0.2%	17.1%	6.4%	5.4%	10.6%	12.4%	0.0%	0.4%	0.6%	0.4%	0.8%	0.0%	0.0%	2.6%	2.8%	0.0%	100.0%
Road 54	54	50	23.4	N	0700-0800	182	27.0%	11.8%	0.2%	17.8%	6.4%	5.6%	11.0%	12.2%	0.1%	0.4%	0.6%	0.4%	0.9%	0.0%	0.0%	2.8%	2.9%	0.0%	100.0%
Road 54	54	50	23.1	N	0800-0900	209	30.5%	9.8%	0.2%	19.6%	7.0%	5.5%	10.8%	9.6%	0.1%	0.4%	0.6%	0.4%	0.9%	0.0%	0.0%	1.8%	2.8%	0.0%	100.0%
Road 54	54	50	23.1	N	0900-1000	201	23.8%	8.6%	0.2%	23.6%	8.5%	6.4%	12.7%	10.3%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.0%	0.9%	3.3%	0.0%	100.0%
Road 54	54	50	23.2	N	1000-1100	185	21.1%	8.2%	0.2%	23.8%	8.5%	7.6%	14.9%	9.8%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	0.0%	0.8%	3.9%	0.0%	100.0%
Road 54	54	50	23.4	N	1100-1200	175	21.1%	8.7%	0.2%	23.7%	8.6%	7.4%	14.6%	10.2%	0.0%	0.4%	0.2%	0.1%	0.3%	0.0%	0.0%	0.8%	3.8%	0.0%	100.0%
Road 54	54	50	24.0	N	1200-1300	120	11.1%	3.3%	0.3%	28.3%	10.3%	10.5%	20.6%	6.8%	0.0%	0.2%	0.2%	0.0%	0.0%	0.0%	0.3%	5.4%	0.0%	100.0%	
Road 54	54	50	23.9	N	1300-1400	131	10.2%	3.4%	0.3%	32.4%	11.6%	10.9%	19.9%	5.8%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.3%	5.2%	0.0%	100.0%
Road 54	54	50	23.8	N	1400-1500	133	10.6%	4.3%	0.3%	30.4%	10.9%	10.3%	20.4%	6.4%	0.0%	0.2%	0.2%	0.1%	0.3%	0.0%	0.0%	0.4%	5.3%	0.0%	100.0%
Road 54	54	50	23.8	N	1500-1600	137	10.4%	4.2%	0.4%	34.8%	12.5%	8.8%	17.3%	5.8%	0.0%	0.2%	0.2%	0.1%	0.3%	0.0%	0.0%	0.4%	4.5%	0.0%	100.0%
Road 54	54	50	23.9	N	1600-1700	131	12.3%	4.2%	0.3%	30.5%	11.0%	9.5%	19.8%	6.4%	0.0%	0.3%	0.4%	0.3%	0.6%	0.0%	0.0%	0.6%	4.9%	0.0%	100.0%
Road 54	54	50	24.0	N	1700-1800	128	15.9%	5.0%	0.3%	31.9%	11.4%	7.2%	14.2%	7.8%	0.0%	0.2%	0.3%	0.2%	0.4%	0.0%	0.0%	1.4%	3.7%	0.0%	100.0%
Road 54	54	50	24.6	N	1800-1900	104	25.8%	6.1%	0.3%	26.4%	9.5%	5.5%	10.8%	10.1%	0.0%	0.0%	0.5%	0.3%	0.7%	0.0%	0.0%	1.2%	2.8%	0.0%	100.0%
Road 54	54	50	24.9	N	1900-2000	76	27.6%	8.7%	0.3%	25.8%	8.4%	6.4%	12.0%	9.0%	0.0%	0.0%	0.6%	0.4%	0.9%	0.0%	0.0%	1.9%	2.7%	0.0%	100.0%
Road 54	54	50	25.7	N	2000-2100	60	24.9%	10.6%	0.2%	22.8%	8.2%	5.0%	9.9%	13.5%	0.0%	0.4%	0.2%	0.5%	0.0%	0.0%	1.0%	2.6%	0.0%	100.0%	
Road 54	54	50	25.7	N	2100-2200	61	25.2%	10.4%	0.2%	23.0%	8.3%	5.3%	10.4%	12.7%	0.0%	0.0%	0.2%	0.1%	0.3%	0.0%	0.0%	1.1%	2.7%	0.0%	100.0%
Road 54	54	50	26.1	N	2200-2300	55	26.7%	12.1%	0.2%	16.0%	6.6%	6.1%	11.9%	12.4%	0.0%	0.2%	0.1%	0.2%	0.0%	0.0%	1.0%	3.1%	0.0%	100.0%	
Road 54	54	50	26.9	N	2300-0000	43	25.0%	11.3%	0.2%	20.2%	7.3%	6.4%	12.6%	11.9%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	1.1%	3.3%	0.0%	100.0%

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters for AERMOD (Year 2033)

Parameters for Scenario (Year 2035)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles >15t	07 - Medium Goods Vehicles 5-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 6.4-15t	13 - Non-franchised Bus 15-24t	14 - Franchise d Bus Single Deck	15 - Franchise d Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total	
							PC	TAXI	LGV3	LGV4	LGV6	HGV7	HGV8	FLB	PV4	PV6	NFB6	NFB7	NFB8	FBS0	FBS1	MC	HGV9	NFB9		
Road 103	103	80	80.0	N	0100-0100	661	57.1%	25.7%	0.1%	0.0%	1.8%	1.6%	3.1%	0.0%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	0.0%	2.2%	0.9%	0.0%	100.0%	
Road 103	103	80	80.0	N	0100-0200	431	56.0%	24.0%	0.1%	5.5%	2.0%	1.7%	3.4%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	0.0%	2.3%	0.9%	0.0%	100.0%	
Road 103	103	80	80.0	N	0200-0300	316	54.8%	24.4%	0.1%	6.0%	2.1%	1.9%	3.7%	0.0%	0.0%	0.3%	0.7%	0.5%	1.1%	0.0%	0.0%	3.5%	1.0%	0.0%	100.0%	
Road 103	103	80	80.0	N	0300-0400	251	53.6%	23.8%	0.1%	6.4%	2.3%	2.0%	4.0%	0.0%	0.1%	0.4%	0.8%	0.5%	1.2%	0.0%	0.0%	3.8%	1.0%	0.0%	100.0%	
Road 103	103	80	80.0	N	0400-0500	229	52.9%	23.4%	0.1%	6.9%	2.4%	2.3%	4.3%	0.0%	0.1%	0.5%	0.9%	0.7%	1.4%	0.0%	0.0%	4.1%	1.1%	0.0%	100.0%	
Road 103	103	80	80.0	N	0500-0600	1480	51.2%	22.5%	0.1%	7.4%	2.7%	2.3%	4.6%	0.0%	0.1%	0.6%	0.9%	0.7%	1.6%	0.0%	0.0%	4.4%	1.2%	0.0%	100.0%	
Road 103	103	80	80.0	N	0600-0700	1033	50.0%	21.9%	0.1%	7.9%	2.8%	2.5%	4.9%	0.0%	0.1%	0.6%	1.0%	0.7%	1.8%	0.0%	0.0%	4.7%	1.3%	0.0%	100.0%	
Road 103	103	70	70.0	N	0700-0800	1055	50.1%	21.9%	0.1%	8.4%	3.0%	2.7%	5.2%	0.0%	0.1%	0.6%	1.1%	0.7%	1.7%	0.0%	0.0%	5.0%	1.3%	0.0%	100.0%	
Road 103	103	70	70.3	N	0800-0900	2441	54.1%	17.3%	0.1%	9.3%	3.3%	2.5%	5.0%	0.0%	0.1%	0.7%	1.1%	0.7%	1.6%	0.0%	0.0%	3.1%	1.3%	0.0%	100.0%	
Road 103	103	70	79.0	N	0900-1000	2051	48.4%	17.6%	0.1%	12.5%	4.5%	3.4%	6.7%	0.0%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	0.0%	1.9%	1.7%	0.0%	100.0%	
Road 103	103	80	80.0	N	1000-1100	1734	45.9%	17.3%	0.1%	13.8%	4.7%	3.3%	7.0%	0.0%	0.1%	0.5%	0.7%	0.5%	1.0%	0.0%	0.0%	1.8%	1.5%	0.0%	100.0%	
Road 103	103	80	80.0	N	1100-1200	1607	45.2%	16.8%	0.1%	13.2%	4.7%	4.1%	8.1%	0.0%	0.1%	0.6%	0.5%	0.3%	0.7%	0.0%	0.0%	1.3%	1.1%	0.0%	100.0%	
Road 103	103	80	80.0	N	1200-1300	1524	45.5%	17.9%	0.1%	11.8%	4.2%	4.2%	8.3%	0.0%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	0.0%	1.4%	1.4%	0.0%	100.0%	
Road 103	103	80	80.0	N	1300-1400	1554	44.6%	17.2%	0.1%	13.8%	5.0%	4.3%	8.5%	0.0%	0.1%	0.6%	0.6%	0.4%	1.0%	0.0%	0.0%	1.4%	1.4%	0.0%	100.0%	
Road 103	103	80	80.0	N	1400-1500	1249	42.8%	16.5%	0.1%	12.4%	4.8%	4.2%	8.2%	0.0%	0.1%	0.6%	0.6%	0.4%	1.0%	0.0%	0.0%	1.4%	1.4%	0.0%	100.0%	
Road 103	103	80	80.0	N	1500-1600	1705	44.5%	17.9%	0.1%	14.3%	5.1%	3.6%	7.1%	0.0%	0.1%	0.6%	0.9%	0.4%	1.4%	0.0%	0.0%	1.6%	1.9%	0.0%	100.0%	
Road 103	103	80	80.0	N	1600-1700	1802	47.7%	18.4%	0.1%	11.3%	4.1%	3.5%	7.0%	0.0%	0.1%	1.1%	1.4%	1.0%	2.1%	0.0%	0.0%	2.2%	1.8%	0.0%	100.0%	
Road 103	103	80	80.0	N	1700-1800	1011	45.9%	19.2%	0.1%	10.2%	3.7%	3.9%	4.5%	0.0%	0.1%	1.0%	1.2%	0.9%	1.4%	0.0%	0.0%	2.3%	1.9%	0.0%	100.0%	
Road 103	103	79.5	N	1800-1900	2033	44.6%	15.2%	0.1%	6.4%	2.3%	1.3%	2.6%	0.0%	0.0%	0.1%	1.1%	0.8%	1.7%	0.0%	0.0%	0.3%	0.7%	0.0%	100.0%		
Road 103	103	80	80.0	N	1900-2000	1738	63.7%	20.0%	0.1%	4.9%	1.8%	1.2%	2.3%	0.0%	0.0%	0.1%	1.0%	0.7%	1.5%	0.0%	0.0%	2.4%	0.6%	0.0%	100.0%	
Road 103	103	80	80.0	N	2000-2100	1350	68.8%	25.0%	0.1%	8.2%	2.9%	1.1%	2.0%	0.0%	0.0%	0.1%	0.8%	0.1%	0.5%	0.0%	0.0%	2.3%	0.6%	0.0%	100.0%	
Road 103	103	80	80.0	N	2100-2200	1353	59.7%	24.7%	0.1%	5.3%	1.9%	1.2%	2.4%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.0%	2.7%	0.6%	0.0%	100.0%	
Road 103	103	80	80.0	N	2200-2300	1309	39.5%	26.9%	0.0%	4.1%	1.5%	1.3%	2.5%	0.0%	0.0%	0.1%	0.4%	0.2%	0.5%	0.0%	0.0%	2.3%	0.7%	0.0%	100.0%	
Road 103	103	80	80.0	N	2300-0000	981	35.3%	26.3%	0.0%	4.5%	1.6%	1.4%	2.6%	0.0%	0.0%	0.1%	0.4%	0.3%	0.5%	0.0%	0.0%	2.0%	0.7%	0.0%	100.0%	
Road 104	104	80	80.0	N	0100-0200	181	22.5%	0.1%	9.9%	3.6%	1.1%	1.4%	2.5%	0.0%	0.0%	0.2%	0.2%	0.1%	0.7%	0.0%	0.0%	2.5%	1.0%	0.0%	100.0%	
Road 104	104	80	80.0	N	0100-0200	252	27.6%	21.3%	0.1%	10.7%	3.9%	3.4%	6.7%	0.0%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	0.0%	2.7%	1.7%	0.0%	100.0%	
Road 104	104	80	80.0	N	0200-0300	187	46.0%	20.5%	0.1%	11.5%	4.1%	3.8%	7.1%	0.0%	0.0%	0.3%	0.3%	0.6%	0.4%	0.0%	0.0%	2.9%	1.9%	0.0%	100.0%	
Road 104	104	80	80.0	N	0300-0400	129	19.7%	23.5%	0.1%	12.3%	4.5%	4.0%	7.9%	0.0%	0.0%	0.1%	0.3%	0.1%	1.2%	0.0%	0.0%	3.1%	2.0%	0.0%	100.0%	
Road 104	104	80	80.0	N	0400-0500	167	42.9%	19.0%	0.1%	13.0%	4.7%	4.1%	8.0%	0.0%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	0.0%	3.3%	2.1%	0.0%	100.0%	
Road 104	104	80	80.0	N	0500-0600	295	41.4%	18.2%	0.1%	13.8%	4.9%	4.3%	8.5%	0.0%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	0.0%	3.5%	2.2%	0.0%	100.0%	
Road 104	104	80	80.0	N	0600-0700	142	39.8%	14.8%	0.1%	14.5%	5.2%	4.5%	8.5%	0.0%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	0.0%	3.7%	2.3%	0.0%	100.0%	
Road 104	104	80	80.0	N	0700-0800	1319	38.5%	16.8%	0.2%	15.2%	5.5%	4.8%	9.3%	0.0%	0.1%	0.6%	0.9%	0.6%	1.3%	0.0%	0.0%	3.9%	2.4%	0.0%	100.0%	
Road 104	104	80	80.0	N	0800-0900	1546	42.4%	13.6%	0.2%	16.3%	5.9%	4.6%	9.0%	0.0%	0.1%	0.6%	0.8%	0.6%	1.3%	0.0%	0.0%	2.5%	2.3%	0.0%	100.0%	
Road 104	104	80	80.0	N	0900-1000	1401	35.2%	12.8%	0.2%	20.8%	5.5%	5.7%	10.3%	0.0%	0.0%	0.3%	0.6%	0.4%	0.6%	0.0%	0.0%	2.9%	2.9%	0.0%	100.0%	
Road 104	104	80	80.0	N	1000-1100	1171	31.8%	11.8%	0.2%	21.4%	6.1%	6.1%	11.8%	0.0%	0.0%	0.3%	0.8%	0.6%	0.8%	0.0%	0.0%	1.0%	1.7%	0.0%	100.0%	
Road 104	104	80	80.0	N	1100-1200	1198	31.8%	13.1%	0.2%	21.4%	7.7%	6.7%	13.1%	0.0%	0.1%	0.6%	0.3%	0.2%	0.5%	0.0%	0.0%	0.9%	3.4%	0.0%	100.0%	
Road 104	104	80	80.0	N	1200-1300	1151	30.4%	18.4%	0.1%	9.5%	3.4%	3.4%	6.7%	0.0%	0.1%	0.8%	0.9%	0.6%	1.3%	0.0%	0.0%	1.5%	1.8%	0.0%	100.0%	
Road 104	104	80	80.0	N	1300-1400	1171	34.8%	18.6%	0.1%	11.4%	4.8%	4.8%	9.0%	0.0%	0.1%	1.1%	1.1%	0.7%	1.0%	0.0%	0.0%	1.6%	1.7%	0.0%	100.0%	
Road 104	104	80	80.0	N	1400-1500	1255	48.8%	19.7%	0.1%	10.0%	3.6%	3.4%	6.7%	0.0%	0.1%	0.8%	1.0%	0.7%	1.5%	0.0%	0.0%	1.8%	1.7%	0.0%	100.0%	
Road 104	104	80	80.0	N	1500-1600	1283	48.5%	19.5%	0.1%	11.6%	4.2%	2.9%	5.6%	0.0%	0.1%	0.9%	1.0%	0.7%	1.5%	0.0%	0.0%	1.8%	1.5%	0.0%	100.0%	
Road 104	104	80	80.0	N	1600-1700	1328	51.7%	21.2%	0.1%	9.1%	3.8%	3.8%	6.7%	0.0%	0.1%	0.5%	1.2%	0.5%	1.2%	0.0%	0.0%	2.4%	1.5%	0.0%	100.0%	
Road 104	104	80	80.0	N	1700-1800	1571	56.1%	17.5%	0.1%	8.1%	2.9%	1.8%	3.6%	0.0%	0.1%	0.8%	1.0%	0.7%	1.5%	0.0%	0.0%	4.8%	0.9%	0.0%	100.0%	
Road 104	104	80	80.0	N	1800-1900	1744	66.9%	15.7%	0.1%	4.9%	1.8%	1.0%	2.0%	0.0%	0.0%	0.1%	1.2%	0.8%	1.8%	0.0%	0.0%	3.2%	0.5%	0.0%	100.0%	
Road 104	104	80	80.0	N	1900-2000	1185	55.5%	20.6%	0.1%	4.9%	1.8%	1.0%	2.0%	0.0%	0.0%	0.1%	1.2%	0.8%	1.8%	0.0%	0.0%	3.2%	0.5%	0.0%	100.0%	
Road 104	104	80	80.0	N	2000-2100	1075	60.5%	25.7%	0.0%	4.9%	1.4%	0.9%	1.7%	0.0%	0.0%	0.1%	0.9%	0.6%	1.3%	0.0%	0.0%	2.4%	0.5%	0.0%	100.0%	
Road 104	104	80	80.0	N	2100-2200	1076	61.5%	25.4%	0.0%	4.0%	1.5%	0.9%	1.8%	0.0%	0.0%	0.1%	0.4%	0.3%	0.7%	0.0%	0.0%	2.8%	0.5%	0.0%	100.0%	
Road 104	104	80	80.0	N	2200-2300	1045	61.1%	27.6%	0.0%	3.1%	1.1%	1.0%	2.0%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.0%	2.3%	0.5%	0.0%	100.0%	
Road 104	104	80	80.0	N	2300-0000	351	60.1%	35.1%	0.0%	3.5%	1.2%	1.0%	2.1%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.0%	2.1%	0.5%	0.0%	100.0%	

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters for AERMOD (Year 2038)

Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles >15t	07 - Medium Goods Vehicles >24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchise d Bus Single Deck	15 - Franchise d Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total
							PC	TAXI	LGV3	LGV4	LGV5	HGV7	HGV8	FLB	PLV4	PV5	NFB6	NFB7	NFB8	FBSDD	FBDSD	MC	HGV9	NFB9	
Road 1	1	80	80.0	N	0000-0100	1002	57.2%	25.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 1	1	80	80.0	N	0100-0200	652	56.2%	25.1%	0.0%	3.8%	1.4%	1.2%	2.3%	0.0%	0.0%	0.0%	0.0%	0.4%	0.9%	0.0%	3.7%	3.2%	0.9%	100.0%	
Road 1	1	80	80.0	N	0200-0300	477	55.1%	24.6%	0.0%	4.1%	1.5%	1.3%	2.5%	0.0%	0.0%	0.3%	0.7%	0.5%	1.1%	0.0%	3.6%	3.5%	1.1%	100.0%	
Road 1	1	80	80.0	N	0300-0400	377	54.1%	24.0%	0.0%	4.4%	1.6%	1.4%	2.7%	0.0%	0.1%	0.4%	0.8%	0.5%	1.2%	0.0%	3.8%	3.8%	1.2%	100.0%	
Road 1	1	80	80.0	N	0400-0500	413	53.1%	23.5%	0.1%	4.8%	1.7%	1.5%	3.0%	0.0%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	3.6%	4.1%	1.2%	100.0%	
Road 1	1	80	80.0	N	0500-0600	714	52.2%	23.0%	0.1%	5.2%	1.9%	1.6%	3.2%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	3.6%	4.5%	1.1%	100.0%	
Road 1	1	80	80.0	N	0600-0700	1527	51.3%	22.5%	0.1%	5.5%	2.0%	1.7%	3.4%	0.0%	0.1%	0.7%	1.1%	0.7%	1.6%	0.0%	3.8%	4.8%	1.0%	100.0%	
Road 1	1	80	79.9	N	0700-0800	3088	50.2%	21.9%	0.1%	5.9%	2.1%	1.8%	3.6%	0.0%	0.1%	0.7%	1.1%	0.8%	1.7%	0.0%	3.5%	5.1%	1.2%	100.0%	
Road 1	1	80	77.0	N	0800-0900	3572	56.1%	17.9%	0.1%	6.4%	2.3%	1.8%	3.5%	0.0%	0.1%	0.8%	1.1%	0.8%	1.7%	0.0%	3.1%	3.3%	1.1%	100.0%	
Road 1	1	80	80.0	N	0900-1000	2927	51.4%	18.7%	0.1%	1.3%	3.3%	2.5%	4.9%	0.0%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	3.3%	2.0%	1.5%	100.0%	
Road 1	1	80	80.0	N	1000-1100	2538	48.7%	18.9%	0.1%	0.8%	3.5%	3.1%	6.1%	0.0%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	3.2%	1.5%	1.9%	100.0%	
Road 1	1	80	80.0	N	1100-1200	2396	48.6%	20.0%	0.1%	0.7%	3.5%	3.0%	6.0%	0.0%	0.1%	0.9%	0.5%	0.3%	0.7%	0.0%	3.3%	1.4%	1.9%	100.0%	
Road 1	1	80	77.0	N	1200-1300	3270	45.5%	17.5%	0.1%	10.9%	3.9%	3.9%	7.7%	0.0%	0.1%	0.7%	0.8%	0.5%	1.2%	0.0%	3.6%	1.3%	2.2%	100.0%	
Road 1	1	80	78.4	N	1300-1400	3345	43.8%	16.9%	0.1%	12.9%	4.6%	4.0%	7.9%	0.0%	0.1%	0.6%	0.6%	0.4%	1.0%	0.0%	3.4%	1.3%	2.3%	100.0%	
Road 1	1	80	75.1	N	1400-1500	3564	44.0%	17.8%	0.1%	11.5%	4.1%	3.9%	7.6%	0.0%	0.1%	0.8%	0.9%	0.6%	1.3%	0.0%	3.4%	1.7%	2.2%	100.0%	
Road 1	1	80	74.7	N	1500-1600	3646	43.7%	17.5%	0.1%	13.3%	4.8%	3.4%	8.6%	0.0%	0.1%	0.8%	0.9%	0.6%	1.4%	0.0%	3.3%	1.6%	1.9%	100.0%	
Road 1	1	80	73.3	N	1600-1700	3875	46.5%	16.0%	0.1%	10.3%	3.6%	3.3%	6.4%	0.0%	0.1%	1.1%	1.4%	0.9%	2.1%	0.0%	3.7%	2.2%	1.9%	100.0%	
Road 1	1	80	71.6	N	1700-1800	4383	51.8%	16.1%	0.1%	9.4%	3.4%	2.1%	4.2%	0.0%	0.1%	0.7%	0.9%	1.4%	0.0%	3.7%	4.4%	1.3%	100.0%		
Road 1	1	80	70.4	N	1800-1900	4782	62.5%	14.7%	0.1%	5.8%	2.1%	1.2%	2.4%	0.0%	0.0%	0.1%	1.1%	0.8%	1.7%	0.0%	3.8%	3.0%	0.8%	100.0%	
Road 1	1	80	76.3	N	1900-2000	3797	61.3%	19.2%	0.0%	4.4%	1.6%	1.1%	2.1%	0.0%	0.0%	0.1%	0.9%	0.6%	1.4%	0.0%	4.4%	2.3%	0.6%	100.0%	
Road 1	1	80	80.0	N	2000-2100	2956	56.4%	24.0%	0.0%	4.7%	1.7%	1.0%	2.0%	0.0%	0.0%	0.1%	0.8%	0.6%	1.2%	0.0%	4.6%	2.3%	0.6%	100.0%	
Road 1	1	80	80.0	N	2100-2200	2944	57.6%	23.8%	0.0%	4.8%	1.7%	1.1%	2.2%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	4.1%	2.6%	0.6%	100.0%	
Road 1	1	80	80.0	N	2200-2300	2862	57.2%	25.8%	0.0%	3.7%	1.3%	1.2%	2.3%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	4.4%	2.2%	0.7%	100.0%	
Road 1	1	80	80.0	N	2300-0000	2143	56.1%	25.9%	0.0%	4.1%	1.5%	1.3%	2.6%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	4.4%	2.5%	0.8%	100.0%	
Road 2	2	80	80.0	N	0000-0100	961	52.9%	23.7%	0.1%	5.8%	1.8%	1.6%	3.6%	0.0%	0.0%	0.2%	0.5%	0.3%	0.7%	0.0%	4.3%	2.7%	1.1%	100.0%	
Road 2	2	80	80.0	N	0100-0200	629	51.6%	23.1%	0.1%	6.4%	2.3%	2.0%	4.0%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	4.2%	2.9%	1.3%	100.0%	
Road 2	2	80	80.0	N	0200-0300	663	50.4%	22.8%	0.1%	6.9%	2.5%	2.2%	4.3%	0.0%	0.0%	0.3%	0.6%	0.4%	1.0%	0.0%	4.1%	3.2%	1.5%	100.0%	
Road 2	2	80	80.0	N	0300-0400	368	49.1%	21.8%	0.1%	7.4%	2.7%	2.3%	4.9%	0.0%	0.0%	0.4%	0.7%	0.5%	1.1%	0.0%	4.1%	3.5%	1.7%	100.0%	
Road 2	2	80	80.0	N	0400-0500	406	47.9%	21.2%	0.1%	8.0%	2.9%	2.5%	4.9%	0.0%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	4.0%	3.7%	1.7%	100.0%	
Road 2	2	80	80.0	N	0500-0600	706	46.8%	20.6%	0.1%	8.5%	3.1%	2.7%	5.2%	0.0%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	4.0%	4.0%	1.6%	100.0%	
Road 2	2	80	80.0	N	0600-0700	1521	45.7%	20.0%	0.1%	9.1%	3.3%	2.8%	5.6%	0.0%	0.1%	0.6%	0.9%	0.7%	1.4%	0.0%	4.3%	4.3%	1.6%	100.0%	
Road 2	2	80	78.7	N	0700-0800	3096	44.4%	19.3%	0.1%	9.6%	3.4%	3.0%	5.9%	0.0%	0.1%	0.7%	1.0%	0.7%	1.5%	0.0%	3.9%	4.4%	1.8%	100.0%	
Road 2	2	80	75.7	N	0800-0900	3594	49.4%	15.8%	0.1%	10.4%	3.7%	2.9%	5.7%	0.0%	0.1%	0.7%	1.0%	0.7%	1.5%	0.0%	3.5%	2.9%	1.7%	100.0%	
Road 2	2	80	78.1	N	0900-1000	3076	43.1%	15.8%	0.1%	14.1%	5.1%	3.8%	7.5%	0.0%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	3.4%	1.1%	2.2%	100.0%	
Road 2	2	80	80.0	N	1000-1100	2715	40.3%	15.6%	0.2%	14.8%	5.3%	4.7%	9.2%	0.0%	0.1%	0.4%	0.7%	0.5%	1.0%	0.0%	3.3%	1.2%	2.7%	100.0%	
Road 2	2	80	80.0	N	1100-1200	2568	40.2%	16.6%	0.2%	14.8%	5.3%	4.6%	9.1%	0.0%	0.1%	0.7%	0.4%	0.3%	0.6%	0.0%	3.4%	1.1%	2.7%	100.0%	
Road 2	2	80	77.7	N	1200-1300	3147	40.6%	15.9%	0.1%	12.5%	5.7%	5.0%	9.0%	0.0%	0.1%	0.6%	0.7%	0.5%	1.1%	0.0%	2.8%	1.2%	2.8%	100.0%	
Road 2	2	80	76.2	N	1300-1400	3258	38.7%	14.9%	0.2%	16.3%	5.9%	5.1%	9.9%	0.0%	0.1%	0.6%	0.6%	0.4%	0.8%	0.0%	2.7%	1.2%	2.8%	100.0%	
Road 2	2	80	75.1	N	1400-1500	3440	39.2%	15.9%	0.2%	14.6%	5.3%	5.0%	9.7%	0.0%	0.1%	0.7%	0.8%	0.5%	1.2%	0.0%	2.7%	1.5%	2.8%	100.0%	
Road 2	2	80	74.7	N	1500-1600	3528	38.8%	15.6%	0.2%	16.9%	6.1%	4.3%	8.4%	0.0%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	2.6%	1.4%	2.4%	100.0%	
Road 2	2	80	73.7	N	1600-1700	3689	42.0%	14.5%	0.1%	13.5%	4.9%	4.2%	8.3%	0.0%	0.1%	1.0%	1.2%	0.9%	1.9%	0.0%	2.9%	2.4%	2.4%	100.0%	
Road 2	2	80	72.7	N	1700-1800	4082	47.6%	14.9%	0.1%	12.4%	4.5%	2.8%	5.5%	0.0%	0.1%	0.7%	0.8%	0.6%	1.3%	0.0%	3.0%	4.1%	1.6%	100.0%	
Road 2	2	80	72.7	N	1800-1900	4310	59.6%	14.0%	0.1%	7.9%	2.9%	1.7%	3.3%	0.0%	0.0%	0.1%	1.0%	0.7%	1.6%	0.0%	3.2%	2.8%	1.0%	100.0%	
Road 2	2	80	71.4	N	1900-2000	3821	59.1%	18.1%	0.1%	9.1%	3.2%	2.8%	5.6%	0.0%	0.0%	0.1%	0.8%	0.6%	1.4%	0.0%	3.2%	2.2%	0.8%	100.0%	
Road 2	2	80	80.0	N	2000-2100	2638	54.4%	23.1%	0.1%	6.5%	2.3%	1.4%	2.8%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	3.9%	2.2%	0.8%	100.0%	
Road 2	2	80	80.0	N	2100-2200	2633	55.4%	22.9%	0.1%	6.6%	2.4%	1.5%	3.0%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	3.4%	2.5%	0.9%	100.0%	
Road 2	2	80	80.0	N	2200-2300	2546	56.1%	23.1%	0.1%	6.6%	2.4%	1.5%	3.0%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	3.4%	2.5%	0.9%	100.0%	
Road 2	2	80	80.0	N	2300-0000	1914	54.0%	24.3%	0.1%	5.7%	2.0%	1.8%	3.5%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	3.7%	2.4%	1.0%	100.0%	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters for AERMOD (Year 2038)

Emission Parameters For Selected Road Types																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles >15t	07 - Medium Goods Vehicles >24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchise d Bus Double Deck	15 - Franchise d Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicle >24t	18 - Non-franchised Bus >24t	Total	
							PC	TAXI	LGV3	LGV4	LGV5	HGV7	HGV8	FLB	PLV4	PV5	NFB6	NFB7	NFB8	FBSDD	FBDSD	MC	HGV9	NFB9		
Road 5	5	50	45.7	N	0000-0100	413	58.3%	26.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 5	5	50	47.2	N	0100-0200	268	57.3%	25.7%	0.0%	2.8%	1.0%	0.9%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 5	5	50	47.9	N	0200-0300	195	56.5%	25.2%	0.0%	3.0%	1.1%	0.9%	1.9%	0.0%	0.0%	0.4%	0.7%	0.5%	1.1%	0.0%	4.6%	3.6%	0.5%	0.0%	100.0%	
Road 5	5	50	48.4	N	0300-0400	154	55.6%	24.7%	0.0%	3.3%	1.2%	1.0%	2.0%	0.0%	0.1%	0.4%	0.8%	0.6%	1.2%	0.0%	4.6%	3.9%	0.5%	0.0%	100.0%	
Road 5	5	50	48.2	N	0400-0500	168	54.8%	24.8%	0.0%	3.5%	1.3%	1.1%	2.2%	0.0%	0.1%	0.5%	0.9%	0.8%	1.4%	0.4%	4.6%	4.3%	0.6%	0.0%	100.0%	
Road 5	5	50	48.9	N	0500-0600	290	53.9%	23.7%	0.0%	3.8%	1.4%	1.2%	2.4%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	4.5%	4.6%	0.6%	0.0%	100.0%	
Road 5	5	50	46.3	N	0600-0700	620	53.0%	23.2%	0.0%	4.1%	1.5%	1.3%	2.5%	0.0%	0.1%	0.7%	1.1%	0.8%	1.7%	0.0%	4.5%	5.0%	0.7%	0.0%	100.0%	
Road 5	5	38.5	38.5	N	0700-0800	449	54.4%	22.7%	0.0%	4.4%	1.6%	1.4%	2.7%	0.0%	0.1%	0.8%	1.2%	0.9%	1.8%	0.0%	4.3%	5.1%	0.7%	0.0%	100.0%	
Road 5	5	36.8	N	0800-0900	1441	58.2%	18.6%	0.0%	4.8%	1.7%	1.3%	2.6%	0.0%	0.1%	0.8%	1.1%	0.8%	1.7%	0.0%	4.0%	3.4%	0.7%	0.0%	100.0%		
Road 5	5	38.3	N	0900-1000	1160	54.4%	19.8%	0.1%	6.9%	2.5%	1.9%	3.7%	0.0%	0.1%	0.5%	0.9%	0.8%	1.4%	0.0%	4.2%	2.1%	1.0%	0.0%	100.0%		
Road 5	5	38.3	N	1000-1100	902	52.5%	20.3%	0.1%	7.5%	2.2%	2.4%	4.2%	0.0%	0.1%	0.6%	0.9%	0.8%	1.4%	0.0%	4.3%	1.8%	1.2%	0.0%	100.0%		
Road 5	5	38.3	N	1100-1200	941	51.9%	21.4%	0.1%	7.4%	2.7%	2.3%	4.6%	0.0%	0.1%	0.9%	0.5%	0.4%	0.5%	0.0%	4.4%	1.5%	1.2%	0.0%	100.0%		
Road 5	5	35.5	N	1200-1300	1605	53.0%	20.4%	0.1%	7.1%	2.6%	2.6%	5.0%	0.0%	0.1%	0.9%	0.9%	0.8%	1.4%	0.0%	2.5%	1.8%	1.3%	0.0%	100.0%		
Road 5	5	34.6	N	1300-1400	1618	51.8%	20.9%	0.1%	7.2%	2.8%	2.9%	5.2%	0.0%	0.1%	0.9%	0.9%	0.8%	1.4%	0.0%	2.4%	1.9%	1.3%	0.0%	100.0%		
Road 5	5	34.6	N	1400-1500	1745	51.4%	20.8%	0.1%	7.5%	2.7%	2.5%	5.0%	0.0%	0.1%	0.9%	0.6%	0.7%	1.6%	0.0%	2.4%	1.9%	1.3%	0.0%	100.0%		
Road 5	5	34.4	N	1500-1600	1780	51.2%	20.5%	0.1%	8.7%	3.1%	2.2%	4.4%	0.0%	0.1%	0.9%	0.1%	0.7%	1.6%	0.0%	2.4%	1.8%	1.1%	0.0%	100.0%		
Road 5	5	33.5	N	1600-1700	1930	53.4%	18.4%	0.1%	6.8%	2.4%	2.1%	4.2%	0.0%	0.2%	0.8%	0.9%	1.1%	2.4%	0.0%	2.6%	2.5%	1.1%	0.0%	100.0%		
Road 5	5	32.5	N	1700-1800	2243	52.6%	17.8%	0.0%	5.9%	4.9%	3.1%	4.7%	0.0%	0.2%	0.8%	0.9%	1.1%	2.4%	0.0%	2.6%	2.9%	0.9%	0.0%	100.0%		
Road 5	5	30.9	N	1800-1900	2543	67.2%	15.8%	0.0%	3.5%	1.3%	0.7%	1.4%	0.0%	0.0%	0.1%	1.2%	0.8%	1.8%	0.0%	2.5%	3.2%	0.4%	0.0%	100.0%		
Road 5	5	33.9	N	1900-2000	2039	65.2%	20.4%	0.0%	2.7%	1.0%	0.6%	1.2%	0.0%	0.0%	0.1%	1.0%	0.7%	1.5%	0.0%	2.8%	2.4%	0.3%	0.0%	100.0%		
Road 5	5	36.3	N	2000-2100	1584	62.0%	25.6%	0.0%	2.8%	1.2%	0.8%	1.2%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	2.8%	2.3%	0.3%	0.0%	100.0%		
Road 5	5	36.7	N	2100-2200	1579	61.2%	25.4%	0.0%	2.9%	1.0%	0.7%	1.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.7%	0.0%	2.6%	2.8%	0.3%	0.0%	100.0%		
Road 5	5	36.9	N	2200-2300	1541	60.7%	27.4%	0.0%	2.2%	0.8%	0.7%	1.4%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	2.8%	2.3%	0.4%	0.0%	100.0%		
Road 5	5	43.1	N	2300-0000	1148	58.9%	27.9%	0.0%	2.1%	0.8%	0.7%	1.5%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	2.8%	2.5%	0.4%	0.0%	100.0%		
Road 6	6	43.8	N	0000-0100	548	48.9%	22.0%	0.1%	8.4%	3.0%	2.6%	5.2%	0.0%	0.0%	0.2%	0.4%	0.3%	0.7%	0.0%	4.0%	2.5%	1.7%	0.0%	100.0%		
Road 6	6	45.8	N	0100-0200	361	47.4%	21.2%	0.1%	9.1%	3.2%	2.9%	5.6%	0.0%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	3.9%	2.7%	2.0%	0.0%	100.0%		
Road 6	6	46.9	N	0200-0300	268	45.9%	20.5%	0.1%	9.7%	3.5%	3.1%	6.0%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	3.8%	2.9%	2.3%	0.0%	100.0%		
Road 6	6	47.5	N	0300-0400	204	45.1%	20.3%	0.1%	10.4%	3.8%	3.4%	6.4%	0.0%	0.0%	0.3%	0.7%	0.5%	1.0%	0.0%	3.7%	3.1%	2.5%	0.0%	100.0%		
Road 6	6	47.2	N	0400-0500	238	43.1%	19.1%	0.1%	11.1%	4.0%	3.5%	6.8%	0.0%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	3.7%	3.3%	2.6%	0.0%	100.0%		
Road 6	6	45.0	N	0500-0600	446	41.9%	18.4%	0.1%	11.8%	4.2%	3.7%	7.3%	0.0%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	3.6%	3.6%	2.3%	0.0%	100.0%		
Road 6	6	36.9	N	0600-0700	1261	67.8%	12.6%	0.0%	12.0%	4.5%	3.7%	7.8%	0.0%	0.0%	0.1%	1.2%	0.8%	1.8%	0.0%	3.6%	3.6%	2.3%	0.0%	100.0%		
Road 6	6	33.0	N	0700-0800	1848	39.2%	17.1%	0.1%	13.1%	4.7%	4.1%	8.1%	0.0%	0.1%	0.6%	0.9%	0.6%	1.4%	0.0%	3.5%	4.0%	2.5%	0.0%	100.0%		
Road 6	6	30.9	N	0800-0900	2152	43.5%	13.9%	0.1%	14.2%	5.1%	4.6%	7.8%	0.0%	0.1%	0.6%	0.9%	0.8%	1.3%	0.0%	3.1%	2.5%	2.4%	0.0%	100.0%		
Road 6	6	31.9	N	0900-1000	1916	43.4%	13.3%	0.0%	18.4%	5.3%	4.9%	9.8%	0.0%	0.0%	0.4%	0.8%	0.7%	1.4%	0.0%	2.8%	2.4%	2.4%	0.0%	100.0%		
Road 6	6	32.9	N	1000-1100	1723	33.5%	13.0%	0.2%	19.0%	6.8%	6.0%	11.9%	0.0%	0.4%	0.4%	0.6%	0.4%	0.8%	0.0%	2.8%	1.0%	3.5%	0.0%	100.0%		
Road 6	6	32.9	N	1100-1200	1677	33.5%	13.8%	0.2%	19.0%	6.8%	5.9%	11.7%	0.0%	0.1%	0.6%	0.3%	0.2%	0.5%	0.0%	2.9%	0.9%	3.5%	0.0%	100.0%		
Road 6	6	32.2	N	1200-1300	1744	27.8%	13.5%	0.1%	21.0%	7.5%	6.8%	12.8%	0.0%	0.1%	0.5%	0.5%	0.4%	0.8%	0.0%	2.9%	1%	4.5%	0.0%	100.0%		
Road 6	6	32.5	N	1300-1400	1604	26.7%	9.9%	0.3%	24.0%	5.7%	7.4%	14.6%	0.0%	0.0%	0.4%	0.4%	0.3%	0.6%	0.0%	2.8%	0.8%	3.3%	0.0%	100.0%		
Road 6	6	32.5	N	1400-1500	1694	26.7%	10.8%	0.2%	22.0%	7.9%	7.4%	14.6%	0.0%	0.1%	0.5%	0.5%	0.4%	0.8%	0.0%	2.9%	1.0%	4.2%	0.0%	100.0%		
Road 6	6	32.2	N	1500-1600	1748	26.3%	10.5%	0.3%	25.2%	9.0%	6.4%	12.6%	0.0%	0.1%	0.5%	0.5%	0.4%	0.8%	0.0%	2.8%	0.9%	3.7%	0.0%	100.0%		
Road 6	6	32.2	N	1600-1700	2109	25.2%	10.2%	0.2%	21.0%	8.2%	7.2%	14.6%	0.0%	0.1%	0.5%	0.5%	0.4%	0.8%	0.0%	2.9%	1%	4.8%	0.0%	100.0%		
Road 6	6	32.4	N	1700-1800	1839	35.4%	11.1%	0.2%	20.3%	7.3%	4.6%	9.1%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	3.6%	3.0%	2.8%	0.0%	100.0%		
Road 6	6	33.7	N	1800-1900	1067	48.7%	11.4%	0.1%	14.3%	5.1%	3.6%	5.9%	0.0%	0.0%	0.1%	0.9%	0.6%	1.3%	0.0%	4.2%	2.3%	1.9%	0.0%	100.0%		
Road 6	6	36.0	N	1900-2000	1346	47.8%	11.4%	0.1%	14.4%	5.1%	3.6%	5.9%	0.0%	0.0%	0.1%	0.9%	0.6%	1.3%	0.0%	4.1%	2.3%	1.9%	0.0%	100.0%		
Road 6	6	38.6	N	2000-2100	1054	45.6%	19.4%	0.1%	12.0%	4.3%	2.6%	5.2%	0.0%	0.0%	0.1%	0.6%	0.4%	1.0%	0.0%	3.5%	1.8%	1.5%	0.0%	100.0%		
Road 6	6	38.7	N	2100-2200	1054	46.4%	19.2%	0.1%	12.2%	4.4%	2.8%	5.5%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	4.6%	2.1%	1.6%	0.0%	100.0%		
Road 6	6	40.9	N	2200-2300	1054	46.4%	19.2%	0.1%	12.2%	4.4%	2.8%	5.5%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	4.6%	2.1%	1.6%	0.0%	100.0%		
Road 6	6	40.9	N	2300-0000	766	45.2%	20.4%	0.1%	10.5%	3.8%	3.3%	6.5%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	5.0%	2.0%	2.0%	0.0%	100.0%		

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters For ARMOED (Year 2038)																									
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Bus Stop Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <2.5-3.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles >4t	07 - Road Goods Vehicles >16t	08 - Public Buses	09 - Private Light Buses >5-8t	10 - Private Light Buses 8-15t	11 - Non-franchised Buses >6-8t	12 - Non-franchised Buses 14-15t	13 - Non-franchised Buses 16-18t	14 - Franchise Single Deck	15 - Franchise Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicle	18 - Non-franchised Buses >24t	Total
							PC	TAXI	LGV3	LGV4	LOVE	HGV7	HGV9	PLB	PV4	PV5	NFB6	NFB7	NFB8	FBSD	FBDL	MC	HGVU	NFB9	
Road 11	11	50	45.0	Y	0000-0100	445	52.6%	23.6%	0.1%	4.9%	1.8%	1.6%	3.1%	0.2%	0.0%	0.2%	0.5%	0.3%	0.7%	0.0%	2.9%	2.6%	9.4%	0.0%	100.0%
Road 11	11	50	46.6	Y	0100-0200	297	50.4%	22.5%	0.1%	5.3%	1.9%	1.7%	3.3%	0.1%	0.0%	0.2%	0.5%	0.4%	0.8%	0.2%	2.8%	2.9%	7.7%	0.0%	100.0%
Road 11	11	50	47.3	Y	0200-0300	223	48.2%	21.6%	0.2%	6.1%	2.1%	1.9%	3.7%	0.1%	0.0%	0.2%	0.4%	0.5%	0.7%	0.1%	2.4%	2.6%	6.0%	0.0%	100.0%
Road 11	11	50	47.8	Y	0300-0400	181	46.1%	20.5%	0.1%	5.9%	2.1%	1.9%	3.7%	0.1%	0.0%	0.4%	0.7%	0.5%	1.0%	0.2%	2.7%	3.2%	11.1%	0.0%	100.0%
Road 11	11	50	47.6	Y	0400-0500	197	45.5%	20.1%	0.1%	6.4%	2.3%	2.0%	4.0%	0.1%	0.1%	0.4%	0.7%	0.5%	1.1%	0.1%	2.7%	3.5%	10.4%	0.0%	100.0%
Road 11	11	50	46.0	Y	0500-0600	329	49.7%	20.4%	0.2%	7.6%	2.6%	2.5%	4.5%	0.1%	0.1%	0.4%	0.7%	0.5%	1.1%	0.1%	2.5%	2.7%	14.4%	0.0%	100.0%
Road 11	11	50	42.0	Y	0600-0700	587	46.6%	20.4%	0.1%	7.8%	2.8%	2.5%	4.8%	0.2%	0.1%	0.6%	1.0%	0.7%	1.5%	0.2%	2.4%	4.4%	3.9%	0.0%	100.0%
Road 11	11	50	36.1	Y	0700-0800	1428	44.3%	19.9%	0.1%	8.1%	2.9%	2.5%	5.0%	0.2%	0.1%	0.6%	1.0%	0.7%	1.5%	0.2%	2.4%	6.5%	6.3%	0.0%	100.0%
Road 11	11	50	34.7	Y	0800-0900	1647	43.1%	18.7%	0.1%	8.1%	3.2%	2.6%	5.2%	0.2%	0.1%	0.6%	1.1%	0.8%	1.5%	0.2%	2.4%	1.8%	1.8%	0.0%	100.0%
Road 11	11	50	35.9	Y	0900-1000	1402	43.9%	19.5%	0.1%	12.1%	4.3%	3.3%	6.5%	0.1%	0.1%	0.4%	0.7%	0.5%	1.1%	0.2%	2.4%	1.7%	6.7%	0.0%	100.0%
Road 11	11	50	36.8	Y	1000-1100	1238	40.7%	15.8%	0.1%	12.7%	4.6%	4.0%	7.9%	0.1%	0.1%	0.4%	0.7%	0.5%	1.0%	0.2%	2.3%	1.2%	7.8%	0.0%	100.0%
Road 11	11	50	37.2	Y	1100-1200	1175	45.0%	12.5%	0.1%	12.5%	4.5%	3.9%	7.5%	0.1%	0.1%	0.5%	0.7%	0.5%	1.0%	0.2%	2.4%	1.4%	7.0%	0.0%	100.0%
Road 11	11	50	33.0	Y	1200-1300	1477	31.2%	12.3%	0.1%	12.3%	6.2%	4.2%	12.2%	0.1%	0.1%	0.5%	0.7%	0.4%	0.8%	0.2%	2.6%	0.8%	8.0%	0.0%	100.0%
Road 11	11	50	33.7	Y	1300-1400	1551	29.9%	11.5%	0.2%	19.9%	7.2%	6.2%	12.1%	0.1%	0.1%	0.4%	0.4%	0.3%	0.7%	0.2%	2.4%	0.9%	7.7%	0.0%	100.0%
Road 11	11	50	33.3	Y	1400-1500	1614	30.7%	12.4%	0.2%	18.7%	6.5%	6.1%	12.1%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.2%	2.5%	1.2%	7.5%	0.0%	100.0%
Road 11	11	50	33.1	Y	1500-1600	1659	30.4%	12.4%	0.2%	18.3%	6.5%	6.3%	12.1%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.2%	2.4%	1.1%	7.3%	0.0%	100.0%

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters For ARMOOD (Year 2038)																													
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Light Bus Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars		02 - Taxi	03 - Light Goods Vehicles >2.5t	04 - Light Goods 2.5-3.5t	05 - Light Goods 3.5t	06 - Medium Goods Vehicles >4t	07 - Medium Goods Vehicles 1-4t	08 - Public Buses	09 - Private Light Buses >0.5t	10 - Private Light Buses 0.5-1t	11 - Non-franchised Buses >4t	12 - Non-franchised Buses 2.4-4.5t	13 - Non-franchised Buses 1.5-2t	14 - Franchise Buses Single Deck	15 - Franchise Buses Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicles	18 - Non-franchised Buses >4t	Total			
							PC	TAXI																			LGV1	LGVA	LOVE
Road 15	15	50	47.8	N	0000-0100	89	47.0%	21.1%	0.0%	4.2%	1.5%	1.3%	2.6%	0.0%	0.0%	0.2%	0.4%	0.3%	0.7%	0.0%	1.1%	2.4%	17.3%	0.0%	100.0%				
Road 15	15	50	48.3	N	0100-0200	63	42.1%	18.9%	0.0%	4.2%	1.5%	1.3%	2.6%	0.0%	0.0%	0.2%	0.5%	0.3%	0.7%	0.0%	1.0%	2.4%	24.0%	0.0%	100.0%				
Road 15	15	50	48.6	N	0200-0300	50	38.1%	17.0%	0.0%	4.2%	1.5%	1.3%	2.6%	0.0%	0.0%	0.2%	0.5%	0.3%	0.7%	0.0%	1.0%	2.4%	24.0%	0.0%	100.0%				
Road 15	15	50	48.7	N	0300-0400	43	34.7%	15.4%	0.0%	4.2%	1.5%	1.3%	2.6%	0.0%	0.0%	0.3%	0.5%	0.3%	0.8%	0.0%	0.8%	2.4%	35.1%	0.0%	100.0%				
Road 15	15	50	48.8	N	0400-0500	45	35.0%	16.5%	0.0%	4.6%	1.7%	1.5%	2.9%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	0.9%	2.7%	33.0%	0.0%	100.0%				
Road 15	15	50	48.1	N	0500-0600	69	38.5%	17.4%	0.1%	5.8%	2.1%	1.8%	3.4%	0.0%	0.0%	0.5%	0.8%	0.5%	1.4%	0.0%	1.4%	4.6%	20.0%	0.0%	100.0%				
Road 15	15	50	46.8	N	0600-0700	131	43.8%	19.2%	0.1%	6.9%	2.5%	2.2%	4.3%	0.0%	0.1%	0.6%	0.9%	0.6%	1.4%	0.0%	1.1%	1.1%	12.4%	0.0%	100.0%				
Road 15	15	50	42.1	N	0700-0800	292	38.8%	16.9%	0.1%	6.7%	2.4%	2.1%	4.1%	0.0%	0.1%	0.6%	0.9%	0.6%	1.3%	0.0%	1.0%	4.0%	20.5%	0.0%	100.0%				
Road 15	15	50	41.3	N	0800-0900	300	37.1%	7.4%	0.1%	7.4%	2.1%	1.9%	3.1%	0.0%	0.1%	0.4%	0.6%	0.4%	1.0%	0.0%	0.9%	1.5%	21.2%	0.0%	100.0%				
Road 15	15	50	42.0	N	0900-1000	287	38.4%	13.9%	0.1%	9.9%	3.6%	2.7%	5.3%	0.0%	0.1%	0.4%	0.6%	0.4%	1.0%	0.0%	0.9%	1.5%	21.2%	0.0%	100.0%				
Road 15	15	50	42.6	N	1000-1100	258	34.3%	13.5%	0.1%	10.3%	3.7%	3.3%	6.4%	0.0%	0.2%	0.4%	0.6%	0.4%	0.9%	0.0%	0.8%	1.1%	23.7%	0.0%	100.0%				
Road 15	15	50	42.9	N	1100-1200	247	34.6%	12.0%	0.1%	3.6%	1.0%	1.0%	1.9%	0.0%	0.1%	0.1%	0.4%	0.3%	0.5%	0.0%	0.7%	1.0%	18.3%	0.0%	100.0%				
Road 15	15	50	39.5	N	1200-1300	372	30.8%	12.3%	0.2%	5.6%	5.8%	11.4%	0.0%	0.1%	0.1%	0.4%	0.5%	0.4%	0.7%	0.2%	0.6%	0.8%	18.3%	0.0%	100.0%				
Road 15	15	50	39.2	N	1300-1400	390	26.3%	10.1%	0.2%	19.8%	6.7%	5.8%	11.4%	0.0%	0.0%	0.4%	0.4%	0.3%	0.6%	0.0%	0.5%	0.8%	17.6%	0.0%	100.0%				
Road 15	15	50	39.0	N	1400-1500	403	27.2%	11.0%	0.2%	17.2%	6.2%	5.8%	11.4%	0.0%	0.1%	0.5%	0.5%	0.4%	0.8%	0.0%	0.6%	1.0%	17.1%	0.0%	100.0%				
Road 15	15	50	38.9	N	1500-1600	414	28.9%	10.8%	0.2%	17.2%	6.2%	5.8%	11.4%	0.0%	0.1%	0.5%	0.5%	0.4%	0.8%	0.0%	0.6%	1.0%	17.1%	0.0%	100.0%				
Road 15	15	50	38.9	N	1600-1700	419	30.1%	10.4%	0.2%	16.4%	5.9%	5.1%	10.1%	0.0%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	0.6%	1.4%	16.2%	0.0%	100.0%				
Road 15	15	50	38.9	N	1700-1800	443	35.1%	11.2%	0.2%	15.7%	5.7%	3.6%	7.0%	0.0%	0.1%	0.1%	0.5%	0.6%	0.4%	1.0%	0.0%	0.7%	3.1%	17.4%	0.0%	100.0%			
Road 15	15	50	39.0	N	1800-1900	499	42.9%	10.7%	0.2%	19.7%	6.2%	2.9%	6.0%	0.0%	0.2%	0.6%	0.9%	0.6%	1.2%	0.0%	0.7%	3.1%	17.4%	0.0%	100.0%				
Road 15	15	50	42.8	N	1900-2000	309	52.7%	16.5%	0.1%	9.3%	3.3%	2.2%	4.3%	0.0%	0.0%	0.1%	0.8%	0.6%	1.2%	0.0%	1.0%	1.9%	5.5%	0.0%	100.0%				
Road 15	15	50	44.3	N	2000-2100	244	47.8%	20.0%	0.1%	9.6%	3.5%	2.1%	4.2%	0.0%	0.0%	0.1%	0.7%	0.5%	1.0%	0.0%	1.0%	1.9%	7.1%	0.0%	100.0%				
Road 15	15	50	44.3	N	2100-2200	345	48.5%	20.0%	0.1%	9.6%	3.5%	2.2%	4.4%	0.0%	0.0%	0.1%	0.7%	0.5%	1.0%	0.0%	1.0%	1.9%	7.2%	0.0%	100.0%				
Road 15	15	50	44.5	N	2200-2300	234	48.8%	22.1%	0.1%	7.7%	2.7%	2.4%	4.8%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	1.0%	1.9%	7.5%	0.0%	100.0%				
Road 15	15	50	45.6	N	2300-0000	181	48.3%	20.0%	0.1%	8.5%	3.0%	2.6%	5.1%	0.0%	0.0%	0.1%	0.4%	0.2%	0.5%	0.0%	0.9%	1.1%	9.5%	0.0%	100.0%				
Road 16	16	70	67.5	N	0000-0100	83	53.5%	24.1%	0.1%	5.4%	1.8%	1.6%	3.4%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	0.3%	3.4%	2.3%	0.0%	100.0%				
Road 16	16	70	66.3	N	0100-0200	231	52.5%	23.5%	0.1%	5.6%	2.0%	1.8%	3.5%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	0.3%	3.4%	2.3%	0.0%	100.0%				
Road 16	16	70	66.7	N	0200-0300	171	51.1%	22.8%	0.1%	6.0%	2.2%	1.9%	3.7%	0.0%	0.0%	0.3%	0.6%	0.4%	1.0%	0.0%	0.3%	3.2%	3.1%	0.0%	100.0%				
Road 16	16	70	69.0	N	0300-0400	198	49.0%	23.0%	0.1%	5.3%	2.3%	2.0%	3.5%	0.0%	0.0%	0.3%	0.6%	0.4%	1.5%	0.0%	0.3%	3.5%	3.7%	0.0%	100.0%				
Road 16	16	70	68.9	N	0400-0500	149	48.6%	21.5%	0.1%	7.0%	2.5%	2.2%	4.3%	0.0%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	0.3%	3.2%	3.8%	0.0%	100.0%				
Road 16	16	70	68.1	N	0500-0600	257	48.0%	21.1%	0.1%	7.5%	2.7%	2.4%	4.6%	0.0%	0.2%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	0.3%	3.1%	2.1%	0.0%	100.0%			
Road 16	16	70	65.8	N	0600-0700	550	47.2%	20.7%	0.1%	8.1%	2.9%	2.5%	5.0%	0.0%	0.2%	0.1%	0.6%	1.0%	0.7%	0.5%	0.3%	3.4%	2.6%	0.0%	100.0%				
Road 16	16	70	65.7	N	0700-0800	1123	45.7%	19.9%	0.1%	8.1%	3.1%	2.7%	5.1%	0.0%	0.2%	0.1%	0.6%	1.2%	1.1%	0.7%	0.5%	3.4%	2.6%	0.0%	100.0%				
Road 16	16	70	49.7	N	0800-0900	1300	51.0%	16.3%	0.1%	9.2%	3.3%	2.6%	5.1%	0.0%	0.1%	0.1%	0.7%	1.0%	0.7%	0.5%	0.0%	2.8%	2.0%	2.4%	0.0%	100.0%			
Road 16	16	70	54.9	N	0900-1000	1102	45.3%	16.4%	0.1%	12.6%	4.5%	3.4%	6.8%	0.0%	0.2%	0.1%	0.4%	0.8%	0.5%	1.2%	0.0%	2.8%	1.8%	3.0%	0.0%	100.0%			
Road 16	16	70	60.0	N	1000-1100	968	42.1%	13.4%	0.1%	13.4%	4.8%	4.2%	8.2%	0.0%	0.2%	0.1%	0.3%	0.8%	0.5%	1.2%	0.0%	2.8%	1.8%	3.0%	0.0%	100.0%			
Road 16	16	70	60.8	N	1100-1200	917	42.0%	17.3%	0.1%	13.3%	4.8%	4.2%	8.2%	0.0%	0.1%	0.1%	0.8%	0.4%	0.3%	0.6%	0.0%	2.8%	1.2%	3.7%	0.0%	100.0%			
Road 16	16	70	51.1	N	1200-1300	1083	32.1%	12.6%	0.2%	17.8%	6.4%	6.4%	12.6%	0.0%	0.1%	0.3%	0.6%	0.4%	0.9%	0.0%	3.4%	1.0%	4.6%	0.0%	100.0%				
Road 16	16	70	51.7	N	1300-1400	1139	30.6%	14.9%	0.2%	18.0%	6.7%	6.7%	12.6%	0.0%	0.1%	0.3%	0.6%	0.4%	0.9%	0.0%	3.4%	1.0%	4.6%	0.0%	100.0%				
Road 16	16	70	51.0	N	1400-1500	1187	31.5%	12.7%	0.2%	18.7%	6.7%	6.3%	12.4%	0.0%	0.1%	0.5%	0.6%	0.4%	1.0%	0.0%	3.2%	1.2%	4.4%	0.0%	100.0%				
Road 16	16	70	46.1	N	1500-1600	1221	31.1%	12.5%	0.2%	21.5%	7.7%	5.4%	10.7%	0.0%	0.1%	0.5%	0.6%	0.4%	1.0%	0.0%	3.1%	1.1%	3.9%	0.0%	100.0%				
Road 16	16	70	46.0	N	1600-1700	1249	33.5%	12.7%	0.2%	17.6%	6.3%	5.9%	10.7%	0.0%	0.1%	0.5%	0.6%	0.4%	1.0%	0.0%	3.1%	1.1%	3.9%	0.0%	100.0%				
Road 16	16	70	44.8	N	1700-1800	1337	40.1%	12.6%	0.2%	16.7%	6.0%	3.8%	7.4%	0.0%	0.1%	0.5%	0.6%	0.7%	0.5%	0.1%	0.0%	3.1%	3.1%	3.0%	0.0%	100.0%			
Road 16	16	70	47.5	N	1800-1900	1343	53.1%	12.5%	0.1%	11.3%	4.0%	2.3%	4.6%	0.0%	0.0%	0.1%	0.9%	0.6%	1.4%	0.0%	4.2%	2.5%	2.2%	0.0%	100.0%				
Road 16	16	70	48.1	N	1900-2000	1032	53.1%	8.9%	0.2%	9.3%	3.2%	2.1%	4.0%	0.0%	0.0%	0.1%	0.5%	0.6%	0.7%	0.0%	4.2%	2.5%	2.2%	0.0%	100.0%				
Road 16	16	70	63.8	N	2000-2100	807	49.2%	20.0%	0.1%	9.3%	3.4%	2.1%	4.0%	0.0%	0.0%	0.1%	0.7%	0.5%	1.0%	0.0%	5.2%	2.0%	1.5%	0.0%	100.0%				
Road 16	16	70	63.9	N	2100-2200	806	50.1%	20.7%	0.1%	9.5%	3.4%	2.2%	4.3%	0.0%	0.0%	0.1%	0.4%	0.2%	0.5%	0.0%	4.6%	2.3%	1.6%	0.0%	100.0%				
Road 16	16	70	65.2	N	2200-2300	773	49.4%	22.1%	0.1%	7.4%	2.9%	2.4%	4.9%	0.0%	0.0%	0.1%	0.4%	0.3%	0.5%	0.0%	4.6%	2.3%	1.6%	0.0%	100.0%				
Road 16	16	70	65.5	N	2300-0000	586	48.8%	22.0%	0.1%	8.2%	2.9%	2.6%	5.1%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	4.9%	2.2%	2.0%	0.0%	100.0%				

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters for AERMOD (Year 2038)

Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles >15t	07 - Medium Goods Vehicles >24t	08 - Public Light Bus >3.5t	09 - Private Light Bus >3.5t	10 - Private Light Bus <=3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.5-4.9t	13 - Non-franchised Bus 5.0-14.9t	14 - Franchised Single Deck	15 - Franchised Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicle >24t	18 - Non-franchised Bus >24t	Total
							PC	TAXI	LGV4	LGV6	HGV7	HGV8	FLB	PV4	PV6	NFB6	NFB7	NFB8	FBS0	FBS1	MC	HGV9	NFB9		
Road 17	17	70	66.6	N	0000-0100	465	50.7%	22.8%	0.1%	7.7%	2.8%	2.4%	4.8%	0.1%	0.0%	0.2%	0.5%	0.3%	0.7%	0.0%	2.5%	2.6%	2.0%	100.0%	
Road 17	17	70	67.7	N	0100-0200	307	49.1%	22.0%	0.1%	8.3%	3.0%	2.6%	5.1%	0.1%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	2.5%	2.8%	2.5%	100.0%	
Road 17	17	70	68.3	N	0200-0300	227	47.5%	21.2%	0.1%	8.9%	3.2%	2.8%	5.5%	0.1%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	2.4%	3.0%	3.0%	100.0%	
Road 17	17	70	68.6	N	0300-0400	182	46.0%	20.4%	0.1%	9.5%	3.4%	3.0%	5.9%	0.1%	0.0%	0.4%	0.7%	0.5%	1.0%	0.0%	2.4%	3.2%	3.5%	100.0%	
Road 17	17	70	69.4	N	0400-0500	202	44.2%	19.8%	0.1%	10.2%	3.8%	3.2%	6.3%	0.1%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	3.4%	3.5%	3.4%	100.0%	
Road 17	17	70	67.3	N	0500-0600	350	43.7%	19.2%	0.1%	10.9%	3.9%	3.4%	6.7%	0.1%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	2.3%	3.7%	2.8%	100.0%	
Road 17	17	70	64.1	N	0600-0700	755	42.6%	18.7%	0.1%	11.6%	4.2%	3.6%	7.1%	0.1%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	2.3%	4.0%	2.3%	100.0%	
Road 17	17	70	37.2	N	0700-0800	1549	41.1%	17.0%	0.1%	12.1%	4.4%	3.8%	7.5%	0.1%	0.1%	0.6%	0.9%	0.7%	1.4%	0.0%	2.2%	4.2%	2.9%	100.0%	
Road 17	17	70	22.6	N	0800-0900	1804	45.6%	14.6%	0.1%	13.1%	4.7%	3.7%	7.2%	0.1%	0.1%	0.6%	0.9%	0.6%	1.4%	0.0%	2.0%	2.6%	2.7%	100.0%	
Road 17	17	70	30.6	N	0900-1000	1589	38.9%	14.1%	0.2%	17.3%	6.2%	4.7%	9.2%	0.1%	0.0%	0.4%	0.7%	0.5%	1.0%	0.0%	1.9%	1.5%	3.3%	100.0%	
Road 17	17	70	38.1	N	1000-1100	1423	35.6%	13.8%	0.2%	17.9%	6.4%	5.7%	11.2%	0.1%	0.0%	0.4%	0.6%	0.4%	0.9%	0.0%	1.8%	1.1%	3.9%	100.0%	
Road 17	17	70	42.9	N	1100-1200	1345	35.6%	14.7%	0.2%	17.9%	6.4%	5.6%	11.0%	0.1%	0.1%	0.6%	0.4%	0.2%	0.5%	0.0%	1.9%	1.0%	3.9%	100.0%	
Road 17	17	70	43.3	N	1200-1300	1227	26.4%	10.2%	0.2%	21.9%	7.0%	7.9%	15.4%	0.0%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	2.3%	0.8%	5.2%	100.0%	
Road 17	17	70	38.1	N	1300-1400	1311	24.3%	9.4%	0.3%	24.9%	8.9%	7.7%	15.1%	0.0%	0.0%	0.4%	0.3%	0.2%	0.5%	0.0%	2.1%	0.7%	5.0%	100.0%	
Road 17	17	70	35.8	N	1400-1500	1350	25.3%	10.2%	0.2%	22.9%	8.2%	7.7%	15.2%	0.0%	0.1%	0.4%	0.5%	0.4%	0.8%	0.0%	2.2%	1.0%	5.0%	100.0%	
Road 17	17	70	34.0	N	1500-1600	1394	24.9%	10.0%	0.3%	26.2%	9.4%	8.6%	13.1%	0.0%	0.1%	0.4%	0.5%	0.4%	0.8%	0.0%	2.1%	0.9%	4.4%	100.0%	
Road 17	17	70	34.3	N	1600-1700	1395	28.1%	9.7%	0.2%	22.0%	7.9%	6.9%	13.5%	0.0%	0.1%	0.7%	0.8%	0.8%	1.3%	0.0%	2.4%	1.3%	4.5%	100.0%	
Road 17	17	70	36.5	N	1700-1800	1447	34.0%	10.6%	0.2%	21.6%	7.7%	4.9%	9.5%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	2.7%	2.9%	3.5%	100.0%	
Road 17	17	70	44.9	N	1800-1900	1370	47.5%	11.2%	0.2%	15.3%	5.5%	3.2%	6.3%	0.0%	0.0%	0.1%	0.8%	0.6%	1.3%	0.0%	3.2%	2.7%	4.0%	100.0%	
Road 17	17	70	58.1	N	1900-2000	1032	49.1%	15.4%	0.1%	12.3%	4.4%	2.9%	5.8%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	3.8%	1.8%	1.9%	100.0%	
Road 17	17	70	63.6	N	2000-2100	869	44.9%	19.1%	0.1%	12.9%	4.6%	2.9%	5.6%	0.0%	0.0%	0.1%	0.6%	0.4%	1.0%	0.0%	4.0%	1.8%	1.9%	100.0%	
Road 17	17	70	63.7	N	2100-2200	811	45.5%	18.8%	0.1%	13.1%	4.7%	3.0%	5.9%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	3.5%	2.1%	2.0%	100.0%	
Road 17	17	70	64.0	N	2200-2300	770	46.3%	20.0%	0.1%	10.4%	3.7%	3.3%	6.5%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	3.9%	1.8%	2.2%	100.0%	
Road 17	17	70	65.4	N	2300-0000	589	44.4%	20.0%	0.1%	11.3%	4.1%	3.6%	7.1%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	3.8%	2.0%	2.5%	100.0%	
Road 18	18	70	68.8	N	0000-0100	352	53.9%	24.2%	0.1%	5.1%	1.8%	1.6%	3.2%	0.2%	0.0%	0.2%	0.5%	0.3%	0.8%	0.0%	3.4%	2.7%	1.9%	100.0%	
Road 18	18	70	69.2	N	0100-0200	231	52.5%	23.8%	0.1%	5.6%	2.0%	1.8%	3.5%	0.2%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	3.4%	3.0%	2.5%	100.0%	
Road 18	18	70	69.4	N	0200-0300	171	51.1%	22.8%	0.1%	6.0%	2.2%	1.9%	3.7%	0.2%	0.0%	0.3%	0.6%	0.4%	1.0%	0.0%	3.3%	3.2%	3.1%	100.0%	
Road 18	18	70	69.5	N	0300-0400	136	49.6%	22.0%	0.1%	6.5%	2.3%	2.0%	4.0%	0.2%	0.0%	0.4%	0.7%	0.5%	1.1%	0.0%	3.3%	3.5%	3.7%	100.0%	
Road 18	18	70	69.5	N	0400-0500	149	48.6%	21.5%	0.1%	7.0%	2.5%	2.2%	4.3%	0.2%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	3.2%	3.8%	3.6%	100.0%	
Road 18	18	70	69.1	N	0500-0600	257	48.0%	21.1%	0.1%	7.5%	2.7%	2.4%	4.6%	0.2%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	3.2%	4.1%	2.6%	100.0%	
Road 18	18	70	68.0	N	0600-0700	559	47.1%	20.7%	0.1%	8.1%	2.9%	2.5%	5.0%	0.2%	0.1%	0.6%	0.9%	0.7%	1.5%	0.0%	3.2%	4.4%	3.0%	100.0%	
Road 18	18	70	65.9	N	0700-0800	1123	45.7%	19.9%	0.1%	8.5%	3.1%	2.7%	5.2%	0.2%	0.1%	0.7%	1.0%	0.7%	1.6%	0.0%	3.2%	4.7%	2.5%	100.0%	
Road 18	18	70	65.3	N	0800-0900	1300	51.0%	18.3%	0.1%	9.2%	3.3%	2.6%	5.1%	0.2%	0.1%	0.7%	1.0%	0.7%	1.5%	0.0%	2.8%	3.0%	2.4%	100.0%	
Road 18	18	70	65.8	N	0900-1000	1102	45.3%	16.4%	0.1%	12.6%	4.5%	3.4%	8.9%	0.2%	0.1%	0.4%	0.8%	0.5%	1.2%	0.0%	2.9%	1.8%	3.0%	100.0%	
Road 18	18	70	66.2	N	1000-1100	968	42.1%	16.4%	0.1%	13.4%	4.8%	4.2%	8.3%	0.2%	0.1%	0.5%	0.7%	0.5%	1.1%	0.0%	2.8%	1.3%	3.6%	100.0%	
Road 18	18	70	66.4	N	1100-1200	917	42.0%	17.3%	0.1%	13.3%	4.8%	4.2%	8.2%	0.2%	0.1%	0.8%	0.4%	0.3%	0.6%	0.0%	2.8%	1.2%	3.7%	100.0%	
Road 18	18	70	65.4	N	1200-1300	1083	32.7%	12.5%	0.2%	24.6%	8.4%	6.2%	12.6%	0.0%	0.1%	0.5%	0.4%	0.9%	0.0%	1.8%	1.0%	4.6%	0.0%	100.0%	
Road 18	18	70	65.0	N	1300-1400	1139	30.6%	11.8%	0.2%	20.6%	7.4%	6.4%	12.3%	0.0%	0.1%	0.4%	0.4%	0.3%	0.7%	0.0%	3.1%	0.9%	4.5%	100.0%	
Road 18	18	70	66.0	N	1400-1500	1187	31.5%	12.7%	0.2%	18.7%	6.7%	6.3%	12.4%	0.0%	0.1%	0.5%	0.6%	0.4%	1.0%	0.0%	3.2%	1.2%	4.4%	100.0%	
Road 18	18	70	64.9	N	1500-1600	1221	31.1%	12.5%	0.2%	21.5%	7.7%	5.4%	10.7%	0.0%	0.1%	0.5%	0.6%	0.4%	1.0%	0.0%	3.1%	1.1%	3.9%	100.0%	
Road 18	18	70	64.8	N	1600-1700	1249	34.1%	11.8%	0.2%	17.6%	6.3%	5.5%	10.8%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	3.5%	1.6%	4.0%	100.0%	
Road 18	18	70	64.8	N	1700-1800	1337	40.2%	12.6%	0.2%	16.7%	6.3%	3.8%	7.4%	0.0%	0.1%	0.6%	0.7%	0.5%	1.1%	0.0%	3.8%	3.5%	3.0%	100.0%	
Road 18	18	70	65.0	N	1800-1900	1343	53.1%	12.5%	0.1%	11.3%	4.0%	2.3%	4.6%	0.0%	0.0%	0.1%	0.9%	0.6%	1.4%	0.0%	4.2%	2.5%	2.2%	100.0%	
Road 18	18	70	66.0	N	1900-2000	1033	53.7%	16.8%	0.1%	11.3%	4.0%	2.3%	4.6%	0.0%	0.0%	0.1%	0.9%	0.6%	1.4%	0.0%	4.2%	2.5%	2.2%	100.0%	
Road 18	18	70	67.1	N	2000-2100	807	49.2%	20.0%	0.1%	9.3%	3.4%	2.1%	4.0%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	5.2%	2.0%	1.5%	100.0%	
Road 18	18	70	67.1	N	2100-2200	806	50.1%	20.7%	0.1%	9.5%	3.4%	2.2%	4.3%	0.0%	0.0%	0.1%	0.4%	0.2%	0.5%	0.0%	4.6%	2.3%	1.6%	100.0%	
Road 18	18	70	67.2	N	2200-2300	773	50.4%	22.8%	0.1%	7.4%	2.7%	2.4%	4.6%	0.0%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	5.0%	1.9%	0.0%	100.0%
Road 18	18	70	67.9	N	2300-0000	586	48.8%	22.0%	0.1%	8.2%	2.8%	2.6%	5.1%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	4.6%	2.2%	2.0%	100.0%	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters for AERMOD (Year 2038)

Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles >15t	07 - Medium Goods Vehicles >24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchised Bus Single Deck	15 - Franchised Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicle >24t	18 - Non-franchised Bus >24t	Total
							PC	TAXI	LGV3	LGV4	LGV6	HGV7	HGV8	FLB	PV4	PV6	NFB6	NFB7	NFB8	FBS0	FBS0	MC	HGV9	NFB9	
Road 21	21	70	68.2	N	0000-0100	510	48.1%	21.6%	0.1%	9.4%	3.4%	3.0%	5.6%	0.1%	0.0%	0.2%	0.4%	0.3%	0.7%	0.0%	2.8%	2.4%	2.2%	0.0%	100.0%
Road 21	21	70	68.8	N	0100-0200	338	46.4%	20.8%	0.1%	10.1%	3.8%	3.2%	6.3%	0.1%	0.0%	0.2%	0.5%	0.3%	0.8%	0.0%	2.8%	2.6%	2.7%	0.0%	100.0%
Road 21	21	70	69.1	N	0200-0300	252	44.8%	19.9%	0.1%	10.8%	3.9%	3.4%	6.7%	0.1%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	2.2%	2.8%	3.2%	0.0%	100.0%
Road 21	21	69.2	69.1	N	0300-0400	262	45.3%	19.9%	0.1%	11.5%	4.1%	3.8%	7.1%	0.1%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	2.1%	3.0%	3.4%	0.0%	100.0%
Road 21	21	69.1	69.1	N	0400-0500	225	41.8%	18.5%	0.1%	12.2%	4.4%	3.8%	7.5%	0.1%	0.0%	0.4%	0.7%	0.5%	1.0%	0.0%	2.1%	3.2%	3.6%	0.0%	100.0%
Road 21	21	70	68.5	N	0500-0600	393	40.6%	17.9%	0.1%	13.0%	4.7%	4.1%	8.0%	0.1%	0.1%	0.4%	0.7%	0.8%	1.1%	0.0%	2.1%	3.5%	3.0%	0.0%	100.0%
Road 21	21	70	68.7	N	0600-0700	951	39.4%	17.3%	0.1%	13.8%	4.9%	4.3%	8.5%	0.1%	0.1%	0.5%	0.8%	1.2%	0.0%	2.0%	3.7%	2.6%	0.0%	100.0%	
Road 21	21	63.1	68.7	N	0700-0800	1702	37.9%	17.8%	0.1%	14.4%	5.1%	4.6%	9.8%	0.1%	0.1%	0.6%	1.0%	1.3%	0.0%	2.0%	3.8%	2.6%	0.0%	100.0%	
Road 21	21	58.8	68.7	N	0800-0900	4205	42.0%	13.4%	0.2%	15.5%	5.6%	4.4%	8.6%	0.0%	0.1%	0.6%	0.8%	0.6%	1.2%	0.0%	1.7%	2.4%	2.9%	0.0%	100.0%
Road 21	21	60.7	68.7	N	0900-1000	1846	34.9%	12.7%	0.2%	20.0%	7.2%	5.4%	10.7%	0.0%	0.1%	0.3%	0.6%	0.4%	0.9%	0.0%	1.8%	1.4%	3.6%	0.0%	100.0%
Road 21	21	63.1	68.7	N	1000-1100	1671	32.3%	12.6%	0.2%	20.5%	7.1%	5.6%	12.0%	0.0%	0.1%	0.3%	0.7%	0.5%	1.2%	0.0%	1.8%	1.4%	3.6%	0.0%	100.0%
Road 21	21	63.4	68.5	N	1100-1200	1577	31.6%	13.0%	0.2%	20.4%	7.3%	6.4%	12.6%	0.1%	0.0%	0.3%	0.2%	0.5%	1.0%	1.6%	0.9%	4.2%	0.0%	100.0%	
Road 21	21	70	63.4	N	1200-1300	1468	23.8%	9.2%	0.2%	23.6%	8.5%	8.4%	16.6%	0.0%	0.0%	0.4%	0.4%	0.3%	0.6%	0.0%	1.9%	0.7%	5.3%	0.0%	100.0%
Road 21	21	63.1	63.4	N	1300-1400	1556	18.4%	6.4%	0.2%	23.6%	8.5%	8.4%	16.6%	0.0%	0.0%	0.3%	0.2%	0.3%	0.6%	0.0%	1.8%	0.9%	5.1%	0.0%	100.0%
Road 21	21	62.4	62.4	N	1400-1500	1596	22.8%	9.2%	0.3%	24.6%	8.8%	8.3%	16.3%	0.0%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	1.8%	0.9%	5.1%	0.0%	100.0%
Road 21	21	70	61.7	N	1500-1600	1650	22.4%	9.3%	0.3%	28.1%	10.1%	7.1%	14.0%	0.0%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	1.8%	0.8%	4.5%	0.0%	100.0%
Road 21	21	62.1	61.7	N	1600-1700	1636	22.5%	9.3%	0.3%	28.1%	10.1%	7.1%	14.0%	0.0%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	1.8%	0.8%	4.5%	0.0%	100.0%
Road 21	21	63.1	61.7	N	1700-1800	1674	31.3%	9.8%	0.2%	23.5%	8.5%	5.3%	10.5%	0.0%	0.1%	0.4%	0.5%	0.4%	0.8%	0.0%	2.3%	2.7%	6.6%	0.0%	100.0%
Road 21	21	64.0	61.7	N	1800-1900	1545	44.8%	10.5%	0.2%	17.3%	6.2%	3.6%	7.1%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	2.8%	2.1%	2.8%	0.0%	100.0%
Road 21	21	65.6	61.7	N	1900-2000	1154	46.3%	14.6%	0.1%	14.9%	5.0%	3.3%	6.6%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	3.4%	1.7%	2.0%	0.0%	100.0%
Road 21	21	68.1	61.7	N	2000-2100	905	45.7%	17.1%	0.1%	14.7%	5.1%	3.2%	6.4%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	3.4%	1.7%	2.0%	0.0%	100.0%
Road 21	21	70	65.6	N	2100-2200	909	43.3%	17.9%	0.2%	14.9%	5.3%	3.4%	6.7%	0.0%	0.1%	0.3%	0.2%	0.5%	1.0%	0.0%	3.2%	2.0%	2.2%	0.0%	100.0%
Road 21	21	70	66.8	N	2200-2300	858	44.2%	20.0%	0.1%	11.8%	4.2%	3.8%	7.4%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	3.5%	1.7%	2.4%	0.0%	100.0%
Road 21	21	67.5	66.8	N	2300-0000	1289	42.8%	22.3%	0.0%	11.8%	4.2%	3.8%	7.4%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	3.5%	1.7%	2.4%	0.0%	100.0%
Road 22	22	50	26.2	N	0000-0100	48	14.1%	6.3%	0.3%	31.7%	11.4%	10.0%	19.7%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.7%	5.2%	0.0%	100.0%
Road 22	22	50	27.3	N	0100-0200	34	12.9%	5.8%	0.3%	32.4%	11.7%	10.2%	20.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.7%	5.3%	0.0%	100.0%
Road 22	22	50	27.9	N	0200-0300	76	14.0%	6.3%	0.3%	31.7%	11.4%	10.0%	19.7%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.7%	5.3%	0.0%	100.0%
Road 22	22	28.2	28.2	N	0300-0400	22	10.9%	4.9%	0.4%	33.6%	12.1%	10.8%	20.8%	0.0%	0.0%	0.1%	0.2%	0.1%	0.2%	0.0%	0.0%	0.8%	5.4%	0.0%	100.0%
Road 22	22	27.9	28.1	N	0400-0500	26	10.1%	4.5%	0.4%	34.1%	12.3%	10.7%	21.1%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	0.8%	5.5%	0.0%	100.0%
Road 22	22	50	26.9	N	0500-0600	47	8.3%	4.1%	0.4%	34.6%	12.4%	10.8%	21.3%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	0.8%	5.6%	0.0%	100.0%
Road 22	22	50	24.7	N	0600-0700	47	8.8%	4.1%	0.4%	35.0%	12.6%	10.9%	21.7%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	0.8%	5.6%	0.0%	100.0%
Road 22	22	22.2	22.2	N	0700-0800	229	8.0%	3.5%	0.4%	35.3%	12.7%	11.1%	21.8%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	0.8%	5.7%	0.0%	100.0%	
Road 22	22	21.5	21.5	N	0800-0900	273	8.7%	2.8%	0.4%	37.3%	13.4%	10.4%	20.5%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	0.5%	5.4%	0.0%	100.0%	
Road 22	22	21.1	21.1	N	0900-1000	304	10.3%	2.2%	0.4%	39.4%	14.0%	10.8%	20.8%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	0.5%	5.4%	0.0%	100.0%	
Road 22	22	21.0	21.0	N	1000-1100	293	5.0%	1.9%	0.4%	37.4%	13.4%	11.9%	23.4%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.2%	6.1%	0.0%	100.0%	
Road 22	22	21.3	21.3	N	1100-1200	275	5.0%	2.1%	0.4%	37.6%	13.5%	11.8%	23.1%	0.0%	0.0%	0.1%	0.1%	0.0%	0.1%	0.0%	0.1%	6.0%	0.0%	100.0%	
Road 22	22	20.7	20.7	N	1200-1300	383	14.8%	2.3%	0.4%	38.5%	14.0%	11.8%	23.1%	0.0%	0.0%	0.1%	0.1%	0.0%	0.1%	0.0%	0.1%	5.8%	0.0%	100.0%	
Road 22	22	20.7	20.7	N	1300-1400	316	5.8%	2.2%	0.4%	37.4%	13.4%	11.6%	23.7%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.2%	5.9%	0.0%	100.0%	
Road 22	22	20.7	20.7	N	1400-1500	315	6.2%	2.5%	0.4%	35.6%	12.8%	12.0%	23.5%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.2%	6.2%	0.0%	100.0%	
Road 22	22	20.5	20.5	N	1500-1600	328	6.0%	2.4%	0.4%	40.3%	14.5%	10.2%	20.1%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.2%	5.3%	0.0%	100.0%	
Road 22	22	20.1	20.1	N	1600-1700	307	7.3%	2.5%	0.4%	36.2%	12.9%	11.3%	22.9%	0.0%	0.0%	0.1%	0.2%	0.0%	0.0%	0.0%	0.2%	5.9%	0.0%	100.0%	
Road 22	22	20.4	20.4	N	1700-1800	284	9.6%	3.1%	0.4%	39.6%	14.2%	9.0%	17.6%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	0.8%	4.6%	0.0%	100.0%
Road 22	22	22.8	22.8	N	1800-1900	209	19.7%	4.2%	0.4%	36.4%	13.1%	7.8%	14.9%	0.0%	0.0%	0.0%	0.3%	0.2%	0.5%	0.0%	0.0%	3.8%	3.9%	0.0%	100.0%
Road 22	22	23.0	23.0	N	1900-2000	127	14.4%	4.4%	0.4%	37.4%	13.4%	7.8%	15.0%	0.0%	0.0%	0.0%	0.3%	0.2%	0.5%	0.0%	0.0%	3.8%	3.9%	0.0%	100.0%
Road 22	22	24.3	24.3	N	2000-2100	112	18.4%	7.8%	0.4%	33.8%	12.1%	7.4%	14.6%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.0%	0.7%	3.8%	0.0%	100.0%
Road 22	22	50	24.3	N	2100-2200	115	15.3%	7.8%	0.4%	33.6%	12.1%	7.7%	15.2%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.8%	4.0%	0.0%	100.0%
Road 22	22	50	24.3	N	2200-2300	118	15.8%	8.0%	0.4%	33.6%	12.1%	7.7%	15.2%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.8%	4.0%	0.0%	100.0%
Road 22	22	50	24.7	N	2300-0000	82	15.1%	6.2%	0.3%	39.3%	10.9%	9.5%	18.3%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.8%	4.8%	0.0%	100.0%

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters for AERMOD (Year 2038)

Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - LGT - Light Goods Vehicles <=2.5t	04 - LGT - Light Goods Vehicles 2.5-3.5t	05 - LGT - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles >15t	07 - Medium Goods Vehicles >24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus<=4t	12 - Non-franchised Bus 6.4t - 15t	13 - Non-franchised Bus 15t-24t	14 - Franchise d Bus Single Deck	15 - Franchise d Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total
							PC	TAXI	LGV3	LGV4	LGV6	HGV7	HGV8	FLB	PV4	PV6	NFB6	NFB7	NFB8	FBS0	FBS1	MC	HGV9	NFB9	
Road 25	25	50	26.5	N	0000-0100	17	6.8%	3.1%	0.4%	36.3%	13.2%	11.8%	22.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	5.9%	0.0%	100.0%	
Road 25	25	50	29.0	N	0100-0200	12	6.2%	2.8%	0.4%	36.7%	13.2%	11.8%	22.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	5.9%	0.0%	100.0%	
Road 25	25	50	26.2	N	0200-0300	10	5.6%	2.5%	0.4%	37.0%	13.3%	11.7%	22.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	6.0%	0.0%	100.0%	
Road 25	25	50	29.3	N	0300-0400	8	5.1%	2.3%	0.4%	37.3%	13.4%	11.7%	23.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	6.0%	0.0%	100.0%	
Road 25	25	50	29.2	N	0400-0500	10	4.7%	2.1%	0.4%	37.6%	13.5%	11.8%	23.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	6.1%	0.0%	100.0%	
Road 25	25	50	28.5	N	0500-0600	18	4.3%	1.9%	0.4%	37.8%	13.6%	11.9%	23.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	6.1%	0.0%	100.0%	
Road 25	25	50	26.5	N	0600-0700	40	4.0%	1.7%	0.4%	38.0%	13.7%	11.9%	23.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	6.1%	0.0%	100.0%	
Road 25	25	50	24.5	N	0700-0800	88	3.7%	1.6%	0.4%	38.2%	13.7%	12.0%	23.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	6.1%	0.0%	100.0%	
Road 25	25	50	24.2	N	0800-0900	104	4.0%	1.3%	0.4%	40.2%	14.4%	11.2%	22.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	5.8%	0.0%	100.0%	
Road 25	25	50	24.0	N	0900-1000	117	2.7%	1.0%	0.4%	41.5%	14.9%	11.3%	22.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	5.8%	0.0%	100.0%	
Road 25	25	50	24.0	N	1000-1100	115	2.4%	0.9%	0.4%	38.1%	14.0%	12.8%	24.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	6.4%	0.0%	100.0%	
Road 25	25	50	24.1	N	1100-1200	108	2.2%	0.9%	0.4%	39.3%	14.1%	12.3%	24.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	6.3%	0.0%	100.0%	
Road 25	25	50	24.1	N	1200-1300	108	2.0%	0.8%	0.4%	37.1%	13.3%	13.3%	26.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	6.8%	0.0%	100.0%	
Road 25	25	50	23.9	N	1300-1400	122	1.8%	0.7%	0.4%	38.8%	14.3%	12.3%	24.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	6.3%	0.0%	100.0%	
Road 25	25	50	23.9	N	1400-1500	120	1.9%	0.8%	0.4%	38.1%	13.7%	12.9%	25.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	6.6%	0.0%	100.0%	
Road 25	25	50	23.9	N	1500-1600	126	1.9%	0.7%	0.5%	43.2%	15.5%	10.9%	21.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	5.6%	0.0%	100.0%	
Road 25	25	50	24.0	N	1600-1700	116	2.3%	0.8%	0.4%	39.3%	14.1%	12.3%	24.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	6.3%	0.0%	100.0%	
Road 25	25	50	24.3	N	1700-1800	104	1.9%	0.5%	0.4%	40.0%	15.0%	10.0%	19.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	6.5%	0.0%	100.0%	
Road 25	25	50	24.8	N	1800-1900	71	6.1%	1.4%	0.5%	43.8%	15.7%	9.1%	18.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	4.7%	0.0%	100.0%	
Road 25	25	50	26.2	N	1900-2000	46	7.3%	2.3%	0.4%	40.8%	14.6%	9.7%	19.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	5.0%	0.0%	100.0%	
Road 25	25	50	27.0	N	2000-2100	37	4.6%	1.2%	0.4%	42.1%	15.1%	9.3%	18.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	4.8%	0.0%	100.0%	
Road 25	25	50	26.9	N	2100-2200	38	6.5%	2.7%	0.4%	41.6%	14.9%	9.6%	18.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	4.9%	0.0%	100.0%	
Road 25	25	50	27.2	N	2200-2300	33	7.2%	3.3%	0.4%	38.0%	12.9%	11.4%	22.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	5.9%	0.0%	100.0%	
Road 25	25	50	27.7	N	2300-0000	27	6.5%	2.9%	0.4%	38.5%	13.1%	11.8%	22.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	5.9%	0.0%	100.0%	
Road 26	26	80	28.0	N	0000-0100	16	6.0%	2.7%	0.4%	36.8%	13.2%	11.6%	22.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	6.0%	0.0%	100.0%	
Road 26	26	80	29.1	N	0100-0200	11	5.4%	2.4%	0.4%	37.1%	13.3%	11.7%	23.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	6.0%	0.0%	100.0%	
Road 26	26	80	29.3	N	0200-0300	9	4.9%	2.2%	0.4%	37.4%	13.4%	11.8%	23.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	6.1%	0.0%	100.0%	
Road 26	26	80	29.4	N	0300-0400	7	4.5%	2.0%	0.4%	37.7%	13.5%	11.9%	23.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	6.1%	0.0%	100.0%	
Road 26	26	80	29.3	N	0400-0500	9	4.1%	1.8%	0.4%	38.0%	13.6%	11.9%	23.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	6.1%	0.0%	100.0%	
Road 26	26	80	28.6	N	0500-0600	16	3.8%	1.7%	0.4%	38.2%	13.7%	12.0%	23.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	6.1%	0.0%	100.0%	
Road 26	26	80	28.9	N	0600-0700	37	3.5%	1.6%	0.4%	38.4%	13.8%	12.0%	23.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	6.2%	0.0%	100.0%	
Road 26	26	80	24.6	N	0700-0800	79	3.2%	1.4%	0.4%	38.5%	13.8%	12.1%	23.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	6.2%	0.0%	100.0%	
Road 26	26	80	24.4	N	0800-0900	95	3.5%	1.1%	0.4%	40.5%	14.5%	11.3%	22.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	5.8%	0.0%	100.0%	
Road 26	26	80	24.2	N	0900-1000	107	2.3%	0.8%	0.4%	41.7%	15.0%	11.8%	22.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	5.8%	0.0%	100.0%	
Road 26	26	80	24.2	N	1000-1100	106	1.9%	0.7%	0.4%	39.3%	14.1%	12.5%	24.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	6.4%	0.0%	100.0%	
Road 26	26	80	24.3	N	1100-1200	99	1.9%	0.8%	0.4%	39.5%	14.2%	12.4%	24.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	6.3%	0.0%	100.0%	
Road 26	26	80	24.0	N	1200-1300	105	5.6%	2.1%	0.4%	35.0%	12.8%	9.8%	24.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.5%	0.0%	100.0%		
Road 26	26	80	24.0	N	1300-1400	118	4.9%	1.9%	0.4%	37.6%	13.6%	11.7%	23.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	6.0%	0.0%	100.0%	
Road 26	26	80	24.0	N	1400-1500	117	5.3%	2.1%	0.4%	36.1%	13.3%	12.2%	24.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	6.3%	0.0%	100.0%	
Road 26	26	80	24.0	N	1500-1600	122	5.1%	2.1%	0.4%	40.9%	14.7%	10.4%	20.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	5.3%	0.0%	100.0%	
Road 26	26	80	24.1	N	1600-1700	114	6.2%	2.2%	0.4%	36.9%	13.2%	11.5%	22.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	5.9%	0.0%	100.0%	
Road 26	26	80	24.3	N	1700-1800	105	8.5%	2.7%	0.4%	40.6%	14.6%	9.2%	18.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	4.7%	0.0%	100.0%	
Road 26	26	80	24.8	N	1800-1900	76	15.5%	3.6%	0.4%	37.8%	13.3%	7.9%	15.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	4.0%	0.0%	100.0%	
Road 26	26	80	26.9	N	1900-2000	51	17.9%	5.6%	0.4%	37.1%	13.2%	8.1%	14.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	4.2%	0.0%	100.0%	
Road 26	26	80	26.9	N	2000-2100	41	16.2%	6.9%	0.4%	35.3%	12.7%	7.8%	15.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	4.0%	0.0%	100.0%	
Road 26	26	80	26.8	N	2100-2200	42	16.1%	6.7%	0.4%	35.1%	12.6%	8.1%	15.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	4.1%	0.0%	100.0%	
Road 26	26	80	27.1	N	2200-2300	37	17.5%	7.9%	0.3%	28.7%	10.7%	8.4%	18.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	4.9%	0.0%	100.0%	
Road 26	26	80	27.7	N	2300-0000	30	15.9%	7.2%	0.3%	30.7%	11.0%	9.7%	19.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	5.0%	0.0%	100.0%	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters for AERMOD (Year 2038)

Parameters For Scenario (Year 2050)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Generated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicle <=2.5t	04 - Light Goods Vehicle 2.5-3.5t	05 - Light Goods Vehicle 3.5t	06 - Medium Goods Vehicle >15t	07 - Medium Goods Vehicle >24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.4t - 15t	13 - Non-franchised Bus 15-24t	14 - Franchise d Bus Double Deck	15 - Franchise d Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicle >24t	18 - Non-franchised Bus >24t	Total	
Road 29	29	80	80.0	N	0000-0100	717	56.2%	0.0%	0.0%	3.5%	1.1%	1.0%	2.0%	0.0%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	3.8%	2.8%	2.1%	0.0%	100.0%	
Road 29	29	80	80.0	N	0100-0200	470	54.8%	0.0%	0.0%	3.5%	1.3%	1.1%	2.2%	0.0%	0.0%	0.3%	0.4%	0.9%	0.0%	3.3%	2.1%	2.9%	0.0%	100.0%		
Road 29	29	80	80.0	N	0200-0300	346	53.5%	0.0%	0.0%	3.8%	1.4%	1.2%	2.3%	0.0%	0.0%	0.3%	0.7%	0.5%	1.0%	0.0%	3.7%	3.4%	3.8%	0.0%	100.0%	
Road 29	29	80	80.0	N	0300-0400	275	52.1%	0.0%	0.0%	4.1%	1.5%	1.3%	2.5%	0.0%	0.0%	0.1%	0.4%	0.8%	0.5%	1.1%	0.0%	3.6%	3.7%	4.4%	0.0%	100.0%
Road 29	29	80	80.0	N	0400-0500	431	50.0%	0.0%	0.0%	4.3%	1.8%	1.4%	2.7%	0.0%	0.1%	0.5%	0.8%	1.3%	0.3%	3.6%	4.0%	4.4%	0.0%	100.0%		
Road 29	29	80	80.0	N	0500-0600	512	51.2%	0.0%	0.0%	4.8%	1.7%	1.5%	3.0%	0.0%	0.1%	0.6%	0.9%	0.7%	1.4%	0.0%	3.6%	4.4%	4.9%	0.0%	100.0%	
Road 29	29	80	80.0	N	0600-0700	1084	50.8%	0.0%	0.0%	4.2%	1.9%	1.6%	3.2%	0.7%	0.1%	0.7%	1.6%	0.0%	3.7%	4.8%	1.9%	0.0%	100.0%			
Road 29	29	80	80.0	N	0700-0800	2110	51.9%	0.0%	0.0%	4.5%	3.4%	3.4%	4.7%	0.7%	0.1%	0.7%	1.5%	0.0%	3.0%	5.0%	1.5%	0.0%	100.0%			
Road 29	29	80	80.0	N	0800-0900	2547	55.3%	0.0%	0.0%	2.2%	1.1%	3.3%	0.5%	0.1%	0.8%	1.1%	0.8%	1.6%	0.3%	3.2%	2.5%	0.0%	100.0%			
Road 29	29	80	80.0	N	0900-1000	2060	50.7%	0.0%	0.0%	8.5%	3.0%	2.3%	4.5%	0.6%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	3.3%	2.0%	3.2%	0.0%	100.0%	
Road 29	29	80	80.0	N	1000-1100	1807	48.0%	0.0%	0.0%	10.8%	2.3%	2.2%	5.2%	0.5%	0.1%	0.5%	0.8%	0.5%	1.1%	0.0%	3.1%	1.5%	3.8%	0.0%	100.0%	
Road 29	29	80	80.0	N	1100-1200	1715	47.7%	0.0%	0.0%	3.2%	2.8%	2.5%	5.7%	0.1%	0.9%	0.5%	0.3%	0.7%	0.0%	3.4%	1.3%	3.9%	0.0%	100.0%		
Road 29	29	80	80.0	N	1200-1300	1556	28.2%	10.9%	0.2%	16.2%	5.8%	11.4%	0.0%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	12.4%	0.8%	5.7%	0.0%	100.0%		
Road 29	29	80	80.0	N	1300-1400	1625	28.2%	10.9%	0.2%	16.2%	5.8%	11.4%	0.0%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	11.1%	0.8%	5.7%	0.0%	100.0%		
Road 29	29	80	80.0	N	1400-1500	1684	27.3%	11.0%	0.2%	17.1%	6.1%	5.8%	11.4%	0.0%	0.1%	0.5%	0.4%	0.8%	0.0%	11.1%	1.0%	5.5%	0.0%	100.0%		
Road 29	29	80	80.0	N	1500-1600	1738	27.0%	10.9%	0.2%	17.9%	7.1%	5.0%	9.8%	0.0%	0.1%	0.5%	0.6%	0.4%	0.8%	0.1%	11.4%	1.0%	5.0%	0.0%	100.0%	
Road 29	29	80	80.0	N	1600-1700	1796	26.6%	10.2%	0.2%	18.0%	5.7%	5.0%	9.8%	0.0%	0.1%	0.7%	0.9%	0.6%	1.3%	0.0%	13.0%	1.4%	4.9%	0.0%	100.0%	
Road 29	29	80	80.0	N	1700-1800	1930	26.6%	10.2%	0.2%	18.0%	5.7%	5.0%	9.8%	0.0%	0.1%	0.7%	0.9%	0.6%	1.3%	0.0%	13.0%	1.4%	4.9%	0.0%	100.0%	
Road 29	29	80	80.0	N	1800-1900	1949	45.2%	10.6%	0.1%	11.0%	3.6%	2.1%	4.1%	0.6%	0.0%	0.1%	0.8%	0.5%	1.2%	0.1%	15.4%	2.2%	3.3%	0.0%	100.0%	
Road 29	29	80	80.0	N	1900-2000	1517	45.2%	14.1%	0.1%	7.8%	2.8%	1.8%	3.7%	0.8%	0.0%	0.1%	0.7%	0.5%	1.0%	0.1%	17.9%	1.7%	1.7%	0.0%	100.0%	
Road 29	29	80	80.0	N	2000-2100	1196	45.2%	14.1%	0.1%	8.2%	2.8%	1.8%	3.6%	0.8%	0.0%	0.1%	0.8%	0.5%	1.0%	0.1%	17.9%	1.7%	1.7%	0.0%	100.0%	
Road 29	29	80	80.0	N	2100-2200	1174	42.6%	17.6%	0.1%	8.5%	3.0%	2.0%	3.8%	0.8%	0.0%	0.0%	0.3%	0.2%	0.5%	0.0%	16.7%	1.9%	1.9%	0.0%	100.0%	
Road 29	29	80	80.0	N	2200-2300	1139	42.3%	19.1%	0.1%	6.6%	2.4%	2.1%	4.1%	0.7%	0.0%	0.0%	0.3%	0.2%	0.4%	0.1%	18.0%	1.6%	2.0%	0.0%	100.0%	
Road 30	30	70	70.0	N	0000-0100	854	65.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 30	30	70	70.0	N	0100-0200	554	50.1%	0.0%	0.0%	1.7%	2.5%	2.2%	4.4%	0.4%	0.1%	0.0%	0.2%	0.5%	0.3%	0.7%	0.0%	2.3%	2.5%	4.5%	0.0%	100.0%
Road 30	30	70	70.0	N	0200-0300	370	47.9%	0.0%	0.0%	1.7%	2.6%	2.4%	4.7%	0.1%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	2.2%	2.7%	6.2%	0.0%	100.0%	
Road 30	30	70	70.0	N	0300-0400	278	45.8%	0.0%	0.0%	1.8%	2.8%	2.9%	5.0%	0.1%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	2.1%	2.9%	7.6%	0.0%	100.0%	
Road 30	30	70	70.0	N	0400-0500	225	43.9%	0.0%	0.0%	1.9%	3.0%	3.1%	5.2%	0.1%	0.0%	0.3%	0.7%	0.5%	1.0%	0.0%	2.1%	3.1%	8.1%	0.0%	100.0%	
Road 30	30	70	70.0	N	0500-0600	247	42.9%	0.0%	0.0%	9.1%	3.3%	2.9%	5.6%	0.1%	0.4%	0.4%	0.7%	0.5%	1.1%	0.0%	2.1%	3.3%	8.9%	0.0%	100.0%	
Road 30	30	70	70.0	N	0600-0700	439	43.0%	0.0%	0.0%	3.6%	3.1%	3.2%	6.1%	0.1%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	2.1%	3.7%	6.0%	0.0%	100.0%	
Road 30	30	70	70.0	N	0700-0800	1086	42.9%	0.0%	0.0%	3.6%	3.1%	3.2%	6.1%	0.1%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	2.1%	3.7%	6.0%	0.0%	100.0%	
Road 30	30	69.8	N	0700-0800	1841	40.7%	17.8%	0.1%	11.3%	4.0%	3.5%	6.9%	0.1%	0.1%	0.6%	0.9%	0.6%	1.4%	0.0%	2.6%	4.2%	5.7%	0.0%	100.0%		
Road 30	30	67.5	N	0800-0900	2134	45.4%	14.5%	0.1%	12.2%	4.4%	3.4%	6.7%	0.0%	0.1%	0.6%	0.9%	0.6%	1.4%	0.0%	1.8%	2.6%	5.1%	0.0%	100.0%		
Road 30	30	68.0	N	0900-1000	1626	46.3%	14.1%	0.0%	12.6%	4.3%	3.4%	6.8%	0.0%	0.1%	0.6%	0.9%	0.6%	1.5%	0.0%	1.5%	2.6%	5.1%	0.0%	100.0%		
Road 30	30	70	70.0	N	1000-1100	1681	35.5%	13.8%	0.2%	16.7%	6.0%	5.3%	10.4%	0.1%	0.4%	0.4%	0.6%	0.4%	0.9%	0.0%	1.7%	1.1%	6.9%	0.0%	100.0%	
Road 30	30	70	70.0	N	1100-1200	1592	35.4%	14.6%	0.2%	16.7%	6.0%	5.2%	10.2%	0.1%	0.1%	0.6%	0.4%	0.2%	0.5%	0.0%	1.7%	1.0%	1.1%	0.0%	100.0%	
Road 30	30	68.7	N	1200-1300	1599	26.8%	13.7%	0.2%	17.5%	7.0%	6.2%	10.5%	0.0%	0.1%	0.6%	0.4%	0.2%	0.5%	0.0%	1.7%	1.0%	1.1%	0.0%	100.0%		
Road 30	30	68.7	N	1300-1400	1700	24.8%	10.4%	0.0%	23.5%	6.4%	7.3%	14.3%	0.0%	0.0%	0.4%	0.4%	0.4%	0.2%	0.5%	0.1%	1.7%	0.8%	0.9%	0.0%	100.0%	
Road 30	30	68.0	N	1400-1500	1753	25.7%	10.2%	0.0%	21.6%	7.7%	7.3%	14.3%	0.0%	0.1%	0.4%	0.5%	0.4%	0.8%	0.0%	1.8%	1.0%	0.7%	0.0%	100.0%		
Road 30	30	68.0	N	1500-1600	1807	25.4%	10.2%	0.0%	24.7%	8.9%	6.3%	12.3%	0.0%	0.1%	0.4%	0.5%	0.4%	0.8%	0.0%	1.7%	0.9%	0.7%	0.0%	100.0%		
Road 30	30	68.0	N	1600-1700	1814	24.9%	10.2%	0.0%	20.7%	8.8%	6.2%	12.3%	0.0%	0.1%	0.4%	0.5%	0.4%	0.8%	0.0%	2.0%	1.5%	0.7%	0.0%	100.0%		
Road 30	30	68.0	N	1700-1800	1889	34.4%	10.8%	0.2%	20.1%	7.2%	4.8%	10.0%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	2.2%	3.0%	6.1%	0.0%	100.0%		
Road 30	30	68.0	N	1800-1900	1810	47.5%	11.2%	0.1%	14.2%	5.1%	3.6%	5.8%	0.0%	0.0%	0.1%	0.8%	0.6%	1.3%	0.0%	2.6%	2.3%	5.4%	0.0%	100.0%		
Road 30	30	70.0	N	1900-2000	1341	46.1%	11.6%	0.1%	11.6%	4.1%	3.6%	5.8%	0.0%	0.0%	0.1%	0.8%	0.6%	1.3%	0.0%	1.8%	1.8%	5.4%	0.0%	100.0%		
Road 30	30	70	70.0	N	2000-2100	1053	45.6%	19.4%	0.1%	12.2%	4.4%	2.7%	5.3%	0.0%	0.0%	0.1%	0.6%	0.4%	1.0%	0.0%	3.3%	1.8%	3.1%	0.0%	100.0%	
Road 30	30	70	70.0	N	2100-2200	1056	46.2%	19.1%	0.1%	12.3%	4.4%	2.8%	5.6%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	2.9%	2.1%	3.2%	0.0%	100.0%	
Road 30	30	70	70.0	N	2200-2300	1054	47.5%	19.0%	0.1%	12.3%	4.4%	2.8%	5.6%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	2.9%	2.1%	3.4%	0.0%	100.0%	
Road 30	30	70	70.0	N	2300-0000	770	44.9%	20.2%	0.1%	10.8%	3.8%	3.4%	6.6%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	3.1%	2.0%	4.1%	0.0%	100.0%	

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters for AERMOD (Year 2038)

Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles >15t	07 - Medium Goods Vehicles >24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchise d Bus Single Deck	15 - Franchise d Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total
							PC	TAXI	LG3	LG4	LG5	HGV7	HGV8	FLB	PV4	PV5	NFB6	NFB7	NFB8	FBS0	FBS1	MC	HGV9	NFB9	
Road 33	33	70	70.0	N	0000-0100	667	48.1%	21.6%	0.1%	7.4%	2.5%	2.3%	4.9%	0.2%	0.0%	0.2%	0.4%	0.3%	0.7%	0.0%	3.3%	2.4%	5.6%	0.0%	100.0%
Road 33	33	70	70.0	N	0100-0200	448	45.8%	20.5%	0.1%	7.9%	2.8%	2.5%	4.9%	0.1%	0.0%	0.2%	0.5%	0.3%	0.8%	0.0%	3.1%	2.6%	7.8%	0.0%	100.0%
Road 33	33	70	70.0	N	0200-0300	339	43.5%	19.4%	0.1%	8.3%	3.0%	2.6%	5.1%	0.1%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	3.0%	2.8%	10.0%	0.0%	100.0%
Road 33	33	70	70.0	N	0300-0400	276	41.2%	18.3%	0.1%	8.7%	3.1%	2.7%	5.4%	0.1%	0.0%	0.3%	0.6%	0.4%	0.8%	0.0%	2.9%	2.9%	12.1%	0.0%	100.0%
Road 33	33	70	70.0	N	0400-0500	303	40.5%	17.9%	0.1%	9.4%	3.4%	2.9%	5.8%	0.1%	0.0%	0.4%	0.7%	0.3%	1.1%	0.0%	2.9%	3.1%	11.2%	0.0%	100.0%
Road 33	33	70	70.0	N	0500-0600	509	41.0%	18.0%	0.1%	10.4%	3.7%	3.3%	6.4%	0.1%	0.1%	0.5%	0.8%	0.5%	1.1%	0.0%	3.0%	3.5%	7.5%	0.0%	100.0%
Road 33	33	70	70.0	N	0600-0700	1069	41.0%	18.0%	0.1%	11.4%	4.1%	3.6%	7.0%	0.2%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	3.0%	3.6%	4.6%	0.0%	100.0%
Road 33	33	70	70.0	N	0700-0800	2317	38.8%	16.9%	0.1%	11.7%	4.2%	3.7%	7.2%	0.1%	0.1%	0.6%	0.9%	0.6%	1.3%	0.0%	2.9%	4.0%	6.9%	0.0%	100.0%
Road 33	33	70	70.0	N	0800-0900	2587	43.3%	13.9%	0.1%	12.7%	4.4%	3.6%	7.0%	0.1%	0.1%	0.6%	0.8%	0.6%	1.3%	0.0%	2.6%	2.5%	6.2%	0.0%	100.0%
Road 33	33	70	70.0	N	0900-1000	2295	36.7%	13.3%	0.2%	16.6%	6.0%	4.5%	8.9%	0.1%	0.0%	0.4%	0.6%	0.4%	0.9%	0.0%	2.5%	1.4%	7.3%	0.0%	100.0%
Road 33	33	70	70.0	N	1000-1100	2065	33.4%	13.0%	0.2%	17.2%	6.2%	5.4%	10.7%	0.1%	0.0%	0.4%	0.6%	0.4%	0.8%	0.0%	2.3%	1.0%	8.3%	0.0%	100.0%
Road 33	33	70	70.0	N	1100-1200	1957	33.3%	13.7%	0.2%	17.1%	6.1%	5.3%	10.5%	0.1%	0.1%	0.6%	0.3%	0.2%	0.5%	0.0%	2.4%	0.9%	8.5%	0.0%	100.0%
Road 33	33	70	70.0	N	1200-1300	1884	27.4%	10.6%	0.2%	19.4%	7.0%	6.9%	13.7%	0.0%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	2.5%	0.8%	9.5%	0.0%	100.0%
Road 33	33	70	70.0	N	1300-1400	2005	25.5%	9.8%	0.2%	22.2%	8.0%	6.9%	13.5%	0.0%	0.0%	0.4%	0.4%	0.3%	0.6%	0.0%	2.3%	0.6%	8.2%	0.0%	100.0%
Road 33	33	70	70.0	N	1400-1500	2072	26.4%	10.7%	0.2%	20.4%	7.3%	6.8%	13.5%	0.0%	0.1%	0.5%	0.5%	0.4%	0.8%	0.0%	2.4%	1.0%	9.0%	0.0%	100.0%
Road 33	33	70	70.0	N	1500-1600	2133	26.1%	10.5%	0.2%	23.4%	8.4%	5.9%	11.7%	0.0%	0.1%	0.5%	0.5%	0.4%	0.8%	0.0%	2.3%	0.9%	8.4%	0.0%	100.0%
Road 33	33	70	70.0	N	1600-1700	2152	29.2%	10.1%	0.2%	19.4%	7.3%	6.1%	12.0%	0.0%	0.1%	0.7%	0.9%	0.8%	1.3%	0.0%	2.7%	1.4%	8.4%	0.0%	100.0%
Road 33	33	70	70.0	N	1700-1800	2255	35.0%	10.9%	0.2%	18.8%	6.8%	4.3%	8.4%	0.0%	0.1%	0.5%	0.8%	0.9%	0.0%	3.0%	3.0%	7.2%	0.0%	100.0%	
Road 33	33	70	70.0	N	1800-1900	2187	47.7%	11.2%	0.1%	13.1%	4.7%	2.7%	5.4%	0.0%	0.0%	0.1%	0.8%	0.6%	1.3%	0.0%	3.4%	2.3%	6.6%	0.0%	100.0%
Road 33	33	70	70.0	N	1900-2000	1616	50.2%	15.7%	0.1%	10.7%	3.9%	2.6%	5.0%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	4.2%	1.9%	3.1%	0.0%	100.0%
Road 33	33	70	70.0	N	2000-2100	1270	45.8%	19.4%	0.1%	11.3%	4.0%	2.5%	4.9%	0.0%	0.0%	0.1%	0.6%	1.0%	0.0%	4.4%	1.8%	3.6%	0.0%	100.0%	
Road 33	33	70	70.0	N	2100-2200	1272	46.5%	19.2%	0.1%	11.4%	4.1%	2.6%	5.2%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	3.8%	2.1%	3.7%	0.0%	100.0%
Road 33	33	70	70.0	N	2200-2300	1213	47.0%	21.1%	0.1%	9.0%	3.2%	2.9%	5.6%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	4.2%	1.8%	3.9%	0.0%	100.0%
Road 33	33	70	70.0	N	2300-0000	931	45.0%	20.3%	0.1%	9.8%	3.5%	3.1%	5.1%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	4.1%	2.0%	4.9%	0.0%	100.0%
Road 34	34	80	80.0	N	0000-0100	686	56.9%	25.0%	0.0%	1.1%	1.1%	1.0%	1.9%	0.6%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	2.9%	2.1%	0.0%	100.0%	
Road 34	34	80	80.0	N	0100-0200	449	55.5%	24.8%	0.0%	3.4%	1.2%	1.1%	2.1%	0.6%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	2.8%	3.1%	3.0%	0.0%	100.0%
Road 34	34	80	80.0	N	0200-0300	331	54.1%	24.1%	0.0%	3.7%	1.3%	1.2%	2.3%	0.6%	0.0%	0.3%	0.7%	0.5%	1.0%	0.0%	2.8%	3.4%	3.9%	0.0%	100.0%
Road 34	34	80	80.0	N	0300-0400	263	52.7%	23.4%	0.0%	4.0%	1.4%	1.2%	2.4%	0.6%	0.1%	0.4%	0.8%	0.5%	1.2%	0.0%	2.7%	3.7%	4.8%	0.0%	100.0%
Road 34	34	80	80.0	N	0400-0500	287	51.9%	23.0%	0.0%	4.3%	1.5%	1.3%	2.6%	0.7%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	2.7%	4.0%	4.5%	0.0%	100.0%
Road 34	34	80	80.0	N	0500-0600	489	51.8%	22.8%	0.0%	4.7%	1.7%	1.5%	2.9%	0.7%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	2.8%	4.4%	5.0%	0.0%	100.0%
Road 34	34	80	80.0	N	0600-0700	1035	51.1%	22.6%	0.1%	5.1%	1.8%	1.6%	3.1%	0.7%	0.1%	0.7%	1.1%	1.6%	0.0%	2.8%	4.8%	4.9%	0.0%	100.0%	
Road 34	34	80	80.0	N	0700-0800	2110	50.0%	21.8%	0.1%	5.4%	1.9%	1.7%	3.3%	0.7%	0.1%	0.7%	1.1%	1.7%	0.0%	2.7%	5.1%	2.9%	0.0%	100.0%	
Road 34	34	80	80.0	N	0800-0900	2432	56.0%	17.9%	0.1%	5.9%	2.1%	1.6%	3.2%	0.5%	0.1%	0.8%	1.1%	0.8%	1.7%	0.0%	2.4%	3.3%	2.6%	0.0%	100.0%
Road 34	34	80	80.0	N	0900-1000	1993	51.4%	18.7%	0.1%	8.3%	3.0%	2.3%	4.4%	0.7%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	2.5%	2.0%	3.3%	0.0%	100.0%
Road 34	34	80	80.0	N	1000-1100	1721	48.7%	18.9%	0.1%	8.9%	3.2%	2.8%	5.6%	0.7%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	2.5%	1.5%	3.9%	0.0%	100.0%
Road 34	34	80	80.0	N	1100-1200	1634	48.5%	20.0%	0.1%	8.8%	3.2%	2.8%	6.4%	0.7%	0.1%	0.9%	0.5%	0.3%	0.7%	0.0%	2.6%	1.4%	4.0%	0.0%	100.0%
Road 34	34	80	80.0	N	1200-1300	1327	27.8%	10.1%	0.2%	16.1%	6.1%	5.8%	11.4%	0.0%	0.1%	0.4%	0.3%	0.7%	0.0%	0.5%	1.5%	6.2%	0.0%	100.0%	
Road 34	34	80	80.0	N	1300-1400	1386	26.3%	10.1%	0.2%	16.7%	6.1%	5.8%	11.4%	0.7%	0.0%	0.4%	0.4%	0.3%	0.6%	0.1%	11.6%	0.8%	6.0%	0.0%	100.0%
Road 34	34	80	80.0	N	1400-1500	1444	27.0%	10.9%	0.2%	17.0%	6.1%	5.8%	11.3%	0.7%	0.1%	0.5%	0.5%	0.4%	0.8%	0.0%	11.8%	1.0%	5.9%	0.0%	100.0%
Road 34	34	80	80.0	N	1500-1600	1481	26.7%	10.7%	0.2%	16.6%	7.0%	5.0%	9.8%	0.7%	0.1%	0.5%	0.5%	0.4%	0.8%	0.1%	11.5%	1.0%	5.4%	0.0%	100.0%
Road 34	34	80	80.0	N	1600-1700	1530	29.1%	10.2%	0.2%	15.9%	5.7%	5.0%	9.8%	0.7%	0.1%	0.5%	0.6%	1.3%	0.0%	13.1%	1.4%	5.3%	0.0%	100.0%	
Road 34	34	80	80.0	N	1700-1800	1643	34.2%	10.7%	0.2%	15.0%	5.4%	3.4%	6.7%	0.7%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	14.0%	2.9%	4.3%	0.0%	100.0%
Road 34	34	80	80.0	N	1800-1900	1659	44.8%	10.5%	0.1%	10.1%	3.6%	2.1%	4.1%	0.8%	0.0%	0.1%	0.8%	0.5%	1.2%	0.1%	15.5%	2.1%	3.6%	0.0%	100.0%
Road 34	34	80	80.0	N	1900-2000	1388	44.4%	14.0%	0.1%	8.4%	3.6%	2.8%	1.8%	0.8%	0.0%	0.1%	0.8%	0.5%	1.1%	0.1%	17.8%	1.8%	2.0%	0.0%	100.0%
Road 34	34	80	80.0	N	2000-2100	1017	40.8%	17.3%	0.1%	8.2%	2.9%	1.8%	3.6%	0.7%	0.1%	0.6%	0.4%	0.9%	0.0%	18.8%	1.6%	2.0%	0.0%	100.0%	
Road 34	34	80	80.0	N	2100-2200	997	42.2%	17.5%	0.1%	8.5%	3.0%	2.0%	3.8%	0.9%	0.0%	0.3%	0.2%	0.5%	0.0%	16.9%	1.9%	2.1%	0.0%	100.0%	
Road 34	34	80	80.0	N	2200-2300	968	42.0%	19.0%	0.1%	6.6%	2.4%	2.1%	4.1%	0.8%	0.0%	0.1%	0.3%	0.2%	0.4%	0.1%	16.2%	1.6%	2.2%	0.0%	100.0%
Road 34	34	80	80.0	N	2300-0000	734	40.7%	18.3%	0.1%	7.2%	2.6%	2.3%	4.9%	0.8%	0.0%	0.1%	0.3%	0.2%	0.5%	0.1%	17.8%	1.8%	2.7%	0.0%	100.0%

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters for AERMOD (Year 2038)

Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles >15t	07 - Medium Goods Vehicles >24t	08 - Private Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus<=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchise Single Deck	15 - Franchise Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicle >24t	18 - Non-franchised Bus >24t	Total
							PC	TAXI	LG3	LG4	LG5	HGV7	HGV8	FLB	PV4	PV5	NFB6	NFB7	NFB8	FBS0	FBS1	MC	HGV9	NFB9	
Road 37	37	50	50.0	Y	0000-0100	2	49.5%	22.3%	0.1%	9.7%	3.5%	3.1%	6.0%	0.0%	0.0%	0.2%	0.5%	0.3%	0.7%	0.0%	2.8%	1.6%	0.0%	100.0%	
Road 37	37	50	50.0	Y	0100-0200	1	48.0%	21.5%	0.1%	10.5%	3.8%	3.3%	6.5%	0.0%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	2.7%	1.7%	0.0%	100.0%	
Road 37	37	50	50.0	Y	0200-0300	1	46.5%	20.7%	0.1%	11.2%	4.0%	3.5%	7.0%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	2.9%	1.8%	0.0%	100.0%	
Road 37	37	50	50.0	Y	0300-0400	1	43.9%	18.9%	0.1%	12.0%	4.2%	3.1%	7.4%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	3.2%	1.9%	0.0%	100.0%	
Road 37	37	50	50.0	Y	0400-0500	1	41.4%	16.2%	0.1%	11.2%	4.6%	4.0%	7.9%	0.0%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	3.4%	2.1%	0.0%	100.0%	
Road 37	37	50	50.0	Y	0500-0600	1	41.9%	18.4%	0.1%	13.4%	4.8%	4.2%	8.3%	0.0%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	3.6%	2.2%	0.0%	100.0%	
Road 37	37	50	49.9	Y	0600-0700	3	46.4%	17.7%	0.1%	14.2%	5.1%	4.4%	8.7%	0.0%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	3.8%	2.3%	0.0%	100.0%	
Road 37	37	49.9	49.9	Y	0700-0800	7	49.0%	17.0%	0.0%	14.8%	5.1%	4.8%	9.1%	0.0%	0.1%	0.5%	0.8%	0.6%	1.4%	0.0%	4.0%	2.4%	0.0%	100.0%	
Road 37	37	50	49.8	Y	0800-0900	8	43.0%	13.8%	0.2%	16.0%	5.7%	4.0%	8.8%	0.0%	0.1%	0.6%	0.8%	0.6%	1.3%	0.0%	2.5%	2.3%	0.0%	100.0%	
Road 37	37	50	49.8	Y	0900-1000	7	35.8%	13.0%	0.2%	20.5%	7.4%	5.8%	11.0%	0.0%	0.1%	0.3%	0.8%	0.6%	0.4%	0.9%	0.1%	1.4%	2.9%	0.0%	100.0%
Road 37	37	50	49.8	Y	1000-1100	6	35.0%	12.0%	0.2%	21.0%	7.1%	6.1%	13.1%	0.0%	0.1%	0.4%	0.7%	0.5%	0.4%	0.9%	0.1%	1.3%	3.0%	0.0%	100.0%
Road 37	37	50	49.8	Y	1100-1200	6	32.4%	13.4%	0.2%	21.0%	7.5%	6.6%	12.9%	0.0%	0.1%	0.6%	0.3%	0.2%	0.5%	0.0%	0.9%	3.4%	0.0%	100.0%	
Road 37	37	50	49.8	Y	1200-1300	6	34.5%	13.3%	0.2%	18.6%	6.7%	6.7%	13.1%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	1.0%	3.4%	0.0%	100.0%	
Road 37	37	50	49.8	Y	1300-1400	7	31.2%	12.4%	0.1%	21.4%	6.8%	6.8%	12.7%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	2.1%	3.4%	0.0%	100.0%	
Road 37	37	50	49.8	Y	1400-1500	7	33.1%	13.4%	0.2%	19.5%	7.0%	6.8%	12.5%	0.0%	0.1%	0.6%	0.7%	0.5%	1.0%	0.0%	1.2%	3.4%	0.0%	100.0%	
Road 37	37	50	49.8	Y	1500-1600	7	32.6%	13.1%	0.2%	22.4%	8.0%	5.7%	11.1%	0.0%	0.1%	0.6%	0.7%	0.5%	1.0%	0.0%	1.2%	2.9%	0.0%	100.0%	
Road 37	37	50	49.8	Y	1600-1700	7	27.5%	12.6%	0.1%	18.4%	6.1%	6.1%	10.5%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	1.1%	2.9%	0.0%	100.0%	
Road 37	37	50	49.8	Y	1700-1800	8	32.4%	13.3%	0.2%	17.4%	6.3%	3.9%	7.8%	0.0%	0.1%	0.6%	0.7%	0.5%	1.1%	0.0%	3.6%	2.0%	0.0%	100.0%	
Road 37	37	50	49.8	Y	1800-1900	8	56.2%	13.2%	0.1%	11.8%	4.2%	2.5%	4.8%	0.0%	0.0%	0.1%	1.0%	0.7%	1.5%	0.0%	2.7%	1.3%	0.0%	100.0%	
Road 37	37	50	49.9	Y	1900-2000	6	56.8%	17.8%	0.1%	9.3%	3.3%	2.2%	4.4%	0.0%	0.0%	0.1%	0.9%	0.8%	1.3%	0.0%	2.1%	1.1%	0.0%	100.0%	
Road 37	37	50	49.9	Y	2000-2100	6	56.8%	17.8%	0.1%	9.3%	3.3%	2.2%	4.4%	0.0%	0.0%	0.1%	0.9%	0.8%	1.3%	0.0%	2.1%	1.1%	0.0%	100.0%	
Road 37	37	50	49.9	Y	2100-2200	5	52.9%	21.9%	0.1%	9.9%	3.6%	2.3%	4.5%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	2.4%	1.2%	0.0%	100.0%	
Road 37	37	50	49.9	Y	2200-2300	4	53.4%	24.1%	0.1%	7.8%	2.8%	2.5%	4.9%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.0%	2.1%	1.3%	0.0%	100.0%
Road 37	37	50	49.9	Y	2300-0000	6	58.3%	18.3%	0.1%	8.8%	3.3%	2.3%	4.5%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.0%	2.3%	1.3%	0.0%	100.0%
Road 38	38	48.1	Y	0000-0100	68	36.8%	16.5%	0.1%	7.5%	2.7%	2.4%	4.9%	1.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.1%	1.9%	25.4%	0.0%	100.0%	
Road 38	38	48.5	Y	0100-0200	51	31.7%	14.2%	0.1%	7.2%	2.6%	2.3%	4.4%	0.9%	0.0%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	1.8%	33.7%	0.0%	100.0%	
Road 38	38	48.5	Y	0200-0300	42	22.5%	13.2%	0.1%	6.8%	2.4%	2.1%	4.1%	0.8%	0.0%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	1.7%	32.0%	0.0%	100.0%	
Road 38	38	48.8	Y	0300-0400	37	24.2%	10.8%	0.1%	6.7%	2.4%	2.1%	4.1%	0.7%	0.0%	0.0%	0.3%	0.2%	0.5%	0.0%	1.7%	45.8%	0.0%	100.0%		
Road 38	38	48.7	Y	0400-0500	39	24.5%	10.8%	0.1%	7.5%	2.7%	2.3%	4.6%	0.7%	0.0%	0.0%	0.2%	0.4%	0.3%	0.5%	0.0%	1.9%	43.3%	0.0%	100.0%	
Road 38	38	50	48.3	Y	0500-0600	57	28.9%	12.7%	0.1%	9.6%	3.3%	3.0%	5.9%	0.0%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	2.5%	30.7%	0.0%	100.0%	
Road 38	38	47.7	50.0	Y	0600-0700	47	31.1%	12.0%	0.1%	11.3%	3.7%	3.4%	7.4%	0.0%	0.1%	0.4%	0.7%	0.5%	0.4%	0.9%	3.1%	29.0%	0.0%	100.0%	
Road 38	38	42.7	Y	0700-0800	243	28.0%	12.2%	0.1%	11.1%	4.0%	3.5%	6.8%	0.9%	0.1%	0.4%	0.6%	0.4%	1.0%	0.0%	2.9%	28.0%	0.0%	100.0%		
Road 38	38	42.0	Y	0800-0900	273	32.2%	10.3%	0.1%	12.4%	4.5%	3.5%	6.8%	0.9%	0.1%	0.4%	0.6%	0.4%	1.0%	0.0%	1.9%	25.1%	0.0%	100.0%		
Road 38	38	42.2	Y	0900-1000	255	35.5%	15.5%	0.1%	12.4%	4.5%	3.5%	6.8%	0.9%	0.1%	0.4%	0.6%	0.4%	1.0%	0.0%	1.9%	25.1%	0.0%	100.0%		
Road 38	38	42.5	Y	1000-1100	236	22.9%	8.9%	0.2%	15.5%	5.6%	4.9%	9.7%	0.8%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.7%	29.4%	0.0%	100.0%		
Road 38	38	42.8	Y	1100-1200	226	22.6%	9.3%	0.2%	15.2%	5.5%	4.8%	9.3%	0.8%	0.1%	0.4%	0.2%	0.2%	0.3%	0.0%	0.6%	30.5%	0.0%	100.0%		
Road 38	38	44.4	Y	1200-1300	168	29.6%	6.9%	0.2%	18.3%	6.2%	5.5%	9.7%	0.8%	0.1%	0.4%	0.2%	0.2%	0.3%	0.0%	0.6%	31.0%	0.0%	100.0%		
Road 38	38	44.5	Y	1300-1400	148	4.4%	2.5%	0.9%	19.4%	7.0%	6.0%	11.8%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.2%	46.1%	0.0%	100.0%		
Road 38	38	44.5	Y	1400-1500	148	6.8%	2.8%	0.2%	18.3%	6.6%	6.2%	12.2%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.3%	48.1%	0.0%	100.0%		
Road 38	38	44.4	Y	1500-1600	152	6.8%	2.7%	0.2%	21.2%	7.6%	5.4%	10.6%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.2%	44.7%	0.0%	100.0%	
Road 38	38	44.4	Y	1600-1700	148	7.9%	2.7%	0.2%	18.3%	6.2%	6.2%	11.2%	0.0%	0.0%	0.2%	0.2%	0.2%	0.4%	0.0%	0.2%	44.7%	0.0%	100.0%		
Road 38	38	44.4	Y	1700-1800	144	10.1%	3.2%	0.2%	19.0%	6.8%	4.3%	8.5%	0.5%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.9%	46.3%	0.0%	100.0%		
Road 38	38	45.3	Y	1800-1900	128	15.0%	3.5%	0.2%	14.4%	5.2%	3.0%	5.9%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.7%	51.1%	0.0%	100.0%		
Road 38	38	48.0	Y	1900-2000	152	18.0%	4.3%	0.2%	18.0%	6.2%	4.3%	8.5%	0.5%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.7%	51.1%	0.0%	100.0%		
Road 38	38	48.3	Y	2000-2100	53	20.5%	8.7%	0.2%	17.6%	6.3%	3.9%	7.6%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.8%	33.5%	0.0%	100.0%		
Road 38	38	48.3	Y	2100-2200	53	20.6%	8.5%	0.2%	17.7%	6.3%	4.1%	8.0%	0.0%	0.0%	0.0%	0.3%	0.1%	0.1%	0.2%	0.0%	0.9%	33.2%	0.0%	100.0%	
Road 38	38	48.0	Y	2200-2300	53	14.1%	8.2%	0.1%	14.1%	5.0%	2.9%	8.3%	0.0%	0.0%	0.0%	0.3%	0.1%	0.1%	0.2%	0.0%	0.8%	40.8%	0.0%	100.0%	
Road 38	38	48.5	Y	2300-0000	43	18.1%	8.2%	0.1%	13.7%	6.9%	4.3%	8.5%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.8%	40.8%	0.0%	100.0%	

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters for AERMOD (Year 2038)

Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles >15t	07 - Medium Goods Vehicles >24t	08 - Public Light Bus >3.5t	09 - Private Light Bus >3.5t	10 - Private Light Bus <=3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 6.4 - 15t	13 - Non-franchised Bus 15 - 24t	14 - Franchise d Bus Single Deck	15 - Franchise d Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total
							PC	TAXI	LGV4	LGV6	LGV9	HGV7	HGV9	FLB	PV4	PV6	NFB6	NFB7	NFB8	FBS0	FBS0	MC	HGV9	NFB9	
Road 41	41	70	70.0	N	0000-0100	119	44.5%	20.0%	0.0%	3.1%	1.1%	1.0%	1.9%	0.9%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.0%	2.2%	32.7%	0.0%	100.0%
Road 41	41	70	70.0	N	0100-0200	87	38.9%	17.4%	0.0%	3.0%	1.1%	1.0%	1.9%	0.8%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.2%	2.2%	33.2%	0.0%	100.0%
Road 41	41	70	70.0	N	0200-0300	71	34.2%	15.2%	0.0%	2.9%	1.1%	0.9%	1.8%	0.7%	0.0%	0.2%	0.4%	0.3%	0.7%	0.0%	0.0%	2.2%	39.3%	0.0%	100.0%
Road 41	41	70	70.0	N	0300-0400	62	30.4%	13.5%	0.0%	2.9%	1.0%	0.9%	1.8%	0.6%	0.0%	0.2%	0.4%	0.3%	0.7%	0.0%	0.2%	2.1%	45.0%	0.0%	100.0%
Road 41	41	70	70.0	N	0400-0500	65	31.0%	13.7%	0.0%	3.2%	1.2%	1.0%	2.0%	0.7%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	0.2%	4.2%	42.8%	0.0%	100.0%
Road 41	41	70	70.0	N	0500-0600	93	37.0%	16.3%	0.0%	4.2%	1.5%	1.3%	2.6%	0.8%	0.1%	0.4%	0.7%	0.5%	1.0%	0.0%	0.3%	32.4%	30.4%	0.0%	100.0%
Road 41	41	70	70.0	N	0600-0700	168	43.0%	18.8%	0.1%	5.4%	1.9%	1.7%	3.3%	1.0%	0.1%	0.6%	0.9%	0.6%	1.3%	0.0%	0.6%	4.0%	17.3%	0.0%	100.0%
Road 41	41	70	70.0	N	0700-0800	390	35.7%	16.0%	0.1%	5.0%	1.8%	1.6%	3.1%	0.9%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	0.3%	26.0%	0.0%	100.0%	
Road 41	41	70	70.0	N	0800-0900	435	42.4%	13.6%	0.1%	5.6%	2.0%	1.6%	3.1%	0.7%	0.1%	0.6%	0.8%	0.6%	1.3%	0.0%	0.6%	2.5%	25.2%	0.0%	100.0%
Road 41	41	70	70.0	N	0900-1000	378	35.7%	13.3%	0.1%	7.5%	2.7%	2.0%	4.0%	0.9%	0.4%	0.6%	0.4%	0.9%	0.4%	0.9%	0.0%	1.4%	29.1%	0.0%	100.0%
Road 41	41	70	70.0	N	1000-1100	342	33.2%	12.9%	0.1%	7.7%	2.8%	2.4%	4.9%	0.8%	0.0%	0.4%	0.5%	0.4%	0.8%	0.0%	1.0%	32.2%	0.0%	100.0%	
Road 41	41	70	70.0	N	1100-1200	330	32.5%	13.4%	0.1%	7.5%	2.7%	2.4%	4.6%	0.8%	0.1%	0.6%	0.3%	0.2%	0.5%	0.0%	0.9%	33.4%	0.0%	100.0%	
Road 41	41	70	70.0	N	1200-1300	353	25.6%	9.9%	0.1%	12.2%	4.4%	4.4%	8.6%	0.0%	0.1%	0.4%	0.4%	0.3%	0.7%	0.0%	0.0%	32.3%	0.0%	100.0%	
Road 41	41	70	70.0	N	1300-1400	365	24.4%	9.4%	0.1%	14.3%	5.1%	4.4%	8.7%	0.0%	0.0%	0.4%	0.3%	0.2%	0.5%	0.0%	0.7%	31.5%	0.0%	100.0%	
Road 41	41	70	70.0	N	1400-1500	377	25.2%	10.2%	0.1%	15.1%	4.7%	4.4%	8.7%	0.0%	0.1%	0.4%	0.5%	0.4%	0.8%	0.0%	1.0%	30.4%	0.0%	100.0%	
Road 41	41	70	70.0	N	1500-1600	385	25.1%	10.1%	0.2%	15.2%	5.1%	4.9%	7.6%	0.0%	0.1%	0.4%	0.5%	0.4%	0.8%	0.0%	0.9%	29.5%	0.0%	100.0%	
Road 41	41	70	70.0	N	1600-1700	392	27.9%	9.6%	0.1%	12.5%	4.9%	3.9%	7.7%	0.0%	0.1%	0.7%	0.8%	0.8%	1.2%	0.0%	0.6%	1.3%	20.0%	0.0%	100.0%
Road 41	41	70	70.0	N	1700-1800	415	31.0%	10.3%	0.1%	12.0%	4.3%	3.7%	5.3%	0.0%	0.1%	0.5%	0.8%	0.4%	0.9%	0.0%	2.8%	26.9%	0.0%	100.0%	
Road 41	41	70	70.0	N	1800-1900	420	43.2%	10.2%	0.1%	8.0%	2.9%	1.7%	3.3%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	0.2%	2.1%	26.1%	0.0%	100.0%
Road 41	41	70	70.0	N	1900-2000	270	52.3%	16.4%	0.1%	7.5%	2.7%	1.8%	3.5%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	0.6%	1.9%	11.1%	0.0%	100.0%
Road 41	41	70	70.0	N	2000-2100	217	46.8%	19.9%	0.1%	7.8%	2.8%	1.7%	3.4%	0.0%	0.0%	0.1%	0.7%	0.5%	1.0%	0.0%	1.9%	13.6%	0.0%	100.0%	
Road 41	41	70	70.0	N	2100-2200	217	47.4%	19.6%	0.1%	7.8%	2.8%	1.8%	3.5%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.2%	13.6%	0.0%	100.0%	
Road 41	41	70	70.0	N	2200-2300	209	47.5%	21.4%	0.1%	6.1%	2.2%	1.9%	3.8%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.6%	1.8%	14.2%	0.0%	100.0%
Road 41	41	70	70.0	N	2300-0000	165	44.2%	16.9%	0.1%	5.5%	2.3%	2.1%	4.0%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	2.0%	17.7%	0.0%	100.0%	
Road 42	42	50	47.2	N	0000-0100	106	43.5%	19.5%	0.0%	3.3%	1.2%	1.0%	2.0%	1.0%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.2%	24.8%	0.0%	100.0%	
Road 42	42	50	47.7	N	0100-0200	78	37.8%	16.9%	0.0%	3.2%	1.1%	1.0%	2.0%	0.9%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.2%	21%	33.5%	0.0%	100.0%
Road 42	42	50	48.0	N	0200-0300	64	33.1%	14.7%	0.0%	3.1%	1.1%	1.0%	1.9%	0.8%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.2%	21%	40.7%	0.0%	100.0%
Road 42	42	50	48.2	N	0300-0400	56	29.3%	13.0%	0.0%	3.0%	1.1%	0.9%	1.9%	0.7%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.2%	21%	46.4%	0.0%	100.0%
Road 42	42	50	48.1	N	0400-0500	59	29.9%	13.2%	0.0%	3.4%	1.2%	1.1%	2.1%	0.7%	0.0%	0.3%	0.5%	0.3%	0.7%	0.0%	0.2%	23%	44.1%	0.0%	100.0%
Road 42	42	50	47.6	N	0500-0600	83	35.9%	15.8%	0.0%	4.4%	1.6%	1.4%	2.7%	0.9%	0.1%	0.4%	0.7%	0.5%	1.0%	0.0%	0.3%	31.5%	0.0%	100.0%	
Road 42	42	50	48.2	N	0600-0700	150	42.1%	18.4%	0.1%	5.7%	2.0%	1.8%	3.5%	1.1%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	0.3%	18.1%	0.0%	100.0%	
Road 42	42	50	40.0	N	0700-0800	350	35.6%	15.5%	0.1%	5.2%	1.9%	1.6%	3.2%	1.0%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	0.6%	28.1%	0.0%	100.0%	
Road 42	42	50	39.5	N	0800-0900	390	41.3%	13.2%	0.1%	5.9%	2.1%	1.6%	3.2%	0.8%	0.1%	0.6%	0.8%	0.6%	1.2%	0.0%	0.6%	24.2%	26.2%	0.0%	100.0%
Road 42	42	50	40.0	N	0900-1000	341	35.1%	12.9%	0.1%	7.8%	2.8%	2.1%	4.2%	0.9%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	1.4%	30.1%	0.0%	100.0%	
Road 42	42	50	40.5	N	1000-1100	310	32.0%	12.4%	0.1%	8.0%	2.9%	2.5%	5.0%	0.9%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	0.6%	10%	33.2%	0.0%	100.0%
Road 42	42	50	40.8	N	1100-1200	298	31.4%	12.9%	0.1%	7.8%	2.8%	2.4%	4.8%	0.9%	0.1%	0.6%	0.3%	0.2%	0.5%	0.0%	0.9%	34.4%	0.0%	100.0%	
Road 42	42	50	41.9	N	1200-1300	233	17.8%	6.5%	0.1%	11.9%	4.3%	3.5%	5.4%	0.0%	0.0%	0.3%	0.3%	0.2%	0.4%	0.0%	0.3%	12.6%	0.0%	100.0%	
Road 42	42	50	41.6	N	1300-1400	241	18.9%	6.3%	0.1%	13.9%	5.0%	4.3%	6.5%	0.0%	0.0%	0.2%	0.4%	0.3%	0.5%	0.0%	0.5%	43.3%	0.0%	100.0%	
Road 42	42	50	41.5	N	1400-1500	246	17.7%	7.2%	0.1%	12.9%	4.6%	4.4%	8.6%	0.0%	0.0%	0.3%	0.4%	0.2%	0.5%	0.0%	0.7%	42.3%	0.0%	100.0%	
Road 42	42	50	41.4	N	1500-1600	251	17.7%	7.1%	0.2%	15.0%	5.4%	3.8%	7.5%	0.0%	0.0%	0.3%	0.4%	0.3%	0.6%	0.0%	0.6%	41.3%	0.0%	100.0%	
Road 42	42	50	41.4	N	1600-1700	252	19.3%	6.9%	0.1%	12.6%	4.5%	3.9%	7.7%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	0.9%	41.2%	0.0%	100.0%	
Road 42	42	50	41.5	N	1700-1800	260	24.2%	7.6%	0.1%	12.3%	4.4%	3.8%	5.5%	0.0%	0.0%	0.3%	0.4%	0.3%	0.6%	0.0%	0.2%	31%	38.4%	0.0%	100.0%
Road 42	42	50	41.0	N	1800-1900	256	32.6%	7.7%	0.1%	8.4%	3.0%	1.8%	3.5%	0.0%	0.0%	0.0%	0.6%	0.4%	0.9%	0.0%	1.6%	39.5%	0.0%	100.0%	
Road 42	42	50	41.2	N	1900-2000	145	44.7%	14.0%	0.1%	6.3%	2.1%	1.8%	3.7%	0.0%	0.0%	0.1%	0.8%	0.7%	1.2%	0.0%	1.4%	18.8%	0.0%	100.0%	
Road 42	42	50	46.7	N	2000-2100	119	39.1%	16.6%	0.1%	9.1%	3.3%	2.0%	3.9%	0.0%	0.0%	0.1%	0.5%	0.4%	0.8%	0.0%	0.6%	22.6%	0.0%	100.0%	
Road 42	42	50	46.7	N	2100-2200	120	39.6%	16.4%	0.1%	9.2%	3.3%	2.1%	4.1%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.6%	22.5%	0.0%	100.0%	
Road 42	42	50	46.9	N	2200-2300	115	39.7%	17.9%	0.1%	7.2%	2.6%	2.3%	4.5%	0.0%	0.0%	0.0%	0.2%	0.2%	0.4%	0.0%	0.5%	23.5%	0.0%	100.0%	
Road 42	42	50	47.5	N	2300-0000	94	35.8%	16.1%	0.1%	2.3%	2.6%	2.3%	4.6%	0.0%	0.0%	0.1%	0.3%	0.2%	0.4%	0.0%	0.6%	28.6%	0.0%	100.0%	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters for AERMOD (Year 2038)

Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles >15t	07 - Medium Goods Vehicles >24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-Franchised Bus<=4t	12 - Non-Franchised Bus 6.4 - 15t	13 - Non-Franchised Bus 15 - 24t	14 - Franchise d Bus Single Deck	15 - Franchise d Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicle >24t	18 - Non-Franchised Bus >24t	Total	
							PC	TAXI	LGV3	LGV4	LGV6	HGV7	HGV9	FLB	PV4	PV6	NFB6	NFB7	NFB8	FBS0	FBS0	MC	HGV9	NFB9		
Road 45	45	80	80.0	N	0000-0100	423	58.0%	26.1%	0.0%	3.2%	1.2%	1.0%	2.0%	0.0%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	3.1%	2.9%	0.5%	0.0%	100.0%	
Road 45	45	80	80.0	N	0100-0200	275	57.1%	25.5%	0.0%	3.5%	1.1%	1.2%	2.2%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	3.1%	3.2%	0.9%	0.0%	100.0%	
Road 45	45	80	80.0	N	0200-0300	200	56.2%	25.0%	0.0%	3.8%	1.4%	1.2%	2.4%	0.0%	0.0%	0.4%	0.7%	0.5%	1.1%	0.0%	3.1%	3.6%	0.6%	0.0%	100.0%	
Road 45	45	80	80.0	N	0300-0400	158	54.5%	24.5%	0.0%	4.0%	1.5%	1.3%	2.6%	0.0%	0.0%	0.4%	0.8%	0.6%	1.2%	0.0%	3.0%	3.9%	0.7%	0.0%	100.0%	
Road 45	45	80	80.0	N	0400-0500	173	54.2%	24.0%	0.0%	4.5%	1.6%	1.4%	2.8%	0.0%	0.1%	0.5%	0.9%	1.4%	1.4%	0.0%	3.0%	4.2%	0.7%	0.0%	100.0%	
Road 45	45	80	80.0	N	0500-0600	300	53.2%	23.4%	0.1%	4.8%	1.7%	1.5%	3.0%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	3.0%	4.5%	0.8%	0.0%	100.0%	
Road 45	45	80	80.0	N	0600-0700	642	52.2%	22.9%	0.1%	5.2%	1.9%	1.6%	3.2%	0.0%	0.1%	0.7%	1.1%	0.7%	1.6%	0.0%	3.0%	4.9%	0.8%	0.0%	100.0%	
Road 45	45	73.5	73.5	N	0700-0800	1099	50.9%	22.5%	0.1%	5.5%	2.1%	1.8%	3.5%	0.0%	0.1%	0.8%	1.2%	0.8%	1.7%	0.0%	3.0%	5.2%	0.9%	0.0%	100.0%	
Road 45	45	70	70.1	N	0800-0900	1500	57.2%	18.3%	0.1%	6.0%	2.2%	1.7%	3.3%	0.0%	0.1%	0.8%	1.1%	0.8%	1.7%	0.0%	2.7%	3.3%	0.9%	0.0%	100.0%	
Road 45	45	74.6	74.6	N	0900-1000	1222	52.7%	19.2%	0.1%	6.6%	3.1%	2.3%	4.6%	0.0%	0.1%	0.9%	0.8%	0.8%	1.4%	0.0%	2.8%	2.1%	1.2%	0.0%	100.0%	
Road 45	45	77.5	77.5	N	1000-1100	1062	52.5%	19.2%	0.2%	6.9%	3.2%	2.5%	4.9%	0.0%	0.1%	1.0%	0.9%	0.9%	1.5%	0.0%	2.7%	1.5%	1.2%	0.0%	100.0%	
Road 45	45	78.6	78.6	N	1100-1200	997	50.6%	20.0%	0.1%	9.2%	3.3%	2.9%	5.6%	0.0%	0.1%	0.9%	0.5%	0.3%	0.8%	0.0%	2.8%	1.4%	1.5%	0.0%	100.0%	
Road 45	45	73.3	73.3	N	1200-1300	1220	47.1%	18.1%	0.1%	10.1%	3.6%	3.6%	7.1%	0.0%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	3.3%	1.4%	1.9%	0.0%	100.0%	
Road 45	45	72.0	72.0	N	1300-1400	1245	45.5%	16.5%	0.1%	12.7%	3.8%	3.7%	7.2%	0.0%	0.1%	0.7%	0.8%	0.5%	1.2%	0.0%	3.4%	1.4%	2.1%	0.0%	100.0%	
Road 45	45	70.0	70.0	N	1400-1500	1330	45.6%	16.4%	0.1%	10.7%	3.8%	3.6%	7.1%	0.0%	0.1%	0.8%	0.9%	0.6%	1.4%	0.0%	3.2%	1.7%	1.9%	0.0%	100.0%	
Road 45	45	70.5	70.5	N	1500-1600	1359	45.3%	16.2%	0.1%	12.4%	4.4%	3.1%	6.2%	0.0%	0.1%	0.8%	0.9%	0.6%	1.4%	0.0%	3.1%	1.6%	1.6%	0.0%	100.0%	
Road 45	45	68.0	68.0	N	1600-1700	1611	46.6%	16.1%	0.1%	13.6%	4.5%	3.4%	6.7%	0.0%	0.1%	0.9%	1.1%	0.7%	1.2%	0.0%	3.0%	1.4%	1.7%	0.0%	100.0%	
Road 45	45	59.7	59.7	N	1700-1800	1651	52.9%	16.5%	0.1%	8.7%	3.1%	2.0%	3.9%	0.0%	0.1%	0.8%	0.9%	0.6%	1.4%	0.0%	3.4%	4.5%	1.0%	0.0%	100.0%	
Road 45	45	49.6	49.6	N	1800-1900	1816	63.6%	14.9%	0.1%	5.3%	1.9%	1.1%	2.2%	0.0%	0.0%	0.1%	1.1%	0.8%	1.7%	0.0%	3.5%	3.0%	0.6%	0.0%	100.0%	
Road 45	45	71.8	71.8	N	1900-2000	1446	62.2%	15.5%	0.0%	4.0%	1.5%	1.0%	1.9%	0.0%	0.0%	0.1%	0.9%	0.8%	1.4%	0.0%	4.0%	2.3%	0.5%	0.0%	100.0%	
Road 45	45	77.5	77.5	N	2000-2100	1127	62.7%	17.3%	0.0%	4.3%	1.6%	0.8%	1.9%	0.0%	0.0%	0.1%	0.9%	0.8%	1.4%	0.0%	4.2%	2.3%	0.5%	0.0%	100.0%	
Road 45	45	78.0	78.0	N	2100-2200	1121	58.5%	24.2%	0.0%	4.4%	1.6%	1.0%	2.0%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	3.7%	2.7%	0.5%	0.0%	100.0%	
Road 45	45	78.6	78.6	N	2200-2300	1091	58.0%	26.2%	0.0%	3.4%	1.2%	0.8%	1.1%	2.1%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	4.0%	2.2%	0.6%	0.0%	100.0%
Road 45	45	80.0	80.0	N	2300-0000	835	57.8%	26.8%	0.0%	3.3%	1.2%	0.8%	1.2%	2.3%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	4.0%	2.5%	0.6%	0.0%	100.0%
Road 46	46	80	80.0	N	0000-0100	226	58.9%	26.4%	0.0%	3.4%	1.2%	1.1%	2.1%	0.0%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	1.5%	3.0%	0.5%	0.0%	100.0%	
Road 46	46	80	80.0	N	0100-0200	147	57.9%	25.9%	0.0%	3.7%	1.3%	1.2%	2.3%	0.0%	0.0%	0.3%	0.6%	0.4%	1.0%	0.0%	1.4%	3.3%	0.6%	0.0%	100.0%	
Road 46	46	80	80.0	N	0200-0300	107	56.4%	25.4%	0.0%	4.1%	1.3%	1.2%	2.6%	0.0%	0.0%	0.3%	0.7%	0.5%	1.2%	0.0%	1.4%	3.6%	0.7%	0.0%	100.0%	
Road 46	46	80	80.0	N	0300-0400	84	56.0%	24.8%	0.0%	4.4%	1.6%	1.4%	2.7%	0.0%	0.1%	0.4%	0.8%	0.6%	1.2%	0.0%	1.4%	3.9%	0.7%	0.0%	100.0%	
Road 46	46	80	80.0	N	0400-0500	93	55.0%	24.3%	0.0%	4.7%	1.7%	1.5%	2.9%	0.0%	0.1%	0.5%	0.9%	0.6%	1.4%	0.0%	1.4%	4.3%	0.8%	0.0%	100.0%	
Road 46	46	80	80.0	N	0500-0600	160	53.9%	23.7%	0.0%	5.0%	1.8%	1.6%	3.1%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	1.4%	4.6%	0.8%	0.0%	100.0%	
Road 46	46	80	80.0	N	0600-0700	343	52.9%	22.9%	0.1%	5.4%	2.1%	1.9%	3.4%	0.0%	0.1%	0.7%	1.1%	0.8%	1.4%	0.0%	1.5%	5.0%	1.0%	0.0%	100.0%	
Road 46	46	80	80.0	N	0700-0800	683	51.9%	22.6%	0.1%	5.8%	2.1%	1.8%	3.5%	0.0%	0.1%	0.8%	1.2%	0.8%	1.8%	0.0%	1.4%	5.3%	0.9%	0.0%	100.0%	
Road 46	46	80	80.0	N	0800-0900	864	57.8%	18.5%	0.1%	6.3%	2.2%	1.8%	3.4%	0.0%	0.1%	0.8%	1.1%	0.8%	1.7%	0.0%	1.2%	3.4%	0.9%	0.0%	100.0%	
Road 46	46	80	80.0	N	0900-1000	566	53.2%	18.3%	0.1%	6.8%	2.3%	2.4%	3.9%	0.0%	0.1%	0.9%	1.2%	0.8%	1.7%	0.0%	1.2%	3.6%	1.2%	0.0%	100.0%	
Road 46	46	80	80.0	N	1000-1100	565	50.6%	19.6%	0.1%	9.6%	3.4%	3.0%	6.0%	0.0%	0.1%	0.6%	0.8%	0.6%	1.3%	0.0%	1.3%	1.5%	1.6%	0.0%	100.0%	
Road 46	46	80	80.0	N	1100-1200	535	50.0%	20.8%	0.1%	9.5%	3.4%	3.0%	5.9%	0.0%	0.1%	0.9%	0.5%	0.4%	0.8%	0.0%	1.3%	1.4%	1.5%	0.0%	100.0%	
Road 46	46	80	80.0	N	1200-1300	502	50.0%	21.9%	0.1%	9.5%	3.4%	3.0%	5.9%	0.0%	0.1%	0.9%	0.5%	0.4%	0.8%	0.0%	1.3%	1.4%	1.5%	0.0%	100.0%	
Road 46	46	80	80.0	N	1300-1400	467	52.8%	20.3%	0.1%	8.4%	3.0%	2.6%	5.1%	0.0%	0.1%	0.8%	0.8%	0.5%	1.1%	0.0%	1.5%	1.6%	1.3%	0.0%	100.0%	
Road 46	46	80	80.0	N	1400-1500	747	52.3%	21.2%	0.1%	7.3%	2.6%	2.5%	4.9%	0.0%	0.1%	0.9%	1.0%	0.7%	1.6%	0.0%	1.5%	2.0%	1.3%	0.0%	100.0%	
Road 46	46	80	80.0	N	1500-1600	823	52.1%	20.9%	0.1%	6.5%	3.1%	2.2%	4.2%	0.0%	0.1%	0.9%	1.1%	0.7%	1.6%	0.0%	1.4%	1.9%	1.1%	0.0%	100.0%	
Road 46	46	80	80.0	N	1600-1700	863	54.4%	19.2%	0.1%	6.5%	3.1%	2.2%	4.2%	0.0%	0.1%	0.9%	1.1%	0.7%	1.6%	0.0%	1.4%	2.6%	1.1%	0.0%	100.0%	
Road 46	46	80	80.0	N	1700-1800	1039	58.5%	18.3%	0.1%	5.7%	2.1%	1.3%	2.5%	0.0%	0.1%	0.8%	1.0%	0.7%	1.6%	0.0%	1.5%	5.0%	0.7%	0.0%	100.0%	
Road 46	46	80	80.0	N	1800-1900	1181	68.1%	16.0%	0.0%	3.4%	1.2%	0.7%	1.4%	0.0%	0.0%	0.1%	1.2%	0.8%	1.8%	0.0%	1.5%	3.2%	0.4%	0.0%	100.0%	
Road 46	46	80	80.0	N	1900-2000	947	60.7%	18.1%	0.0%	2.6%	0.7%	0.4%	0.7%	0.0%	0.0%	0.1%	1.2%	0.8%	1.8%	0.0%	1.5%	3.2%	0.4%	0.0%	100.0%	
Road 46	46	80	80.0	N	2000-2100	735	61.1%	25.9%	0.0%	2.7%	1.0%	0.6%	1.2%	0.0%	0.0%	0.1%	0.9%	0.6%	1.3%	0.0%	1.8%	2.4%	0.3%	0.0%	100.0%	
Road 46	46	80	80.0	N	2100-2200	733	62.3%	25.8%	0.0%	2.8%	1.0%	0.6%	1.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.7%	0.0%	1.6%	2.8%	0.3%	0.0%	100.0%	
Road 46	46	80	80.0	N	2200-2300	546	64.5%	24.6%	0.0%	2.8%	1.0%	0.6%	1.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.7%	0.0%	1.6%	2.8%	0.3%	0.0%	100.0%	
Road 46	46	80	80.0	N	2300-0000	533	66.7%	27.3%	0.0%	2.4%	0.9%	0.5%	1.5%	0.0%	0.0%	0.1%	0.5%	0.3%	0.7%	0.0%	1.7%	2.7%	0.4%	0.0%	100.0%	

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters For AERMOD (Year 2038)

Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles <=15t	07 - Medium Goods Vehicles >15t	08 - Public Light Bus >24t	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchised Bus Single Deck	15 - Franchised Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicle >24t	18 - Non-franchised Bus >24t	Total	
Road 49	49	50	43.3	N	0000-0100	321	58.6%	26.3%	0.0%	1.7%	0.6%	0.5%	1.1%	0.0%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	5.9%	2.9%	0.3%	0.0%	100.0%	
Road 49	49	50	45.6	N	0100-0200	208	57.9%	25.9%	0.0%	1.9%	0.7%	0.6%	1.2%	0.0%	0.0%	0.3%	0.6%	0.4%	1.0%	0.0%	5.9%	3.3%	0.3%	0.0%	100.0%	
Road 49	49	50	46.8	N	0200-0300	151	57.2%	25.0%	0.0%	2.1%	0.7%	0.6%	1.3%	0.0%	0.0%	0.4%	0.7%	0.5%	1.1%	0.0%	5.9%	3.6%	0.3%	0.0%	100.0%	
Road 49	49	50	47.5	N	0300-0400	113	56.4%	25.0%	0.0%	2.2%	0.8%	0.7%	1.4%	0.0%	0.1%	0.4%	0.8%	0.6%	1.2%	0.0%	5.9%	4.0%	0.4%	0.0%	100.0%	
Road 49	49	50	47.2	N	0400-0500	129	55.6%	24.6%	0.0%	2.4%	0.8%	0.8%	1.5%	0.0%	0.1%	0.5%	0.9%	0.8%	1.4%	0.0%	5.9%	4.3%	0.4%	0.0%	100.0%	
Road 49	49	50	45.2	N	0500-0600	223	54.9%	24.1%	0.0%	2.6%	0.9%	0.8%	1.6%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	5.9%	4.7%	0.4%	0.0%	100.0%	
Road 49	49	50	39.8	N	0600-0700	475	54.1%	23.7%	0.0%	2.8%	1.0%	0.9%	1.7%	0.0%	0.1%	0.7%	1.1%	0.8%	1.7%	0.0%	5.9%	5.1%	0.5%	0.0%	100.0%	
Road 49	49	50	34.0	N	0700-0800	956	53.2%	23.2%	0.0%	3.0%	1.1%	0.9%	1.9%	0.0%	0.1%	0.8%	1.2%	0.8%	1.9%	0.0%	5.9%	5.4%	0.5%	0.0%	100.0%	
Road 49	49	50	32.3	N	0800-0900	1100	50.7%	19.1%	0.0%	3.3%	1.2%	0.9%	1.8%	0.0%	0.1%	0.8%	1.2%	0.8%	1.8%	0.0%	5.3%	3.5%	0.5%	0.0%	100.0%	
Road 49	49	50	34.8	N	0900-1000	872	56.7%	20.6%	0.1%	4.8%	1.7%	1.3%	2.6%	0.0%	0.1%	0.8%	1.0%	0.7%	1.5%	0.0%	5.4%	2.2%	0.7%	0.0%	100.0%	
Road 49	49	50	38.3	N	1000-1100	739	54.7%	21.2%	0.1%	5.3%	1.9%	1.7%	3.3%	0.0%	0.1%	0.6%	0.9%	0.6%	1.4%	0.0%	5.7%	1.7%	0.9%	0.0%	100.0%	
Road 49	49	50	36.8	N	1100-1200	702	54.4%	22.4%	0.1%	5.2%	1.9%	1.6%	3.2%	0.0%	0.1%	1.0%	0.9%	0.4%	0.8%	0.0%	5.8%	1.5%	0.9%	0.0%	100.0%	
Road 49	49	50	38.0	N	1200-1300	583	52.1%	20.1%	0.1%	5.9%	2.1%	2.1%	4.4%	0.0%	0.1%	0.8%	0.9%	0.6%	1.4%	0.0%	7.0%	1.8%	1.1%	0.0%	100.0%	
Road 49	49	50	38.0	N	1300-1400	584	51.2%	19.7%	0.1%	7.1%	2.6%	2.2%	4.4%	0.0%	0.1%	0.7%	0.7%	0.5%	1.1%	0.0%	6.8%	1.6%	1.1%	0.0%	100.0%	
Road 49	49	50	37.4	N	1400-1500	631	50.3%	20.5%	0.1%	6.3%	2.2%	2.1%	4.2%	0.0%	0.1%	0.9%	1.0%	0.7%	1.5%	0.0%	6.7%	1.9%	1.1%	0.0%	100.0%	
Road 49	49	50	37.3	N	1500-1600	643	50.5%	20.3%	0.1%	7.3%	2.6%	1.8%	4.6%	0.0%	0.1%	0.9%	1.0%	0.7%	1.6%	0.0%	6.8%	1.8%	0.9%	0.0%	100.0%	
Road 49	49	50	36.4	N	1600-1700	703	52.3%	18.0%	0.1%	5.6%	2.9%	1.7%	3.4%	0.0%	0.2%	1.2%	1.5%	1.1%	2.3%	0.0%	7.1%	2.5%	0.9%	0.0%	100.0%	
Road 49	49	50	35.4	N	1700-1800	821	56.2%	17.5%	0.1%	4.8%	1.7%	1.1%	2.2%	0.0%	0.1%	0.8%	1.0%	0.7%	1.5%	0.0%	6.9%	4.8%	0.6%	0.0%	100.0%	
Road 49	49	50	34.2	N	1800-1900	938	65.0%	15.3%	0.2%	2.9%	1.0%	0.6%	1.2%	0.0%	0.0%	0.1%	1.1%	0.8%	1.7%	0.0%	6.8%	3.1%	0.3%	0.0%	100.0%	
Road 49	49	50	36.4	N	1900-2000	758	62.6%	19.6%	0.0%	2.1%	0.8%	0.5%	1.0%	0.0%	0.0%	0.1%	0.9%	0.7%	1.4%	0.0%	7.6%	2.3%	0.3%	0.0%	100.0%	
Road 49	49	50	38.4	N	2000-2100	590	57.0%	24.5%	0.0%	2.3%	0.8%	0.5%	1.0%	0.0%	0.0%	0.1%	0.8%	0.6%	1.2%	0.0%	6.0%	2.3%	0.3%	0.0%	100.0%	
Road 49	49	50	38.7	N	2200-2300	573	58.2%	26.3%	0.0%	1.8%	0.6%	0.6%	1.1%	0.0%	0.0%	0.1%	0.4%	0.2%	0.5%	0.1%	7.6%	2.2%	0.3%	0.0%	100.0%	
Road 49	49	50	40.8	N	2300-0000	427	57.5%	25.9%	0.0%	2.0%	0.7%	0.6%	1.2%	0.0%	0.0%	0.1%	0.4%	0.3%	0.7%	0.1%	7.6%	2.5%	0.3%	0.0%	100.0%	
Road 50	50	50	49.3	N	0000-0100	24	28.0%	12.5%	0.2%	19.9%	7.2%	6.3%	12.4%	0.0%	0.0%	0.1%	0.3%	0.2%	0.4%	0.0%	0.4%	11.1%	0.1%	0.0%	100.0%	
Road 50	50	50	49.5	N	0100-0200	17	25.3%	11.3%	0.2%	20.2%	7.2%	6.4%	12.5%	0.0%	0.0%	0.1%	0.3%	0.2%	0.4%	0.0%	0.4%	14.5%	0.0%	0.0%	100.0%	
Road 50	50	50	49.6	N	0200-0300	13	21.0%	10.2%	0.2%	20.3%	7.3%	6.4%	12.6%	0.0%	0.0%	0.1%	0.3%	0.2%	0.4%	0.0%	0.4%	15.7%	0.0%	0.0%	100.0%	
Road 50	50	50	49.7	N	0300-0400	11	21.0%	9.3%	0.2%	20.5%	7.3%	6.4%	12.6%	0.0%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	0.4%	20.0%	0.0%	0.0%	100.0%	
Road 50	50	50	49.6	N	0400-0500	13	20.2%	8.9%	0.2%	21.6%	7.8%	6.8%	13.3%	0.0%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	0.4%	18.4%	0.0%	0.0%	100.0%	
Road 50	50	50	49.4	N	0500-0600	21	20.3%	8.9%	0.2%	23.9%	8.6%	7.5%	14.7%	0.0%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.4%	17.2%	0.0%	0.0%	100.0%	
Road 50	50	50	48.7	N	0600-0700	45	20.1%	8.8%	0.3%	26.6%	9.1%	8.1%	15.9%	0.0%	0.0%	0.3%	0.4%	0.3%	0.6%	0.0%	1.9%	8.3%	0.0%	0.0%	100.0%	
Road 50	50	50	47.1	N	0700-0800	98	18.3%	8.0%	0.3%	25.5%	9.2%	8.0%	15.7%	0.0%	0.0%	0.3%	0.4%	0.3%	0.6%	0.0%	0.4%	11.5%	0.0%	0.0%	100.0%	
Road 50	50	50	46.6	N	0800-0900	115	20.2%	6.5%	0.3%	27.4%	9.9%	7.7%	15.1%	0.0%	0.0%	0.3%	0.4%	0.3%	0.6%	0.0%	0.4%	1.2%	10.2%	0.0%	100.0%	
Road 50	50	50	46.5	N	0900-1000	117	14.9%	5.4%	0.3%	31.1%	11.2%	8.5%	16.6%	0.0%	0.0%	0.1%	0.3%	0.2%	0.4%	0.0%	0.4%	10.5%	0.0%	0.0%	100.0%	
Road 50	50	50	46.5	N	1000-1100	112	12.7%	4.9%	0.3%	30.2%	10.8%	9.6%	18.9%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.4%	11.4%	0.0%	0.0%	100.0%	
Road 50	50	50	46.7	N	1100-1200	106	12.7%	5.2%	0.3%	30.2%	10.8%	9.4%	18.6%	0.0%	0.0%	0.2%	0.1%	0.1%	0.2%	0.0%	0.4%	11.7%	0.0%	0.0%	100.0%	
Road 50	50	50	48.1	N	1200-1300	49	23.6%	1.7%	0.3%	30.0%	10.8%	12.4%	14.4%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.4%	20.4%	0.0%	0.0%	100.0%	
Road 50	50	50	48.2	N	1300-1400	54	4.0%	1.3%	0.3%	33.0%	11.8%	10.2%	20.1%	0.0%	0.0%	0.1%	0.1%	0.0%	0.1%	0.0%	0.4%	18.7%	0.0%	0.0%	100.0%	
Road 50	50	50	48.2	N	1400-1500	53	4.3%	1.7%	0.3%	31.4%	11.3%	10.6%	20.9%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.4%	19.0%	0.0%	0.0%	100.0%	
Road 50	50	50	48.2	N	1500-1600	55	4.2%	1.7%	0.4%	35.8%	12.9%	9.1%	17.8%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.4%	17.7%	0.0%	0.0%	100.0%	
Road 50	50	50	48.3	N	1600-1700	52	5.1%	1.7%	0.3%	31.9%	11.2%	10.0%	19.8%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.4%	19.0%	0.0%	0.0%	100.0%	
Road 50	50	50	48.4	N	1700-1800	48	6.8%	2.1%	0.4%	34.8%	12.5%	7.9%	15.5%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.6%	18.0%	0.0%	0.0%	100.0%	
Road 50	50	50	48.8	N	1800-1900	37	11.8%	2.8%	0.3%	30.8%	11.1%	6.4%	12.6%	0.0%	0.0%	0.0%	0.2%	0.1%	0.3%	0.0%	0.6%	22.8%	0.0%	0.0%	100.0%	
Road 50	50	50	48.8	N	1900-2000	22	11.8%	2.8%	0.3%	30.8%	11.1%	6.4%	12.6%	0.0%	0.0%	0.0%	0.2%	0.1%	0.3%	0.0%	0.6%	22.8%	0.0%	0.0%	100.0%	
Road 50	50	50	49.5	N	2000-2100	18	13.8%	5.9%	0.3%	32.1%	11.5%	7.1%	13.9%	0.0%	0.0%	0.0%	0.2%	0.1%	0.3%	0.0%	0.6%	14.2%	0.0%	0.0%	100.0%	
Road 50	50	50	49.4	N	2100-2200	18	13.7%	5.7%	0.3%	31.9%	11.5%	7.3%	14.4%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.6%	14.1%	0.0%	0.0%	100.0%	
Road 50	50	50	49.5	N	2200-2300	16	14.8%	6.7%	0.3%	26.7%	9.6%	8.5%	16.7%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.6%	15.9%	0.0%	0.0%	100.0%	
Road 50	50	50	49.6	N	2300-0000	13	13.0%	5.9%	0.3%	26.8%	9.8%	8.5%	16.7%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.6%	18.3%	0.0%	0.0%	100.0%

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters For AERMOD (Year 2038)

Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Est Emission Based on Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles <=15t	07 - Medium Goods Vehicles >15t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchised Bus Single Deck	15 - Franchised Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total
							PC	TAXI	LGV3	LGV4	LGV5	HGV7	HGV9	FLB	PV4	PV5	NFB6	NFB7	NFB8	FBS0	FBS0	MC	HGV9	NFB9	
Road 53	53	50	28.2	N	0000-0100	26	23.5%	10.6%	0.2%	16.4%	5.9%	5.2%	10.2%	22.5%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	1.2%	2.7%	0.0%	100.0%
Road 53	53	50	28.7	N	0100-0200	17	22.3%	10.0%	0.2%	17.3%	6.2%	5.5%	10.7%	22.8%	0.0%	0.1%	0.2%	0.2%	0.4%	0.0%	0.3%	2.8%	0.0%	0.0%	100.0%
Road 53	53	50	29.0	N	0200-0300	13	21.1%	9.4%	0.2%	18.2%	6.5%	5.7%	11.3%	22.2%	0.0%	0.1%	0.3%	0.2%	0.4%	0.0%	0.4%	3.1%	2.9%	0.0%	100.0%
Road 53	53	50	29.2	N	0300-0400	12	19.9%	8.8%	0.2%	19.1%	6.8%	6.0%	10.9%	22.6%	0.0%	0.2%	0.3%	0.2%	0.4%	0.0%	0.4%	3.4%	3.0%	0.0%	100.0%
Road 53	53	50	29.1	N	0400-0500	12	19.0%	8.4%	0.2%	19.8%	7.1%	6.2%	12.2%	21.1%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	0.5%	3.2%	3.0%	0.0%	100.0%
Road 53	53	50	28.4	N	0500-0600	22	18.0%	7.9%	0.2%	20.6%	7.4%	6.5%	12.2%	20.6%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	0.5%	3.5%	3.3%	0.0%	100.0%
Road 53	53	50	28.3	N	0600-0700	49	17.1%	7.5%	0.2%	21.3%	7.6%	6.7%	13.1%	20.1%	0.0%	0.2%	0.4%	0.2%	0.5%	0.0%	0.6%	3.6%	3.4%	0.0%	100.0%
Road 53	53	50	28.3	N	0700-0800	25	17.0%	7.5%	0.2%	21.3%	7.6%	6.7%	13.1%	20.1%	0.0%	0.2%	0.4%	0.2%	0.5%	0.0%	0.6%	3.6%	3.4%	0.0%	100.0%
Road 53	53	50	24.3	N	0800-0900	115	18.5%	5.9%	0.3%	24.5%	8.8%	6.8%	13.5%	15.7%	0.0%	0.3%	0.4%	0.3%	0.6%	0.0%	0.0%	1.1%	3.5%	0.0%	100.0%
Road 53	53	50	24.2	N	0900-1000	118	13.6%	4.9%	0.3%	27.7%	10.0%	7.5%	14.8%	15.9%	0.0%	0.1%	0.2%	0.2%	0.3%	0.0%	0.5%	3.9%	0.0%	100.0%	
Road 53	53	50	24.3	N	1000-1100	131	13.6%	4.8%	0.3%	27.7%	10.1%	8.1%	15.3%	15.9%	0.0%	0.1%	0.3%	0.1%	0.3%	0.0%	0.5%	4.0%	0.0%	100.0%	
Road 53	53	50	24.3	N	1100-1200	105	11.8%	4.9%	0.3%	27.2%	9.8%	8.5%	16.7%	15.4%	0.0%	0.2%	0.1%	0.1%	0.2%	0.0%	0.3%	0.3%	4.4%	0.0%	100.0%
Road 53	53	50	24.0	N	1200-1300	131	24.0%	9.3%	0.2%	22.1%	8.0%	7.9%	15.6%	16.3%	0.0%	0.4%	0.4%	0.3%	0.8%	0.0%	0.7%	0.7%	4.1%	0.0%	100.0%
Road 53	53	50	23.8	N	1300-1400	148	24.5%	7.2%	0.2%	24.8%	8.2%	7.8%	16.2%	16.2%	0.0%	0.4%	0.5%	0.2%	0.5%	0.0%	0.8%	4.0%	0.0%	100.0%	
Road 53	53	50	23.8	N	1400-1500	144	23.1%	9.3%	0.2%	23.1%	8.3%	7.8%	15.4%	15.9%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	0.9%	4.0%	0.0%	100.0%	
Road 53	53	50	23.8	N	1500-1600	148	22.8%	9.1%	0.3%	26.6%	9.6%	7.6%	13.3%	15.4%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	0.8%	3.5%	0.0%	100.0%	
Road 53	53	50	23.9	N	1600-1700	147	22.7%	9.1%	0.3%	22.7%	9.6%	7.6%	13.3%	15.4%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	0.8%	3.5%	0.0%	100.0%	
Road 53	53	50	23.9	N	1700-1800	153	31.4%	9.8%	0.2%	21.9%	7.9%	5.0%	18.8%	6.5%	0.1%	0.4%	0.6%	0.4%	0.8%	0.0%	0.7%	2.7%	2.6%	0.0%	100.0%
Road 53	53	50	24.2	N	1800-1900	143	44.3%	10.4%	0.2%	15.9%	5.1%	3.3%	6.5%	7.3%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	0.2%	1.7%	1.6%	0.0%	100.0%
Road 53	53	50	24.6	N	1900-2000	109	45.2%	14.2%	0.1%	12.6%	4.5%	3.0%	5.9%	8.9%	0.0%	0.1%	0.7%	0.5%	1.0%	0.0%	0.7%	1.7%	1.5%	0.0%	100.0%
Road 53	53	50	24.6	N	2000-2100	89	45.2%	14.2%	0.1%	12.6%	4.5%	3.0%	5.9%	8.9%	0.0%	0.1%	0.7%	0.5%	1.0%	0.0%	0.7%	1.7%	1.5%	0.0%	100.0%
Road 53	53	50	24.9	N	2100-2200	86	41.8%	17.3%	0.1%	13.4%	4.8%	3.1%	8.0%	9.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.9%	1.9%	1.6%	0.0%	100.0%
Road 53	53	50	25.0	N	2200-2300	81	43.0%	16.4%	0.1%	10.7%	3.8%	3.4%	6.7%	8.5%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.7%	1.7%	1.7%	0.0%	100.0%
Road 54	54	50	25.3	N	0000-0100	28	33.0%	10.0%	0.2%	12.2%	5.3%	4.7%	9.2%	12.8%	0.0%	0.2%	0.3%	0.2%	0.3%	0.0%	0.7%	1.7%	1.7%	0.0%	100.0%
Road 54	54	50	26.8	N	0200-0300	50	35.5%	16.4%	0.1%	12.4%	4.4%	3.9%	7.7%	13.6%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.8%	2.0%	2.0%	0.0%	100.0%
Road 54	54	50	27.8	N	0300-0400	33	35.0%	15.6%	0.1%	13.2%	4.6%	4.2%	8.2%	13.3%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	2.0%	2.1%	2.1%	0.0%	100.0%
Road 54	54	50	28.3	N	0400-0500	20	34.9%	15.9%	0.1%	13.2%	4.6%	4.1%	8.2%	13.3%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	2.0%	2.1%	2.1%	0.0%	100.0%
Road 54	54	50	28.6	N	0500-0600	20	32.1%	14.3%	0.2%	14.9%	5.3%	4.7%	9.2%	12.8%	0.0%	0.3%	0.5%	0.3%	0.7%	0.0%	0.3%	2.4%	2.4%	0.0%	100.0%
Road 54	54	50	28.5	N	0600-0700	23	30.8%	13.6%	0.2%	15.7%	5.5%	4.9%	9.7%	12.8%	0.0%	0.3%	0.5%	0.3%	0.8%	0.0%	0.2%	2.4%	2.5%	0.0%	100.0%
Road 54	54	50	27.2	N	0700-0800	40	29.5%	13.0%	0.2%	16.4%	5.9%	5.1%	10.1%	12.8%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	0.2%	2.9%	2.8%	0.0%	100.0%
Road 54	54	50	24.4	N	0800-0900	24	27.7%	12.5%	0.2%	16.4%	5.9%	5.1%	10.1%	12.8%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	0.2%	2.9%	2.8%	0.0%	100.0%
Road 54	54	50	23.4	N	0900-1000	182	37.0%	9.1%	0.2%	17.8%	6.4%	5.6%	11.0%	12.2%	0.1%	0.4%	0.6%	0.4%	0.9%	0.0%	0.7%	2.8%	2.9%	0.0%	100.0%
Road 54	54	50	23.1	N	1000-1100	208	27.0%	11.8%	0.2%	18.6%	7.1%	5.5%	10.8%	12.6%	0.1%	0.4%	0.6%	0.4%	0.9%	0.0%	0.7%	2.8%	2.8%	0.0%	100.0%
Road 54	54	50	23.2	N	1100-1200	208	26.8%	11.8%	0.2%	18.6%	7.1%	5.5%	10.8%	12.6%	0.1%	0.4%	0.6%	0.4%	0.9%	0.0%	0.7%	2.8%	2.8%	0.0%	100.0%
Road 54	54	50	23.2	N	1200-1300	175	21.1%	8.2%	0.2%	23.8%	8.5%	7.6%	14.9%	9.8%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	0.6%	0.6%	3.9%	0.0%	100.0%
Road 54	54	50	23.4	N	1300-1400	185	21.1%	8.2%	0.2%	23.7%	8.5%	7.6%	14.6%	10.3%	0.0%	0.4%	0.2%	0.1%	0.3%	0.0%	0.6%	3.8%	0.0%	100.0%	
Road 54	54	50	23.4	N	1400-1500	171	21.1%	8.1%	0.2%	23.7%	8.5%	7.6%	14.6%	10.3%	0.0%	0.4%	0.2%	0.1%	0.3%	0.0%	0.6%	3.8%	0.0%	100.0%	
Road 54	54	50	23.8	N	1500-1600	132	10.0%	3.8%	0.3%	32.5%	11.7%	10.1%	19.8%	5.9%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.3%	5.2%	0.0%	100.0%	
Road 54	54	50	23.8	N	1600-1700	133	10.2%	3.3%	0.3%	30.4%	10.9%	10.3%	20.2%	6.4%	0.0%	0.2%	0.2%	0.1%	0.3%	0.0%	0.4%	5.5%	0.0%	100.0%	
Road 54	54	50	23.8	N	1700-1800	128	10.4%	4.2%	0.4%	34.8%	12.5%	8.8%	17.3%	5.8%	0.0%	0.2%	0.2%	0.1%	0.3%	0.0%	0.4%	4.5%	0.0%	100.0%	
Road 54	54	50	23.4	N	1800-1900	131	12.3%	4.2%	0.4%	34.8%	12.5%	8.8%	17.3%	5.8%	0.0%	0.3%	0.2%	0.2%	0.1%	0.3%	0.0%	4.5%	0.0%	100.0%	
Road 54	54	50	24.0	N	1900-2000	138	15.9%	5.0%	0.3%	31.9%	11.7%	12.2%	14.2%	7.8%	0.0%	0.2%	0.3%	0.2%	0.4%	0.0%	0.4%	3.7%	0.0%	100.0%	
Road 54	54	50	24.5	N	2000-2100	104	25.7%	6.0%	0.3%	26.5%	9.5%	5.5%	10.8%	10.1%	0.0%	0.0%	0.5%	0.3%	0.7%	0.0%	0.2%	2.8%	2.8%	0.0%	100.0%
Road 54	54	50	24.4	N	2100-2200	72	27.6%	18.0%	0.2%	22.1%	7.3%	5.3%	7.1%	16.8%	0.0%	0.1%	0.5%	0.3%	0.7%	0.0%	0.2%	2.8%	2.8%	0.0%	100.0%
Road 54	54	50	25.7	N	2200-2300	60	24.9%	10.6%	0.2%	22.9%	8.2%	5.0%	9.9%	13.5%	0.0%	0.3%	0.2%	0.5%	0.0%	0.1%	0.2%	2.6%	0.0%	100.0%	
Road 54	54	50	25.7	N	2300-0000	61	25.1%	10.4%	0.2%	23.1%	8.3%	5.3%	10.4%	12.7%	0.0%	0.0%	0.2%	0.1%	0.3%	0.0%	0.1%	2.7%	0.0%	100.0%	
Road 54	54	50	26.8	N	0000-0100	28	33.0%	10.0%	0.2%	12.2%	5.3%	4.7%	9.2%	12.8%	0.0%	0.2%	0.3%	0.2%	0.3%	0.0%	0.7%	1.7%	1.7%	0.0%	100.0%
Road 54	54	50	26.8	N	0100-0200	28	33.0%	10.0%	0.2%	12.2%	5.3%	4.7%	9.2%	12.8%	0.0%	0.2%	0.3%	0.2%	0.3%	0.0%	0.7%	1.7%	1.7%	0.0%	100.0%
Road 54	54	50	26.9	N	0200-0300	43	25.0%	11.2%	0.2%	20.3%	7.3%	6.4%	12.6%	11.9%	0.0%	0.2%	0.2%	0.1%	0.3%	0.0%	0.1%	3.3%	0.0%	0.0%	100.0%

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters for AERMOD (Year 2038)

Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles >15t	07 - Medium Goods Vehicles >24t	08 - Public Light Bus >8t	09 - Private Light Bus >8t	10 - Private Light Bus <=8t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.5 - 14t	13 - Non-franchised Bus 15 - 24t	14 - Franchised Bus Single Deck	15 - Franchised Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicle >24t	18 - Non-franchised Bus >24t	Total	
							PC	TAXI	LGV3	LGV4	LGV5	HGV7	HGV8	FLB	PV4	PV5	NFB6	NFB7	NFB8	FBS0	FBS1	MC	HGV9	NFB9		
Road 103	103	80	80.0	N	0000-0100	819	57.3%	25.7%	0.1%	4.9%	1.8%	1.5%	3.1%	0.0%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	0.0%	2.9%	0.8%	0.0%	100.0%	
Road 103	103	80	80.0	N	0100-0200	534	56.2%	25.1%	0.1%	5.4%	1.9%	1.7%	3.3%	0.0%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	0.3%	0.2%	0.9%	0.0%	100.0%
Road 103	103	80	80.0	N	0200-0300	392	55.0%	24.5%	0.1%	5.8%	2.1%	1.8%	3.6%	0.0%	0.0%	0.3%	0.7%	0.5%	1.1%	0.0%	0.0%	3.5%	0.9%	0.0%	100.0%	
Road 103	103	80	80.0	N	0300-0400	331	53.8%	23.9%	0.1%	6.3%	2.3%	2.0%	3.9%	0.0%	0.1%	0.4%	0.8%	0.5%	1.2%	0.0%	0.0%	3.8%	1.0%	0.0%	100.0%	
Road 103	103	80	80.0	N	0400-0500	341	52.6%	23.3%	0.1%	6.8%	2.4%	2.1%	4.2%	0.0%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	0.0%	4.1%	1.1%	0.0%	100.0%	
Road 103	103	80	80.0	N	0500-0600	594	51.4%	22.6%	0.1%	7.3%	2.6%	2.3%	4.5%	0.0%	0.1%	0.6%	0.9%	0.7%	1.4%	0.0%	0.0%	4.4%	1.2%	0.0%	100.0%	
Road 103	103	80	80.0	N	0600-0700	1276	50.2%	22.0%	0.1%	7.7%	2.8%	2.4%	4.8%	0.0%	0.1%	0.6%	1.0%	0.7%	1.6%	0.0%	0.0%	4.7%	1.2%	0.0%	100.0%	
Road 103	103	80	75.1	N	0700-0800	1549	49.0%	21.4%	0.1%	8.2%	2.9%	2.6%	5.1%	0.0%	0.1%	0.7%	1.1%	0.8%	1.7%	0.0%	0.0%	5.0%	1.3%	0.0%	100.0%	
Road 103	103	80	71.2	N	0800-0900	3015	54.4%	17.4%	0.1%	8.9%	3.2%	2.5%	4.9%	0.0%	0.1%	0.7%	1.1%	0.7%	1.6%	0.0%	0.0%	5.2%	1.3%	0.0%	100.0%	
Road 103	103	80	74.6	N	0900-1000	2528	48.8%	17.7%	0.1%	12.3%	4.4%	3.3%	6.6%	0.0%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	0.0%	1.9%	1.7%	0.0%	100.0%	
Road 103	103	80	77.0	N	1000-1100	2210	45.7%	17.7%	0.1%	13.0%	4.7%	4.1%	8.1%	0.0%	0.1%	0.5%	0.8%	0.5%	1.1%	0.0%	0.0%	1.4%	2.1%	0.0%	100.0%	
Road 103	103	80	78.3	N	1100-1200	2091	45.6%	16.8%	0.1%	13.0%	4.7%	4.1%	8.0%	0.0%	0.1%	0.8%	0.5%	0.3%	0.7%	0.0%	0.0%	1.3%	2.1%	0.0%	100.0%	
Road 103	103	80	78.7	N	1200-1300	2039	46.8%	16.0%	0.1%	11.6%	4.2%	4.2%	8.2%	0.0%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	0.0%	1.4%	2.1%	0.0%	100.0%	
Road 103	103	80	79.0	N	1300-1400	2091	44.9%	17.3%	0.1%	13.7%	4.6%	4.3%	8.4%	0.0%	0.1%	0.8%	0.6%	0.4%	1.0%	0.0%	0.0%	1.4%	2.2%	0.0%	100.0%	
Road 103	103	80	76.8	N	1400-1500	2227	45.2%	16.3%	0.1%	12.2%	4.4%	4.1%	8.1%	0.0%	0.1%	0.8%	0.9%	0.8%	1.4%	0.0%	0.0%	1.7%	2.1%	0.0%	100.0%	
Road 103	103	80	76.4	N	1500-1600	2281	44.8%	16.0%	0.1%	14.1%	5.1%	3.6%	7.0%	0.0%	0.1%	0.8%	0.9%	0.6%	1.4%	0.0%	0.0%	1.6%	1.8%	0.0%	100.0%	
Road 103	103	80	75.3	N	1600-1700	2412	47.9%	16.5%	0.1%	11.2%	4.0%	3.5%	6.9%	0.0%	0.1%	1.1%	1.4%	1.0%	2.1%	0.0%	0.0%	2.3%	1.8%	0.0%	100.0%	
Road 103	103	80	74.0	N	1700-1800	2722	51.6%	16.0%	0.1%	10.0%	3.8%	2.3%	4.5%	0.0%	0.1%	0.8%	0.9%	1.4%	0.0%	0.0%	4.8%	1.2%	0.0%	100.0%		
Road 103	103	80	73.1	N	1800-1900	2958	64.8%	15.2%	0.1%	6.2%	2.2%	1.3%	2.6%	0.0%	0.0%	0.1%	1.1%	0.8%	1.7%	0.0%	0.0%	3.1%	0.7%	0.0%	100.0%	
Road 103	103	80	78.7	N	1900-2000	2335	63.9%	20.0%	0.1%	4.8%	1.7%	1.1%	2.2%	0.0%	0.0%	0.1%	1.0%	0.7%	1.5%	0.0%	0.0%	2.4%	0.6%	0.0%	100.0%	
Road 103	103	80	80.0	N	2000-2100	1814	59.0%	25.0%	0.1%	5.1%	1.8%	1.1%	2.2%	0.0%	0.0%	0.1%	0.8%	0.6%	1.3%	0.0%	0.0%	2.4%	0.6%	0.0%	100.0%	
Road 103	103	80	80.0	N	2100-2200	1817	59.9%	24.8%	0.1%	5.2%	1.9%	1.2%	2.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.0%	2.7%	0.5%	0.0%	100.0%	
Road 103	103	80	80.0	N	2200-2300	1759	59.6%	27.0%	0.0%	4.0%	1.4%	1.3%	2.5%	0.0%	0.0%	0.1%	0.4%	0.2%	0.5%	0.0%	0.0%	2.3%	0.7%	0.0%	100.0%	
Road 103	103	80	80.0	N	2300-0000	1598	59.9%	22.3%	0.0%	4.0%	1.3%	1.0%	2.5%	0.0%	0.0%	0.1%	0.4%	0.2%	0.5%	0.0%	0.0%	2.3%	0.7%	0.0%	100.0%	
Road 104	104	80	80.0	N	0000-0100	500	49.7%	22.3%	0.1%	9.6%	3.3%	3.0%	6.0%	0.0%	0.0%	0.2%	0.5%	0.3%	0.7%	0.0%	0.0%	2.5%	1.6%	0.0%	100.0%	
Road 104	104	80	80.0	N	0100-0200	330	48.1%	21.5%	0.1%	10.4%	3.7%	3.3%	6.4%	0.0%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	0.0%	2.7%	1.7%	0.0%	100.0%	
Road 104	104	80	80.0	N	0200-0300	245	46.6%	20.8%	0.1%	11.2%	4.0%	3.5%	6.9%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	0.0%	2.9%	1.8%	0.0%	100.0%	
Road 104	104	80	80.0	N	0300-0400	196	45.0%	20.0%	0.1%	11.9%	4.3%	3.7%	7.4%	0.0%	0.0%	0.4%	0.8%	0.5%	1.0%	0.0%	0.0%	3.2%	1.9%	0.0%	100.0%	
Road 104	104	80	80.0	N	0400-0500	219	43.3%	19.2%	0.1%	12.6%	4.5%	4.0%	7.8%	0.0%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	0.0%	3.4%	2.0%	0.0%	100.0%	
Road 104	104	80	80.0	N	0500-0600	385	42.0%	18.5%	0.1%	13.4%	4.8%	4.2%	8.2%	0.0%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	0.0%	3.6%	2.2%	0.0%	100.0%	
Road 104	104	80	80.0	N	0600-0700	837	40.6%	17.8%	0.1%	14.1%	5.1%	4.4%	8.7%	0.0%	0.1%	0.8%	1.3%	0.7%	1.5%	0.0%	0.0%	3.8%	2.3%	0.0%	100.0%	
Road 104	104	80	80.0	N	0700-0800	1719	39.1%	17.0%	0.2%	14.8%	5.3%	4.6%	9.1%	0.0%	0.1%	0.6%	0.9%	0.6%	1.4%	0.0%	0.0%	4.0%	2.4%	0.0%	100.0%	
Road 104	104	80	78.4	N	0800-0900	2044	43.1%	13.8%	0.2%	15.9%	5.7%	4.4%	8.7%	0.0%	0.1%	0.6%	0.8%	0.6%	1.3%	0.0%	0.0%	2.5%	2.3%	0.0%	100.0%	
Road 104	104	80	79.4	N	0900-1000	1817	35.9%	13.1%	0.2%	20.4%	7.3%	5.6%	10.9%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	0.0%	1.4%	2.9%	0.0%	100.0%	
Road 104	104	80	80.0	N	1000-1100	1644	32.5%	12.6%	0.2%	20.9%	7.5%	6.6%	13.1%	0.0%	0.0%	0.4%	0.5%	0.4%	0.8%	0.0%	0.0%	1.0%	3.4%	0.0%	100.0%	
Road 104	104	80	80.0	N	1100-1200	1551	32.6%	13.4%	0.2%	20.9%	7.5%	6.5%	12.9%	0.0%	0.1%	0.6%	0.3%	0.2%	0.5%	0.0%	0.0%	0.9%	3.4%	0.0%	100.0%	
Road 104	104	80	80.0	N	1200-1300	1272	50.0%	19.3%	0.1%	9.8%	3.3%	3.5%	6.9%	0.0%	0.1%	0.8%	0.9%	0.6%	1.3%	0.0%	0.0%	1.5%	1.9%	0.0%	100.0%	
Road 104	104	80	80.0	N	1300-1400	1296	48.4%	16.8%	0.1%	11.6%	4.2%	3.6%	7.1%	0.0%	0.1%	0.7%	0.7%	0.3%	1.1%	0.0%	0.0%	1.5%	1.9%	0.0%	100.0%	
Road 104	104	80	80.0	N	1400-1500	1888	48.3%	16.8%	0.1%	10.3%	3.7%	3.3%	6.9%	0.0%	0.1%	0.8%	1.0%	0.7%	1.5%	0.0%	0.0%	1.8%	1.8%	0.0%	100.0%	
Road 104	104	80	80.0	N	1500-1600	1419	48.0%	19.3%	0.1%	11.1%	4.3%	3.0%	5.9%	0.0%	0.1%	0.8%	1.0%	0.7%	1.5%	0.0%	0.0%	1.7%	1.6%	0.0%	100.0%	
Road 104	104	80	80.0	N	1600-1700	1515	50.9%	17.5%	0.1%	9.4%	3.4%	2.9%	5.8%	0.0%	0.2%	1.2%	1.5%	1.0%	2.3%	0.0%	0.0%	2.4%	1.5%	0.0%	100.0%	
Road 104	104	80	80.0	N	1700-1800	1732	55.8%	17.4%	0.1%	8.3%	3.0%	1.9%	3.7%	0.0%	0.1%	0.8%	1.0%	0.7%	1.5%	0.0%	0.0%	4.8%	1.0%	0.0%	100.0%	
Road 104	104	80	80.0	N	1800-1900	1918	66.7%	15.7%	0.1%	5.1%	1.8%	1.1%	2.1%	0.0%	0.0%	0.1%	1.2%	0.8%	1.8%	0.0%	0.0%	3.2%	0.5%	0.0%	100.0%	
Road 104	104	80	80.0	N	1900-2000	1533	65.3%	20.5%	0.0%	4.0%	1.4%	1.0%	2.5%	0.0%	0.0%	0.1%	0.8%	0.6%	1.3%	0.0%	0.0%	3.4%	0.5%	0.0%	100.0%	
Road 104	104	80	80.0	N	2000-2100	1182	60.4%	25.6%	0.0%	4.1%	1.5%	0.9%	1.8%	0.0%	0.0%	0.1%	0.8%	0.6%	1.3%	0.0%	0.0%	2.4%	0.5%	0.0%	100.0%	
Road 104	104	80	80.0	N	2100-2200	1183	61.3%	25.4%	0.0%	4.2%	1.5%	1.0%	1.9%	0.0%	0.0%	0.1%	0.4%	0.3%	0.7%	0.0%	0.0%	2.8%	0.5%	0.0%	100.0%	
Road 104	104	80	80.0	N	2200-2300	1149	60.9%	27.0%	0.0%	3.2%	1.2%	1.0%	2.0%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.0%	2.3%	0.5%	0.0%	100.0%	
Road 104	104	80	80.0	N	2300-0000	858	59.9%	27.0%	0.0%	3.6%	1.3%	1.1%	2.2%	0.0%	0.0%	0.1%	0.3%	0.3%	0.7%	0.0%	0.0%	2.6%	0.6%	0.0%	100.0%	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters for AERMOD (Year 2038)

Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles >15t	07 - Medium Goods Vehicles >24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1 - 15t	13 - Non-franchised Bus 15- 24t	14 - Franchise d Bus Single Deck	15 - Franchise d Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total		
							PC	TAXI	LGV3	LGV4	LGV5	HGV7	HGV8	FLB	PV4	PV5	NFB6	NFB7	NFB8	FBS0	FBS0	MC	HGV9	NFB9			
Road 1	1	80	80.0	N	0000-0100	1050	57.0%	25.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%		
Road 1	1	80	80.0	N	0100-0200	684	56.0%	23.1%	0.0%	0.0%	1.3%	1.2%	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%		
Road 1	1	80	80.0	N	0200-0500	500	55.0%	24.5%	0.0%	0.0%	1.5%	1.3%	2.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%		
Road 1	1	80	80.0	N	0500-0600	395	53.0%	21.0%	0.0%	0.0%	1.5%	1.3%	2.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%		
Road 1	1	80	80.0	N	0600-0700	433	53.0%	23.4%	0.1%	0.0%	1.5%	1.6%	1.3%	0.0%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	0.4%	4.1%	1.2%	0.0%	100.0%		
Road 1	1	80	80.0	N	0700-0800	349	52.0%	22.9%	0.1%	0.0%	1.5%	1.7%	3.3%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	3.4%	4.4%	1.1%	0.0%	100.0%		
Road 1	1	80	80.0	N	0800-0900	524	54.0%	24.4%	0.1%	0.0%	1.5%	1.7%	3.3%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	3.4%	4.4%	1.1%	0.0%	100.0%		
Road 1	1	80	78.9	N	0900-1000	3245	50.0%	21.8%	0.1%	0.1%	2.2%	1.9%	3.8%	0.0%	0.1%	0.7%	1.1%	0.8%	1.7%	0.0%	3.4%	5.1%	1.2%	0.0%	100.0%		
Road 1	1	80	75.9	N	0800-0900	3755	55.8%	17.8%	0.1%	0.7%	2.4%	1.9%	3.7%	0.0%	0.1%	0.8%	1.1%	0.8%	1.7%	0.0%	3.0%	3.2%	1.1%	0.0%	100.0%		
Road 1	1	80	79.2	N	0900-1000	3085	51.0%	18.5%	0.1%	0.8%	3.4%	2.6%	5.0%	0.0%	0.1%	0.5%	0.5%	0.6%	1.3%	0.0%	3.1%	2.0%	1.5%	0.0%	100.0%		
Road 1	1	80	80.0	N	1000-1100	2668	49.0%	19.0%	0.0%	0.0%	1.0%	1.9%	4.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%		
Road 1	1	80	80.0	N	1100-1200	2528	49.2%	18.6%	0.1%	0.0%	3.6%	3.1%	6.2%	0.0%	0.1%	0.9%	0.5%	0.3%	0.7%	0.0%	3.1%	1.4%	0.9%	0.0%	100.0%		
Road 1	1	80	75.1	N	1200-1300	1449	42.7%	16.5%	0.1%	0.0%	1.2%	4.5%	4.8%	0.0%	0.1%	0.7%	0.7%	0.5%	1.1%	0.0%	3.4%	1.3%	2.5%	0.0%	100.0%		
Road 1	1	80	74.1	N	1300-1400	3602	42.0%	21.8%	0.0%	0.0%	4.8%	3.0%	4.8%	0.0%	0.0%	0.6%	0.6%	0.6%	0.6%	0.0%	3.2%	1.6%	2.2%	0.0%	100.0%		
Road 1	1	80	72.9	N	1400-1500	3815	41.3%	16.7%	0.1%	0.0%	1.3%	4.7%	4.5%	0.8%	0.0%	0.1%	0.7%	0.8%	0.8%	1.3%	0.0%	3.2%	1.6%	2.5%	0.0%	100.0%	
Road 1	1	80	72.5	N	1500-1600	3912	40.9%	16.4%	0.2%	0.0%	1.5%	5.3%	3.9%	7.6%	0.0%	0.1%	0.7%	0.8%	0.6%	1.3%	0.0%	3.1%	1.5%	2.2%	0.0%	100.0%	
Road 1	1	80	71.2	N	1600-1700	4212	44.0%	17.2%	0.0%	0.0%	4.8%	2.0%	4.8%	0.0%	0.0%	0.6%	0.6%	0.6%	0.6%	0.0%	3.2%	1.6%	2.2%	0.0%	100.0%		
Road 1	1	80	69.8	N	1700-1800	4607	49.3%	15.4%	0.1%	0.0%	1.1%	11.0%	4.0%	2.5%	4.9%	0.0%	0.1%	0.7%	0.9%	0.0%	3.0%	3.6%	4.2%	1.4%	0.0%	100.0%	
Road 1	1	80	69.2	N	1800-1900	4338	60.8%	14.3%	0.1%	0.9%	0.9%	2.5%	1.4%	2.8%	0.0%	0.0%	0.1%	1.1%	0.7%	1.6%	0.0%	3.7%	2.9%	0.9%	0.0%	100.0%	
Road 1	1	80	75.0	N	1900-2000	3904	59.9%	18.8%	0.0%	0.0%	1.5%	5.3%	4.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	4.3%	2.0%	1.5%	0.0%	100.0%		
Road 1	1	80	80.0	N	2000-2100	3038	55.2%	22.4%	0.0%	0.0%	2.8%	2.6%	1.2%	2.4%	0.0%	0.0%	0.1%	0.8%	0.5%	0.0%	4.5%	2.2%	0.7%	0.0%	100.0%		
Road 1	1	80	80.0	N	2100-2200	3328	56.3%	23.3%	0.1%	0.0%	5.7%	2.1%	1.3%	2.6%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	4.0%	2.6%	0.7%	0.0%	100.0%	
Road 1	1	80	80.0	N	2200-2300	2936	56.0%	25.3%	0.0%	0.0%	4.4%	1.6%	1.4%	2.8%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	4.3%	2.2%	0.8%	0.0%	100.0%	
Road 1	1	80	80.0	N	2300-0000	2203	54.8%	22.0%	0.0%	0.0%	4.8%	2.4%	1.3%	2.6%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	4.3%	2.4%	0.8%	0.0%	100.0%	
Road 2	2	80	80.0	N	0000-0100	952	32.3%	23.5%	0.1%	0.0%	6.2%	2.2%	2.0%	3.9%	0.0%	0.0%	0.2%	0.5%	0.3%	0.7%	0.0%	4.3%	3.6%	1.2%	0.0%	100.0%	
Road 2	2	80	80.0	N	0100-0200	424	51.0%	22.8%	0.1%	0.8%	2.8%	2.1%	4.2%	0.0%	0.0%	0.2%	0.6%	0.4%	0.8%	0.0%	4.2%	2.9%	1.4%	0.0%	100.0%		
Road 2	2	80	80.0	N	0200-0300	460	49.7%	23.0%	0.0%	0.0%	2.3%	4.5%	4.0%	0.0%	0.0%	0.3%	0.3%	0.3%	0.3%	0.0%	4.2%	2.9%	1.4%	0.0%	100.0%		
Road 2	2	80	80.0	N	0300-0400	366	48.4%	21.5%	0.1%	0.0%	7.9%	2.8%	2.5%	4.9%	0.0%	0.0%	0.4%	0.7%	0.5%	1.1%	0.0%	4.1%	3.4%	1.8%	0.0%	100.0%	
Road 2	2	80	80.0	N	0400-0500	404	47.2%	20.9%	0.1%	0.8%	3.0%	2.6%	5.2%	0.0%	0.1%	0.4%	0.8%	0.8%	1.2%	0.0%	4.1%	3.7%	1.8%	0.0%	100.0%		
Road 2	2	80	80.0	N	0500-0600	703	46.1%	20.3%	0.0%	0.0%	3.2%	2.8%	5.5%	0.0%	0.0%	0.5%	0.8%	1.2%	0.0%	0.0%	4.0%	3.3%	0.9%	0.0%	100.0%		
Road 2	2	80	80.0	N	0600-0700	1516	49.0%	18.9%	0.0%	0.0%	1.7%	4.8%	4.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	4.0%	4.2%	1.7%	0.0%	100.0%		
Road 2	2	80	78.6	N	0700-0800	3089	43.6%	19.0%	0.1%	0.0%	1.0%	3.6%	3.2%	6.2%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	3.9%	4.5%	1.9%	0.0%	100.0%	
Road 2	2	80	75.6	N	0800-0900	3586	45.5%	15.5%	0.1%	0.0%	3.9%	3.1%	6.0%	0.0%	0.1%	0.7%	0.9%	0.7%	1.4%	0.0%	3.5%	2.8%	1.8%	0.0%	100.0%		
Road 2	2	80	77.2	N	0900-1000	3089	45.4%	19.0%	0.0%	0.0%	4.8%	4.0%	7.6%	0.0%	0.0%	0.4%	0.4%	0.4%	0.4%	0.0%	3.5%	2.8%	1.8%	0.0%	100.0%		
Road 2	2	80	79.7	N	1000-1100	2734	39.2%	15.2%	0.2%	0.0%	15.5%	6.6%	4.9%	9.7%	0.0%	0.1%	0.4%	0.6%	0.4%	0.0%	3.3%	1.2%	2.8%	0.0%	100.0%		
Road 2	2	80	80.0	N	1100-1200	2585	39.1%	16.1%	0.2%	0.0%	15.4%	5.5%	4.8%	9.5%	0.0%	0.1%	0.7%	0.4%	0.3%	0.6%	0.0%	3.4%	1.1%	2.8%	0.0%	100.0%	
Road 2	2	80	75.0	N	1200-1300	3340	39.2%	15.9%	0.2%	0.0%	13.5%	4.3%	4.9%	9.5%	0.0%	0.1%	0.7%	0.4%	0.3%	0.6%	0.0%	3.4%	1.2%	2.8%	0.0%	100.0%	
Road 2	2	80	75.9	N	1300-1400	3312	39.3%	15.1%	0.2%	0.0%	16.0%	5.7%	5.0%	9.7%	0.0%	0.1%	0.6%	0.6%	0.9%	0.0%	2.6%	1.2%	2.8%	0.0%	100.0%		
Road 2	2	80	74.8	N	1400-1500	3500	39.7%	16.1%	0.1%	0.0%	14.3%	5.1%	4.9%	9.5%	0.0%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	2.8%	1.5%	2.7%	0.0%	100.0%	
Road 2	2	80	74.0	N	1500-1600	3500	45.8%	15.9%	0.2%	0.0%	16.5%	5.5%	5.0%	9.2%	0.0%	0.1%	0.6%	0.6%	0.6%	1.2%	0.0%	2.8%	1.4%	2.4%	0.0%	100.0%	
Road 2	2	80	73.4	N	1600-1700	3759	42.6%	14.1%	0.0%	0.0%	14.7%	5.1%	4.1%	9.1%	0.0%	0.1%	1.0%	3.3%	0.9%	1.9%	0.0%	2.9%	2.0%	3.3%	0.0%	100.0%	
Road 2	2	80	72.4	N	1700-1800	4168	48.1%	15.0%	0.1%	0.0%	1.2%	4.3%	2.7%	5.4%	0.0%	0.1%	0.7%	0.8%	0.6%	1.3%	0.0%	3.0%	3.4%	1.4%	1.6%	0.0%	100.0%
Road 2	2	80	72.2	N	1800-1900	4445	60.0%	14.1%	0.1%	0.7%	2.8%	1.8%	3.2%	3.0%	0.0%	0.0%	0.1%	1.1%	0.7%	0.8%	0.0%	3.1%	2.9%	1.0%	0.0%	100.0%	
Road 2	2	80	78.0	N	1900-2000	3472	59.8%	20.4%	0.0%	0.0%	2.9%	5.6%	2.7%	2.8%	0.0%	0.0%	0.1%	0.9%	1.2%	0.0%	3.0%	2.9%	0.8%	0.0%	100.0%		
Road 2	2	80	80.0	N	2000-2100	2705	54.7%	23.2%	0.1%	0.3%	2.3%	1.4%	3.7%	0.0%	0.0%	0.0%	0.1%	0.8%	1.2%	0.0%	3.8%	2.2%	0.8%	0.0%	100.0%		
Road 2	2	80	80.0	N	2100-2200	2700	55.7%	23.1%	0.1%	0.4%	2.3%	1.5%	2.9%	0.0%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	3.4%	2.5%	0.8%	0.0%	100.0%	
Road 2	2	80	80.0	N	2200-2300	2611	56.1%	23.1%	0.1%	0.4%	2.3%	1.6%	3.1%	0.0%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	3.4%	2.5%	0.8%	0.0%	100.0%	
Road 2	2	80	80.0	N	2300-0000	1963	54.3%	24.5%	0.1%	0.5%	2.0%	1.7%	3.4%	0.0%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	3.6%	2.4%	1.0%	0.0%	100.0%	

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters For AERMOD (Year 2043)

Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles >15t	07 - Medium Goods Vehicles >24t	08 - Public Light Buses >24t	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchise d Bus Single Deck	15 - Franchise d Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total	
							PC	TAXI	LGV3	LGV4	LGV5	HGV7	HGV8	FLB	PV4	PV5	NFB6	NFB7	NFB8	FBS0	FBS1	MC	HGV9	NFB9		
Road 5	5	50	45.7	N	0000-0100	414	59.9%	26.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%		
Road 5	5	50	47.2	N	0100-0200	268	57.1%	25.5%	0.0%	2.9%	0.1%	0.9%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%		
Road 5	5	50	47.9	N	0200-0300	156	56.2%	25.1%	0.0%	3.2%	1.1%	1.0%	2.0%	0.0%	0.0%	0.4%	0.7%	0.5%	1.1%	0.0%	4.6%	3.6%	0.5%	0.0%	100.0%	
Road 5	5	50	48.4	N	0300-0400	151	55.3%	24.3%	0.0%	3.5%	1.2%	1.1%	2.1%	0.0%	0.1%	0.4%	0.8%	0.6%	1.2%	0.0%	4.6%	3.9%	0.6%	0.0%	100.0%	
Road 5	5	50	48.2	N	0400-0500	189	54.4%	24.1%	0.0%	3.8%	1.3%	1.2%	2.3%	0.0%	0.1%	0.5%	0.9%	0.8%	1.4%	0.0%	4.5%	4.2%	0.6%	0.0%	100.0%	
Road 5	5	50	46.9	N	0500-0600	291	53.5%	23.6%	0.0%	4.0%	1.5%	1.3%	2.5%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	4.5%	4.6%	0.7%	0.0%	100.0%	
Road 5	5	50	43.2	N	0600-0700	623	52.6%	23.0%	0.0%	4.3%	1.6%	1.4%	2.7%	0.0%	0.1%	0.7%	1.1%	0.8%	1.6%	0.0%	4.5%	4.9%	0.7%	0.0%	100.0%	
Road 5	5	50	37.9	N	0700-0800	1255	51.7%	22.5%	0.0%	4.6%	1.7%	1.4%	2.8%	0.0%	0.1%	0.8%	1.2%	0.8%	1.8%	0.0%	4.5%	5.3%	0.7%	0.0%	100.0%	
Road 5	5	50	36.8	N	0800-0900	1449	57.8%	16.5%	0.1%	5.0%	1.8%	1.4%	2.8%	0.0%	0.1%	0.8%	1.1%	0.8%	1.7%	0.0%	4.4%	5.3%	0.7%	0.0%	100.0%	
Road 5	5	50	38.2	N	0900-1000	1170	53.8%	19.5%	0.1%	7.3%	2.6%	2.0%	3.9%	0.0%	0.1%	0.5%	0.9%	0.6%	1.4%	0.0%	4.2%	2.1%	1.0%	0.0%	100.0%	
Road 5	5	50	39.2	N	1000-1100	1002	51.4%	20.0%	0.1%	7.9%	2.8%	2.5%	4.9%	0.0%	0.1%	0.6%	0.8%	0.6%	1.3%	0.0%	4.2%	1.8%	1.3%	0.0%	100.0%	
Road 5	5	50	39.6	N	1100-1200	951	51.2%	21.1%	0.1%	7.8%	2.8%	2.4%	4.8%	0.0%	0.1%	0.9%	0.5%	0.4%	0.8%	0.0%	4.3%	1.4%	1.3%	0.0%	100.0%	
Road 5	5	50	35.5	N	1200-1300	1610	53.2%	20.5%	0.1%	7.0%	2.5%	2.5%	4.9%	0.0%	0.1%	0.8%	0.9%	0.6%	1.4%	0.0%	2.8%	1.6%	1.3%	0.0%	100.0%	
Road 5	5	50	35.4	N	1300-1400	1621	52.1%	20.1%	0.1%	9.4%	3.0%	2.6%	5.1%	0.0%	0.1%	0.7%	0.7%	0.5%	1.1%	0.0%	2.4%	1.6%	1.3%	0.0%	100.0%	
Road 5	5	50	34.6	N	1400-1500	1750	51.8%	20.9%	0.1%	7.4%	2.8%	2.5%	4.9%	0.0%	0.1%	0.9%	1.0%	0.7%	1.6%	0.0%	2.4%	1.9%	1.3%	0.0%	100.0%	
Road 5	5	50	34.4	N	1500-1600	1785	51.4%	20.7%	0.1%	8.6%	3.1%	2.2%	4.3%	0.0%	0.1%	0.9%	1.1%	0.7%	1.6%	0.0%	2.4%	1.9%	1.1%	0.0%	100.0%	
Road 5	5	50	33.5	N	1600-1700	1916	53.6%	18.5%	0.1%	8.6%	2.4%	2.1%	4.1%	0.0%	0.2%	1.3%	1.6%	1.1%	2.4%	0.0%	2.6%	2.5%	1.1%	0.0%	100.0%	
Road 5	5	50	32.2	N	1700-1800	2552	57.8%	18.1%	0.1%	5.8%	2.1%	1.3%	2.9%	0.0%	0.1%	0.8%	1.0%	0.7%	1.5%	0.0%	2.5%	5.0%	0.7%	0.0%	100.0%	
Road 5	5	50	30.8	N	1800-1900	2557	67.4%	15.8%	0.0%	3.4%	1.2%	0.7%	1.4%	0.0%	0.0%	0.1%	1.2%	0.8%	1.8%	0.0%	2.5%	3.2%	0.4%	0.0%	100.0%	
Road 5	5	50	33.8	N	1900-2000	2051	65.3%	20.5%	0.0%	2.6%	0.9%	0.6%	1.2%	0.0%	0.0%	0.1%	1.0%	0.7%	1.5%	0.0%	2.8%	2.4%	0.3%	0.0%	100.0%	
Road 5	5	50	36.5	N	2000-2100	1551	60.3%	25.6%	0.0%	0.6%	0.0%	0.6%	1.2%	0.0%	0.0%	0.1%	0.8%	0.6%	1.3%	0.0%	3.0%	2.4%	0.3%	0.0%	100.0%	
Road 5	5	50	36.6	N	2100-2200	1588	61.6%	25.5%	0.0%	0.6%	0.0%	1.0%	0.6%	1.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.7%	0.0%	2.6%	2.8%	0.3%	0.0%	100.0%
Road 5	5	50	36.9	N	2200-2300	1550	60.8%	27.5%	0.0%	2.2%	0.8%	0.7%	1.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	2.8%	2.3%	0.4%	0.0%	100.0%	
Road 5	5	50	30.0	N	2300-0000	1155	59.5%	27.0%	0.0%	2.4%	0.9%	0.8%	1.5%	0.0%	0.0%	0.1%	0.5%	0.3%	0.7%	0.0%	2.8%	2.7%	0.4%	0.0%	100.0%	
Road 6	6	50	43.8	N	0000-0100	538	48.0%	21.5%	0.1%	6.9%	3.2%	2.8%	5.6%	0.0%	0.0%	0.2%	0.4%	0.3%	0.7%	0.0%	4.1%	2.4%	1.8%	0.0%	100.0%	
Road 6	6	50	45.9	N	0100-0200	356	46.4%	20.8%	0.1%	9.7%	3.5%	3.0%	6.0%	0.0%	0.0%	0.2%	0.5%	0.3%	0.8%	0.0%	4.0%	2.6%	2.1%	0.0%	100.0%	
Road 6	6	50	46.9	N	0200-0300	264	44.9%	20.0%	0.1%	10.4%	3.7%	3.3%	6.4%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	3.9%	2.8%	2.4%	0.0%	100.0%	
Road 6	6	50	47.5	N	0300-0400	212	43.1%	19.3%	0.1%	11.1%	4.0%	3.5%	8.8%	0.0%	0.0%	0.3%	0.6%	0.4%	1.0%	0.0%	3.8%	3.1%	2.7%	0.0%	100.0%	
Road 6	6	50	47.2	N	0400-0500	235	42.0%	18.6%	0.1%	11.8%	4.2%	3.7%	7.7%	0.0%	0.1%	0.4%	0.7%	0.5%	1.0%	0.0%	3.7%	3.3%	2.7%	0.0%	100.0%	
Road 6	6	50	45.0	N	0500-0600	412	40.8%	17.9%	0.1%	12.5%	4.5%	3.9%	7.3%	0.0%	0.1%	0.5%	0.8%	0.5%	1.1%	0.0%	3.7%	3.5%	2.5%	0.0%	100.0%	
Road 6	6	50	39.5	N	0600-0700	821	39.1%	17.3%	0.1%	13.2%	4.7%	4.1%	8.1%	0.0%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	3.6%	3.7%	2.5%	0.0%	100.0%	
Road 6	6	50	32.9	N	0700-0800	1834	38.1%	16.6%	0.1%	13.9%	5.0%	4.3%	8.5%	0.0%	0.1%	0.6%	0.9%	0.6%	1.3%	0.0%	3.3%	3.9%	2.6%	0.0%	100.0%	
Road 6	6	50	30.9	N	0800-0900	2137	42.2%	13.5%	0.2%	15.0%	5.4%	4.2%	8.2%	0.0%	0.1%	0.6%	0.8%	0.6%	1.3%	0.0%	3.1%	2.5%	2.5%	0.0%	100.0%	
Road 6	6	50	31.7	N	0900-1000	1919	35.4%	12.8%	0.2%	19.3%	6.9%	5.3%	10.4%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	2.9%	1.4%	3.1%	0.0%	100.0%	
Road 6	6	50	32.7	N	1000-1100	1732	32.1%	12.4%	0.2%	19.9%	7.1%	6.3%	12.4%	0.0%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	2.8%	1.0%	3.7%	0.0%	100.0%	
Road 6	6	50	33.5	N	1100-1200	1635	32.1%	13.2%	0.2%	19.9%	7.1%	6.2%	12.2%	0.0%	0.1%	0.6%	0.3%	0.2%	0.5%	0.0%	2.9%	0.9%	3.6%	0.0%	100.0%	
Road 6	6	50	33.4	N	1200-1300	1593	29.1%	11.2%	0.2%	20.4%	7.3%	6.5%	11.2%	0.0%	0.1%	0.5%	0.3%	0.3%	0.0%	0.0%	3.9%	4.2%	3.0%	0.0%	100.0%	
Road 6	6	50	32.6	N	1300-1400	1680	27.0%	10.4%	0.2%	23.3%	8.4%	7.2%	14.2%	0.0%	0.0%	0.4%	0.4%	0.3%	0.6%	0.0%	2.8%	0.8%	4.1%	0.0%	100.0%	
Road 6	6	50	32.2	N	1400-1500	1750	27.9%	11.3%	0.2%	21.3%	8.7%	7.2%	14.2%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	2.8%	1.0%	4.1%	0.0%	100.0%	
Road 6	6	50	31.9	N	1500-1600	1804	27.5%	11.0%	0.3%	24.4%	8.8%	6.2%	12.2%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	2.8%	1.0%	3.6%	0.0%	100.0%	
Road 6	6	50	31.6	N	1600-1700	1821	30.1%	10.2%	0.2%	20.3%	7.3%	6.3%	12.5%	0.0%	0.1%	0.9%	0.6%	1.4%	0.0%	3.2%	1.4%	3.7%	0.0%	100.0%		
Road 6	6	50	32.0	N	1700-1800	1916	36.7%	11.5%	0.2%	19.5%	7.7%	6.4%	8.7%	0.0%	0.1%	0.5%	0.6%	0.4%	1.0%	0.0%	3.5%	3.2%	2.6%	0.0%	100.0%	
Road 6	6	50	33.2	N	1800-1900	1860	50.0%	11.7%	0.1%	13.6%	4.9%	2.8%	5.6%	0.0%	0.0%	0.1%	0.9%	0.6%	1.3%	0.0%	4.0%	2.4%	1.8%	0.0%	100.0%	
Road 6	6	50	33.3	N	1900-2000	1421	55.9%	15.9%	0.0%	10.8%	4.0%	2.8%	5.6%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	4.0%	2.9%	1.8%	0.0%	100.0%	
Road 6	6	50	38.3	N	2000-2100	1112	46.7%	19.8%	0.1%	11.4%	4.1%	2.5%	4.9%	0.0%	0.1%	0.7%	0.5%	1.0%	0.0%	5.0%	1.9%	1.5%	0.0%	100.0%		
Road 6	6	50	38.4	N	2100-2200	1112	47.4%	19.6%	0.1%	11.5%	4.1%	2.7%	5.2%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	4.4%	2.2%	1.5%	0.0%	100.0%	
Road 6	6	50	38.7	N	2200-2300	1061	48.0%	21.7%	0.1%	9.1%	3.5%	2.9%	5.7%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	4.8%	1.6%	1.7%	0.0%	100.0%	
Road 6	6	50	40.5	N	2300-0000	808	46.3%	20.8%	0.1%	10.0%	3.8%	3.2%	6.2%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	4.7%	2.0%	1.9%	0.0%	100.0%	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters For AERMOD (Year 2043)

Parameters for AEMOD (Year 2050)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles >15t	07 - Medium Goods Vehicles >24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1 - 15t	13 - Non-franchised Bus 15-24t	14 - Franchise d Bus Double Deck	15 - Franchise d Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicle >24t	18 - Non-Franchised Bus >24t	Total	
							PC	TAXI	LGV3	LGV4	LGV5	HGV7	HGV8	FLB	PV4	PV5	NFB6	NFB7	NFB8	FBS0	FBS0	MC	HGV9	NFB9		
Road 9	9	50	40.0	N	0100-0100	474	59.7%	25.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%		
Road 9	9	50	43.4	N	0100-0200	310	54.5%	24.4%	0.1%	5.1%	1.8%	1.6%	3.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%		
Road 9	9	50	45.1	N	0200-0300	228	53.2%	23.7%	0.1%	5.5%	2.0%	1.7%	3.4%	0.0%	0.0%	0.3%	0.7%	0.5%	1.0%	0.0%	0.0%	2.7%	3.4%	1.7%	100.0%	
Road 9	9	50	46.0	N	0400-0500	181	52.0%	23.1%	0.1%	5.9%	2.1%	1.9%	3.7%	0.0%	0.1%	0.8%	0.8%	0.8%	1.1%	0.0%	0.0%	2.7%	3.7%	2.0%	100.0%	
Road 9	9	50	45.6	N	0600-0600	388	53.0%	23.9%	0.1%	6.4%	2.3%	0.8%	3.9%	0.0%	0.0%	0.8%	0.5%	0.0%	0.0%	0.0%	0.0%	2.6%	4.0%	2.0%	100.0%	
Road 9	9	50	42.4	N	0500-0600	344	50.0%	22.0%	0.1%	6.9%	2.5%	2.2%	4.2%	0.0%	0.1%	0.6%	0.9%	0.8%	1.4%	0.0%	0.0%	2.6%	4.3%	1.7%	100.0%	
Road 9	9	50	36.4	N	0600-0700	738	40.0%	21.5%	0.1%	7.3%	2.6%	2.3%	4.5%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	0.0%	2.6%	4.6%	1.4%	100.0%	
Road 9	9	50	29.0	N	0700-0800	1469	30.0%	20.9%	0.1%	8.4%	2.7%	2.4%	4.8%	0.0%	0.1%	0.7%	1.0%	0.7%	1.6%	0.0%	0.0%	2.6%	4.8%	1.2%	100.0%	
Road 9	9	50	17.5	N	0800-0900	1735	53.2%	17.0%	0.1%	8.5%	3.0%	2.4%	4.6%	0.0%	0.1%	0.7%	1.0%	0.1%	1.6%	0.0%	0.0%	2.3%	3.1%	1.6%	100.0%	
Road 9	9	50	25.8	N	0900-1000	1453	47.8%	17.3%	0.1%	11.7%	4.2%	3.2%	6.3%	0.0%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	0.0%	2.3%	1.9%	2.1%	100.0%	
Road 9	9	50	28.1	N	1000-1100	1240	44.7%	17.4%	0.0%	12.4%	4.0%	3.3%	6.5%	0.0%	0.0%	0.5%	0.3%	0.5%	0.5%	0.0%	0.0%	2.1%	1.4%	1.7%	100.0%	
Road 9	9	50	29.6	N	1100-1200	1202	44.6%	16.4%	0.1%	12.4%	4.4%	3.9%	7.8%	0.0%	0.1%	0.8%	0.4%	0.3%	0.7%	0.0%	0.0%	2.3%	1.3%	2.6%	100.0%	
Road 9	9	50	17.6	N	1200-1300	1515	36.9%	14.2%	0.0%	16.0%	5.8%	5.8%	11.3%	0.0%	0.1%	0.6%	0.6%	0.4%	1.0%	0.0%	0.0%	2.5%	1.1%	3.4%	100.0%	
Road 9	9	50	14.0	N	1300-1400	582	30.9%	14.4%	0.0%	15.4%	5.9%	5.9%	11.4%	0.0%	0.0%	0.5%	0.5%	0.1%	0.5%	0.0%	0.0%	2.4%	1.4%	1.1%	100.0%	
Road 9	9	50	11.3	N	1400-1500	1659	35.6%	14.4%	0.0%	16.8%	6.0%	5.7%	11.2%	0.0%	0.1%	0.6%	0.1%	0.1%	0.1%	0.0%	0.0%	2.4%	1.3%	3.4%	100.0%	
Road 9	9	50	10.0	N	1500-1600	1705	35.2%	14.1%	0.0%	19.4%	7.0%	4.9%	9.7%	0.0%	0.1%	0.6%	0.7%	0.5%	1.1%	0.0%	0.0%	2.3%	1.3%	2.9%	100.0%	
Road 9	9	50	10.0	N	1600-1700	1762	38.3%	13.3%	0.0%	15.7%	5.6%	4.9%	9.7%	0.0%	0.1%	0.9%	1.1%	0.8%	1.7%	0.0%	0.0%	2.7%	1.8%	2.9%	100.0%	
Road 9	9	50	10.0	N	1700-1800	1913	41.8%	14.0%	0.0%	14.8%	3.8%	3.8%	9.0%	0.0%	0.0%	0.9%	0.8%	0.8%	2.0%	0.0%	0.0%	2.8%	1.8%	2.9%	100.0%	
Road 9	9	50	10.0	N	1800-1900	1974	57.0%	13.4%	0.1%	6.6%	3.5%	2.0%	3.9%	0.0%	0.0%	0.1%	1.0%	0.7%	1.5%	0.0%	0.0%	3.0%	2.7%	1.4%	100.0%	
Road 9	9	50	25.9	N	1900-2000	1536	57.0%	17.9%	0.1%	7.5%	2.7%	1.8%	3.5%	0.0%	0.0%	0.1%	0.9%	0.6%	1.3%	0.0%	0.0%	3.5%	2.1%	1.0%	100.0%	
Road 9	9	50	30.0	N	2000-2100	1188	52.4%	22.2%	0.1%	11.3%	3.4%	3.4%	6.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	3.5%	2.1%	1.1%	100.0%	
Road 9	9	50	31.0	N	2100-2200	1197	53.3%	22.1%	0.1%	8.0%	2.9%	1.9%	3.8%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.0%	3.3%	2.4%	1.1%	100.0%	
Road 9	9	50	31.5	N	2200-2300	1153	53.4%	24.1%	0.1%	6.3%	2.3%	2.0%	3.9%	0.0%	0.0%	0.1%	0.1%	0.3%	0.2%	0.5%	0.0%	3.6%	2.1%	1.2%	100.0%	
Road 9	9	50	34.0	N	2300-0000	830	52.4%	20.4%	0.0%	10.0%	3.5%	3.5%	6.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	3.9%	2.3%	1.0%	100.0%	
Road 10	10	50	48.3	Y	0100-0200	58	33.6%	15.1%	0.1%	7.6%	1.7%	2.3%	4.4%	0.4%	1.2%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	1.7%	2.8%	0.0%	100.0%	
Road 10	10	50	48.6	Y	0200-0300	44	28.3%	12.7%	0.1%	7.2%	2.6%	2.3%	4.4%	0.4%	1.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.0%	1.6%	38.8%	0.0%	100.0%
Road 10	10	50	48.8	Y	0300-0400	37	24.2%	10.8%	0.1%	6.8%	2.4%	2.1%	4.2%	0.0%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	0.0%	1.5%	45.8%	0.0%	100.0%	
Road 10	10	50	48.0	N	0400-0500	21	21.0%	9.3%	0.1%	6.2%	2.1%	2.0%	4.0%	0.0%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	0.0%	1.0%	58.9%	0.0%	100.0%	
Road 10	10	50	48.8	Y	0600-0600	35	21.4%	9.5%	0.1%	7.3%	2.6%	2.3%	4.5%	0.8%	0.0%	0.2%	0.4%	0.2%	0.5%	0.0%	0.0%	1.7%	46.6%	0.0%	100.0%	
Road 10	10	50	48.5	Y	0500-0600	49	25.9%	11.4%	0.1%	8.8%	3.5%	3.0%	5.9%	1.0%	0.0%	0.3%	0.5%	0.3%	0.7%	0.0%	0.0%	2.2%	35.4%	0.0%	100.0%	
Road 10	10	50	47.0	Y	0600-0700	30	30.6%	10.4%	0.1%	12.4%	4.7%	4.7%	6.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	2.4%	34.1%	0.0%	100.0%	
Road 10	10	50	43.5	Y	0700-0800	209	25.2%	11.0%	0.1%	11.1%	4.0%	3.5%	6.9%	1.1%	0.0%	0.4%	0.6%	0.4%	0.9%	0.0%	0.0%	2.6%	32.2%	0.0%	100.0%	
Road 10	10	50	42.9	Y	0800-0900	233	29.2%	9.3%	0.1%	12.6%	4.5%	3.5%	6.9%	0.9%	0.1%	0.4%	0.6%	0.4%	0.9%	0.0%	0.0%	0.7%	17.0%	26.0%	100.0%	
Road 10	10	50	43.0	N	0900-1000	233	29.2%	9.3%	0.1%	15.5%	4.5%	4.2%	6.9%	0.0%	0.0%	0.4%	0.6%	0.4%	0.9%	0.0%	0.0%	0.7%	17.0%	26.0%	100.0%	
Road 10	10	50	43.3	Y	1000-1100	206	20.4%	7.9%	0.0%	15.3%	5.5%	4.9%	9.6%	0.0%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	0.0%	0.6%	33.4%	0.0%	100.0%	
Road 10	10	50	43.5	Y	1100-1200	198	20.0%	8.3%	0.0%	15.0%	5.4%	4.7%	9.2%	0.0%	0.0%	0.4%	0.2%	0.1%	0.3%	0.0%	0.0%	0.6%	34.6%	0.0%	100.0%	
Road 10	10	50	45.0	N	1200-1300	113	14.4%	0.0%	10.2%	10.2%	10.2%	10.2%	10.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 10	10	50	45.5	Y	1300-1400	127	13.8%	5.9%	0.1%	11.3%	4.0%	3.5%	6.9%	0.0%	0.0%	0.2%	0.2%	0.1%	0.3%	0.0%	0.0%	0.4%	53.9%	0.0%	100.0%	
Road 10	10	50	45.4	Y	1400-1500	124	14.8%	5.9%	0.1%	10.5%	3.8%	3.6%	7.0%	0.0%	0.0%	0.3%	0.2%	0.1%	0.4%	0.0%	0.0%	0.5%	53.0%	0.0%	100.0%	
Road 10	10	50	45.4	Y	1500-1600	126	14.5%	5.8%	0.1%	12.2%	4.4%	3.1%	6.1%	0.0%	0.0%	0.3%	0.2%	0.2%	0.5%	0.0%	0.0%	0.5%	52.0%	0.0%	100.0%	
Road 10	10	50	45.0	Y	1600-1700	127	16.3%	6.8%	0.1%	10.2%	3.2%	3.2%	6.9%	0.0%	0.0%	0.3%	0.2%	0.2%	0.5%	0.0%	0.0%	0.5%	52.0%	0.0%	100.0%	
Road 10	10	50	45.4	Y	1700-1800	130	19.9%	6.2%	0.1%	10.1%	3.6%	2.3%	4.5%	0.0%	0.0%	0.3%	0.3%	0.4%	0.2%	0.5%	0.0%	0.7%	50.1%	0.0%	100.0%	
Road 10	10	50	45.6	Y	1800-1900	128	26.8%	6.3%	0.1%	6.9%	2.5%	1.4%	2.8%	0.0%	0.0%	0.5%	0.5%	0.3%	0.7%	0.0%	0.0%	1.3%	50.4%	0.0%	100.0%	
Road 10	10	50	48.0	Y	1900-2000	66	40.6%	6.7%	0.0%	10.0%	3.6%	3.6%	6.0%	0.0%	0.0%	0.2%	0.1%	0.1%	0.1%	0.0%	0.0%	1.5%	49.1%	0.0%	100.0%	
Road 10	10	50	48.4	Y	2000-2100	55	34.8%	14.8%	0.1%	8.1%	2.9%	1.8%	3.5%	0.0%	0.0%	0.1%	0.5%	0.3%	0.7%	0.0%	0.0%	1.4%	31.0%	0.0%	100.0%	
Road 10	10	50	48.4	Y	2100-2200	55	35.3%	14.6%	0.1%	8.2%	2.9%	1.9%	3.7%	0.0%	0.0%	0.0%	0.2%	0.2%	0.4%	0.0%	0.0%	1.6%	30.9%	0.0%	100.0%	
Road 10	10	50	48.4	Y	2300-0000	55	35.3%	14.6%	0.1%	8.2%	2.9%	1.9%	3.7%	0.0%	0.0%	0.0%	0.2%	0.2%	0.4%	0.0%	0.0%	1.6%	30.9%	0.0%	100.0%	
Road 10	10	50	48.6	Y	0000-0100	55	35.3%	14.6%	0.1%	8.2%	2.9%	1.9%	3.7%	0.0%	0.0%	0.0%	0.1%	0.2%	0.2%	0.4%	0.0%	0.0%	1.4%	36.2%	0.0%	100.0%

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters for AERMOD (Year 2033)																									
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Road/Buss (Approx V/h)	Hour	Total Vehicles (Vehicles)	Vehicle Categories																Total		
							01 - Private Car	02 - Taxi	03 - Light Goods Vehicles <3.5t	04 - Light Goods Vehicles 3.5-5t	05 - Light Goods Vehicles >5t	06 - Medium Goods Vehicles >5t	07 - Medium Goods Vehicles >5t	08 - Public Light Buses	09 - Private <3.5t	10 - Private >3.5t	11 - Non-franchised Bus<4t	12 - Non-franchised Bus 4t-15t	13 - Non-franchised Bus 15t-24t	14 - Franchise of Bus Single Deck	15 - Franchise of Bus Double Deck	16 - Motorcyclist		17 - Heavy Goods Vehicles >4t	18 - Non-franchised Bus >4t
Road 13	13	50	27.6	N 0000-0100	20	4.7%	2.1%	0.0%	0.0%	0.3%	0.3%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	98.8%	100%		
Road 13	13	50	27.6	N 0100-0200	20	3.1%	1.4%	0.0%	0.7%	0.2%	0.2%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.2%	93.3%	100%	
Road 13	13	50	27.6	N 0200-0300	19	1.2%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100%	100%	
Road 13	13	50	27.6	N 0300-0400	19	1.8%	0.8%	0.0%	0.5%	0.2%	0.1%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	98.2%	100%	
Road 13	13	50	27.5	N 0400-0500	19	1.9%	0.8%	0.0%	0.6%	0.2%	0.2%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	98.7%	100%	
Road 13	13	50	27.6	N 0500-0600	20	1.4%	1.0%	0.0%	0.5%	0.1%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	98.9%	100%	
Road 13	13	50	27.5	N 0600-0700	22	6.0%	2.6%	0.0%	2.1%	0.8%	0.7%	1.3%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.6%	85.5%	100%		
Road 13	13	50	24.1	N 0700-0800	77	3.3%	1.4%	0.3%	1.3%	0.5%	0.4%	0.8%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.3%	91.7%	100%		
Road 13	13	50	24.1	N 0800-0900	78	3.2%	1.6%	0.3%	1.6%	0.5%	0.5%	0.9%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.2%	91.8%	100%	
Road 13	13	50	24.1	N 0900-1000	78	3.2%	1.2%	0.0%	1.8%	0.7%	0.5%	1.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.1%	91.3%	100%	
Road 13	13	50	24.1	N 1000-1100	77	2.6%	1.0%	0.0%	1.7%	0.8%	0.5%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	92.1%	100%		
Road 13	13	50	24.1	N 1100-1200	78	2.5%	1.6%	0.0%	1.6%	0.9%	0.6%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	92.0%	100%		
Road 13	13	50	24.1	N 1200-1300	77	2.8%	1.1%	0.0%	1.5%	0.5%	0.5%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	92.1%	100%	
Road 13	13	50	24.1	N 1300-1400	77	2.8%	1.1%	0.0%	1.8%	0.7%	0.6%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	91.7%	100%	
Road 13	13	50	24.1	N 1400-1500	78	3.0%	1.2%	0.0%	1.5%	0.5%	0.5%	1.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.1%	91.1%	100%	
Road 13	13	50	24.1	N 1500-1600	78	3.4%	1.2%	0.1%	1.7%	0.6%	0.5%	1.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.2%	91.0%	100%		
Road 13	13	50	24.1	N 1600-1700	78	3.4%	1.2%	0.1%	1.7%	0.6%	0.5%	1.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.2%	91.0%	100%		
Road 13	13	50	24.1	N 1700-1800	78	3.4%	1.2%	0.1%	1.7%	0.6%	0.5%	1.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.2%	91.0%	100%		
Road 13	13	50	24.1	N 1800-1900	79	5.6%	1.3%	0.0%	1.2%	0.4%	0.2%	0.5%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.3%	90.2%	100%		
Road 13	13	50	24.1	N 1900-2000	24	13.9%	4.4%	0.0%	2.3%	0.8%	0.5%	1.1%	0.0%	0.0%	0.0%	0.2%	0.1%	0.3%	0.0%	0.0%	0.5%	75.7%	100%		
Road 13	13	50	27.4	N 2000-2100	23	10.6%	4.5%	0.0%	2.0%	0.7%	0.4%	0.9%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.4%	80.0%	100%		
Road 13	13	50	27.4	N 2100-2200	23	10.7%	4.4%	0.0%	2.0%	0.7%	0.4%	0.9%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.4%	79.9%	100%		
Road 13	13	50	27.5	N 2200-2300	23	10.4%	4.7%	0.0%	1.5%	0.5%	0.5%	1.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.4%	80.7%	100%		
Road 13	13	50	27.4	N 2300-0000	22	8.1%	3.6%	0.0%	1.3%	0.5%	0.4%	0.9%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.4%	84.7%	100%		
Road 14	14	44	44.4	N 0000-0100	28	21.5%	6.0%	3.1%	2.1%	1.0%	1.3%	2.1%	0.0%	0.0%	0.2%	0.1%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%	100%	100%	
Road 14	14	46.0	46.0	N 0100-0200	35.1	51.2%	22.9%	0.1%	5.3%	1.9%	1.7%	3.3%	0.1%	0.0%	0.3%	0.6%	0.4%	0.8%	0.0%	2.4%	2.9%	6.1%	100%	100%	
Road 14	14	48.0	48.0	N 0200-0300	36.2	49.1%	21.9%	0.1%	5.7%	2.0%	1.8%	3.5%	0.1%	0.0%	0.3%	0.8%	0.4%	0.9%	0.0%	2.3%	3.1%	7.9%	100%	100%	
Road 14	14	47.5	47.5	N 0300-0400	21.2	42.7%	19.9%	0.2%	4.2%	1.5%	1.3%	2.5%	0.1%	0.0%	0.2%	0.7%	0.4%	0.8%	0.0%	1.0%	1.2%	5.2%	100%	100%	
Road 14	14	47.2	47.2	N 0400-0500	23.1	46.5%	20.5%	0.1%	6.5%	2.3%	2.0%	4.0%	0.1%	0.1%	0.4%	0.8%	0.5%	1.2%	0.0%	2.3%	3.6%	9.0%	100%	100%	
Road 14	14	45.5	45.5	N 0500-0600	38.9	47.0%	20.7%	0.1%	7.2%	2.6%	2.3%	4.4%	0.1%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	2.3%	4.0%	9.9%	100%	100%	
Road 14	14	40.0	40.0	N 0600-0700	41.6	41.8%	21.1%	0.0%	8.1%	2.7%	2.4%	4.6%	0.1%	0.1%	0.6%	1.2%	0.8%	1.5%	0.0%	4.4%	5.9%	12.3%	100%	100%	
Road 14	14	34.4	34.4	N 0700-0800	49.01	45.0%	16.6%	0.1%	8.2%	2.9%	2.6%	5.0%	0.1%	0.1%	0.7%	1.0%	0.7%	1.6%	0.0%	2.3%	4.6%	5.5%	100%	100%	
Road 14	14	32.8	32.8	N 0800-0900	19.52	50.3%	16.1%	0.1%	8.9%	3.2%	2.5%	4.9%	0.1%	0.1%	0.7%	1.0%	0.7%	1.5%	0.0%	2.9%	4.9%	6.9%	100%	100%	
Road 14	14	34.2	34.2	N 0900-1000	46.68	54.5%	18.2%	0.4%	12.8%	4.4%	3.1%	6.1%	0.1%	0.1%	0.4%	0.7%	1.1%	1.0%	0.0%	4.0%	7.0%	11.0%	100%	100%	
Road 14	14	35.8	35.8	N 1000-1100	13.63	41.3%	16.0%	0.1%	12.8%	4.6%	4.1%	8.0%	0.1%	0.1%	0.4%	0.7%	0.5%	1.0%	0.0%	2.0%	3.5%	6.9%	100%	100%	
Road 14	14	35.3	35.3	N 1100-1200	1488	41.1%	17.0%	0.1%	12.7%	4.6%	4.0%	7.8%	0.1%	0.1%	0.4%	0.7%	0.4%	0.3%	0.6%	0.0%	2.2%	3.1%	7.0%	100%	100%
Road 14	14	33.0	33.0	N 1200-1300	1612	35.0%	16.1%	0.1%	12.8%	4.6%	4.1%	8.0%	0.1%	0.1%	0.4%	0.7%	0.4%	0.3%	0.6%	0.0%	2.2%	3.1%	7.0%	100%	100%
Road 14	14	33.0	33.0	N 1300-1400	1662	31.1%	12.7%	0.2%	18.3%	6.6%	5.7%	11.1%	0.0%	0.0%	0.1%	0.5%	0.5%	0.3%	0.7%	0.0%	2.2%	1.0%	7.1%	100%	100%
Road 14	14	32.5	32.5	N 1400-1500	1719	33.8%	13.7%	0.2%	16.5%	6.5%	5.6%	11.0%	0.0%	0.0%	0.1%	0.6%	0.7%	0.5%	1.0%	0.0%	2.3%	1.3%	6.9%	100%	100%
Road 14	14	32.3	32.3	N 1500-1600	1856	33.5%	13.4%	0.2%	19.0%	6.6%	4.8%	9.5%	0.0%	0.0%	0.1%	0.6%	0.7%	0.5%	1.0%	0.0%	2.2%	1.2%	6.4%	100%	100%
Road 14	14	32.0	32.0	N 1600-1700	15.82	36.7%	12.7%	0.2%	15.8%	6.5%	5.6%	9.5%	0.0%	0.0%	0.1%	0.6%	0.7%	0.5%	1.0%	0.0%	2.2%	1.0%	6.4%	100%	100%
Road 14	14	31.7	31.7	N 1700-1800	2017	42.5%	13.3%	0.2%	14.5%	5.2%	3.4%	6.5%	0.0%	0.0%	0.0%	0.6%	0.7%	0.5%	1.1%	0.0%	2.7%	3.7%	5.2%	100%	100%
Road 14	14	32.1	32.1	N 1800-1900	2066	54.9%	12.9%	0.1%	9.6%	3.4%	2.6%	3.9%	0.0%	0.0%	0.1%	1.0%	0.7%	1.5%	0.0%	2.9%	2.6%	4.5%	100%	100%	
Road 14	14	35	35	N 1900-2000	17.77	54.1%	7.67%	0.1%	7.67%	1.6%	1.3%	3.0%	0.0%	0.0%	0.1%	0.7%	0.5%	1.0%	0.0%	2.1%	2.1%	2.1%	100%	100%	
Road 14	14	37.8	37.8	N 2000-2100	1231	51.4%	21.8%	0.1%	8.0%	2.9%	1.8%	3.5%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	3.6%	2.1%	2.4%	100%	100%	
Road 14	14	37.9	37.9	N 2100-2200	1220	52.3%	21.6%	0.1%	7.2%	2.9%	1.9%	3.7%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	3.2%	2.4%	2.5%	100%	100%	
Road 14	14	38.2	38.2	N 2200-2300	1.684	50.4%	21.6%	0.1%	6.4%	2.4%	2.1%	4.0%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	2.0%	2.0%	2.0%	100%	100%	
Road 14	14	39.9	39.9	N 2300-0000	898	50.8%	22.9%	0.1%	7.0%	2.5%	2.2%	4.4%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	3.4%	2.2%	3.2%	100%	100%	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters for AERMOD (Year 2033)																									
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Road/Brush Area (Vpn)/N	Hour	Total Vehicles (Vehicles)	Vehicle Type Breakdown																Total		
							01 - Private Car	02 - Taxi	03 - Light Goods Vehicles >3.5 T	04 - Light Goods Vehicles >3.5 T	05 - Light Goods Vehicles >3.5 T	06 - Medium Goods Vehicles >6.5 T	07 - Medium Goods Vehicles >6.5 T	08 - Public Buses	09 - Private <3.5 T	10 - Private >3.5 T	11 - Non-franchised Bus <6.5 T	12 - Non-franchised Bus 1st	13 - Non-franchised Bus 2nd	14 - Franchise of Bus Single	15 - Franchise of Bus Double	16 - Motorcyclist		17 - Heavy Goods Vehicles >4T	18 - Non-franchised Bus >4T
Road 17	17	70	66.7	N	0000-0100	441	49.5%	22.2%	0.1%	8.3%	3.0%	2.0%	5.2%	0.1%	0.0%	0.2%	0.5%	0.3%	0.7%	0.0%	2.7%	2.5%	2.2%	0.0%	100.0%
Road 17	17	70	67.8	N	0100-0200	292	47.8%	21.4%	0.1%	8.3%	3.2%	2.8%	5.6%	0.1%	0.0%	0.2%	0.5%	0.4%	0.0%	2.6%	2.7%	2.7%	0.0%	100.0%	
Road 17	17	68.0	66.0	N	0200-0300	217	45.0%	20.7%	0.2%	8.3%	3.0%	2.0%	5.2%	0.1%	0.0%	0.2%	0.5%	0.4%	0.0%	2.5%	2.6%	2.6%	0.0%	100.0%	
Road 17	17	68.0	66.0	N	0300-0400	174	44.6%	19.8%	0.1%	10.3%	3.1%	3.2%	6.4%	0.1%	0.0%	0.3%	0.6%	0.4%	1.0%	2.0%	2.5%	3.1%	3.8%	0.0%	100.0%
Road 17	17	68.5	68.5	N	0400-0500	193	43.3%	18.1%	0.1%	11.0%	3.9%	3.4%	6.8%	0.1%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	2.4%	3.4%	3.7%	0.0%	100.0%
Road 17	17	67.0	67.0	N	0500-0600	336	42.3%	17.8%	0.2%	14.1%	4.3%	7.2%	11.7%	0.2%	0.1%	0.5%	0.8%	1.2%	0.0%	3.1%	3.9%	4.0%	0.0%	100.0%	
Road 17	17	64.2	64.2	N	0600-0700	724	41.2%	18.0%	0.1%	12.5%	4.5%	3.9%	7.7%	0.1%	0.1%	0.5%	0.8%	1.3%	2.0%	2.4%	3.9%	2.5%	0.0%	100.0%	
Road 17	17	39.5	N	0700-0800	1488	39.7%	17.3%	0.1%	13.0%	4.7%	4.1%	8.0%	0.1%	0.1%	0.6%	0.9%	0.6%	1.4%	0.0%	2.3%	4.1%	3.0%	0.0%	100.0%	
Road 17	17	25.0	N	0800-0900	1714	41.6%	18.1%	0.1%	14.1%	4.6%	4.1%	8.0%	0.1%	0.1%	0.6%	0.9%	0.6%	1.4%	0.0%	2.3%	4.0%	2.8%	0.0%	100.0%	
Road 17	17	32.1	32.1	N	0900-1000	1543	37.1%	13.5%	0.2%	14.8%	6.6%	5.0%	9.8%	0.1%	0.0%	0.4%	0.6%	0.4%	1.0%	0.0%	2.0%	4.1%	3.5%	0.0%	100.0%
Road 17	17	39.1	N	1000-1100	1388	33.8%	15.1%	0.2%	19.0%	6.8%	6.6%	11.8%	0.1%	0.0%	0.4%	0.6%	0.4%	0.8%	0.0%	1.9%	1.0%	4.1%	0.0%	100.0%	
Road 17	17	43.0	43.0	N	1100-1200	1311	33.9%	14.8%	0.2%	18.1%	6.8%	11.1%	0.1%	0.0%	0.4%	0.6%	0.4%	0.8%	0.0%	1.9%	1.0%	4.0%	0.0%	100.0%	
Road 17	17	42.1	42.1	N	1200-1300	1270	27.7%	10.2%	0.2%	21.2%	7.6%	7.8%	14.9%	0.0%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	2.2%	0.8%	5.0%	0.0%	100.0%
Road 17	17	38.1	N	1300-1400	1352	25.6%	9.9%	0.3%	24.1%	8.7%	7.5%	14.7%	0.0%	0.0%	0.4%	0.4%	0.3%	0.6%	0.0%	2.0%	0.8%	4.9%	0.0%	100.0%	
Road 17	17	33.0	33.0	N	1400-1500	1396	23.6%	9.0%	0.3%	24.7%	8.7%	7.4%	14.7%	0.0%	0.0%	0.4%	0.4%	0.3%	0.6%	0.0%	2.0%	0.8%	4.9%	0.0%	100.0%
Road 17	17	31.9	N	1500-1600	1440	26.2%	10.5%	0.3%	25.4%	9.1%	6.4%	12.6%	0.0%	0.1%	0.5%	0.5%	0.4%	0.8%	0.0%	2.0%	0.9%	4.3%	0.0%	100.0%	
Road 17	17	31.8	N	1600-1700	1447	25.9%	10.2%	0.2%	21.2%	7.6%	6.6%	13.0%	0.0%	0.1%	0.7%	0.9%	0.6%	1.3%	0.0%	2.4%	1.4%	4.4%	0.0%	100.0%	
Road 17	17	33.0	33.0	N	1700-1800	1509	25.4%	10.6%	0.3%	20.6%	8.4%	7.2%	13.4%	0.0%	0.0%	0.4%	0.4%	0.3%	0.6%	0.0%	2.0%	0.8%	4.3%	0.0%	100.0%
Road 17	17	42.8	N	1800-1900	1466	48.9%	11.5%	0.2%	14.5%	5.2%	3.0%	6.0%	0.0%	0.0%	0.1%	0.9%	0.6%	1.3%	0.0%	3.0%	2.3%	2.5%	0.0%	100.0%	
Road 17	17	56.3	N	1900-2000	1094	50.3%	15.7%	0.1%	11.8%	4.2%	2.8%	5.5%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	3.6%	1.9%	1.8%	0.0%	100.0%	
Road 17	17	63.0	N	2000-2100	896	46.1%	18.6%	0.1%	12.2%	4.4%	2.7%	5.3%	0.0%	0.0%	0.1%	0.6%	0.4%	1.0%	0.0%	3.8%	1.8%	1.8%	0.0%	100.0%	
Road 17	17	63.4	N	2100-2200	858	46.7%	19.3%	0.1%	12.4%	4.5%	2.9%	5.6%	0.0%	0.0%	0.1%	0.3%	0.5%	0.3%	0.2%	1.9%	0.8%	0.7%	0.0%	100.0%	
Road 17	17	63.7	N	2200-2300	826	47.4%	21.4%	0.1%	9.8%	3.5%	3.1%	6.1%	0.0%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	3.7%	1.8%	2.0%	0.0%	100.0%
Road 17	17	65.1	N	2300-0000	623	45.6%	20.5%	0.1%	10.7%	3.8%	3.4%	6.7%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	3.6%	2.0%	2.3%	0.0%	100.0%	
Road 18	18	68.0	68.0	N	0000-0100	417	47.0%	24.4%	0.2%	5.4%	2.0%	1.4%	3.2%	0.2%	0.0%	0.2%	0.5%	0.3%	0.7%	0.0%	2.4%	2.1%	1.9%	0.0%	100.0%
Road 18	18	69.0	69.0	N	0100-0200	274	52.6%	22.9%	0.1%	5.8%	2.1%	1.8%	3.6%	0.2%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	2.9%	3.0%	2.3%	0.0%	100.0%
Road 18	18	69.3	N	0200-0300	262	51.2%	23.8%	0.1%	6.3%	2.3%	2.0%	3.9%	0.2%	0.0%	0.3%	0.8%	0.4%	1.0%	0.0%	2.8%	3.2%	2.8%	0.0%	100.0%	
Road 18	18	69.4	N	0300-0400	161	49.8%	16.5%	0.2%	6.8%	2.2%	2.4%	4.2%	0.2%	0.0%	0.1%	1.2%	0.5%	1.0%	0.0%	1.8%	2.0%	1.8%	0.0%	100.0%	
Road 18	18	69.4	N	0400-0500	177	48.7%	21.5%	0.1%	7.3%	2.6%	2.3%	4.5%	0.2%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	2.7%	3.8%	3.2%	0.0%	100.0%	
Road 18	18	68.9	N	0500-0600	306	48.0%	21.1%	0.1%	7.8%	2.8%	2.5%	4.8%	0.2%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	2.7%	4.1%	2.5%	0.0%	100.0%	
Road 18	18	67.0	67.0	N	0600-0700	654	47.1%	20.6%	0.2%	8.4%	3.1%	2.8%	5.6%	0.2%	0.0%	0.4%	0.7%	0.5%	1.1%	0.0%	4.4%	3.9%	3.2%	0.0%	100.0%
Road 18	18	65.1	N	0700-0800	1335	45.6%	16.9%	0.1%	8.9%	3.2%	2.8%	5.5%	0.2%	0.1%	0.7%	1.0%	0.7%	1.6%	0.0%	2.7%	4.7%	2.5%	0.0%	100.0%	
Road 18	18	64.4	N	0800-0900	1548	50.9%	16.3%	0.1%	9.6%	3.5%	2.7%	5.3%	0.1%	0.1%	0.7%	1.0%	0.7%	1.5%	0.0%	2.4%	3.0%	2.3%	0.0%	100.0%	
Road 18	18	65.0	N	0900-1000	1316	47.6%	17.1%	0.1%	10.6%	3.8%	3.1%	5.8%	0.1%	0.1%	0.8%	1.2%	0.4%	1.1%	0.0%	2.1%	3.0%	2.7%	0.0%	100.0%	
Road 18	18	65.5	N	1000-1100	1158	41.8%	16.2%	0.1%	13.8%	5.0%	4.4%	8.6%	0.2%	0.1%	0.5%	0.7%	0.5%	1.0%	0.0%	2.3%	1.3%	3.5%	0.0%	100.0%	
Road 18	18	65.8	N	1100-1200	1096	41.7%	17.2%	0.1%	13.8%	4.9%	4.3%	8.5%	0.2%	0.1%	0.5%	0.4%	0.3%	0.6%	0.0%	2.4%	1.2%	3.5%	0.0%	100.0%	
Road 18	18	65.0	N	1200-1300	1180	36.4%	11.5%	0.1%	15.8%	5.7%	5.0%	9.6%	0.1%	0.0%	0.1%	0.5%	0.1%	0.3%	0.0%	1.1%	0.5%	1.1%	0.0%	100.0%	
Road 18	18	64.9	N	1300-1400	1242	34.4%	13.3%	0.2%	18.5%	6.6%	5.7%	11.2%	0.0%	0.0%	0.1%	0.5%	0.3%	0.7%	0.0%	2.9%	1.0%	4.1%	0.0%	100.0%	
Road 18	18	64.7	N	1400-1500	1302	35.1%	14.2%	0.2%	16.7%	6.0%	5.6%	11.1%	0.0%	0.1%	0.6%	0.7%	0.5%	1.1%	0.0%	2.9%	1.3%	4.0%	0.0%	100.0%	
Road 18	18	64.6	N	1500-1600	1337	34.7%	13.9%	0.2%	19.2%	6.9%	4.9%	9.6%	0.0%	0.1%	0.6%	0.7%	0.5%	1.1%	0.0%	2.8%	1.3%	3.5%	0.0%	100.0%	
Road 18	18	64.0	N	1600-1700	3883	33.8%	31.7%	0.2%	15.8%	6.5%	15.8%	10.8%	0.0%	0.0%	0.1%	0.8%	0.9%	1.1%	0.0%	1.5%	0.8%	1.5%	0.0%	100.0%	
Road 18	18	64.3	N	1700-1800	1504	43.8%	13.7%	0.2%	14.5%	5.2%	3.9%	6.5%	0.0%	0.0%	0.1%	0.8%	0.8%	1.2%	0.0%	3.4%	3.8%	2.6%	0.0%	100.0%	
Road 18	18	66.4	N	1800-1900	1548	56.3%	13.2%	0.1%	9.5%	3.4%	2.6%	3.9%	0.0%	0.0%	0.1%	0.7%	1.5%	0.0%	0.3%	2.7%	2.1%	1.9%	0.0%	100.0%	
Road 18	18	65.0	N	1900-2000	1701	49.4%	17.0%	0.1%	7.4%	3.1%	2.4%	4.0%	0.1%	0.1%	0.7%	1.4%	0.1%	0.7%	0.0%	2.1%	2.7%	2.1%	0.0%	100.0%	
Road 18	18	64.7	N	2000-2100	938	51.8%	22.0%	0.1%	7.9%	2.8%	1.7%	3.4%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	4.5%	2.1%	1.3%	0.0%	100.0%	
Road 18	18	66.7	N	2100-2200	936	52.8%	21.8%	0.1%	8.0%	2.9%	1.8%	3.6%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	4.0%	2.4%	1.3%	0.0%	100.0%	
Road 18	18	66.9	N	2200-2300	627	48.2%	22.6%	0.2%	8.0%	2.9%	2.1%	3.3%	0.0%	0.0%	0.1%	0.2%	0.2%	0.3%	0.0%	2.0%	1.4%	2.0%	0.0%	100.0%	
Road 18	18	67.6	N	2300-0000	681	51.4%	23.2%	0.1%	6.9%	2.5%	2.2%	4.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	4.2%	2.3%	1.7%	0.0%	100.0%	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters For AERMOD (Year 2043)																																
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Road/Buss (Appy) (N/A)	Hour	Total Vehicles (Veh/hr)	01 - Private Car	02 - Taxi	03 - Light Goods Vehicles >2t	04 - Light Goods Vehicles 2.5-3t	05 - Light Goods Vehicles 3-5t	06 - Medium Goods Vehicles >16t	07 - Medium Goods Vehicles >16t	08 - Public Buses	09 - Private Light <=3.5t	10 - Private Light >3.5t	11 - Non-franchised Bus<=4t	12 - Non-franchised Bus 1st 1st	13 - Non-franchised Bus 2nd 2nd	14 - Franchise of Bus Single	15 - Franchise of Bus Double	16 - Motorcyclist	17 - Heavy Goods Vehicles >2t	18 - Non-franchised Bus >2t	Total							
							PC	Taxi	LGV1	LGV4	LGV6	HGV7	HGV8	PUB	PV4	PV5	NFB8	NFB7	NFB8	FBSB	FBSB	FBSB	FBSB	FBSB	FBSB							
Road 15	15	50	47.4	N	0000-0300	111	50.4%	22.6%	0.0%	3.5%	1.2%	1.1%	2.2%	0.0%	0.0%	0.2%	0.5%	0.3%	0.7%	0.0%	0.0%	2.5%	13.9%	0.0%	100.0%							
Road 15	15	50	48.0	N	0100-0300	77	46.2%	20.7%	0.0%	3.5%	1.3%	1.1%	2.2%	0.0%	0.0%	0.2%	0.5%	0.3%	0.7%	0.0%	0.0%	2.6%	14.0%	0.0%	100.0%							
Road 15	15	48	48.0	N	0400-0300	101	48.8%	23.2%	0.0%	3.5%	1.2%	1.1%	2.2%	0.0%	0.0%	0.2%	0.5%	0.3%	0.7%	0.0%	0.0%	2.7%	14.1%	0.0%	100.0%							
Road 15	15	48.6	N	0300-0400	51	39.0%	17.3%	0.0%	3.7%	1.3%	1.2%	1.2%	2.3%	0.0%	0.0%	0.3%	0.3%	0.6%	0.4%	0.9%	0.0%	0.7%	2.7%	29.5%	0.0%	100.0%						
Road 15	15	48	48.1	N	0400-0500	55	39.3%	17.4%	0.0%	4.1%	1.5%	1.3%	2.5%	0.0%	0.0%	0.4%	0.6%	0.4%	1.0%	0.0%	0.7%	3.1%	27.7%	0.0%	100.0%							
Road 15	15	47.5	N	0500-0600	49	34.2%	15.5%	0.0%	4.3%	1.5%	1.3%	1.3%	3.0%	0.0%	0.0%	0.5%	0.5%	0.8%	1.3%	0.0%	0.8%	3.7%	34.9%	0.0%	100.0%							
Road 15	15	46.1	N	0600-0700	163	47.0%	20.6%	0.1%	5.8%	2.1%	1.8%	3.6%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	0.9%	4.4%	10.0%	0.0%	0.0%	100.0%							
Road 15	15	40.9	N	0700-0800	356	42.5%	18.5%	0.1%	5.7%	2.0%	1.8%	3.5%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	0.8%	4.3%	16.9%	0.0%	0.0%	100.0%							
Road 15	15	39.1	N	0800-0900	305	41.3%	18.0%	0.1%	6.3%	2.0%	1.8%	3.5%	0.0%	0.1%	0.6%	1.0%	0.7%	1.5%	0.0%	0.8%	4.3%	16.9%	0.0%	0.0%	100.0%							
Road 15	15	40.9	N	0900-1000	344	42.8%	15.5%	0.1%	6.8%	3.1%	2.3%	4.6%	0.0%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	0.7%	1.7%	17.7%	0.0%	0.0%	100.0%							
Road 15	15	41.6	N	1000-1200	306	39.4%	15.5%	0.1%	9.0%	3.2%	2.9%	5.6%	0.0%	0.1%	0.4%	0.6%	0.4%	1.0%	0.0%	0.7%	1.2%	20.0%	0.0%	0.0%	100.0%							
Road 15	15	42.2	N	1200-1300	412	39.0%	15.0%	0.1%	8.9%	3.2%	2.9%	5.6%	0.0%	0.1%	0.4%	0.6%	0.4%	1.0%	0.0%	0.7%	1.2%	20.0%	0.0%	0.0%	100.0%							
Road 15	15	38.9	N	1200-1300	422	31.1%	12.0%	0.2%	15.2%	5.5%	5.0%	10.7%	0.0%	0.1%	0.5%	0.5%	0.4%	0.8%	0.0%	0.5%	0.9%	16.3%	0.0%	0.0%	100.0%							
Road 15	15	38.6	N	1300-1400	440	29.3%	11.3%	0.2%	17.7%	6.3%	5.5%	10.8%	0.0%	0.1%	0.4%	0.4%	0.3%	0.6%	0.0%	0.5%	0.9%	15.7%	0.0%	0.0%	100.0%							
Road 15	15	38	38.1	N	1400-1500	417	28.3%	16.1%	0.2%	18.1%	6.3%	10.7%	0.0%	0.1%	0.4%	0.4%	0.3%	0.6%	0.0%	0.5%	0.9%	15.7%	0.0%	0.0%	100.0%							
Road 15	15	38.3	N	1500-1600	469	29.9%	12.0%	0.2%	18.6%	6.7%	4.7%	9.3%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	0.5%	1.1%	14.5%	0.0%	0.0%	100.0%							
Road 15	15	38.2	N	1600-1700	479	31.1%	11.4%	0.2%	15.3%	5.5%	4.8%	9.4%	0.0%	0.1%	0.8%	1.0%	0.7%	1.5%	0.0%	0.5%	1.6%	14.3%	0.0%	0.0%	100.0%							
Road 15	15	38	38.1	N	1700-1800	443	29.3%	14.5%	0.2%	18.1%	6.3%	10.7%	0.0%	0.1%	0.4%	0.4%	0.3%	0.6%	0.0%	0.5%	0.9%	15.7%	0.0%	0.0%	100.0%							
Road 15	15	38.4	N	1800-1900	518	50.8%	11.9%	0.1%	9.7%	3.5%	2.0%	4.0%	0.0%	0.1%	0.9%	0.6%	1.4%	0.0%	0.8%	2.4%	12.0%	0.0%	0.0%	100.0%								
Road 15	15	38.2	N	1900-2000	391	55.1%	17.1%	0.1%	8.2%	2.9%	1.9%	3.8%	0.0%	0.1%	0.1%	0.8%	0.6%	1.3%	0.0%	0.8%	2.0%	5.0%	0.0%	0.0%	100.0%							
Road 15	15	43.3	N	2000-2100	293	50.2%	21.3%	0.1%	8.5%	3.1%	1.9%	3.7%	0.0%	0.0%	0.1%	0.7%	1.3%	0.0%	0.8%	2.0%	6.0%	0.0%	0.0%	100.0%								
Road 15	15	43.3	N	2100-2200	294	50.9%	21.0%	0.1%	8.7%	3.1%	1.9%	3.9%	0.0%	0.0%	0.1%	0.7%	1.3%	0.0%	0.8%	2.0%	6.0%	0.0%	0.0%	100.0%								
Road 15	15	43.6	N	2200-2300	282	51.1%	21.1%	0.1%	6.8%	2.4%	2.2%	4.2%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.8%	2.0%	6.3%	0.0%	0.0%	100.0%							
Road 15	15	44.9	N	2300-0000	217	48.8%	22.0%	0.1%	7.3%	2.6%	2.3%	4.8%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.8%	2.2%	8.0%	0.0%	0.0%	100.0%							
Road 16	16	67	67.0	N	0000-0300	547	64.0%	24.9%	0.0%	5.4%	2.0%	2.4%	2.4%	0.0%	0.0%	0.2%	0.4%	0.2%	0.4%	0.2%	0.4%	2.3%	11.8%	0.0%	100.0%							
Road 16	16	68.0	N	0100-0200	274	52.6%	23.5%	0.1%	5.8%	2.1%	1.8%	3.6%	0.2%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	2.9%	3.0%	2.8%	0.0%	0.0%	100.0%							
Road 16	16	68.5	N	0200-0300	362	52.8%	0.1%	6.3%	2.3%	2.0%	3.9%	0.2%	0.0%	0.3%	0.3%	0.6%	0.4%	1.0%	0.0%	2.8%	3.2%	2.8%	0.0%	0.0%	100.0%							
Road 16	16	68.8	N	0300-0400	161	49.8%	0.1%	4.2%	1.5%	1.8%	4.2%	0.2%	0.4%	0.2%	0.2%	0.4%	0.2%	0.4%	0.0%	1.1%	1.8%	1.8%	0.0%	0.0%	100.0%							
Road 16	16	68.7	N	0400-0500	177	48.7%	0.1%	7.3%	2.6%	2.3%	4.5%	0.2%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	2.7%	3.8%	3.2%	0.0%	0.0%	100.0%								
Road 16	16	67.7	N	0500-0600	366	48.0%	0.1%	7.8%	2.8%	2.5%	4.8%	0.2%	0.1%	0.5%	0.9%	0.6%	1.3%	0.0%	2.7%	4.1%	2.9%	0.0%	0.0%	100.0%								
Road 16	16	65.8	N	0600-0700	624	47.1%	20.6%	0.1%	8.4%	3.2%	2.2%	5.2%	0.2%	0.0%	0.2%	0.6%	0.2%	0.4%	0.0%	4.4%	1.9%	3.4%	0.0%	0.0%	100.0%							
Road 16	16	48.5	N	0700-0800	1335	45.6%	19.9%	0.1%	3.2%	2.8%	5.5%	0.2%	0.1%	0.7%	1.0%	0.7%	1.0%	0.7%	1.6%	0.0%	2.7%	4.7%	2.5%	0.0%	100.0%							
Road 16	16	40.8	N	0800-0900	1548	50.9%	16.3%	0.1%	6.9%	3.5%	2.7%	5.3%	0.1%	0.1%	0.7%	1.0%	0.7%	1.8%	0.0%	2.4%	3.0%	2.3%	0.0%	0.0%	100.0%							
Road 16	16	47.3	N	0900-1000	1316	48.6%	13.1%	0.2%	6.8%	3.2%	2.8%	5.0%	0.2%	0.1%	0.5%	0.7%	0.5%	1.0%	0.0%	2.1%	1.9%	1.9%	0.0%	0.0%	100.0%							
Road 16	16	51.8	N	1000-1200	1158	41.8%	16.2%	0.1%	13.8%	5.0%	4.4%	8.6%	0.2%	0.1%	0.8%	0.4%	0.3%	0.6%	0.0%	2.4%	1.2%	3.5%	0.0%	0.0%	100.0%							
Road 16	16	48.1	N	1200-1300	1180	36.4%	17.2%	0.1%	13.8%	4.9%	4.3%	8.5%	0.2%	0.1%	0.8%	0.4%	0.3%	0.6%	0.0%	2.4%	1.2%	3.5%	0.0%	0.0%	100.0%							
Road 16	16	45.9	N	1300-1400	1242	35.4%	13.3%	0.2%	18.5%	6.6%	5.7%	11.2%	0.0%	0.1%	0.5%	0.5%	0.3%	0.7%	0.0%	2.9%	1.0%	4.1%	0.0%	0.0%	100.0%							
Road 16	16	43.9	N	1400-1500	1302	35.1%	14.2%	0.2%	18.7%	6.0%	5.6%	11.1%	0.0%	0.1%	0.6%	0.7%	0.5%	1.1%	0.0%	2.9%	1.3%	4.0%	0.0%	0.0%	100.0%							
Road 16	16	43.0	N	1500-1600	1337	34.7%	13.9%	0.2%	19.2%	6.9%	4.9%	9.6%	0.0%	0.1%	0.6%	0.7%	0.5%	1.1%	0.0%	2.8%	1.3%	3.5%	0.0%	0.0%	100.0%							
Road 16	16	41.1	N	1600-1700	1383	30.8%	13.7%	0.2%	15.6%	5.8%	5.0%	9.6%	0.0%	0.1%	0.6%	0.8%	0.5%	1.1%	0.0%	2.5%	1.6%	3.8%	0.0%	0.0%	100.0%							
Road 16	16	39.1	N	1700-1800	1504	43.8%	13.7%	0.2%	14.5%	5.2%	3.3%	6.5%	0.0%	0.1%	0.6%	0.8%	0.5%	1.2%	0.0%	3.4%	3.8%	2.6%	0.0%	0.0%	100.0%							
Road 16	16	41.5	N	1800-1900	1548	56.3%	13.2%	0.1%	9.5%	3.4%	2.6%	3.9%	0.0%	0.0%	0.1%	1.0%	0.7%	1.5%	0.0%	3.7%	2.7%	1.9%	0.0%	0.0%	100.0%							
Road 16	16	54.7	N	1900-2000	7701	44.6%	17.7%	0.1%	7.4%	3.7%	2.4%	4.9%	0.0%	0.1%	0.7%	1.0%	0.7%	1.0%	0.0%	2.1%	2.7%	2.1%	0.0%	0.0%	100.0%							
Road 16	16	63.0	N	2000-2100	918	58.3%	22.0%	0.1%	7.9%	2.8%	1.7%	3.4%	0.0%	0.0%	0.1%	0.7%	1.1%	0.1%	0.4%	0.5%	2.1%	1.3%	0.0%	0.0%	100.0%							
Road 16	16	63.1	N	2100-2200	936	52.8%	21.8%	0.1%	8.0%	2.9%	1.8%	3.6%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	4.0%	2.4%	1.3%	0.0%	0.0%	100.0%							
Road 16	16	63.4	N	2200-2300	627	46.2%	22.0%	0.1%	8.2%	2.9%	2.1%	3.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	2.0%	2.0%	1.3%	0.0%	0.0%	100.0%							
Road 16	16	64.9	N	2300-0000	681	51.4%	23.2%	0.1%	6.9%	2.5%	2.2%	4.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	4.2%	2.3%	1.7%	0.0%	0.0%	100.0%							

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters For AERMOD (Year 2043)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Road/Buss (Approx YN)	Hour	Total Vehicles (Vehicles)	01 - Private Car	02 - Taxi	03 - Light Goods Vehicles >2t	04 - Light Goods Vehicles 2.5-3t	05 - Light Goods Vehicles 3-5t	06 - Medium Goods Vehicles >5t	07 - Medium Goods Vehicles 5-10t	08 - Public Buses	09 - Private Buses <=5t	10 - Private Buses >5t	11 - Non-franchised Buses<=4t	12 - Non-franchised Buses 1st 1st	13 - Non-franchised Buses 2nd 2nd	14 - Franchise of Bus Single	15 - Franchise of Bus Double	16 - Motorcyclist	17 - Heavy Goods Vehicles >2t	18 - Non-franchised Buses >2t	Total	
							PC	Taxi	LGVS	LGVS	LGVS	HGV	HGV	PB	PV4	PV5	NFB	NFB7	NFB8	FBSB	FBSB	MC	MGV	NFB9		
Road 19	19	70	68.4	N	0000-0100	441	49.5%	22.2%	0.1%	8.3%	3.0%	2.6%	5.2%	0.1%	0.0%	0.2%	0.5%	0.3%	0.7%	0.0%	2.7%	2.5%	2.2%	0.0%	100.0%	
Road 19	19	70	68.9	N	0100-0200	292	47.8%	21.4%	0.1%	8.0%	3.2%	2.8%	5.6%	0.1%	0.0%	0.2%	0.5%	0.4%	0.6%	0.0%	2.6%	2.7%	2.7%	0.0%	100.0%	
Road 19	19	70	69.0	N	0200-0300	917	49.0%	20.7%	0.1%	8.0%	3.2%	2.8%	5.6%	0.1%	0.0%	0.2%	0.5%	0.4%	0.6%	0.0%	2.6%	2.7%	2.7%	0.0%	100.0%	
Road 19	19	70	69.4	N	0300-0400	174	44.6%	19.8%	0.1%	10.3%	3.7%	3.2%	6.4%	0.1%	0.0%	0.3%	0.5%	0.4%	1.0%	0.0%	2.5%	3.1%	3.8%	0.0%	100.0%	
Road 19	19	70	69.3	N	0400-0500	193	43.1%	19.1%	0.1%	11.0%	3.9%	3.4%	6.8%	0.1%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	2.4%	3.4%	3.7%	0.0%	100.0%	
Road 19	19	70	68.8	N	0500-0600	1176	42.3%	18.6%	0.1%	11.0%	3.9%	3.4%	7.2%	0.1%	0.1%	0.5%	0.7%	0.5%	1.1%	0.0%	2.4%	3.4%	3.8%	0.0%	100.0%	
Road 19	19	70	69.3	N	0600-0700	724	43.2%	18.0%	0.1%	12.5%	4.5%	3.9%	7.7%	0.1%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	2.4%	3.9%	2.5%	0.0%	100.0%	
Road 19	19	70	64.3	N	0700-0800	1488	39.7%	17.3%	0.1%	13.0%	4.7%	4.1%	9.0%	0.1%	0.1%	0.6%	0.9%	0.6%	1.4%	0.0%	2.3%	4.1%	3.5%	0.0%	100.0%	
Road 19	19	70	63.9	N	0800-0900	1714	44.0%	17.3%	0.1%	13.9%	4.8%	4.2%	7.8%	0.1%	0.1%	0.6%	1.0%	0.6%	1.2%	0.0%	2.3%	2.0%	2.8%	0.0%	100.0%	
Road 19	19	70	63.8	N	0900-1000	1543	37.1%	13.5%	0.2%	14.8%	6.6%	5.0%	9.8%	0.1%	0.0%	0.4%	0.6%	0.4%	1.0%	0.0%	2.0%	1.4%	3.5%	0.0%	100.0%	
Road 19	19	70	64.3	N	1000-1100	1388	33.8%	15.1%	0.2%	19.0%	6.8%	6.0%	11.8%	0.1%	0.0%	0.4%	0.6%	0.4%	0.8%	0.0%	1.9%	1.0%	4.1%	0.0%	100.0%	
Road 19	19	70	64.3	N	1100-1200	1311	33.9%	15.1%	0.2%	18.0%	6.8%	6.0%	11.8%	0.1%	0.0%	0.4%	0.6%	0.4%	0.8%	0.0%	1.9%	1.0%	4.1%	0.0%	100.0%	
Road 19	19	70	64.5	N	1200-1300	1370	27.7%	10.7%	0.2%	21.2%	7.6%	7.8%	14.9%	0.0%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	2.2%	0.8%	4.3%	0.0%	100.0%	
Road 19	19	70	63.8	N	1300-1400	1352	25.6%	9.9%	0.3%	24.1%	8.1%	7.5%	14.7%	0.0%	0.0%	0.4%	0.4%	0.3%	0.6%	0.0%	2.0%	0.8%	4.9%	0.0%	100.0%	
Road 19	19	70	63.9	N	1400-1500	1396	25.6%	9.9%	0.3%	24.1%	8.1%	7.5%	14.7%	0.0%	0.0%	0.4%	0.4%	0.3%	0.6%	0.0%	2.0%	0.8%	4.9%	0.0%	100.0%	
Road 19	19	70	64.1	N	1500-1600	1400	26	10.5%	3%	25.4%	9.1%	8.4%	12.6%	0.0%	0.1%	0.5%	0.5%	0.4%	0.8%	0.0%	2.0%	0.9%	4.3%	0.0%	100.0%	
Road 19	19	70	63.8	N	1600-1700	1447	29.5%	10.2%	0.2%	21.2%	7.6%	6.6%	13.0%	0.0%	0.1%	0.7%	0.9%	0.6%	1.3%	0.0%	2.4%	1.4%	4.4%	0.0%	100.0%	
Road 19	19	70	63.9	N	1700-1800	1529	25.4%	9.2%	0.3%	24.1%	8.1%	7.5%	14.7%	0.0%	0.0%	0.4%	0.4%	0.3%	0.6%	0.0%	2.0%	0.8%	4.9%	0.0%	100.0%	
Road 19	19	70	64.5	N	1800-1900	1466	48.9%	11.5%	0.2%	14.5%	5.2%	3.0%	6.0%	0.0%	0.1%	0.9%	0.6%	1.3%	0.0%	3.0%	2.3%	2.5%	0.0%	100.0%		
Road 19	19	70	66.0	N	1900-2000	1094	50.3%	15.7%	0.1%	11.8%	4.2%	2.8%	5.5%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	3.6%	1.9%	1.8%	0.0%	100.0%		
Road 19	19	70	66.0	N	2000-2100	896	46.1%	19.8%	0.1%	12.2%	4.4%	2.7%	5.3%	0.0%	0.0%	0.1%	0.6%	0.4%	1.0%	0.0%	3.8%	1.8%	1.8%	0.0%	100.0%	
Road 19	19	70	66.0	N	2100-2200	858	47.6%	19.3%	0.1%	12.4%	4.5%	2.8%	5.6%	0.0%	0.1%	0.3%	0.5%	0.5%	1.0%	0.0%	3.5%	1.2%	1.9%	0.0%	100.0%	
Road 19	19	70	67.0	N	2200-2300	816	47.4%	21.4%	0.1%	9.8%	3.5%	3.1%	6.1%	0.1%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	3.7%	1.6%	2.0%	0.0%	100.0%	
Road 19	19	70	67.0	N	2300-0000	623	45.6%	20.5%	0.1%	10.7%	3.8%	3.4%	6.7%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	3.8%	1.6%	2.3%	0.0%	100.0%	
Road 20	20	48.0	48.0	N	0000-0100	44	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 20	20	49.0	49.1	N	0100-0200	30	18.8%	8.9%	0.3%	28.0%	10.1%	8.9%	17.5%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	1.1%	0.0%	1.1%	4.6%	0.0%	100.0%	
Road 20	20	49.0	49.3	N	0200-0300	20	18.4%	8.2%	0.3%	29.0%	10.4%	9.1%	17.9%	0.0%	0.0%	0.1%	0.2%	0.2%	0.4%	0.0%	0.0%	1.2%	4.7%	0.0%	100.0%	
Road 20	20	49.4	49.4	N	0300-0400	20	17.3%	7.6%	0.3%	28.7%	10.4%	9.4%	18.4%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	1.2%	4.7%	0.0%	100.0%		
Road 20	20	49.3	49.3	N	0400-0500	23	15.9%	7.0%	0.3%	30.4%	10.9%	9.5%	18.8%	0.0%	0.1%	0.3%	0.2%	0.4%	0.0%	0.0%	1.2%	4.9%	0.0%	100.0%		
Road 20	20	49.8	49.8	N	0500-0600	41	14.8%	6.5%	0.3%	31.0%	11.1%	9.7%	19.1%	0.0%	0.0%	0.2%	0.3%	0.2%	0.4%	0.0%	0.0%	1.3%	5.0%	0.0%	100.0%	
Road 20	20	47.0	47.0	N	0600-0700	63	13.8%	5.1%	0.3%	31.6%	11.3%	10.8%	19.5%	0.0%	0.0%	0.2%	0.3%	0.2%	0.4%	0.0%	0.0%	1.3%	5.0%	0.0%	100.0%	
Road 20	20	44.2	44.2	N	0700-0800	156	12.9%	5.6%	0.3%	32.1%	11.5%	10.1%	19.8%	0.0%	0.0%	0.2%	0.3%	0.2%	0.4%	0.0%	0.0%	1.3%	5.2%	0.0%	100.0%	
Road 20	20	43.0	43.0	N	0800-0900	234	14.0%	4.5%	0.4%	34.0%	12.2%	9.5%	18.7%	0.0%	0.0%	0.2%	0.3%	0.2%	0.4%	0.0%	0.0%	0.8%	4.9%	0.0%	100.0%	
Road 20	20	42.0	42.0	N	0900-1000	249	14.9%	3.6%	0.4%	34.0%	12.2%	9.5%	18.7%	0.0%	0.0%	0.1%	0.3%	0.2%	0.4%	0.0%	0.0%	0.4%	5.2%	0.0%	100.0%	
Road 20	20	42.0	42.0	N	1000-1100	261	8.3%	3.2%	0.4%	35.4%	12.7%	11.2%	22.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.3%	5.8%	0.0%	100.0%	
Road 20	20	43.0	43.0	N	1100-1200	226	8.4%	3.5%	0.4%	35.6%	12.8%	11.1%	22.9%	0.0%	0.0%	0.2%	0.1%	0.1%	0.1%	0.0%	0.0%	0.2%	5.7%	0.0%	100.0%	
Road 20	20	43.0	43.0	N	1200-1300	210	9.3%	3.6%	0.4%	35.6%	12.8%	10.8%	22.6%	0.0%	0.0%	0.2%	0.1%	0.1%	0.1%	0.0%	0.0%	0.2%	5.7%	0.0%	100.0%	
Road 20	20	42.5	42.5	N	1300-1400	244	8.2%	3.4%	0.4%	35.9%	12.8%	11.1%	23.6%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.3%	5.8%	0.0%	100.0%	
Road 20	20	42.5	42.5	N	1400-1500	244	8.8%	3.6%	0.4%	34.0%	12.2%	11.5%	22.9%	0.0%	0.0%	0.2%	0.2%	0.1%	0.3%	0.0%	0.0%	0.3%	5.9%	0.0%	100.0%	
Road 20	20	42.0	42.0	N	1500-1600	254	8.6%	3.5%	0.4%	36.6%	13.9%	9.8%	19.2%	0.0%	0.0%	0.2%	0.2%	0.1%	0.3%	0.0%	0.0%	0.3%	5.0%	0.0%	100.0%	
Road 20	20	42.0	42.0	N	1600-1700	349	8.3%	3.6%	0.4%	34.0%	12.2%	11.5%	22.9%	0.0%	0.0%	0.2%	0.2%	0.1%	0.3%	0.0%	0.0%	0.3%	5.0%	0.0%	100.0%	
Road 20	20	43.4	43.4	N	1700-1800	225	13.8%	4.3%	0.4%	37.0%	13.3%	8.4%	16.5%	0.0%	0.0%	0.2%	0.2%	0.2%	0.4%	0.0%	0.0%	1.2%	4.3%	0.0%	100.0%	
Road 20	20	45.2	45.2	N	1800-1900	173	23.7%	5.6%	0.3%	32.6%	11.7%	6.8%	13.3%	0.0%	0.0%	0.4%	0.3%	0.6%	0.0%	0.0%	1.1%	3.5%	0.0%	100.0%		
Road 20	20	46.0	46.0	N	1900-2000	80	24.6%	5.3%	0.3%	32.6%	11.7%	6.8%	13.3%	0.0%	0.0%	0.4%	0.3%	0.6%	0.0%	0.0%	1.1%	3.5%	0.0%	100.0%		
Road 20	20	47.4	47.4	N	2000-2100	93	24.7%	10.3%	0.3%	29.7%	10.7%	6.5%	12.9%	0.0%	0.0%	0.4%	0.3%	0.5%	0.0%	0.0%	1.0%	1.4%	3.4%	0.0%	100.0%	
Road 20	20	47.4	47.4	N	2100-2200	96	24.1%	10.0%	0.3%	29.6%	10.6%	6.8%	13.4%	0.0%	0.0%	0.2%	0.1%	0.3%	0.0%	0.0%	1.1%	3.5%	0.0%	100.0%		
Road 20	20	47.6	47.6	N	2200-2300	24	21.7%	10.8%	0.3%	24.6%	10.4%	6.4%	11.4%	0.0%	0.0%	0.2%	0.1%	0.3%	0.0%	0.0%	1.0%	1.4%	3.4%	0.0%	100.0%	
Road 20	20	48.1	48.1	N	2300-0000	69	23.8%	10.7%	0.3%	25.8%	9.3%	8.2%	16.1%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	1.1%	4.2%	0.0%	100.0%	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters for AERMOD (Year 2043)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles >15t	07 - Medium Goods Vehicles >24t	08 - Public Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus<=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchise d Bus Single Deck	15 - Franchise d Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total	
							PC	TAXI	LGVS	LGVS	LGVS	HGV7	HGV7	P.B	PV4	PV5	NFB	NFB7	NFB8	FSSD	FSSD	FSSD	MCV9	MCV9	NFB8	
Road 21	21	70	68.2	N	0000-0100	485	45.9%	2.1%	0.1%	10.0%	3.6%	3.2%	6.2%	0.1%	0.0%	0.2%	0.4%	0.3%	0.7%	0.0%	2.4%	2.4%	2.4%	0.0%	100.0%	
Road 21	21	70	68.8	N	0100-0200	322	45.2%	20.2%	0.1%	10.8%	3.9%	3.4%	6.7%	0.1%	0.0%	0.1%	0.5%	0.3%	0.5%	0.0%	2.3%	2.6%	2.9%	0.0%	100.0%	
Road 21	21	70	69.1	N	0200-0300	240	43.5%	11.8%	0.1%	10.4%	3.5%	7.1%	0.1%	0.0%	0.0%	0.1%	0.5%	0.3%	0.5%	0.0%	2.3%	2.8%	3.4%	0.0%	100.0%	
Road 21	21	70	69.3	N	0300-0400	193	41.8%	0.1%	12.2%	4.4%	3.8%	7.6%	0.1%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	2.2%	2.9%	3.9%	0.0%	100.0%	
Road 21	21	70	69.2	N	0400-0500	215	40.4%	17.9%	0.1%	13.0%	4.7%	4.1%	8.0%	0.1%	0.0%	0.4%	0.7%	0.5%	1.0%	0.0%	2.2%	3.1%	3.8%	0.0%	100.0%	
Road 21	21	70	68.5	N	0500-0600	377	39.3%	17.3%	0.1%	13.8%	5.0%	4.3%	8.5%	0.1%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	2.1%	3.4%	3.2%	0.0%	100.0%	
Road 21	21	70	66.8	N	0600-0700	816	38.1%	16.7%	0.2%	14.6%	5.3%	4.6%	9.0%	0.1%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	2.1%	3.6%	2.8%	0.0%	100.0%	
Road 21	21	70	63.4	N	0700-0800	1684	36.3%	15.0%	0.2%	15.3%	5.5%	4.8%	9.4%	0.1%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	2.0%	3.7%	3.3%	0.0%	100.0%	
Road 21	21	70	59.8	N	0800-0900	1967	40.4%	12.9%	0.2%	16.5%	5.8%	4.6%	9.1%	0.1%	0.1%	0.6%	0.8%	0.5%	1.2%	0.0%	1.8%	2.3%	3.1%	0.0%	100.0%	
Road 21	21	70	61.3	N	0900-1000	1793	33.4%	12.1%	0.2%	20.9%	7.5%	5.7%	11.2%	0.1%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	1.7%	1.3%	3.7%	0.0%	100.0%	
Road 21	21	70	63.1	N	1000-1100	1629	30.0%	11.7%	0.2%	21.4%	7.7%	6.8%	13.4%	0.1%	0.0%	0.3%	0.5%	0.3%	0.8%	0.0%	1.6%	0.9%	4.3%	0.0%	100.0%	
Road 21	21	70	63.5	N	1100-1200	1538	30.1%	12.4%	0.2%	21.4%	7.7%	6.7%	13.1%	0.1%	0.1%	0.5%	0.3%	0.2%	0.5%	0.0%	1.6%	0.8%	4.3%	0.0%	100.0%	
Road 21	21	70	63.4	N	1200-1300	1489	25.0%	9.8%	0.2%	22.9%	8.2%	8.2%	16.2%	0.0%	0.1%	0.4%	0.4%	0.3%	0.7%	0.0%	1.9%	0.7%	5.2%	0.0%	100.0%	
Road 21	21	70	62.5	N	1300-1400	1596	23.0%	8.9%	0.3%	25.9%	9.3%	8.0%	15.8%	0.0%	0.0%	0.3%	0.3%	0.2%	0.5%	0.0%	1.7%	0.7%	5.0%	0.0%	100.0%	
Road 21	21	70	61.8	N	1400-1500	1260	23.9%	9.9%	0.2%	23.9%	9.3%	8.1%	15.9%	0.0%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	1.8%	0.9%	5.0%	0.0%	100.0%	
Road 21	21	70	61.1	N	1500-1600	1694	23.5%	9.4%	0.3%	27.4%	9.8%	9.8%	13.6%	0.0%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	1.7%	0.9%	4.4%	0.0%	100.0%	
Road 21	21	70	61.4	N	1600-1700	1686	26.8%	9.2%	0.2%	23.1%	8.3%	7.2%	14.2%	0.0%	0.1%	0.6%	0.8%	0.9%	1.2%	0.0%	2.0%	1.3%	4.5%	0.0%	100.0%	
Road 21	21	70	62.5	N	1700-1800	1725	32.0%	0.2%	22.0%	8.2%	5.1%	10.1%	0.0%	0.1%	0.5%	0.8%	0.4%	0.9%	0.0%	2.3%	2.8%	3.4%	0.0%	100.0%		
Road 21	21	70	63.8	N	1800-1900	1619	46.2%	10.9%	0.2%	16.5%	5.9%	3.4%	6.7%	0.0%	0.0%	0.1%	0.8%	0.6%	1.2%	0.0%	2.7%	2.2%	2.6%	0.0%	100.0%	
Road 21	21	70	66.5	N	1900-2000	1213	48.0%	15.0%	0.1%	13.3%	4.8%	3.2%	6.2%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	3.3%	1.8%	1.9%	0.0%	100.0%	
Road 21	21	70	66.4	N	2000-2100	951	43.9%	18.6%	0.1%	14.0%	5.0%	3.1%	6.1%	0.0%	0.0%	0.1%	0.1%	0.3%	0.0%	0.0%	3.4%	1.8%	2.0%	0.0%	100.0%	
Road 21	21	70	66.5	N	2100-2200	955	44.4%	16.4%	0.1%	14.1%	0.1%	3.3%	4.8%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	3.0%	2.0%	2.1%	0.0%	100.0%	
Road 21	21	70	66.7	N	2200-2300	903	45.3%	20.5%	0.1%	11.2%	4.4%	3.6%	7.0%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	3.3%	1.7%	2.2%	0.0%	100.0%	
Road 21	21	70	67.4	N	2300-0000	693	43.4%	19.6%	0.1%	12.2%	4.4%	3.9%	7.6%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	3.2%	1.9%	2.5%	0.0%	100.0%	
Road 22	22	50	26.2	N	0000-0100	48	14.1%	6.3%	0.3%	31.7%	11.4%	10.0%	19.7%	0.0%	0.0%	0.0%	0.1%	0.1%	0.4%	0.0%	0.7%	5.2%	0.0%	100.0%		
Road 22	22	50	27.3	N	0100-0200	34	12.9%	5.8%	0.3%	32.4%	11.7%	10.2%	20.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.7%	5.3%	0.0%	100.0%	
Road 22	22	50	27.9	N	0200-0300	26	11.9%	5.3%	0.3%	33.1%	11.9%	10.4%	20.5%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.8%	5.3%	0.0%	100.0%	
Road 22	22	50	29.2	N	0300-0400	22	10.9%	4.4%	0.4%	33.6%	12.1%	10.8%	20.8%	0.0%	0.0%	0.1%	0.2%	0.1%	0.2%	0.0%	0.0%	0.4%	5.4%	0.0%	100.0%	
Road 22	22	50	27.9	N	0400-0500	26	10.1%	4.5%	0.4%	34.1%	12.3%	10.7%	21.1%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	0.8%	5.5%	0.0%	100.0%	
Road 22	22	50	26.1	N	0500-0600	47	9.3%	4.1%	0.4%	34.6%	12.4%	10.8%	21.3%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	0.8%	5.6%	0.0%	100.0%	
Road 22	22	50	24.2	N	0600-0700	87	8.7%	3.8%	0.4%	35.0%	12.6%	11.0%	21.5%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	0.8%	5.6%	0.0%	100.0%	
Road 22	22	50	22.2	N	0700-0800	229	8.0%	3.5%	0.4%	35.3%	12.7%	11.1%	21.8%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	0.8%	5.7%	0.0%	100.0%	
Road 22	22	50	21.5	N	0800-0900	273	8.7%	2.8%	0.4%	37.3%	13.4%	10.4%	20.5%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	0.8%	5.4%	0.0%	100.0%	
Road 22	22	50	21.0	N	0900-1000	309	6.0%	2.2%	0.4%	39.4%	14.1%	10.7%	21.1%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.2%	5.6%	0.0%	100.0%		
Road 22	22	50	21.0	N	1000-1100	293	5.0%	1.9%	0.4%	37.4%	13.4%	11.9%	23.4%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.2%	6.1%	0.0%	100.0%		
Road 22	22	50	21.3	N	1100-1200	275	5.0%	2.1%	0.4%	37.6%	13.5%	11.8%	23.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.1%	6.0%	0.0%	100.0%		
Road 22	22	50	21.2	N	1200-1300	289	6.5%	2.5%	0.4%	34.1%	12.7%	12.8%	24.5%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.2%	6.4%	0.0%	100.0%		
Road 22	22	50	20.7	N	1300-1400	316	5.8%	2.2%	0.4%	37.4%	13.4%	11.8%	22.3%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.2%	5.9%	0.0%	100.0%		
Road 22	22	50	20.7	N	1400-1500	315	6.2%	2.5%	0.4%	36.6%	12.8%	12.0%	23.7%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	6.2%	0.0%	100.0%		
Road 22	22	50	20.5	N	1500-1600	328	6.0%	2.4%	0.4%	40.3%	14.5%	10.2%	20.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	6.2%	0.0%	100.0%		
Road 22	22	50	20.9	N	1600-1700	307	7.1%	2.5%	0.4%	36.2%	13.3%	11.3%	22.2%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	5.8%	0.0%	100.0%		
Road 22	22	50	21.4	N	1700-1800	284	9.9%	3.1%	0.4%	39.6%	14.2%	10.9%	17.6%	0.0%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	4.6%	0.0%	100.0%		
Road 22	22	50	22.8	N	1800-1900	209	17.7%	4.2%	0.4%	36.4%	13.1%	7.6%	14.9%	0.0%	0.0%	0.3%	0.2%	0.5%	0.0%	0.0%	0.8%	3.9%	0.0%	100.0%		
Road 22	22	50	23.8	N	1900-2000	142	19.0%	6.4%	0.4%	36.1%	12.7%	12.8%	24.5%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.2%	6.4%	0.0%	100.0%		
Road 22	22	50	24.3	N	2000-2100	112	18.4%	7.8%	0.4%	33.8%	12.1%	7.4%	14.6%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.0%	0.7%	3.8%	0.0%	100.0%		
Road 22	22	50	24.3	N	2100-2200	115	18.3%	7.6%	0.4%	33.6%	12.1%	7.7%	15.2%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.8%	4.0%	0.0%	100.0%		
Road 22	22	50	24.4	N	2200-2300	102	19.8%	9.0%	0.3%	28.3%	10.2%	9.0%	17.7%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.8%	4.6%	0.0%	100.0%		
Road 22	22	50	24.7	N	2300-0000	82	18.1%	8.2%	0.3%	29.3%	10.5%	9.3%	18.3%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.8%	4.8%	0.0%	100.0%	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters for AERMOD (Year 2043)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles >15t	07 - Medium Goods Vehicles >24t	08 - Public Light Buses	09 - Private Light Bus <3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus<=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchise d Bus Single Deck	15 - Franchise d Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total	
							PC	TAXI	LGVS	LGVS4	LGVS5	HGV7	HGV8	PUB	PV4	PV5	NFB6	NFB7	NFB8	FSSD	FSSD	MC	HGV9	NFB9		
Road 25	25	50	26.5	N	0000-0100	17	6.8%	3.1%	0.4%	36.3%	13.0%	11.5%	22.5%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.3%	5.9%	0.0%	100.0%	
Road 25	25	50	29.0	N	0100-0200	12	6.2%	2.8%	0.4%	36.7%	13.2%	11.6%	22.7%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.1%	0.0%	0.4%	5.9%	0.0%	100.0%	
Road 25	25	50	31.5	N	0200-0300	6	5.6%	2.5%	0.4%	37.0%	13.4%	11.7%	23.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.1%	0.0%	0.4%	5.9%	0.0%	100.0%	
Road 25	25	50	29.3	N	0300-0400	8	5.1%	2.3%	0.4%	37.3%	13.4%	11.7%	23.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.4%	6.0%	0.0%	100.0%	
Road 25	25	50	29.2	N	0400-0500	10	4.7%	2.1%	0.4%	37.6%	13.5%	11.8%	23.2%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.4%	6.1%	0.0%	100.0%	
Road 25	25	50	28.6	N	0500-0600	8	4.3%	1.9%	0.4%	37.8%	13.6%	11.8%	23.3%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.4%	6.1%	0.0%	100.0%	
Road 25	25	50	26.5	N	0600-0700	40	4.0%	1.7%	0.4%	38.0%	13.7%	11.9%	23.4%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.4%	6.1%	0.0%	100.0%	
Road 25	25	24.5	N	0700-0800	87	3.7%	1.6%	0.4%	38.2%	13.7%	12.0%	23.5%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.4%	6.1%	0.0%	100.0%		
Road 25	25	24.0	N	0800-0900	104	3.5%	1.5%	0.4%	38.3%	13.8%	12.1%	23.6%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.4%	6.1%	0.0%	100.0%		
Road 25	25	24.0	N	0900-1000	117	2.7%	1.0%	0.4%	41.5%	14.9%	11.3%	22.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	5.8%	0.0%	100.0%		
Road 25	25	24.0	N	1000-1100	115	2.2%	0.9%	0.4%	39.1%	14.0%	12.4%	24.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	6.4%	0.0%	100.0%		
Road 25	25	24.0	N	1100-1200	108	2.2%	0.9%	0.4%	39.1%	14.0%	12.4%	24.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	6.4%	0.0%	100.0%		
Road 25	25	24.1	N	1200-1300	108	2.0%	0.8%	0.4%	37.1%	13.3%	13.3%	26.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	6.8%	0.0%	100.0%		
Road 25	25	23.9	N	1300-1400	122	1.8%	0.7%	0.4%	39.8%	14.3%	12.3%	24.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	6.3%	0.0%	100.0%		
Road 25	25	23.9	N	1400-1500	120	1.9%	0.8%	0.4%	38.1%	13.7%	12.9%	25.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	6.8%	0.0%	100.0%		
Road 25	25	23.9	N	1500-1600	122	1.9%	0.8%	0.4%	43.2%	17.3%	12.3%	24.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	6.8%	0.0%	100.0%		
Road 25	25	24.0	N	1600-1700	116	2.3%	0.8%	0.4%	39.3%	14.1%	12.3%	24.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.1%	6.3%	0.0%	100.0%		
Road 25	25	24.0	N	1700-1800	104	3.2%	1.0%	0.5%	44.2%	16.9%	10.0%	19.7%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.3%	5.1%	0.0%	100.0%		
Road 25	25	24.0	N	1800-1900	71	3.4%	1.1%	0.5%	43.8%	16.8%	10.0%	19.7%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.3%	5.1%	0.0%	100.0%		
Road 25	25	26.2	N	1900-2000	46	3.3%	2.3%	0.4%	40.8%	14.6%	9.7%	19.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.3%	5.0%	0.0%	100.0%		
Road 25	25	27.0	N	2000-2100	37	6.0%	2.8%	0.4%	42.1%	15.1%	9.3%	18.3%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.3%	4.8%	0.0%	100.0%		
Road 25	25	26.9	N	2100-2200	37	6.5%	2.7%	0.4%	41.6%	14.9%	9.3%	18.3%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.3%	4.8%	0.0%	100.0%		
Road 25	25	27.2	N	2200-2300	33	7.2%	3.3%	0.4%	36.0%	12.9%	11.4%	22.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.3%	5.9%	0.0%	100.0%		
Road 25	25	27.2	N	2300-0000	27	6.5%	2.9%	0.4%	36.5%	13.1%	11.6%	22.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.3%	5.9%	0.0%	100.0%		
Road 26	26	50	26.7	N	0000-0100	17	6.8%	3.1%	0.4%	36.3%	13.0%	11.5%	22.5%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.0%	0.3%	5.9%	0.0%	100.0%		
Road 26	26	50.1	N	0100-0200	11	5.4%	2.4%	0.4%	37.1%	13.3%	11.7%	23.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.3%	6.0%	0.0%	100.0%		
Road 26	26	29.3	N	0200-0300	9	4.9%	2.2%	0.4%	37.1%	13.4%	11.8%	23.2%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.3%	6.1%	0.0%	100.0%		
Road 26	26	29.4	N	0300-0400	7	4.5%	2.0%	0.4%	37.2%	13.5%	11.9%	23.3%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.3%	6.1%	0.0%	100.0%		
Road 26	26	29.3	N	0400-0500	9	4.1%	1.8%	0.4%	38.0%	13.8%	11.9%	23.4%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.3%	6.1%	0.0%	100.0%		
Road 26	26	28.6	N	0500-0600	16	3.8%	1.7%	0.4%	38.2%	13.7%	12.0%	23.5%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.3%	6.1%	0.0%	100.0%		
Road 26	26	28.6	N	0600-0700	37	3.5%	1.5%	0.4%	38.4%	13.8%	12.0%	23.5%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.3%	6.1%	0.0%	100.0%		
Road 26	26	24.0	N	0700-0800	19	3.2%	1.4%	0.4%	38.5%	13.9%	12.1%	23.6%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.3%	6.2%	0.0%	100.0%		
Road 26	26	24.4	N	0800-0900	95	3.5%	1.1%	0.4%	40.5%	14.5%	11.3%	23.3%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.1%	0.0%	0.2%	5.8%	0.0%	100.0%		
Road 26	26	24.2	N	0900-1000	97	2.3%	0.8%	0.4%	41.7%	15.0%	11.4%	22.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	5.8%	0.0%	100.0%		
Road 26	26	24.0	N	1000-1100	96	2.1%	0.8%	0.4%	39.3%	14.1%	12.3%	24.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.2%	5.8%	0.0%	100.0%		
Road 26	26	24.2	N	1100-1200	99	1.9%	0.8%	0.4%	39.5%	14.2%	12.4%	24.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	6.3%	0.0%	100.0%		
Road 26	26	24.0	N	1200-1300	105	5.6%	2.1%	0.4%	35.0%	12.6%	12.6%	24.7%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.2%	6.5%	0.0%	100.0%		
Road 26	26	24.0	N	1300-1400	107	5.7%	2.1%	0.4%	37.6%	13.6%	12.7%	23.7%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.2%	6.5%	0.0%	100.0%		
Road 26	26	24.0	N	1400-1500	117	5.3%	2.1%	0.4%	36.1%	13.0%	12.2%	24.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.2%	6.3%	0.0%	100.0%		
Road 26	26	24.0	N	1500-1600	122	5.1%	2.1%	0.4%	40.9%	14.7%	10.4%	20.4%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.2%	5.3%	0.0%	100.0%		
Road 26	26	24.1	N	1600-1700	124	2.2%	0.9%	0.4%	36.2%	13.1%	12.2%	22.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.3%	5.9%	0.0%	100.0%		
Road 26	26	24.3	N	1700-1800	105	8.5%	2.7%	0.4%	40.6%	14.6%	9.2%	18.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.7%	4.7%	0.0%	100.0%		
Road 26	26	24.8	N	1800-1900	76	15.5%	3.6%	0.4%	37.8%	13.6%	7.9%	15.5%	0.0%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.7%	4.0%	0.0%	100.0%		
Road 26	26	24.0	N	1900-2000	51	16.0%	3.6%	0.4%	34.0%	11.8%	16.0%	16.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	5.2%	0.0%	100.0%		
Road 26	26	26.9	N	2000-2100	41	16.2%	6.9%	0.4%	35.3%	12.7%	7.8%	15.3%	0.0%	0.0%	0.0%	0.2%	0.2%	0.3%	0.0%	0.0%	0.6%	4.0%	0.0%	100.0%		
Road 26	26	26.8	N	2100-2200	42	16.1%	6.7%	0.4%	35.1%	12.6%	8.1%	15.9%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.7%	4.1%	0.0%	100.0%		
Road 26	26	27.0	N	2200-2300	30	19.7%	12.8%	0.4%	32.9%	10.7%	16.6%	16.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.7%	4.0%	0.0%	100.0%		
Road 26	26	27.7	N	2300-0000	30	15.9%	7.2%	0.3%	30.7%	11.0%	9.1%	19.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.7%	5.0%	0.0%	100.0%		

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters For AERMOD (Year 2043)																										
Route Name	Route ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Brazil Block (g/sec) (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2t	04 - Light Goods Vehicle 2-5.5 t	05 - Light Goods Vehicle 5.5-8t	06 - Medium Goods Vehicles >=8t	07 - Medium Goods Vehicles >=12t	08 - Public Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-Franchised Bus<=4t	12 - Non-Franchised Bus 4.4-5t	13 - Non-Franchised Bus 5.5-24t	14 - Franchisee D/B Single Deck	15 - Franchisee D/B Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicles>=4t	18 - Non-franchised Bus >4t	Total	
							P/C	TAXI	LGV3	LGV4	LGV8	HGV7	HGV9	PLB	PVB	PVS	NFBF	NFBT	NFBH	FBSO	FBDO	MIC	HVVU	NFB9		
Road 31	31	80	80.0	N	0000-0100	115	38.6%	17.3%	0.1%	9.2%	3.3%	2.9%	5.1%	0.0%	0.1%	0.4%	0.2%	0.5%	0.1%	8.0%	19.1%	11.1%	0.0%	100.0%		
Road 31	31	80	80.0	N	0100-0200	80	35.5%	15.9%	0.1%	9.4%	3.4%	3.0%	5.9%	0.6%	0.0%	0.2%	0.4%	0.3%	0.6%	0.1%	7.4%	2.0%	15.4%	0.0%	100.0%	
Road 31	31	80	80.0	N	0200-0300	62	14.6%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	100.0%	
Road 31	31	80	80.0	N	0300-0400	52	30.3%	13.5%	0.1%	9.9%	3.5%	3.1%	6.1%	0.5%	0.0%	0.2%	0.4%	0.3%	0.7%	0.1%	6.5%	2.1%	22.8%	0.0%	100.0%	
Road 31	31	80	80.0	N	0400-0500	57	29.6%	13.2%	0.1%	10.7%	3.8%	3.4%	6.6%	0.5%	0.0%	0.3%	0.5%	0.3%	0.7%	0.1%	6.5%	2.3%	21.1%	0.0%	100.0%	
Road 31	31	80	80.0	N	0500-0600	92	33.4%	13.3%	0.8%	9.5%	3.6%	3.9%	6.2%	0.4%	0.0%	0.2%	0.4%	0.6%	0.7%	0.1%	6.5%	2.7%	21.6%	0.0%	100.0%	
Road 31	31	80	80.0	N	0600-0700	187	32.4%	14.2%	0.1%	13.8%	5.0%	4.3%	8.5%	0.6%	0.1%	0.4%	0.7%	0.5%	1.0%	0.1%	7.2%	3.0%	8.1%	0.0%	100.0%	
Road 31	31	80	80.0	N	0700-0800	404	29.7%	12.9%	0.1%	13.8%	5.0%	4.3%	8.5%	0.5%	0.1%	0.4%	0.7%	0.5%	1.0%	0.1%	6.7%	3.0%	12.7%	0.0%	100.0%	
Road 31	31	80	80.0	N	0800-0900	462	29.7%	12.9%	0.1%	13.8%	5.0%	4.3%	8.5%	0.5%	0.1%	0.4%	0.7%	0.5%	1.0%	0.1%	6.7%	3.0%	12.7%	0.0%	100.0%	
Road 31	31	80	80.0	N	0900-1000	427	27.2%	9.9%	0.2%	19.0%	6.8%	5.2%	10.2%	0.5%	0.0%	0.3%	0.5%	0.3%	0.7%	0.0%	5.5%	1.1%	12.6%	0.0%	100.0%	
Road 31	31	80	80.0	N	1000-1100	193	24.3%	9.4%	0.2%	19.2%	6.9%	6.1%	12.0%	0.5%	0.0%	0.3%	0.4%	0.3%	0.6%	0.0%	5.1%	0.7%	13.9%	0.0%	100.0%	
Road 31	31	80	80.0	N	1100-1200	174	24.3%	9.4%	0.2%	19.2%	6.9%	6.1%	12.0%	0.5%	0.0%	0.3%	0.4%	0.3%	0.6%	0.0%	5.1%	0.7%	13.9%	0.0%	100.0%	
Road 31	31	80	80.0	N	1200-1300	273	32.5%	12.5%	0.1%	11.3%	4.0%	4.0%	7.9%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	6.5%	1.0%	17.6%	0.0%	100.0%	
Road 31	31	80	80.0	N	1300-1400	180	31.2%	12.0%	0.1%	13.3%	4.8%	4.1%	8.1%	0.0%	0.1%	0.4%	0.4%	0.3%	0.7%	0.0%	6.2%	1.0%	17.3%	0.0%	100.0%	
Road 31	31	80	80.0	N	1400-1500	230	30.9%	12.0%	0.1%	13.3%	4.8%	4.1%	8.1%	0.0%	0.1%	0.4%	0.4%	0.3%	0.7%	0.0%	6.2%	1.0%	17.3%	0.0%	100.0%	
Road 31	31	80	80.0	N	1500-1600	300	31.7%	12.7%	0.1%	13.9%	5.0%	3.5%	6.9%	0.0%	0.1%	0.6%	0.8%	0.5%	1.0%	0.0%	6.1%	1.1%	16.0%	0.0%	100.0%	
Road 31	31	80	80.0	N	1600-1700	311	34.4%	11.9%	0.1%	11.2%	4.0%	3.5%	6.9%	0.0%	0.1%	0.8%	1.0%	0.7%	1.5%	0.0%	6.9%	1.6%	15.4%	0.0%	100.0%	
Road 31	31	80	80.0	N	1700-1800	347	39.4%	12.3%	0.1%	10.4%	3.7%	2.3%	4.6%	0.0%	0.1%	0.6%	0.7%	0.5%	1.1%	0.0%	7.2%	3.4%	13.6%	0.0%	100.0%	
Road 31	31	80	80.0	N	1800-1900	360	49.0%	11.6%	0.1%	8.7%	2.4%	1.7%	2.5%	0.0%	0.1%	0.6%	0.7%	0.5%	1.2%	0.0%	7.1%	2.8%	13.2%	0.0%	100.0%	
Road 31	31	80	80.0	N	1900-2000	262	52.9%	16.6%	0.1%	5.5%	2.0%	1.3%	2.6%	0.0%	0.0%	0.1%	0.8%	0.6%	1.2%	0.0%	6.9%	2.0%	4.9%	0.0%	100.0%	
Road 31	31	80	80.0	N	2000-2100	208	47.9%	20.4%	0.1%	5.8%	2.1%	1.3%	2.5%	0.0%	0.0%	0.1%	0.7%	0.5%	1.0%	0.0%	9.9%	1.9%	8.0%	0.0%	100.0%	
Road 31	31	80	80.0	N	2100-2200	206	49.2%	20.4%	0.1%	5.9%	2.1%	1.4%	2.7%	0.0%	0.0%	0.1%	0.7%	0.5%	1.0%	0.0%	9.9%	1.9%	8.0%	0.0%	100.0%	
Road 31	31	80	80.0	N	2200-2300	200	48.8%	22.0%	0.0%	4.6%	1.6%	1.4%	2.8%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.1%	9.5%	1.9%	6.3%	0.0%	100.0%	
Road 31	31	80	80.0	N	2300-0000	153	46.8%	21.1%	0.1%	5.0%	1.6%	1.6%	3.1%	0.0%	0.0%	0.1%	0.4%	0.2%	0.5%	0.1%	9.2%	2.1%	8.0%	0.0%	100.0%	
Road 32	32	80	80.0	N	0000-0100	116	48.8%	22.1%	0.1%	7.1%	2.4%	2.2%	4.3%	0.0%	0.1%	0.4%	0.3%	0.7%	0.2%	0.1%	7.4%	2.3%	13.4%	0.0%	100.0%	
Road 32	32	80	80.0	N	0100-0200	170	46.8%	20.0%	0.1%	7.7%	2.8%	2.4%	4.8%	0.0%	0.0%	0.2%	0.5%	0.4%	0.8%	0.1%	8.1%	2.7%	1.2%	0.0%	100.0%	
Road 32	32	80	80.0	N	0200-0300	347	45.6%	20.3%	0.1%	8.3%	3.0%	2.6%	5.1%	0.6%	0.0%	0.3%	0.6%	0.4%	0.9%	0.1%	7.9%	2.9%	1.3%	0.0%	100.0%	
Road 32	32	80	80.0	N	0300-0400	196	47.4%	20.9%	0.1%	7.4%	2.8%	2.5%	5.2%	0.6%	0.0%	0.2%	0.5%	0.4%	0.8%	0.1%	7.7%	2.3%	1.4%	0.0%	100.0%	
Road 32	32	80	80.0	N	0400-0500	306	43.1%	19.4%	0.1%	9.5%	3.4%	3.0%	5.9%	0.6%	0.1%	0.4%	0.7%	0.5%	1.1%	0.1%	7.7%	3.3%	1.5%	0.0%	100.0%	
Road 32	32	80	80.0	N	0500-0600	335	41.9%	18.0%	0.1%	10.1%	3.6%	3.2%	6.2%	0.6%	0.1%	0.5%	0.6%	0.5%	1.2%	0.1%	7.6%	3.6%	1.6%	0.0%	100.0%	
Road 32	32	80	80.0	N	0600-0700	1158	37.4%	18.0%	0.1%	17.4%	6.3%	5.6%	10.8%	0.6%	0.1%	0.6%	0.8%	0.7%	1.5%	0.0%	6.3%	3.2%	1.5%	0.0%	100.0%	
Road 32	32	80	80.0	N	0700-0800	2364	39.4%	17.2%	0.1%	11.3%	4.1%	3.5%	7.0%	0.6%	0.1%	0.6%	0.9%	0.6%	1.4%	0.1%	7.3%	4.0%	1.8%	0.0%	100.0%	
Road 32	32	80	80.0	N	0800-0900	2379	44.0%	14.1%	0.1%	12.3%	4.4%	3.5%	6.8%	0.4%	0.1%	0.6%	0.9%	0.6%	1.3%	0.0%	6.5%	2.6%	1.8%	0.0%	100.0%	
Road 32	32	80	80.0	N	0900-1000	2199	44.0%	13.7%	0.1%	13.3%	4.4%	3.5%	6.8%	0.4%	0.1%	0.6%	0.9%	0.6%	1.3%	0.0%	6.5%	2.6%	1.8%	0.0%	100.0%	
Road 32	32	80	80.0	N	1000-1100	1138	34.6%	13.5%	0.2%	17.0%	6.1%	5.4%	10.6%	0.5%	0.0%	0.4%	0.6%	0.4%	0.9%	0.0%	6.1%	1.1%	2.8%	0.0%	100.0%	
Road 32	32	80	80.0	N	1100-1200	2023	34.6%	14.3%	0.2%	16.9%	6.1%	5.3%	10.4%	0.5%	0.1%	0.6%	0.3%	0.2%	0.5%	0.0%	6.2%	1.0%	2.7%	0.0%	100.0%	
Road 32	32	80	80.0	N	1200-1300	1790	48.0%	15.6%	0.0%	13.8%	4.9%	4.9%	9.7%	0.5%	0.1%	0.6%	0.7%	0.5%	1.1%	0.0%	3.0%	1.2%	2.5%	0.0%	100.0%	
Road 32	32	80	80.0	N	1300-1400	1832	38.0%	16.0%	0.1%	13.8%	4.9%	4.9%	9.7%	0.5%	0.1%	0.6%	0.7%	0.5%	1.1%	0.0%	2.9%	1.2%	2.5%	0.0%	100.0%	
Road 32	32	80	80.0	N	1400-1500	1856	39.1%	15.5%	0.2%	14.5%	5.2%	4.9%	9.6%	0.5%	0.1%	0.7%	0.8%	0.5%	1.2%	0.0%	2.9%	1.5%	2.5%	0.0%	100.0%	
Road 32	32	80	80.0	N	1500-1600	2005	38.8%	15.6%	0.2%	16.7%	6.0%	4.2%	8.3%	0.5%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	2.8%	1.4%	2.2%	0.0%	100.0%	
Road 32	32	80	80.0	N	1600-1700	2099	41.9%	14.4%	0.1%	14.5%	5.9%	4.8%	9.2%	0.5%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	2.9%	1.4%	2.2%	0.0%	100.0%	
Road 32	32	80	80.0	N	1700-1800	2325	47.4%	14.8%	0.1%	12.3%	4.4%	4.2%	5.5%	0.5%	0.1%	0.7%	0.8%	0.6%	1.3%	0.0%	3.3%	1.4%	1.4%	0.0%	100.0%	
Road 32	32	80	80.0	N	1800-1900	2458	59.4%	13.9%	0.1%	7.8%	2.8%	1.8%	3.2%	0.5%	0.0%	0.1%	1.0%	0.7%	1.6%	0.0%	3.4%	2.8%	0.8%	0.0%	100.0%	
Road 32	32	80	80.0	N	1900-2000	1835	59.4%	14.1%	0.1%	7.8%	2.8%	1.8%	3.2%	0.5%	0.0%	0.1%	1.0%	0.7%	1.6%	0.0%	3.4%	2.8%	0.8%	0.0%	100.0%	
Road 32	32	80	80.0	N	2000-2100	1509	54.0%	22.9%	0.1%	6.4%	2.3%	1.4%	2.8%	0.0%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	4.2%	2.2%	0.7%	0.0%	100.0%	
Road 32	32	80	80.0	N	2100-2200	1505	55.0%	22.8%	0.1%	6.5%	2.3%	1.5%	2.9%	0.6%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	3.7%	2.5%	0.8%	0.0%	100.0%	
Road 32	32	80	80.0	N	2200-2300	1463	54.0%	24.0%	0.1%	5.8%	1.2%	1.2%	1.6%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	3.7%	2.5%	0.8%	0.0%	100.0%	
Road 32	32	80	80.0	N	2300-0000	1093	53.6%	24.2%	0.1%	5.6%	2.0%	1.8%	3.5%	0.6%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	3.9%	2.4%	0.9%	0.0%	100.0%	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters For AERMOD (Year 2043)																											
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Brand/Block Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars		02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles <=3.5t	07 - Medium Goods Vehicles >3.5t	08 - Public Buses	09 - Private Light Buses <=3.5t	10 - Private Light Buses >3.5t	11 - Non-Franchised Bus <=4t	12 - Non-Franchised Bus 4.4-15t	13 - Non-Franchised Bus 15-24t	14 - Franchised Bus Single Deck	15 - Franchised Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicles >24t	18 - Non-Franchised Bus >24t	Total	
							P0	TAXI																			LOV3
Road 35	35	50	48.6	N	0000-0100	54	43.1%	19.3%	0.1%	5.2%	1.9%	1.6%	3.2%	0.6%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.2%	2.1%	24.2%	0.0%	100.0%		
Road 35	35	50	48.9	N	0100-0200	39	33.9%	17.0%	0.1%	5.1%	1.8%	1.6%	3.2%	0.6%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.1%	2.1%	29.2%	0.0%	100.0%		
Road 35	35	50	49.0	N	0200-0300	39	33.9%	17.0%	0.1%	5.1%	1.8%	1.6%	3.2%	0.6%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.1%	2.1%	29.2%	0.0%	100.0%		
Road 35	35	50	49.1	N	0300-0400	27	30.0%	13.3%	0.1%	4.9%	1.6%	1.6%	3.0%	0.5%	0.0%	0.2%	0.4%	0.3%	0.7%	0.0%	0.0%	2.1%	41.1%	0.0%	100.0%		
Road 35	35	50	49.1	N	0400-0500	29	30.4%	13.4%	0.1%	5.5%	2.0%	1.7%	3.4%	0.5%	0.0%	0.3%	0.5%	0.3%	0.8%	0.0%	0.0%	2.4%	38.8%	0.0%	100.0%		
Road 35	35	50	48.8	N	0500-0600	43	35.8%	19.0%	0.1%	5.5%	2.0%	2.5%	2.2%	0.5%	0.0%	0.3%	0.5%	0.3%	0.8%	0.0%	0.0%	3.6%	40.0%	0.0%	100.0%		
Road 35	35	50	48.0	N	0600-0700	79	39.8%	17.4%	0.1%	8.6%	3.1%	2.7%	5.3%	0.7%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	0.3%	3.7%	15.3%	0.0%	100.0%		
Road 35	35	50	44.9	N	0700-0800	181	34.5%	15.0%	0.1%	8.1%	2.9%	2.5%	5.0%	0.6%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	0.3%	3.5%	24.7%	0.0%	100.0%		
Road 35	35	50	44.4	N	0800-0900	304	39.3%	12.6%	0.1%	9.2%	3.4%	2.5%	4.3%	0.6%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	0.3%	3.4%	24.7%	0.0%	100.0%		
Road 35	35	50	44.7	N	0900-1000	182	33.3%	12.1%	0.1%	11.8%	4.2%	3.2%	6.3%	0.6%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	0.1%	1.3%	24.9%	0.0%	100.0%		
Road 35	35	50	45.0	N	1000-1100	166	29.9%	11.6%	0.1%	12.0%	4.3%	3.8%	7.5%	0.5%	0.0%	0.3%	0.5%	0.3%	0.7%	0.0%	0.0%	0.9%	27.5%	0.0%	100.0%		
Road 35	35	50	45.2	N	1100-1200	159	28.5%	11.2%	0.1%	11.8%	4.2%	3.8%	7.5%	0.5%	0.0%	0.3%	0.5%	0.3%	0.7%	0.0%	0.0%	0.9%	27.5%	0.0%	100.0%		
Road 35	35	50	46.4	N	1200-1300	112	27.7%	10.7%	0.1%	7.9%	2.9%	2.8%	5.6%	0.0%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	0.0%	0.8%	39.4%	0.0%	100.0%		
Road 35	35	50	46.3	N	1300-1400	114	26.8%	10.3%	0.1%	9.4%	3.4%	2.9%	5.8%	0.0%	0.0%	0.4%	0.4%	0.3%	0.6%	0.0%	0.0%	0.8%	38.8%	0.0%	100.0%		
Road 35	35	50	46.7	N	1400-1500	118	26.8%	8.6%	0.1%	10.3%	3.6%	3.1%	5.8%	0.0%	0.0%	0.4%	0.4%	0.3%	0.6%	0.0%	0.0%	0.8%	38.8%	0.0%	100.0%		
Road 35	35	50	46.2	N	1500-1600	120	27.6%	11.1%	0.1%	10.0%	3.6%	2.5%	5.0%	0.0%	0.1%	0.5%	0.5%	0.4%	0.9%	0.0%	0.0%	1.0%	36.6%	0.0%	100.0%		
Road 35	35	50	46.1	N	1600-1700	124	30.4%	10.4%	0.1%	8.2%	2.9%	2.5%	5.0%	0.0%	0.1%	0.7%	0.0%	0.6%	1.4%	0.0%	0.0%	1.4%	35.5%	0.0%	100.0%		
Road 35	35	50	46.0	N	1700-1800	114	35.2%	11.0%	0.1%	7.7%	2.8%	1.7%	3.4%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	0.3%	3.0%	32.6%	0.0%	100.0%		
Road 35	35	50	46.0	N	1800-1900	140	44.3%	10.4%	0.1%	4.0%	1.5%	1.0%	1.0%	0.0%	0.1%	0.5%	0.5%	0.5%	1.2%	0.0%	0.2%	2.1%	32.6%	0.0%	100.0%		
Road 35	35	50	47.9	N	1900-2000	88	55.0%	17.2%	0.0%	4.8%	1.7%	1.1%	2.2%	0.0%	0.0%	0.1%	0.8%	0.6%	1.3%	0.0%	0.0%	2.0%	13.1%	0.0%	100.0%		
Road 35	35	50	48.3	N	2000-2100	71	49.0%	20.8%	0.1%	4.9%	1.8%	1.1%	2.1%	0.0%	0.0%	0.1%	0.7%	0.5%	1.0%	0.0%	0.0%	2.0%	16.1%	0.0%	100.0%		
Road 35	35	50	48.3	N	2100-2200	71	49.7%	20.6%	0.1%	4.9%	1.8%	1.1%	2.2%	0.0%	0.0%	0.1%	0.7%	0.5%	1.0%	0.0%	0.0%	2.3%	16.1%	0.0%	100.0%		
Road 35	35	50	48.3	N	2200-2300	69	49.4%	22.3%	0.0%	3.8%	1.4%	1.2%	2.4%	0.0%	0.0%	0.0%	0.3%	0.2%	0.5%	0.0%	0.1%	1.9%	16.6%	0.0%	100.0%		
Road 35	35	50	48.6	N	2300-0000	55	45.9%	20.7%	0.0%	4.0%	1.4%	1.3%	2.5%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.0%	2.0%	20.9%	0.0%	100.0%		
Road 35	35	50	48.4	N	0000-0100	43	45.8%	21.0%	0.1%	4.0%	1.5%	1.6%	1.1%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.0%	2.3%	25.1%	0.0%	100.0%		
Road 36	36	50	48.8	Y	0100-0200	45	40.8%	18.2%	0.1%	5.0%	1.8%	1.6%	3.1%	0.5%	0.0%	0.2%	0.4%	0.3%	0.7%	0.0%	0.0%	2.3%	25.1%	0.0%	100.0%		
Road 36	36	50	49.0	Y	0200-0300	35	36.6%	16.3%	0.1%	4.9%	1.8%	1.6%	3.1%	0.4%	0.0%	0.2%	0.5%	0.3%	0.7%	0.0%	0.0%	2.3%	31.2%	0.0%	100.0%		
Road 36	36	50	48.1	Y	0300-0400	34	34.4%	14.7%	0.1%	4.5%	1.5%	1.5%	2.8%	0.5%	0.0%	0.2%	0.3%	0.3%	0.7%	0.0%	0.0%	2.3%	31.2%	0.0%	100.0%		
Road 36	36	50	49.0	Y	0400-0500	33	33.4%	14.8%	0.1%	5.5%	2.0%	1.7%	3.4%	0.4%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	0.0%	2.6%	34.2%	0.0%	100.0%		
Road 36	36	50	48.6	Y	0500-0600	50	37.9%	16.7%	0.1%	6.8%	2.4%	2.1%	4.2%	0.5%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	0.0%	2.3%	25.3%	0.0%	100.0%		
Road 36	36	50	47.6	Y	0600-0700	48	41.7%	18.4%	0.1%	6.8%	2.4%	2.1%	4.2%	0.5%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	0.0%	2.3%	25.3%	0.0%	100.0%		
Road 36	36	50	47.2	Y	0700-0800	122	36.9%	16.1%	0.1%	7.8%	2.8%	2.5%	4.8%	0.5%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	0.3%	2.8%	21.3%	0.0%	100.0%		
Road 36	36	50	43.6	Y	0800-0900	239	42.2%	13.5%	0.1%	8.7%	3.1%	2.4%	4.8%	0.4%	0.1%	0.6%	0.8%	0.6%	1.3%	0.0%	0.0%	2.4%	19.0%	0.0%	100.0%		
Road 36	36	50	44.1	Y	0900-1000	158	41.5%	13.0%	0.1%	9.1%	3.4%	2.5%	5.1%	0.4%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	0.0%	2.4%	19.0%	0.0%	100.0%		
Road 36	36	50	44.4	Y	1000-1100	191	32.5%	12.6%	0.1%	11.8%	4.2%	3.7%	3.3%	0.5%	0.0%	0.4%	0.5%	0.4%	0.8%	0.0%	0.0%	1.0%	24.1%	0.0%	100.0%		
Road 36	36	50	44.7	Y	1100-1200	183	32.1%	13.2%	0.1%	11.6%	4.2%	3.6%	7.1%	0.5%	0.1%	0.6%	0.3%	0.2%	0.5%	0.0%	0.0%	0.9%	25.0%	0.0%	100.0%		
Road 36	36	50	45.2	Y	1200-1300	152	24.6%	9.5%	0.1%	13.5%	4.9%	4.9%	9.5%	0.0%	0.0%	0.4%	0.4%	0.3%	0.6%	0.0%	0.0%	0.7%	30.4%	0.0%	100.0%		
Road 36	36	50	44.9	Y	1300-1400	138	23.6%	14.0%	0.1%	10.5%	3.8%	3.5%	4.9%	0.0%	0.0%	0.7%	0.7%	0.7%	0.7%	0.0%	0.0%	0.7%	30.4%	0.0%	100.0%		
Road 36	36	50	44.9	Y	1400-1500	163	24.2%	9.9%	0.2%	14.5%	5.2%	4.9%	9.7%	0.0%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	0.0%	0.9%	28.5%	0.0%	100.0%		
Road 36	36	50	44.8	Y	1500-1600	167	24.1%	9.7%	0.2%	16.8%	6.0%	4.3%	8.4%	0.0%	0.1%	0.4%	0.5%	0.3%	0.8%	0.0%	0.0%	0.9%	27.6%	0.0%	100.0%		
Road 36	36	50	44.8	Y	1600-1700	169	26.3%	10.9%	0.2%	15.9%	6.0%	4.3%	8.4%	0.0%	0.1%	0.4%	0.5%	0.3%	0.8%	0.0%	0.0%	0.9%	27.6%	0.0%	100.0%		
Road 36	36	50	44.8	Y	1700-1800	178	32.1%	10.0%	0.1%	13.4%	4.8%	3.0%	6.0%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	0.0%	2.8%	25.4%	0.0%	100.0%		
Road 36	36	50	45.0	Y	1800-1900	177	42.5%	10.0%	0.1%	9.1%	3.3%	1.9%	3.7%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	0.0%	2.0%	24.9%	0.0%	100.0%		
Road 36	36	50	45.0	Y	1900-2000	115	51.7%	20.0%	0.1%	3.1%	1.2%	1.0%	1.2%	0.0%	0.0%	0.1%	0.6%	0.5%	1.2%	0.0%	0.0%	1.9%	19.0%	0.0%	100.0%		
Road 36	36	50	47.7	Y	2000-2100	92	45.8%	19.5%	0.1%	8.8%	3.1%	1.9%	3.8%	0.0%	0.1%	0.6%	0.4%	1.0%	0.0%	0.0%	1.8%	13.0%	0.0%	100.0%			
Road 36	36	50	47.7	Y	2100-2200	92	46.4%	19.2%	0.1%	8.9%	3.2%	2.0%	4.0%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.0%	2.1%	13.0%	0.0%	100.0%		
Road 36	36	50	48.2	Y	2200-2300	81	47.8%	21.1%	0.1%	8.8%	3.2%	2.2%	4.0%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.0%	1.8%	13.0%	0.0%	100.0%		
Road 36	36	50	48.2	Y	2300-0000	70	43.4%	19.6%	0.1%	7.3%	2.6%	2.3%	4.6%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.0%	1.9%	17.0%	0.0%	100.0%		

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters for AERMOD (Year 2043)

Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles >15t	07 - Medium Goods Vehicles >24t	08 - Public Light Bus	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus<=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchise d Bus Single Deck	15 - Franchise d Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total
							PC	TAXI	LGV3	LGV4	LGV6	HGV7	HGV8	FLB	PV4	PV6	NFB6	NFB7	NFB8	FBS0	FBS1	MC	HGV9	NFB9	
Road 37	37	50	50.0	Y	0000-0100	2	49.5%	22.3%	0.1%	9.7%	3.0%	1.0%	6.0%	0.0%	0.0%	0.2%	0.4%	0.3%	0.7%	0.0%	2.5%	1.4%	0.0%	100.0%	
Road 37	37	50	50.0	Y	0100-0200	1	48.0%	21.5%	0.1%	10.5%	3.8%	3.3%	6.5%	0.0%	0.0%	0.2%	0.4%	0.8%	0.0%	0.2%	0.7%	1.7%	0.1%	0.0%	100.0%
Road 37	37	50	50.0	Y	0200-0300	1	46.5%	20.7%	0.1%	11.2%	4.0%	3.5%	7.0%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	0.2%	1.8%	0.1%	0.0%	100.0%
Road 37	37	50	50.0	Y	0300-0400	1	43.4%	19.9%	0.1%	12.0%	4.3%	3.8%	7.4%	0.0%	0.0%	0.4%	0.6%	0.4%	1.0%	0.0%	0.3%	2.1%	0.1%	0.0%	100.0%
Road 37	37	50	50.0	Y	0400-0500	1	43.4%	19.2%	0.1%	12.7%	4.6%	4.0%	7.9%	0.0%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	0.3%	2.1%	0.1%	0.0%	100.0%
Road 37	37	50	50.0	Y	0500-0600	1	41.9%	18.4%	0.1%	13.4%	4.8%	4.2%	8.3%	0.0%	0.1%	0.5%	0.8%	0.6%	1.2%	0.0%	0.3%	2.2%	0.1%	0.0%	100.0%
Road 37	37	50	49.9	Y	0600-0700	3	40.4%	17.7%	0.1%	14.2%	5.1%	4.4%	8.7%	0.0%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	0.3%	2.3%	0.1%	0.0%	100.0%
Road 37	37	50	49.8	Y	0700-0800	7	39.0%	17.0%	0.2%	14.9%	5.3%	4.6%	9.1%	0.0%	0.1%	0.6%	0.9%	0.6%	1.4%	0.0%	0.4%	2.4%	0.1%	0.0%	100.0%
Road 37	37	50	49.8	Y	0800-0900	8	43.0%	13.8%	0.2%	16.0%	5.7%	4.5%	8.8%	0.0%	0.1%	0.6%	0.8%	0.6%	1.3%	0.0%	0.5%	2.5%	0.1%	0.0%	100.0%
Road 37	37	50	49.8	Y	0900-1000	7	35.8%	13.0%	0.2%	20.5%	7.4%	5.8%	11.0%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	0.4%	2.9%	0.1%	0.0%	100.0%
Road 37	37	50	49.8	Y	1000-1100	6	32.4%	12.6%	0.2%	21.0%	7.5%	6.7%	13.1%	0.0%	0.0%	0.4%	0.5%	0.4%	0.8%	0.0%	0.5%	3.4%	0.1%	0.0%	100.0%
Road 37	37	50	49.8	Y	1100-1200	6	32.4%	13.4%	0.2%	21.0%	7.5%	6.6%	12.9%	0.0%	0.1%	0.6%	0.3%	0.2%	0.5%	0.0%	0.9%	3.4%	0.1%	0.0%	100.0%
Road 37	37	50	49.8	Y	1200-1300	6	34.5%	13.3%	0.2%	18.6%	6.7%	6.7%	13.1%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	1.0%	3.4%	0.1%	0.0%	100.0%
Road 37	37	50	49.8	Y	1300-1400	7	32.2%	12.4%	0.2%	21.4%	7.7%	6.6%	13.0%	0.0%	0.1%	0.5%	0.5%	0.3%	0.7%	0.0%	1.0%	3.4%	0.1%	0.0%	100.0%
Road 37	37	50	49.8	Y	1400-1500	7	33.1%	13.4%	0.2%	16.9%	7.0%	6.6%	12.9%	0.0%	0.1%	0.6%	0.7%	0.5%	1.0%	0.0%	1.2%	3.4%	0.1%	0.0%	100.0%
Road 37	37	50	49.8	Y	1500-1600	7	32.6%	13.1%	0.2%	22.4%	8.0%	5.7%	11.1%	0.0%	0.1%	0.6%	0.7%	0.5%	1.0%	0.0%	1.2%	2.9%	0.1%	0.0%	100.0%
Road 37	37	50	49.8	Y	1600-1700	7	36.2%	12.5%	0.2%	18.4%	6.8%	5.8%	11.3%	0.0%	0.1%	0.9%	1.1%	0.7%	1.6%	0.0%	0.4%	3.0%	0.1%	0.0%	100.0%
Road 37	37	50	49.8	Y	1700-1800	8	42.4%	13.3%	0.2%	17.4%	6.3%	3.9%	7.9%	0.0%	0.1%	0.6%	0.7%	0.5%	1.1%	0.0%	0.3%	2.0%	0.1%	0.0%	100.0%
Road 37	37	50	49.8	Y	1800-1900	8	56.2%	13.2%	0.1%	11.8%	4.2%	2.5%	4.8%	0.0%	0.0%	0.1%	1.0%	0.7%	1.5%	0.0%	0.2%	1.3%	0.1%	0.0%	100.0%
Road 37	37	50	49.9	Y	1900-2000	6	56.8%	17.8%	0.1%	9.3%	3.3%	2.2%	4.4%	0.0%	0.0%	0.1%	0.9%	0.6%	1.3%	0.0%	0.2%	1.1%	0.1%	0.0%	100.0%
Road 37	37	50	49.9	Y	2000-2100	5	52.3%	22.2%	0.1%	9.8%	3.3%	2.2%	4.3%	0.0%	0.0%	0.1%	0.7%	0.5%	1.1%	0.0%	0.2%	1.1%	0.1%	0.0%	100.0%
Road 37	37	50	49.9	Y	2100-2200	5	52.9%	21.9%	0.1%	9.9%	3.6%	2.3%	4.5%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.2%	1.2%	0.1%	0.0%	100.0%
Road 37	37	50	49.9	Y	2200-2300	4	53.4%	24.1%	0.1%	7.8%	2.8%	2.5%	4.9%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.2%	1.1%	0.1%	0.0%	100.0%
Road 37	37	50	49.9	Y	2300-0000	3	51.8%	23.3%	0.1%	6.8%	3.1%	2.7%	5.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.2%	1.4%	0.1%	0.0%	100.0%
Road 38	38	50	48.2	Y	0000-0100	64	36.4%	16.3%	0.1%	7.0%	2.5%	2.2%	4.3%	1.1%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	1.8%	27.0%	0.1%	0.0%	100.0%
Road 38	38	50	48.5	Y	0100-0200	48	31.1%	13.9%	0.1%	6.7%	2.4%	2.1%	4.1%	0.9%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	1.8%	35.7%	0.1%	0.0%	100.0%
Road 38	38	50	48.7	Y	0200-0300	40	26.9%	12.0%	0.1%	6.4%	2.3%	2.0%	4.0%	0.8%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	1.7%	42.6%	0.1%	0.0%	100.0%
Road 38	38	50	49.8	Y	0300-0400	35	23.5%	10.5%	0.1%	6.2%	2.2%	1.9%	3.8%	0.7%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	1.7%	48.1%	0.1%	0.0%	100.0%
Road 38	38	50	48.8	Y	0400-0500	37	23.9%	10.6%	0.1%	6.9%	2.5%	2.2%	4.3%	0.8%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	1.9%	45.5%	0.1%	0.0%	100.0%
Road 38	38	50	48.4	Y	0500-0600	53	28.6%	12.6%	0.1%	8.9%	3.2%	2.8%	5.6%	1.1%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	2.4%	32.7%	0.1%	0.0%	100.0%
Road 38	38	50	47.4	Y	0600-0700	86	33.2%	14.6%	0.1%	11.4%	4.1%	3.6%	7.0%	1.1%	0.0%	0.4%	0.7%	0.4%	1.0%	0.0%	3.1%	19.1%	0.1%	0.0%	100.0%
Road 38	38	50	43.1	Y	0700-0800	226	27.8%	12.1%	0.1%	10.4%	3.7%	3.3%	6.4%	1.0%	0.1%	0.4%	0.6%	0.4%	1.0%	0.0%	2.8%	28.8%	0.1%	0.0%	100.0%
Road 38	38	50	42.5	Y	0800-0900	254	32.0%	10.2%	0.1%	11.7%	4.2%	3.3%	6.4%	0.8%	0.1%	0.4%	0.6%	0.4%	1.0%	0.0%	1.9%	26.8%	0.1%	0.0%	100.0%
Road 38	38	50	42.7	Y	0900-1000	235	26.0%	9.4%	0.2%	14.7%	5.3%	4.0%	7.8%	0.9%	0.0%	0.3%	0.4%	0.3%	0.7%	0.0%	1.0%	29.1%	0.1%	0.0%	100.0%
Road 38	38	50	43.0	Y	1000-1100	219	22.9%	8.9%	0.2%	14.6%	5.3%	4.6%	9.1%	0.8%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.7%	31.5%	0.1%	0.0%	100.0%
Road 38	38	50	43.3	Y	1100-1200	210	22.5%	9.3%	0.1%	14.4%	5.2%	4.5%	8.8%	0.9%	0.1%	0.4%	0.2%	0.3%	0.3%	0.0%	0.6%	32.6%	0.1%	0.0%	100.0%
Road 38	38	50	45.4	Y	1200-1300	119	7.2%	2.8%	0.1%	13.7%	4.9%	4.9%	8.6%	0.0%	0.0%	0.1%	0.9%	0.4%	0.9%	0.0%	0.2%	56.0%	0.1%	0.0%	100.0%
Road 38	38	50	45.3	Y	1300-1400	124	6.8%	2.6%	0.1%	16.8%	5.7%	4.9%	8.6%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.0%	0.2%	53.7%	0.1%	0.0%	100.0%
Road 38	38	50	46.2	Y	1400-1500	125	7.3%	2.9%	0.2%	14.9%	5.4%	5.1%	9.9%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.3%	53.5%	0.1%	0.0%	100.0%
Road 38	38	50	45.2	Y	1500-1600	127	7.2%	2.9%	0.2%	17.3%	6.2%	4.4%	8.6%	0.0%	0.0%	0.1%	0.1%	0.1%	0.2%	0.0%	0.3%	52.2%	0.1%	0.0%	100.0%
Road 38	38	50	45.3	Y	1600-1700	125	8.3%	2.9%	0.2%	14.6%	5.3%	4.6%	9.1%	0.0%	0.0%	0.2%	0.2%	0.2%	0.4%	0.0%	0.4%	53.3%	0.1%	0.0%	100.0%
Road 38	38	50	45.4	Y	1700-1800	123	10.6%	3.3%	0.2%	15.2%	6.3%	3.4%	6.8%	0.0%	0.0%	0.2%	0.2%	0.1%	0.3%	0.0%	0.9%	53.4%	0.1%	0.0%	100.0%
Road 38	38	50	45.8	Y	1800-1900	113	15.3%	3.6%	0.1%	11.2%	4.0%	2.3%	4.6%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.7%	57.3%	0.1%	0.0%	100.0%	
Road 38	38	50	45.8	Y	1900-2000	53	25.3%	8.1%	0.1%	10.4%	4.7%	4.1%	8.7%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.7%	57.3%	0.1%	0.0%	100.0%	
Road 38	38	50	48.5	Y	2000-2100	45	21.6%	9.2%	0.1%	14.2%	5.1%	3.1%	6.1%	0.0%	0.0%	0.3%	0.2%	0.5%	0.0%	0.9%	38.6%	0.1%	0.0%	100.0%	
Road 38	38	50	48.5	Y	2100-2200	45	21.8%	9.0%	0.1%	14.3%	5.1%	3.3%	6.5%	0.0%	0.0%	0.2%	0.1%	0.2%	0.0%	1.0%	38.4%	0.1%	0.0%	100.0%	
Road 38	38	50	46.6	Y	2200-2300	43	22.1%	10.0%	0.1%	11.3%	4.1%	3.6%	7.1%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.9%	40.5%	0.1%	0.0%	100.0%	
Road 38	38	50	46.7	Y	2300-0000	37	18.7%	8.4%	0.1%	10.9%	3.9%	3.4%	6.8%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.0%	0.8%	46.4%	0.1%	0.0%	100.0%

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters for AERMOD (Year 2043)

Parameters for Scenario (Year 2050)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Generated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles >15t	07 - Medium Goods Vehicles >24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchise d Bus Double Deck	15 - Franchise d Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicle >24t	18 - Non-franchised Bus >24t	Total	
							PC	TAXI	LGV3	LGV4	LGV6	HGV7	HGV8	FLB	PV4	PV6	NFB6	NFB7	NFB8	FBS0	FBS0	MC	HGV9	NFB9		
Road 41	41	70	70.0	N	0000-0100	128	46.9%	21.1%	0.0%	0.8%	2.4%	0.0%	0.8%	0.0%	0.2%	0.4%	0.3%	0.7%	0.0%	0.2%	21.6%	0.1%	0.0%	100.0%		
Road 41	41	70	70.0	N	0100-0200	93	41.4%	18.5%	0.0%	0.8%	2.5%	0.0%	0.7%	0.0%	0.2%	0.4%	0.3%	0.7%	0.0%	0.3%	30.0%	0.1%	0.0%	100.0%		
Road 41	41	70	70.0	N	0200-0300	75	36.7%	16.4%	0.0%	2.3%	0.8%	0.0%	1.4%	0.6%	0.0%	0.2%	0.5%	0.3%	0.7%	0.0%	0.2%	2.3%	36.9%	0.0%	100.0%	
Road 41	41	70	70.0	N	0300-0400	65	32.9%	14.6%	0.0%	0.8%	0.0%	0.1%	1.4%	0.6%	0.0%	0.3%	0.5%	0.1%	0.2%	0.0%	0.0%	2.3%	42.6%	0.0%	100.0%	
Road 41	41	70	70.0	N	0400-0500	69	31.5%	14.6%	0.0%	0.8%	0.0%	0.1%	1.6%	0.6%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	0.0%	2.3%	42.6%	0.0%	100.0%	
Road 41	41	70	70.0	N	0500-0600	59	39.6%	17.4%	0.0%	3.3%	1.2%	1.0%	2.0%	0.8%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	0.0%	3.4%	28.4%	0.0%	100.0%	
Road 41	41	70	70.0	N	0600-0700	180	45.7%	20.0%	0.0%	4.2%	1.5%	1.3%	2.6%	0.9%	0.1%	0.6%	0.7%	1.4%	0.0%	0.0%	4.3%	15.9%	0.0%	100.0%		
Road 41	41	70	70.0	N	0700-0800	174	45.4%	19.4%	0.0%	3.9%	1.4%	1.2%	2.8%	0.9%	0.1%	0.6%	0.6%	1.3%	0.0%	0.0%	4.0%	15.9%	0.0%	100.0%		
Road 41	41	70	70.0	N	0800-0900	463	45.5%	14.5%	0.0%	4.4%	1.6%	1.2%	2.4%	0.0%	0.1%	0.6%	0.9%	0.6%	1.4%	0.0%	0.0%	2.6%	23.5%	0.0%	100.0%	
Road 41	41	70	70.0	N	0900-1000	366	40.0%	14.5%	0.0%	5.9%	2.1%	1.6%	3.2%	0.8%	0.0%	0.4%	0.7%	0.5%	1.0%	0.0%	0.0%	1.6%	27.6%	0.0%	100.0%	
Road 41	41	70	70.0	N	1000-1100	425	40.0%	14.5%	0.0%	5.9%	2.1%	1.6%	3.2%	0.8%	0.0%	0.4%	0.7%	0.5%	1.0%	0.0%	0.0%	1.6%	27.6%	0.0%	100.0%	
Road 41	41	70	70.0	N	1100-1200	342	35.8%	14.7%	0.0%	6.0%	2.2%	1.9%	3.7%	0.8%	0.1%	0.6%	0.4%	0.2%	0.5%	0.0%	0.0%	1.0%	31.9%	0.0%	100.0%	
Road 41	41	70	70.0	N	1200-1300	371	29.3%	11.3%	0.0%	10.6%	3.8%	3.8%	7.5%	0.0%	0.1%	0.5%	0.5%	0.3%	0.8%	0.0%	0.0%	0.9%	30.5%	0.0%	100.0%	
Road 41	41	50	50.0	N	1300-1400	128	46.9%	21.1%	0.0%	0.8%	2.4%	0.0%	0.8%	0.0%	0.2%	0.4%	0.3%	0.7%	0.0%	0.2%	21.6%	0.1%	0.0%	100.0%		
Road 41	41	70	70.0	N	1400-1500	397	28.9%	11.7%	0.0%	11.4%	4.1%	3.9%	7.6%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	0.0%	1.1%	28.7%	0.0%	100.0%	
Road 41	41	70	70.0	N	1500-1600	404	28.8%	11.6%	0.0%	11.3%	4.8%	3.4%	6.6%	0.0%	0.1%	0.5%	0.6%	0.4%	0.9%	0.0%	0.0%	1.0%	27.9%	0.0%	100.0%	
Road 41	41	70	70.0	N	1600-1700	455	31.7%	10.9%	0.0%	3.9%	3.4%	6.7%	0.0%	0.1%	0.8%	0.9%	0.6%	1.4%	0.0%	0.0%	1.5%	27.2%	0.0%	100.0%		
Road 41	41	70	70.0	N	1700-1800	411	26.8%	11.5%	0.0%	10.2%	4.5%	2.9%	4.5%	0.0%	0.1%	0.8%	0.9%	0.6%	1.3%	0.0%	0.0%	1.2%	32.9%	0.0%	100.0%	
Road 41	41	70	70.0	N	1800-1900	464	47.1%	11.1%	0.0%	8.7%	2.4%	1.4%	2.7%	0.0%	0.0%	0.8%	0.6%	1.3%	0.0%	0.0%	0.0%	2.2%	23.6%	0.0%	100.0%	
Road 41	41	70	70.0	N	1900-2000	367	55.4%	17.4%	0.0%	6.1%	2.2%	1.5%	2.9%	0.0%	0.0%	0.1%	0.8%	1.3%	0.0%	0.0%	0.0%	2.0%	9.7%	0.0%	100.0%	
Road 41	41	70	70.0	N	2000-2100	295	50.0%	21.2%	0.0%	6.3%	2.3%	1.5%	2.9%	0.0%	0.0%	0.1%	0.7%	1.1%	0.0%	0.0%	0.0%	2.0%	9.7%	0.0%	100.0%	
Road 41	41	70	70.0	N	2100-2200	245	50.5%	20.9%	0.0%	6.4%	2.3%	1.5%	2.9%	0.0%	0.0%	0.1%	0.4%	0.2%	0.5%	0.0%	0.0%	2.3%	12.0%	0.0%	100.0%	
Road 41	41	70	70.0	N	2200-2300	237	50.4%	22.8%	0.0%	5.0%	1.8%	1.6%	3.1%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.0%	1.9%	12.4%	0.0%	100.0%	
Road 41	41	70	70.0	N	2300-2400	205	51.3%	20.5%	0.0%	5.1%	1.8%	1.6%	3.2%	0.0%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.0%	2.1%	12.4%	0.0%	100.0%	
Road 42	42	50	47.3	N	0000-0100	103	43.9%	19.7%	0.0%	2.7%	1.0%	0.9%	1.7%	1.0%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.0%	2.2%	25.4%	0.0%	100.0%	
Road 42	42	50	47.3	N	0100-0200	76	38.1%	17.0%	0.0%	2.6%	0.9%	0.8%	1.6%	0.0%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.0%	2.2%	34.3%	0.0%	100.0%	
Road 42	42	50	48.1	N	0200-0300	62	33.2%	14.8%	0.0%	2.5%	0.9%	0.8%	1.6%	0.8%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.0%	2.1%	41.6%	0.0%	100.0%	
Road 42	42	50	48.2	N	0300-0400	57	32.4%	14.8%	0.0%	2.5%	0.9%	0.8%	1.5%	0.7%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.0%	2.1%	41.6%	0.0%	100.0%	
Road 42	42	50	48.2	N	0400-0500	57	30.1%	13.3%	0.0%	2.8%	1.0%	0.9%	1.7%	0.8%	0.0%	0.3%	0.5%	0.3%	0.8%	0.0%	0.0%	2.3%	45.2%	0.0%	100.0%	
Road 42	42	47.7	N	0500-0600	81	36.4%	16.0%	0.0%	3.7%	1.3%	1.2%	2.3%	0.9%	0.0%	0.1%	0.4%	0.7%	0.5%	1.0%	0.0%	0.0%	3.1%	32.4%	0.0%	100.0%	
Road 42	42	46.2	N	0600-0700	63	31.8%	16.0%	0.0%	4.7%	1.7%	1.4%	2.7%	0.9%	0.0%	0.1%	0.4%	0.7%	0.5%	1.0%	0.0%	0.0%	3.1%	32.4%	0.0%	100.0%	
Road 42	42	40.4	N	0700-0800	337	36.2%	15.8%	0.0%	4.4%	1.6%	1.4%	2.7%	1.0%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	0.0%	0.0%	3.7%	30.0%	0.0%	100.0%	
Road 42	42	39.7	N	0800-0900	375	42.1%	13.5%	0.0%	1.8%	1.4%	2.7%	0.8%	1.1%	0.6%	0.8%	0.8%	1.3%	0.0%	0.0%	0.0%	2.4%	27.1%	0.0%	100.0%		
Road 42	42	45.2	N	0900-1000	336	40.0%	13.5%	0.0%	1.8%	1.4%	2.7%	0.8%	1.1%	0.6%	0.8%	0.8%	1.3%	0.0%	0.0%	0.0%	2.4%	27.1%	0.0%	100.0%		
Road 42	42	41.0	N	1000-1100	295	32.9%	12.8%	0.0%	6.7%	2.4%	2.1%	4.2%	0.9%	0.0%	0.0%	0.4%	0.5%	0.4%	0.8%	0.0%	0.0%	1.0%	34.6%	0.0%	100.0%	
Road 42	42	50	41.3	N	1100-1200	284	32.7%	13.3%	0.0%	6.6%	2.4%	2.1%	4.0%	0.9%	0.1%	0.6%	0.3%	0.2%	0.5%	0.0%	0.0%	0.9%	35.8%	0.0%	100.0%	
Road 42	42	50	41.3	N	1200-1300	219	19.7%	7.8%	0.0%	6.6%	2.4%	2.1%	4.0%	0.9%	0.1%	0.6%	0.3%	0.2%	0.5%	0.0%	0.0%	0.9%	35.8%	0.0%	100.0%	
Road 42	42	42.1	N	1300-1400	239	18.8%	7.3%	0.0%	11.6%	4.2%	3.6%	7.1%	0.0%	0.0%	0.3%	0.3%	0.4%	0.4%	0.0%	0.0%	0.6%	44.6%	0.0%	100.0%		
Road 42	42	42.1	N	1400-1500	231	19.7%	8.0%	0.0%	10.7%	3.8%	3.6%	7.1%	0.0%	0.0%	0.3%	0.3%	0.4%	0.3%	0.0%	0.0%	0.7%	44.6%	0.0%	100.0%		
Road 42	42	50	42.0	N	1500-1600	235	19.6%	7.9%	0.0%	12.5%	4.5%	3.2%	6.2%	0.0%	0.0%	0.3%	0.3%	0.4%	0.3%	0.6%	0.0%	0.7%	43.6%	0.0%	100.0%	
Road 42	42	50	41.9	N	1600-1700	238	21.9%	10.3%	0.0%	10.3%	3.9%	3.2%	6.3%	0.0%	0.0%	0.3%	0.5%	0.3%	0.6%	0.0%	0.0%	1.0%	43.6%	0.0%	100.0%	
Road 42	42	42.0	N	1700-1800	249	26.3%	8.2%	0.0%	10.0%	3.6%	2.3%	4.5%	0.0%	0.0%	0.0%	0.4%	0.5%	0.3%	0.7%	0.0%	0.0%	2.3%	40.8%	0.0%	100.0%	
Road 42	42	50	42.1	N	1800-1900	250	34.6%	8.1%	0.0%	6.7%	2.4%	1.4%	2.8%	0.0%	0.0%	0.1%	0.6%	0.4%	0.9%	0.0%	0.0%	1.7%	40.2%	0.0%	100.0%	
Road 42	42	46.2	N	1900-2000	143	37.3%	14.3%	0.0%	4.8%	1.7%	1.4%	2.7%	0.9%	0.0%	0.1%	0.4%	0.7%	0.5%	1.0%	0.0%	0.0%	3.1%	32.4%	0.0%	100.0%	
Road 42	42	46.9	N	2000-2100	117	41.4%	17.6%	0.0%	7.2%	2.6%	1.6%	3.1%	0.0%	0.0%	0.1%	0.8%	0.4%	0.9%	0.0%	0.0%	0.7%	1.7%	22.8%	0.0%	100.0%	
Road 42	42	46.9	N	2100-2200	117	42.0%	17.4%	0.0%	7.1%	2.6%	1.7%	3.3%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.0%	0.9%	19.9%	22.8%	0.0%	100.0%	
Road 42	42	50	47.4	N	2200-2300	113	42.0%	17.4%	0.0%	7.1%	2.6%	1.7%	3.3%	0.0%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.0%	0.9%	19.9%	22.8%	0.0%	100.0%
Road 42	42	50	47.4	N	2300-0000	122	39.9%	17.4%	0.0%	5.9%	2.1%	1.5%	3.8%	0.0%	0.0%	0.1%	0.3%	0.2%	0.4%	0.0%	0.0%	1.7%	28.9%	0.0%	100.0%	

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters For AERMOD (Year 2043)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles <=10t	07 - Medium Goods Vehicles >10t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus<=6t	12 - Non-franchised Bus 6.4-15t	13 - Non-franchised Bus 15-24t	14 - Franchise d Bus Single Deck	15 - Franchise d Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total	
							PC	TAXI	LG3	LG4	LG5	HGV7	HGV9	FLB	PV4	PV5	NFB6	NFB7	NFB8	FBS0	FBS0	MC	HGV9	NFB9		
Road 45	45	80	80.0	N	0000-0100	446	57.6%	25.9%	0.0%	0.0%	1.3%	1.1%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	0.2%	2.9%	2.9%	0.0%	100.0%	
Road 45	45	80	80.0	N	0100-0200	290	56.7%	25.3%	0.0%	0.3%	1.4%	1.2%	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	2.9%	3.2%	0.0%	100.0%	
Road 45	45	80	80.0	N	0200-0300	212	55.7%	24.8%	0.0%	0.3%	1.2%	2.0%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	2.9%	3.2%	0.0%	100.0%	
Road 45	45	80	80.0	N	0300-0400	167	54.7%	24.3%	0.0%	0.4%	1.6%	1.4%	2.8%	0.0%	0.1%	0.4%	0.8%	0.5%	1.2%	0.0%	0.2%	2.9%	3.8%	0.7%	100.0%	
Road 45	45	80	80.0	N	0400-0500	183	53.7%	23.2%	0.1%	0.4%	1.8%	1.5%	3.0%	0.0%	0.1%	0.5%	0.9%	0.8%	1.3%	0.0%	0.2%	2.9%	4.2%	0.8%	100.0%	
Road 45	45	80	80.0	N	0500-0600	118	52.6%	23.2%	0.0%	0.3%	1.9%	1.6%	3.3%	0.0%	0.0%	0.6%	0.9%	0.8%	1.3%	0.0%	0.3%	2.9%	4.5%	0.8%	100.0%	
Road 45	45	80	80.0	N	0600-0700	681	51.6%	22.6%	0.1%	0.7%	2.0%	1.8%	3.5%	0.0%	0.1%	0.7%	1.1%	0.7%	1.6%	0.0%	0.2%	2.8%	4.8%	0.9%	100.0%	
Road 45	45	80	72.3	N	0700-0800	1375	50.6%	22.0%	0.1%	0.6%	2.2%	1.9%	3.7%	0.0%	0.1%	0.7%	1.2%	0.8%	1.8%	0.0%	0.2%	5.2%	1.0%	0.0%	100.0%	
Road 45	45	80	68.2	N	0800-0900	1593	56.4%	18.0%	0.0%	0.0%	0.0%	1.6%	3.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.3%	3.0%	0.0%	100.0%	
Road 45	45	80	72.8	N	0900-1000	1306	51.7%	18.8%	0.1%	0.3%	3.3%	2.5%	5.0%	0.0%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	0.2%	2.6%	2.0%	1.3%	100.0%	
Road 45	45	80	75.7	N	1000-1100	1128	49.0%	19.0%	0.1%	0.0%	3.6%	3.2%	6.2%	0.0%	0.1%	0.5%	0.8%	0.8%	1.2%	0.0%	0.2%	2.6%	1.5%	1.8%	100.0%	
Road 45	45	80	77.1	N	1100-1200	1069	48.9%	20.1%	0.0%	0.0%	3.6%	3.1%	6.3%	0.0%	0.0%	0.8%	0.7%	0.8%	1.2%	0.0%	0.2%	2.4%	1.4%	1.8%	100.0%	
Road 45	45	80	72.9	N	1200-1300	1243	47.5%	18.3%	0.0%	0.0%	3.6%	3.6%	7.0%	0.0%	0.1%	0.5%	0.8%	0.8%	1.2%	0.0%	0.3%	2.4%	1.4%	1.8%	100.0%	
Road 45	45	80	72.3	N	1300-1400	1267	45.9%	17.2%	0.1%	0.1%	4.3%	3.7%	7.2%	0.0%	0.1%	0.7%	0.7%	0.8%	1.0%	0.0%	0.3%	1.4%	1.9%	0.9%	100.0%	
Road 45	45	80	70.5	N	1400-1500	1354	45.9%	16.8%	0.0%	0.0%	4.3%	3.6%	7.4%	0.0%	0.0%	0.7%	0.8%	0.8%	1.0%	0.0%	0.3%	1.4%	1.9%	0.9%	100.0%	
Road 45	45	80	70.1	N	1500-1600	1384	45.6%	16.3%	0.0%	0.0%	4.3%	3.1%	6.1%	0.0%	0.0%	0.8%	0.9%	0.7%	1.4%	0.0%	0.3%	1.1%	1.6%	1.6%	100.0%	
Road 45	45	80	68.3	N	1600-1700	1479	48.3%	16.0%	0.1%	0.0%	3.4%	3.0%	5.9%	0.0%	0.1%	1.1%	1.4%	1.0%	2.2%	0.0%	0.4%	2.3%	1.5%	1.0%	100.0%	
Road 45	45	80	56.6	N	1700-1800	1684	16.6%	0.1%	0.5%	3.1%	1.9%	3.8%	0.0%	0.1%	0.8%	0.9%	0.8%	1.4%	0.0%	0.4%	0.3%	4.6%	0.0%	0.0%	100.0%	
Road 45	45	80	45.9	N	1800-1900	1856	63.9%	15.0%	0.0%	0.0%	3.1%	2.1%	4.9%	0.0%	0.1%	0.8%	1.1%	0.0%	0.7%	0.0%	0.3%	5.0%	0.0%	0.0%	100.0%	
Road 45	45	80	71.2	N	1900-2000	1478	62.4%	19.5%	0.0%	0.0%	4.1%	0.9%	1.9%	0.0%	0.0%	0.1%	0.9%	0.7%	1.0%	0.0%	0.3%	2.3%	0.5%	0.0%	100.0%	
Road 45	45	80	77.2	N	2000-2100	1155	57.1%	24.4%	0.0%	0.4%	1.5%	0.9%	1.8%	0.0%	0.0%	0.1%	0.8%	0.8%	1.2%	0.0%	0.1%	2.3%	0.5%	0.0%	100.0%	
Road 45	45	80	77.6	N	2100-2200	1146	58.7%	24.3%	0.0%	0.4%	1.5%	0.9%	1.8%	0.0%	0.0%	0.1%	0.4%	0.8%	1.2%	0.0%	0.1%	2.7%	0.5%	0.0%	100.0%	
Road 45	45	80	78.2	N	2200-2300	1115	58.2%	26.3%	0.0%	0.3%	1.2%	1.1%	2.1%	0.0%	0.0%	0.1%	0.4%	0.2%	0.5%	0.0%	0.3%	2.2%	0.5%	0.0%	100.0%	
Road 45	45	80	80.0	N	2300-0000	834	57.2%	25.8%	0.0%	0.3%	1.3%	1.2%	2.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.7%	0.0%	0.3%	2.5%	0.8%	0.0%	100.0%	
Road 46	46	80	80.0	N	0000-0100	202	59.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Road 46	46	80	80.0	N	0100-0200	131	58.0%	25.9%	0.0%	0.3%	1.3%	1.1%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	1.6%	3.3%	0.6%	100.0%	
Road 46	46	80	80.0	N	0200-0300	96	57.0%	25.4%	0.0%	0.3%	1.4%	1.2%	2.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	1.6%	3.6%	0.6%	100.0%	
Road 46	46	80	80.0	N	0300-0400	75	56.1%	24.9%	0.0%	0.3%	1.5%	1.3%	2.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.0%	0.0%	1.6%	3.9%	0.7%	100.0%	
Road 46	46	80	80.0	N	0400-0500	83	55.1%	24.3%	0.0%	0.4%	1.6%	1.4%	2.8%	0.0%	0.1%	0.5%	0.9%	0.8%	1.4%	0.0%	0.3%	1.6%	4.3%	0.7%	100.0%	
Road 46	46	80	80.0	N	0500-0600	143	54.1%	23.8%	0.1%	0.4%	1.8%	1.5%	3.0%	0.0%	0.1%	0.5%	1.0%	0.7%	1.5%	0.0%	0.3%	1.8%	4.6%	0.8%	100.0%	
Road 46	46	80	80.0	N	0600-0700	368	53.1%	23.2%	0.0%	0.3%	1.9%	1.6%	3.3%	0.0%	0.0%	0.6%	0.9%	0.8%	1.3%	0.0%	0.3%	2.1%	4.8%	0.8%	100.0%	
Road 46	46	80	80.0	N	0700-0800	618	52.0%	22.7%	0.1%	0.6%	2.0%	1.7%	3.4%	0.0%	0.0%	0.8%	1.2%	0.8%	1.8%	0.0%	0.6%	5.3%	0.9%	0.0%	100.0%	
Road 46	46	80	80.0	N	0800-0900	717	58.0%	18.5%	0.1%	0.6%	2.2%	1.7%	3.3%	0.0%	0.1%	0.8%	1.1%	0.8%	1.7%	0.0%	0.4%	3.4%	0.9%	0.0%	100.0%	
Road 46	46	80	80.0	N	0900-1000	584	53.1%	19.4%	0.0%	0.6%	3.1%	2.4%	4.6%	0.0%	0.1%	0.9%	0.9%	0.8%	1.4%	0.0%	0.5%	2.1%	2.2%	0.0%	100.0%	
Road 46	46	80	80.0	N	1000-1100	503	50.9%	19.8%	0.0%	0.3%	3.0%	2.8%	5.0%	0.0%	0.0%	0.8%	0.8%	0.9%	1.5%	0.0%	0.5%	1.5%	1.3%	0.0%	100.0%	
Road 46	46	80	80.0	N	1100-1200	476	50.7%	20.9%	0.1%	0.3%	3.3%	2.9%	5.7%	0.0%	0.1%	0.9%	0.5%	0.4%	0.8%	0.0%	0.5%	1.4%	1.5%	0.0%	100.0%	
Road 46	46	80	80.0	N	1200-1300	632	45.5%	17.5%	0.1%	0.1%	4.2%	4.2%	8.2%	0.0%	0.1%	0.7%	0.8%	0.5%	1.2%	0.0%	0.8%	1.3%	2.1%	0.0%	100.0%	
Road 46	46	80	80.0	N	1300-1400	648	43.7%	16.8%	0.0%	0.0%	4.3%	3.7%	8.4%	0.0%	0.0%	0.7%	0.8%	0.7%	1.0%	0.0%	0.8%	1.3%	2.1%	0.0%	100.0%	
Road 46	46	80	80.0	N	1400-1500	690	43.9%	17.8%	0.1%	0.2%	4.4%	4.1%	8.2%	0.0%	0.1%	0.8%	0.9%	0.8%	1.3%	0.0%	1.0%	1.7%	2.1%	0.0%	100.0%	
Road 46	46	80	80.0	N	1500-1600	706	43.6%	17.5%	0.1%	0.2%	5.1%	3.6%	7.1%	0.0%	0.1%	0.8%	0.9%	0.8%	1.4%	0.0%	1.7%	1.6%	1.8%	0.0%	100.0%	
Road 46	46	80	80.0	N	1600-1700	747	46.1%	16.1%	0.0%	0.1%	5.2%	4.0%	6.9%	0.0%	0.0%	1.1%	1.2%	1.2%	2.2%	0.0%	2.0%	1.8%	2.0%	0.0%	100.0%	
Road 46	46	80	80.0	N	1700-1800	842	51.9%	16.2%	0.1%	0.1%	3.6%	2.3%	4.5%	0.0%	0.1%	0.7%	0.9%	0.6%	1.4%	0.0%	1.9%	4.5%	1.2%	0.0%	100.0%	
Road 46	46	80	80.0	N	1800-1900	913	63.3%	14.9%	0.1%	0.3%	2.3%	1.3%	2.6%	0.0%	0.0%	0.1%	1.1%	0.8%	1.7%	0.0%	2.0%	3.0%	0.7%	0.0%	100.0%	
Road 46	46	80	80.0	N	1900-2000	732	62.2%	19.5%	0.0%	0.0%	2.3%	1.3%	2.6%	0.0%	0.0%	0.1%	0.7%	0.8%	1.7%	0.0%	2.3%	2.7%	0.7%	0.0%	100.0%	
Road 46	46	80	80.0	N	2000-2100	562	57.4%	24.4%	0.1%	0.5%	1.8%	1.1%	2.2%	0.0%	0.0%	0.1%	0.8%	0.8%	1.2%	0.0%	2.4%	2.3%	0.6%	0.0%	100.0%	
Road 46	46	80	80.0	N	2100-2200	561	58.4%	24.2%	0.1%	0.5%	1.9%	1.2%	2.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	2.1%	2.7%	0.6%	0.0%	100.0%	
Road 46	46	80	80.0	N	2200-2300	544	58.1%	26.3%	0.0%	0.0%	1.4%	1.2%	2.4%	0.0%	0.0%	0.1%	0.4%	0.3%	0.7%	0.0%	2.1%	2.7%	0.6%	0.0%	100.0%	
Road 46	46	80	80.0	N	2300-0000	468	57.0%	25.7%	0.0%	0.4%	1.6%	1.4%	2.8%	0.0%	0.0%	0.1%	0.4%	0.3%	0.7%	0.0%	2.2%	2.5%	0.7%	0.0%	100.0%	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters For AERMOD (Year 2043)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles <=10t	07 - Medium Goods Vehicles >10t	08 - Public Light Bus	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus<=6t	12 - Non-franchised Bus 6.4 - 15t	13 - Non-franchised Bus 15-24t	14 - Franchise d Bus Single Deck	15 - Franchise d Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total	
Road 49	49	50	43.2	N	0000-0100	321	57.7%	25.9%	0.0%	2.3%	0.8%	0.7%	1.4%	0.0%	0.0%	0.2%	0.0%	0.8%	0.8%	0.9%	2.9%	0.4%	0.4%	0.0%	100.0%	
Road 49	50	45.6	N	0100-0200	268	56.9%	25.5%	0.0%	2.5%	0.9%	0.8%	1.5%	0.0%	0.0%	0.3%	0.6%	0.4%	0.9%	0.0%	5.9%	3.2%	0.4%	0.4%	0.0%	100.0%	
Road 49	50	46.8	N	0200-0300	212	56.2%	24.2%	0.0%	2.7%	0.4%	2.7%	1.4%	0.0%	0.0%	0.2%	0.1%	1.0%	0.1%	0.0%	5.9%	3.2%	0.4%	0.4%	0.0%	100.0%	
Road 49	50	47.4	N	0300-0400	119	55.3%	24.5%	0.0%	3.0%	1.1%	0.9%	1.8%	0.0%	0.0%	0.1%	0.4%	0.8%	0.8%	1.2%	0.0%	5.9%	3.9%	0.5%	0.0%	100.0%	
Road 49	50	47.2	N	0400-0500	130	54.5%	24.1%	0.0%	3.2%	1.2%	1.0%	2.0%	0.0%	0.1%	0.5%	0.9%	0.8%	1.4%	0.0%	5.9%	4.2%	0.5%	0.0%	100.0%		
Road 49	50	45.9	N	0500-0600	235	56.0%	23.6%	0.0%	3.1%	1.0%	1.2%	2.3%	0.0%	0.1%	0.5%	0.8%	1.2%	0.0%	1.5%	0.0%	5.9%	4.2%	0.5%	0.0%	100.0%	
Road 49	50	39.7	N	0600-0700	480	52.7%	23.1%	0.0%	3.7%	1.3%	1.2%	2.3%	0.0%	0.1%	0.7%	1.1%	0.8%	1.7%	0.0%	5.8%	4.9%	0.6%	0.0%	100.0%		
Road 49	50	33.7	N	0700-0800	967	51.8%	22.6%	0.0%	4.0%	1.4%	1.2%	2.4%	0.0%	0.1%	0.8%	1.2%	0.8%	1.9%	0.0%	5.8%	5.3%	0.6%	0.0%	100.0%		
Road 49	50	31.0	N	0800-0900	1415	51.2%	21.5%	0.0%	4.3%	1.6%	1.3%	2.5%	0.0%	0.1%	0.9%	1.3%	0.8%	2.1%	0.0%	5.8%	5.4%	0.6%	0.0%	100.0%		
Road 49	50	34.4	N	0900-1000	864	54.5%	19.8%	0.1%	6.3%	2.3%	1.7%	3.4%	0.0%	0.1%	0.5%	0.9%	0.6%	1.4%	0.0%	5.5%	2.1%	0.9%	0.0%	100.0%		
Road 49	50	35.8	N	1000-1100	762	52.3%	20.3%	0.1%	6.8%	2.4%	2.2%	4.3%	0.0%	0.1%	0.6%	0.9%	0.6%	1.3%	0.0%	5.5%	1.6%	1.1%	0.0%	100.0%		
Road 49	50	36.4	N	1100-1200	724	52.0%	21.4%	0.1%	6.8%	2.4%	2.1%	4.2%	0.0%	0.1%	0.9%	0.5%	0.4%	0.8%	0.0%	5.7%	1.9%	1.1%	0.0%	100.0%		
Road 49	50	37.0	N	1200-1300	582	52.0%	19.8%	0.0%	5.8%	1.9%	2.5%	4.1%	0.0%	0.1%	0.8%	0.5%	0.4%	0.8%	0.0%	5.7%	1.9%	1.1%	0.0%	100.0%		
Road 49	50	37.2	N	1300-1400	603	51.6%	19.9%	0.1%	7.0%	2.5%	2.2%	4.3%	0.0%	0.1%	0.7%	0.7%	0.5%	1.1%	0.0%	6.6%	1.6%	1.1%	0.0%	100.0%		
Road 49	50	37.8	N	1400-1500	652	51.0%	20.6%	0.1%	6.1%	2.2%	2.1%	4.1%	0.0%	0.1%	0.9%	1.0%	0.7%	1.6%	0.0%	6.5%	1.9%	1.1%	0.0%	100.0%		
Road 49	50	39.5	N	1500-1600	7154	50.9%	19.9%	0.0%	7.5%	2.9%	3.0%	3.9%	0.0%	0.1%	0.9%	0.9%	0.9%	1.6%	0.0%	6.0%	2.0%	1.1%	0.0%	100.0%		
Road 49	50	36.2	N	1600-1700	726	52.7%	18.2%	0.1%	5.5%	2.0%	1.7%	3.4%	0.0%	0.2%	1.2%	1.5%	1.1%	2.4%	0.0%	6.8%	2.5%	0.9%	0.0%	100.0%		
Road 49	50	35.1	N	1700-1800	849	55.5%	17.6%	0.0%	4.7%	1.7%	1.1%	2.1%	0.0%	0.1%	0.8%	1.0%	0.7%	1.5%	0.0%	6.7%	4.9%	0.6%	0.0%	100.0%		
Road 49	50	32.5	N	1800-1900	2872	52.0%	20.5%	0.0%	2.8%	1.1%	0.8%	1.5%	0.0%	0.1%	0.5%	0.7%	0.5%	3.1%	0.0%	6.3%	2.3%	0.3%	0.0%	100.0%		
Road 49	50	36.1	N	1900-2000	786	62.8%	19.7%	0.0%	2.1%	0.8%	0.5%	1.0%	0.0%	0.0%	0.1%	0.9%	1.4%	0.0%	7.7%	2.3%	0.3%	0.0%	100.0%			
Road 49	50	38.2	N	2000-2100	632	57.9%	24.6%	0.0%	2.2%	0.8%	0.5%	1.0%	0.0%	0.0%	0.1%	0.8%	0.6%	1.2%	0.0%	7.3%	2.3%	0.3%	0.0%	100.0%		
Road 49	50	38.4	N	2100-2200	606	59.5%	24.0%	0.0%	2.3%	0.8%	0.5%	1.0%	0.0%	0.1%	0.8%	0.5%	0.6%	1.4%	0.0%	6.9%	2.7%	0.3%	0.0%	100.0%		
Road 49	50	38.5	N	2200-2300	594	54.4%	26.4%	0.0%	1.7%	0.6%	0.6%	1.1%	0.0%	0.0%	0.1%	0.4%	0.2%	0.5%	0.1%	7.3%	2.2%	0.3%	0.0%	100.0%		
Road 49	50	40.5	N	2300-0000	442	57.7%	26.0%	0.0%	2.0%	0.7%	0.6%	1.2%	0.0%	0.0%	0.1%	0.4%	0.3%	0.7%	0.1%	7.3%	2.6%	0.3%	0.0%	100.0%		
Road 50	50	46.8	N	0000-0100	227	56.2%	24.2%	0.0%	1.9%	0.4%	1.8%	1.2%	0.0%	0.0%	0.1%	0.4%	0.4%	0.4%	0.0%	1.4%	0.1%	0.1%	0.0%	100.0%		
Road 50	50	49.5	N	0100-0200	17	55.3%	11.3%	0.0%	20.2%	7.2%	6.4%	12.5%	0.0%	0.0%	0.1%	0.3%	0.2%	0.4%	0.0%	0.0%	1.4%	14.5%	0.0%	100.0%		
Road 50	50	49.6	N	0200-0300	13	23.0%	10.2%	0.0%	20.3%	7.3%	6.4%	12.6%	0.0%	0.0%	0.1%	0.3%	0.2%	0.4%	0.0%	0.0%	1.5%	17.4%	0.0%	100.0%		
Road 50	50	49.7	N	0300-0400	11	21.0%	9.3%	0.2%	20.5%	7.3%	6.4%	12.6%	0.0%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	0.0%	1.5%	20.0%	0.0%	100.0%		
Road 50	50	49.8	N	0400-0500	13	23.0%	10.2%	0.0%	20.3%	7.3%	6.4%	12.6%	0.0%	0.0%	0.1%	0.3%	0.2%	0.4%	0.0%	0.0%	1.4%	17.4%	0.0%	100.0%		
Road 50	50	49.4	N	0500-0600	21	20.3%	8.9%	0.2%	20.3%	8.6%	7.5%	14.7%	0.0%	0.0%	0.2%	0.2%	0.4%	0.3%	0.6%	0.0%	0.0%	1.7%	12.7%	0.0%	100.0%	
Road 50	50	49.7	N	0600-0700	45	20.1%	8.8%	0.3%	25.8%	9.3%	8.1%	15.9%	0.0%	0.0%	0.4%	0.3%	0.6%	0.0%	0.0%	1.9%	8.3%	0.3%	0.0%	100.0%		
Road 50	50	47.5	N	0700-0800	88	20.1%	8.8%	0.3%	25.8%	9.3%	8.1%	15.9%	0.0%	0.0%	0.4%	0.3%	0.6%	0.0%	0.0%	1.9%	8.3%	0.3%	0.0%	100.0%		
Road 50	50	46.6	N	0800-0900	115	20.2%	6.5%	0.3%	27.4%	9.9%	7.7%	15.1%	0.0%	0.0%	0.3%	0.4%	0.3%	0.6%	0.0%	0.0%	1.2%	10.2%	0.0%	100.0%		
Road 50	50	46.5	N	0900-1000	117	14.9%	5.4%	0.3%	31.1%	11.2%	8.5%	16.6%	0.0%	0.0%	0.1%	0.3%	0.2%	0.4%	0.0%	0.0%	0.6%	10.5%	0.0%	100.0%		
Road 50	50	48.5	N	1000-1100	122	16.8%	5.2%	0.3%	30.2%	10.8%	10.2%	16.8%	0.0%	0.0%	0.1%	0.2%	0.2%	0.4%	0.0%	0.0%	0.6%	10.5%	0.0%	100.0%		
Road 50	50	46.7	N	1100-1200	106	12.7%	5.2%	0.3%	30.2%	10.8%	9.4%	16.8%	0.0%	0.0%	0.2%	0.1%	0.1%	0.2%	0.0%	0.0%	0.4%	11.7%	0.0%	100.0%		
Road 50	50	48.4	N	1200-1300	49	4.5%	1.7%	0.3%	30.0%	10.8%	10.8%	21.1%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.1%	20.4%	0.0%	100.0%	
Road 50	50	48.2	N	1300-1400	54	4.5%	1.8%	0.3%	33.0%	11.4%	10.8%	20.9%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.1%	20.4%	0.0%	100.0%	
Road 50	50	48.2	N	1400-1500	53	4.3%	1.7%	0.3%	31.4%	11.3%	10.6%	20.9%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.2%	19.0%	0.0%	100.0%	
Road 50	50	48.2	N	1500-1600	55	4.2%	1.7%	0.4%	35.8%	12.8%	9.1%	17.8%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.2%	17.7%	0.0%	100.0%	
Road 50	50	48.4	N	1600-1700	52	5.3%	2.3%	0.3%	31.9%	12.8%	9.1%	17.8%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.2%	17.7%	0.0%	100.0%	
Road 50	50	48.4	N	1700-1800	48	4.8%	2.1%	0.4%	34.8%	12.9%	9.9%	15.5%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.2%	0.0%	0.0%	0.6%	18.9%	0.0%	100.0%	
Road 50	50	49.8	N	1800-1900	37	11.9%	2.8%	0.3%	30.8%	11.1%	6.4%	12.6%	0.0%	0.0%	0.0%	0.2%	0.1%	0.1%	0.3%	0.0%	0.0%	0.6%	22.8%	0.0%	100.0%	
Road 50	50	49.3	N	1900-2000	22	15.6%	4.9%	0.3%	31.6%	11.3%	7.5%	14.8%	0.0%	0.0%	0.0%	0.2%	0.2%	0.4%	0.0%	0.0%	0.6%	12.5%	0.0%	100.0%		
Road 50	50	49.5	N	2000-2100	18	13.8%	3.1%	0.3%	32.1%	11.3%	12.1%	13.8%	0.0%	0.0%	0.0%	0.2%	0.2%	0.4%	0.0%	0.0%	0.6%	12.5%	0.0%	100.0%		
Road 50	50	49.4	N	2100-2200	18	13.7%	5.7%	0.3%	31.9%	11.5%	7.3%	14.4%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.6%	14.1%	0.0%	100.0%		
Road 50	50	49.5	N	2200-2300	16	14.8%	6.7%	0.3%	26.7%	8.6%	8.5%	16.7%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.6%	15.9%	0.0%	100.0%		
Road 50	50	49.7	N	2300-0000	17	16.8%	6.7%	0.3%	26.7%	8.6%	8.5%	16.7%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.0%	0.6%	15.9%	0.0%	100.0%		

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters For AERMOD (Year 2043)

Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles >15t	07 - Medium Goods Vehicles >24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchised Bus <=4t	12 - Non-franchised Bus 4.1-15t	13 - Non-franchised Bus 15-24t	14 - Franchise d Bus Single Deck	15 - Franchise d Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Bus >24t	Total
							PC	TAXI	LGV4	LGV6	HGV7	HGV8	FLB	PV4	PV6	NFB6	NFB7	NFB8	FBS0	FBS1	MC	HGV9	NFB9		
Road 53	53	50	28.2	N	0000-0100	26	23.7%	10.6%	0.0%	16.2%	5.8%	5.1%	10.1%	23.6%	0.0%	0.1%	0.2%	0.2%	0.3%	0.0%	1.2%	2.6%	0.0%	100.0%	
Road 53	53	50	28.8	N	0100-0200	17	22.4%	10.0%	0.2%	17.2%	6.2%	5.4%	10.7%	23.0%	0.0%	0.1%	0.2%	0.2%	0.4%	0.0%	0.3%	1.3%	2.8%	0.0%	100.0%
Road 53	53	50	29.0	N	0200-0300	13	21.3%	9.5%	0.2%	18.1%	6.5%	5.7%	11.2%	22.4%	0.0%	0.1%	0.3%	0.2%	0.4%	0.0%	0.3%	1.3%	2.9%	0.0%	100.0%
Road 53	53	50	29.2	N	0300-0400	11	20.2%	9.0%	0.2%	18.9%	6.8%	5.9%	11.7%	21.8%	0.0%	0.2%	0.3%	0.2%	0.4%	0.0%	0.0%	1.4%	3.1%	0.0%	100.0%
Road 53	53	50	29.1	N	0400-0500	12	19.1%	8.5%	0.2%	19.7%	7.1%	6.2%	12.2%	21.3%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	0.0%	1.5%	3.2%	0.0%	100.0%
Road 53	53	50	28.4	N	0500-0600	22	18.1%	8.0%	0.2%	20.4%	7.3%	6.4%	12.6%	20.8%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	0.0%	1.5%	3.3%	0.0%	100.0%
Road 53	53	50	28.3	N	0600-0700	48	17.2%	7.5%	0.2%	21.1%	7.6%	6.6%	13.0%	20.3%	0.0%	0.2%	0.4%	0.2%	0.5%	0.0%	0.0%	1.6%	3.4%	0.0%	100.0%
Road 53	53	50	24.5	N	0700-0800	101	16.3%	7.1%	0.2%	21.8%	7.7%	6.8%	13.4%	19.8%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.0%	1.7%	3.5%	0.0%	100.0%
Road 53	53	50	24.3	N	0800-0900	114	18.7%	6.0%	0.3%	24.3%	8.7%	6.8%	13.4%	18.8%	0.0%	0.3%	0.4%	0.3%	0.6%	0.0%	0.0%	1.1%	3.5%	0.0%	100.0%
Road 53	53	50	24.2	N	0900-1000	117	13.7%	5.0%	0.3%	27.6%	9.9%	7.5%	14.8%	16.0%	0.0%	0.1%	0.2%	0.2%	0.4%	0.0%	0.0%	0.5%	3.9%	0.0%	100.0%
Road 53	53	50	24.3	N	1000-1100	119	11.9%	4.6%	0.3%	27.2%	9.8%	8.6%	17.0%	14.9%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.4%	4.4%	0.0%	100.0%	
Road 53	53	50	24.4	N	1100-1200	104	11.9%	4.9%	0.3%	27.1%	9.7%	8.5%	16.7%	15.6%	0.0%	0.2%	0.1%	0.1%	0.2%	0.0%	0.0%	4.4%	0.0%	100.0%	
Road 53	53	50	24.0	N	1200-1300	131	24.1%	9.3%	0.2%	22.1%	7.9%	7.8%	15.6%	6.3%	0.0%	0.4%	0.3%	0.6%	0.0%	0.0%	0.7%	4.1%	0.0%	100.0%	
Road 53	53	50	23.9	N	1300-1400	139	22.3%	8.6%	0.3%	23.1%	9.0%	7.8%	15.3%	5.5%	0.0%	0.3%	0.3%	0.2%	0.5%	0.0%	0.0%	0.7%	4.0%	0.0%	100.0%
Road 53	53	50	23.9	N	1400-1500	144	23.3%	9.4%	0.2%	23.1%	8.3%	7.8%	15.3%	5.9%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	0.0%	0.9%	4.0%	0.0%	100.0%
Road 53	53	50	23.8	N	1500-1600	148	22.9%	9.2%	0.3%	26.5%	9.0%	6.7%	13.2%	5.4%	0.1%	0.4%	0.5%	0.3%	0.7%	0.0%	0.0%	0.8%	3.5%	0.0%	100.0%
Road 53	53	50	23.8	N	1600-1700	147	26.0%	9.0%	0.2%	22.4%	8.9%	7.0%	13.7%	5.7%	0.1%	0.6%	0.8%	0.8%	1.2%	0.0%	0.0%	1.2%	3.6%	0.0%	100.0%
Road 53	53	50	23.9	N	1700-1800	153	31.9%	9.8%	0.2%	21.0%	7.9%	5.0%	3.7%	6.6%	0.1%	0.5%	0.8%	0.4%	0.8%	0.0%	0.0%	2.7%	2.5%	0.0%	100.0%
Road 53	53	50	24.2	N	1800-1900	143	44.4%	10.4%	0.2%	15.8%	5.7%	3.3%	6.5%	7.3%	0.0%	0.1%	0.8%	0.5%	1.2%	0.0%	0.0%	2.1%	1.7%	0.0%	100.0%
Road 53	53	50	24.6	N	1900-2000	109	45.3%	14.2%	0.1%	12.5%	4.5%	3.0%	5.9%	8.9%	0.0%	0.1%	0.7%	0.5%	1.0%	0.0%	0.0%	1.7%	1.5%	0.0%	100.0%
Road 53	53	50	24.9	N	2000-2100	88	41.3%	17.5%	0.1%	13.1%	4.7%	2.9%	5.7%	9.5%	0.0%	0.1%	0.6%	0.4%	0.9%	0.0%	0.0%	1.6%	1.5%	0.0%	100.0%
Road 53	53	50	24.9	N	2100-2200	86	41.9%	17.3%	0.1%	13.3%	4.8%	3.1%	6.0%	9.0%	0.0%	0.3%	0.2%	0.4%	0.4%	0.0%	0.0%	1.9%	1.6%	0.0%	100.0%
Road 53	53	50	25.0	N	2200-2300	81	43.1%	19.5%	0.1%	10.7%	3.8%	3.4%	6.7%	8.5%	0.0%	0.0%	0.3%	0.2%	0.4%	0.0%	0.0%	1.7%	1.7%	0.0%	100.0%
Road 53	53	50	25.1	N	2300-0000	62	41.4%	18.6%	0.1%	11.6%	4.2%	3.7%	7.2%	8.3%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.0%	1.8%	1.9%	0.0%	100.0%
Road 54	54	50	26.8	N	0000-0100	50	36.4%	16.3%	0.1%	12.4%	4.5%	3.9%	7.7%	13.5%	0.0%	0.1%	0.3%	0.2%	0.5%	0.0%	0.0%	1.8%	2.0%	0.0%	100.0%
Road 54	54	50	27.8	N	0100-0200	33	34.9%	15.6%	0.1%	13.3%	4.8%	4.2%	8.2%	13.3%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.0%	2.0%	2.2%	0.0%	100.0%
Road 54	54	50	28.3	N	0200-0300	25	33.4%	14.9%	0.1%	14.1%	5.1%	4.4%	8.7%	13.1%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.0%	2.1%	2.3%	0.0%	100.0%
Road 54	54	50	28.6	N	0300-0400	20	32.0%	14.2%	0.2%	14.9%	5.4%	4.7%	9.2%	12.9%	0.0%	0.3%	0.5%	0.3%	0.7%	0.0%	0.0%	2.3%	2.4%	0.0%	100.0%
Road 54	54	50	28.5	N	0400-0500	23	30.7%	13.6%	0.2%	15.7%	5.6%	4.9%	8.7%	12.7%	0.0%	0.3%	0.5%	0.3%	0.8%	0.0%	0.0%	2.4%	2.5%	0.0%	100.0%
Road 54	54	50	27.2	N	0500-0600	40	29.4%	12.9%	0.2%	16.5%	5.9%	5.2%	10.2%	12.6%	0.0%	0.3%	0.5%	0.4%	0.8%	0.0%	0.0%	2.5%	2.7%	0.0%	100.0%
Road 54	54	50	24.8	N	0600-0700	88	28.1%	12.3%	0.2%	17.2%	6.4%	6.4%	10.6%	12.4%	0.0%	0.4%	0.6%	0.4%	0.9%	0.0%	0.0%	2.6%	2.8%	0.0%	100.0%
Road 54	54	50	23.4	N	0700-0800	182	26.9%	11.7%	0.2%	17.9%	6.4%	5.6%	11.0%	12.2%	0.1%	0.4%	0.6%	0.4%	0.9%	0.0%	0.0%	2.7%	2.9%	0.0%	100.0%
Road 54	54	50	23.1	N	0800-0900	208	30.4%	9.7%	0.2%	19.7%	7.1%	5.5%	10.8%	9.6%	0.1%	0.4%	0.6%	0.4%	0.9%	0.0%	0.0%	1.8%	2.8%	0.0%	100.0%
Road 54	54	50	23.1	N	0900-1000	201	23.7%	8.6%	0.2%	23.7%	8.5%	6.5%	12.7%	10.3%	0.0%	0.2%	0.4%	0.3%	0.6%	0.0%	0.0%	0.9%	3.3%	0.0%	100.0%
Road 54	54	50	23.2	N	1000-1100	185	21.0%	8.2%	0.2%	23.9%	8.6%	7.6%	14.9%	9.8%	0.0%	0.2%	0.3%	0.2%	0.5%	0.0%	0.0%	0.8%	3.9%	0.0%	100.0%
Road 54	54	50	23.4	N	1100-1200	175	21.0%	8.6%	0.2%	23.8%	8.6%	7.4%	14.6%	10.2%	0.0%	0.4%	0.2%	0.1%	0.3%	0.0%	0.0%	0.6%	3.8%	0.0%	100.0%
Road 54	54	50	24.0	N	1200-1300	122	10.5%	7.2%	0.3%	28.4%	10.6%	10.5%	20.7%	6.7%	0.0%	0.2%	0.2%	0.4%	0.0%	0.0%	0.3%	5.4%	0.0%	100.0%	
Road 54	54	50	23.8	N	1300-1400	134	9.8%	3.8%	0.3%	32.6%	11.7%	10.1%	19.9%	5.7%	0.0%	0.1%	0.1%	0.2%	0.0%	0.0%	0.3%	5.2%	0.0%	100.0%	
Road 54	54	50	23.8	N	1400-1500	135	10.4%	4.2%	0.3%	30.6%	11.0%	10.3%	20.3%	6.3%	0.0%	0.2%	0.2%	0.1%	0.3%	0.0%	0.0%	0.4%	5.3%	0.0%	100.0%
Road 54	54	50	23.8	N	1500-1600	140	10.2%	4.1%	0.4%	35.0%	12.6%	8.9%	17.4%	5.7%	0.0%	0.2%	0.2%	0.1%	0.3%	0.0%	0.0%	0.4%	4.5%	0.0%	100.0%
Road 54	54	50	23.8	N	1600-1700	134	12.1%	4.2%	0.3%	30.7%	11.0%	9.6%	18.9%	6.3%	0.0%	0.3%	0.4%	0.2%	0.5%	0.0%	0.0%	0.5%	4.0%	0.0%	100.0%
Road 54	54	50	24.0	N	1700-1800	130	15.7%	4.9%	0.3%	32.1%	11.3%	7.3%	14.3%	7.7%	0.0%	0.2%	0.3%	0.2%	0.4%	0.0%	0.0%	1.3%	3.7%	0.0%	100.0%
Road 54	54	50	24.6	N	1800-1900	105	25.5%	6.0%	0.3%	26.7%	9.8%	5.6%	10.9%	10.0%	0.0%	0.4%	0.3%	0.7%	0.0%	0.0%	0.0%	1.2%	2.9%	0.0%	100.0%
Road 54	54	50	24.9	N	1900-2000	76	27.9%	8.6%	0.2%	23.5%	10.6%	6.2%	10.5%	10.7%	0.0%	0.4%	0.3%	0.6%	0.0%	0.0%	0.0%	1.9%	2.7%	0.0%	100.0%
Road 54	54	50	25.7	N	2000-2100	61	24.7%	10.0%	0.2%	23.1%	9.3%	5.1%	10.0%	13.4%	0.0%	0.0%	0.3%	0.2%	0.5%	0.0%	0.0%	1.0%	2.6%	0.0%	100.0%
Road 54	54	50	25.6	N	2100-2200	61	24.9%	10.3%	0.2%	23.3%	8.4%	5.4%	10.5%	12.6%	0.0%	0.0%	0.2%	0.1%	0.3%	0.0%	0.0%	1.1%	2.7%	0.0%	100.0%
Road 54	54	50	26.0	N	2200-2300	56	26.5%	12.0%	0.2%	16.3%	6.9%	6.1%	12.6%	12.3%	0.0%	0.0%	0.2%	0.1%	0.2%	0.0%	0.0%	1.0%	3.1%	0.0%	100.0%
Road 54	54	50	26.8	N	2300-0000	44	24.2%	11.1%	0.2%	20.5%	7.3%	6.5%	12.7%	11.8%	0.0%	0.1%	0.2%	0.1%	0.3%	0.0%	0.0%	1.1%	3.3%	0.0%	100.0%

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Traffic Data / Modeling Parameters For AERMOD (Year 2043)

Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Broad Brush Approach (Y/N)	Hour	Total Vehicles (Veh/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <=2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles >15t	07 - Medium Goods Vehicles >24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-Franchised Bus<=4t	12 - Non-Franchised Bus 4.1-15t	13 - Non-Franchised Bus 15-24t	14 - Franchise d Bus Single Deck	15 - Franchise d Bus Double Deck	16 - Motorcycle	17 - Heavy Goods Vehicles >24t	18 - Non-Franchised Bus >24t	Total
							PC	TAXI	LGV3	LGV4	LGV6	HGV7	HGV8	FLB	PV4	PV6	NFB6	NFB7	NFB8	FBS0	FBS1	MC	HGV9	NFB9	
Road 103	103	80	80.0	N	0000-0100	952	57.3%	25.7%	0.1%	4.9%	1.6%	1.6%	3.9%	0.0%	0.0%	0.2%	0.5%	0.4%	0.0%	0.0%	2.9%	0.9%	0.0%	100.0%	
Road 103	103	80	80.0	N	0100-0200	621	56.2%	28.1%	0.1%	5.4%	1.9%	1.7%	3.3%	0.0%	0.0%	0.3%	0.6%	0.4%	0.0%	0.0%	3.2%	0.9%	0.0%	100.0%	
Road 103	103	80	80.0	N	0200-0300	455	55.0%	24.5%	0.1%	5.8%	2.1%	1.8%	3.6%	0.0%	0.0%	0.3%	0.7%	0.5%	1.1%	0.0%	0.5%	3.5%	0.9%	0.0%	100.0%
Road 103	103	80	80.0	N	0300-0400	361	53.8%	23.9%	0.1%	6.3%	2.3%	1.9%	3.2%	0.0%	0.0%	0.4%	0.8%	0.6%	1.3%	0.0%	0.3%	3.8%	0.9%	0.0%	100.0%
Road 103	103	80	80.0	N	0400-0500	397	52.7%	23.3%	0.1%	6.8%	2.4%	2.1%	4.2%	0.0%	0.1%	0.5%	0.9%	0.9%	1.3%	0.0%	0.4%	4.1%	1.1%	0.0%	100.0%
Road 103	103	80	80.0	N	0500-0600	580	51.5%	22.6%	0.1%	7.2%	2.6%	2.3%	4.5%	0.0%	0.1%	0.6%	0.9%	0.7%	1.4%	0.0%	0.4%	4.4%	1.2%	0.0%	100.0%
Road 103	103	80	80.0	N	0600-0700	1494	50.3%	22.0%	0.1%	7.7%	2.8%	2.4%	4.9%	0.0%	0.1%	0.8%	1.0%	0.7%	1.6%	0.0%	0.4%	4.7%	1.2%	0.0%	100.0%
Road 103	103	71.1	80.0	N	0700-0800	2069	50.1%	21.4%	0.1%	8.2%	3.0%	2.7%	5.0%	0.0%	0.1%	0.9%	1.1%	0.8%	1.7%	0.0%	0.5%	5.0%	1.3%	0.0%	100.0%
Road 103	103	61.7	80.0	N	0800-0900	3505	54.4%	17.4%	0.1%	8.9%	3.2%	2.5%	4.9%	0.0%	0.1%	0.7%	1.1%	0.7%	1.6%	0.0%	0.3%	3.2%	1.3%	0.0%	100.0%
Road 103	103	70.8	78.0	N	0900-1000	2938	48.8%	17.7%	0.1%	12.2%	4.4%	3.3%	6.6%	0.0%	0.1%	0.5%	0.8%	0.8%	1.3%	0.0%	0.1%	1.9%	1.7%	0.0%	100.0%
Road 103	103	73.1	78.0	N	1000-1100	2568	45.7%	17.7%	0.1%	13.0%	4.5%	4.1%	8.1%	0.0%	0.1%	0.5%	0.7%	0.7%	1.3%	0.0%	0.1%	1.6%	1.9%	0.0%	100.0%
Road 103	103	75.1	80.0	N	1100-1200	2429	45.6%	18.8%	0.1%	13.0%	4.7%	4.1%	8.0%	0.0%	0.1%	0.8%	0.5%	0.3%	0.7%	0.0%	0.1%	1.3%	2.1%	0.0%	100.0%
Road 103	103	78.0	78.0	N	1200-1300	2454	46.8%	18.0%	0.1%	11.6%	4.2%	4.2%	8.2%	0.0%	0.1%	0.7%	0.8%	0.6%	1.2%	0.0%	0.1%	1.4%	2.1%	0.0%	100.0%
Road 103	103	73.0	78.0	N	1300-1400	2630	44.8%	18.0%	0.1%	12.7%	4.3%	4.3%	8.4%	0.0%	0.1%	0.8%	0.4%	0.3%	0.7%	0.0%	0.1%	1.4%	2.0%	0.0%	100.0%
Road 103	103	71.5	80.0	N	1400-1500	2789	45.2%	18.3%	0.1%	12.2%	4.4%	4.1%	8.1%	0.0%	0.1%	0.8%	0.9%	0.6%	1.4%	0.0%	0.1%	1.7%	2.1%	0.0%	100.0%
Road 103	103	70.0	78.0	N	1500-1600	2866	44.8%	18.0%	0.1%	14.1%	5.1%	3.6%	7.0%	0.0%	0.1%	0.8%	0.9%	0.8%	1.4%	0.0%	0.1%	1.6%	1.8%	0.0%	100.0%
Road 103	103	69.0	78.0	N	1600-1700	3311	47.2%	18.0%	0.1%	14.1%	5.1%	3.6%	7.0%	0.0%	0.1%	0.8%	1.1%	1.1%	1.2%	0.0%	0.1%	1.7%	1.8%	0.0%	100.0%
Road 103	103	67.5	80.0	N	1700-1800	3469	53.3%	16.6%	0.1%	10.0%	3.6%	2.3%	4.5%	0.0%	0.1%	0.8%	0.9%	0.8%	1.4%	0.0%	0.4%	1.8%	1.2%	0.0%	100.0%
Road 103	103	61.5	80.0	N	1800-1900	3705	64.8%	15.2%	0.1%	6.2%	2.2%	1.3%	2.6%	0.0%	0.1%	0.1%	0.1%	0.8%	1.7%	0.0%	0.0%	4.6%	1.2%	0.0%	100.0%
Road 103	103	73.8	80.0	N	1900-2000	2925	63.9%	20.0%	0.1%	4.8%	1.7%	1.1%	2.2%	0.0%	0.1%	0.1%	1.0%	0.7%	1.5%	0.0%	0.2%	2.4%	0.6%	0.0%	100.0%
Road 103	103	79.0	80.0	N	2000-2100	2272	54.0%	20.0%	0.1%	5.8%	1.7%	1.1%	2.4%	0.0%	0.1%	0.1%	0.8%	0.7%	1.5%	0.0%	0.2%	2.4%	0.6%	0.0%	100.0%
Road 103	103	79.5	80.0	N	2100-2200	2276	59.9%	24.8%	0.1%	5.2%	1.9%	1.2%	2.3%	0.0%	0.0%	0.1%	0.4%	0.3%	0.6%	0.0%	0.2%	2.7%	0.6%	0.0%	100.0%
Road 103	103	80.0	80.0	N	2200-2300	2204	59.6%	27.0%	0.0%	4.0%	1.4%	1.3%	2.5%	0.0%	0.0%	0.1%	0.4%	0.2%	0.5%	0.0%	0.2%	2.3%	0.7%	0.0%	100.0%
Road 103	103	80.0	80.0	N	2300-0000	1663	58.5%	25.5%	0.0%	3.8%	1.4%	1.4%	2.5%	0.0%	0.0%	0.1%	0.4%	0.2%	0.5%	0.0%	0.2%	2.6%	0.7%	0.0%	100.0%
Road 104	104	80.0	80.0	N	0000-0100	624	50.5%	22.7%	0.1%	9.2%	3.3%	2.9%	5.7%	0.0%	0.2%	0.2%	0.5%	0.3%	0.7%	0.0%	0.2%	2.5%	1.5%	0.0%	100.0%
Road 104	104	80.0	80.0	N	0100-0200	411	48.9%	21.9%	0.1%	9.9%	3.6%	3.1%	6.1%	0.0%	0.0%	0.2%	0.5%	0.4%	0.8%	0.0%	0.2%	2.8%	1.6%	0.0%	100.0%
Road 104	104	80.0	80.0	N	0200-0300	306	47.4%	21.1%	0.0%	9.3%	3.7%	3.4%	6.3%	0.0%	0.0%	0.2%	0.5%	0.4%	0.9%	0.0%	0.2%	3.0%	1.7%	0.0%	100.0%
Road 104	104	80.0	80.0	N	0300-0400	245	45.0%	20.4%	0.1%	11.4%	4.1%	3.6%	7.0%	0.0%	0.0%	0.4%	0.7%	0.5%	1.0%	0.0%	0.3%	3.2%	1.8%	0.0%	100.0%
Road 104	104	80.0	80.0	N	0400-0500	273	44.4%	19.6%	0.1%	12.1%	4.3%	3.8%	7.5%	0.0%	0.1%	0.4%	0.7%	0.5%	1.1%	0.0%	0.3%	3.4%	1.9%	0.0%	100.0%
Road 104	104	80.0	80.0	N	0500-0600	480	42.9%	18.9%	0.1%	12.8%	4.6%	4.0%	7.9%	0.0%	0.1%	0.5%	0.8%	0.5%	1.2%	0.0%	0.3%	3.7%	2.1%	0.0%	100.0%
Road 104	104	80.0	80.0	N	0600-0700	1042	41.4%	18.0%	0.1%	13.9%	4.8%	4.2%	8.3%	0.0%	0.1%	0.5%	0.8%	0.6%	1.3%	0.0%	0.3%	3.9%	2.2%	0.0%	100.0%
Road 104	104	77.8	80.0	N	0700-0800	2137	40.0%	17.4%	0.1%	14.2%	5.1%	4.4%	8.7%	0.0%	0.1%	0.6%	0.9%	0.8%	1.4%	0.0%	0.4%	4.1%	2.3%	0.0%	100.0%
Road 104	104	73.8	80.0	N	0800-0900	2563	44.1%	14.1%	0.2%	15.2%	5.5%	4.3%	8.4%	0.0%	0.1%	0.6%	0.9%	0.6%	1.3%	0.0%	0.2%	2.6%	2.2%	0.0%	100.0%
Road 104	104	75.0	80.0	N	0900-1000	2244	42.4%	17.0%	0.2%	16.4%	5.8%	5.4%	10.0%	0.0%	0.1%	0.6%	0.9%	0.8%	1.4%	0.0%	0.2%	2.8%	2.4%	0.0%	100.0%
Road 104	104	75.8	80.0	N	1000-1100	2025	33.6%	13.0%	0.2%	20.3%	7.3%	6.3%	12.7%	0.0%	0.0%	0.4%	0.6%	0.4%	0.8%	0.0%	0.1%	3.3%	0.0%	0.0%	100.0%
Road 104	104	78.1	80.0	N	1100-1200	1910	33.6%	13.9%	0.2%	20.3%	7.3%	6.3%	12.5%	0.0%	0.1%	0.6%	0.3%	0.2%	0.5%	0.0%	0.0%	0.9%	0.3%	0.0%	100.0%
Road 104	104	80.0	80.0	N	1200-1300	1914	33.3%	13.9%	0.2%	20.3%	7.3%	6.3%	12.6%	0.0%	0.1%	0.6%	0.3%	0.2%	0.5%	0.0%	0.0%	0.9%	0.3%	0.0%	100.0%
Road 104	104	80.0	80.0	N	1300-1400	1918	33.3%	13.9%	0.2%	20.3%	7.3%	6.3%	12.6%	0.0%	0.1%	0.6%	0.3%	0.2%	0.5%	0.0%	0.0%	0.9%	0.3%	0.0%	100.0%
Road 104	104	80.0	80.0	N	1400-1500	1398	48.7%	18.8%	0.1%	11.4%	4.1%	3.5%	7.0%	0.0%	0.1%	0.7%	0.7%	0.5%	1.1%	0.0%	0.1%	1.5%	0.8%	0.0%	100.0%
Road 104	104	80.0	80.0	N	1500-1600	1498	48.1%	19.7%	0.1%	10.1%	3.6%	3.4%	6.7%	0.0%	0.1%	0.8%	0.0%	0.7%	1.5%	0.0%	0.1%	1.8%	1.8%	0.0%	100.0%
Road 104	104	80.0	80.0	N	1600-1700	1532	48.3%	19.4%	0.1%	11.7%	4.2%	3.6%	5.8%	0.0%	0.1%	0.8%	1.0%	0.7%	1.5%	0.0%	0.1%	1.7%	1.5%	0.0%	100.0%
Road 104	104	80.0	80.0	N	1700-1800	1697	51.2%	19.7%	0.1%	12.9%	4.5%	3.9%	6.7%	0.0%	0.1%	0.8%	1.2%	0.9%	1.5%	0.0%	0.2%	2.4%	1.5%	0.0%	100.0%
Road 104	104	80.0	80.0	N	1800-1800	1814	56.1%	17.5%	0.1%	8.1%	2.9%	1.8%	3.6%	0.0%	0.1%	0.8%	1.0%	0.7%	1.5%	0.0%	0.0%	4.8%	0.9%	0.0%	100.0%
Road 104	104	80.0	80.0	N	1900-1900	2078	66.8%	15.7%	0.1%	5.0%	1.8%	1.0%	2.0%	0.0%	0.1%	1.2%	0.8%	1.8%	0.0%	0.0%	0.3%	3.2%	0.5%	0.0%	100.0%
Road 104	104	80.0	80.0	N	2000-2000	1651	59.0%	20.0%	0.1%	5.0%	1.8%	1.0%	2.0%	0.0%	0.1%	1.2%	0.8%	1.8%	0.0%	0.0%	0.3%	3.2%	0.5%	0.0%	100.0%
Road 104	104	80.0	80.0	N	2000-2100	1282	60.5%	25.7%	0.0%	4.0%	1.4%	0.9%	1.7%	0.0%	0.0%	0.1%	0.9%	0.6%	1.3%	0.0%	0.2%	2.4%	0.5%	0.0%	100.0%
Road 104	104	80.0	80.0	N	2100-2200	1283	61.5%	25.4%	0.0%	4.1%	1.5%	0.9%	1.8%	0.0%	0.0%	0.1%	0.4%	0.3%	0.7%	0.0%	0.2%	2.8%	0.5%	0.0%	100.0%
Road 104	104	80.0	80.0	N	2200-2300	1286	61.5%	25.4%	0.0%	4.1%	1.5%	0.9%	1.8%	0.0%	0.0%	0.1%	0.4%	0.3%	0.7%	0.0%	0.2%	2.8%	0.5%	0.0%	100.0%
Road 104	104	80.0	80.0	N	2300-0000	931	69.0%	27.0%	0.0%	3.5%	1.3%	1.1%	2.2%	0.0%	0.0%	0.1%	0.5%	0.3%	0.7%	0.0%	0.2%	2.7%	0.6%	0.0%	100.0%

Tsiang Yi North Underground Quarry Summary of Open Road Segments											
Road Name	Road ID	X coordinate of endpoint 1	Y coordinate of endpoint 1	X coordinate of endpoint 2	Y coordinate of endpoint 2	Grid (L,U)	Vehicle height	Release height	Slope	Width	Elevation
Road 100	006-4	820502.00	820502.00	820502.00	820502.00	11.37	0.0	0.0	0.0	14.3	6.0
Road 100	006-4	820502.00	820502.00	820502.00	820502.00	11.37	0.0	0.0	0.0	14.3	6.0
Road 100	006-4	820502.00	820502.00	820502.00	820502.00	11.37	0.0	0.0	0.0	14.3	6.0
Road 100	006-4	820502.00	820502.00	820502.00	820502.00	11.37	0.0	0.0	0.0	14.3	6.0

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Appendix 4.5 Calculation of Vehicular Emission

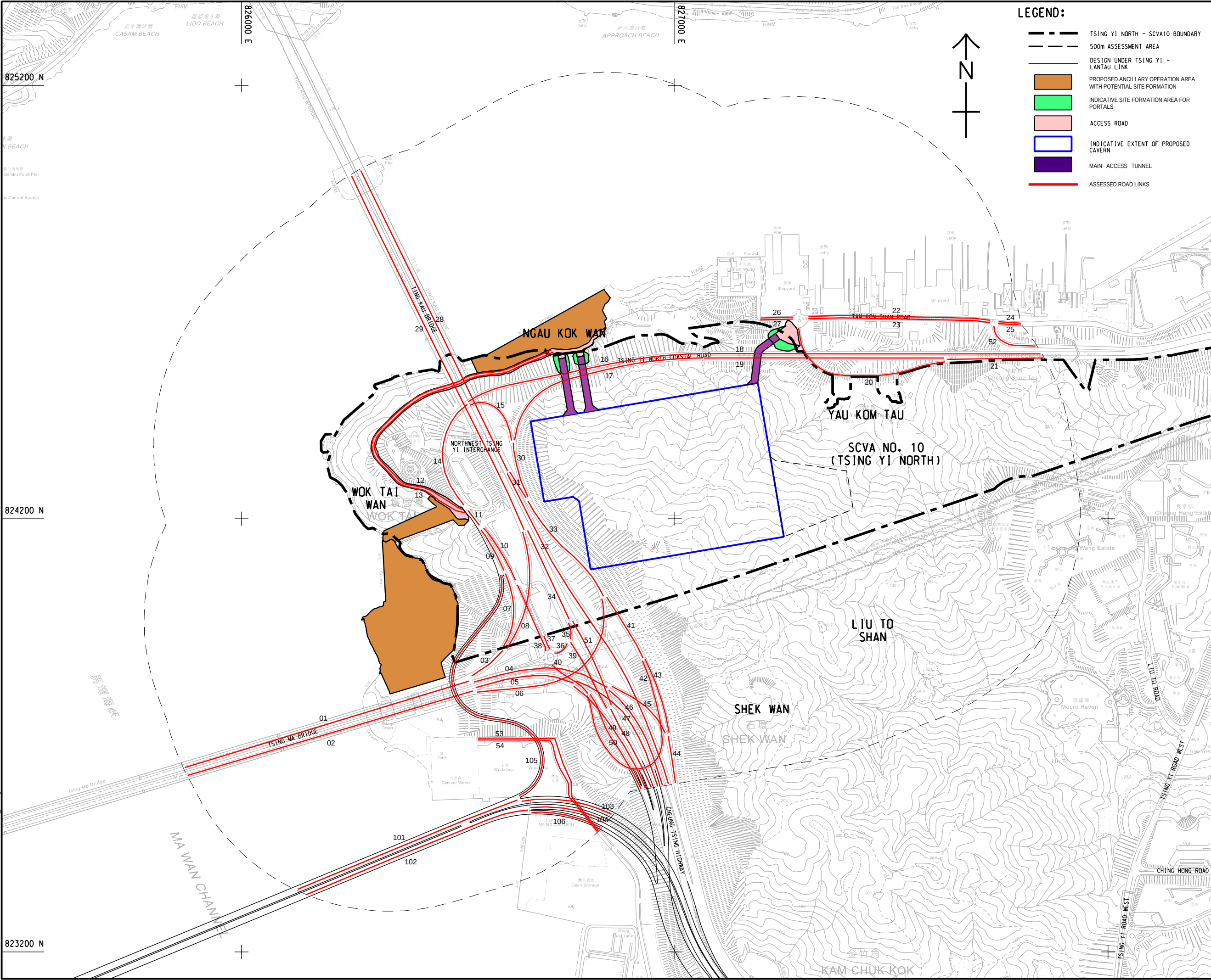
Tsiang Yi North Underground Quarry
Summary of Meteorological Data

Grid (L,U)	Hour	Annual Minimum												Month Minimum															
		Temperature	RH	January	February	March	April	May	June	July	August	September	October	November	December	Temperature	RH	January	February	March	April	May	June	July	August	September	October	November	December
30.36	0000-0100	14	29	15	38	18	62	18	72	21	73	22	71	26	72	28	72	27	71	26	40	23	42	19	45	14	29	23	
30.36	0100-0200	14	29	14	39	17	63	17	72	21	73	22	71	25	77	28	75	27	71	25	42	23	54	18	49	14	29	23	
30.36	0200-0300	13	29	14	42	17	64	16	71	20	72	21	70	26	77	28	77	27	74	25	42	22	54	18	49	13	29	23	
30.36	0300-0400	13	27	13	40	17	62	18	65	21	78	21	70	26	74	28	78	26	76	25	40	22	55	17	47	13	27	27	
30.36	0400-0500	13	27	13	40	17	61	17	59	21	75	21	63	25	74	28	76	27	76	24	40	22	55	17	48	13	27	27	
30.36	0500-0600	12	29	13	43	16	60	17	56	21	71	22	69	25	77	28	74	27	78	20	41	21	17	47	12	26	12	26	
30.36	0600-0700	12	27	13	46	17	63	17	51	21	74	22	61	25	77	27	72	27	76	24	44	21	47	17	45	12	27	27	
30.36	0700-0800	12	29	13	48	17	65	18	47	21	71	22	58	24	74	28	67	27	74	24	42	21	46	17	44	12	29	29	
30.36	0800-0900	13	29	15	50	17	67	19	46	21	71	23	60	25	72	27	66	29	38	22	44	21	47	16	13	29	29	29	
30.36	0900-1000	13	30	15	49	17	69	19	49	21	72	24	61	25	68	28	63	28	63	26	37	24	42	18	43	13	30	30	
30.36	1000-1100	14	29	15	48	18	68	20	51	21	70	24	60	25	71	28	62	28	61	25	36	24	42	18	43	14	29	29	
30.36	1100-1200	15	27	18	68	19	55	22	54	24	69	25	71	27	55	22	68	27	55	22	68	27	55	22	68	27	55	22	27
30.36	1200-1300	16	27	16	48	19	66	19	55	22	71	23	61	25	75	27	65	28	59	27	26	25	41	20	43	16	27	27	
30.36	1300-1400	16	26	16	50	20	67	19	58	22	73	23	63	26	72	28	63	27	63	27	35	26	43	21	42	16	26	26	
30.36	1400-1500	17	20	17	39	20	62	19	59	22	64	23	56	27	54	27	58	27	54	27	35	26	42	22	40	17	26	26	
30.36	1500-1600	17	24	17	39	20	66	19	59	22	64	23	56	27	54	27	58	27	57	28	32	26	42	22	38	17	24	24	
30.36	1600-1700	17	25	17	39	20	63	19	58	21	67	23	54	27	63	26	62	27	52	28	30	26	44	22	38	17	25	25	
30.36	1700-1800	16	24	17	42	20	63	19	50	21	65	23	61	27	66	27	64	27	64	27	36	25	46	21	39	16	24	24	
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30.36	1900-2000	16	25	17	39	19	66	18	64	21	73	22	63	27	69	27	67	27	64	27	31	25	55	20	39	16	25	25	
30.36	2000-2100	16	25	17	41	18	71	18	72	21	77	22	73	26	73	27	73	27	73	24	39	27	53	19	41	16	25	25	
30.36	2100-2200	16	25	17	44	19	72	18	71	21	77	22	74	26	75	27	72	27	68	27	36	24	56	19	43	16	25	25	
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30.36 31.36 31.37	0000-0100	13	25	14	35	18	59	18	69	21	71	22	66	26	72	27	71	27	68	25	35	23	39	18	42	13	25	25	
30.36 31.36 31.37	0100-0200	12	23	13	36	17	59	12	65	21	71	22	69	25	74	28	73	27	71	24	39	22	52	17	46	12	26	26	
30.36 31.36 31.37	0200-0300	12	22	13	36	17	58	17	60	21	73	21	68	26	73	28	76	26	74	24	37	22	53	17	44	12	22	22	
30.36 31.36 31.37	0300-0400	12	22	13	36	17	57	17	56	21	72	21	61	25	73	28	74	26	74	24	36	22	53	17	45	12	22	22	
30.36 31.36 31.37	0400-0500	12	22	13	40	16	57	17	53	20	71	21	57	25	76	27	73	27	75	24	37	21	49	17	42	12	24	24	
30.36 31.36 31.37	0500-0600	11	22	12	44	17	59	17	45	21	69	22	56	24	73	27	70	27	73	24	39	21	44	16	43	11	22	22	
30.36 31.36 31.37	0600-0700	12	23	13	45	17	63	17	40	20	64	22	53	24	68	27	62	27	68	24	37	21	41	17	39	12	23	23	
30.36 31.36 31.37	0700-0800	12	24	15	43	18	63	19	39	21	65	23	48	25	69	27	65	29	33	22	39	22	49	17	42	12	24	24	
30.36 31.36 31.37	0800-0900	13	24	15	41	17	61	19	38	21	61	24	48	25	58	27	55	28	53	26	30	24	37	18	37	13	24	24	
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30.36 31.36 31.37	1000-1100	15	19	16	36	18	54	19	45	22	55	23	41	26	54	27	57	32	28	44	25	26	24	36	20	34	15	19	
30.36 31.36 31.37	1100-1200	16	18	16	34	19	52	19	38	21	55	23	42	25	58	27	53	28	43	27	26	25	34	20	33	16	18	18	
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30.36 31.36 31.37	1400-1500	17	19	17	32	20	56	18	48	22	55	23	43	27	54	27	48	27	48	27	24	26	17	22	33	17	19	19	
30.36 31.36 31.37	1500-1600	16	20	17	33	20	56	19	48	21	59	23	44	26	55	26	54	27	46	27	23	26	39	22	33	16	20	20	
30.36 31.36 31.37	1600-1700	16	19	17	33	20	56	19	48	21	59	23	44	26	55	26	54	27	46	27	23	26	39	22	33	16	20	20	
30.36 31.36 31.37	1700-1800	16	19	17	33	20	56	19	48	21	59	23	44	26	55	26	54	27	46	27	23	26	39	22	33	16	20	20	
30.36 31.36 31.37	1800-1900	16	19	17	35	19	62	18	60	21	69	22	60	26	65	27	64	27	59	27	27	24	52	19	36	16	20	20	
30.36 31.36 31.37	1900-2000	15	21	17	41	19	71	18	66	21	72	22	70	25	70	27	65	26	62	26	29	24	54	19	39	15	21	21	
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30.36 31.36 31.37	2100-2200	14	25	14	39	17	63	18	73	21	72	22	70	25	71	28	72	27	70	26	40	23	43	19	46	14	24	24	
30.37	0000-0100	13	29	13	39	17	63	17	73	21	73	22	70	25	77	28	75	27	70	25	42	23	54	18	49	13	29	29	
30.37	0100-0200	13	29	13	42	17	64	16	71	20	72	21	70	26	77	28	75	27	74	25	42	22	55	18	49	13	29	29	
30.37	0200-0300	13	27	13	40	17	62	18	65	21	76	21	70	26	74	28	78	26	76	25	40	22	55	17	47	13	27	27	
30.37	0300-0400	13	27	13	40	17	61	17	59	21	75	21	63	25	74	28	76	27	76	24	40	22	55	17	48	13	27	27	
30.37	0400-0500	12	26	13	40	17	61	17	57	21	74	22	63	25	74	28	76	27	75	24	40	22	55	17	48	12	26	26	
30.37	0500-0600	12	26	13	43	17	60	17	55	21	73	22	60	25	76	27	74	27	76	24	42	21	52	17	45	12	26	26	
30.37	0600-0700	12	27	13	46	17	63	17	51	21	75	22	61	25	77	27	72	27	76	24	44	21	52	17	46	12	27	27	
30.37	0700-0800	12	28	13	48	17	65	18	46	21	70	22	57	25	73	28	67	27	73	24	42	21	46	17	43	12	28	28	
30.37	0800-0900	13	28	15	50	17	67	18	44	21	71	23	61	25	73	27	62	27	66	25	38								

Appendix 4.5 Calculation of Vehicular Emission

Tsing Yi North Underground Quarry Summary of Meteorological Data																																					
Grid (U)	Hour	January												Month Average												Month Average											
		Temperature	RH	Temperature	RH	Temperature	RH	Temperature	RH	Temperature	RH	Temperature	RH	Temperature	RH	Temperature	RH	Temperature	RH	Temperature	RH	Temperature	RH	Temperature	RH	Temperature	RH	Temperature	RH	Temperature	RH						
30.36	0000-0100	19	77	21	85	22	85	25	88	26	88	28	88	28	88	28	88	28	88	28	88	28	88	28	88	28	88	28	88	28	88						
30.36	0100-0200	19	77	21	85	22	85	25	88	26	88	28	88	28	88	28	88	28	88	28	88	28	88	28	88	28	88	28	88	28	88						
30.36	0200-0300	19	77	21	87	22	86	24	90	25	89	28	90	29	85	29	85	27	73	25	72	21	66	18	68	27	73	25	71	21	68						
30.36	0300-0400	18	77	21	87	21	86	24	90	25	89	28	90	29	84	28	85	27	73	25	72	21	66	18	68	27	73	25	71	21	68						
30.36	0400-0500	18	77	21	87	21	85	24	90	25	89	28	91	29	85	28	85	27	73	25	71	21	66	18	68	27	73	25	71	21	68						
30.36	0500-0600	18	77	21	87	21	84	24	90	25	88	28	90	29	84	28	84	27	73	25	71	21	64	18	68	27	73	25	71	21	68						
30.36	0600-0700	18	77	21	86	21	83	24	89	25	87	28	90	29	83	29	82	27	71	25	70	21	64	18	68	27	73	25	71	21	68						
30.36	0700-0800	19	76	21	84	22	81	25	87	26	85	28	86	29	81	29	79	28	67	26	67	22	61	18	64	27	73	25	71	21	68						
30.36	0800-0900	19	76	21	84	22	81	25	87	26	85	28	86	29	83	29	79	28	67	26	67	22	61	18	64	27	73	25	71	21	68						
30.36	0900-1000	19	74	22	82	22	79	25	85	26	84	28	85	30	79	30	77	29	64	26	64	22	58	20	61	27	73	25	71	21	68						
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30.37	1500-1600	22	73	24	73	24	73	24	73	24	73	24	73	24	73	24	73	24	62	28	58	24	53	21	56	27	73	25	71	21	63						
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30.37	0000-0100	19	75	21	83																																

ISO A1 594mm x 841mm
Approved:
Checked:
Designer:
Project Management Initials:



PROJECT
UNDERGROUND
QUARRYING AT
TSING YI NORTH –
INVESTIGATION,
DESIGN AND
CONSTRUCTION

CLIENT
土木工程拓展署
Civil Engineering and
Development Department

CONSULTANT
AECOM Asia Company Ltd.
www.aecom.com

ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK.

STATUS

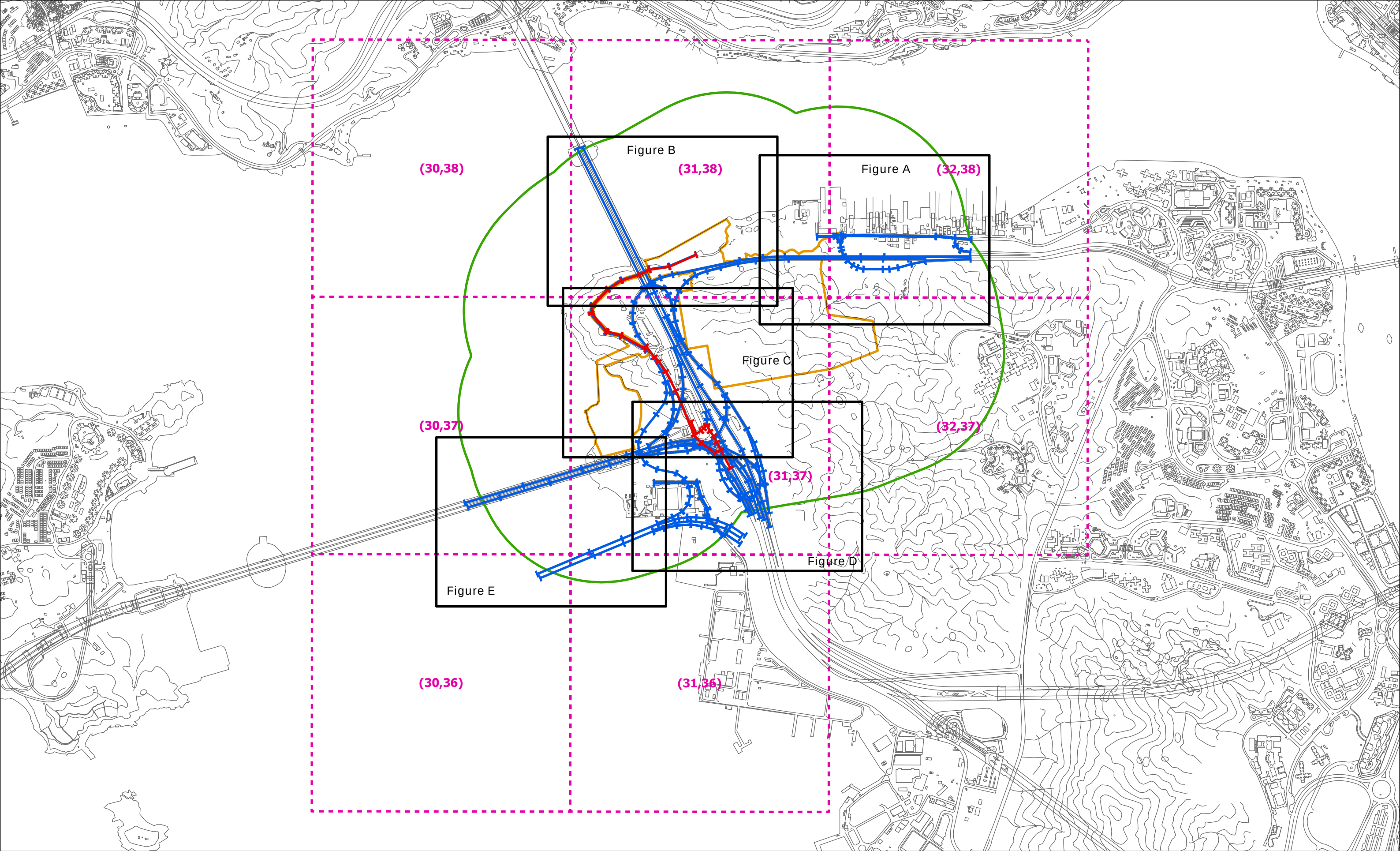
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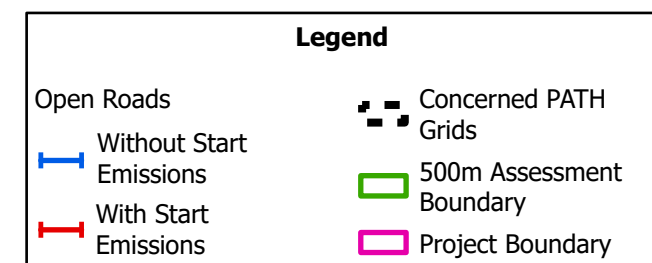
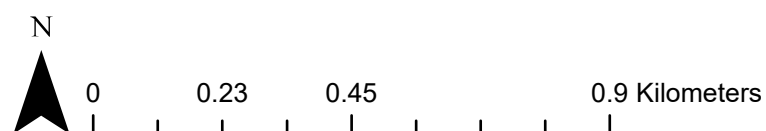
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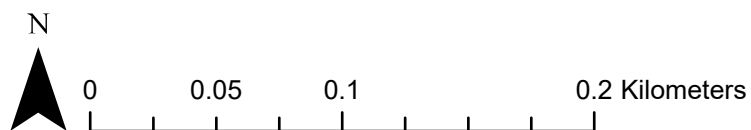
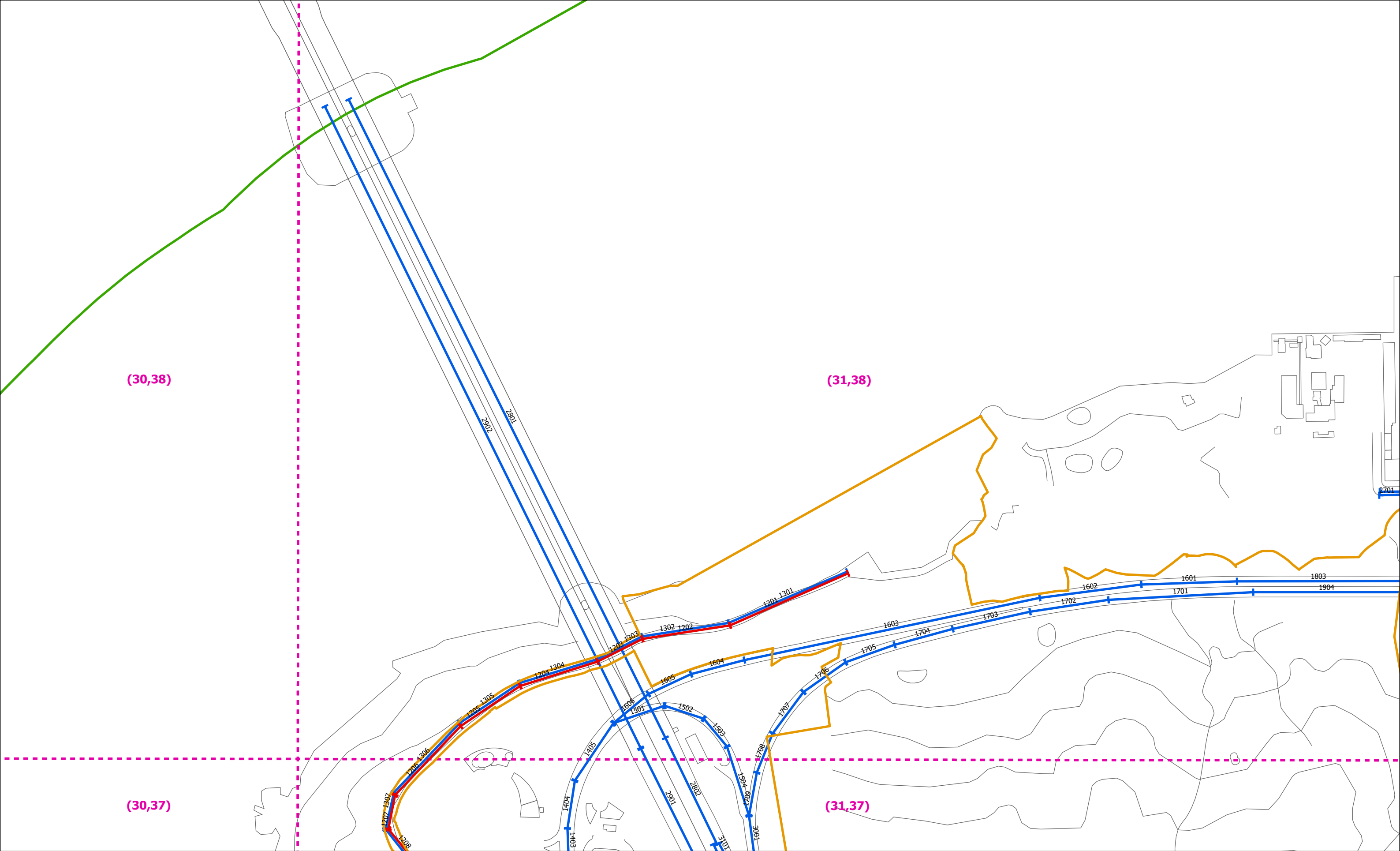
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UNDERGROUND QUARRYING AT
TSING YI NORTH (AFTER
COMMISSIONING OF THE TSING YI
– LANTAU LINK)
SHEET NUMBER

60733229/Figure 2.2

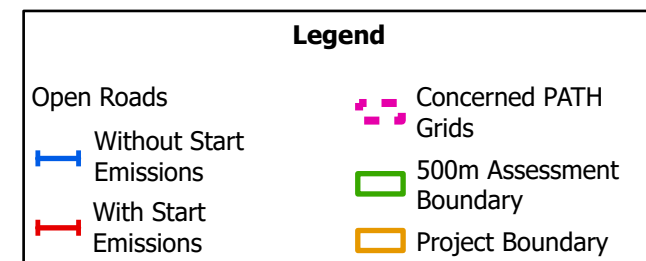


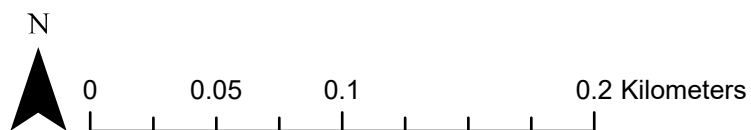
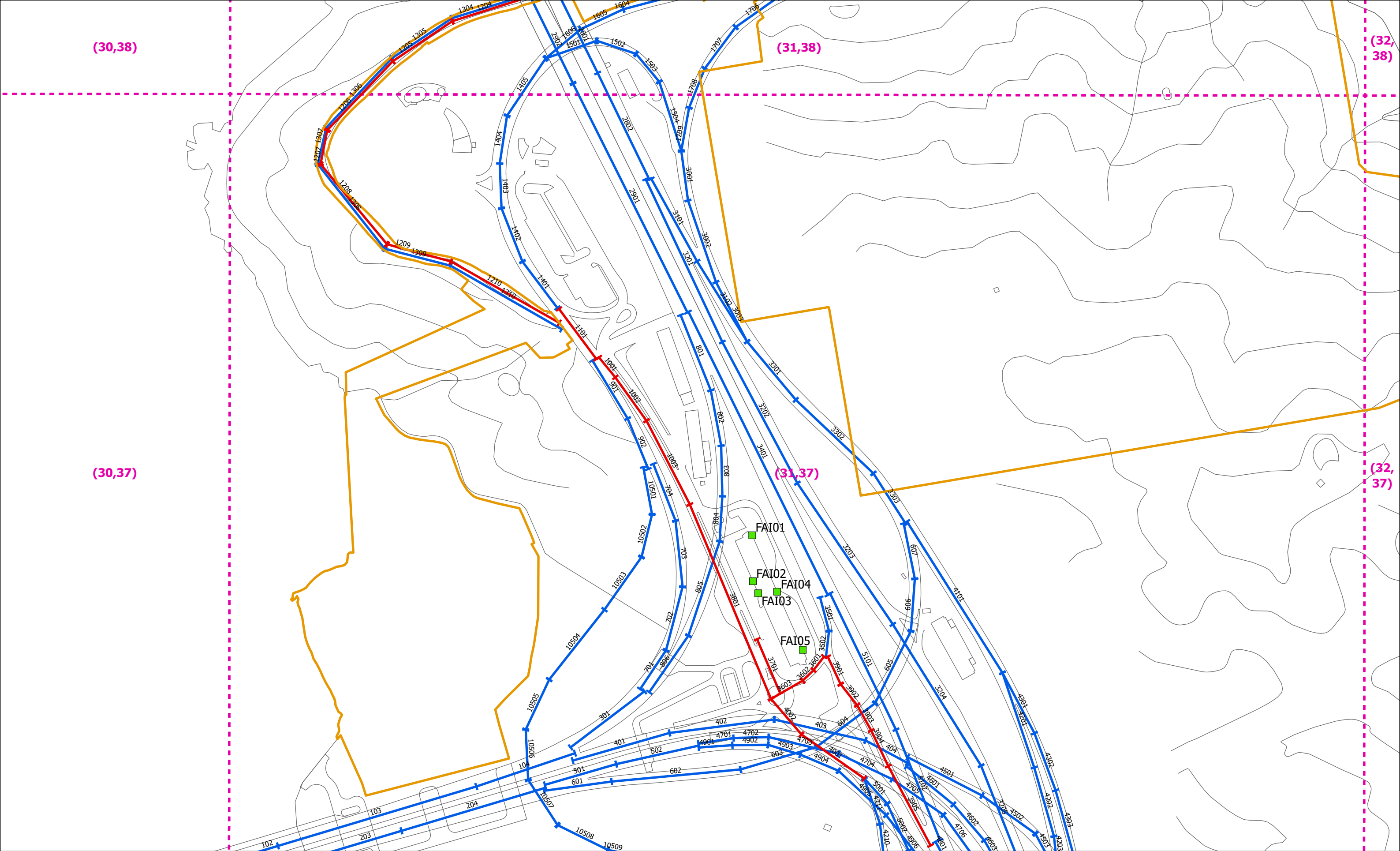
Location of Open Road Emission Sources (Key Plan)





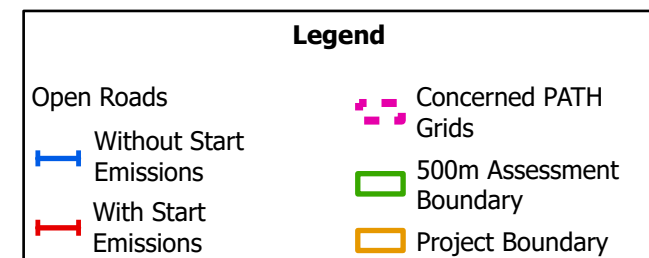
Location of Open Road Emission Sources
Figure B

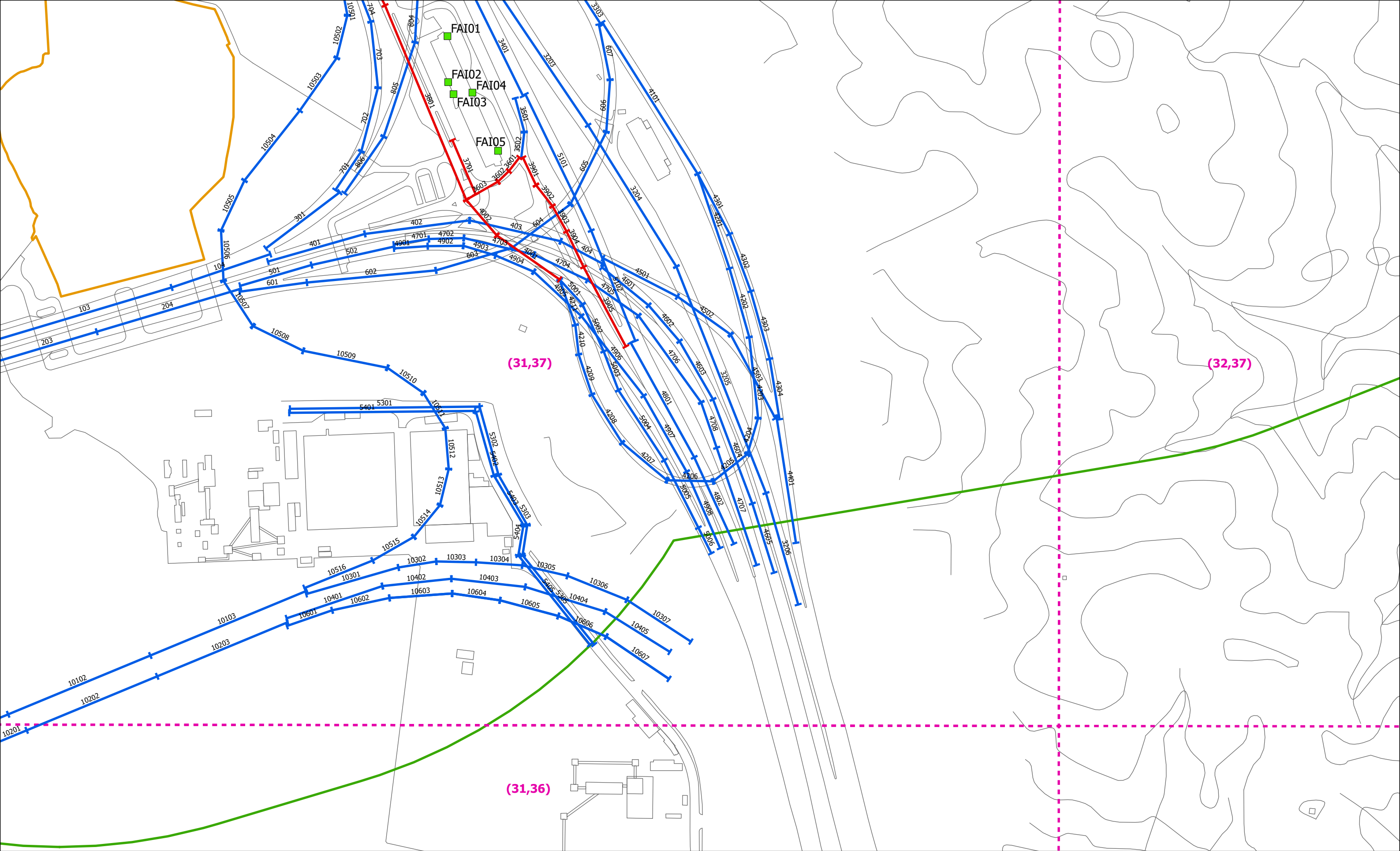




Location of Open Road Emission Sources

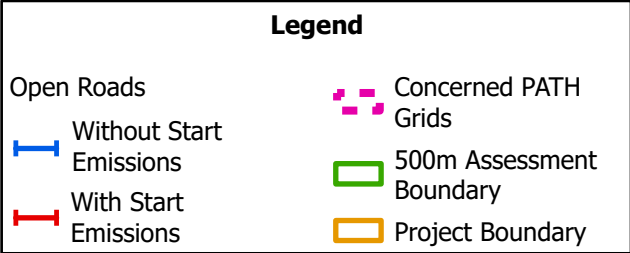
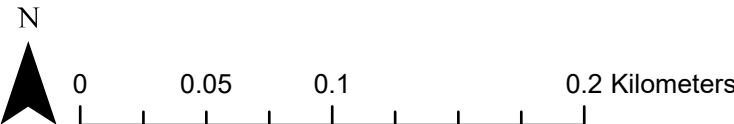
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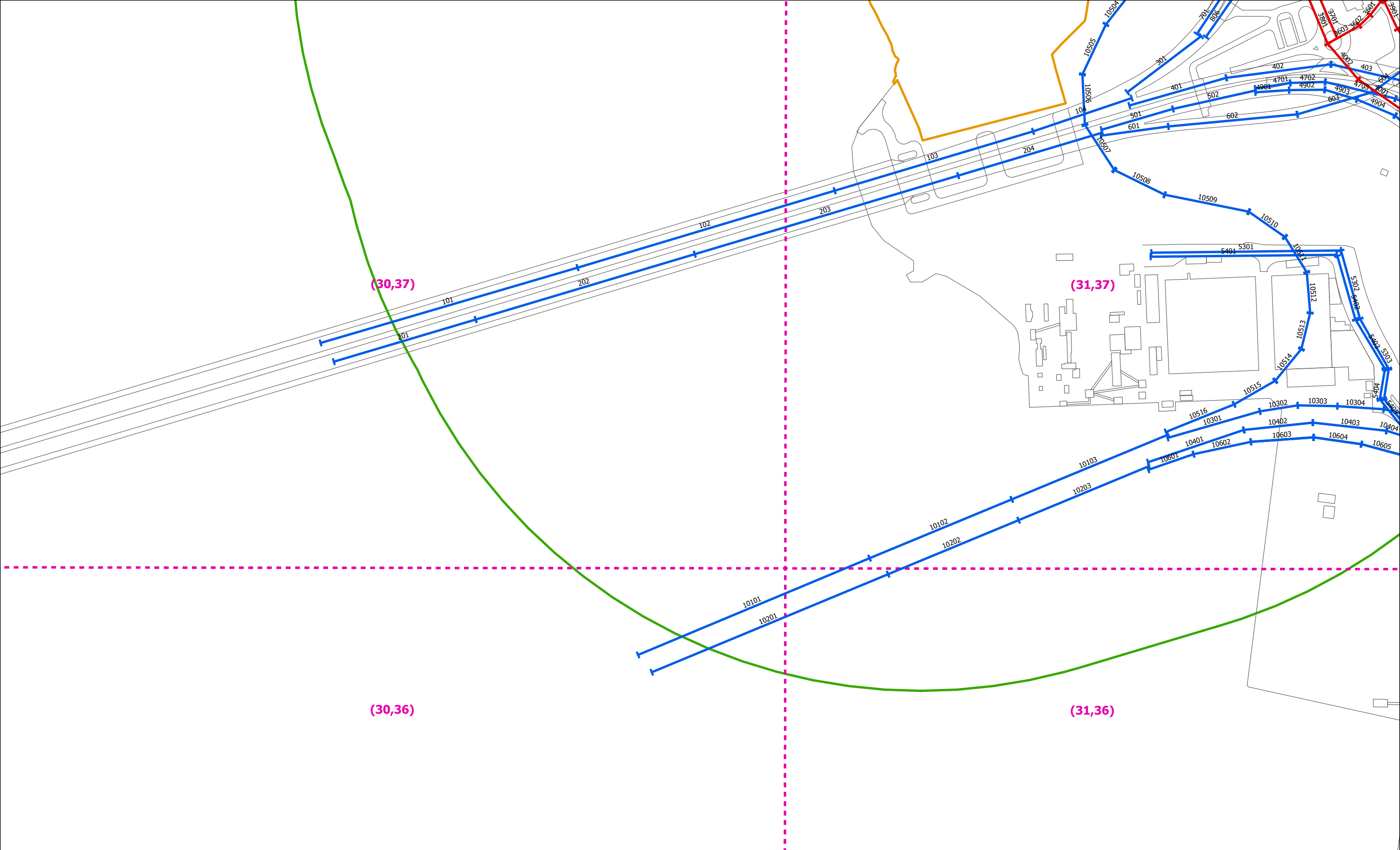




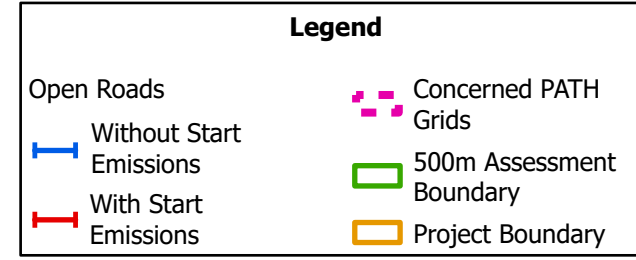
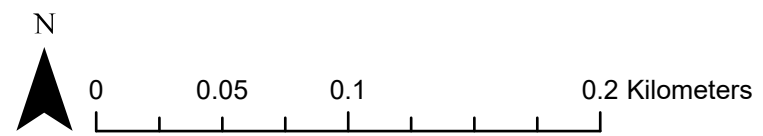
Location of Open Road Emission Sources

Figure D





Location of Open Road Emission Sources
Figure E



Appendix 4.5 Calculation of Vehicular Emission

Tsing Yi North Underground Quarry

Summary of Paved Haul Road Segments

Road Name	Road ID	X coordinate of endpoint 1	Y coordinate of endpoint 1	X coordinate of endpoint 2	Y coordinate of endpoint 2	Grid (IJ)	Vehicle height	Release height	Szinrt	Width	Elevation
		(m)	(m)	(m)	(m)						
Haul Road 1	HR01	826702.63	824592.56	826711.26	824593.51	31,38	3.9	3.3	3.1	14.0	7.0
Haul Road 2	HR02	826706.76	824593.01	826745.26	824620.21	31,38	3.9	3.3	3.1	14.0	7.0
Haul Road 3	HR03	826673.72	824582.55	826661.11	824607.14	31,38	3.9	3.3	3.1	14.0	5.0
Haul Road 4	HR04	826677.41	824583.59	826702.63	824592.56	31,38	3.9	3.3	3.1	14.0	7.0
Haul Road 5	HR05	826711.26	824593.51	826756.40	824593.26	31,38	3.9	3.3	3.1	14.0	6.0
Haul Road 6	HR06	826756.40	824593.26	826779.20	824597.20	31,38	3.9	3.3	3.1	14.0	5.0
Haul Road 7	HR07	826768.96	824622.44	826779.20	824597.20	31,38	3.9	3.3	3.1	14.0	5.0
Haul Road 8	HR08	826742.54	824669.48	826768.96	824622.44	31,38	3.9	3.3	3.1	14.0	5.0
Haul Road 12	HR12	826608.25	824595.11	826620.30	824601.95	31,38	3.9	3.3	3.1	14.0	5.0
Haul Road 13	HR13	826546.24	824560.01	826608.27	824595.07	31,38	3.9	3.3	3.1	14.0	4.0
Haul Road 14	HR14	826528.56	824549.98	826546.24	824560.01	31,38	3.9	3.3	3.1	14.0	9.0
Haul Road 15	HR15	826677.41	824583.59	826668.23	824581.00	31,38	3.9	3.3	3.1	14.0	10.0
Haul Road 16	HR16	826668.21	824581.06	826635.95	824569.57	31,38	3.9	3.3	3.1	14.0	10.0
Haul Road 17	HR17	826635.95	824569.57	826627.47	824566.90	31,38	3.9	3.3	3.1	14.0	9.0
Haul Road 18	HR18	826630.98	824567.80	826616.42	824599.75	31,38	3.9	3.3	3.1	14.0	5.0
Haul Road 21	HR21	826790.38	824638.91	826819.20	824656.69	31,38	3.9	3.3	3.1	14.0	6.0
Haul Road 22	HR22	826627.47	824566.90	826596.68	824549.62	31,38	3.9	3.3	3.1	14.0	12.0
Haul Road 23	HR23	826580.24	824579.23	826589.19	824560.00	31,38	3.9	3.3	3.1	14.0	6.0

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Appendix\Appendix 3.5.1 Hual Road Segemnt&MetData.xlsx

Appendix 4.5 Calculation of Vehicular Emission

Traffic Data / Modeling Parameters For AEMOD (Haul Roads, Short-Term Average Speed, Year 2028)																									
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start/End Estimated by Road Brush Arroyo/VN(H)	Hour	Total Vehicles (Vehicle/h)	01 - Private Car	02 - Taxi	03 - Light Goods Vehicles <2t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles >3.5t	06 - Medium Goods Vehicles <12t	07 - Medium Goods Vehicles >12t	08 - Public Buses	09 - Private Light ><0.5t	10 - Private Heavy >3.5t	11 - Non-franchised Bus<+6t	12 - Non-franchised 1st	13 - Non-franchised 2nd	14 - Franchise d Bus Single	15 - Franchise d Bus Double Rock	16 - Motorcycle	17 - Franchise d Goods/ Vehicles>	18 - Non-franchised Bus >24t	Total
Haul Road 3	HR03	8	8.0	N	0000-0100	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 3	HR03	8	8.0	N	0100-0200	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 3	HR03	8	8.0	N	0200-0300	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 3	HR03	8	8.0	N	0300-0400	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 3	HR03	8	8.0	N	0400-0500	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 3	HR03	8	8.0	N	0500-0600	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 3	HR03	8	8.0	N	0600-0700	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 3	HR03	8	8.0	N	0700-0800	41	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 3	HR03	8	8.0	N	0800-0900	41	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 3	HR03	8	8.0	N	0900-1000	41	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 3	HR03	8	8.0	N	1000-1100	41	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 3	HR03	8	8.0	N	1100-1200	41	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 3	HR03	8	8.0	N	1200-1300	41	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 3	HR03	8	8.0	N	1300-1400	41	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 3	HR03	8	8.0	N	1400-1500	41	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 3	HR03	8	8.0	N	1500-1600	41	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 3	HR03	8	8.0	N	1600-1700	41	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 3	HR03	8	8.0	N	1700-1800	41	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 3	HR03	8	8.0	N	1800-1900	41	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 3	HR03	8	8.0	N	1900-2000	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 3	HR03	8	8.0	N	2000-2100	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 3	HR03	8	8.0	N	2100-2200	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 3	HR03	8	8.0	N	2200-2300	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 3	HR03	8	8.0	N	2300-0100	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 4	HR04	8	8.0	N	0000-0100	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 4	HR04	8	8.0	N	0100-0200	126	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 4	HR04	8	8.0	N	0200-0300	126	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 4	HR04	8	8.0	N	0300-0400	126	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 4	HR04	8	8.0	N	0400-0500	126	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 4	HR04	8	8.0	N	0500-0600	126	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 4	HR04	8	8.0	N	0600-0700	126	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 4	HR04	8	8.0	N	0700-0800	166	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 4	HR04	8	8.0	N	0800-0900	166	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 4	HR04	8	8.0	N	0900-1000	166	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 4	HR04	8	8.0	N	1000-1100	166	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 4	HR04	8	8.0	N	1100-1200	166	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 4	HR04	8	8.0	N	1200-1300	166	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 4	HR04	8	8.0	N	1300-1400	166	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 4	HR04	8	8.0	N	1400-1500	166	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 4	HR04	8	8.0	N	1500-1600	166	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 4	HR04	8	8.0	N	1600-1700	166	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 4	HR04	8	8.0	N	1700-1800	166	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 4	HR04	8	8.0	N	1800-1900	166	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 4	HR04	8	8.0	N	1900-2000	166	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 4	HR04	8	8.0	N	2000-2100	126	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 4	HR04	8	8.0	N	2100-2200	126	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 4	HR04	8	8.0	N	2200-2300	126	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 4	HR04	8	8.0	N	2300-0000	126	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Haul Road 4	HR04	8	8.0	N	2300-0000	126	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

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Appendix 4.5 Calculation of Vehicular Emission

[illegible]

Read Name	Read ID	Speed Limit	Average Speed	Start Emission Estimated by
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[illegible]

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Appendix 4.5 Calculation of Vehicular Emission

Traffic Data / Modeling Parameters For AERMOD (Haul Roads, Short-Term Assessment, Year 2028)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start/End Estimated by Road Brush Approach (Y/N)	Hour	Total Vehicles (Vehicle/h)	01 - Private Car	02 - Taxi	03 - Light Goods Vehicles <2.5 T	04 - Light Goods Vehicles 2.5-3.5 T	05 - Light Goods 3.5 T	06 - Medium Goods Vehicles <12 T	07 - Medium Goods Vehicles 12-18 T	08 - Public Buses	09 - Private Light >3.5 T	10 - Private >3.5 T	11 - Non-franchised Bus <41	12 - Non-franchised 15t	13 - Non-franchised 24t	14 - Franchise d Bus Single	15 - Franchise d Bus Double	16 - Motorcycl	17 - Heavy Goods Vehicles	18 - Non-franchised Bus >41	Total	
							PC	TAXI	LG03	LG04	LG05	HGV7	HGV8	PLB	PV4	PV5	NFB6	NFB7	NFB8	FBS0	FBD0	MC	HGV9	NFB9		
Haul Road 5	HR05	8	8.0	N	0000-0100	40	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 5	HR05	8	8.0	N	0100-0200	40	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 5	HR05	8	8.0	N	0200-0300	40	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 5	HR05	8	8.0	N	0300-0400	40	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 5	HR05	8	8.0	N	0400-0500	40	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 5	HR05	8	8.0	N	0500-0600	40	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 5	HR05	8	8.0	N	0600-0700	40	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 5	HR05	8	8.0	N	0700-0800	70	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 5	HR05	8	8.0	N	0800-0900	70	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 5	HR05	8	8.0	N	0900-1000	70	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 5	HR05	8	8.0	N	1000-1100	70	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 5	HR05	8	8.0	N	1100-1200	70	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 5	HR05	8	8.0	N	1200-1300	70	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 5	HR05	8	8.0	N	1300-1400	70	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 5	HR05	8	8.0	N	1400-1500	70	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 5	HR05	8	8.0	N	1500-1600	70	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 5	HR05	8	8.0	N	1600-1700	70	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 5	HR05	8	8.0	N	1700-1800	70	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 5	HR05	8	8.0	N	1800-1900	70	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 5	HR05	8	8.0	N	1900-2000	40	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 5	HR05	8	8.0	N	2000-2100	40	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 5	HR05	8	8.0	N	2100-2200	40	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 5	HR05	8	8.0	N	2200-2300	40	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 5	HR05	8	8.0	N	2300-0000	40	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 5	HR05	8	8.0	N	0100-0200	40	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 6	HR06	8	8.0	N	0200-0300	40	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 6	HR06	8	8.0	N	0300-0400	40	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 6	HR06	8	8.0	N	0400-0500	40	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 6	HR06	8	8.0	N	0500-0600	40	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 6	HR06	8	8.0	N	0600-0700	40	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 6	HR06	8	8.0	N	0700-0800	70	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 6	HR06	8	8.0	N	0800-0900	70	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%</										

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Appendix 4.5 Calculation of Vehicular Emission

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Appendix 4.5 Calculation of Vehicular Emission

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Appendix 4.5 Calculation of Vehicular Emission

Traffic Data / Modeling Parameters For AERMOD (Hail Roads, Short-term Assessment Year 2028)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start/Arrival Estimated by Broadcast Appraisal (Y/N)	Hour	Total Vehicle(s) =161	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles ≤2.5t	04 - Light Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Medium Goods Vehicles ≤4.5t	07 - Medium Goods Vehicles 4.5-6t	08 - Public Buses	09 - Private Light Bus ≤3.5t	10 - Private Light Bus 3.5-6t	11 - Non-franchised Bus ≤4t	12 - Non-franchised Bus 1st ≥4t	13 - Non-franchised Bus 2nd ≥4t	14 - Franchise d Single Bus Dept	15 - Franchise d Double Bus Dept	16 - Motorcycl es	17 - Heavy Goods Vehicle(s)	18 - Non-franchised Bus ≥4t	Total	
Hail Road 22	HR22	8	8.0	N	0000-0100	40	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 22	HR22	8	8.0	N	0100-0200	40	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 22	HR22	8	8.0	N	0200-0300	40	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 22	HR22	8	8.0	N	0300-0400	40	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 22	HR22	8	8.0	N	0400-0500	40	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 22	HR22	8	8.0	N	0500-0600	40	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 22	HR22	8	8.0	N	0600-0700	40	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 22	HR22	8	8.0	N	0700-0800	40	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 22	HR22	8	8.0	N	0800-0900	40	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 22	HR22	8	8.0	N	0900-1000	40	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 22	HR22	8	8.0	N	1000-1100	40	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 22	HR22	8	8.0	N	1100-1200	40	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 22	HR22	8	8.0	N	1200-1300	40	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 22	HR22	8	8.0	N	1300-1400	40	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 22	HR22	8	8.0	N	1400-1500	40	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 22	HR22	8	8.0	N	1500-1600	40	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 22	HR22	8	8.0	N	1600-1700	40	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 22	HR22	8	8.0	N	1700-1800	40	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 22	HR22	8	8.0	N	1800-1900	40	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 22	HR22	8	8.0	N	1900-2000	40	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 22	HR22	8	8.0	N	2000-2100	40	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 22	HR22	8	8.0	N	2100-2200	40	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 22	HR22	8	8.0	N	2200-2300	40	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 22	HR22	8	8.0	N	2300-0000	40	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 22	HR22	8	8.0	N	2000-2100	40	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 22	HR22	8	8.0	N	2100-2200	40	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 22	HR22	8	8.0	N	2200-2300	40	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 22	HR22	8	8.0	N	2300-0000	40	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 23	HR23	8	8.0	N	2200-2300	40	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 23	HR23	8	8.0	N	2300-0000	40	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 23	HR23	8	8.0	N	0000-0100	168	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 23	HR23	8	8.0	N	0100-0200	168	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 23	HR23	8	8.0	N	0200-0300	168	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 23	HR23	8	8.0	N	0300-0400	168	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 23	HR23	8	8.0	N	0400-0500	168	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 23	HR23	8	8.0	N	0500-0600	168	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 23	HR23	8	8.0	N	0600-0700	168	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 23	HR23	8	8.0	N	0700-0800	168	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 23	HR23	8	8.0	N	0800-0900	168	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 23	HR23	8	8.0	N	0900-1000	168	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 23	HR23	8	8.0	N	1000-1100	168	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 23	HR23	8	8.0	N	1100-1200	168	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 23	HR23	8	8.0	N	1200-1300	168	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 23	HR23	8	8.0	N	1300-1400	168	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 23	HR23	8	8.0	N	1400-1500	168	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 23	HR23	8	8.0	N	1500-1600	168	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 23	HR23	8	8.0	N	1600-1700	168	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 23	HR23	8	8.0	N	1700-1800	168	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 23	HR23	8	8.0	N	1800-1900	168	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 23	HR23	8	8.0	N	1900-2000	168	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 23	HR23	8	8.0	N	2000-2100	168	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 23	HR23	8	8.0	N	2100-2200	168	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 23	HR23	8	8.0	N	2200-2300	168	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	
Hail Road 23	HR23	8	8.0	N	2300-0000	168	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	

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Appendix 4.5 Calculation of Vehicular Emission

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Appendix 4.5 Calculation of Vehicular Emission

Traffic Data / Modeling Parameters For AERMOD (Haul Roads, Long-Term Average Speed, Year 2028)																										
Road Name	Road ID	Speed (km/hr)	Average Speed (km/hr)	Start/End Estimated by Road Brush Approach (Yr/In)	Hour	Total Vehicles (Veh/yr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles <2.5 T	04 - Light Goods Vehicles 2.5-3.5 T	05 - Light Goods 3.5 T	06 - Medium Goods Vehicles <2.5 T	07 - Medium Goods Vehicles 2.5-3.5 T	08 - Public Buses	09 - Private Light Buses <15 >3.5 T	10 - Private Light Buses >15 >3.5 T	11 - Non-franchised Bus<41	12 - Non-franchised Bus 41-15t	13 - Non-franchised Bus 15t-24t	14 - Franchised Bus >24t Single Lane	15 - Franchised Bus >24t Double Lane	16 - Motorcycls	17 - Heavy Goods Vehicles	18 - Non-franchised Bus >24t	Total	
							PC	TAXI	LGVS	LGVA	LGVB	HGV7	HGV8	PLB	PV4	PV5	NFB6	NFB7	NFB8	FBS0	FBD0	MC	HGV9	NFB9		
Haul Road 7	HR07	8	8.0	N	0000-0100	16	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 7	HR07	8	8.0	N	0100-0200	16	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 7	HR07	8	8.0	N	0200-0300	16	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 7	HR07	8	8.0	N	0300-0400	16	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 7	HR07	8	8.0	N	0400-0500	16	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 7	HR07	8	8.0	N	0500-0600	16	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 7	HR07	8	8.0	N	0600-0700	16	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 7	HR07	8	8.0	N	0700-0800	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 7	HR07	8	8.0	N	0800-0900	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 7	HR07	8	8.0	N	0900-1000	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 7	HR07	8	8.0	N	1000-1100	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 7	HR07	8	8.0	N	1100-1200	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 7	HR07	8	8.0	N	1200-1300	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 7	HR07	8	8.0	N	1300-1400	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 7	HR07	8	8.0	N	1400-1500	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 7	HR07	8	8.0	N	1500-1600	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 7	HR07	8	8.0	N	1600-1700	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 7	HR07	8	8.0	N	1700-1800	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 7	HR07	8	8.0	N	1800-1900	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 7	HR07	8	8.0	N	1900-2000	16	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 7	HR07	8	8.0	N	2000-2100	16	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 7	HR07	8	8.0	N	2100-2200	16	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 7	HR07	8	8.0	N	2200-2300	16	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 7	HR07	8	8.0	N	2300-0000	16	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 8	HR08	8	8.0	N	0100-0200	16	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 8	HR08	8	8.0	N	0200-0300	16	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 8	HR08	8	8.0	N	0300-0400	16	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 8	HR08	8	8.0	N	0400-0500	16	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 8	HR08	8	8.0	N	0500-0600	16	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 8	HR08	8	8.0	N	0600-0700	16	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 8	HR08	8	8.0	N	0700-0800	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 8	HR08	8	8.0	N	0800-0900	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 8	HR08	8	8.0	N	0900-1000	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 8	HR08	8	8.0	N	1000-1100	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 8	HR08	8	8.0	N	1100-1200	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 8	HR08	8	8.0	N	1200-1300	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 8	HR08	8	8.0	N	1300-1400	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 8	HR08	8	8.0	N	1400-1500	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 8	HR08	8	8.0	N	1500-1600	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 8	HR08	8	8.0	N	1600-1700	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 8	HR08	8	8.0	N	1700-1800	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 8	HR08	8	8.0	N	1800-1900	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 8	HR08	8	8.0	N	1900-2000	16	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 8	HR08	8	8.0	N	2000-2100	16	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 8	HR08	8	8.0	N	2100-2200	16	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 8	HR08	8	8.0	N	2200-2300	16	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 8	HR08	8	8.0	N	2300-0000	16	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	

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Appendix 4.5 Calculation of Vehicular Emission

Traffic Data / Modeling Parameters For AERMOD (Haul Roads, Long-Term Average, Year 2028)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start/End Emission Estimated by Road Brush Approach (Yr/Ann)	Hour	Total Vehicles (Veh/ht)	01 - Private Car	02 - Taxi	03 - Light Goods Vehicles <= 3.5t	04 - Light Goods Vehicles > 3.5t	05 - Light Goods Vehicles > 3.5t	06 - Medium Goods Vehicles > 3.5t	07 - Medium Goods Vehicles > 3.5t	08 - Public Buses	09 - Private Light Buses <= 3.5t	10 - Private Light Buses > 3.5t	11 - Non-franchised Buses <= 3.5t	12 - Non-franchised Buses > 3.5t	13 - Non-franchised Buses > 3.5t	14 - Franchised Buses > 3.5t	15 - Franchised Buses > 3.5t	16 - Motorcyclist	17 - Heavy Goods Vehicles > 3.5t	18 - Non-franchised Buses > 3.5t	Total	
							PC	TAXI	LGVS	LGVA	LGVB	HGV7	HGV8	PLB	PV4	PV5	NFB6	NFB7	NFB8	FBS0	FBD0	MC	HGV9	NFB9		
Haul Road 14	HR14	8	8.0	N	0000-0100	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 14	HR14	8	8.0	N	0100-0200	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 14	HR14	8	8.0	N	0200-0300	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 14	HR14	8	8.0	N	0300-0400	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 14	HR14	8	8.0	N	0400-0500	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 14	HR14	8	8.0	N	0500-0600	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 14	HR14	8	8.0	N	0600-0700	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 14	HR14	8	8.0	N	0700-0800	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 14	HR14	8	8.0	N	0800-0900	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 14	HR14	8	8.0	N	0900-1000	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 14	HR14	8	8.0	N	1000-1100	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 14	HR14	8	8.0	N	1100-1200	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 14	HR14	8	8.0	N	1200-1300	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 14	HR14	8	8.0	N	1300-1400	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 14	HR14	8	8.0	N	1400-1500	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 14	HR14	8	8.0	N	1500-1600	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 14	HR14	8	8.0	N	1600-1700	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 14	HR14	8	8.0	N	1700-1800	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 14	HR14	8	8.0	N	1800-1900	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 14	HR14	8	8.0	N	1900-2000	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 14	HR14	8	8.0	N	2000-2100	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 14	HR14	8	8.0	N	2100-2200	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 14	HR14	8	8.0	N	2200-2300	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 14	HR14	8	8.0	N	2300-0000	46	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 15	HR15	8	8.0	N	0000-0100	50	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 15	HR15	8	8.0	N	0100-0200	50	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 15	HR15	8	8.0	N	0200-0300	50	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 15	HR15	8	8.0	N	0300-0400	50	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 15	HR15	8	8.0	N	0400-0500	50	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 15	HR15	8	8.0	N	0500-0600	50	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 15	HR15	8	8.0	N	0600-0700	50	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 15	HR15	8	8.0	N	0700-0800	86	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 15	HR15	8	8.0	N	0800-0900	86	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 15	HR15	8	8.0	N	0900-1000	86	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 15	HR15	8	8.0	N	1000-1100	86	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 15	HR15	8	8.0	N	1100-1200	86	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 15	HR15	8	8.0	N	1200-1300	86	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 15	HR15	8	8.0	N	1300-1400	86	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 15	HR15	8	8.0	N	1400-1500	86	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 15	HR15	8	8.0	N	1500-1600	86	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 15	HR15	8	8.0	N	1600-1700	86	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 15	HR15	8	8.0	N	1700-1800	86	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 15	HR15	8	8.0	N	1800-1900	86	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 15	HR15	8	8.0	N	1900-2000	86	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 15	HR15	8	8.0	N	2000-2100	86	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 15	HR15	8	8.0	N	2100-2200	86	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 15	HR15	8	8.0	N	2200-2300	86	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	
Haul Road 15	HR15	8	8.0	N	2300-0000	50	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	

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Appendix 4.5 Calculation of Vehicular Emission

Traffic Data / Modeling Parameters For AEMOD (Haul Roads, Long-term Assessment, Year 2028)																										
Road Name	Road ID	Speed Limit (km/hr)	Average Speed (km/hr)	Start Emission Estimated by Road-Bias Approach (YN)	Hour	Total Vehicles (Veh/yr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles 2-5.5t	04 - Light Goods Vehicles 5.5-3.5t	05 - Light Goods Vehicles 3.5t	06 - Light Goods Vehicles >3.5t	07 - Medium Goods Vehicles 1-24t	08 - Public Light Buses	09 - Private Buses >3.5t	10 - Private Buses >3.5t	11 - Non-franchised Buses >3.5t	12 - Non-franchised Buses 1-15t	13 - Non-franchised Buses 15-24t	14 - Franchise Buses Single Deck	15 - Franchise Buses Double Deck	16 - Motorcyclists	17 - Heavy Goods Vehicles >24t	18 - Non-franchised Buses >24t	Total	
							PC	TAXI	LGV3	LGV4	LGV6	HGV7	HGV5	PLB	PV4	PV5	NFB6	NFB7	NFB8	FBSD	FBDO	MC	HGV9	NFB9		
Haul Road 18	HR18	8	8.0	N	0000-0100	34	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 18	HR18	8	8.0	N	0100-0200	34	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 18	HR18	8	8.0	N	0200-0300	34	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 18	HR18	8	8.0	N	0300-0400	34	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 18	HR18	8	8.0	N	0400-0500	34	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 18	HR18	8	8.0	N	0500-0600	34	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 18	HR18	8	8.0	N	0600-0700	34	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 18	HR18	8	8.0	N	0700-0800	34	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 18	HR18	8	8.0	N	0800-0900	34	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 18	HR18	8	8.0	N	0900-1000	34	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 18	HR18	8	8.0	N	1000-1100	34	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 18	HR18	8	8.0	N	1100-1200	34	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 18	HR18	8	8.0	N	1200-1300	34	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 18	HR18	8	8.0	N	1300-1400	34	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 18	HR18	8	8.0	N	1400-1500	34	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 18	HR18	8	8.0	N	1500-1600	34	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 18	HR18	8	8.0	N	1600-1700	34	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 18	HR18	8	8.0	N	1700-1800	34	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 18	HR18	8	8.0	N	1800-1900	34	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 18	HR18	8	8.0	N	1900-2000	34	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 18	HR18	8	8.0	N	2000-2100	34	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 18	HR18	8	8.0	N	2100-2200	34	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 18	HR18	8	8.0	N	2200-2300	34	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 18	HR18	8	8.0	N	2300-0000	34	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 21	HR21	8	8.0	N	0000-0100	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 21	HR21	8	8.0	N	0100-0200	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 21	HR21	8	8.0	N	0200-0300	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 21	HR21	8	8.0	N	0300-0400	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 21	HR21	8	8.0	N	0400-0500	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 21	HR21	8	8.0	N	0500-0600	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 21	HR21	8	8.0	N	0600-0700	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 21	HR21	8	8.0	N	0700-0800	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 21	HR21	8	8.0	N	0800-0900	228	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 21	HR21	8	8.0	N	0900-1000	228	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 21	HR21	8	8.0	N	1000-1100	228	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 21	HR21	8	8.0	N	1100-1200	228	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 21	HR21	8	8.0	N	1200-1300	228	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 21	HR21	8	8.0	N	1300-1400	228	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 21	HR21	8	8.0	N	1400-1500	228	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 21	HR21	8	8.0	N	1500-1600	228	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 21	HR21	8	8.0	N	1600-1700	228	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 21	HR21	8	8.0	N	1700-1800	228	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 21	HR21	8	8.0	N	1800-1900	228	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 21	HR21	8	8.0	N	1900-2000	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 21	HR21	8	8.0	N	2000-2100	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 21	HR21	8	8.0	N	2100-2200	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 21	HR21	8	8.0	N	2200-2300	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	
Haul Road 21	HR21	8	8.0	N	2300-0000	0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

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Location of Paved Haul Roads (Ngau Kok Wan)



Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Pit North 24 Hour Emission Factors for AERMOD model (Summary)														
Road Name	Road ID	Hour	NO _x Emission		NO Emission		PM ₁₀ Emission		PM _{2.5} Emission					
			g/hour	g/hour/km	g/hour	g/hour/km	g/hour	g/hour/km	g/hour	g/hour/km				
Road #1	1	0000-0100	2,476.02	2,666.07	3,356.03	2,700.01	2,925.06	5,882.02	1,145.02	1,231.07	2,466.03	1,242.02	1,135.07	2,686.03
Road #1	1	0100-0200	2,696.02	2,886.07	3,576.03	2,790.01	2,985.06	5,942.02	1,185.02	1,248.07	2,686.03	1,248.07	1,185.07	2,906.03
Road #1	1	0200-0300	2,546.02	2,736.07	3,516.03	2,730.01	2,485.06	4,802.02	1,225.02	1,312.07	2,056.03	1,442.02	1,476.07	2,418.03
Road #1	1	0300-0400	1,846.02	1,726.07	2,566.03	2,790.01	2,145.06	2,484.02	1,272.02	1,548.07	1,038.03	1,184.02	1,086.07	1,968.03
Road #1	1	0400-0500	1,346.02	1,486.07	2,176.03	3,070.01	2,365.06	2,732.02	1,305.02	1,578.07	1,165.03	1,442.02	1,629.07	1,466.03
Road #1	1	0500-0600	1,496.02	1,636.07	2,226.03	3,270.01	2,385.06	2,732.02	1,355.02	1,628.07	1,165.03	1,442.02	1,629.07	1,466.03
Road #1	1	0600-0700	3,676.02	6,014.07	7,312.03	2,780.01	5,522.06	1,005.02	1,365.02	2,724.07	4,743.02	1,486.02	2,432.07	2,862.03
Road #1	1	0700-0800	3,896.02	12,296.07	2,592.03	2,730.01	5,085.06	2,175.02	1,416.02	4,654.07	5,935.02	1,554.02	5,060.07	1,022.02
Road #1	1	0800-0900	3,776.02	12,296.07	2,592.03	2,730.01	5,085.06	2,175.02	1,416.02	4,654.07	5,935.02	1,554.02	5,060.07	1,022.02
Road #1	1	0900-1000	4,146.02	1,396.07	2,592.03	3,378.01	4,105.06	2,095.02	1,476.02	4,654.07	9,245.02	1,605.02	5,006.07	1,000.02
Road #1	1	1000-1100	5,006.02	1,356.07	2,706.03	3,540.01	9,535.06	1,591.02	1,595.02	4,828.07	8,608.02	1,738.02	4,654.07	9,356.03
Road #1	1	1100-1200	2,796.02	2,566.07	3,016.03	3,540.01	8,835.06	1,591.02	1,595.02	4,828.07	8,608.02	1,738.02	4,654.07	9,356.03
Road #1	1	1200-1300	2,576.02	2,216.07	4,446.03	3,795.01	4,475.06	2,095.02	1,815.02	6,718.07	1,375.02	1,975.02	7,296.07	1,476.03
Road #1	1	1300-1400	6,136.02	2,320.06	4,466.03	4,005.01	1,515.06	3,046.02	1,815.02	6,831.07	1,375.02	1,967.02	7,435.07	1,496.02
Road #1	1	1400-1500	6,046.02	2,340.06	4,496.03	4,005.01	1,515.06	3,046.02	1,808.02	7,467.07	1,496.02	1,967.02	7,885.07	1,586.02
Road #1	1	1500-1600	5,896.02	2,340.06	4,496.03	4,005.01	1,515.06	3,046.02	1,808.02	7,467.07	1,496.02	1,967.02	7,885.07	1,586.02
Road #1	1	1600-1700	5,816.02	2,566.06	4,446.03	3,340.01	1,725.06	3,446.02	1,808.02	7,905.07	1,595.02	1,967.02	8,595.07	1,732.02
Road #1	1	1700-1800	4,246.02	2,176.06	3,554.03	3,340.01	1,675.06	3,346.02	1,495.02	7,498.07	1,495.02	1,621.02	8,051.07	1,621.02
Road #1	1	1800-1900	3,226.02	1,754.06	3,554.03	2,810.01	1,545.06	3,095.02	1,295.02	7,017.07	1,415.02	1,495.02	7,443.07	1,535.02
Road #1	1	1900-2000	2,876.02	1,240.06	4,496.03	2,870.01	1,245.06	2,495.02	1,305.02	5,611.07	1,135.02	1,415.02	6,105.07	1,235.02
Road #1	1	2000-2100	2,846.02	9,531.07	9,921.06	3,005.01	1,015.06	2,025.02	1,325.02	4,446.07	8,905.02	1,446.02	4,821.07	8,562.03
Road #2	2	0000-0100	2,564.02	8,555.07	7,721.02	2,754.01	9,205.06	1,850.02	1,175.02	3,337.07	8,863.02	1,273.02	4,365.07	8,562.03
Road #2	2	0100-0200	2,515.02	8,155.07	7,164.02	2,845.01	9,235.06	1,864.02	1,222.02	3,364.07	7,955.02	1,324.02	4,305.07	8,641.03
Road #2	2	0200-0300	2,786.02	6,646.07	6,474.02	2,926.01	7,125.06	1,458.02	1,265.02	3,064.07	6,155.02	1,375.02	3,335.07	6,646.03
Road #2	2	0300-0400	2,684.02	6,646.07	7,296.03	2,615.01	7,384.06	1,715.02	1,485.02	3,064.07	6,155.02	1,375.02	3,335.07	6,646.03
Road #2	2	0400-0500	2,921.02	2,807.01	5,185.03	2,715.01	2,605.06	4,082.02	1,125.02	1,058.07	1,995.02	1,272.02	1,075.07	1,655.03
Road #2	2	0500-0600	3,176.02	2,238.01	4,713.03	2,820.01	4,185.06	3,656.02	1,172.02	8,327.08	1,525.02	1,272.02	8,935.08	1,616.03
Road #2	2	0600-0700	3,412.02	3,967.01	3,360.02	2,915.01	1,613.06	2,995.02	1,225.02	6,767.08	1,525.02	1,272.02	8,935.08	1,616.03
Road #2	2	0700-0800	3,465.02	3,465.01	3,845.02	2,915.01	1,835.06	2,995.02	1,225.02	6,767.08	1,525.02	1,272.02	8,935.08	1,616.03
Road #2	2	0800-0900	3,835.02	4,044.07	4,773.03	3,070.01	2,345.06	2,995.02	1,266.02	3,364.07	1,525.02	1,405.02	4,481.07	2,746.03
Road #2	2	0900-1000	4,084.02	9,131.07	9,192.02	3,150.01	7,715.06	1,335.02	1,325.02	3,005.07	5,545.02	1,445.02	3,365.07	6,025.03
Road #2	2	1000-1100	4,275.02	9,131.07	9,192.02	3,150.01	7,715.06	1,335.02	1,325.02	3,005.07	5,545.02	1,445.02	3,365.07	6,025.03
Road #2	2	1100-1200	4,615.02	4,221.06	4,081.02	4,295.01	1,486.06	2,904.02	1,305.02	6,891.07	1,272.02	1,415.02	7,895.07	1,380.02
Road #2	2	1200-1300	4,084.02	4,221.06	4,081.02	4,295.01	1,486.06	2,904.02	1,305.02	6,891.07	1,272.02	1,415.02	7,895.07	1,380.02
Road #2	2	1300-1400	4,084.02	4,221.06	4,081.02	4,295.01	1,486.06	2,904.02	1,305.02	6,891.07	1,272.02	1,415.02	7,895.07	1,380.02
Road #2	2	1400-1500	4,084.02	4,221.06	4,081.02	4,295.01	1,486.06	2,904.02	1,305.02	6,891.07	1,272.02	1,415.02	7,895.07	1,380.02
Road #2	2	1500-1600	4,084.02	4,221.06	4,081.02	4,295.01	1,486.06	2,904.02	1,305.02	6,891.07	1,272.02	1,415.02	7,895.07	1,380.02
Road #2	2	1600-1700	4,084.02	4,221.06	4,081.02	4,295.01	1,486.06	2,904.02	1,305.02	6,891.07	1,272.02	1,415.02	7,895.07	1,380.02
Road #2	2	1700-1800	4,084.02	4,221.06	4,081.02	4,295.01	1,486.06	2,904.02	1,305.02	6,891.07	1,272.02	1,415.02	7,895.07	1,380.02
Road #2	2	1800-1900	4,084.02	4,221.06	4,081.02	4,295.01	1,486.06	2,904.02	1,305.02	6,891.07	1,272.02	1,415.02	7,895.07	1,380.02
Road #2	2	1900-2000	4,084.02	4,221.06	4,081.02	4,295.01	1,486.06	2,904.02	1,305.02	6,891.07	1,272.02	1,415.02	7,895.07	1,380.02
Road #2	2	2000-2100	4,084.02	4,221.06	4,081.02	4,295.01	1,486.06	2,904.02	1,305.02	6,891.07	1,272.02	1,415.02	7,895.07	1,380.02
Road #3	3	0000-0100	2,946.02	1,010.07	2,276.04	3,860.01	1,275.06	2,833.02	1,688.02	5,788.08	1,926.02	1,831.02	6,285.08	1,415.02
Road #3	3	0100-0200	3,046.02	1,010.07	2,276.04	3,860.01	1,275.06	2,833.02	1,688.02	5,788.08	1,926.02	1,831.02	6,285.08	1,415.02
Road #3	3	0200-0300	3,046.02	1,010.07	2,276.04	3,860.01	1,275.06	2,833.02	1,688.02	5,788.08	1,926.02	1,831.02	6,285.08	1,415.02
Road #3	3	0300-0400	3,046.02	1,010.07	2,276.04	3,860.01	1,275.06	2,833.02	1,688.02	5,788.08	1,926.02	1,831.02	6,285.08	1,415.02
Road #3	3	0400-0500	3,046.02	1,010.07	2,276.04	3,860.01	1,275.06	2,833.02	1,688.02	5,788.08	1,926.02	1,831.02	6,285.08	1,415.02
Road #3	3	0500-0600	3,046.02	1,010.07	2,276.04	3,860.01	1,275.06	2,833.02	1,688.02	5,788.08	1,926.02	1,831.02	6,285.08	1,415.02
Road #3	3	0600-0700	3,046.02	1,010.07	2,276.04	3,860.01	1,275.06	2,833.02	1,688.02	5,788.08	1,926.02	1,831.02	6,285.08	1,415.02
Road #3	3	0700-0800	3,046.02	1,010.07	2,276.04	3,860.01	1,275.06	2,833.02	1,688.02	5,788.08	1,926.02	1,831.02	6,285.08	1,415.02
Road #3	3	0800-0900	3,046.02	1,010.07	2,276.04	3,860.01	1,275.06	2,833.02	1,688.02	5,788.08	1,926.02	1,831.02	6,285.08	1,415.02
Road #3	3	0900-1000	3,046.02	1,010.07	2,276.04	3,860.01	1,275.06	2,833.02	1,688.02	5,788.08	1,926.02	1,831.02	6,285.08	1,415.02
Road #3	3	1000-1100	3,046.02	1,010.07	2,276.04	3,860.01	1,275.06	2,833.02	1,688.02	5,788.08	1,926.02	1,831.02	6,285.08	1,415.02
Road #3	3	1100-1200	3,046.02	1,010.07	2,276.04	3,860.01	1,275.06	2,833.02	1,688.02	5,788.08	1,926.02	1,831.02	6,285.08	1,415.02
Road #3	3	1200-1300	3,046.02	1,010.07	2,276.04	3,860.01	1,275.06	2,833.02	1,688.02	5,788.08	1,926.02	1,831.02	6,285.08	1,415.02
Road #3	3	1300-1400	3,046.02	1,010.07	2,276.04	3,860.01	1,275.06	2,833.02	1,688.02	5,788.08	1,926.02	1,831.02	6,285.08	1,415.02
Road #3	3	1400-1500	3,046.02	1,010.07	2,276.04	3,860.01	1,275.06	2,833.02	1,688.02	5,788.08	1,926.02	1,831.02	6,285.08	1,415.02
Road #3	3	1500-1600	3,046.02	1,010.07	2,276.04	3,860.01	1,275.06	2,833.02	1,688.02	5,788.08	1,926.02	1,831.02	6,285.08	1,415.02
Road #3	3	1600-1700	3,046.02	1,010.07	2,276.04	3,860.01	1,275.06	2,833.02	1,688.02	5,788.08	1,926.02	1,831.02	6,285.08	1,415.02
Road #3	3	1700-1800	3,046.02	1,010.07	2,276.04	3,860.01	1,275.06	2,833.02	1,688.02	5,788.08	1,926.02	1,831.02	6,285.08	1,415.02
Road #3	3	1800-1900	3,046.02	1,010.07	2,276.04	3,860.01	1,275.06	2,833.02	1,688.02	5,788.08	1,926.02	1,831.02	6,285.08	1,415.02
Road #3	3	1900-2000	3,046.02	1,010.07	2,276.04	3,860.01	1,275.06	2,833.02	1,688.02	5,788.08	1,926.02	1,831.02	6,285.08	1,415.02
Road #3	3	2000-2100	3,046.02	1,010.07	2,276.04	3,860.01	1,275.06	2,833.02	1,688.02	5,788.08	1,926.02	1,831.02	6,285.08	1,415.02

I:\Secure\Environment Projects\607333229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.1 Emission Factor in 2028.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Bay North Underground Quarry															
Taung Pit 24 Hour Emission Factors															
for AERMOD model (Summary)															
Road Name		Road ID		NO ₂ Emission			NO Emission			PM ₁₀ Emission			PM _{2.5} Emission		
				g/km ² /hour	g/km ² /hour	g/km ² /hour	g/km ² /hour	g/km ² /hour	g/km ² /hour	g/km ² /hour	g/km ² /hour	g/km ² /hour	g/km ² /hour	g/km ² /hour	
Road 12	12	0890-0900		5.42E-01	1.331E-01	1.18E-02	2.534E-01	6.33E-02	5.52E-01	1.04E-01	2.51E-07	2.26E-03	1.13E-01	2.73E-07	2.46E-03
Road 12	12	0900-1000		5.47E-01	1.331E-01	1.18E-02	2.534E-01	6.12E-02	5.51E-01	1.05E-01	2.51E-07	2.26E-03	1.14E-01	2.73E-07	2.45E-03
Road 12	12	1000-1100		5.47E-01	1.331E-01	1.18E-02	2.534E-01	6.13E-02	5.50E-01	1.05E-01	2.51E-07	2.26E-03	1.14E-01	2.73E-07	2.45E-03
Road 12	12	1100-1200		5.47E-01	1.332E-01	1.18E-02	2.534E-01	6.14E-02	5.51E-01	1.06E-01	2.52E-07	2.25E-03	1.15E-01	2.72E-07	2.45E-03
Road 12	12	1200-1300		5.47E-01	1.332E-01	1.19E-02	2.534E-01	6.14E-02	5.51E-01	1.06E-01	2.51E-07	2.26E-03	1.15E-01	2.73E-07	2.45E-03
Road 12	12	1300-1400		5.53E-01	1.322E-01	1.19E-02	2.534E-01	6.13E-02	5.54E-01	1.05E-01	2.51E-07	2.26E-03	1.14E-01	2.73E-07	2.46E-03
Road 12	12	1400-1500		5.53E-01	1.322E-01	1.19E-02	2.534E-01	6.13E-02	5.54E-01	1.05E-01	2.51E-07	2.26E-03	1.14E-01	2.73E-07	2.46E-03
Road 12	12	1500-1600		5.47E-01	1.332E-01	1.18E-02	2.534E-01	6.14E-02	5.51E-01	1.04E-01	2.51E-07	2.26E-03	1.14E-01	2.73E-07	2.46E-03
Road 12	12	1600-1700		5.47E-01	1.332E-01	1.19E-02	2.534E-01	6.14E-02	5.54E-01	1.04E-01	2.51E-07	2.26E-03	1.14E-01	2.74E-07	2.46E-03
Road 12	12	1700-1800		5.47E-01	1.332E-01	1.19E-02	2.534E-01	6.13E-02	5.54E-01	1.04E-01	2.51E-07	2.26E-03	1.14E-01	2.73E-07	2.46E-03
Road 12	12	1800-1900		5.36E-01	1.330E-01	1.17E-02	2.514E-01	6.08E-02	5.47E-01	1.03E-01	2.50E-07	2.25E-03	1.12E-01	2.72E-07	2.44E-03
Road 12	12	1900-2000		4.13E-01	1.114E-01	7.80E-03	1.900E-01	4.69E-02	3.84E-01	8.31E-02	6.68E-06	5.63E-04	9.04E-02	6.80E-02	1.12E-04
Road 12	12	2000-2100		4.13E-01	1.114E-01	7.76E-03	1.900E-01	4.47E-02	3.84E-01	8.31E-02	6.68E-06	5.63E-04	9.04E-02	6.80E-02	1.12E-04
Road 12	12	2100-2200		4.30E-01	1.07E-01	7.76E-03	2.07E-01	1.47E-02	1.33E-01	8.65E-02	6.17E-05	5.54E-05	9.41E-02	6.70E-02	6.03E-04
Road 12	12	2200-2300		4.32E-01	1.05E-01	7.73E-03	2.08E-01	1.47E-02	1.33E-01	8.71E-02	6.16E-05	5.53E-04	9.47E-02	6.68E-02	6.01E-04
Road 12	12	2300-2400		4.34E-01	1.02E-01	7.83E-03	2.09E-01	1.41E-02	1.24E-01	8.86E-02	5.96E-05	5.30E-04	9.64E-02	6.49E-02	5.83E-04
Road 12	12	2400-0100		2.97E-01	7.47E-02	5.21E-03	2.19E-01	1.37E-02	1.25E-01	9.32E-02	5.84E-06	5.13E-04	1.09E-01	6.54E-02	5.83E-04
Road 13	13	0100-0200		4.17E-01	7.88E-01	6.21E-03	2.25E-01	3.37E-02	1.25E-01	8.59E-02	5.81E-04	5.31E-04	1.04E-01	6.13E-02	5.77E-04
Road 13	13	0200-0300		4.81E-01	2.87E-02	6.21E-03	2.29E-01	3.37E-02	1.25E-01	9.78E-02	5.81E-04	5.30E-04	1.06E-01	6.32E-02	5.76E-04
Road 13	13	0300-0400		4.85E-01	2.87E-02	7.25E-03	2.31E-01	3.37E-02	1.25E-01	9.81E-02	5.81E-04	5.30E-04	1.07E-01	6.45E-02	5.75E-04
Road 13	13	0400-0500		4.87E-01	2.87E-02	7.82E-03	2.31E-01	3.37E-02	1.25E-01	9.78E-02	5.81E-04	5.30E-04	1.06E-01	6.32E-02	5.76E-04
Road 13	13	0500-0600		4.73E-01	2.90E-02	7.85E-03	2.29E-01	3.38E-02	1.24E-01	9.53E-02	5.85E-04	5.33E-04	1.04E-01	6.36E-02	5.80E-04
Road 13	13	0600-0700		4.62E-01	3.00E-02	7.81E-03	2.29E-01	3.42E-02	1.24E-01	9.15E-02	5.85E-04	5.33E-04	1.03E-01	6.68E-02	5.84E-04
Road 13	13	0700-0800		4.57E-01	3.18E-01	1.19E-02	2.25E-01	6.08E-02	5.55E-01	1.04E-01	2.50E-07	2.27E-03	1.13E-01	2.71E-07	2.47E-03
Road 13	13	0800-0900		5.39E-01	1.331E-01	1.19E-02	2.514E-01	6.09E-02	5.55E-01	1.06E-01	2.50E-07	2.28E-03	1.14E-01	2.71E-07	2.48E-03
Road 13	13	0900-1000		5.44E-01	1.331E-01	1.19E-02	2.514E-01	6.09E-02	5.55E-01	1.04E-01	2.50E-07	2.28E-03	1.13E-01	2.72E-07	2.48E-03
Road 13	13	1000-1100		5.44E-01	1.332E-01	1.19E-02	2.514E-01	6.09E-02	5.55E-01	1.04E-01	2.50E-07	2.28E-03	1.13E-01	2.72E-07	2.48E-03
Road 13	13	1100-1200		5.53E-01	1.331E-01	1.19E-02	2.534E-01	6.10E-02	5.56E-01	1.05E-01	2.50E-07	2.28E-03	1.15E-01	2.71E-07	2.48E-03
Road 13	13	1200-1300		5.52E-01	1.331E-01	1.20E-02	2.574E-01	6.11E-02	5.57E-01	1.05E-01	2.50E-07	2.28E-03	1.14E-01	2.72E-07	2.48E-03
Road 13	13	1300-1400		5.44E-01	1.332E-01	1.19E-02	2.514E-01	6.09E-02	5.55E-01	1.04E-01	2.50E-07	2.28E-03	1.13E-01	2.72E-07	2.48E-03
Road 13	13	1400-1500		5.44E-01	1.331E-01	1.19E-02	2.534E-01	6.10E-02	5.56E-01	1.05E-01	2.51E-07	2.29E-03	1.14E-01	2.72E-07	2.49E-03
Road 13	13	1500-1600		5.44E-01	1.331E-01	1.19E-02	2.534E-01	6.09E-02	5.56E-01	1.04E-01	2.50E-07	2.28E-03	1.13E-01	2.72E-07	2.49E-03
Road 13	13	1600-1700		5.44E-01	1.331E-01	1.20E-02	2.534E-01	6.10E-02	5.56E-01	1.04E-01	2.51E-07	2.29E-03	1.14E-01	2.72E-07	2.49E-03
Road 13	13	1700-1800		5.44E-01	1.331E-01	1.20E-02	2.534E-01	6.10E-02	5.56E-01	1.04E-01	2.51E-07	2.29E-03	1.14E-01	2.72E-07	2.49E-03
Road 13	13	1800-1900		5.34E-01	1.29E-01	1.18E-02	2.49E-01	6.04E-02	5.51E-01	1.02E-01	2.47E-07	2.26E-03	1.15E-01	2.70E-07	2.46E-03
Road 13	13	1900-2000		4.08E-01	1.07E-01	7.87E-03	2.05E-01	1.46E-02	1.34E-01	8.35E-02	6.13E-05	5.59E-05	8.95E-02	6.66E-02	6.08E-04
Road 13	13	2000-2100		4.26E-01	1.07E-01	7.87E-03	2.05E-01	1.45E-02	1.34E-01	8.35E-02	6.13E-05	5.59E-05	8.95E-02	6.66E-02	6.08E-04
Road 13	13	2100-2200		4.46E-01	1.04E-01	7.77E-03	2.01E-01	1.45E-02	1.33E-01	8.51E-02	6.07E-06	5.53E-04	9.91E-02	6.59E-02	6.01E-04
Road 13	13	2200-2300		4.29E-01	1.07E-01	7.76E-03	2.05E-01	1.44E-02	1.33E-01	8.58E-02	6.06E-06	5.53E-04	9.93E-02	6.58E-02	6.02E-04
Road 13	13	2300-2400		2.96E-01	7.47E-02	5.21E-03	2.19E-01	1.36E-02	1.25E-01	9.32E-02	5.84E-06	5.13E-04	1.09E-01	6.54E-02	5.83E-04
Road 14	14	0000-0100		3.31E-01	2.211E-01	1.38E-03	4.17E-01	1.74E-02	1.08E-01	1.72E-01	7.17E-04	6.86E-04	1.837E-02	7.78E-04	8.40E-04
Road 14	14	0100-0200		6.26E-02	1.76E-01	1.99E-03	4.56E-01	1.28E-02	7.97E-02	1.92E-02	5.40E-06	3.86E-06	2.09E-02	5.87E-05	6.05E-04
Road 14	14	0200-0300		7.25E-02	1.69E-01	7.70E-04	5.34E-01	1.207E-06	8.68E-06	2.24E-05	5.46E-06	2.84E-04	2.34E-04	4.96E-08	1.39E-04
Road 14	14	0300-0400		2.86E-02	1.69E-01	7.70E-04	5.47E-01	1.252E-06	9.59E-06	2.38E-05	5.46E-06	2.84E-04	2.34E-04	4.96E-08	1.39E-04
Road 14	14	0400-0500		8.29E-02	1.550E-01	9.67E-04	5.40E-01	1.205E-02	6.37E-02	1.31E-01	4.37E-02	7.17E-03	2.52E-02	4.75E-06	3.96E-04
Road 14	14	0500-0600		7.26E-02	2.255E-01	9.67E-04	5.42E-01	1.53E-05	9.07E-06	2.07E-02	6.17E-06	3.96E-04	2.64E-04	6.91E-08	4.36E-04
Road 14	14	0600-0700		2.86E-02	1.69E-01	7.70E-04	5.47E-01	1.252E-06	9.59E-06	2.38E-05	5.46E-06	2.84E-04	2.34E-04	4.96E-08	1.39E-04
Road 14	14	0700-0800		8.19E-02	1.19E-01	7.88E-03	5.58E-01	7.78E-04	8.48E-02	2.34E-02	3.11E-03	3.17E-03	2.52E-02	3.38E-02	7.10E-03
Road 14	14	0800-0900		8.68E-02	1.320E-01	8.22E-03	5.40E-01	8.34E-03	5.29E-02	2.22E-02	3.38E-02	2.10E-02	2.41E-02	3.67E-02	2.08E-03
Road 14	14	0900-1000		1.06E-01	1.29E-01	8.63E-03	6.12E-01	7.90E-03	5.56E-02	2.22E-02	3.17E-02	1.97E-02	2.40E-02	4.95E-02	1.24E-03
Road 14	14	1000-1100		1.06E-01	1.29E-01	8.63E-03	6.12E-01	7.90E-03	5.56E-02	2.22E-02	3.17E-02	1.97E-02	2.40E-02	4.95E-02	1.24E-03
Road 14	14	1100-1200		1.18E-01	1.18E-01	7.32E-03	6.47E-01	7.16E-03	4.96E-02	2.62E-02	2.84E-02	2.16E-02	2.78E-02	3.08E-02	1.92E-03
Road 14	14	1200-1300		1.17E-01	1.41E-01	8.76E-03	7.00E-01	8.24E-03	5.25E-02	2.88E-02	3.47E-02	2.10E-02	3.14E-02	3.77E-02	2.35E-03
Road 14	14	1300-1400		1.17E-01	1.41E-01	8.76E-03	7.00E-01	8.24E-03	5.25E-02	2.88E-02	3.47E-02	2.10E-02	3.14E-02	3.77E-02	2.35E-03
Road 14	14	1400-1500		1.17E-01	1.511E-01	9.99E-03	6.80E-01	8.98E-03	5.59E-02	8.82E-02	3.68E-02	2.29E-02	3.17E-02	4.00E-02	2.49E-03
Road 14	14	1500-1600		1.17E-01	1.496E-01	9.24E-03	6.71E-01	8.97E-03	5.56E-02	2.71E-02	3.62E-02	2.25E-02	2.95E-02	3.93E-02	2.45E-03
Road 14	14	1600-1700		1.17E-01	1.496E-01	9.24E-03	6.71E-01	8.97E-03	5.56E-02	2.71E-02	3.62E-02	2.25E-02	2.95E-02	3.93E-02	2.45E-03
Road 14	14	1700-1800		8.92E-01	1.405E-01	8.70E-03	5.79E-01	9.35E-03	5.82E-02	2.48E-02	3.08E-02	2.37E-02	2.64E-02	4.13E-02	2.57E-03
Road 14	14	1800-1900		7.19E-02	1.19E-01	7.99E-03	5.46E-01	8.66E-03	5.39E-02	2.16E-02	3.64E-02	2.26E-02	2.31E-02	3.95E-02	2.46E-03
Road 14	14	1900-2000		5.03E-02	1.09E-01	7.40E-03	5.16E-01	8.55E-03	5.39E-02	1.86E-02	2.86E-02	1.47E-02	2.09E-02	2.99E-02	1.61E-03
Road 14	14	2000-2100		4.88E-02	1.09E-01	7.40E-03	5.16E-01	8.55E-03	5.39E-02	1.86E-02	2.86E-02	1.47E-02	2.09E-02	2.99E-02	1.61E-03
Road 14	14	2100-2200		4.60E-02	4.60E-02	7.86E-03	4.20E-01	4.20E-03	2.61E-02	1.70E-02	1.05E-02				

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.1 Emission Factor in 2028.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open VI North Union Factory for ARMMO model (Summary)														
Year 2028														
Road Name	Road ID	Hour	NO _x Emission		NO Emission		PM _{2.5} Emission		PM ₁₀ Emission					
			Average g/min/veh	g/min/veh	Average g/min/veh	g/min/veh	Average g/min/veh	g/min/veh	Average g/min/veh	g/min/veh				
Road 6	61600-1700	1225	0.16	0.66	1.9555	7.476	1.1605	1.2061	3.0502	4.7467	4.8881	3.315	5.1567	5.3063
Road 6	61700-1800	9358	0.008	0.008	0.005	0.005	0.1105	0.1136	0.0404	0.4448	0.564	0.2876	0.4835	0.4983
Road 6	61700-1830	1138	0.16	0.66	1.9555	7.476	1.1605	1.2061	3.0502	4.7467	4.8881	3.315	5.1567	5.3063
Road 6	62000-2000	6086	0.058	0.407	0.8726	0.448	7.7246	0.545	2.3540	0.122	2.308	0.2561	0.3967	0.3483
Road 6	62000-2100	5848	0.058	0.407	0.6223	0.474	5.6796	0.531	2.301	0.2423	2.048	0.2536	0.2631	2.7083
Road 6	62100-2560	7200	0.5662	2.797	6.2016	5.476	0.5308	0.5308	2.1862	0.2267	2.3463	0.2332	0.2847	0.4316
Road 6	62200-2300	5506	0.058	0.407	0.6223	0.474	5.2386	0.531	2.280	0.2227	2.281	0.2431	2.416	0.2705
Road 6	62300-0900	5738	0.438	0.437	0.6223	0.474	0.5308	0.4012	2.2180	0.687	1.7678	0.2438	1.8267	1.8773
Road 7	70000-0800	1686	0.008	0.008	0.005	0.005	0.1105	0.1136	0.0404	0.4448	0.564	0.2876	0.4835	0.4983
Road 7	70200-0100	2956	0.725	0.726	3.3326	0.208	8.4207	3.5061	0.1401	1.3708	1.5804	1.5352	0.0208	1.7254
Road 7	70200-0330	3254	0.258	0.268	2.6881	0.334	6.6447	2.765	1.4752	2.8838	1.2104	1.0602	3.088	1.3234
Road 7	70200-0530	2818	0.258	0.268	2.6881	0.334	6.6447	2.765	1.4752	2.8838	1.2104	1.0602	3.088	1.3234
Road 7	70300-0900	3688	0.538	0.538	2.6881	0.334	5.8797	0.531	1.5408	0.2106	1.1101	1.6901	0.2828	1.3214
Road 7	70500-0600	3712	0.008	0.008	0.005	0.005	0.1006	0.4306	0.3540	0.4422	1.8974	0.1682	0.4088	2.0504
Road 7	70500-0700	3808	0.2318	0.2318	0.9554	0.236	0.9554	0.236	1.5408	0.9408	0.008	1.688	1.0267	0.3754
Road 7	70700-0900	3496	0.008	0.008	0.005	0.005	0.1006	0.4306	0.3540	0.4422	1.8974	0.1682	0.4088	2.0504
Road 7	70800-0900	1938	0.558	0.558	0.2396	0.344	4.7536	0.201	1.5002	0.1137	9.1208	1.6622	2.322	0.9204
Road 7	70900-0000	4531	0.364	0.364	2.2362	0.309	4.286	1.831	0.266	1.933	8.2654	1.813	1.208	8.8984
Road 7	71000-1300	5166	0.176	0.176	0.9009	0.167	0.9009	0.167	1.7849	0.1762	7.6104	0.1682	1.346	0.8704
Road 7	71100-1200	4976	0.478	0.478	0.2202	0.388	3.688	0.588	1.7505	0.1667	7.1904	0.308	1.880	7.7254
Road 7	71200-1300	5676	0.678	0.678	0.2738	0.438	4.8868	0.280	0.201	2.268	9.6704	1.1808	2.466	1.0503
Road 7	71300-1810	6447	0.278	0.278	2.848	0.333	4.584	0.288	2.1112	0.008	8.7108	1.688	2.472	1.0603
Road 7	71400-1500	5732	0.708	0.707	2.996	0.268	5.2136	0.232	1.9802	0.242	1.041	1.025	2.638	1.1137
Road 7	71500-1600	5538	0.608	0.608	2.996	0.268	5.2136	0.232	1.9802	0.242	1.041	1.025	2.638	1.1137
Road 7	71600-1700	5348	0.608	0.608	2.996	0.268	5.2136	0.232	1.9802	0.242	1.041	1.025	2.638	1.1137
Road 7	71700-1800	4248	0.058	0.058	0.2788	0.474	5.798	0.458	2.7540	0.263	1.130	1.875	2.868	1.3318
Road 7	71800-1900	3258	0.528	0.528	0.3368	0.378	5.5648	0.288	1.5402	0.2638	1.137	1.688	2.852	1.2238
Road 7	72000-1800	2888	0.358	0.358	1.7976	0.358	4.5248	1.948	0.1572	2.138	9.3804	1.708	2.312	8.9804
Road 7	72000-1830	2878	0.358	0.358	1.7976	0.358	4.5248	1.948	0.1572	2.138	9.3804	1.708	2.312	8.9804
Road 7	72000-2200	2668	0.268	0.268	1.1578	0.208	3.358	0.438	1.4202	0.1468	6.3884	0.558	1.6267	0.9804
Road 7	72000-2330	2338	0.298	0.298	1.1115	0.328	3.468	0.468	1.488	1.528	6.5104	1.618	1.658	7.0774
Road 8	80000-2400	7468	0.008	0.008	0.005	0.005	0.1006	0.4306	0.3540	0.4422	1.8974	0.1682	0.4088	2.0504
Road 8	80100-0000	4678	0.288	0.288	0.7008	0.508	4.4487	0.328	3.8502	0.3008	7.0084	0.488	1.568	1.8504
Road 8	80200-0100	4868	0.008	0.008	0.005	0.005	0.1006	0.4306	0.3540	0.4422	1.8974	0.1682	0.4088	2.0504
Road 8	80300-0200	4088	0.008	0.008	0.005	0.005	0.1006	0.4306	0.3540	0.4422	1.8974	0.1682	0.4088	2.0504
Road 8	80300-0400	5288	0.218	0.218	0.7787	0.288	3.808	0.858	1.998	0.798	6.488	0.238	0.558	7.0685
Road 8	80400-0500	5478	0.388	0.388	0.008	0.708	1.9347	1.418	3.908	0.798	7.848	0.258	0.688	7.7985
Road 8	80500-0600	5448	0.448	0.448	0.008	0.708	1.9347	1.418	3.908	0.798	7.848	0.258	0.688	7.7985
Road 8	80600-0700	5878	0.458	0.458	0.008	0.708	1.9347	1.418	3.908	0.798	7.848	0.258	0.688	7.7985
Road 8	80700-0800	6058	0.148	0.148	0.8808	0.7808	1.4798	0.108	3.958	0.7428	5.848	0.298	0.878	5.9584
Road 8	80800-0858	6258	0.148	0.148	0.8808	0.7808	1.4798	0.108	3.958	0.7428	5.848	0.298	0.878	5.9584
Road 8	80900-0900	6658	0.102	0.102	0.8868	0.548	1.3908	0.1018	3.828	0.688	5.008	0.418	0.748	5.9384
Road 8	81000-1100	7258	0.148	0.148	0.8448	0.768	1.2118	0.8968	0.3902	0.5158	4.548	0.242	0.698	4.8184
Road 8	81100-1200	7318	1.078	1.078	0.7748	0.7748	1.1408	0.8968	0.3902	0.5158	4.548	0.242	0.698	4.8184
Road 8	81200-1158	8468	0.1158	0.1158	0.8468	0.7818	1.078	0.8968	0.3902	0.5158	4.548	0.242	0.698	4.8184
Road 8	81300-1400	9248	0.308	0.308	2.8888	0.648	2.8908	0.2138	3.3008	0.398	1.008	3.598	1.528	1.1283
Road 8	81400-1500	4018	0.008	0.008	0.005	0.005	0.1006	0.4306	0.3540	0.4422	1.8974	0.1682	0.4088	2.0504
Road 8	81500-1600	4018	0.008	0.008	0.005	0.005	0.1006	0.4306	0.3540	0.4422	1.8974	0.1682	0.4088	2.0504
Road 8	81600-1700	8688	0.4078	0.4078	0.008	0.8988	0.3238	0.288	3.398	0.558	1.178	0.388	1.728	1.2783
Road 8	81700-1800	70318	0.5478	0.5478	0.2618	0.4088	3.2998	0.2398	1.3240	1.588	1.868	0.408	1.728	1.2783
Road 8	81800-1748	8478	0.4078	0.4078	0.008	0.8988	0.3238	0.288	3.398	0.558	1.178	0.388	1.728	1.2783
Road 8	82000-2000	5138	0.0707	0.0707	0.1538	0.308	2.5808	1.918	0.3218	0.3318	0.9704	0.518	1.428	1.0518
Road 8	82000-2100	5148	0.638	0.638	0.1128	0.628	0.2168	1.558	0.438	1.5918	0.7774	0.368	1.418	8.0584
Road 8	82100-2098	4988	0.538	0.538	0.1128	0.628	0.2168	1.558	0.438	1.5918	0.7774	0.368	1.418	8.0584
Road 8	82200-2300	4908	0.488	0.488	1.1708	0.408	1.948	0.438	0.208	0.9688	0.788	1.488	1.058	7.7984
Road 8	82300-0000	5178	0.1188	0.1188	0.7748	0.8448	1.4798	0.1098	3.278	0.7428	5.848	0.508	0.8018	5.91184
Road 9	90000-0000	2398	0.108	0.108	2.9968	0.688	1.1808	0.208	1.4778	0.778	1.298	1.598	0.538	1.0184
Road 9	90100-0238	6908	0.108	0.108	2.9968	0.688	1.1808	0.208	1.4778	0.778	1.298	1.598	0.538	1.0184
Road 9	90200-0300	3948	0.6128	0.6128	0.8668	0.778	5.8687	1.598	1.5402	0.2468	0.688	1.688	2.618	0.888
Road 9	90300-0400	4308	0.2998	0.2998	0.1418	0.9318	0.487	1.3118	1.6808	1.9808	0.588	1.758	2.338	0.8018
Road 9	90400-0400	4888	0.408	0.408	0.1418	0.9318	0.487	1.3118	1.6808	1.9808	0.588	1.758	2.338	0.8018
Road 9	90500-0600	4588	0.0618	0.0618	0.2878	0.408	9.3247	0.5138	1.6448	0.3808	1.008	1.788	0.4128	1.13284
Road 9	90600-0700	5048	0.478	0.478	0.6708	0.436	2.1448	0.508	1.878	0.8508	2.388	1.888	0.948	2.5084
Road 9	90700-1402	1058	0.478	0.478	0.6708	0.436	2.1448	0.508	1.878	0.8508	2.388	1.888	0.948	2.5084
Road 9	90800-0900	6068	0.2957	0.2957	0.7788	0.578	5.468	0.488	1.878	0.2118	5.804	0.208	2.347	6.3384
Road 9	90900-1000	6968	0.5378	0.5378	1.1708	0.518	4.8686	0.3278	2.048	0.5918	0.598	2.228	2.088	5.0384
Road 9	91000-0658	8408	0.5378	0.5378	1.1708	0.518	4.8686	0.3278	2.048	0.5918	0.598	2.228	2.088	5.0384
Road 9	91100-1200	7208	0.5378	0.5378	1.1708	0.518	4.8686	0.3278	2.048	0.5918	0.598	2.228	2.088	5.0384

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

TSPing VI North Underquarry										
Open Road 2 North Emission Factors										
Year 2028										
for AERMOD model (Summary)										
Road Name	Road ID	Hour	NO _x Emission		NO Emission		PM _{2.5} Emission		PM ₁₀ Emission	
			A _{road} /hour [g/mi/yr] [g/s]	A _{road} /hour [g/mi/yr] [g/s]	A _{road} /hour [g/mi/yr] [g/s]	A _{road} /hour [g/mi/yr] [g/s]	A _{road} /hour [g/mi/yr] [g/s]	A _{road} /hour [g/mi/yr] [g/s]		
Road 18	18	0000-0100	3.21E+03	1.30E+07	1.85E+03	1.26E+07	1.32E+06	1.88E+02	1.43E+03	5.77E+08
Road 18	18	0100-0200	3.59E+03	1.54E+08	1.38E+03	1.34E+07	9.08E+07	1.30E+02	1.51E+03	4.03E+08
Road 18	18	0200-0300	3.49E+03	1.49E+08	1.35E+03	1.30E+07	8.70E+07	1.01E+02	1.46E+03	3.15E+08
Road 18	18	0300-0400	3.18E+03	1.48E+08	1.37E+03	1.30E+07	8.41E+07	1.00E+02	1.40E+06	3.77E+04
Road 18	18	0400-0500	4.52E+02	7.75E+08	1.10E+03	1.81E+07	6.57E+07	9.30E+03	1.71E+02	2.92E+08
Road 18	18	0500-0600	4.44E+02	1.80E+07	1.20E+03	1.78E+07	1.15E+08	1.48E+06	4.84E+06	9.98E+04
Road 18	18	0600-0700	4.44E+02	1.80E+07	1.20E+03	1.78E+07	1.15E+08	1.48E+06	4.84E+06	9.98E+04
Road 18	18	0700-0800	4.83E+02	6.11E+07	8.77E+03	1.88E+07	4.91E+06	7.00E+02	1.72E+01	1.87E+02
Road 18	18	0800-0900	4.66E+02	6.00E+07	8.69E+03	1.55E+07	5.22E+06	7.44E+02	1.23E+03	3.35E+03
Road 18	18	0900-1000	5.11E+02	5.89E+07	9.61E+03	1.86E+07	4.20E+06	7.05E+02	2.96E+02	3.36E+03
Road 18	18	1000-1100	6.21E+02	5.58E+07	9.63E+03	1.42E+07	4.50E+06	1.24E+02	1.59E+02	2.91E+03
Road 18	18	1100-1200	6.03E+02	5.60E+07	8.60E+03	4.22E+06	4.24E+06	6.05E+01	1.92E+02	2.74E+03
Road 18	18	1200-1300	5.17E+02	5.60E+07	7.60E+03	4.32E+06	4.15E+06	6.15E+01	1.92E+02	2.74E+03
Road 18	18	1300-1400	5.27E+02	5.06E+07	7.22E+03	4.35E+06	4.18E+06	5.86E+02	1.95E+05	2.79E+03
Road 18	18	1400-1500	5.21E+02	5.06E+07	7.16E+03	4.29E+06	4.13E+06	5.82E+02	2.02E+02	2.68E+07
Road 18	18	1500-1600	5.09E+02	5.11E+07	7.08E+03	4.22E+06	4.03E+06	5.80E+02	2.08E+02	2.54E+07
Road 18	18	1600-1700	5.16E+02	5.89E+07	8.41E+03	4.32E+06	4.39E+06	5.86E+02	2.02E+02	2.56E+07
Road 18	18	1700-1800	3.97E+02	5.51E+07	7.49E+03	4.83E+06	5.00E+06	7.22E+02	1.76E+02	3.78E+03
Road 18	18	1800-1900	3.16E+02	4.74E+07	6.75E+03	3.40E+06	5.00E+06	7.25E+02	1.63E+02	2.44E+07
Road 18	18	1900-2000	2.72E+02	4.74E+07	6.45E+03	3.45E+06	4.29E+06	1.63E+02	1.95E+07	2.79E+03
Road 18	18	2000-2100	2.72E+02	4.74E+07	6.45E+03	3.38E+06	4.82E+02	1.68E+02	1.57E+07	2.23E+03
Road 18	18	2100-2200	2.39E+02	2.20E+07	1.14E+03	1.28E+03	3.03E+06	4.32E+02	1.48E+02	1.37E+07
Road 18	18	2200-2300	2.37E+02	2.15E+07	3.06E+03	4.36E+06	4.42E+02	1.55E+02	1.44E+07	2.06E+03
Road 18	18	2300-0000	2.58E+02	1.74E+07	2.48E+03	4.49E+06	2.86E+06	3.36E+02	1.08E+07	1.54E+03
Road 19	19	0000-0100	2.99E+03	1.86E+07	1.89E+03	2.72E+07	1.63E+06	1.72E+02	1.12E+03	7.16E+06
Road 19	19	0100-0200	3.33E+03	3.31E+07	3.28E+03	2.86E+07	1.13E+06	1.19E+02	1.40E+06	4.70E+04
Road 19	19	0200-0300	2.69E+03	3.31E+07	2.82E+03	2.86E+07	8.70E+07	1.38E+02	1.80E+06	3.80E+04
Road 19	19	0300-0400	4.04E+02	9.33E+08	1.12E+04	1.18E+07	7.74E+07	1.35E+02	3.12E+08	3.28E+04
Road 19	19	0400-0500	4.22E+02	1.07E+07	9.81E+03	8.26E+07	8.62E+03	3.39E+08	3.66E+04	1.50E+03
Road 19	19	0500-0600	3.55E+02	1.07E+07	8.40E+03	8.26E+07	8.62E+03	3.39E+08	3.66E+04	1.50E+03
Road 19	19	0600-0700	4.34E+02	4.02E+07	4.23E+03	3.25E+03	3.01E+07	1.34E+02	1.72E+03	1.37E+04
Road 19	19	0700-0800	4.69E+02	8.85E+03	9.30E+03	3.18E+06	6.47E+06	6.73E+02	1.44E+02	2.71E+03
Road 19	19	0800-0900	4.54E+02	9.92E+07	9.40E+03	3.14E+06	6.88E+06	7.21E+03	1.38E+06	2.98E+03
Road 19	19	0900-1000	4.43E+02	9.92E+07	9.40E+03	3.14E+06	6.88E+06	7.21E+03	1.38E+06	2.98E+03
Road 19	19	1000-1100	6.14E+02	9.97E+07	1.03E+04	3.82E+06	6.39E+06	1.68E+02	1.68E+02	2.87E+03
Road 19	19	1100-1200	5.94E+02	8.99E+07	9.42E+03	3.78E+06	5.99E+06	1.44E+02	2.48E+02	2.61E+03
Road 19	19	1200-1300	6.63E+02	8.99E+07	9.42E+03	3.78E+06	5.99E+06	1.44E+02	2.48E+02	2.61E+03
Road 19	19	1300-1400	8.80E+02	9.94E+07	9.51E+03	3.78E+06	5.52E+06	5.80E+02	2.47E+02	2.54E+03
Road 19	19	1400-1500	8.64E+02	9.30E+07	9.37E+03	3.30E+06	5.714E+06	6.00E+02	2.47E+02	2.66E+03
Road 19	19	1500-1600	8.64E+02	9.30E+07	9.37E+03	3.30E+06	5.714E+06	6.00E+02	2.47E+02	2.66E+03
Road 19	19	1600-1700	8.18E+02	3.36E+07	9.84E+03	3.21E+06	5.97E+06	6.27E+02	2.44E+02	2.94E+03
Road 19	19	1700-1800	6.45E+02	8.02E+07	8.43E+03	5.59E+06	6.00E+06	2.10E+02	6.17E+02	2.79E+03
Road 19	19	1800-1900	4.87E+02	8.22E+07	6.34E+03	5.59E+06	5.35E+07	1.82E+02	2.29E+02	2.51E+03
Road 19	19	1900-2000	2.18E+02	8.22E+07	4.94E+03	5.59E+06	5.35E+07	1.82E+02	2.29E+02	2.51E+03
Road 19	19	2000-2100	4.20E+02	3.25E+07	3.41E+03	5.11E+06	3.18E+06	3.42E+02	1.54E+02	2.05E+07
Road 19	19	2100-2200	3.96E+02	3.05E+07	3.20E+03	4.81E+06	2.88E+06	1.87E+02	1.32E+02	1.88E+06
Road 19	19	2200-2300	3.96E+02	3.05E+07	3.20E+03	4.81E+06	2.88E+06	1.87E+02	1.32E+02	1.88E+06
Road 19	19	2300-0000	4.26E+02	2.40E+07	2.52E+03	4.05E+06	2.28E+06	2.40E+02	1.80E+02	1.10E+02
Road 20	20	0000-0100	1.14E+01	7.76E+08	1.52E+04	5.37E+07	2.47E+02	2.00E+02	1.37E+02	2.18E+07
Road 20	20	0100-0200	1.18E+01	5.53E+08	1.57E+04	5.58E+07	2.46E+02	1.75E+02	2.00E+02	1.96E+07
Road 20	20	0200-0300	1.27E+01	5.68E+08	1.69E+04	5.68E+07	2.46E+02	1.75E+02	2.00E+02	1.96E+07
Road 20	20	0300-0400	1.26E+01	5.78E+08	1.751E+04	5.68E+07	1.74E+07	1.72E+02	2.21E+02	5.49E+06
Road 20	20	0400-0500	1.30E+01	4.41E+08	2.931E+04	6.05E+07	2.44E+07	1.98E+02	2.77E+02	5.20E+06
Road 20	20	0500-0600	1.36E+01	4.41E+08	2.931E+04	6.05E+07	2.44E+07	1.98E+02	2.77E+02	5.20E+06
Road 20	20	0700-0800	1.42E+01	1.94E+07	1.84E+05	5.89E+07	6.02E+02	2.27E+03	2.27E+04	2.68E+06
Road 20	20	0800-0900	1.50E+01	4.31E+07	2.08E+05	6.88E+08	1.98E+06	1.33E+02	2.56E+06	5.01E+04
Road 20	20	0900-1000	1.47E+01	4.31E+07	2.08E+05	6.88E+08	1.98E+06	1.33E+02	2.56E+06	5.01E+04
Road 20	20	1000-1100	1.59E+01	5.58E+07	2.37E+05	2.55E+06	1.71E+02	2.73E+03	6.04E+04	2.97E+04
Road 20	20	1100-1200	1.71E+01	5.74E+07	3.67E+05	2.71E+06	2.59E+06	1.74E+02	2.96E+02	9.96E+04
Road 20	20	1200-1300	1.70E+01	5.74E+07	3.67E+05	2.71E+06	2.59E+06	1.74E+02	2.96E+02	9.96E+04
Road 20	20	1300-1400	1.96E+01	6.07E+07	4.17E+05	2.47E+06	2.78E+06	1.87E+02	3.19E+02	1.08E+07
Road 20	20	1400-1500	1.91E+01	6.07E+07	4.02E+05	2.57E+06	2.81E+06	1.87E+02	3.19E+02	1.08E+07
Road 20	20	1500-1600	1.93E+01	6.07E+07	4.17E+05	2.57E+06	2.81E+06	1.87E+02	3.19E+02	1.08E+07
Road 20	20	1600-1700	1.65E+01	7.75E+07	3.87E+05	2.57E+06	1.73E+02	3.27E+03	6.04E+04	2.97E+04
Road 20	20	1700-1800	1.65E+01	7.75E+07	3.87E+05	2.57E+06	1.73E+02	3.27E+03	6.04E+04	2.97E+04
Road 20	20	1800-1900	1.48E+01	6.48E+07	3.40E+05	2.57E+06	1.68E+02	3.29E+03	5.49E+04	2.47E+04
Road 20	20	1900-2000	1.37E+01	5.95E+07	3.13E+05	2.57E+06	1.68E+02	3.29E+03	5.49E+04	2.47E+04

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Ing YR North Underground Quarry																	
Year 2028																	
For AERMOD model (Summary)																	
Road Name	Road ID	Hour	NO ₂ Emission		NO Emission		PM _{2.5} Emission		PM ₁₀ Emission								
			g/h/mph	g/h	g/h/mph	g/h	g/h/mph	g/h	g/h/mph	g/h							
Road #	9	1200-1300	8.596	7.802	7.115	6.081	5.526	1.506	2.466	2.236	6.046	2.676	2.426	6.576	0.04		
Road #	9	1300-1400	8.796	8.102	7.216	6.221	6.111	5.646	1.536	2.466	2.236	6.076	2.656	2.446	6.626	0.04	
Road #	9	1500-1600	8.476	7.682	6.996	5.961	5.396	1.616	2.426	2.176	5.966	2.686	2.416	6.576	0.04		
Road #	9	1500-1600	8.546	8.602	7.716	6.721	6.081	6.086	1.516	2.386	2.336	6.486	2.516	2.606	6.076	0.04	
Road #	9	1600-1700	8.646	8.326	7.536	6.541	6.616	6.656	1.806	2.526	2.706	7.326	3.216	2.946	7.966	0.04	
Road #	9	1600-1700	8.656	8.296	7.496	6.501	5.916	6.216	1.826	2.476	2.716	7.376	3.246	2.976	8.016	0.04	
Road #	9	1800-1900	7.126	7.156	6.476	4.796	6.386	1.786	1.986	2.726	7.366	3.256	2.966	7.016	0.04		
Road #	9	2000-2000	4.356	4.026	3.726	2.666	4.666	5.086	1.386	1.936	2.116	5.736	2.106	2.966	6.236	0.04	
Road #	9	2100-2100	1.146	1.026	1.356	1.086	1.356	1.386	0.806	1.356	1.386	0.806	1.356	1.386	0.806	0.04	
Road #	9	2100-2200	3.126	3.062	2.786	4.126	4.611	3.526	2.546	1.676	1.426	3.846	1.826	1.546	3.716	0.04	
Road #	9	2200-2300	3.556	2.962	2.976	4.316	4.316	3.566	9.656	1.746	1.446	3.906	1.896	1.576	4.246	0.04	
Road #	10	0000-0100	2.726	2.726	2.726	2.726	2.726	2.726	2.726	2.726	2.726	2.726	2.726	2.726	2.726	0.04	
Road #	10	0100-0100	3.006	3.006	2.116	4.671	3.766	1.196	2.066	1.071	3.006	1.406	1.206	3.246	3.316	0.04	
Road #	10	0100-0200	1.516	1.827	4.466	4.841	1.006	2.456	2.536	4.526	1.046	3.846	3.626	4.646	1.146	0.04	
Road #	10	0200-0300	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	0.04	
Road #	10	0300-0400	1.806	1.806	1.806	1.806	1.806	1.806	1.806	1.806	1.806	1.806	1.806	1.806	1.806	0.04	
Road #	10	0400-0500	1.786	1.667	4.076	4.956	9.551	8.896	2.176	1.216	4.156	3.866	9.456	4.521	4.216	1.036	0.04
Road #	10	0500-0600	1.616	1.216	5.336	6.846	6.846	1.376	2.856	3.326	4.846	1.386	3.926	5.296	1.306	0.04	
Road #	10	0600-0700	1.456	1.456	6.816	7.766	1.396	1.396	4.726	1.026	7.596	1.846	3.316	8.256	1.026	0.04	
Road #	10	0700-0800	1.786	1.046	2.536	9.306	5.406	1.326	1.776	2.196	5.376	3.556	4.126	2.366	5.886	0.04	
Road #	10	0800-0900	1.756	1.156	4.066	8.896	5.626	1.426	1.546	3.126	3.716	5.666	3.606	2.936	8.156	0.04	
Road #	10	0900-1000	1.956	1.956	2.956	9.541	5.846	1.346	1.346	2.776	5.566	4.046	2.476	6.056	0.04		
Road #	10	1000-1100	2.066	1.196	2.956	1.006	2.906	5.706	1.406	1.346	2.526	5.496	4.246	2.446	5.986	0.04	
Road #	10	1100-1200	2.066	1.196	2.956	1.006	2.906	5.436	1.386	1.306	2.516	5.216	4.246	2.366	5.876	0.04	
Road #	10	1200-1300	2.066	1.196	2.956	1.006	2.906	5.466	1.346	1.406	2.516	5.496	4.366	2.376	5.816	0.04	
Road #	10	1300-1400	2.156	1.276	3.006	1.026	2.926	5.826	1.436	1.446	2.596	5.566	4.436	2.476	6.056	0.04	
Road #	10	1400-1500	2.106	1.216	3.016	1.016	2.976	5.876	1.446	1.406	2.586	5.696	4.436	2.326	5.816	0.04	
Road #	10	1500-1600	2.076	1.246	3.046	9.906	5.936	1.456	1.406	2.581	5.686	4.456	2.466	5.976	6.096	0.04	
Road #	10	1600-1700	2.036	1.286	3.076	1.046	2.996	5.946	1.446	1.406	2.586	5.686	4.456	2.466	5.976	6.096	0.04
Road #	10	1700-1800	1.816	1.116	2.766	9.091	5.676	1.396	1.366	2.526	5.576	3.996	2.996	2.496	6.096	0.04	
Road #	10	1800-1900	1.506	1.127	2.726	7.871	4.786	1.176	1.326	2.026	5.076	3.456	2.636	2.826	5.916	0.04	
Road #	10	1900-2000	1.506	1.127	2.726	7.871	4.786	1.176	1.326	2.026	5.076	3.456	2.636	2.826	5.916	0.04	
Road #	10	2000-2100	1.056	3.246	6.076	6.076	1.076	3.246	3.306	2.706	1.756	1.836	1.531	2.206	1.996	0.04	
Road #	10	2100-2200	1.046	3.246	6.076	6.076	1.076	3.246	3.306	2.706	1.756	1.836	1.531	2.206	1.996	0.04	
Road #	10	2200-2300	1.046	3.246	6.076	6.076	1.076	3.246	3.306	2.706	1.756	1.836	1.531	2.206	1.996	0.04	
Road #	10	2300-0000	1.146	2.707	6.656	6.541	1.555	3.806	2.586	3.126	4.156	2.526	6.096	1.646	0.04		
Road #	11	0000-0100	6.556	2.727	8.746	5.786	2.446	3.426	4.026	1.016	4.276	2.636	1.611	5.556	0.04		
Road #	11	0100-0200	7.446	2.846	9.746	6.246	3.126	4.756	2.456	1.076	4.756	2.846	1.646	5.756	0.04		
Road #	11	0200-0300	6.166	2.867	8.616	5.646	1.436	2.011	2.811	0.606	8.496	1.086	1.106	8.316	0.04		
Road #	11	0300-0400	9.626	2.707	7.396	7.016	1.246	1.746	2.011	5.316	7.436	1.246	1.306	8.166	0.04		
Road #	11	0400-0500	9.686	2.707	7.396	7.016	1.246	1.746	2.011	5.316	7.436	1.246	1.306	8.166	0.04		
Road #	11	0500-0600	9.336	2.796	7.391	6.741	1.246	1.746	2.011	5.316	7.436	1.246	1.306	8.166	0.04		
Road #	11	0600-0700	8.586	2.506	7.006	6.706	1.406	4.296	6.016	2.736	5.276	2.456	3.011	1.916	6.706	0.04	
Road #	11	0700-0800	1.456	2.086	2.286	7.746	1.041	1.466	1.376	4.266	4.976	3.486	4.606	4.576	0.04		
Road #	11	0800-0900	1.056	2.086	2.286	7.746	1.116	1.556	2.166	4.266	4.976	3.486	4.606	4.576	0.04		
Road #	11	0900-1000	1.216	1.516	2.116	7.611	9.956	1.396	2.976	1.896	5.456	3.256	4.220	3.956	0.04		
Road #	11	1000-1100	1.316	1.586	2.116	7.841	9.946	1.276	3.076	1.946	5.476	3.356	4.376	4.056	0.04		
Road #	11	1100-1200	1.316	1.586	2.116	7.841	9.946	1.276	3.076	1.946	5.476	3.356	4.376	4.056	0.04		
Road #	11	1200-1300	1.366	1.686	2.366	8.276	1.026	1.456	3.276	4.056	5.676	3.576	4.441	4.676	0.04		
Road #	11	1300-1400	1.406	1.686	2.496	8.341	1.066	1.486	3.246	4.056	5.756	3.636	4.476	4.626	0.04		
Road #	11	1400-1500	1.366	1.686	2.366	8.276	1.026	1.456	3.276	4.056	5.676	3.576	4.441	4.676	0.04		
Road #	11	1500-1600	1.356	1.846	2.586	8.811	1.111	1.556	3.336	4.286	5.996	3.611	4.547	4.546	0.04		
Road #	11	1600-1700	1.346	1.936	2.706	8.286	1.196	1.676	3.326	4.806	6.736	3.636	4.621	4.676	0.04		
Road #	11	1700-1800	1.346	1.936	2.706	8.286	1.196	1.676	3.326	4.806	6.736	3.636	4.621	4.676	0.04		
Road #	11	1800-1900	1.346	1.456	2.366	8.456	1.126	1.726	3.326	4.806	6.736	3.636	4.621	4.676	0.04		
Road #	11	1900-2000	1.346	1.456	2.366	8.456	1.126	1.726	3.326	4.806	6.736	3.636	4.621	4.676	0.04		
Road #	11	2000-2100	8.196	1.156	2.576	5.791	7.656	1.077	2.511	3.326	4.776	2.596	2.726	3.646	1.106	0.04	
Road #	11	2100-2200	8.196	1.156	2.576	5.791	7.656	1.077	2.511	3.326	4.776	2.596	2.726	3.646	1.106	0.04	
Road #	11	2200-2300	8.196	1.156	2.576	5.791	7.656	1.077	2.511	3.326	4.776	2.596	2.726	3.646	1.106	0.04	
Road #	11	2300-0000	6.076	4.646	6.446	5.881	4.476	6.246	2.441	3.846	4.976	2.596	2.676	3.646	1.106	0.04	
Road #	11	0000-0100	6.416	4.646	6.446	5.881	4.476	6.246	2.441	3.846	4.976	2.596	2.676	3.646	1.106	0.04	
Road #	12	0100-0200	7.736	2.876	2.576	2.266	1.376	1.226	9.636	5.846	5.846	5.266	1.051	6.366	5.726	0.04	
Road #	12	0200-0300	8.216	2.876	2.576	2.266	1.376	1.226	9.636	5.846	5.846	5.266	1.051	6.366	5.726	0.04	
Road #	12	0300-0400	8.216	2.876	2.576	2.266	1.376	1.226	9.636	5.846	5.846	5.266	1.051	6.366	5.726	0.04	
Road #	12	0400-0500	8.856	2.886	2.586	2.326	1.376	1.246	9.816	5.836	5.836	5.246	1.071	6.346	5.706	0.04	
Road #	12	0500-0600	7.456	2.916	2.626	2.276	1.396	1.256	9.596	5.886	5.886	5.296	1.041	6.406	5.756	0.04	
Road #	12	0600-0700	4.936	2.916	2.626	2.276	1.396	1.256	9.596	5.886	5.886	5.296	1.041	6.406	5.756	0.04	
Road #	12	0700-0800	4.936	2.916	2.626	2.276	1.396	1.256	9.596	5.886	5.886	5.296	1.041	6.406	5.756	0.04	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Tsing Yi North Underground Quarry											
Open Road 24 hour Emission Factors for AERMOD model (Summary)											
Year 2028											
Road Name	Road ID	Hour	NO _x Emission AnnualTotal/g/m ²			NO Emission AnnualTotal/g/m ²			PM _{2.5} Emission AnnualTotal/g/m ²		
			g/h/m ²	g/m ² /m	tonnes/year	g/h/m ²	g/m ² /m	tonnes/year	g/h/m ²	g/m ² /m	tonnes/year
Road 23	1600-1700	1	2.260E+01	4.520E+01	1.38E+02	1.44E+01	2.88E+01	1.65E+01	5.36E+01	3.22E+02	1.65E+01
Road 23	1700-1800	2	1.93E+01	4.930E+01	1.32E+02	1.27E+01	2.54E+01	1.43E+01	4.71E+01	2.92E+02	5.34E+01
Road 23	1800-1900	3	2.43E+01	4.30E+01	1.22E+02	1.44E+01	2.88E+01	1.65E+01	5.36E+01	3.22E+02	1.65E+01
Road 23	1900-2000	4	2.43E+01	4.30E+01	1.22E+02	1.44E+01	2.88E+01	1.65E+01	5.36E+01	3.22E+02	1.65E+01
Road 23	2000-2100	5	2.43E+01	4.30E+01	1.22E+02	1.44E+01	2.88E+01	1.65E+01	5.36E+01	3.22E+02	1.65E+01
Road 23	2100-2200	6	2.43E+01	4.30E+01	1.22E+02	1.44E+01	2.88E+01	1.65E+01	5.36E+01	3.22E+02	1.65E+01
Road 23	2200-2300	7	2.43E+01	4.30E+01	1.22E+02	1.44E+01	2.88E+01	1.65E+01	5.36E+01	3.22E+02	1.65E+01
Road 23	2300-2400	8	2.43E+01	4.30E+01	1.22E+02	1.44E+01	2.88E+01	1.65E+01	5.36E+01	3.22E+02	1.65E+01
Road 24	0000-0100	9	8.05E+02	3.88E+03	2.55E+06	4.32E+01	2.08E+08	1.90E+03	3.52E+07	1.44E+02	6.34E+07
Road 24	0100-0200	10	8.71E+02	2.77E+03	2.53E+06	4.32E+01	2.08E+08	1.90E+03	3.52E+07	1.44E+02	6.34E+07
Road 24	0200-0300	11	8.85E+02	2.71E+03	2.54E+06	4.32E+01	2.08E+08	1.90E+03	3.52E+07	1.44E+02	6.34E+07
Road 24	0300-0400	12	1.01E+03	1.90E+04	7.40E+06	5.15E+01	2.48E+09	8.91E+06	4.37E+07	1.77E+03	3.04E+07
Road 24	0400-0500	13	1.07E+03	2.25E+04	2.86E+06	5.40E+01	2.81E+09	1.43E+07	4.70E+07	1.94E+03	3.61E+07
Road 24	0500-0600	14	1.13E+03	2.16E+04	2.81E+06	5.65E+01	2.65E+09	1.50E+07	4.93E+07	2.05E+03	3.67E+07
Road 24	0600-0700	15	1.19E+03	2.07E+04	2.76E+06	5.90E+01	2.49E+09	1.48E+07	5.20E+07	2.10E+03	3.72E+07
Road 24	0700-0800	16	1.25E+03	1.98E+04	2.69E+06	6.15E+01	2.33E+09	1.50E+07	5.47E+07	2.15E+03	3.78E+07
Road 24	0800-0900	17	1.31E+03	1.89E+04	2.62E+06	6.40E+01	2.17E+09	1.52E+07	5.74E+07	2.20E+03	3.84E+07
Road 24	0900-1000	18	1.37E+03	1.80E+04	2.55E+06	6.65E+01	2.01E+09	1.54E+07	6.01E+07	2.25E+03	3.90E+07
Road 24	1000-1100	19	1.43E+03	1.71E+04	2.48E+06	6.90E+01	1.85E+09	1.56E+07	6.28E+07	2.30E+03	3.96E+07
Road 24	1100-1200	20	1.49E+03	1.62E+04	2.41E+06	7.15E+01	1.69E+09	1.58E+07	6.55E+07	2.35E+03	4.02E+07
Road 24	1200-1300	21	1.55E+03	1.53E+04	2.34E+06	7.40E+01	1.53E+09	1.60E+07	6.82E+07	2.40E+03	4.08E+07
Road 24	1300-1400	22	1.61E+03	1.44E+04	2.27E+06	7.65E+01	1.37E+09	1.62E+07	7.09E+07	2.45E+03	4.14E+07
Road 24	1400-1500	23	1.67E+03	1.35E+04	2.20E+06	7.90E+01	1.21E+09	1.64E+07	7.36E+07	2.50E+03	4.20E+07
Road 24	1500-1600	24	1.73E+03	1.26E+04	2.13E+06	8.15E+01	1.05E+09	1.66E+07	7.63E+07	2.55E+03	4.26E+07
Road 25	0000-0100	25	2.98E+02	1.26E+03	8.45E+05	1.46E+01	7.30E+07	6.88E+05	1.28E+07	5.14E+02	2.28E+07
Road 25	0100-0200	26	3.28E+02	1.37E+03	9.25E+05	1.61E+01	8.06E+07	7.50E+05	1.39E+07	5.64E+02	2.49E+07
Road 25	0200-0300	27	3.58E+02	1.48E+03	1.00E+06	1.76E+01	8.92E+07	8.28E+05	1.50E+07	6.14E+02	2.70E+07
Road 25	0300-0400	28	3.88E+02	1.59E+03	1.08E+06	1.91E+01	9.78E+07	8.98E+05	1.61E+07	6.64E+02	2.91E+07
Road 25	0400-0500	29	4.18E+02	1.70E+03	1.16E+06	2.06E+01	1.06E+08	9.58E+05	1.72E+07	7.14E+02	3.12E+07
Road 25	0500-0600	30	4.48E+02	1.81E+03	1.24E+06	2.21E+01	1.15E+08	1.02E+06	1.83E+07	7.64E+02	3.33E+07
Road 25	0600-0700	31	4.78E+02	1.92E+03	1.32E+06	2.36E+01	1.24E+08	1.08E+06	1.94E+07	8.14E+02	3.54E+07
Road 25	0700-0800	32	5.08E+02	2.03E+03	1.40E+06	2.51E+01	1.33E+08	1.14E+06	2.05E+07	8.64E+02	3.75E+07
Road 25	0800-0900	33	5.38E+02	2.14E+03	1.48E+06	2.66E+01	1.42E+08	1.20E+06	2.16E+07	9.14E+02	3.96E+07
Road 25	0900-1000	34	5.68E+02	2.25E+03	1.56E+06	2.81E+01	1.51E+08	1.26E+06	2.27E+07	9.64E+02	4.17E+07
Road 25	1000-1100	35	5.98E+02	2.36E+03	1.64E+06	2.96E+01	1.60E+08	1.32E+06	2.38E+07	1.01E+03	4.38E+07
Road 25	1100-1200	36	6.28E+02	2.47E+03	1.72E+06	3.11E+01	1.69E+08	1.38E+06	2.49E+07	1.06E+03	4.59E+07
Road 25	1200-1300	37	6.58E+02	2.58E+03	1.80E+06	3.26E+01	1.78E+08	1.44E+06	2.60E+07	1.11E+03	4.80E+07
Road 25	1300-1400	38	6.88E+02	2.69E+03	1.88E+06	3.41E+01	1.87E+08	1.50E+06	2.71E+07	1.16E+03	5.01E+07
Road 25	1400-1500	39	7.18E+02	2.80E+03	1.96E+06	3.56E+01	1.96E+08	1.56E+06	2.82E+07	1.21E+03	5.22E+07
Road 25	1500-1600	40	7.48E+02	2.91E+03	2.04E+06	3.71E+01	2.05E+08	1.62E+06	2.93E+07	1.26E+03	5.43E+07
Road 26	0000-0100	41	1.41E+03	6.04E+03	4.05E+06	2.46E+01	1.23E+09	1.15E+07	2.48E+07	1.01E+03	4.26E+07
Road 26	0100-0200	42	1.56E+03	6.54E+03	4.40E+06	2.71E+01	1.34E+09	1.26E+07	2.73E+07	1.11E+03	4.61E+07
Road 26	0200-0300	43	1.71E+03	7.04E+03	4.75E+06	2.96E+01	1.45E+09	1.37E+07	2.98E+07	1.21E+03	4.96E+07
Road 26	0300-0400	44	1.86E+03	7.54E+03	5.10E+06	3.21E+01	1.56E+09	1.48E+07	3.23E+07	1.31E+03	5.31E+07
Road 26	0400-0500	45	2.01E+03	8.04E+03	5.45E+06	3.46E+01	1.67E+09	1.59E+07	3.48E+07	1.41E+03	5.66E+07
Road 26	0500-0600	46	2.16E+03	8.54E+03	5.80E+06	3.71E+01	1.78E+09	1.70E+07	3.73E+07	1.51E+03	6.01E+07
Road 26	0600-0700	47	2.31E+03	9.04E+03	6.15E+06	3.96E+01	1.89E+09	1.81E+07	3.98E+07	1.61E+03	6.36E+07
Road 26	0700-0800	48	2.46E+03	9.54E+03	6.50E+06	4.21E+01	2.00E+09	1.92E+07	4.23E+07	1.71E+03	6.71E+07
Road 26	0800-0900	49	2.61E+03	1.00E+04	6.85E+06	4.46E+01	2.11E+09	2.03E+07	4.48E+07	1.81E+03	7.06E+07
Road 26	0900-1000	50	2.76E+03	1.05E+04	7.20E+06	4.71E+01	2.22E+09	2.14E+07	4.73E+07	1.91E+03	7.41E+07
Road 26	1000-1100	51	2.91E+03	1.10E+04	7.55E+06	4.96E+01	2.33E+09	2.25E+07	4.98E+07	2.01E+03	7.76E+07
Road 26	1100-1200	52	3.06E+03	1.15E+04	7.90E+06	5.21E+01	2.44E+09	2.36E+07	5.23E+07	2.11E+03	8.11E+07
Road 27	0000-0100	53	1.41E+03	6.04E+03	4.05E+06	2.46E+01	1.23E+09	1.15E+07	2.48E+07	1.01E+03	4.26E+07
Road 27	0100-0200	54	1.56E+03	6.54E+03	4.40E+06	2.71E+01	1.34E+09	1.26E+07	2.73E+07	1.11E+03	4.61E+07
Road 27	0200-0300	55	1.71E+03	7.04E+03	4.75E+06	2.96E+01	1.45E+09	1.37E+07	2.98E+07	1.21E+03	4.96E+07
Road 27	0300-0400	56	1.86E+03	7.54E+03	5.10E+06	3.21E+01	1.56E+09	1.48E+07	3.23E+07	1.31E+03	5.31E+07
Road 27	0400-0500	57	2.01E+03	8.04E+03	5.45E+06	3.46E+01	1.67E+09	1.59E+07	3.48E+07	1.41E+03	5.66E+07
Road 27	0500-0600	58	2.16E+03	8.54E+03	5.80E+06	3.71E+01	1.78E+09	1.70E+07	3.73E+07	1.51E+03	6.01E+07
Road 27	0600-0700	59	2.31E+03	9.04E+03	6.15E+06	3.96E+01	1.89E+09	1.81E+07	3.98E+07	1.61E+03	6.36E+07
Road 27	0700-0800	60	2.46E+03	9.54E+03	6.50E+06	4.21E+01	2.00E+09	1.92E+07	4.23E+07	1.71E+03	6.71E+07
Road 27	0800-0900	61	2.61E+03	1.00E+04	6.85E+06	4.46E+01	2.11E+09	2.03E+07	4.48E+07	1.81E+03	7.06E+07
Road 27	0900-1000	62	2.76E+03	1.05E+04	7.20E+06	4.71E+01	2.22E+09	2.14E+07	4.73E+07	1.91E+03	7.41E+07
Road 27	1000-1100	63	2.91E+03	1.10E+04	7.55E+06	4.96E+01	2.33E+09	2.25E+07	4.98E+07	2.01E+03	7.76E+07
Road 27	1100-1200	64	3.06E+03	1.15E+04	7.90E+06	5.21E+01	2.44E+09	2.36E+07	5.23E+07	2.11E+03	8.11E+07
Road 28	0000-0100	65	1.41E+03	6.04E+03	4.05E+06	2.46E+01	1.23E+09	1.15E+07	2.48E+07	1.01E+03	4.26E+07
Road 28	0100-0200	66	1.56E+03	6.54E+03	4.40E+06	2.71E+01	1.34E+09	1.26E+07	2.73E+07	1.11E+03	4.61E+07
Road 28	0200-0300	67	1.71E+03	7.04E+03	4.75E+06	2.96E+01	1.45E+09	1.37E+07	2.98E+07	1.21E+03	4.96E+07
Road 28	0300-0400	68	1.86E+03	7.54E+03	5.10E+06	3.21E+01	1.56E+09	1.48E+07	3.23E+07	1.31E+03	5.31E+07
Road 28	0400-0500	69	2.01E+03	8.04E+03	5.45E+06	3.46E+01	1.67E+09	1.59E+07	3.48E+07	1.41E+03	5.66E+07
Road 28	0500-0600	70	2.16E+03	8.54E+03	5.80E+06	3.71E+01	1.78E+09	1.70E+07	3.73E+07	1.51E+03	6.01E+07
Road 28	0600-0700	71	2.31E+03	9.04E+03	6.15E+06	3.96E+01	1.89E+09	1.81E+07	3.98E+07	1.61E+03	6.36E+07
Road 28	0700-0800	72	2.46E+03	9.54E+03	6.50E+06	4.21E+01	2.00E+09	1.92E+07	4.23E+07	1.71E+03	6.71E+07
Road 28	0800-0900	73	2.61E+03	1.00E+04	6.85E+06	4.46E+01	2.11E+09	2.03E+07	4.48E+07	1.81E+03	7.06E+07
Road 28	0900-1000	74	2.76E+03	1.05E+04	7.20E+06	4.71E+01	2.22E+09	2.14E+07	4.73E+07	1.91E+03	7.41E+07
Road 28	1000-1100	75	2.91E+03	1.10E+04	7.55E+06	4.96E+01	2.33E+09	2.25E+07	4.98E+07	2.01E+03	7.76E+07
Road 28	1100-1200	76	3.06E+03	1.15E+04	7.90E+06	5.21E+01	2.44E+09	2.36E+07	5.23E+07	2.11E+03	8.11E+07
Road 29	0000-0100	77	1.41E+03	6.04E+03	4.05E+06	2.46E+01	1.23E+09	1.15E+07	2.48E+07	1.01E+03	4.26E+07

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Day 24 hour Emulsion Factors																
for AEMMO model (Summary)																
Road Name	Road ID	Hour	NO _x Emission		NO ₂ Emission		PM ₁₀ Emission		PM _{2.5} Emission							
			g/h/mi	g/mi	AnnualHours	g/mi ²	g/h/mi	g/mi	AnnualHours	g/mi ²						
Road #6	46	0800-0900	3.28	0.747	1.89	0.212	3.69	2.50	0.176	1.41	8.67	8.88	1.55	1.04		
Road #6	46	0900-1200	4.04	0.915	2.23	0.251	3.98	3.68	0.217	1.80	10.5	10.5	1.86	1.29		
Road #6	46	1000-1200	4.41	0.58	1.65	0.203	3.16	2.14	0.105	1.28	6.81	11.52	1.39	0.74		
Road #6	46	1200-1300	2.00	0.484	0.73	0.231	0.91	1.08	0.388	1.98	1.12	7.88	1.08	1.25	0.43	
Road #6	46	1300-1400	1.54	0.41	0.61	0.191	0.73	0.68	0.388	1.98	1.12	7.88	1.08	1.25	0.43	
Road #6	46	1300-1400	5.81	1.01	0.66	0.72	3.18	5.46	3.76	0.33	2.32	1.57	1.45	2.53	1.71	
Road #6	46	1400-1500	5.74	0.68	1.88	0.331	5.83	3.95	0.33	2.32	1.57	1.45	2.53	1.71	1.03	
Road #6	46	1500-1600	4.88	0.61	1.52	0.281	4.88	3.95	0.33	2.32	1.57	1.45	2.53	1.71	1.03	
Road #6	46	1600-1700	5.50	1.11	0.50	0.75	3.04	6.15	4.17	0.30	2.01	1.78	1.41	2.85	1.93	
Road #6	46	1700-1800	4.06	0.918	0.62	0.44	2.61	3.80	0.28	0.74	2.24	1.52	1.06	2.44	1.65	
Road #6	46	1800-1900	2.80	0.747	0.474	0.484	1.03	2.72	0.65	0.65	1.38	1.31	1.03	2.09	1.42	
Road #6	46	1900-2000	4.46	0.615	0.73	0.116	1.44	3.68	0.40	0.33	2.47	1.52	1.47	2.44	1.65	
Road #6	46	2000-2100	2.41	0.378	0.25	0.191	0.27	2.01	0.64	0.10	0.80	0.79	7.54	1.17	0.72	
Road #6	46	2100-2200	2.16	0.34	0.27	0.178	0.28	1.87	0.51	0.54	9.54	6.04	6.69	1.04	7.02	
Road #6	46	2200-2300	2.16	0.34	0.27	0.178	0.28	1.87	0.51	0.54	9.54	6.04	6.69	1.04	7.02	
Road #6	46	2300-2400	2.30	0.29	0.76	1.88	0.21	1.44	6.62	7.45	6.04	5.71	1.18	8.09	4.94	
Road #7	47	0000-0100	2.17	0.51	1.07	1.26	0.75	8.21	0.41	0.91	2.18	3.81	4.81	2.26	2.57	
Road #7	47	0100-0200	2.17	0.51	1.07	1.26	0.75	8.21	0.41	0.91	2.18	3.81	4.81	2.26	2.57	
Road #7	47	0200-0300	2.76	0.61	1.55	1.04	1.91	4.22	0.49	1.21	1.15	1.38	1.55	1.25	1.42	
Road #7	47	0300-0400	3.04	0.528	0.624	0.241	3.58	3.95	0.65	0.83	0.98	1.12	6.13	1.07	1.28	
Road #7	47	0400-0500	3.04	0.528	0.624	0.241	3.58	3.95	0.65	0.83	0.98	1.12	6.13	1.07	1.28	
Road #7	47	0500-0600	3.06	1.19	0.31	0.25	2.01	4.41	0.64	0.63	2.18	2.49	4.94	7.21	3.08	7.21
Road #7	47	0600-0700	4.08	0.82	1.38	0.247	3.88	2.46	1.59	0.45	5.22	5.05	8.01	5.68	6.47	
Road #7	47	0700-0800	4.73	0.79	1.74	0.28	4.83	3.54	0.51	1.21	1.98	9.92	3.21	1.36	1.04	
Road #7	47	0800-0900	4.94	0.86	0.96	0.288	4.43	3.69	0.46	1.34	1.43	9.83	1.34	9.83	1.34	
Road #7	47	0900-1000	5.47	0.73	1.38	0.361	0.99	4.04	0.66	1.48	1.48	10.04	1.41	1.61	1.61	
Road #7	47	1000-1100	6.12	0.73	1.05	0.84	0.33	3.72	0.48	0.99	1.24	1.43	1.14	1.36	1.55	
Road #7	47	1100-1200	6.12	0.73	1.05	0.84	0.33	3.72	0.48	0.99	1.24	1.43	1.14	1.36	1.55	
Road #7	47	1200-1300	6.76	0.77	1.77	0.81	0.86	3.88	0.54	1.26	1.37	1.57	1.36	1.49	1.70	
Road #7	47	1300-1400	7.01	0.81	0.97	0.96	0.39	4.43	0.76	1.28	1.47	1.62	1.33	1.55	1.77	
Road #7	47	1400-1500	7.76	0.81	0.97	0.96	0.39	4.43	0.76	1.28	1.47	1.62	1.33	1.55	1.77	
Road #7	47	1500-1600	7.86	0.85	0.87	0.86	0.33	4.50	0.53	1.18	1.51	1.72	1.28	1.46	1.77	
Road #7	47	1600-1700	8.06	0.98	0.56	0.97	0.50	4.85	0.52	1.24	1.60	1.92	1.34	1.83	2.09	
Road #7	47	1700-1800	8.06	0.98	0.56	0.97	0.50	4.85	0.52	1.24	1.60	1.92	1.34	1.83	2.09	
Road #7	47	1800-1900	5.90	0.66	0.74	0.44	0.68	3.03	0.44	0.77	1.18	1.51	1.35	1.75	1.61	
Road #7	47	1900-2000	2.94	0.407	0.47	0.64	1.87	0.25	0.56	0.62	7.80	8.96	6.11	8.48	9.66	
Road #7	47	2000-2100	2.40	0.29	0.95	0.36	1.89	0.23	0.21	0.51	5.58	6.27	5.54	5.98	6.82	
Road #7	47	2100-2200	2.40	0.29	0.95	0.36	1.89	0.23	0.21	0.51	5.58	6.27	5.54	5.98	6.82	
Road #7	47	2200-2300	2.28	0.283	0.967	0.371	1.84	1.82	0.208	0.428	4.48	5.12	4.67	4.89	5.72	
Road #7	47	2300-2400	2.47	0.93	0.205	0.88	1.06	1.405	0.44	0.64	3.63	3.84	4.54	5.04	5.48	
Road #8	48	0000-0100	2.45	0.54	1.07	1.26	0.75	8.21	0.41	0.91	2.18	3.81	4.81	2.26	2.57	
Road #8	48	0100-0200	2.71	0.56	1.04	1.16	0.76	8.71	0.41	0.94	2.24	3.91	4.91	2.31	2.64	
Road #8	48	0200-0300	6.78	0.21	0.117	0.117	0.375	3.06	0.718	0.82	5.68	3.16	4.08	6.17	3.40	
Road #8	48	0300-0400	7.12	0.392	0.216	0.431	0.236	1.93	0.83	1.87	1.01	4.77	5.69	2.04	1.12	0.19
Road #8	48	0400-0500	7.45	0.49	0.87	0.44	0.49	1.31	0.98	1.90	1.04	5.68	6.06	2.51	1.47	
Road #8	48	0500-0600	7.79	0.54	0.94	0.48	0.54	1.45	1.04	2.04	1.11	5.96	6.38	2.61	1.54	
Road #8	48	0600-0700	8.59	0.22	0.106	0.126	0.424	0.294	0.684	0.90	5.90	3.07	4.03	2.06	0.87	0.29
Road #8	48	0700-0800	7.86	0.28	0.237	0.136	0.472	0.184	0.704	0.216	0.577	3.13	2.30	3.17	1.40	
Road #8	48	0800-0900	8.45	0.28	0.237	0.136	0.472	0.184	0.704	0.216	0.577	3.13	2.30	3.17	1.40	
Road #8	48	0900-1000	9.60	0.28	0.237	0.136	0.472	0.184	0.704	0.216	0.577	3.13	2.30	3.17	1.40	
Road #8	48	1000-1100	9.60	0.28	0.237	0.136	0.472	0.184	0.704	0.216	0.577	3.13	2.30	3.17	1.40	
Road #8	48	1100-1200	9.60	0.28	0.237	0.136	0.472	0.184	0.704	0.216	0.577	3.13	2.30	3.17	1.40	
Road #8	48	1200-1300	7.46	0.258	0.448	0.507	0.31	1.74	0.598	0.45	8.20	5.27	2.66	8.92	6.17	
Road #8	48	1300-1400	7.46	0.258	0.448	0.507	0.31	1.74	0.598	0.45	8.20	5.27	2.66	8.92	6.17	
Road #8	48	1400-1500	7.73	0.284	0.532	0.513	0.38	1.88	0.638	0.41	8.81	5.68	2.61	9.07	6.38	
Road #8	48	1500-1600	7.46	0.278	0.538	0.507	0.31	1.88	0.638	0.41	8.81	5.68	2.61	9.07	6.38	
Road #8	48	1600-1700	7.46	0.278	0.538	0.507	0.31	1.88	0.638	0.41	8.81	5.68	2.61	9.07	6.38	
Road #8	48	1700-1800	7.46	0.278	0.538	0.507	0.31	1.88	0.638	0.41	8.81	5.68	2.61	9.07	6.38	
Road #8	48	1800-1900	7.46	0.278	0.538	0.507	0.31	1.88	0.638	0.41	8.81	5.68	2.61	9.07	6.38	
Road #8	48	1900-2000	7.46	0.278	0.538	0.507	0.31	1.88	0.638	0.41	8.81	5.68	2.61	9.07	6.38	
Road #8	48	2000-2100	7.46	0.278	0.538	0.507	0.31	1.88	0.638	0.41	8.81	5.68	2.61	9.07	6.38	
Road #8	48	2100-2200	7.46	0.278	0.538	0.507	0.31	1.88	0.638	0.41	8.81	5.68	2.61	9.07	6.38	
Road #8	48	2200-2300	7.46	0.278	0.538	0.507	0.31	1.88	0.638	0.41	8.81	5.68	2.61	9.07	6.38	
Road #8	48	2300-2400	7.46	0.278	0.538	0.507	0.31	1.88	0.638	0.41	8.81	5.68	2.61	9.07	6.38	
Road #9	49	0000-0100	1.66	0.82	1.87	0.71	3.91	1.84	1.796	0.59	1.58	7.87	7.58	1.72	8.56	7.88
Road #9	49	0100-0200	1.66	0.82	1.87	0.71	3.91	1.84	1.796	0.59	1.58	7.87	7.58	1.72	8.56	7.88
Road #9	49	0200-0300	3.26	1.13	0.62	0.381	1.256	1.135	0.59	1.58	7.87	7.58	1.72	8.56	7.88	
Road #9	49	0300-0400	3.26	1.13	0.62	0.381	1.256	1.135	0.59	1.58	7.87	7.58	1.72	8.56	7.88	
Road #9	49	0400-0500	4.21	0.786	0.44	0.24	0.97	4.1	0.83	0.63	3.04	2.86	1.77	1.18	1.05	0.44

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Road Year 24 Underground Quarry
for AERMOD model (sum)

Year 2020										
Road Name	Road ID	Sum	NO _x Emission		NO _y Emission		PM ₁₀ Emission		PM _{2.5} Emission	
			Annual/t/yr	g/m ² /m	Annual/t/yr	g/m ² /m	Annual/t/yr	g/m ² /m	Annual/t/yr	g/m ² /m
Road S2	0000-0120	1.778	1.778	0.238	7.996	7.996	2.248	4.384	3.112	9.198
Road S2	0120-0300	1.798	1.798	0.238	7.996	7.996	2.248	4.384	3.112	9.198
Road S2	0300-0340	1.806	1.806	2.386	5.775	5.775	3.124	5.975	4.372	10.066
Road S2	0340-0500	1.822	1.822	0.238	4.775	4.775	1.136	2.147	1.574	4.544
Road S2	0500-0600	1.831	1.831	0.238	4.445	4.445	1.136	2.147	1.574	4.544
Road S2	0600-0700	1.876	1.876	1.708	1.076	1.076	8.345	2.447	4.764	3.524
Road S2	0700-0800	1.881	1.881	5.316	2.447	2.447	8.345	2.447	4.764	3.524
Road S2	0800-1000	1.886	1.886	1.371	0.704	0.704	8.445	2.512	2.831	5.788
Road S2	1000-1100	1.990	1.990	1.817	7.126	7.126	8.445	2.512	2.831	5.788
Road S2	1100-1200	1.996	1.996	3.947	7.371	7.371	8.445	2.512	2.831	5.788
Road S2	1200-1300	1.996	1.996	3.947	7.371	7.371	8.445	2.512	2.831	5.788
Road S2	1300-1400	1.996	1.996	3.947	7.371	7.371	8.445	2.512	2.831	5.788
Road S2	1400-1500	1.816	1.816	4.280	7.781	7.781	8.445	2.512	2.831	5.788
Road S2	1500-1600	1.820	1.820	4.280	7.781	7.781	8.445	2.512	2.831	5.788
Road S2	1600-1700	1.820	1.820	4.280	7.781	7.781	8.445	2.512	2.831	5.788
Road S2	1700-1800	1.820	1.820	4.280	7.781	7.781	8.445	2.512	2.831	5.788
Road S2	1800-1900	1.820	1.820	4.280	7.781	7.781	8.445	2.512	2.831	5.788
Road S2	1900-2000	1.820	1.820	4.280	7.781	7.781	8.445	2.512	2.831	5.788
Road S2	2000-2100	1.820	1.820	4.280	7.781	7.781	8.445	2.512	2.831	5.788
Road S2	2100-2200	1.820	1.820	4.280	7.781	7.781	8.445	2.512	2.831	5.788
Road S2	2200-2300	1.820	1.820	4.280	7.781	7.781	8.445	2.512	2.831	5.788
Road S2	2300-2400	1.820	1.820	4.280	7.781	7.781	8.445	2.512	2.831	5.788
Road S3	0000-0120	1.668	1.668	0.238	7.996	7.996	2.248	4.384	3.112	9.198
Road S3	0120-0300	1.668	1.668	0.238	7.996	7.996	2.248	4.384	3.112	9.198
Road S3	0300-0340	1.636	1.636	2.386	4.471	4.471	8.136	2.447	2.241	6.312
Road S3	0340-0500	1.636	1.636	2.386	4.471	4.471	8.136	2.447	2.241	6.312
Road S3	0500-0600	1.636	1.636	2.386	4.471	4.471	8.136	2.447	2.241	6.312
Road S3	0600-0700	1.636	1.636	2.386	4.471	4.471	8.136	2.447	2.241	6.312
Road S3	0700-0800	1.636	1.636	2.386	4.471	4.471	8.136	2.447	2.241	6.312
Road S3	0800-1000	1.636	1.636	2.386	4.471	4.471	8.136	2.447	2.241	6.312
Road S3	1000-1100	1.636	1.636	2.386	4.471	4.471	8.136	2.447	2.241	6.312
Road S3	1100-1200	1.636	1.636	2.386	4.471	4.471	8.136	2.447	2.241	6.312
Road S3	1200-1300	1.636	1.636	2.386	4.471	4.471	8.136	2.447	2.241	6.312
Road S3	1300-1400	1.636	1.636	2.386	4.471	4.471	8.136	2.447	2.241	6.312
Road S3	1400-1500	1.636	1.636	2.386	4.471	4.471	8.136	2.447	2.241	6.312
Road S3	1500-1600	1.636	1.636	2.386	4.471	4.471	8.136	2.447	2.241	6.312
Road S3	1600-1700	1.636	1.636	2.386	4.471	4.471	8.136	2.447	2.241	6.312
Road S3	1700-1800	1.636	1.636	2.386	4.471	4.471	8.136	2.447	2.241	6.312
Road S3	1800-1900	1.636	1.636	2.386	4.471	4.471	8.136	2.447	2.241	6.312
Road S3	1900-2000	1.636	1.636	2.386	4.471	4.471	8.136	2.447	2.241	6.312
Road S3	2000-2100	1.636	1.636	2.386	4.471	4.471	8.136	2.447	2.241	6.312
Road S3	2100-2200	1.636	1.636	2.386	4.471	4.471	8.136	2.447	2.241	6.312
Road S3	2200-2300	1.636	1.636	2.386	4.471	4.471	8.136	2.447	2.241	6.312
Road S3	2300-2400	1.636	1.636	2.386	4.471	4.471	8.136	2.447	2.241	6.312
Road S4	0000-0120	1.166	1.166	0.406	8.666	8.666	1.166	2.447	1.166	2.447
Road S4	0120-0300	1.166	1.166	0.406	8.666	8.666	1.166	2.447	1.166	2.447
Road S4	0300-0340	1.166	1.166	0.406	8.666	8.666	1.166	2.447	1.166	2.447
Road S4	0340-0500	1.166	1.166	0.406	8.666	8.666	1.166	2.447	1.166	2.447
Road S4	0500-0600	1.166	1.166	0.406	8.666	8.666	1.166	2.447	1.166	2.447
Road S4	0600-0700	1.166	1.166	0.406	8.666	8.666	1.166	2.447	1.166	2.447
Road S4	0700-0800	1.166	1.166	0.406	8.666	8.666	1.166	2.447	1.166	2.447
Road S4	0800-1000	1.166	1.166	0.406	8.666	8.666	1.166	2.447	1.166	2.447
Road S4	1000-1100	1.166	1.166	0.406	8.666	8.666	1.166	2.447	1.166	2.447
Road S4	1100-1200	1.166	1.166	0.406	8.666	8.666	1.166	2.447	1.166	2.447
Road S4	1200-1300	1.166	1.166	0.406	8.666	8.666	1.166	2.447	1.166	2.447
Road S4	1300-1400	1.166	1.166	0.406	8.666	8.666	1.166	2.447	1.166	2.447
Road S4	1400-1500	1.166	1.166	0.406	8.666	8.666	1.166	2.447	1.166	2.447
Road S4	1500-1600	1.166	1.166	0.406	8.666	8.666	1.166	2.447	1.166	2.447
Road S4	1600-1700	1.166	1.166	0.406	8.666	8.666	1.166	2.447	1.166	2.447
Road S4	1700-1800	1.166	1.166	0.406	8.666	8.666	1.166	2.447	1.166	2.447
Road S4	1800-1900	1.166	1.166	0.406	8.666	8.666	1.166	2.447	1.166	2.447
Road S4	1900-2000	1.166	1.166	0.406	8.666	8.666	1.166	2.447	1.166	2.447
Road S4	2000-2100	1.166	1.166	0.406	8.666	8.666	1.166	2.447	1.166	2.447
Road S4	2100-2200	1.166	1.166	0.406	8.666	8.666	1.166	2.447	1.166	2.447
Road S4	2200-2300	1.166	1.166	0.406	8.666	8.666	1.166	2.447	1.166	2.447
Road S4	2300-2400	1.166	1.166	0.406	8.666	8.666	1.166	2.447	1.166	2.447
Road S5	0000-0120	1.024	1.024	0.512	9.024	9.024	1.024	2.447	1.024	2.447
Road S5	0120-0300	1.024	1.024	0.512	9.024	9.024	1.024	2.447	1.024	2.447
Road S5	0300-0340	1.024	1.024	0.512	9.024	9.024	1.024	2.447	1.024	2.447
Road S5	0340-0500	1.024	1.024	0.512	9.024	9.024	1.024	2.447	1.024	2.447
Road S5	0500-0600	1.024	1.024	0.512	9.024	9.024	1.024	2.447	1.024	2.447
Road S5	0600-0700	1.024	1.024	0.512	9.024	9.024	1.024	2.447	1.024	2.447
Road S5	0700-0800	1.024	1.024	0.512	9.024	9.024	1.024	2.447	1.024	2.447
Road S5	0800-1000	1.024	1.024	0.512	9.024	9.024	1.024	2.447	1.024	2.447
Road S5	1000-1100	1.024	1.024	0.512	9.024	9.024	1.024	2.447	1.024	2.447
Road S5	1100-1200	1.024	1.024	0.512	9.024	9.024	1.024	2.447	1.024	2.447
Road S5	1200-1300	1.024	1.024	0.512	9.024	9.024	1.024	2.447	1.024	2.447
Road S5	1300-1400	1.024	1.024	0.512	9.024	9.024	1.024	2.447	1.024	2.447
Road S5	1400-1500	1.024	1.024	0.512	9.024	9.024	1.024	2.447	1.024	2.447
Road S5	1500-1600	1.024	1.024	0.512	9.024	9.024	1.024	2.447	1.024	2.447
Road S5	1600-1700	1.024	1.024	0.512	9.024	9.024	1.024	2.447	1.024	2.447
Road S5	1700-1800	1.024	1.024	0.512	9.024	9.024	1.024	2.447	1.024	2.447
Road S5	1800-1900	1.024	1.024	0.512	9.024	9.024	1.024	2.447	1.024	2.447
Road S5	1900-2000	1.024	1.024	0.512	9.024	9.024	1.024	2.447	1.024	2.447
Road S5	2000-2100	1.024	1.024	0.512	9.024	9.024	1.024	2.447	1.024	2.447
Road S5	2100-2200	1.024	1.024	0.512	9.024	9.024	1.024	2.447	1.024	2.447
Road S5	2200-2300	1.024	1.024	0.512	9.024	9.024	1.024	2.447	1.024	2.447
Road S5	2300-2400	1.024	1.024	0.512	9.024	9.024	1.024	2.447	1.024	2.447
Road S6	0000-0120	1.024	1.024	0.512	9.024	9.024	1.024	2.447	1.024	2.447
Road S6	0120-0300	1.024	1.024	0.512	9.024	9.024	1.024	2.447	1.024	2.447
Road S6	0300-0340	1.024	1.024	0.512	9.024	9.024	1.024	2.447	1.024	2.447
Road S6	0340-0500	1.024	1.024	0.512	9.024	9.024	1.024	2.447	1.024	2.447
Road S6	0500-0600	1.024	1.024	0.512	9.024	9.024	1.024	2.447	1.024	2.447
Road S6	0600-0700	1.024	1.024	0.512	9.024	9.024	1.024	2.447	1.024	2.447
Road S6	0700-0800	1.024	1.024	0.512	9.024	9.024	1.024	2.447	1.024	2.447
Road S6	0800-1000	1.024	1.024	0.512	9.024	9.024	1.024	2.447	1.024	2.447
Road S6	1000-1100	1.024	1.024	0.512	9.024	9.024	1.024	2.447	1.024	2.447
Road S6	1100-1200	1.024	1.024	0.512	9.024	9.024	1.024	2.447	1.024	2.447
Road S6	1200-1300	1.024	1.024	0.512	9.024	9.024	1.024	2.447	1.024	2.447
Road S6	1300-1400	1.024	1.024	0.512	9.024	9.024	1.024	2.447	1.024	2.447
Road S6	1400-1500	1.024	1.024	0.512	9.024	9.024	1.024	2.447	1.024	2.447
Road S6	1500-1600	1.024	1.024	0.512	9.024	9				

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Road North Underground Factors for AERMOD model (January)

Open Road North Underground Factors for AERMOD model (January)											
Row Name	Row ID	Hour	Month/Jan			NOx Emission			NO Emission		
			g/h/v/m	g/m ³	g/m ³	g/h/v/m	g/m ³	g/m ³	g/h/v/m	g/m ³	g/m ³
Row 7	7	1600-1700	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 8	8	1700-1800	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 9	9	1800-1900	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 10	10	1900-2000	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 11	11	2000-2100	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 12	12	2100-2200	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 13	13	2200-2300	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 14	14	2300-2400	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 15	15	0000-0100	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 16	16	0100-0200	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 17	17	0200-0300	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 18	18	0300-0400	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 19	19	0400-0500	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 20	20	0500-0600	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 21	21	0600-0700	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 22	22	0700-0800	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 23	23	0800-0900	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 24	24	0900-1000	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 25	25	1000-1100	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 26	26	1100-1200	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 27	27	1200-1300	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 28	28	1300-1400	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 29	29	1400-1500	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 30	30	1500-1600	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 31	31	1600-1700	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 32	32	1700-1800	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 33	33	1800-1900	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 34	34	1900-2000	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 35	35	2000-2100	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 36	36	2100-2200	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 37	37	2200-2300	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 38	38	2300-2400	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 39	39	0000-0100	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 40	40	0100-0200	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 41	41	0200-0300	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 42	42	0300-0400	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 43	43	0400-0500	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 44	44	0500-0600	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 45	45	0600-0700	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 46	46	0700-0800	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 47	47	0800-0900	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 48	48	0900-1000	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 49	49	1000-1100	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 50	50	1100-1200	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 51	51	1200-1300	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 52	52	1300-1400	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 53	53	1400-1500	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 54	54	1500-1600	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 55	55	1600-1700	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 56	56	1700-1800	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 57	57	1800-1900	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 58	58	1900-2000	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 59	59	2000-2100	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 60	60	2100-2200	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 61	61	2200-2300	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 62	62	2300-2400	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 63	63	0000-0100	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 64	64	0100-0200	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 65	65	0200-0300	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 66	66	0300-0400	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 67	67	0400-0500	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 68	68	0500-0600	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 69	69	0600-0700	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 70	70	0700-0800	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 71	71	0800-0900	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 72	72	0900-1000	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 73	73	1000-1100	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 74	74	1100-1200	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 75	75	1200-1300	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 76	76	1300-1400	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 77	77	1400-1500	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 78	78	1500-1600	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 79	79	1600-1700	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 80	80	1700-1800	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 81	81	1800-1900	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 82	82	1900-2000	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 83	83	2000-2100	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 84	84	2100-2200	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 85	85	2200-2300	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 86	86	2300-2400	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 87	87	0000-0100	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 88	88	0100-0200	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 89	89	0200-0300	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 90	90	0300-0400	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 91	91	0400-0500	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 92	92	0500-0600	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 93	93	0600-0700	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 94	94	0700-0800	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 95	95	0800-0900	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 96	96	0900-1000	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 97	97	1000-1100	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 98	98	1100-1200	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 99	99	1200-1300	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 100	100	1300-1400	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 101	101	1400-1500	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 102	102	1500-1600	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 103	103	1600-1700	5.440	0.720	0.737	4.855	0.638	0.747	4.150	0.572	0.638
Row 104	104	1700-1800	5.440	0.720	0.737	4.855	0.638				

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Yr North Undermain Factors for ARBMSD model (January)											
Year 2008											
Road Name	Road ID	Hour	NOx Emission					NO Emission			
			g/h/vhr	g/min	g/h/vhr	g/min	g/h/vhr	g/h/vhr	g/min	g/h/vhr	g/min
Road 14	0800-0900	8.3440	1.3774	0.248	1.7442	0.318	1.1485	1.9881	0.352	1.8506	0.3374
Road 14	0900-1000	8.5400	1.3774	0.248	1.7442	0.318	1.1485	1.9881	0.352	1.8506	0.3374
Road 14	1000-1100	1.0464	1.3774	0.248	1.7442	0.318	1.1485	1.9881	0.352	1.8506	0.3374
Road 14	1100-1200	1.0464	1.3774	0.248	1.7442	0.318	1.1485	1.9881	0.352	1.8506	0.3374
Road 14	1200-1300	1.0464	1.3774	0.248	1.7442	0.318	1.1485	1.9881	0.352	1.8506	0.3374
Road 14	1300-1400	1.1540	1.4208	0.264	1.9408	0.336	1.2008	2.0796	0.378	1.9408	0.354
Road 14	1400-1500	1.1540	1.4208	0.264	1.9408	0.336	1.2008	2.0796	0.378	1.9408	0.354
Road 14	1500-1600	1.1540	1.4208	0.264	1.9408	0.336	1.2008	2.0796	0.378	1.9408	0.354
Road 14	1600-1700	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	1700-1800	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	1800-1900	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	1900-2000	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	2000-2100	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	2100-2200	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	2200-2300	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	2300-2400	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	2400-2500	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	2500-2600	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	2600-2700	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	2700-2800	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	2800-2900	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	2900-3000	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	3000-3100	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	3100-3200	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	3200-3300	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	3300-3400	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	3400-3500	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	3500-3600	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	3600-3700	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	3700-3800	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	3800-3900	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	3900-4000	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	4000-4100	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	4100-4200	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	4200-4300	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	4300-4400	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	4400-4500	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	4500-4600	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	4600-4700	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	4700-4800	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	4800-4900	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	4900-5000	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	5000-5100	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	5100-5200	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	5200-5300	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	5300-5400	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	5400-5500	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	5500-5600	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	5600-5700	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	5700-5800	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	5800-5900	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	5900-6000	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	6000-6100	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	6100-6200	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	6200-6300	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	6300-6400	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	6400-6500	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	6500-6600	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	6600-6700	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	6700-6800	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	6800-6900	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	6900-7000	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	7000-7100	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	7100-7200	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	7200-7300	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	7300-7400	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	7400-7500	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	7500-7600	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	7600-7700	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	7700-7800	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	7800-7900	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	7900-8000	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	8000-8100	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	8100-8200	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	8200-8300	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	8300-8400	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	8400-8500	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	8500-8600	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	8600-8700	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	8700-8800	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	8800-8900	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	8900-9000	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	9000-9100	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	9100-9200	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	9200-9300	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	9300-9400	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	9400-9500	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	9500-9600	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	9600-9700	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	9700-9800	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	9800-9900	1.0976	1.4556	0.276	1.9764	0.336	1.2336	2.1336	0.384	1.9864	0.354
Road 14	9900-10000	1.0976	1.4556	0.276	1.9764						

[illegible]

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open T4 North Underground Quarry

Using 24 Hour Ambient Factors for AERMOD model (Hourly)

Year	Month	Hour	Row ID	NO _x emission g/hour	NO _x emission g/hour	NO _x emission g/hour	NO _x emission g/hour	NO _x emission g/hour	NO _x emission g/hour
				Monthly/average	Monthly/average	Monthly/average	Monthly/average	Monthly/average	Monthly/average
Road 1	1	0000-1000	1	2.346	2.471	1.345	2.018	2.198	1.298
				2.466	2.738	1.477	2.221	2.555	1.477
Road 1	1	1000-1500	2	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 1	1	1500-2000	3	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 1	1	2000-2300	4	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 1	1	2300-2400	5	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 1	1	2400-2500	6	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 1	1	2500-2600	7	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 1	1	2600-2700	8	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 1	1	2700-2800	9	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 1	1	2800-2900	10	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 1	1	2900-3000	11	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 1	1	3000-3100	12	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 1	1	3100-3200	13	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 1	1	3200-3300	14	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 1	1	3300-3400	15	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 1	1	3							
Road 2	1	0000-1000	1	2.346	2.471	1.345	2.018	2.198	1.298
				2.466	2.738	1.477	2.221	2.555	1.477
Road 2	1	1000-1500	2	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 2	1	1500-2000	3	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 2	1	2000-2300	4	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 2	1	2300-2400	5	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 2	1	2400-2500	6	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 2	1	2500-2600	7	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 2	1	2600-2700	8	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 2	1	2700-2800	9	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 2	1	2800-2900	10	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 2	1	2900-3000	11	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 2	1	3000-3100	12	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 2	1	3100-3200	13	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 2	1	3200-3300	14	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 2	1	3300-3400	15	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 2	1	3							
Road 3	1	0000-1000	1	2.346	2.471	1.345	2.018	2.198	1.298
				2.466	2.738	1.477	2.221	2.555	1.477
Road 3	1	1000-1500	2	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 3	1	1500-2000	3	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 3	1	2000-2300	4	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 3	1	2300-2400	5	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 3	1	2400-2500	6	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 3	1	2500-2600	7	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 3	1	2600-2700	8	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 3	1	2700-2800	9	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 3	1	2800-2900	10	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 3	1	2900-3000	11	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 3	1	3000-3100	12	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 3	1	3100-3200	13	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 3	1	3200-3300	14	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 3	1	3300-3400	15	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 3	1	3							
Road 4	1	0000-1000	1	2.346	2.471	1.345	2.018	2.198	1.298
				2.466	2.738	1.477	2.221	2.555	1.477
Road 4	1	1000-1500	2	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 4	1	1500-2000	3	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 4	1	2000-2300	4	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 4	1	2300-2400	5	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 4	1	2400-2500	6	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 4	1	2500-2600	7	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 4	1	2600-2700	8	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 4	1	2700-2800	9	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 4	1	2800-2900	10	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 4	1	2900-3000	11	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 4	1	3000-3100	12	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 4	1	3100-3200	13	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 4	1	3200-3300	14	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 4	1	3300-3400	15	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 4	1	3							
Road 5	1	0000-1000	1	2.346	2.471	1.345	2.018	2.198	1.298
				2.466	2.738	1.477	2.221	2.555	1.477
Road 5	1	1000-1500	2	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 5	1	1500-2000	3	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 5	1	2000-2300	4	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 5	1	2300-2400	5	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 5	1	2400-2500	6	2.466	2.738	1.477	2.221	2.555	1.477
				2.466	2.738	1.477	2.221	2.555	1.477
Road 5	1	2500-2600	7	2.466	2.738	1.477			

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.1 Emission Factor in 2028.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Read 10 Year Exemption Factors for ARMED AND DANGEROUS													
Year 2020			No Exemption				No Exemption						
Room Name	Room ID	Hour	Monthly/Hours	Monthly/Hours	Monthly/Hours	Monthly/Hours	Monthly/Hours	Monthly/Hours	Monthly/Hours	Monthly/Hours	Monthly/Hours	Monthly/Hours	Monthly/Hours
			(g)/year	(g)/year	(g)/year	(g)/year	(g)/year	(g)/year	(g)/year	(g)/year	(g)/year	(g)/year	(g)/year
Room 4	0800-0900	1:31E2	8:46E 07	1:80E 05	2:96E 02	8:61E 07	1:77E 05	2:32E 01	8:75E 06	1:88E 02	2:08E 06	6:08E 06	1:21E 04
Room 4	0900-1000	3:97E 02	1:16E 05	1:84E 05	5:52E 02	4:40E 07	1:02E 05	2:50E 04	4:04E 06	2:37E 01	2:01E 06	5:18E 06	1:18E 04
Room 4	1000-1100	4:41E 02	1:16E 05	1:84E 05	5:52E 02	4:40E 07	1:02E 05	2:50E 04	4:04E 06	2:37E 01	2:01E 06	5:18E 06	1:18E 04
Room 4	1100-1200	4:19E 02	8:12E 07	8:12E 05	3:82E 07	7:39E 04	1:48E 05	2:78E 03	5:38E 05	1:08E 04	2:50E 04	4:04E 06	9:70E 05
Room 4	1200-1300	5:22E 02	1:16E 05	1:84E 05	5:52E 02	4:40E 07	1:02E 05	2:50E 04	4:04E 06	2:37E 01	2:01E 06	5:18E 06	1:18E 04
Room 4	1300-1400	3:39E 02	1:16E 05	1:84E 05	5:52E 02	4:40E 07	1:02E 05	2:50E 04	4:04E 06	2:37E 01	2:01E 06	5:18E 06	1:18E 04
Room 4	1400-1500	5:12E 05	1:84E 05	5:52E 02	4:40E 07	1:02E 05	2:50E 04	4:04E 06	2:37E 01	2:01E 06	5:18E 06	1:18E 04	1:88E 04
Room 4	1500-1600	5:08E 05	1:84E 05	5:52E 02	4:40E 07	1:02E 05	2:50E 04	4:04E 06	2:37E 01	2:01E 06	5:18E 06	1:18E 04	1:88E 04
Room 4	1600-1700	5:08E 05	1:84E 05	5:52E 02	4:40E 07	1:02E 05	2:50E 04	4:04E 06	2:37E 01	2:01E 06	5:18E 06	1:18E 04	1:88E 04
Room 4	1700-1730	1:48E 03	1:16E 05	1:84E 05	5:52E 02	4:40E 07	1:02E 05	2:50E 04	4:04E 06	2:37E 01	2:01E 06	5:18E 06	1:18E 04
Room 4	1800-1900	2:67E 03	1:16E 05	1:84E 05	5:52E 02	4:40E 07	1:02E 05	2:50E 04	4:04E 06	2:37E 01	2:01E 06	5:18E 06	1:18E 04
Room 4	1900-2000	2:12E 03	1:16E 05	1:84E 05	5:52E 02	4:40E 07	1:02E 05	2:50E 04	4:04E 06	2:37E 01	2:01E 06	5:18E 06	1:18E 04
Room 4	2100-2200	2:04E 04	2:36E 07	6:08E 05	1:49E 07	9:89E 03	1:93E 05	1:50E 04	1:00E 04	2:72E 01	4:04E 06	2:37E 01	2:01E 06
Room 4	2200-2300	2:04E 04	2:36E 07	6:08E 05	1:49E 07	9:89E 03	1:93E 05	1:50E 04	1:00E 04	2:72E 01	4:04E 06	2:37E 01	2:01E 06
Room 4	2300-2400	2:18E 04	2:02E 07	8:13E 06	2:05E 02	3:87E 07	7:59E 04	2:03E 01	3:86E 07	7:63E 06	1:90E 04	3:60E 06	7:21E 05
Room 5	0000-0100	2:04E 04	2:36E 07	6:08E 05	1:49E 07	9:89E 03	1:93E 05	1:50E 04	1:00E 04	2:72E 01	4:04E 06	2:37E 01	2:01E 06
Room 5	0100-0200	2:04E 04	2:36E 07	6:08E 05	1:49E 07	9:89E 03	1:93E 05	1:50E 04	1:00E 04	2:72E 01	4:04E 06	2:37E 01	2:01E 06
Room 5	0200-0300	2:02E 02	1:93E 07	1:80E 06	2:44E 03	1:03E 06	2:44E 03	1:03E 06	2:44E 03	1:03E 06	2:44E 03	1:03E 06	2:44E 03
Room 5	0300-0400	3:11E 04	1:48E 07	1:24E 08	2:81E 02	1:34E 07	1:12E 06	2:58E 01	1:27E 06	1:03E 07	2:28E 02	1:09E 04	3:46E 04
Room 5	0400-0500	3:40E 04	1:48E 07	1:24E 08	2:81E 02	1:34E 07	1:12E 06	2:58E 01	1:27E 06	1:03E 07	2:28E 02	1:09E 04	3:46E 04
Room 5	0500-0600	4:04E 04	1:50E 07	1:20E 08	3:12E 02	1:34E 07	1:12E 06	2:58E 01	1:27E 06	1:03E 07	2:28E 02	1:09E 04	3:46E 04
Room 5	0600-0700	4:02E 04	1:50E 07	1:20E 08	3:12E 02	1:34E 07	1:12E 06	2:58E 01	1:27E 06	1:03E 07	2:28E 02	1:09E 04	3:46E 04
Room 5	0700-0800	4:05E 04	1:50E 07	1:20E 08	3:12E 02	1:34E 07	1:12E 06	2:58E 01	1:27E 06	1:03E 07	2:28E 02	1:09E 04	3:46E 04
Room 5	0800-0900	4:05E 04	1:50E 07	1:20E 08	3:12E 02	1:34E 07	1:12E 06	2:58E 01	1:27E 06	1:03E 07	2:28E 02	1:09E 04	3:46E 04
Room 5	0900-1000	4:05E 04	1:50E 07	1:20E 08	3:12E 02	1:34E 07	1:12E 06	2:58E 01	1:27E 06	1:03E 07	2:28E 02	1:09E 04	3:46E 04
Room 5	1000-1100	4:05E 04	1:50E 07	1:20E 08	3:12E 02	1:34E 07	1:12E 06	2:58E 01	1:27E 06	1:03E 07	2:28E 02	1:09E 04	3:46E 04
Room 5	1100-1200	4:05E 04	1:50E 07	1:20E 08	3:12E 02	1:34E 07	1:12E 06	2:58E 01	1:27E 06	1:03E 07	2:28E 02	1:09E 04	3:46E 04
Room 5	1200-1300	4:05E 04	1:50E 07	1:20E 08	3:12E 02	1:34E 07	1:12E 06	2:58E 01	1:27E 06	1:03E 07	2:28E 02	1:09E 04	3:46E 04
Room 5	1300-1400	4:05E 04	1:50E 07	1:20E 08	3:12E 02	1:34E 07	1:12E 06	2:58E 01	1:27E 06	1:03E 07	2:28E 02	1:09E 04	3:46E 04
Room 5	1400-1500	4:05E 04	1:50E 07	1:20E 08	3:12E 02	1:34E 07	1:12E 06	2:58E 01	1:27E 06	1:03E 07	2:28E 02	1:09E 04	3:46E 04
Room 5	1500-1600	4:05E 04	1:50E 07	1:20E 08	3:12E 02	1:34E 07	1:12E 06	2:58E 01	1:27E 06	1:03E 07	2:28E 02	1:09E 04	3:46E 04
Room 5	1600-1700	4:05E 04	1:50E 07	1:20E 08	3:12E 02	1:34E 07	1:12E 06	2:58E 01	1:27E 06	1:03E 07	2:28E 02	1:09E 04	3:46E 04
Room 5	1700-1730	4:05E 04	1:50E 07	1:20E 08	3:12E 02	1:34E 07	1:12E 06	2:58E 01	1:27E 06	1:03E 07	2:28E 02	1:09E 04	3:46E 04
Room 5	1800-1900	4:05E 04	1:50E 07	1:20E 08	3:12E 02	1:34E 07	1:12E 06	2:58E 01	1:27E 06	1:03E 07	2:28E 02	1:09E 04	3:46E 04
Room 5	1900-2000	4:05E 04	1:50E 07	1:20E 08	3:12E 02	1:34E 07	1:12E 06	2:58E 01	1:27E 06	1:03E 07	2:28E 02	1:09E 04	3:46E 04
Room 5	2000-2100	4:05E 04	1:50E 07	1:20E 08	3:12E 02	1:34E 07	1:12E 06	2:58E 01	1:27E 06	1:03E 07	2:28E 02	1:09E 04	3:46E 04
Room 5	2100-2200	4:05E 04	1:50E 07	1:20E 08	3:12E 02	1:34E 07	1:12E 06	2:58E 01	1:27E 06	1:03E 07	2:28E 02	1:09E 04	3:46E 04
Room 5	2200-2300	4:05E 04	1:50E 07	1:20E 08	3:12E 02	1:34E 07	1:12E 06	2:58E 01	1:27E 06	1:03E 07	2:28E 02	1:09E 04	3:46E 04
Room 5	2300-2400	4:05E 04	1:50E 07	1:20E 08	3:12E 02	1:34E 07	1:12E 06	2:58E 01	1:27E 06	1:03E 07	2:28E 02	1:09E 04	3:46E 04
Room 6	0000-0100	1:48E 03	1:16E 05	1:84E 05	5:52E 02	4:40E 07	1:02E 05	2:50E 04	4:04E 06	2:37E 01	2:01E 06	5:18E 06	1:18E 04
Room 6	0100-0200	1:48E 03	1:16E 05	1:84E 05	5:52E 02	4:40E 07	1:02E 05	2:50E 04	4:04E 06	2:37E 01	2:01E 06	5:18E 06	1:18E 04
Room 6	0200-0300	1:48E 03	1:16E 05	1:84E 05	5:52E 02	4:40E 07	1:02E 05	2:50E 04	4:04E 06	2:37E 01	2:01E 06	5:18E 06	1:18E 04
Room 6	0300-0400	1:48E 03	1:16E 05	1:84E 05	5:52E 02	4:40E 07	1:02E 05	2:50E 04	4:04E 06	2:37E 01	2:01E 06	5:18E 06	1:18E 04
Room 6	0400-0500	1:48E 03	1:16E 05	1:84E 05	5:52E 02	4:40E 07	1:02E 05	2:50E 04	4:04E 06	2:37E 01	2:01E 06	5:18E 06	1:18E 04
Room 6	0500-0600	1:48E 03	1:16E 05	1:84E 05	5:52E 02	4:40E 07	1:02E 05	2:50E 04	4:04E 06	2:37E 01	2:01E 06	5:18E 06	1:18E 04
Room 6	0600-0700	1:48E 03	1:16E 05	1:84E 05	5:52E 02	4:40E 07	1:02E 05	2:50E 04	4:04E 06	2:37E 01	2:01E 06	5:18E 06	1:18E 04
Room 6	0700-0800	1:48E 03	1:16E 05	1:84E 05	5:52E 02	4:40E 07	1:02E 05	2:50E 04	4:04E 06	2:37E 01	2:01E 06	5:18E 06	1:18E 04
Room 6	0800-0900	1:48E 03	1:16E 05	1:84E 05	5:52E 02	4:40E 07	1:02E 05	2:50E 04	4:04E 06	2:37E 01	2:01E 06	5:18E 06	1:18E 04
Room 6	0900-1000	1:48E 03	1:16E 05	1:84E 05	5:52E 02	4:40E 07	1:02E 05	2:50E 04	4:04E 06	2:37E 01	2:01E 06	5:18E 06	1:18E 04
Room 6	1000-1100	1:48E 03	1:16E 05	1:84E 05	5:52E 02	4:40E 07	1:02E 05	2:50E 04	4:04E 06	2:37E 01	2:01E 06	5:18E 06	1:18E 04
Room 6	1100-1200	1:48E 03	1:16E 05	1:84E 05	5:52E 02	4:40E 07	1:02E 05	2:50E 04	4:04E 06	2:37E 01	2:01E 06	5:18E 06	1:18E 04
Room 6	1200-1300	1:48E 03	1:16E 05	1:84E 05	5:52E 02	4:40E 07	1:02E 05	2:50E 04	4:04E 06	2:37E 01	2:01E 06	5:18E 06	1:18E 04
Room 6	1300-1400	1:48E 03	1:16E 05	1:84E 05	5:52E 02	4:40E 07	1:02E 05	2:50E 04	4:04E 06	2:37E 01	2:01E 06	5:18E 06	1:18E 04
Room 6	1400-1500	1:48E 03	1:16E 05	1:84E 05	5:52E 02	4:40E 07	1:02E 05	2:50E 04	4:04E 06	2:37E 01	2:01E 06	5:18E 06	1:18E 04
Room 6	1500-1600	1:48E 03	1:16E 05	1:84E 05	5:52E 02	4:40E 07	1:02E 05	2:50E 04	4:04E 06	2:37E 01	2:01E 06	5:18E 06	1:18E 04
Room 6	1600-1700	1:48E 03	1:16E 05	1:84E 05	5:52E 02	4:40E 07	1:02E 05	2:50E 04	4:04E 06	2:37E 01	2:01E 06	5:18E 06	1:18E 04
Room 6	1700-1730	1:48E 03	1:16E 05	1:84E 05	5:52E 02	4:40E 07	1:02E 05	2:50E 04	4:04E 06	2:37E 01	2:01E 06	5:18E 06	1:18E 04
Room 6	1800-1900	1:48E 03	1:16E 05	1:84E 05	5:52E 02	4:40E 07	1:02E 05	2:50E 04	4:04E 06	2:37E 01	2:01E 06	5:18E 06	1:18E 04
Room 6	1900-2000	1:48E 03	1:16E 05	1:84E 05	5:52E 02	4:40E 07	1:02E 05	2:50E 04	4:04E 06	2:37E 01	2:01E 06	5:18E 06	1:18E 04
Room 6	2000-2100	1:48E 03	1:16E 05	1:84E 05	5:52E 02	4:40E 07	1:02E 05	2:50E 04	4:04E 06	2:37E 01	2:01E 06	5:18E 06	1:18E 04
Room 6	2100-2200	1:48E 03	1:16E 05	1:84E 05	5:52E 02	4:40E 07	1:02E 05	2:50E 04	4:04E 06	2:37E 01	2:01E 06	5:18E 06	1:18E 04
Room 6	2200-2300	1:48E 03	1:16E 05	1:84E 05	5:52E 02	4:40E 07	1:02E 05	2:50E 04	4:04E 06	2:37E 01	2:01E 06	5:18E 06	1:18E 04
Room 6	2300-2400	1:48E 03	1:16E 05	1:84E 05	5:52E 02	4:40E 07	1:02E 05	2:50E 04	4:04E 06	2:37E 01	2:01E 06	5:18E 06	1:18E 04
Room 7	0000-0100	1:48E 03	1:16E 05	1:84E 05	5:52E 02	4:40E 07	1:02E 05	2:50E 04	4:04E 06	2:37E 01	2:01E 06	5:18E 06	1:18E 04
Room 7	0100-0200	1:48E 03	1:16E 05	1:84E 05	5:52E 02	4:40E 07	1:02E 05	2:50E 04	4:04E 06	2:37E 01	2:01E 06	5:18E 06	1:18E 04
Room 7	0200-0300	1:48E 03	1:16E 05	1:84E 05	5:52E 02	4:40E 07	1:02E 05	2:50E 04	4:04E 06	2:37E 01	2:01E 06	5:18E 06	1:18E 04
Room 7	0300-0400	1:48E 03	1:16E 05	1:84E 05	5:52E 02	4:40E							

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Top Y4 North Underdrain Quarter													
Year 2008													
K&M model (P&W)													
Road ID	Road ID	Hour	NO _x Emission						NO _x Emission				
			Monthly/Average		Monthly/Average		Monthly/Average		Monthly/Average				
			g/hour	lb/day	g/hour	lb/day	g/hour	lb/day	g/hour	lb/day	g/hour	lb/day	
Road 7	1600-1700	5.5662	6.7807	7.954	6.662	8.2387	7.3110	3.846	5.1404	6.0105	3.1181	4.7006	5.5326
Road 7	1700-1800	5.2622	5.8507	6.9808	5.4465	6.5403	6.3758	3.1308	5.1404	5.9896	3.0765	4.5114	5.2895
Road 7	1800-1900	5.0058	5.5507	6.6808	5.1465	6.2403	6.0758	2.8758	5.1404	5.7396	2.8065	4.2225	5.0004
Road 7	1900-2000	2.5885	3.5047	4.1112	2.6885	3.2387	3.2758	2.3751	4.0104	4.7275	1.7228	2.5810	4.3184
Road 7	2000-2100	2.1565	2.9847	3.5912	2.1865	2.7387	2.7758	2.0751	3.3604	4.0775	1.4228	2.2810	3.9384
Road 7	2100-2200	2.2442	2.8347	3.4412	2.3885	2.9387	2.8158	2.1886	3.3104	3.9885	1.5445	2.4665	4.1664
Road 7	2200-2300	2.2442	2.8347	3.4412	2.3885	2.9387	2.8158	2.1886	3.3104	3.9885	1.5445	2.4665	4.1664
Road 7	2300-2400	2.2442	2.8347	3.4412	2.3885	2.9387	2.8158	2.1886	3.3104	3.9885	1.5445	2.4665	4.1664
Road 8	0900-1000	4.2775	2.5408	3.0747	3.8765	4.3105	4.6847	6.8245	6.8245	6.2645	6.1450	6.8885	7.4474
Road 8	0100-0200	4.4445	2.6447	3.1786	4.0445	4.4785	4.8527	6.9945	6.9945	6.3345	6.2150	6.9585	7.5174
Road 8	0300-0400	4.6115	2.7447	3.2786	4.1445	4.5785	4.9527	7.1245	7.1245	6.4645	6.3450	7.0885	7.6474
Road 8	0500-0600	4.7785	2.8447	3.3786	4.2445	4.6785	5.0527	7.2545	7.2545	6.5945	6.4750	7.2185	7.7774
Road 8	0700-0800	4.9455	2.9447	3.4786	4.3445	4.7785	5.1527	7.3845	7.3845	6.6945	6.5750	7.3185	7.8774
Road 8	0900-1000	5.1125	3.0447	3.5786	4.4445	4.8785	5.2527	7.5145	7.5145	6.7945	6.6750	7.4185	7.9774
Road 8	1100-1200	5.2795	3.1447	3.6786	4.5445	4.9785	5.3527	7.6445	7.6445	6.8945	6.7750	7.5185	8.0774
Road 8	1300-1400	5.4465	3.2447	3.7786	4.6445	5.0785	5.4527	7.7745	7.7745	6.9945	6.8750	7.6185	8.1774
Road 8	1500-1600	5.6135	3.3447	3.8786	4.7445	5.1785	5.5527	7.9045	7.9045	7.0945	6.9750	7.7185	8.2774
Road 8	1700-1800	5.7805	3.4447	3.9786	4.8445	5.2785	5.6527	8.0345	8.0345	7.1945	7.0750	7.8185	8.3774
Road 8	1900-2000	5.9475	3.5447	4.0786	4.9445	5.3785	5.7527	8.1645	8.1645	7.2945	7.1750	7.9185	8.4774
Road 8	2100-2200	6.1145	3.6447	4.1786	5.0445	5.4785	5.8527	8.2945	8.2945	7.3945	7.2750	8.0185	8.5774
Road 8	2300-2400	6.2815	3.7447	4.2786	5.1445	5.5785	5.9527	8.4245	8.4245	7.4945	7.3750	8.1185	8.6774
Road 9	0900-1000	4.9052	3.1467	3.7565	6.6502	7.3508	8.1806	8.1806	7.3508	8.1806	7.3508	8.1806	8.1806
Road 9	1100-1200	4.9052	3.1467	3.7565	6.6502	7.3508	8.1806	8.1806	7.3508	8.1806	7.3508	8.1806	8.1806
Road 9	1300-1400	4.9052	3.1467	3.7565	6.6502	7.3508	8.1806	8.1806	7.3508	8.1806	7.3508	8.1806	8.1806
Road 9	1500-1600	4.9052	3.1467	3.7565	6.6502	7.3508	8.1806	8.1806	7.3508	8.1806	7.3508	8.1806	8.1806
Road 9	1700-1800	4.9052	3.1467	3.7565	6.6502	7.3508	8.1806	8.1806	7.3508	8.1806	7.3508	8.1806	8.1806
Road 9	1900-2000	4.9052	3.1467	3.7565	6.6502	7.3508	8.1806	8.1806	7.3508	8.1806	7.3508	8.1806	8.1806
Road 9	2100-2200	4.9052	3.1467	3.7565	6.6502	7.3508	8.1806	8.1806	7.3508	8.1806	7.3508	8.1806	8.1806
Road 9	2300-2400	4.9052	3.1467	3.7565	6.6502	7.3508	8.1806	8.1806	7.3508	8.1806	7.3508	8.1806	8.1806
Road 10	0900-1000	3.8902	4.8808	5.846	3.1002	4.138	3.2007	4.188	4.2707	5.188	3.0981	4.1817	28.044
Road 10	0100-0200	4.1155	4.9808	5.946	3.1702	4.208	3.2707	4.2588	4.3407	5.2589	3.1682	4.2515	28.269
Road 10	0300-0400	4.3408	5.0708	6.036	3.2402	4.2782	3.3407	4.3289	4.4108	5.3189	3.2383	4.3204	28.494
Road 10	0500-0600	4.5661	5.1608	6.126	3.3102	4.3482	3.4107	4.4004	4.4823	5.3904	3.3083	4.3904	28.719
Road 10	0700-0800	4.7914	5.2508	6.216	3.3802	4.4176	3.4807	4.4709	4.5528	5.4609	3.3783	4.4604	28.944
Road 10	0900-1000	5.0167	5.3408	6.306	3.4502	4.4870	3.5507	4.5414	4.6233	5.5314	3.4483	4.5304	29.169
Road 10	1100-1200	5.2420	5.4308	6.396	3.5202	4.5564	3.6207	4.6119	4.6938	5.6019	3.5183	4.6004	29.394
Road 10	1300-1400	5.4673	5.5208	6.486	3.5902	4.6258	3.6907	4.6824	4.7643	5.6724	3.5883	4.6704	29.619
Road 10	1500-1600	5.6926	5.6108	6.576	3.6602	4.6952	3.7607	4.7529	4.8348	5.7429	3.6583	4.7404	29.844
Road 10	1700-1800	5.9179	5.7008	6.666	3.7302	4.7646	3.8307	4.8234	4.9053	5.8134	3.7283	4.8104	30.069
Road 10	1900-2000	6.1432	5.7908	6.756	3.8002	4.8340	3.9007	4.8929	4.9748	5.8839	3.7983	4.8804	30.294
Road 10	2100-2200	6.3685	5.8808	6.846	3.8702	4.9034	3.9707	4.9634	5.0453	5.9544	3.8683	4.9504	30.519
Road 10	2300-2400	6.5938	5.9708	6.936	3.9402	4.9728	4.0407	5.0329	5.1158	6.0249	3.9383	5.0204	30.744
Road 11	0900-1000	3.1467	4.877	5.882	2.746	3.782	2.485	3.484	3.575	4.580	2.252	3.025	2.075
Road 11	1100-1200	3.3689	4.967	5.972	2.816	3.852	2.555	3.556	3.647	4.651	2.322	3.095	2.200
Road 11	1300-1400	3.5912	5.057	6.062	2.886	3.922	2.625	3.626	3.717	4.722	2.392	3.165	2.325
Road 11	1500-1600	3.8134	5.147	6.152	2.956	4.000	2.700	3.701	3.792	4.833	2.462	3.235	2.450
Road 11	1700-1800	4.0356	5.237	6.242	3.026	4.070	2.770	3.771	3.862	4.944	2.532	3.305	2.575
Road 11	1900-2000	4.2578	5.327	6.332	3.096	4.140	2.840	3.841	3.932	5.055	2.602	3.375	2.700
Road 11	2100-2200	4.4800	5.417	6.422	3.166	4.210	2.910	3.911	4.002	5.166	2.672	3.445	2.825
Road 11	2300-2400	4.7022	5.507	6.512	3.236	4.280	2.980	4.001	4.092	5.276	2.742	3.515	2.950
Road 12	0900-1000	1.5551	1.5447	1.055	1.4965	1.390	9.3147	8.1807	8.1807	4.5495	7.8985	3.5235	45.720
Road 12	0100-0200	1.5551	1.5447	1.055	1.4965	1.390	9.3147	8.1807	8.1807	4.5495	7.8985	3.5235	45.720
Road 12	0300-0400	1.5551	1.5447	1.055	1.4965	1.390	9.3147	8.1807	8.1807	4.5495	7.8985	3.5235	45.720
Road 12	0500-0600	1.5551	1.5447	1.055	1.4965	1.390	9.3147	8.1807	8.1807	4.5495	7.8985	3.5235	45.720
Road 12	0700-0800	1.5551	1.5447	1.055	1.4965	1.390	9.3147	8.1807	8.1807	4.5495	7.8985	3.5235	45.720
Road 12	0900-1000	1.5551	1.5447	1.055	1.4965	1.390	9.3147	8.1807	8.1807	4.5495	7.8985	3.5235	45.720
Road 12	1100-1200	1.5551	1.5447	1.055	1.4965	1.390	9.3147	8.1807	8.1807	4.5495	7.8985	3.5235	45.720
Road 12	1300-1400	1.5551	1.5447	1.055	1.4965	1.390	9.3147	8.1807	8.1807	4.5495	7.8985	3.5235	45.720
Road 12	1500-1600	1.5551	1.5447	1.055	1.4965	1.390	9.3147	8.1807	8.1807	4.5495	7.8985	3.5235	45.720
Road 12	1700-1800	1.5551	1.5447	1.055	1.4965	1.390	9.3147	8.1807	8.1807	4.5495	7.8985	3.5235	45.720
Road 12	1900-2000	1.5551	1.5447	1.055	1.4965	1.390	9.3147	8.1807	8.1807	4.5495	7.8985	3.5235	45.720
Road 12	2100-2200	1.5551	1.5447	1.055	1.4965	1.390	9.3147	8.1807	8.1807	4.5495	7.8985	3.5235	45.720
Road 12	2300-2400	1.5551	1.5447	1.055	1.4965	1.390	9.3147	8.1807	8.1807	4.5495	7.8985	3.5235	45.720

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.1 Emission Factor in 2028.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Road 24 Hour Underground Quarry											
Typical North and East Emission Factors for ARXSD Model (February)											
Road ID	Road ID	Hour	NO _x Emission				NO _x Emission				
			Monthly/Average		Monthly/Average		Monthly/Average		Monthly/Average		
			g/min	g/min	g/min	g/min	g/min	g/min	g/min	g/min	
Row 11	11	0000-0100	6.044E-04	2.531E-07	9.786E-07	5.382E-02	2.344E-07	9.008E-07	9.230E-01	2.213E-06	8.471E-06
Row 11	11	0100-0200	6.044E-04	2.531E-07	9.786E-07	5.382E-02	2.344E-07	9.008E-07	9.230E-01	2.213E-06	8.471E-06
Row 11	11	0200-0300	6.044E-04	2.531E-07	9.786E-07	5.382E-02	2.344E-07	9.008E-07	9.230E-01	2.213E-06	8.471E-06
Row 11	11	0300-0400	8.838E-04	3.616E-07	1.971E-07	8.000E-02	4.421E-07	5.645E-07	6.335E-01	1.121E-06	4.305E-07
Row 11	11	0400-0500	8.838E-04	3.616E-07	1.971E-07	8.000E-02	4.421E-07	5.645E-07	6.335E-01	1.121E-06	4.305E-07
Row 11	11	0500-0600	8.838E-04	3.616E-07	1.971E-07	8.000E-02	4.421E-07	5.645E-07	6.335E-01	1.121E-06	4.305E-07
Row 11	11	0600-0700	8.838E-04	3.616E-07	1.971E-07	8.000E-02	4.421E-07	5.645E-07	6.335E-01	1.121E-06	4.305E-07
Row 11	11	0700-0800	8.838E-04	3.616E-07	1.971E-07	8.000E-02	4.421E-07	5.645E-07	6.335E-01	1.121E-06	4.305E-07
Row 11	11	0800-0900	8.838E-04	3.616E-07	1.971E-07	8.000E-02	4.421E-07	5.645E-07	6.335E-01	1.121E-06	4.305E-07
Row 11	11	0900-1000	8.838E-04	3.616E-07	1.971E-07	8.000E-02	4.421E-07	5.645E-07	6.335E-01	1.121E-06	4.305E-07
Row 11	11	1000-1100	1.126E-03	1.431E-06	3.441E-06	1.112E-01	1.296E-06	4.961E-06	2.754E-01	6.364E-07	7.573E-07
Row 11	11	1100-1200	1.126E-03	1.431E-06	3.441E-06	1.112E-01	1.296E-06	4.961E-06	2.754E-01	6.364E-07	7.573E-07
Row 11	11	1200-1300	1.126E-03	1.431E-06	3.441E-06	1.112E-01	1.296E-06	4.961E-06	2.754E-01	6.364E-07	7.573E-07
Row 11	11	1300-1400	1.126E-03	1.431E-06	3.441E-06	1.112E-01	1.296E-06	4.961E-06	2.754E-01	6.364E-07	7.573E-07
Row 11	11	1400-1500	1.126E-03	1.431E-06	3.441E-06	1.112E-01	1.296E-06	4.961E-06	2.754E-01	6.364E-07	7.573E-07
Row 11	11	1500-1600	1.126E-03	1.431E-06	3.441E-06	1.112E-01	1.296E-06	4.961E-06	2.754E-01	6.364E-07	7.573E-07
Row 11	11	1600-1700	1.126E-03	1.431E-06	3.441E-06	1.112E-01	1.296E-06	4.961E-06	2.754E-01	6.364E-07	7.573E-07
Row 11	11	1700-1800	1.126E-03	1.431E-06	3.441E-06	1.112E-01	1.296E-06	4.961E-06	2.754E-01	6.364E-07	7.573E-07
Row 11	11	1800-1900	7.072E-04	1.311E-06	3.045E-06	7.042E-02	3.231E-06	4.711E-06	1.789E-01	3.835E-07	5.518E-07
Row 11	11	1900-2000	7.072E-04	1.311E-06	3.045E-06	7.042E-02	3.231E-06	4.711E-06	1.789E-01	3.835E-07	5.518E-07
Row 11	11	2000-2100	5.632E-04	9.881E-07	2.246E-06	5.226E-02	2.461E-06	4.471E-06	1.388E-01	2.954E-07	4.564E-07
Row 11	11	2100-2200	5.632E-04	9.881E-07	2.246E-06	5.226E-02	2.461E-06	4.471E-06	1.388E-01	2.954E-07	4.564E-07
Row 11	11	2200-2300	4.986E-04	5.005E-07	5.025E-06	4.790E-02	2.144E-06	3.545E-06	1.545E-01	2.945E-07	4.835E-07
Row 11	11	2300-0000	4.986E-04	5.005E-07	5.025E-06	4.790E-02	2.144E-06	3.545E-06	1.545E-01	2.945E-07	4.835E-07
Row 11	11	0000-0100	6.044E-04	2.531E-07	9.786E-07	5.382E-02	2.344E-07	9.008E-07	9.230E-01	2.213E-06	8.471E-06
Row 11	11	0100-0200	6.044E-04	2.531E-07	9.786E-07	5.382E-02	2.344E-07	9.008E-07	9.230E-01	2.213E-06	8.471E-06
Row 11	11	0200-0300	6.044E-04	2.531E-07	9.786E-07	5.382E-02	2.344E-07	9.008E-07	9.230E-01	2.213E-06	8.471E-06
Row 11	11	0300-0400	8.838E-04	3.616E-07	1.971E-07	8.000E-02	4.421E-07	5.645E-07	6.335E-01	1.121E-06	4.305E-07
Row 11	11	0400-0500	8.838E-04	3.616E-07	1.971E-07	8.000E-02	4.421E-07	5.645E-07	6.335E-01	1.121E-06	4.305E-07
Row 11	11	0500-0600	8.838E-04	3.616E-07	1.971E-07	8.000E-02	4.421E-07	5.645E-07	6.335E-01	1.121E-06	4.305E-07
Row 11	11	0600-0700	8.838E-04	3.616E-07	1.971E-07	8.000E-02	4.421E-07	5.645E-07	6.335E-01	1.121E-06	4.305E-07
Row 11	11	0700-0800	8.838E-04	3.616E-07	1.971E-07	8.000E-02	4.421E-07	5.645E-07	6.335E-01	1.121E-06	4.305E-07
Row 11	11	0800-0900	8.838E-04	3.616E-07	1.971E-07	8.000E-02	4.421E-07	5.645E-07	6.335E-01	1.121E-06	4.305E-07
Row 11	11	0900-1000	8.838E-04	3.616E-07	1.971E-07	8.000E-02	4.421E-07	5.645E-07	6.335E-01	1.121E-06	4.305E-07
Row 11	11	1000-1100	1.126E-03	1.431E-06	3.441E-06	1.112E-01	1.296E-06	4.961E-06	2.754E-01	6.364E-07	7.573E-07
Row 11	11	1100-1200	1.126E-03	1.431E-06	3.441E-06	1.112E-01	1.296E-06	4.961E-06	2.754E-01	6.364E-07	7.573E-07
Row 11	11	1200-1300	1.126E-03	1.431E-06	3.441E-06	1.112E-01	1.296E-06	4.961E-06	2.754E-01	6.364E-07	7.573E-07
Row 11	11	1300-1400	1.126E-03	1.431E-06	3.441E-06	1.112E-01	1.296E-06	4.961E-06	2.754E-01	6.364E-07	7.573E-07
Row 11	11	1400-1500	1.126E-03	1.431E-06	3.441E-06	1.112E-01	1.296E-06	4.961E-06	2.754E-01	6.364E-07	7.573E-07
Row 11	11	1500-1600	1.126E-03	1.431E-06	3.441E-06	1.112E-01	1.296E-06	4.961E-06	2.754E-01	6.364E-07	7.573E-07
Row 11	11	1600-1700	1.126E-03	1.431E-06	3.441E-06	1.112E-01	1.296E-06	4.961E-06	2.754E-01	6.364E-07	7.573E-07
Row 11	11	1700-1800	1.126E-03	1.431E-06	3.441E-06	1.112E-01	1.296E-06	4.961E-06	2.754E-01	6.364E-07	7.573E-07
Row 11	11	1800-1900	7.072E-04	1.311E-06	3.045E-06	7.042E-02	3.231E-06	4.711E-06	1.789E-01	3.835E-07	5.518E-07
Row 11	11	1900-2000	7.072E-04	1.311E-06	3.045E-06	7.042E-02	3.231E-06	4.711E-06	1.789E-01	3.835E-07	5.518E-07
Row 11	11	2000-2100	5.632E-04	9.881E-07	2.246E-06	5.226E-02	2.461E-06	4.471E-06	1.388E-01	2.954E-07	4.564E-07
Row 11	11	2100-2200	5.632E-04	9.881E-07	2.246E-06	5.226E-02	2.461E-06	4.471E-06	1.388E-01	2.954E-07	4.564E-07
Row 11	11	2200-2300	4.986E-04	5.005E-07	5.025E-06	4.790E-02	2.144E-06	3.545E-06	1.545E-01	2.945E-07	4.835E-07
Row 11	11	2300-0000	4.986E-04	5.005E-07	5.025E-06	4.790E-02	2.144E-06	3.545E-06	1.545E-01	2.945E-07	4.835E-07
Row 11	11	0000-0100	6.044E-04	2.531E-07	9.786E-07	5.382E-02	2.344E-07	9.008E-07	9.230E-01	2.213E-06	8.471E-06
Row 11	11	0100-0200	6.044E-04	2.531E-07	9.786E-07	5.382E-02	2.344E-07	9.008E-07	9.230E-01	2.213E-06	8.471E-06
Row 11	11	0200-0300	6.044E-04	2.531E-07	9.786E-07	5.382E-02	2.344E-07	9.008E-07	9.230E-01	2.213E-06	8.471E-06
Row 11	11	0300-0400	8.838E-04	3.616E-07	1.971E-07	8.000E-02	4.421E-07	5.645E-07	6.335E-01	1.121E-06	4.305E-07
Row 11	11	0400-0500	8.838E-04	3.616E-07	1.971E-07	8.000E-02	4.421E-07	5.645E-07	6.335E-01	1.121E-06	4.305E-07
Row 11	11	0500-0600	8.838E-04	3.616E-07	1.971E-07	8.000E-02	4.421E-07	5.645E-07	6.335E-01	1.121E-06	4.305E-07
Row 11	11	0600-0700	8.838E-04	3.616E-07	1.971E-07	8.000E-02	4.421E-07	5.645E-07	6.335E-01	1.121E-06	4.305E-07
Row 11	11	0700-0800	8.838E-04	3.616E-07	1.971E-07	8.000E-02	4.421E-07	5.645E-07	6.335E-01	1.121E-06	4.305E-07
Row 11	11	0800-0900	8.838E-04	3.616E-07	1.971E-07	8.000E-02	4.421E-07	5.645E-07	6.335E-01	1.121E-06	4.305E-07
Row 11	11	0900-1000	8.838E-04	3.616E-07	1.971E-07	8.000E-02	4.421E-07	5.645E-07	6.335E-01	1.121E-06	4.305E-07
Row 11	11	1000-1100	1.126E-03	1.431E-06	3.441E-06	1.112E-01	1.296E-06	4.961E-06	2.754E-01	6.364E-07	7.573E-07
Row 11	11	1100-1200	1.126E-03	1.431E-06	3.441E-06	1.112E-01	1.296E-06	4.961E-06	2.754E-01	6.364E-07	7.573E-07
Row 11	11	1200-1300	1.126E-03	1.431E-06	3.441E-06	1.112E-01	1.296E-06	4.961E-06	2.754E-01	6.364E-07	7.573E-07
Row 11	11	1300-1400	1.126E-03	1.431E-06	3.441E-06	1.112E-01	1.296E-06	4.961E-06	2.754E-01	6.364E-07	7.573E-07
Row 11	11	1400-1500	1.126E-03	1.431E-06	3.441E-06	1.112E-01	1.296E-06	4.961E-06	2.754E-01	6.364E-07	7.573E-07
Row 11	11	1500-1600	1.126E-03	1.431E-06	3.441E-06	1.112E-01	1.296E-06	4.961E-06	2.754E-01	6.364E-07	7.573E-07
Row 11	11	1600-1700	1.126E-03	1.431E-06	3.441E-06	1.112E-01	1.296E-06	4.961E-06	2.754E-01	6.364E-07	7.573E-07
Row 11	11	1700-1800	1.126E-03	1.431E-06	3.441E-06	1.112E-01	1.296E-06	4.961E-06	2.754E-01	6.364E-07	7.573E-07
Row 11	11	1800-1900	7.072E-04	1.311E-06	3.045E-06	7.042E-02	3.231E-06	4.711E-06	1.789E-01	3.835E-07	5.518E-07
Row 11	11	1900-2000	7.072E-04	1.311E-06	3.045E-06	7.042E-02	3.231E-06	4.711E-06	1.789E-01	3.835E-07	5.518E-07
Row 11	11	2000-2100	5.632E-04	9.881E-07	2.246E-06	5.226E-02	2.461E-06	4.471E-06	1.388E-01	2.954E-07	4.564E-07
Row 11	11	2100-2200	5.632E-04	9.881E-07	2.246E-06	5.226E-02	2.461E-06	4.471E-06	1.388E-01	2.954E-07	4.564E-07
Row 11	11	2200-2300	4.986E-04	5.005E-07	5.025E-06	4.790E-02	2.144E-06	3.545E-06	1.545E-01	2.945E-07	4.835E-07
Row 11	11	2300-0000	4.986E-04	5.005E-07	5.025E-06	4.790E-02	2.144E-06	3.545E-06	1.545E-01	2.945E-07	4.835E-07
Row 11	11	0000-0100	6.044E-04	2.531E-07	9.786E-07	5.382E-02	2.344E-07	9.008E-07	9.230E-01	2.213E-06	8.471E-06
Row 11	11	0100-0200	6.044E-04	2.531E-07	9.786E-07	5.382E-02	2.344E-07	9.008E-07	9.230E-01	2.213E-06	8.471E-06
Row 11	11	0200-0300	6.044E-04	2.531E-07	9.786E-07	5.382E-02	2.344E-07	9.008E-07	9.230E-01	2.213E-06	8.471E-06
Row 11	11	0300-0400	8.838E-04	3.616E-07	1.971E-07	8.000E-02	4.421E-07	5.645E-07	6.335E-01	1.121E-06	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Tsyg YI North Underground Quarry									
Open Road 24 hour Emission Factor for ARMMQ Model (February)									
Year 2028									
Road Name	Road ID	Hour	NO ₂ Emission			Monthly/Average			Monthly/Average
			g/hour/km	g/km	g/km ²	tonne/hour	tonne/km	g/km ²	
Road 27	27	0000-0100	1.146	8.112	7.208	2.888	7.462	7.208	1.622
Road 27	27	0100-0200	1.235	8.852	7.856	3.156	8.104	7.856	1.888
Road 27	27	0200-0300	1.324	9.592	8.592	3.424	8.848	8.592	2.048
Road 27	27	0300-0400	1.413	10.332	9.292	3.692	9.592	9.292	2.288
Road 27	27	0400-0500	1.502	11.072	10.000	3.960	10.340	10.000	2.528
Road 27	27	0500-0600	1.591	11.812	10.708	4.228	11.088	10.708	2.768
Road 27	27	0600-0700	1.680	12.552	11.416	4.496	11.832	11.416	3.008
Road 27	27	0700-0800	1.769	13.292	12.124	4.764	12.576	12.124	3.248
Road 27	27	0800-0900	1.858	14.032	12.832	5.032	13.320	12.832	3.488
Road 27	27	0900-1000	1.947	14.772	13.540	5.300	14.064	13.540	3.728
Road 27	27	1000-1100	2.036	15.512	14.248	5.568	14.808	14.248	3.968
Road 27	27	1100-1200	2.125	16.252	14.956	5.836	15.552	14.956	4.208
Road 27	27	1200-1300	2.214	16.992	15.664	6.104	16.296	15.664	4.448
Road 27	27	1300-1400	2.303	17.732	16.372	6.372	17.040	16.372	4.688
Road 27	27	1400-1500	2.392	18.472	17.080	6.640	17.784	17.080	4.928
Road 27	27	1500-1600	2.481	19.212	17.788	6.908	18.528	17.788	5.168
Road 27	27	1600-1700	2.570	19.952	18.496	7.176	19.272	18.496	5.408
Road 27	27	1700-1800	2.659	20.692	19.204	7.444	20.016	19.204	5.648
Road 27	27	1800-1900	2.748	21.432	19.912	7.712	20.760	19.912	5.888
Road 27	27	1900-2000	2.837	22.172	20.620	7.980	21.504	20.620	6.128
Road 27	27	2000-2100	2.926	22.912	21.328	8.248	22.248	21.328	6.368
Road 27	27	2100-2200	3.015	23.652	22.036	8.516	22.992	22.036	6.608
Road 27	27	2200-2300	3.104	24.392	22.744	8.784	23.736	22.744	6.848
Road 27	27	2300-2400	3.193	25.132	23.452	9.052	24.480	23.452	7.088
Road 28	28	0100-0200	1.672	4.792	2.728	3.552	4.424	2.728	2.792
Road 28	28	0200-0300	1.761	5.532	3.436	4.260	5.132	3.436	3.032
Road 28	28	0300-0400	1.850	6.272	4.144	4.968	5.840	4.144	3.272
Road 28	28	0400-0500	1.939	7.012	4.852	5.676	6.552	4.852	3.512
Road 28	28	0500-0600	2.028	7.752	5.560	6.384	7.264	5.560	3.752
Road 28	28	0600-0700	2.117	8.492	6.268	7.092	7.976	6.268	3.992
Road 28	28	0700-0800	2.206	9.232	6.976	7.800	8.688	6.976	4.232
Road 28	28	0800-0900	2.295	9.972	7.684	8.508	9.400	7.684	4.472
Road 28	28	0900-1000	2.384	10.712	8.392	9.216	10.112	8.392	4.712
Road 28	28	1000-1100	2.473	11.452	9.100	9.924	10.824	9.100	4.952
Road 28	28	1100-1200	2.562	12.192	9.808	10.632	11.536	9.808	5.192
Road 28	28	1200-1300	2.651	12.932	10.516	11.340	12.248	10.516	5.432
Road 28	28	1300-1400	2.740	13.672	11.224	12.048	12.960	11.224	5.672
Road 28	28	1400-1500	2.829	14.412	11.932	12.756	13.672	11.932	5.912
Road 28	28	1500-1600	2.918	15.152	12.640	13.464	14.384	12.640	6.152
Road 28	28	1600-1700	3.007	15.892	13.348	14.172	15.096	13.348	6.392
Road 28	28	1700-1800	3.096	16.632	14.056	14.880	15.808	14.056	6.632
Road 28	28	1800-1900	3.185	17.372	14.764	15.588	16.520	14.764	6.872
Road 28	28	1900-2000	3.274	18.112	15.472	16.296	17.232	15.472	7.112
Road 28	28	2000-2100	3.363	18.852	16.180	17.004	17.944	16.180	7.352
Road 28	28	2100-2200	3.452	19.592	16.888	17.712	18.656	16.888	7.592
Road 28	28	2200-2300	3.541	20.332	17.596	18.420	19.368	17.596	7.832
Road 28	28	2300-2400	3.630	21.072	18.304	19.128	20.080	18.304	8.072
Road 29	29	0100-0200	1.672	4.792	2.728	3.552	4.424	2.728	2.792
Road 29	29	0200-0300	1.761	5.532	3.436	4.260	5.132	3.436	3.032
Road 29	29	0300-0400	1.850	6.272	4.144	4.968	5.840	4.144	3.272
Road 29	29	0400-0500	1.939	7.012	4.852	5.676	6.552	4.852	3.512
Road 29	29	0500-0600	2.028	7.752	5.560	6.384	7.264	5.560	3.752
Road 29	29	0600-0700	2.117	8.492	6.268	7.092	7.976	6.268	3.992
Road 29	29	0700-0800	2.206	9.232	6.976	7.800	8.688	6.976	4.232
Road 29	29	0800-0900	2.295	9.972	7.684	8.508	9.400	7.684	4.472
Road 29	29	0900-1000	2.384	10.712	8.392	9.216	10.112	8.392	4.712
Road 29	29	1000-1100	2.473	11.452	9.100	9.924	10.824	9.100	4.952
Road 29	29	1100-1200	2.562	12.192	9.808	10.632	11.536	9.808	5.192
Road 29	29	1200-1300	2.651	12.932	10.516	11.340	12.248	10.516	5.432
Road 29	29	1300-1400	2.740	13.672	11.224	12.048	12.960	11.224	5.672
Road 29	29	1400-1500	2.829	14.412	11.932	12.756	13.672	11.932	5.912
Road 29	29	1500-1600	2.918	15.152	12.640	13.464	14.384	12.640	6.152
Road 29	29	1600-1700	3.007	15.892	13.348	14.172	15.096	13.348	6.392
Road 29	29	1700-1800	3.096	16.632	14.056	14.880	15.808	14.056	6.632
Road 29	29	1800-1900	3.185	17.372	14.764	15.588	16.520	14.764	6.872
Road 29	29	1900-2000	3.274	18.112	15.472	16.296	17.232	15.472	7.112
Road 29	29	2000-2100	3.363	18.852	16.180	17.004	17.944	16.180	7.352
Road 29	29	2100-2200	3.452	19.592	16.888	17.712	18.656	16.888	7.592
Road 29	29	2200-2300	3.541	20.332	17.596	18.420	19.368	17.596	7.832
Road 29	29	2300-2400	3.630	21.072	18.304	19.128	20.080	18.304	8.072
Road 30	30	0100-0200	1.672	4.792	2.728	3.552	4.424	2.728	2.792
Road 30	30	0200-0300	1.761	5.532	3.436	4.260	5.132	3.436	3.032
Road 30	30	0300-0400	1.850	6.272	4.144	4.968	5.840	4.144	3.272
Road 30	30	0400-0500	1.939	7.012	4.852	5.676	6.552	4.852	3.512
Road 30	30	0500-0600	2.028	7.752	5.560	6.384	7.264	5.560	3.752
Road 30	30	0600-0700	2.117	8.492	6.268	7.092	7.976	6.268	3.992
Road 30	30	0700-0800	2.206	9.232	6.976	7.800	8.688	6.976	4.232
Road 30	30	0800-0900	2.295	9.972	7.684	8.508	9.400	7.684	4.472
Road 30	30	0900-1000	2.384	10.712	8.392	9.216	10.112	8.392	4.712
Road 30	30	1000-1100	2.473	11.452	9.100	9.924	10.824	9.100	4.952
Road 30	30	1100-1200	2.562	12.192	9.808	10.632	11.536	9.808	5.192
Road 30	30	1200-1300	2.651	12.932	10.516	11.340	12.248	10.516	5.432
Road 30	30	1300-1400	2.740	13.672	11.224	12.048	12.960	11.224	5.672
Road 30	30	1400-1500	2.829	14.412	11.932	12.756	13.672	11.932	5.912
Road 30	30	1500-1600	2.918	15.152	12.640	13.464	14.384	12.640	6.152
Road 30	30	1600-1700	3.007	15.892	13.348	14.172	15.096	13.348	6.392
Road 30	30	1700-1800	3.096	16.632	14.056	14.880	15.808	14.056	6.632
Road 30	30	1800-1900	3.185	17.372	14.764	15.588	16.520	14.764	6.872
Road 30	30	1900-2000	3.274	18.112	15.472	16.296	17.232	15.472	7.112
Road 30	30	2000-2100	3.363	18.852	16.180	17.004	17.944	16.180	7.352
Road 30	30	2100-2200	3.452	19.592	16.888	17.712	18.656	16.888	7.592
Road 30	30	2200-2300	3.541	20.332	17.596	18.420	19.368	17.596	7.832
Road 30	30	2300-2400	3.630	21.072	18.304	19.128	20.080	18.304	8.072
Road 31	31	0100-0200	1.672	4.792	2.728	3.552	4.424	2.728	2.792
Road 31	31	0200-0300	1.761	5.532	3.436	4.260	5.132	3.436	3.032
Road 31	31	0300-0400	1.850	6.272	4.144	4.968	5.840	4.144	3.272
Road 31	31	0400-0500	1.939	7.012	4.852	5.676	6.552	4.852	3.512
Road 31	31	0500-0600	2.028	7.752	5.560	6.384	7.264	5.560	3.752
Road 31	31	0600-0700	2.117	8.492	6.268	7.092	7.976	6.268	3.992
Road 31	31	0700-0800	2.206	9.232	6.976	7.800	8.688	6.976	4.232
Road 31	31	0800-0900	2.295	9.972	7.684	8.508	9.400	7.684	4.472
Road 31	31	0900-1000	2.384	10.712	8.392	9.216	10.112	8.392	4.712
Road 31	31	1000-1100	2.473	11.452	9.100	9.924	10.824	9.100	4.952
Road 31	31	1100-1200	2.562	12.192	9.808	10.632	11.536	9.808	5.192
Road 31	31	1200-1300	2.651	12.932	10.516	11.340	12.248	10.516	5.432
Road 31	31	1300-1400	2.740	13.672	11.224	12.048	12.960	11.224	5.672
Road 31	31	1400-1500	2.829	14.412	11.932	12.756	13.672	11.932	5.912
Road 31	31	1500-1600	2.918	15.152	12.640	13.464	14.384	12.640	6.152
Road 31	31	1600-1700	3.007	15.892	13.348	14.172	15.096	13.348	6.392
Road 31	31	1700-1800	3.096	16.632	14.056	14.880	15.808	14.056	6.632

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Tsing Yi North Underground Quarry Open Road 4-hour Emission Factor for ARMMO Model (Metric)														
Year 2028														
Road Name	Road ID	Hour	NO ₂ Emission			NO Emission								
			Monthly/t/veh	g/veh/h	g/veh	Monthly/t/veh	g/veh/h	g/veh						
Road 54	54	0800-0900	1.676	6.188	1.415	1.521	5.557	1.276	7.461	7.136	2.616	0.966		
Road 54	54	0900-1000	1.593	5.755	1.321	1.405	5.078	1.153	6.755	6.732	2.426	0.866		
Road 54	54	1000-1100	2.145	8.577	1.595	1.817	6.637	1.446	9.885	9.860	3.516	1.236		
Road 54	54	1100-1200	2.086	6.447	1.476	1.502	5.862	1.345	6.702	6.006	6.835	8.772	2.716	0.816
Road 54	54	1200-1300	2.145	8.577	1.595	1.817	6.637	1.446	9.885	9.860	3.516	1.236		
Road 54	54	1300-1400	1.593	5.755	1.321	1.405	5.078	1.153	6.755	6.732	2.426	0.866		
Road 54	54	1400-1500	2.145	8.577	1.595	1.817	6.637	1.446	9.885	9.860	3.516	1.236		
Road 54	54	1500-1600	2.086	6.447	1.476	1.502	5.862	1.345	6.702	6.006	6.835	8.772	2.716	0.816
Road 54	54	1600-1700	1.593	5.755	1.321	1.405	5.078	1.153	6.755	6.732	2.426	0.866		
Road 54	54	1700-1800	2.145	8.577	1.595	1.817	6.637	1.446	9.885	9.860	3.516	1.236		
Road 54	54	1800-1900	1.593	5.755	1.321	1.405	5.078	1.153	6.755	6.732	2.426	0.866		
Road 54	54	1900-2000	1.781	3.416	7.876	1.665	3.167	7.786	6.511	1.665	7.876	1.665	7.876	1.665
Road 54	54	2000-2100	1.623	2.285	6.737	1.322	2.117	6.881	7.819	1.665	2.117	6.881	7.819	1.665
Road 54	54	2100-2200	1.545	1.737	1.337	1.431	1.597	1.431	1.597	1.431	1.597	1.431	1.597	1.431
Road 54	54	2200-2300	1.545	1.737	1.337	1.431	1.597	1.431	1.597	1.431	1.597	1.431	1.597	1.431
Road 54	54	2300-2400	1.545	1.737	1.337	1.431	1.597	1.431	1.597	1.431	1.597	1.431	1.597	1.431
Road 101	101	0800-0900	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 101	101	0900-1000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 101	101	1000-1100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 101	101	1100-1200	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 101	101	1200-1300	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 101	101	1300-1400	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 101	101	1400-1500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 101	101	1500-1600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 101	101	1600-1700	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 101	101	1700-1800	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 101	101	1800-1900	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 101	101	1900-2000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 101	101	2000-2100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 101	101	2100-2200	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 101	101	2200-2300	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 101	101	2300-2400	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 102	102	0800-0900	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 102	102	0900-1000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 102	102	1000-1100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 102	102	1100-1200	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 102	102	1200-1300	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 102	102	1300-1400	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 102	102	1400-1500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 102	102	1500-1600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 102	102	1600-1700	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 102	102	1700-1800	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 102	102	1800-1900	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 102	102	1900-2000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 102	102	2000-2100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 102	102	2100-2200	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 102	102	2200-2300	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 102	102	2300-2400	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 103	103	0800-0900	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 103	103	0900-1000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 103	103	1000-1100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 103	103	1100-1200	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 103	103	1200-1300	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 103	103	1300-1400	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 103	103	1400-1500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 103	103	1500-1600	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 103	103	1600-1700	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 103	103	1700-1800	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 103	103	1800-1900	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 103	103	1900-2000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 103	103	2000-2100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 103	103	2100-2200	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 103	103	2200-2300	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Road 103	103	2300-2400	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

L:\Source\Environment_Project\6073229\1\Other\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.1 Emission Factor in 2028.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Tsing Yi North Underground Quarry Open Road 4-hour Emission Factor for ARMMO Model (Metric)									
Year 2028									
Road Name	Road ID	Hour	NO ₂ Emission			NO Emission			
			Monthly/t/veh	g/veh/h	g/veh	Monthly/t/veh	g/veh/h	g/veh	
Road 7	7	1600-1700	2.506	6.576	1.836	1.667	6.237	1.438	7.478
Road 7	7	1700-1800	2.506	6.576	1.836	1.667	6.237	1.438	7.478
Road 7	7	1800-1900	2.506	6.576	1.836	1.667	6.237	1.438	7.478
Road 7	7	1900-2000	2.506	6.576	1.836	1.667	6.237	1.438	7.478
Road 7	7	2000-2100	2.506	6.576	1.836	1.667	6.237	1.438	7.478
Road 7	7	2100-2200	2.506	6.576	1.836	1.667	6.237	1.438	7.478
Road 7	7	2200-2300	2.506	6.576	1.836	1.667	6.237	1.438	7.478
Road 7	7	2300-2400	2.506	6.576	1.836	1.667	6.237	1.438	7.478
Road 8	8	0800-0900	4.388	1.715	2.447	1.364	5.222	1.177	4.805
Road 8	8	0900-1000	4.388	1.715	2.447	1.364	5.222	1.177	4.805
Road 8	8	1000-1100	4.388	1.715	2.447	1.364	5.222	1.177	4.805
Road 8	8	1100-1200	4.388	1.715	2.447	1.364	5.222	1.177	4.805
Road 8	8	1200-1300	4.388	1.715	2.447	1.364	5.222	1.177	4.805
Road 8	8	1300-1400	4.388	1.715	2.447	1.364	5.222	1.177	4.805
Road 8	8	1400-1500	4.388	1.715	2.447	1.364	5.222	1.177	4.805
Road 8	8	1500-1600	4.388	1.715	2.447	1.364	5.222	1.177	4.805
Road 8	8	1600-1700	4.388	1.715	2.447	1.364	5.222	1.177	4.805
Road 8	8	1700-1800	4.388	1.715	2.447	1.364	5.222	1.177	4.805
Road 8	8	1800-1900	4.388	1.715	2.447	1.364	5.222	1.177	4.805
Road 8	8	1900-2000	4.388	1.715	2.447	1.364	5.222	1.177	4.805
Road 8	8	2000-2100	4.388	1.715	2.447	1.364	5.222	1.177	4.805
Road 8	8	2100-2200	4.388	1.715	2.447	1.364	5.222	1.177	4.805
Road 8	8	2200-2300	4.388	1.715	2.447	1.364	5.222	1.177	4.805
Road 8	8	2300-2400	4.388	1.715	2.447	1.364	5.222	1.177	4.805
Road 9	9	0800-0900	5.159	1.512	1.686	1.484	6.971	1.778	1.185
Road 9	9	0900-1000	5.159	1.512	1.686	1.484	6.971	1.778	1.185
Road 9	9	1000-1100	5.159	1.512	1.686	1.484	6.971	1.778	1.185
Road 9	9	1100-1200	5.159	1.512	1.686	1.484	6.971	1.778	1.185
Road 9	9	1200-1300	5.159	1.512	1.686	1.484	6.971	1.778	1.185
Road 9	9	1300-1400	5.159	1.512	1.686	1.484	6.971	1.778	1.185
Road 9	9	1400-1500	5.159	1.512	1.686	1.484	6.971	1.778	1.185
Road 9	9	1500-1600	5.159	1.512	1.686	1.484	6.971	1.778	1.185
Road 9	9	1600-1700	5.159	1.512	1.686	1.484	6.971	1.778	1.185
Road 9	9	1700-1800	5.159	1.512	1.686	1.484	6.971	1.778	1.185
Road 9	9	1800-1900	5.159	1.512	1.686	1.484	6.971	1.778	1.185
Road 9	9	1900-2000	5.159	1.512	1.686	1.484	6.971	1.778	1.185
Road 9	9	2000-2100	5.159	1.512	1.686	1.484	6.971	1.778	1.185
Road 9	9	2100-2200	5.159	1.512	1.686	1.484	6.971	1.778	1.185
Road 9	9	2200-2300	5.159	1.512	1.686	1.484	6.971	1.778	1.185
Road 9	9	2300-2400	5.159	1.512	1.686	1.484	6.971	1.778	1.185
Road 10	10	0800-0900	6.826	2.765	3.086	2.894	5.276	1.715	0.914
Road 10	10	0900-1000	6.826	2.765	3.086	2.894	5.276	1.715	0.914
Road 10	10	1000-1100	6.826	2.765	3.086	2.894	5.276	1.715	0.914
Road 10	10	1100-1200	6.826	2.765	3.086	2.894	5.276	1.715	0.914
Road 10	10	1200-1300	6.826	2.765	3.086	2.894	5.276	1.715	0.914
Road 10	10	1300-1400	6.826	2.765	3.086	2.894	5.276	1.715	0.914
Road 10	10	1400-1500	6.826	2.765	3.086	2.894	5.276	1.715	0.914
Road 10	10	1500-1600	6.826	2.765	3.086	2.894	5.276	1.715	0.914
Road 10	10	1600-1700	6.826	2.765	3.086	2.894	5.276	1.715	0.914
Road 10	10	1700-1800	6.826	2.765	3.086	2.894	5.276	1.715	0.914
Road 10	10	1800-1900	6.826	2.765	3.086	2.894	5.276	1.715	0.914
Road 10	10	1900-2000	6.826	2.765	3.086	2.894	5.276	1.715	0.914
Road 10	10	2000-2100	6.826	2.765	3.086	2.894	5.276	1.715	0.914
Road 10	10	2100-2200	6.826	2.765	3.086	2.894	5.276	1.715	0.914
Road 10	10	2200-2300	6.826	2.765	3.086	2.894	5.276	1.715	0.914
Road 10	10	2300-2400	6.826	2.765	3.086	2.894	5.276	1.715	0.914
Road 11	11	0800-0900	1.666	1.546	0.708	1.498	1.396	0.737	4.046
Road 11	11	0900-1000	1.666	1.546	0.708	1.498	1.396	0.737	4.046
Road 11	11	1000-1100	1.666	1.546	0.708	1.498	1.396	0.737	4.046
Road 11	11	1100-1200	1.666	1.546	0.708	1.498	1.396	0.737	4.046
Road 11	11	1200-1300	1.666	1.546	0.708	1.498	1.396	0.737	4.046
Road 11	11	1300-1400	1.666	1.546	0.708	1.498	1.396	0.737	4.046
Road 11	11	1400-1500	1.666	1.546	0.708	1.498	1.396	0.737	4.046
Road 11	11	1500-1600	1.666	1.546	0.708	1.498	1.396	0.737	4.046
Road 11	11	1600-1700	1.666	1.546	0.708	1.498	1.396	0.737	4.046
Road 11	11	1700-1800	1.666	1.546	0.708	1.498	1.396	0.737	4.046
Road 11	11	1800-1900	1.666	1.546	0.708	1.498	1.396	0.737	4.046
Road 11	11	1900-2000	1.666	1.546	0.708	1.498	1.396	0.737	4.046
Road 11	11	2000-2100	1.666	1.546	0.708	1.498	1.396	0.737	4.046
Road 11	11	2100-2200	1.666	1.546	0.708	1.498	1.396	0.737	4.046
Road 11	11	2200-2300	1.666	1.546	0.708	1.498	1.396	0.737	4.046
Road 11	11	2300-2400	1.666	1.546	0.708	1.498	1.396	0.737	4.046
Road 12	12	0800-0900	1.136	1.511	0.707	1.388	1.317	0.717	4.551
Road 12	12	0900-1000	1.136	1.511	0.707	1.388	1.317	0.717	4.551
Road 12	12	1000-1100	1.136	1.511	0.707	1.388	1.317	0.717	4.551
Road 12	12	1100-1200	1.136	1.511	0.707	1.388	1.317	0.717	4.551
Road 12	12	1200-1300	1.136	1.511	0.707	1.388	1.317	0.717	4.551
Road 12	12	1300-1400	1.136	1.511	0.707	1.388	1.317	0.717	4.551
Road 12	12	1400-1500	1.136	1.511	0.707	1.388	1.317	0.717	4.551
Road 12	12	1500-1600	1.136	1.511	0.707	1.388	1.317	0.717	4.551
Road 12	12	1600-1700	1.136	1.511	0.707	1.388	1.317	0.717	4.551
Road 12	12	1700-1800	1.136	1.511	0.707	1.388	1.317	0.717	4.551
Road 12	12	1800-1900	1.136	1.511	0.707	1.388	1.317	0.717	4.551
Road 12	12	1900-2000	1.136	1.511	0.707	1.388	1.317	0.717	4.551
Road 12	12	2000-2100	1.136	1.511	0.707	1.388	1.317	0.717	4.551
Road 12	12	2100-2200	1.136	1.511	0.707	1.388	1.317	0.717	4.551
Road 12	12	2200-2300	1.136	1.511	0.707	1.388	1.317	0.717	4.551
Road 12	12	2300-2400	1.136	1.511	0.707	1.388	1.317	0.717	4.551
Road 13	13	0800-0900	1.666	1.546	0.708	1.498	1.396	0.737	4.046
Road 13	13	0900-1000	1.666	1.546	0.708	1.498	1.396	0.737	4.046
Road 13	13	1000-1100	1.666	1.546	0.708	1.498	1.396	0.737	4.046
Road 13	13	1100-1200	1.666	1.546	0.708	1.498	1.396	0.737	4.046
Road 13	13	1200-1300	1.666	1.546	0.708	1.498	1.396	0.737	4.046
Road 13	13	1300-1400	1.666	1.546	0.708	1.498	1.396	0.737	4.046
Road 13	13	1400-1500	1.666	1.546	0.708	1.498	1.396	0.737	4.046
Road 13	13	1500-1600	1.666	1.546	0.708	1.498	1.396	0.737	4.046
Road 13	13	1600-1700	1.666	1.546	0.708	1.498	1.396	0.737	4.046
Road 13	13	1700-1800	1.666	1.546	0.708	1.498	1.396	0.737	4.046
Road 13	13	1800-1900	1.666	1.546	0.708	1.498	1.396	0.737	4.046
Road 13	13	1900-2000	1.666	1.546	0.708	1.498	1.396	0.737	4.046
Road 13	13	2000-2100	1.666	1.546	0.708	1.498	1.396	0.737	4.046
Road 13	13	2100-2200	1.666	1.546	0.708	1.498	1.396	0.737	4.046
Road 13	13	2200-2300	1.666	1.546	0.708	1.498	1.396	0.737	4.046
Road 13	13	2300-2400	1.666	1.546	0.708	1.498	1.396	0.737	4.046
Road 14	14	0800-0900	1.136	1.511	0.707	1.388	1.317	0.717	4.551
Road 14	14	0900-1000	1.136	1.511	0.707	1.388	1.317	0.717	4.551
Road 14	14	1000-1100	1.136	1.511	0.707	1.388	1.317	0.717	4.551
Road 14	14	1100-1200	1.136	1.511	0.707	1.388	1.317	0.717	4.551
Road 14	14	1200-1300	1.136	1.511	0.707	1.388	1.317	0.717	4.551
Road 14	14	1300-1400	1.136	1.511	0.707	1.388	1.317	0.717	4.551
Road 14	14	1400-1500	1.136	1.511	0.707	1.388	1.317	0.717	4.551
Road 14	14	1500-1600	1.136	1.511	0.707	1.388	1.317	0.717	4.551
Road 14	14	1600-1700	1.136	1.511	0.707	1.388	1.317	0.717	4.551
Road 14	14	1700-1800	1.136	1.511	0.707	1.388	1.317	0.717	4.551
Road 14	14	1800-1900	1.136	1.511	0.707	1.388	1.317	0.717	4.551
Road 14	14	1900-2000	1.136	1.511	0.707	1.388	1.317	0.717	4.551
Road 14	14	2000-2100	1.136	1.511	0.707	1.388	1.317	0.717	4.551
Road 14	14	2100-2200	1.136	1.511	0.707	1.388	1.317	0.717	4.551
Road 14									

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open North End Union Factory														
Open North End Union Factory														
Year 2028														
Veh	Road ID	Hour	No. Emissions				No. Emissions							
			Month/tonnage	Month/tonnage	Month/tonnage	Month/tonnage	Month/tonnage	Month/tonnage						
			g/hour	g/ton	g/ton	g/ton	g/ton	g/ton	g/ton	g/ton	g/ton	g/ton	g/ton	
2028	21	0000:00:00	1.15E+02	1.48E+07	1.97E+06	2.87E+09	1.86E+07	1.88E+06	2.50E+01	1.18E+06	1.75E+01	1.06E+04	1.14E+01	8.77E+00
2028	21	0000:00:15	5.09E+00	5.09E+06	4.00E+05	4.00E+05	5.09E+06	5.09E+06	5.09E+06	5.09E+06	5.09E+06	5.09E+06	5.09E+06	5.09E+06
2028	21	0000:00:30	1.84E+01	1.84E+07	1.45E+06	2.17E+09	1.45E+07	1.45E+06	2.17E+09	1.45E+07	1.45E+06	2.17E+09	1.45E+07	1.45E+06
2028	21	0000:00:45	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:01:00	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:01:15	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:01:30	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:01:45	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:02:00	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:02:15	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:02:30	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:02:45	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:03:00	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:03:15	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:03:30	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:03:45	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:04:00	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:04:15	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:04:30	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:04:45	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:05:00	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:05:15	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:05:30	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:05:45	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:06:00	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:06:15	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:06:30	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:06:45	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:07:00	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:07:15	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:07:30	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:07:45	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:08:00	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:08:15	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:08:30	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:08:45	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:09:00	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:09:15	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:09:30	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:09:45	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:10:00	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:10:15	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:10:30	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:10:45	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:11:00	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:11:15	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:11:30	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:11:45	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:12:00	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:12:15	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:12:30	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:12:45	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:13:00	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:13:15	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:13:30	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:13:45	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:14:00	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:14:15	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:14:30	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:14:45	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:15:00	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:15:15	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:15:30	4.23E+01	4.23E+08	3.38E+06	3.38E+06	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08	4.23E+08
2028	21	0000:15:45	4.23E+01	4.23E+08	3.38E+06	3								

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Top North Undermined Quarry														
Road D 24 km 24 Exemptions Factors for														
Roadside Model Year 2020														
Roadside Model	Road D	Hour	NO _x Emission						NO _x Emission					
			Monthly/hourly			Monthly/hourly			Monthly/hourly					
			g/hourly	g/h	tonne/hour	g/hourly	g/h	tonne/hour	g/hourly	g/h	tonne/hour			
Road 27	27	1600-1700	3.11E+01	1.83E 07	2.55E 06	2.81E 04	7.37E 07	2.27E 06	1.43E+00	1.18E 06	1.13E 05	1.24E+00	3.37E 06	1.01E 08
Road 27	27	1800-1900	2.66E+01	1.57E 07	2.20E 06	2.50E 04	6.06E 07	1.85E 06	1.16E+00	9.54E 05	9.24E 04	1.05E+00	2.95E 06	8.61E 07
Road 27	27	1900-2000	2.66E+01	1.57E 07	2.20E 06	2.50E 04	6.06E 07	1.85E 06	1.16E+00	9.54E 05	9.24E 04	1.05E+00	2.95E 06	8.61E 07
Road 27	27	2000-2100	2.44E+01	2.55E 07	3.63E 07	2.21E 04	2.31E 07	7.11E 07	1.12E+00	1.17E 06	1.14E 05	3.61E 07	1.02E 06	3.24E 08
Road 27	27	2100-2200	2.44E+01	2.55E 07	3.63E 07	2.21E 04	2.31E 07	7.11E 07	1.12E+00	1.17E 06	1.14E 05	3.61E 07	1.02E 06	3.24E 08
Road 27	27	2300-2400	2.46E+01	2.51E 07	3.52E 07	2.23E 04	1.89E 07	5.81E 07	1.12E+00	9.47E 07	2.91E 06	1.93E+00	8.70E 07	2.67E 08
Road 27	27	2500-2600	2.55E+01	1.87E 07	2.67E 06	2.29E 04	1.71E 07	5.26E 07	1.16E+00	8.50E 07	2.57E 06	1.50E+00	7.68E 07	2.34E 08
Road 27	27	2600-2700	2.55E+01	1.87E 07	2.67E 06	2.29E 04	1.71E 07	5.26E 07	1.16E+00	8.50E 07	2.57E 06	1.50E+00	7.68E 07	2.34E 08
Road 27	27	2800-2900	2.55E+01	1.87E 07	2.67E 06	2.29E 04	1.71E 07	5.26E 07	1.16E+00	8.50E 07	2.57E 06	1.50E+00	7.68E 07	2.34E 08
Road 27	27	2900-3000	3.12E+02	5.12E 07	7.30E 07	3.12E 04	3.26E 07	9.88E 07	3.88E 07	3.42E 08	3.88E 06	3.24E 07	4.95E 07	2.29E 08
Road 27	27	3000-3100	3.86E 07	7.12E 07	1.02E 08	4.18E 04	4.29E 07	1.29E 08	4.62E 07	4.18E 06	4.62E 06	4.18E 06	4.95E 07	2.29E 08
Road 27	27	3100-3200	4.20E+02	4.80E 07	6.81E 07	3.80E 04	3.48E 07	9.54E 07	3.21E 07	2.90E 06	1.63E 04	2.86E 07	2.59E 07	1.47E 08
Road 27	27	3200-3300	4.20E+02	4.80E 07	6.81E 07	3.80E 04	3.48E 07	9.54E 07	3.21E 07	2.90E 06	1.63E 04	2.86E 07	2.59E 07	1.47E 08
Road 27	27	3400-3500	4.88E+01	2.11E 07	3.05E 06	2.11E 04	1.94E 07	5.97E 07	3.51E 07	1.81E 06	1.50E 07	4.76E 07	1.47E 08	6.61E 07
Road 27	27	3600-3700	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	3800-3900	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	4000-4100	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	4200-4300	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	4400-4500	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	4600-4700	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	4800-4900	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	5000-5100	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	5200-5300	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	5400-5500	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	5600-5700	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	5800-5900	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	6000-6100	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	6200-6300	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	6400-6500	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	6600-6700	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	6800-6900	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	7000-7100	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	7200-7300	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	7400-7500	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	7600-7700	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	7800-7900	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	8000-8100	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	8200-8300	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	8400-8500	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	8600-8700	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	8800-8900	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	9000-9100	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	9200-9300	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	9400-9500	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	9600-9700	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	9800-9900	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	10000-10100	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	10200-10300	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	10400-10500	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	10600-10700	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	10800-10900	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	11000-11100	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	11200-11300	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	11400-11500	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	11600-11700	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	11800-11900	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	12000-12100	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	12200-12300	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	12400-12500	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	12600-12700	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	12800-12900	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	13000-13100	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27	27	13200-13300	5.54E+02	5.54E 07	7.95E 07	4.47E 04	6.16E 07	3.51E 07	3.51E 07	3.51E 07	2.88E 04	3.12E 07	4.32E 07	2.45E 08
Road 27														

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Top North Undermined Quarry										
Road D 24-hour Emission Factors for										
Roadside Model										
Road ID	Road D	Hour	NO _x Emission						NO _x Emission	
			Monthly/ha			Monthly/ha			Monthly/ha	
			g/hour/ha	tonne/hour	kg/hour/ha	g/hour/ha	tonne/hour	kg/hour/ha	g/hour/ha	tonne/hour
Road #1	43	0000-0100	7.7982	1.744	0.77	1.6486	0.4542	1.598	1.4946	0.376
		0100-0200	8.7722	1.947	0.86	1.6486	0.4542	1.598	1.4946	0.376
Road #1	43	0200-0300	12.013	2.69	1.2	1.6486	0.4542	1.598	1.4946	0.376
		0300-0400	11.2173	2.517	1.276	1.6486	0.4542	1.598	1.4946	0.376
Road #1	43	0400-0500	11.113	2.49	1.24	1.6486	0.4542	1.598	1.4946	0.376
		0500-0600	9.7162	1.888	0.76	1.6486	0.4542	1.598	1.4946	0.376
Road #1	43	0600-0700	8.7622	1.947	0.86	1.6486	0.4542	1.598	1.4946	0.376
		0700-0800	8.9652	2.01	0.89	1.6486	0.4542	1.598	1.4946	0.376
Road #1	43	0800-0900	9.4112	2.074	0.93	1.6486	0.4542	1.598	1.4946	0.376
		0900-1000	9.5132	2.106	0.95	1.6486	0.4542	1.598	1.4946	0.376
Road #1	43	1000-1100	11.5141	2.536	1.054	1.6486	0.4542	1.598	1.4946	0.376
		1100-1200	11.5141	2.536	1.054	1.6486	0.4542	1.598	1.4946	0.376
Road #1	43	1200-1300	11.5141	2.536	1.054	1.6486	0.4542	1.598	1.4946	0.376
		1300-1400	11.5141	2.536	1.054	1.6486	0.4542	1.598	1.4946	0.376
Road #1	43	1400-1500	10.7745	2.417	0.98	1.6486	0.4542	1.598	1.4946	0.376
		1500-1600	10.7745	2.417	0.98	1.6486	0.4542	1.598	1.4946	0.376
Road #1	43	1600-1700	10.7745	2.417	0.98	1.6486	0.4542	1.598	1.4946	0.376
		1700-1800	8.9162	1.947	0.86	1.6486	0.4542	1.598	1.4946	0.376
Road #1	43	1800-1900	7.7452	1.693	0.75	1.6486	0.4542	1.598	1.4946	0.376
		1900-2000	7.7452	1.693	0.75	1.6486	0.4542	1.598	1.4946	0.376
Road #1	43	2000-2100	11.6402	2.598	1.072	1.6486	0.4542	1.598	1.4946	0.376
		2100-2200	11.6402	2.598	1.072	1.6486	0.4542	1.598	1.4946	0.376
Road #1	43	2200-2300	5.0062	1.131	0.2004	1.6486	0.4542	1.598	1.4946	0.376
		2300-2400	5.0062	1.131	0.2004	1.6486	0.4542	1.598	1.4946	0.376
Road #2	43	0000-0100	7.7452	1.693	0.75	1.6486	0.4542	1.598	1.4946	0.376
		0100-0200	8.9162	1.947	0.86	1.6486	0.4542	1.598	1.4946	0.376
Road #2	43	0200-0300	12.013	2.69	1.2	1.6486	0.4542	1.598	1.4946	0.376
		0300-0400	11.2173	2.517	1.276	1.6486	0.4542	1.598	1.4946	0.376
Road #2	43	0400-0500	11.113	2.49	1.24	1.6486	0.4542	1.598	1.4946	0.376
		0500-0600	9.7162	1.888	0.76	1.6486	0.4542	1.598	1.4946	0.376
Road #2	43	0600-0700	8.7622	1.947	0.86	1.6486	0.4542	1.598	1.4946	0.376
		0700-0800	8.9652	2.01	0.89	1.6486	0.4542	1.598	1.4946	0.376
Road #2	43	0800-0900	9.4112	2.074	0.93	1.6486	0.4542	1.598	1.4946	0.376
		0900-1000	9.5132	2.106	0.95	1.6486	0.4542	1.598	1.4946	0.376
Road #2	43	1000-1100	11.5141	2.536	1.054	1.6486	0.4542	1.598	1.4946	0.376
		1100-1200	11.5141	2.536	1.054	1.6486	0.4542	1.598	1.4946	0.376
Road #2	43	1200-1300	11.5141	2.536	1.054	1.6486	0.4542	1.598	1.4946	0.376
		1300-1400	11.5141	2.536	1.054	1.6486	0.4542	1.598	1.4946	0.376
Road #2	43	1400-1500	10.7745	2.417	0.98	1.6486	0.4542	1.598	1.4946	0.376
		1500-1600	10.7745	2.417	0.98	1.6486	0.4542	1.598	1.4946	0.376
Road #2	43	1600-1700	10.7745	2.417	0.98	1.6486	0.4542	1.598	1.4946	0.376
		1700-1800	8.9162	1.947	0.86	1.6486	0.4542	1.598	1.4946	0.376
Road #2	43	1800-1900	7.7452	1.693	0.75	1.6486	0.4542	1.598	1.4946	0.376
		1900-2000	7.7452	1.693	0.75	1.6486	0.4542	1.598	1.4946	0.376
Road #2	43	2000-2100	11.6402	2.598	1.072	1.6486	0.4542	1.598	1.4946	0.376
		2100-2200	11.6402	2.598	1.072	1.6486	0.4542	1.598	1.4946	0.376
Road #2	43	2200-2300	5.0062	1.131	0.2004	1.6486	0.4542	1.598	1.4946	0.376
		2300-2400	5.0062	1.131	0.2004	1.6486	0.4542	1.598	1.4946	0.376
Road #3	43	0000-0100	7.7452	1.693	0.75	1.6486	0.4542	1.598	1.4946	0.376
		0100-0200	8.9162	1.947	0.86	1.6486	0.4542	1.598	1.4946	0.376
Road #3	43	0200-0300	12.013	2.69	1.2	1.6486	0.4542	1.598	1.4946	0.376
		0300-0400	11.2173	2.517	1.276	1.6486	0.4542	1.598	1.4946	0.376
Road #3	43	0400-0500	11.113	2.49	1.24	1.6486	0.4542	1.598	1.4946	0.376
		0500-0600	9.7162	1.888	0.76	1.6486	0.4542	1.598	1.4946	0.376
Road #3	43	0600-0700	8.7622	1.947	0.86	1.6486	0.4542	1.598	1.4946	0.376
		0700-0800	8.9652	2.01	0.89	1.6486	0.4542	1.598	1.4946	0.376
Road #3	43	0800-0900	9.4112	2.074	0.93	1.6486	0.4542	1.598	1.4946	0.376
		0900-1000	9.5132	2.106	0.95	1.6486	0.4542	1.598	1.4946	0.376
Road #3	43	1000-1100	11.5141	2.536	1.054	1.6486	0.4542	1.598	1.4946	0.376
		1100-1200	11.5141	2.536	1.054	1.6486	0.4542	1.598	1.4946	0.376
Road #3	43	1200-1300	11.5141	2.536	1.054	1.6486	0.4542	1.598	1.4946	0.376
		1300-1400	11.5141	2.536	1.054	1.6486	0.4542	1.598	1.4946	0.376
Road #3	43	1400-1500	10.7745	2.417	0.98	1.6486	0.4542	1.598	1.4946	0.376
		1500-1600	10.7745	2.417	0.98	1.6486	0.4542	1.598	1.4946	0.376
Road #3	43	1600-1700	10.7745	2.417	0.98	1.6486	0.4542	1.598	1.4946	0.376
		1700-1800	8.9162	1.947	0.86	1.6486	0.4542	1.598	1.4946	0.376
Road #3	43	1800-1900	7.7452	1.693	0.75	1.6486	0.4542	1.598	1.4946	0.376
		1900-2000	7.7452	1.693	0.75	1.6486	0.4542	1.598	1.4946	0.376
Road #3	43	2000-2100	11.6402	2.598	1.072	1.6486	0.4542	1.598	1.4946	0.376
		2100-2200	11.6402	2.598	1.072	1.6486	0.4542	1.598	1.4946	0.376
Road #3	43	2200-2300	5.0062	1.131	0.2004	1.6486	0.4542	1.598	1.4946	0.376
		2300-2400	5.0062	1.131	0.2004	1.6486	0.4542	1.598	1.4946	0.376
Road #4	43	0000-0100	7.7452	1.693	0.75	1.6486	0.4542	1.598	1.4946	0.376
		0100-0200	8.9162	1.947	0.86	1.6486	0.4542	1.598	1.4946	0.376
Road #4	43	0200-0300	12.013	2.69	1.2	1.6486	0.4542	1.598	1.4946	0.376
		0300-0400	11.2173	2.517	1.276	1.6486	0.4542	1.598	1.4946	0.376
Road #4	43	0400-0500	11.113	2.49	1.24	1.6486	0.4542	1.598	1.4946	0.376
		0500-0600	9.7162	1.888	0.76	1.6486	0.4542	1.598	1.4946	0.376
Road #4	43	0600-0700	8.7622	1.947	0.86	1.6486	0.4542	1.598	1.4946	0.376
		0700-0800	8.9652	2.01	0.89	1.6486	0.4542	1.598	1.4946	0.376
Road #4	43	0800-0900	9.4112	2.074	0.93	1.6486	0.4542	1.598	1.4946	0.376
		0900-1000	9.5132	2.106	0.95	1.6486	0.4542	1.598	1.4946	0.376
Road #4	43	1000-1100	11.5141	2.536	1.054	1.6486	0.4542	1.598	1.4946	0.376
		1100-1200	11.5141	2.536	1.054	1.6486	0.4542	1.598	1.4946	0.376
Road #4	43	1200-1300	11.5141	2.536	1.054	1.6486	0.4542	1.598	1.4946	0.376
		1300-1400	11.5141	2.536	1.054	1.6486	0.4542	1.598	1.4946	0.376
Road #4	43	1400-1500	10.7745	2.417	0.98	1.6486	0.4542	1.598	1.4946	0.376
		1500-1600	10.7745	2.417	0.98	1.6486	0.4542	1.598	1.4946	0.376
Road #4	43	1600-1700	10.7745	2.417	0.98	1.6486	0.4542	1.598	1.4946	0.376
		1700-1800	8.9162	1.947	0.86	1.6486	0.4542	1.598	1.4946	0.376
Road #4	43	1800-1900	7.7452	1.693	0.75	1.6486	0.4542	1.598	1.4946	0.376
		1900-2000	7.7452	1.693	0.75	1.6486	0.4542	1.598	1.4946	0.376
Road #4	43	2000-2100	11.6402	2.598	1.072	1.6486	0.4542	1.598	1.4946	0.376
		2100-2200	11.6402	2.598	1.072	1.6486	0.4542	1.598	1.4946	0.376
Road #4	43	2200-2300	5.0062	1.131	0.2004	1.6486	0.4542	1.598	1.4946	0.376
		2300-2400	5.0062	1.131	0.2004	1.6486	0.4542	1.598	1.4946	0.376
Road #5	43	0000-0100	7.7452	1.693	0.75	1.6486	0.4542	1.598	1.4946	0.376
		0100-0200	8.9162	1.947	0.86	1.6486	0.4542	1.598	1.4946	0.376
Road #5	43	0200-0300	12.013	2.69	1.2	1.6486	0.4542	1.598	1.4946	0.376
		0300-0400	11.2173	2.517	1.276	1.6486	0.4542	1.598	1.4946	0.376
Road #5	43	0400-0500	11.113	2.49	1.24	1.6486	0.4542	1.598	1.4946	0.376
		0500-0600	9.7162	1.888	0.76	1.6486	0.4542	1.598	1.4946	0.376
Road #5	43	0600-0700	8.7622	1.947	0.86	1.6486	0.4542	1.598	1.4946	0.376
		0700-0800	8.9652	2.01	0.89	1.6486	0.4542	1.598	1.4946	0.376
Road #5	43	0800-0900	9.4112	2.074	0.93	1.6486	0.4542	1.598	1.4946	0.376
		0900-1000	9.5132	2.106	0.95	1.6486	0.4542	1.598	1.4946	

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Year		Factors for Q4												
Hour	Month	NO Emission						NO Emission						
		Monthly/Range			Monthly/Average			Monthly/Range			Monthly/Average			
		g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	
0000-0100	4.81E	1.83E	1.47E	1.44E	4.48E	1.87E	1.49E	1.57E	1.31E	1.18E	1.18E	3.21E	1.13E	1.08E
0000-0200	5.46E	1.44E	1.24E	1.24E	5.12E	1.29E	1.15E	1.24E	1.07E	0.85E	0.56E	2.81E	0.87E	0.79E
0000-0300	7.19E	1.12E	0.97E	0.97E	6.87E	1.01E	0.87E	1.01E	0.87E	0.67E	0.47E	2.41E	0.71E	0.67E
0000-0400	7.07E	1.12E	0.97E	0.97E	6.73E	1.01E	0.87E	1.01E	0.87E	0.67E	0.47E	2.41E	0.71E	0.67E
0000-0500	7.19E	1.12E	0.97E	0.97E	6.87E	1.01E	0.87E	1.01E	0.87E	0.67E	0.47E	2.41E	0.71E	0.67E
0000-0600	6.73E	1.12E	0.97E	0.97E	6.48E	0.97E	0.83E	0.97E	0.83E	0.63E	0.43E	2.41E	0.71E	0.67E
0000-0700	6.73E	1.12E	0.97E	0.97E	6.48E	0.97E	0.83E	0.97E	0.83E	0.63E	0.43E	2.41E	0.71E	0.67E
0000-0800	6.73E	1.12E	0.97E	0.97E	6.48E	0.97E	0.83E	0.97E	0.83E	0.63E	0.43E	2.41E	0.71E	0.67E
0000-0900	7.07E	1.04E	0.92E	0.92E	6.73E	0.98E	0.85E	0.98E	0.82E	0.62E	0.42E	2.48E	0.54E	0.50E
0000-1000	7.07E	1.04E	0.92E	0.92E	6.73E	0.98E	0.85E	0.98E	0.82E	0.62E	0.42E	2.48E	0.54E	0.50E
0000-1100	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0000-1200	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0001-0100	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0001-0200	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0001-0300	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0001-0400	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0001-0500	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0001-0600	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0001-0700	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0001-0800	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0001-0900	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0001-1000	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0001-1100	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0001-1200	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0002-0100	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0002-0200	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0002-0300	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0002-0400	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0002-0500	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0002-0600	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0002-0700	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0002-0800	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0002-0900	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0002-1000	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0002-1100	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0002-1200	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0003-0100	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0003-0200	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0003-0300	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0003-0400	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0003-0500	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0003-0600	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0003-0700	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0003-0800	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0003-0900	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0003-1000	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0003-1100	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0003-1200	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0004-0100	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0004-0200	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0004-0300	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0004-0400	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0004-0500	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0004-0600	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0004-0700	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0004-0800	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0004-0900	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0004-1000	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0004-1100	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0004-1200	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0005-0100	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0005-0200	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0005-0300	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0005-0400	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0005-0500	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0005-0600	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0005-0700	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0005-0800	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0005-0900	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0005-1000	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0005-1100	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0005-1200	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0006-0100	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0006-0200	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0006-0300	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0006-0400	9.08E	1.04E	0.92E	0.92E	8.73E	0.97E	0.85E	0.97E	0.80E	0.61E	0.41E	4.44E	0.51E	0.47E
0006-0500	9.08E	1.04E	0.92E											

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Year		Factors for the Year											
Hour	Month	NO ₂ Emission						NO ₂ Emission					
		Monthly/Max			Monthly/Average			Monthly/Max			Monthly/Average		
		g/hour	g/day	g/month	g/hour	g/day	g/month	g/hour	g/day	g/month	g/hour	g/day	g/month
0800-0900	4.818E	0.932E 07	1.888E	4.18E	0.824E 07	1.648E	3.296E	0.817E	4.000E	2.811E	5.538E	1.641E	0.000E
0900-1000	5.946E	0.932E 07	1.888E	4.18E	0.824E 07	1.648E	3.296E	0.817E	4.000E	2.811E	5.538E	1.641E	0.000E
1000-1100	5.946E	0.932E 07	1.888E	4.18E	0.824E 07	1.648E	3.296E	0.817E	4.000E	2.811E	5.538E	1.641E	0.000E
1100-1200	5.946E	0.932E 07	1.888E	4.18E	0.824E 07	1.648E	3.296E	0.817E	4.000E	2.811E	5.538E	1.641E	0.000E
1200-1300	5.946E	0.932E 07	1.888E	4.18E	0.824E 07	1.648E	3.296E	0.817E	4.000E	2.811E	5.538E	1.641E	0.000E
1300-1400	5.946E	0.932E 07	1.888E	4.18E	0.824E 07	1.648E	3.296E	0.817E	4.000E	2.811E	5.538E	1.641E	0.000E
1400-1500	5.946E	0.932E 07	1.888E	4.18E	0.824E 07	1.648E	3.296E	0.817E	4.000E	2.811E	5.538E	1.641E	0.000E
1500-1600	5.946E	0.932E 07	1.888E	4.18E	0.824E 07	1.648E	3.296E	0.817E	4.000E	2.811E	5.538E	1.641E	0.000E
1600-1700	5.946E	0.932E 07	1.888E	4.18E	0.824E 07	1.648E	3.296E	0.817E	4.000E	2.811E	5.538E	1.641E	0.000E
1700-1800	5.946E	0.932E 07	1.888E	4.18E	0.824E 07	1.648E	3.296E	0.817E	4.000E	2.811E	5.538E	1.641E	0.000E
1800-1900	5.946E	0.932E 07	1.888E	4.18E	0.824E 07	1.648E	3.296E	0.817E	4.000E	2.811E	5.538E	1.641E	0.000E
1900-2000	5.946E	0.932E 07	1.888E	4.18E	0.824E 07	1.648E	3.296E	0.817E	4.000E	2.811E	5.538E	1.641E	0.000E
2000-2100	5.946E	0.932E 07	1.888E	4.18E	0.824E 07	1.648E	3.296E	0.817E	4.000E	2.811E	5.538E	1.641E	0.000E
2100-2200	5.946E	0.932E 07	1.888E	4.18E	0.824E 07	1.648E	3.296E	0.817E	4.000E	2.811E	5.538E	1.641E	0.000E
2200-2300	5.946E	0.932E 07	1.888E	4.18E	0.824E 07	1.648E	3.296E	0.817E	4.000E	2.811E	5.538E	1.641E	0.000E
2300-2400	5.946E	0.932E 07	1.888E	4.18E	0.824E 07	1.648E	3.296E	0.817E	4.000E	2.811E	5.538E	1.641E	0.000E
0000-0100	5.946E	0.932E 07	1.888E	4.18E	0.824E 07	1.648E	3.296E	0.817E	4.000E	2.811E	5.538E	1.641E	0.000E
0100-0200	5.946E	0.932E 07	1.888E	4.18E	0.824E 07	1.648E	3.296E	0.817E	4.000E	2.811E	5.538E	1.641E	0.000E
0200-0300	5.946E	0.932E 07	1.888E	4.18E	0.824E 07	1.648E	3.296E	0.817E	4.000E	2.811E	5.538E	1.641E	0.000E
0300-0400	5.946E	0.932E 07	1.888E	4.18E	0.824E 07	1.648E	3.296E	0.817E	4.000E	2.811E	5.538E	1.641E	0.000E
0400-0500	5.946E	0.932E 07	1.888E	4.18E	0.824E 07	1.648E	3.296E	0.817E	4.000E	2.811E	5.538E	1.641E	0.000E

ects\60733229\1.01\Others\Air\Modellink\Appendix\Traffic\OpenRoad\Appendix 3.5.1 Emission Factor in 2028.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Yr North Under Environments		Year 2008		Year 2009		Year 2010		Year 2011		Year 2012		Year 2013		Year 2014		Year 2015		Year 2016		Year 2017		Year 2018		Year 2019		Year 2020		Year 2021		Year 2022		Year 2023		Year 2024		Year 2025		Year 2026		Year 2027		Year 2028		Year 2029		Year 2030		Year 2031		Year 2032		Year 2033		Year 2034		Year 2035		Year 2036		Year 2037		Year 2038		Year 2039		Year 2040		Year 2041		Year 2042		Year 2043		Year 2044		Year 2045		Year 2046		Year 2047		Year 2048		Year 2049		Year 2050		Year 2051		Year 2052		Year 2053		Year 2054		Year 2055		Year 2056		Year 2057		Year 2058		Year 2059		Year 2060		Year 2061		Year 2062		Year 2063		Year 2064		Year 2065		Year 2066		Year 2067		Year 2068		Year 2069		Year 2070		Year 2071		Year 2072		Year 2073		Year 2074		Year 2075		Year 2076		Year 2077		Year 2078		Year 2079		Year 2080		Year 2081		Year 2082		Year 2083		Year 2084		Year 2085		Year 2086		Year 2087		Year 2088		Year 2089		Year 2090		Year 2091		Year 2092		Year 2093		Year 2094		Year 2095		Year 2096		Year 2097		Year 2098		Year 2099		Year 2100		Year 2101		Year 2102		Year 2103		Year 2104		Year 2105		Year 2106		Year 2107		Year 2108		Year 2109		Year 2110		Year 2111		Year 2112		Year 2113		Year 2114		Year 2115		Year 2116		Year 2117		Year 2118		Year 2119		Year 2120		Year 2121		Year 2122		Year 2123		Year 2124		Year 2125		Year 2126		Year 2127		Year 2128		Year 2129		Year 2130		Year 2131		Year 2132		Year 2133		Year 2134		Year 2135		Year 2136		Year 2137		Year 2138		Year 2139		Year 2140		Year 2141		Year 2142		Year 2143		Year 2144		Year 2145		Year 2146	
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Open Pit North Underground Quarry									
Open Pit 24 Hour Noise Emission Factors for ARMMMO Model (Month)									
Road Name	Road ID	Hour	Month/Average			No Emission			
			g/h/m ³	100m/hour	1000m/hour	Month/Average	100m/hour	1000m/hour	Month/Average
Road 153	153	0600-0700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 153	153	0700-0800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 153	153	0800-0900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 153	153	0900-1000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 153	153	1000-1100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 153	153	1100-1200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 153	153	1200-1300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 153	153	1300-1400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 153	153	1400-1500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 153	153	1500-1600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 153	153	1600-1700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 153	153	1700-1800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 153	153	1800-1900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 153	153	1900-2000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 153	153	2000-2100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 153	153	2100-2200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 153	153	2200-2300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 153	153	2300-2400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 154	154	0600-0700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 154	154	0700-0800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 154	154	0800-0900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 154	154	0900-1000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 154	154	1000-1100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 154	154	1100-1200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 154	154	1200-1300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 154	154	1300-1400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 154	154	1400-1500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 154	154	1500-1600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 154	154	1600-1700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 154	154	1700-1800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 154	154	1800-1900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 154	154	1900-2000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 154	154	2000-2100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 154	154	2100-2200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 154	154	2200-2300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 154	154	2300-2400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 155	155	0600-0700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 155	155	0700-0800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 155	155	0800-0900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 155	155	0900-1000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 155	155	1000-1100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 155	155	1100-1200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 155	155	1200-1300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 155	155	1300-1400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 155	155	1400-1500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 155	155	1500-1600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 155	155	1600-1700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 155	155	1700-1800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 155	155	1800-1900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 155	155	1900-2000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 155	155	2000-2100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 155	155	2100-2200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 155	155	2200-2300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 155	155	2300-2400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 156	156	0600-0700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 156	156	0700-0800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 156	156	0800-0900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 156	156	0900-1000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 156	156	1000-1100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 156	156	1100-1200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 156	156	1200-1300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 156	156	1300-1400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 156	156	1400-1500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 156	156	1500-1600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 156	156	1600-1700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 156	156	1700-1800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 156	156	1800-1900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 156	156	1900-2000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 156	156	2000-2100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 156	156	2100-2200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 156	156	2200-2300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 156	156	2300-2400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Road North Underground Quantity									
Year 2024									
ADMMO model (kg)									
Road Name		Road ID	Hour	NO _x Emission		Monthly/Average		NO _x Emission	
				g/kwhour	kg/hour	Monthly/Average	Monthly/Average	Monthly/Average	Monthly/Average
Road 1	0000-0100	2108.00	21:07	2.737	1.851	1.851	1.851	2.737	1.851
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 1	0000-0200	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 1	0000-0300	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 1	0000-0400	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 1	0000-0500	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 1	0000-0600	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 1	0000-0700	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 1	0000-0800	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 1	0000-0900	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 1	0000-1000	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 1	0000-1100	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 1	0000-1200	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 1	0000-1300	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 1	0000-1400	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 1	0000-1500	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 1	0000-1600	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 1	0000-1700	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 1	0000-1800	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 1	0000-1900	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 1	0000-2000	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 1	0000-2100	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 2	0000-0100	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 2	0000-0200	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 2	0000-0300	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 2	0000-0400	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 2	0000-0500	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 2	0000-0600	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 2	0000-0700	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 2	0000-0800	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 2	0000-0900	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 2	0000-1000	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 2	0000-1100	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 2	0000-1200	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 2	0000-1300	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 2	0000-1400	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 2	0000-1500	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 2	0000-1600	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 2	0000-1700	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 2	0000-1800	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 2	0000-1900	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 2	0000-2000	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 2	0000-2100	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 3	0000-0100	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 3	0000-0200	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 3	0000-0300	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 3	0000-0400	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 3	0000-0500	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 3	0000-0600	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 3	0000-0700	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 3	0000-0800	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 3	0000-0900	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 3	0000-1000	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 3	0000-1100	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 3	0000-1200	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 3	0000-1300	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 3	0000-1400	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 3	0000-1500	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 3	0000-1600	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 3	0000-1700	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 3	0000-1800	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 3	0000-1900	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 3	0000-2000	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 3	0000-2100	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.531	1.531	2.296	1.531
Road 4	0000-0100	2108.00	21:07	2.737	1.851	2.027	1.432	7.782	2.027
			21:08	2.296	1.531	1.			

1-1 Source\Environment - Project\60723238\1-01\Other\Air Model\Appendix Traffic\Open Road\Appendix 2.5.1 Emission Factor in 2018.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

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I:\Source\Environment - Reports\G0722770\1.01\Other\Aid Modelling\Appendix\Traffic\OpenRoad\Appendix 2 E.1 Emission Factor in 2038.xlsx

Open Top Road Under Drainage Factors										
Year 2028										
ARMSMO Model Results										
Road Name	Road ID	Hour	NO Emission				NO Emission			
			Month/Hours	Annual Hours	Monthly/Average	Annual Hours	Monthly/Average	Monthly/Average		
Road 11	11	0000-0100	0.715	21.47	0.252	0.715	21.47	0.252	0.715	21.47
		0100-0200	0.685	18.87	0.237	0.685	18.87	0.237	0.685	18.87
		0200-0300	0.655	16.27	0.222	0.655	16.27	0.222	0.655	16.27
		0300-0400	0.625	13.67	0.207	0.625	13.67	0.207	0.625	13.67
		0400-0500	0.595	11.07	0.192	0.595	11.07	0.192	0.595	11.07
Road 12	12	0000-0100	0.835	25.07	0.292	0.835	25.07	0.292	0.835	25.07
		0100-0200	0.805	22.47	0.277	0.805	22.47	0.277	0.805	22.47
		0200-0300	0.775	19.87	0.262	0.775	19.87	0.262	0.775	19.87
		0300-0400	0.745	17.27	0.247	0.745	17.27	0.247	0.745	17.27
		0400-0500	0.715	14.67	0.232	0.715	14.67	0.232	0.715	14.67
Road 13	13	0000-0100	0.955	28.67	0.339	0.955	28.67	0.339	0.955	28.67
		0100-0200	0.925	26.07	0.324	0.925	26.07	0.324	0.925	26.07
		0200-0300	0.895	23.47	0.309	0.895	23.47	0.309	0.895	23.47
		0300-0400	0.865	20.87	0.294	0.865	20.87	0.294	0.865	20.87
		0400-0500	0.835	18.27	0.279	0.835	18.27	0.279	0.835	18.27
Road 14	14	0000-0100	1.075	32.27	0.386	1.075	32.27	0.386	1.075	32.27
		0100-0200	1.045	29.67	0.371	1.045	29.67	0.371	1.045	29.67
		0200-0300	1.015	27.07	0.356	1.015	27.07	0.356	1.015	27.07
		0300-0400	0.985	24.47	0.341	0.985	24.47	0.341	0.985	24.47
		0400-0500	0.955	21.87	0.326	0.955	21.87	0.326	0.955	21.87
Road 15	15	0000-0100	1.195	35.87	0.413	1.195	35.87	0.413	1.195	35.87
		0100-0200	1.165	33.27	0.398	1.165	33.27	0.398	1.165	33.27
		0200-0300	1.135	30.67	0.383	1.135	30.67	0.383	1.135	30.67
		0300-0400	1.105	28.07	0.368	1.105	28.07	0.368	1.105	28.07
		0400-0500	1.075	25.47	0.353	1.075	25.47	0.353	1.075	25.47
Road 16	16	0000-0100	1.215	36.47	0.428	1.215	36.47	0.428	1.215	36.47
		0100-0200	1.185	33.87	0.413	1.185	33.87	0.413	1.185	33.87
		0200-0300	1.155	31.27	0.398	1.155	31.27	0.398	1.155	31.27
		0300-0400	1.125	28.67	0.383	1.125	28.67	0.383	1.125	28.67
		0400-0500	1.095	26.07	0.368	1.095	26.07	0.368	1.095	26.07
Road 17	17	0000-0100	1.335	40.07	0.445	1.335	40.07	0.445	1.335	40.07
		0100-0200	1.305	37.47	0.430	1.305	37.47	0.430	1.305	37.47
		0200-0300	1.275	34.87	0.415	1.275	34.87	0.415	1.275	34.87
		0300-0400	1.245	32.27	0.400	1.245	32.27	0.400	1.245	32.27
		0400-0500	1.215	29.67	0.385	1.215	29.67	0.385	1.215	29.67
Road 18	18	0000-0100	1.455	43.67	0.461	1.455	43.67	0.461	1.455	43.67
		0100-0200	1.425	41.07	0.446	1.425	41.07	0.446	1.425	41.07
		0200-0300	1.395	38.47	0.431	1.395	38.47	0.431	1.395	38.47
		0300-0400	1.365	35.87	0.416	1.365	35.87	0.416	1.365	35.87
		0400-0500	1.335	33.27	0.401	1.335	33.27	0.401	1.335	33.27
Road 19	19	0000-0100	1.575	47.27	0.477	1.575	47.27	0.477	1.575	47.27
		0100-0200	1.545	44.67	0.462	1.545	44.67	0.462	1.545	44.67
		0200-0300	1.515	42.07	0.447	1.515	42.07	0.447	1.515	42.07
		0300-0400	1.485	39.47	0.432	1.485	39.47	0.432	1.485	39.47
		0400-0500	1.455	36.87	0.417	1.455	36.87	0.417	1.455	36.87
Road 20	20	0000-0100	1.695	50.87	0.493	1.695	50.87	0.493	1.695	50.87
		0100-0200	1.665	48.27	0.478	1.665	48.27	0.478	1.665	48.27
		0200-0300	1.635	45.67	0.463	1.635	45.67	0.463	1.635	45.67
		0300-0400	1.605	43.07	0.448	1.605	43.07	0.448	1.605	43.07
		0400-0500	1.575	40.47	0.433	1.575	40.47	0.433	1.575	40.47
Road 21	21	0000-0100	1.815	54.47	0.509	1.815	54.47	0.509	1.815	54.47
		0100-0200	1.785	51.87	0.494	1.785	51.87	0.494	1.785	51.87
		0200-0300	1.755	49.27	0.479	1.755	49.27	0.479	1.755	49.27
		0300-0400	1.725	46.67	0.464	1.725	46.67	0.464	1.725	46.67
		0400-0500	1.695	44.07	0.449	1.695	44.07	0.449	1.695	44.07
Road 22	22	0000-0100	1.935	58.07	0.525	1.935	58.07	0.525	1.935	58.07
		0100-0200	1.905	55.47	0.510	1.905	55.47	0.510	1.905	55.47
		0200-0300	1.875	52.87	0.495	1.875	52.87	0.495	1.875	52.87
		0300-0400	1.845	50.27	0.480	1.845	50.27	0.480	1.845	50.27
		0400-0500	1.815	47.67	0.465	1.815	47.67	0.465	1.815	47.67
Road 23	23	0000-0100	2.055	61.67	0.541	2.055	61.67	0.541	2.055	61.67
		0100-0200	2.025	59.07	0.526	2.025	59.07	0.526	2.025	59.07
		0200-0300	1.995	56.47	0.511	1.995	56.47	0.511	1.995	56.47
		0300-0400	1.965	53.87	0.496	1.965	53.87	0.496	1.965	53.87
		0400-0500	1.935	51.27	0.481	1.935	51.27	0.481	1.935	51.27
Road 24	24	0000-0100	2.175	65.27	0.557	2.175	65.27	0.557	2.175	65.27
		0100-0200	2.145	62.67	0.542	2.145	62.67	0.542	2.145	62.67
		0200-0300	2.115	60.07	0.527	2.115	60.07	0.527	2.115	60.07
		0300-0400	2.085	57.47	0.512	2.085	57.47	0.512	2.085	57.47
		0400-0500	2.055	54.87	0.497	2.055	54.87	0.497	2.055	54.87
Road 25	25	0000-0100	2.295	68.87	0.573	2.295	68.87	0.573	2.295	68.87
		0100-0200	2.265	66.27	0.558	2.265	66.27	0.558	2.265	66.27
		0200-0300	2.235	63.67	0.543	2.235	63.67	0.543	2.235	63.67
		0300-0400	2.205	61.07	0.528	2.205	61.07	0.528	2.205	61.07
		0400-0500	2.175	58.47	0.513	2.175	58.47	0.513	2.175	58.47
Road 26	26	0000-0100	2.415	72.47	0.589	2.415	72.47	0.589	2.415	72.47
		0100-0200	2.385	69.87	0.574	2.385	69.87	0.574	2.385	69.87
		0200-0300	2.355	67.27	0.559	2.355	67.27	0.559	2.355	67.27
		0300-0400	2.325	64.67	0.544	2.325	64.67	0.544	2.325	64.67
		0400-0500	2.295	62.07	0.529	2.295	62.07	0.529	2.295	62.07
Road 27	27	0000-0100	2.535	76.07	0.605	2.535	76.07	0.605	2.535	76.07
		0100-0200	2.505	73.47	0.590	2.505	73.47	0.590	2.505	73.47
		0200-0300	2.475	70.87	0.575	2.475	70.87	0.575	2.475	70.87
		0300-0400	2.445	68.27	0.560	2.445	68.27	0.560	2.445	68.27
		0400-0500	2.415	65.67	0.545	2.415	65.67	0.545	2.415	65.67
Road 28	28	0000-0100	2.655	79.67	0.621	2.655	79.67	0.621	2.655	79.67
		0100-0200	2.625	77.07	0.606	2.625	77.07	0.606	2.625	77.07
		0200-0300	2.595	74.47	0.591	2.595	74.47	0.591	2.595	74.47
		0300-0400	2.565	71.87	0.576	2.565	71.87	0.576	2.565	71.87
		0400-0500	2.535	69.27	0.561	2.535	69.27	0.561	2.535	69.27
Road 29	29	0000-0100	2.775	83.27	0.637	2.775	83.27	0.637	2.775	83.27
		0100-0200	2.745	80.67	0.622	2.745	80.67	0.622	2.745	80.67
		0200-0300	2.715	78.07	0.607	2.715	78.07	0.607	2.715	78.07
		0300-0400	2.685	75.47	0.592	2.685	75.47	0.592	2.685	75.47
		0400-0500	2.655	72.87	0.577	2.655	72.87	0.577	2.655	72.87
Road 30	30	0000-0100	2.895	86.87	0.653	2.895	86.87	0.653	2.895	86.87
		0100-0200	2.865	84.27	0.638	2.865	84.27	0.638	2.865	84.27
		0200-0300	2.835	81.67	0.623	2.835	81.67	0.623	2.835	81.67
		0300-0400	2.805	79.07	0.608	2.805	79.07	0.608	2.805	79.07
		0400-0500	2.775	76.47	0.593	2.775	76.47	0.593	2.775	76.47
Road 31	31	0000-0100	3.015	90.47	0.669	3.015	90.47	0.669	3.015	90.47
		0100-0200	2.985	87.87	0.654	2.985	87.87	0.654	2.985	87.87
		0200-0300	2.955	85.27	0.639	2.955	85.27	0.639	2.955	85.27
		0300-0400	2.925	82.67	0.624	2.925	82.67	0.624	2.925	82.67
		0400-0500	2.895	80.07	0.609	2.895	80.07	0.609	2.895	80.07
Road 32	32	0000-0100	3.135	94.07	0.685	3.135	94.07	0.685	3.135	94.07
		0100-0200	3.105	91.47	0.670	3.105	91.47	0.670	3.105	91.47
		0200-0300	3.075	88.87	0.655	3.075	88.87	0.655	3.075	88.87
		0300-0400	3.045	86.27	0.640	3.045	86.27	0.640	3.045	86.27
		0400-0500	3.015	83.67	0.625	3.015	83.67	0.625	3.015	83.67
Road 33	33	0000-0100	3.255	97.67	0.701	3.255	97.67	0.701	3.255	97.67
		0100-0200	3.225	95.07	0.686	3.225	95.07	0.686	3.225	95.07
		0200-0300	3.195	92.47	0.671	3.195	92.47	0.671	3.195	92.47
		0300-0400	3.165	89.87	0.656	3.165	89.87	0.656	3.165	89.87
		0400-0500	3.135	87.27	0.641	3.135	87.27	0.641	3.135	87.27
Road 34	34	0000-0100	3.375	101.27	0.717	3.375	101.27	0.717	3.375	101.27
		0100-0200	3.345	98.67	0.702	3.345	98.67	0.702	3.345	98.67
		0200-0300	3.315	96.07	0.687	3.315	96.07	0.687	3.315	96.07
		0300-0400	3.285	93.47	0.672	3.285	93.47	0.672	3.285	93.47
		0400-0500	3.255							

(I:Secure|Environment_Brojects|60732736|1_01|Other|Air|Modellion|Appendix|Traffic|OpenRoads|Appendix 2 E 1 Emission Factor in 2028.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

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load\Appendix 3.5.1 Emission Factor in 2028.xlsx

Twin Y North Underway Query																
Open Read North End Emission Factors for AEMCO model (lb/hr)			Year 2008													
Road Name	Road ID	Hour	NO _x Emission					NO ₂ Emission					Speed			
			g/hour	g/min	tonne/hour	g/min	tonne/hour	g/hour	g/min	tonne/hour	g/hour	g/min		tonne/hour		
Road 17	17	1600-1700	2.842	0.242	0.071	2.415	0.202	7.286	0.713	2.358	4.598	0.514	1.525	0.04	4.598	0.514
Road 17	17	1700-1800	2.842	0.242	0.071	2.415	0.202	7.286	0.713	2.358	4.598	0.514	1.525	0.04	4.598	0.514
Road 17	17	1800-1900	2.842	0.242	0.071	2.415	0.202	7.286	0.713	2.358	4.598	0.514	1.525	0.04	4.598	0.514
Road 17	17	1900-2000	2.842	0.242	0.071	2.415	0.202	7.286	0.713	2.358	4.598	0.514	1.525	0.04	4.598	0.514
Road 17	17	2000-2100	3.664	0.312	0.091	3.214	0.269	7.465	0.736	2.516	5.535	0.716	2.016	0.06	5.535	0.716
Road 17	17	2100-2200	3.664	0.312	0.091	3.214	0.269	7.465	0.736	2.516	5.535	0.716	2.016	0.06	5.535	0.716
Road 17	17	2200-2300	3.376	0.282	0.083	2.983	0.247	6.803	0.646	2.347	5.078	0.572	1.728	0.05	5.078	0.572
Road 17	17	2300-0000	3.742	0.318	0.095	3.268	0.275	7.825	0.763	2.595	5.498	0.586	1.698	0.05	5.498	0.586
Road 18	18	0000-0100	2.482	0.207	0.063	2.082	0.173	6.345	0.593	2.000	3.932	0.446	1.286	0.03	3.932	0.446
Road 18	18	0100-0200	1.808	0.150	0.046	1.506	0.125	4.288	0.398	1.382	2.697	0.297	0.864	0.02	2.697	0.297
Road 18	18	0200-0300	1.428	0.120	0.037	1.188	0.098	3.584	0.318	1.091	2.166	0.239	0.718	0.02	2.166	0.239
Road 18	18	0300-0400	1.428	0.120	0.037	1.188	0.098	3.584	0.318	1.091	2.166	0.239	0.718	0.02	2.166	0.239
Road 18	18	0400-0500	1.832	0.153	0.047	1.545	0.127	4.844	0.456	1.597	3.205	0.359	2.880	0.03	2.880	0.359
Road 18	18	0500-0600	2.482	0.207	0.063	2.082	0.173	6.345	0.593	2.000	3.932	0.446	1.286	0.03	3.932	0.446
Road 18	18	0600-0700	1.832	0.153	0.047	1.545	0.127	4.844	0.456	1.597	3.205	0.359	2.880	0.03	2.880	0.359
Road 18	18	0700-0800	2.620	0.218	0.066	2.316	0.193	7.002	0.654	2.183	4.110	0.466	1.338	0.04	4.110	0.466
Road 18	18	0800-0900	3.072	0.256	0.077	2.768	0.230	8.066	0.756	2.522	4.844	0.546	1.606	0.05	4.844	0.546
Road 18	18	0900-1000	3.072	0.256	0.077	2.768	0.230	8.066	0.756	2.522	4.844	0.546	1.606	0.05	4.844	0.546
Road 18	18	1000-1100	3.072	0.256	0.077	2.768	0.230	8.066	0.756	2.522	4.844	0.546	1.606	0.05	4.844	0.546
Road 18	18	1100-1200	3.072	0.256	0.077	2.768	0.230	8.066	0.756	2.522	4.844	0.546	1.606	0.05	4.844	0.546
Road 18	18	1200-1300	4.050	0.337	0.102	3.645	0.307	9.321	0.875	3.835	3.675	0.446	1.338	0.04	3.675	0.446
Road 18	18	1300-1400	4.050	0.337	0.102	3.645	0.307	9.321	0.875	3.835	3.675	0.446	1.338	0.04	3.675	0.446
Road 18	18	1400-1500	4.050	0.337	0.102	3.645	0.307	9.321	0.875	3.835	3.675	0.446	1.338	0.04	3.675	0.446
Road 18	18	1500-1600	4.050	0.337	0.102	3.645	0.307	9.321	0.875	3.835	3.675	0.446	1.338	0.04	3.675	0.446
Road 18	18	1600-1700	4.050	0.337	0.102	3.645	0.307	9.321	0.875	3.835	3.675	0.446	1.338	0.04	3.675	0.446
Road 18	18	1700-1800	4.050	0.337	0.102	3.645	0.307	9.321	0.875	3.835	3.675	0.446	1.338	0.04	3.675	0.446
Road 18	18	1800-1900	4.050	0.337	0.102	3.645	0.307	9.321	0.875	3.835	3.675	0.446	1.338	0.04	3.675	0.446
Road 18	18	1900-2000	4.050	0.337	0.102	3.645	0.307	9.321	0.875	3.835	3.675	0.446	1.338	0.04	3.675	0.446
Road 18	18	2000-2100	2.862	0.240	0.072	2.086	0.169	6.366	0.595	2.006	3.938	0.448	1.289	0.03	3.938	0.448
Road 18	18	2100-2200	2.862	0.240	0.072	2.086	0.169	6.366	0.595	2.006	3.938	0.448	1.289	0.03	3.938	0.448
Road 18	18	2200-2300	2.862	0.240	0.072	2.086	0.169	6.366	0.595	2.006	3.938	0.448	1.289	0.03	3.938	0.448
Road 18	18	2300-0000	2.862	0.240	0.072	2.086	0.169	6.366	0.595	2.006	3.938	0.448	1.289	0.03	3.938	0.448
Road 19	19	0000-0100	1.812	0.151	0.045	1.490	0.122	4.245	0.394	1.374	2.686	0.295	0.858	0.02	2.686	0.295
Road 19	19	0100-0200	1.412	0.118	0.036	1.176	0.096	3.545	0.314	1.082	2.154	0.236	0.712	0.02	2.154	0.236
Road 19	19	0200-0300	1.412	0.118	0.036	1.176	0.096	3.545	0.314	1.082	2.154	0.236	0.712	0.02	2.154	0.236
Road 19	19	0300-0400	1.812	0.151	0.045	1.490	0.122	4.245	0.394	1.374	2.686	0.295	0.858	0.02	2.686	0.295
Road 19	19	0400-0500	2.412	0.201	0.060	2.070	0.170	6.245	0.584	2.000	3.930	0.444	1.284	0.03	3.930	0.444
Road 19	19	0500-0600	2.412	0.201	0.060	2.070	0.170	6.245	0.584	2.000	3.930	0.444	1.284	0.03	3.930	0.444
Road 19	19	0600-0700	3.728	0.313	0.093	3.268	0.275	7.825	0.763	2.595	5.498	0.586	1.698	0.05	5.498	0.586
Road 19	19	0700-0800	3.728	0.313	0.093	3.268	0.275	7.825	0.763	2.595	5.498	0.586	1.698	0.05	5.498	0.586
Road 19	19	0800-0900	3.728	0.313	0.093	3.268	0.275	7.825	0.763	2.595	5.498	0.586	1.698	0.05	5.498	0.586
Road 19	19	0900-1000	3.728	0.313	0.093	3.268	0.275	7.825	0.763	2.595	5.498	0.586	1.698	0.05	5.498	0.586
Road 19	19	1000-1100	3.728	0.313	0.093	3.268	0.275	7.825	0.763	2.595	5.498	0.586	1.698	0.05	5.498	0.586
Road 19	19	1100-1200	3.728	0.313	0.093	3.268	0.275	7.825	0.763	2.595	5.498	0.586	1.698	0.05	5.498	0.586
Road 19	19	1200-1300	4.712	0.393	0.117	4.260	0.353	9.521	0.895	3.835	3.675	0.446	1.338	0.04	3.675	0.446
Road 19	19	1300-1400	4.712	0.393	0.117	4.260	0.353	9.521	0.895	3.835	3.675	0.446	1.338	0.04	3.675	0.446
Road 19	19	1400-1500	4.712	0.393	0.117	4.260	0.353	9.521	0.895	3.835	3.675	0.446	1.338	0.04	3.675	0.446
Road 19	19	1500-1600	4.712	0.393	0.117	4.260	0.353	9.521	0.895	3.835	3.675	0.446	1.338	0.04	3.675	0.446
Road 19	19	1600-1700	4.712	0.393	0.117	4.260	0.353	9.521	0.895	3.835	3.675	0.446	1.338	0.04	3.675	0.446
Road 19	19	1700-1800	4.712	0.393	0.117	4.260	0.353	9.521	0.895	3.835	3.675	0.446	1.338	0.04	3.675	0.446
Road 19	19	1800-1900	4.712	0.393	0.117	4.260	0.353	9.521	0.895	3.835	3.675	0.446	1.338	0.04	3.675	0.446
Road 19	19	1900-2000	4.712	0.393	0.117	4.260	0.353	9.521	0.895	3.835	3.675	0.446	1.338	0.04	3.675	0.446
Road 19	19	2000-2100	4.712	0.393	0.117	4.260	0.353	9.521	0.895	3.835	3.675	0.446	1.338	0.04	3.675	0.446
Road 19	19	2100-2200	4.712	0.393	0.117	4.260	0.353	9.521	0.895	3.835	3.675	0.446	1.338	0.04	3.675	0.446
Road 19	19	2200-2300	4.712	0.393	0.117	4.260	0.353	9.521	0.895	3.835	3.675	0.446	1.338	0.04	3.675	0.446
Road 19	19	2300-0000	4.712	0.393	0.117	4.260	0.353	9.521	0.895	3.835	3.675	0.446	1.338	0.04	3.675	0.446
Road 20	20	0000-0100	1.812	0.151	0.045	1.490	0.122	4.245	0.394	1.374	2.686	0.295	0.858	0.02	2.686	0.295
Road 20	20	0100-0200	1.412	0.118	0.036	1.176	0.096	3.545	0.314	1.082	2.154	0.236	0.712	0.02	2.154	0.236
Road 20	20	0200-0300	1.412	0.118	0.036	1.176	0.096	3.545	0.314	1.082	2.154	0.236	0.712	0.02	2.154	0.236
Road 20	20	0300-0400	1.812	0.151	0.045	1.490	0.122	4.245	0.394	1.374	2.686	0.295	0.858	0.02	2.686	0.295
Road 20	20	0400-0500	2.412	0.201	0.060	2.070	0.170	6.245	0.584	2.000	3.930	0.444	1.284	0.03	3.930	0.444
Road 20	20	0500-0600	2.412	0.201	0.060	2.070	0.170	6.245	0.584	2.000	3.930	0.444	1.284	0.03	3.930	0.444
Road 20	20	0600-0700	3.728	0.313	0.093	3.268	0.275	7.825	0.763	2.595	5.498	0.586	1.698	0.05	5.498	0.586
Road 20	20	0700-0800	3.728	0.313	0.093	3.268	0.275	7.825	0.763	2.595	5.498	0.586	1.698	0.05	5.498	0.586
Road 20	20	0800-0900	3.728	0.313	0.093	3.268	0.275	7.825	0.763	2.595	5.498	0.586	1.698	0.05	5.498	0.586
Road 20	20	0900-1000	3.728	0.313	0.093	3.268	0.275	7.825	0.763	2.595	5.498	0.586	1.698	0.05	5.498	0.586
Road 20	20	1000-1100	3.728	0.313	0.093	3.268	0.275	7.825	0.763	2.595	5.498	0.586	1.698	0.05	5.498	0.586
Road 20	20	1100-1200	3.728	0.313	0.093	3.268	0.275	7.825	0.763	2.595	5.498	0.586	1.698	0.05	5.498	0.586
Road 20	20	1200-1300	4.712	0.393	0.117	4.260	0.353	9.521	0.895	3.835	3.675	0.446	1.338	0.04	3.675	0.446
Road 20	20	1300-1400	4.712	0.393	0.117	4.260	0.353	9.521	0.895	3.835	3.675	0.446	1.338	0.04	3.675	0.446
Road 20	20	1400-1500	4.712													

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Tsing Yi North Underground Quarry														
Open Road to Road Emission Factors for AASHTO model (g/m³)														
Year 2028			NO _x Emission						NO ₂ Emission					
Road Name	Road ID	Floor	Motorbikes/g/m³			Motorcycles/g/m³			Motorbikes/g/m³			Motorcycles/g/m³		
			g/m³/hour	g/m³/tonne	g/m³/tonne	g/m³/hour	g/m³/tonne	g/m³/tonne	g/m³/hour	g/m³/tonne	g/m³/tonne	g/m³/hour	g/m³/tonne	g/m³/tonne
Road #21	21	0000-0100	3.038E+02	1.838E+02	1.508E+02	2.278E+02	1.081E+02	2.368E+01	1.138E+02	1.488E+02	2.098E+01	8.868E+02	4.778E+02	1.338E+03
Road #21	21	0100-0200	3.358E+02	2.048E+02	1.588E+02	2.588E+02	1.248E+02	2.668E+01	1.238E+02	1.638E+02	2.238E+01	9.788E+02	5.138E+02	1.538E+03
Road #21	21	0200-0300	1.888E+02	1.448E+02	1.128E+02	1.333E+02	6.681E+01	1.448E+01	8.368E+01	1.108E+02	2.348E+01	8.108E+02	3.748E+02	1.232E+03
Road #21	21	0300-0400	2.468E+02	1.518E+02	1.218E+02	1.788E+02	8.888E+01	1.988E+01	1.088E+02	1.438E+02	2.548E+01	1.058E+03	4.958E+02	1.458E+03
Road #21	21	0400-0500	4.138E+02	8.338E+01	1.188E+02	1.758E+02	1.608E+02	1.008E+02	2.438E+01	1.732E+02	1.755E+02	1.548E+02	5.178E+02	1.678E+03
Road #21	21	0500-0600	4.728E+02	1.498E+02	1.378E+02	1.803E+02	1.748E+02	1.248E+02	2.838E+01	1.938E+02	1.388E+02	2.338E+02	8.881E+02	2.798E+03
Road #21	21	0600-0700	4.368E+02	1.348E+02	1.278E+02	1.788E+02	1.688E+02	1.248E+02	2.838E+01	1.938E+02	1.388E+02	2.338E+02	8.881E+02	2.798E+03
Road #21	21	0700-0800	4.768E+02	1.768E+02	1.648E+02	4.204E+02	1.858E+02	1.078E+02	4.738E+02	6.238E+02	2.738E+02	4.158E+02	1.678E+03	5.178E+03
Road #21	21	0800-0900	6.838E+02	2.998E+02	2.838E+02	3.998E+02	2.188E+02	1.108E+02	6.108E+02	1.108E+02	6.478E+02	1.108E+02	6.478E+02	1.108E+02
Road #21	21	0900-1000	5.748E+02	8.738E+01	1.158E+02	5.908E+02	1.631E+02	1.043E+02	3.108E+02	1.684E+02	2.548E+02	3.488E+02	4.488E+02	5.928E+02
Road #21	21	1000-1100	4.498E+02	8.688E+01	1.138E+02	5.633E+02	1.738E+02	9.988E+02	1.478E+02	1.494E+02	6.538E+02	1.888E+02	2.488E+02	3.608E+02
Road #21	21	1100-1200	1.248E+02	1.018E+02	7.838E+01	1.433E+02	1.118E+02	8.138E+01	4.438E+01	1.118E+02	8.138E+01	4.438E+01	1.118E+02	8.138E+01
Road #21	21	1200-1300	8.858E+02	7.788E+02	1.138E+02	7.723E+02	8.788E+02	8.608E+02	5.032E+02	4.438E+02	8.838E+02	4.388E+02	8.838E+02	5.078E+02
Road #21	21	1300-1400	8.998E+02	8.838E+02	7.723E+02	7.723E+02	8.788E+02	8.608E+02	5.032E+02	4.438E+02	8.838E+02	4.388E+02	8.838E+02	5.078E+02
Road #21	21	1400-1500	8.858E+02	8.838E+02	1.138E+02	7.788E+02	7.488E+02	8.608E+02	5.032E+02	4.438E+02	8.838E+02	4.388E+02	8.838E+02	5.078E+02
Road #21	21	1500-1600	8.448E+02	8.838E+02	1.138E+02	7.788E+02	7.488E+02	8.608E+02	5.032E+02	4.438E+02	8.838E+02	4.388E+02	8.838E+02	5.078E+02
Road #21	21	1600-1700	8.268E+02	8.372E+02	1.108E+02	7.835E+02	7.488E+02	9.768E+02	4.808E+02	4.838E+02	8.888E+02	4.258E+02	8.888E+02	5.668E+02
Road #21	21	1700-1800	6.698E+02	7.118E+02	8.428E+02	6.768E+02	6.338E+02	8.338E+02	4.278E+02	4.558E+02	8.608E+02	3.698E+02	8.608E+02	5.138E+02
Road #21	21	1800-1900	5.938E+02	6.448E+02	6.528E+02	6.178E+02	6.178E+02	8.338E+02	4.278E+02					
Road #21	21	1900-2000	5.248E+02	6.948E+02	7.028E+02	5.828E+02	5.828E+02	8.338E+02	4.278E+02					
Road #21	21	2000-2100	4.598E+02	7.448E+02	7.528E+02	5.178E+02	5.178E+02	8.338E+02	4.278E+02					
Road #21	21	2100-2200	4.098E+02	7.948E+02	8.028E+02	4.678E+02	4.678E+02	8.338E+02	4.278E+02					
Road #21	21	2200-2300	3.598E+02	8.448E+02	8.528E+02	4.178E+02	4.178E+02	8.338E+02	4.278E+02					
Road #21	21	2300-0000	3.098E+02	8.948E+02	9.028E+02	3.678E+02	3.678E+02	8.338E+02	4.278E+02					
Road #22	22	0000-0100	2.058E+02	1.468E+02	1.182E+02	1.725E+02	8.308E+02	9.308E+01	8.798E+02	1.075E+02	8.268E+01	7.817E+02	1.087E+02	1.178E+02
Road #22	22	0100-0200	2.298E+02	1.618E+02	1.302E+02	1.965E+02	9.308E+02	1.038E+02	9.798E+02	1.175E+02	9.268E+01	8.757E+02	1.178E+02	1.268E+02
Road #22	22	0200-0300	1.108E+02	1.078E+02	1.118E+02	1.098E+02	1.098E+02	1.098E+02	1.098E+02	1.098E+02	1.098E+02	1.098E+02	1.098E+02	1.098E+02
Road #22	22	0300-0400	1.268E+02	1.198E+02	1.238E+02	1.218E+02	1.218E+02	1.218E+02	1.218E+02	1.218E+02	1.218E+02	1.218E+02	1.218E+02	1.218E+02
Road #22	22	0400-0500	1.368E+02	1.298E+02	1.338E+02	1.318E+02	1.318E+02	1.318E+02	1.318E+02	1.318E+02	1.318E+02	1.318E+02	1.318E+02	1.318E+02
Road #22	22	0500-0600	1.468E+02	1.398E+02	1.438E+02	1.418E+02	1.418E+02	1.418E+02	1.418E+02	1.418E+02	1.418E+02	1.418E+02	1.418E+02	1.418E+02
Road #22	22	0600-0700	1.568E+02	1.498E+02	1.538E+02	1.518E+02	1.518E+02	1.518E+02	1.518E+02	1.518E+02	1.518E+02	1.518E+02	1.518E+02	1.518E+02
Road #22	22	0700-0800	1.668E+02	1.598E+02	1.638E+02	1.618E+02	1.618E+02	1.618E+02	1.618E+02	1.618E+02	1.618E+02	1.618E+02	1.618E+02	1.618E+02
Road #22	22	0800-0900	1.768E+02	1.698E+02	1.738E+02	1.718E+02	1.718E+02	1.718E+02	1.718E+02	1.718E+02	1.718E+02	1.718E+02	1.718E+02	1.718E+02
Road #22	22	0900-1000	1.868E+02	1.798E+02	1.838E+02	1.818E+02	1.818E+02	1.818E+02	1.818E+02	1.818E+02	1.818E+02	1.818E+02	1.818E+02	1.818E+02
Road #22	22	1000-1100	1.968E+02	1.898E+02	1.938E+02	1.918E+02	1.918E+02	1.918E+02	1.918E+02	1.918E+02	1.918E+02	1.918E+02	1.918E+02	1.918E+02
Road #22	22	1100-1200	1.958E+02	1.888E+02	1.928E+02	1.908E+02	1.908E+02	1.908E+02	1.908E+02	1.908E+02	1.908E+02	1.908E+02	1.908E+02	1.908E+02
Road #22	22	1200-1300	1.948E+02	1.878E+02	1.918E+02	1.898E+02	1.898E+02	1.898E+02	1.898E+02	1.898E+02	1.898E+02	1.898E+02	1.898E+02	1.898E+02
Road #22	22	1300-1400	1.938E+02	1.868E+02	1.908E+02	1.888E+02	1.888E+02	1.888E+02	1.888E+02	1.888E+02	1.888E+02	1.888E+02	1.888E+02	1.888E+02
Road #22	22	1400-1500	1.928E+02	1.858E+02	1.898E+02	1.878E+02	1.878E+02	1.878E+02	1.878E+02	1.878E+02	1.878E+02	1.878E+02	1.878E+02	1.878E+02
Road #22	22	1500-1600	1.918E+02	1.848E+02	1.888E+02	1.868E+02	1.868E+02	1.868E+02	1.868E+02	1.868E+02	1.868E+02	1.868E+02	1.868E+02	1.868E+02
Road #22	22	1600-1700	1.908E+02	1.838E+02	1.878E+02	1.858E+02	1.858E+02	1.858E+02	1.858E+02	1.858E+02	1.858E+02	1.858E+02	1.858E+02	1.858E+02
Road #22	22	1700-1800	1.898E+02	1.828E+02	1.868E+02	1.848E+02	1.848E+02	1.848E+02	1.848E+02	1.848E+02	1.848E+02	1.848E+02	1.848E+02	1.848E+02
Road #22	22	1800-1900	1.888E+02	1.818E+02	1.858E+02	1.838E+02	1.838E+02	1.838E+02	1.838E+02	1.838E+02	1.838E+02	1.838E+02	1.838E+02	1.838E+02
Road #22	22	1900-2000	1.878E+02	1.808E+02	1.848E+02	1.828E+02	1.828E+02	1.828E+02	1.828E+02	1.828E+02	1.828E+02	1.828E+02	1.828E+02	1.828E+02
Road #22	22	2000-2100	1.868E+02	1.798E+02	1.838E+02	1.818E+02	1.818E+02	1.818E+02	1.818E+02	1.818E+02	1.818E+02	1.818E+02	1.818E+02	1.818E+02
Road #22	22	2100-2200	1.858E+02	1.788E+02	1.828E+02	1.808E+02	1.808E+02	1.808E+02	1.808E+02	1.808E+02	1.808E+02	1.808E+02	1.808E+02	1.808E+02
Road #22	22	2200-2300	1.848E+02	1.778E+02	1.818E+02	1.798E+02	1.798E+02	1.798E+02	1.798E+02	1.798E+02	1.798E+02	1.798E+02	1.798E+02	1.798E+02
Road #22	22	2300-0000	1.838E+02	1.768E+02	1.808E+02	1.788E+02	1.788E+02	1.788E+02	1.788E+02	1.788E+02	1.788E+02	1.788E+02	1.788E+02	1.788E+02
Road #22	22	0000-0100	1.828E+02	1.758E+02	1.798E+02	1.778E+02	1.778E+02	1.778E+02	1.778E+02	1.778E+02	1.778E+02	1.778E+02	1.778E+02	1.778E+02
Road #22	22	0100-0200	1.818E+02	1.748E+02	1.788E+02	1.768E+02	1.766E+02	1.766E+02	1.766E+02	1.766E+02	1.766E+02	1.766E+02	1.766E+02	1.766E+02
Road #22	22	0200-0300	1.808E+02	1.738E+02	1.778E+02	1.758E+02	1.758E+02	1.758E+02	1.758E+02	1.758E+02	1.758E+02	1.758E+02	1.758E+02	1.758E+02
Road #22	22	0300-0400	1.798E+02	1.728E+02	1.768E+02	1.748E+02	1.748E+02	1.748E+02	1.748E+02	1.748E+02	1.748E+02	1.748E+02	1.748E+02	1.748E+02
Road #22	22	0400-0500	1.788E+02	1.718E+02	1.758E+02	1.738E+02	1.738E+02	1.738E+02	1.738E+02	1.738E+02	1.738E+02	1.738E+02	1.738E+02	1.738E+02
Road #22	22	0500-0600	1.778E+02	1.708E+02	1.748E+02	1.728E+02	1.728E+02	1.728E+02	1.728E+02	1.728E+02	1.728E+02	1.728E+02	1.728E+02	1.728E+02
Road #22	22	0600-0700	1.768E+02	1.698E+02	1.738E+02	1.718E+02	1.718E+02	1.718E+02	1.718E+02	1.718E+02	1.718E+02	1.718E+02	1.718E+02	1.718E+02
Road #22	22	0700-0800	1.758E+02	1.688E+02	1.728E+02	1.708E+02	1.708E+02	1.708E+02	1.708E+02	1.708E+02	1.708E+02	1.708E+02	1.708E+02	1.708E+02
Road #22	22	0800-0900	1.748E+02	1.678E+02	1.718E+02	1.698E+02	1.698E+02	1.698E+02	1.698E+02	1.698E+02	1.698E+02	1.698E+02	1.698E+02	1.698E+02
Road #22	22	0900-1000	1.738E+02	1.668E+02	1.708E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02
Road #22	22	1000-1100	1.728E+02	1.658E+02	1.698E+02	1.678E+02	1.678E+02	1.678E+02	1.678E+02	1.678E+02	1.678E+02	1.678E+02	1.678E+02	1.678E+02
Road #22	22	1100-1200	1.718E+02	1.648E+02	1.688E+02	1.668E+02	1.668E+02	1.668E+02	1.668E+02	1.668E+02	1.668E+02	1.668E+02	1.668E+02	1.668E+02
Road #22	22	1200-1300	1.708E+02	1.638E+02	1.678E+02	1.658E+02	1.658E+02	1.658E+02	1.658E+02	1.658E+02	1.658E+02	1.658E+02	1.658E+02	1.658E+02
Road #22	22	1300-1400	1.											

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Open Sky 24 Hour Underground Query																	
TSP N24 24 Hour Emission Factors for ARXND model (kg/d)																	
Road Name	Road ID	Flow	NO _x Emission					PM ₁₀ Emission					NO ₂ Emission				
			g/h/vkm	g/m ² /h	tonnes/h	g/h/vkm	g/m ² /h	tonnes/h	g/h/vkm	g/m ² /h	tonnes/h	g/h/vkm	g/m ² /h	tonnes/h			
Road 24	0800-0900	1.075	2.088	5.212	0.81	1.051	1.051	4.637	0.122	0.1	9.487	4.528	0.1	8.788			
Road 24	0900-1000	1.347	2.614	6.686	1.011	1.295	1.295	5.409	0.145	0.1	11.887	5.564	0.1	10.788			
Road 24	1000-1100	1.476	2.118	0.081	0.001	1.159	1.159	4.998	0.012	0.001	2.712	0.117	0.001	0.988			
Road 24	1100-1200	1.465	2.118	0.081	0.001	1.159	1.159	4.998	0.012	0.001	2.712	0.117	0.001	0.988			
Road 24	1200-1300	1.448	2.108	0.081	0.001	1.149	1.149	5.011	0.044	0.001	2.655	0.107	0.001	0.918			
Road 24	1300-1400	1.471	2.471	0.081	0.001	1.202	1.215	5.398	0.041	0.001	3.175	0.127	0.001	1.024			
Road 24	1400-1500	1.465	2.118	0.081	0.001	1.159	1.159	4.998	0.012	0.001	2.712	0.117	0.001	0.988			
Road 24	1500-1600	1.375	2.471	0.081	0.001	1.199	1.215	5.398	0.050	0.001	2.947	0.127	0.001	1.038			
Road 24	1600-1700	1.364	2.471	0.081	0.001	1.199	1.215	5.398	0.050	0.001	2.947	0.127	0.001	1.038			
Road 24	1700-1800	1.081	2.018	0.081	0.001	0.878	1.744	4.918	0.052	0.001	2.861	0.131	0.001	0.841			
Road 24	1800-1900	1.081	2.018	0.081	0.001	0.878	1.744	4.918	0.052	0.001	2.861	0.131	0.001	0.841			
Road 24	1900-2000	1.081	2.018	0.081	0.001	0.878	1.744	4.918	0.052	0.001	2.861	0.131	0.001	0.841			
Road 24	2000-2100	1.111	2.018	0.081	0.001	0.878	1.744	4.918	0.052	0.001	2.861	0.131	0.001	0.841			
Road 24	2100-2200	1.031	2.018	0.081	0.001	0.878	1.744	4.918	0.052	0.001	2.861	0.131	0.001	0.841			
Road 24	2200-2300	1.031	2.018	0.081	0.001	0.878	1.744	4.918	0.052	0.001	2.861	0.131	0.001	0.841			
Road 24	2300-2400	1.031	2.018	0.081	0.001	0.878	1.744	4.918	0.052	0.001	2.861	0.131	0.001	0.841			
Road 25	0600-0700	1.826	2.018	7.041	0.681	1.241	2.466	6.091	0.308	0.001	2.426	7.177	0.317	1.121			
Road 25	0700-0800	1.826	1.979	5.021	0.681	1.241	2.466	4.491	0.311	0.001	2.991	6.027	0.301	1.031			
Road 25	0800-0900	1.826	1.979	5.021	0.681	1.241	2.466	4.491	0.311	0.001	2.991	6.027	0.301	1.031			
Road 25	0900-1000	1.951	1.318	0.398	0.398	1.765	1.211	0.398	0.852	0.015	0.001	1.331	0.871	0.001			
Road 25	1000-1100	1.951	1.318	0.398	0.398	1.765	1.211	0.398	0.852	0.015	0.001	1.331	0.871	0.001			
Road 25	1100-1200	1.951	1.318	0.398	0.398	1.765	1.211	0.398	0.852	0.015	0.001	1.331	0.871	0.001			
Road 25	1200-1300	2.061	2.965	0.501	0.501	1.846	2.445	0.547	0.911	0.311	1.331	0.717	0.801	1.197			
Road 25	1300-1400	2.061	2.965	0.501	0.501	1.846	2.445	0.547	0.911	0.311	1.331	0.717	0.801	1.197			
Road 25	1400-1500	2.061	2.965	0.501	0.501	1.846	2.445	0.547	0.911	0.311	1.331	0.717	0.801	1.197			
Road 25	1500-1600	2.176	1.318	0.421	0.421	1.931	1.318	0.421	0.911	0.311	1.331	0.717	0.801	1.197			
Road 25	1600-1700	2.176	1.318	0.421	0.421	1.931	1.318	0.421	0.911	0.311	1.331	0.717	0.801	1.197			
Road 25	1700-1800	2.271	1.811	0.621	0.621	2.061	1.561	0.621	1.051	0.391	1.431	0.951	1.211	1.431			
Road 25	1800-1900	2.271	1.811	0.621	0.621	2.061	1.561	0.621	1.051	0.391	1.431	0.951	1.211	1.431			
Road 25	1900-2000	2.176	1.318	0.421	0.421	1.931	1.318	0.421	0.911	0.311	1.331	0.717	0.801	1.197			
Road 25	2000-2100	2.176	1.318	0.421	0.421	1.931	1.318	0.421	0.911	0.311	1.331	0.717	0.801	1.197			
Road 25	2100-2200	2.176	1.318	0.421	0.421	1.931	1.318	0.421	0.911	0.311	1.331	0.717	0.801	1.197			
Road 25	2200-2300	2.176	1.318	0.421	0.421	1.931	1.318	0.421	0.911	0.311	1.331	0.717	0.801	1.197			
Road 25	2300-2400	2.176	1.318	0.421	0.421	1.931	1.318	0.421	0.911	0.311	1.331	0.717	0.801	1.197			
Road 26	0600-0700	2.881	5.501	2.211	2.211	2.571	1.741	1.861	1.291	1.291	2.621	1.811	1.411	2.211			
Road 26	0700-0800	2.881	5.501	2.211	2.211	2.571	1.741	1.861	1.291	1.291	2.621	1.811	1.411	2.211			
Road 26	0800-0900	2.881	5.501	2.211	2.211	2.571	1.741	1.861	1.291	1.291	2.621	1.811	1.411	2.211			
Road 26	0900-1000	2.881	5.501	2.211	2.211	2.571	1.741	1.861	1.291	1.291	2.621	1.811	1.411	2.211			
Road 26	1000-1100	2.881	5.501	2.211	2.211	2.571	1.741	1.861	1.291	1.291	2.621	1.811	1.411	2.211			
Road 26	1100-1200	2.881	5.501	2.211	2.211	2.571	1.741	1.861	1.291	1.291	2.621	1.811	1.411	2.211			
Road 26	1200-1300	2.881	5.501	2.211	2.211	2.571	1.741	1.861	1.291	1.291	2.621	1.811	1.411	2.211			
Road 26	1300-1400	2.881	5.501	2.211	2.211	2.571	1.741	1.861	1.291	1.291	2.621	1.811	1.411	2.211			
Road 26	1400-1500	2.881	5.501	2.211	2.211	2.571	1.741	1.861	1.291	1.291	2.621	1.811	1.411	2.211			
Road 26	1500-1600	2.881	5.501	2.211	2.211	2.571	1.741	1.861	1.291	1.291	2.621	1.811	1.411	2.211			
Road 26	1600-1700	2.881	5.501	2.211	2.211	2.571	1.741	1.861	1.291	1.291	2.621	1.811	1.411	2.211			
Road 26	1700-1800	2.881	5.501	2.211	2.211	2.571	1.741	1.861	1.291	1.291	2.621	1.811	1.411	2.211			
Road 26	1800-1900	2.881	5.501	2.211	2.211	2.571	1.741	1.861	1.291	1.291	2.621	1.811	1.411	2.211			
Road 26	1900-2000	2.881	5.501	2.211	2.211	2.571	1.741	1.861	1.291	1.291	2.621	1.811	1.411	2.211			
Road 26	2000-2100	2.881	5.501	2.211	2.211	2.571	1.741	1.861	1.291	1.291	2.621	1.811	1.411	2.211			
Road 26	2100-2200	2.881	5.501	2.211	2.211	2.571	1.741	1.861	1.291	1.291	2.621	1.811	1.411	2.211			
Road 26	2200-2300	2.881	5.501	2.211	2.211	2.571	1.741	1.861	1.291	1.291	2.621	1.811	1.411	2.211			
Road 26	2300-2400	2.881	5.501	2.211	2.211	2.571	1.741	1.861	1.291	1.291	2.621	1.811	1.411	2.211			
Road 27	0600-0700	2.881	5.501	2.211	2.211	2.571	1.741	1.861	1.291	1.291	2.621	1.811	1.411	2.211			
Road 27	0700-0800	2.881	5.501	2.211	2.211	2.571	1.741	1.861	1.291	1.291	2.621	1.811	1.411	2.211			
Road 27	0800-0900	2.881	5.501	2.211	2.211	2.571	1.741	1.861	1.291	1.291	2.621	1.811	1.411	2.211			
Road 27	0900-1000	2.881	5.501	2.211	2.211	2.571	1.741	1.861	1.291	1.291	2.621	1.811	1.411	2.211			
Road 27	1000-1100	2.881	5.501	2.211	2.211	2.571	1.741	1.861	1.291	1.291	2.621	1.811	1.411	2.211			
Road 27	1100-1200	2.881	5.501	2.211	2.211	2.571	1.741	1.861	1.291	1.291	2.621	1.811	1.411	2.211			
Road 27	1200-1300	2.881	5.501	2.211	2.211	2.571	1.741	1.861	1.291	1.291	2.621	1.811	1.411	2.211			
Road 27	1300-1400	2.881	5.501	2.211	2.211	2.571	1.741	1.861	1.291	1.291	2.621	1.811	1.411	2.211			
Road 27	1400-1500	2.881	5.501	2.211	2.211	2.571	1.741	1.861	1.291	1.291	2.621	1.811	1.411	2.211			
Road 27	1500-1600	2.881	5.501	2.211	2.211	2.571	1.741	1.861	1.291	1.291	2.621	1.811	1.411	2.211			
Road 27	1600-1700	2.881	5.501	2.211	2.211	2.571	1.741	1.861	1.291	1.291	2.621	1.811	1.411	2.211			
Road 27	1700-1800	2.881	5.501	2.211	2.211	2.571	1.741	1.861	1.291	1.291	2.621	1.811	1.411	2.211			
Road 27	1800-1900	2.881	5.501	2.211	2.211	2.571	1.741	1.861	1.291	1.291	2.621	1.811	1.411	2.211			
Road 27	1900-2000	2.881	5.501	2.211	2.211	2.571	1.741	1.861	1.291	1.291	2.621	1.811	1.411	2.211			
Road 27	2000-2100	2.881	5.501	2.211	2.211	2.571	1.741	1.861	1.291	1.291	2.621	1.811	1.411	2.211			
Road 27	2100-2200	2.881	5.501	2.211	2.211	2.571	1.741	1.861	1.291	1.291	2.621	1.811	1.411	2.211			
Road 27	2200-2300	2.881	5.501	2.211	2.211	2.571	1.741	1.861	1.291	1.291	2.621	1.811	1.411	2.211			
Road 27	2300-2400	2.881	5.501	2.211	2.211	2.571	1.741	1.861	1.291	1.291	2.621	1.811	1.411	2.211			

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open North End Low Emission Factors
for AEMOD model inputs

Year 2028

Road Name	Road ID	Hour	NO _x Emission						PM Emission		
			Winter			Summer			Winter		
			g/hour	g/veh	g/veh-mile	g/hour	g/veh	g/veh-mile	g/hour	g/veh	g/veh-mile
Road #27	27	1800	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	1830	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	1900	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	1930	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	2000	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	2030	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	2100	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	2130	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	2200	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	2230	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	2300	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	2330	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	2400	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	2430	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	2500	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	2530	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	2600	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	2630	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	2700	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	2730	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	2800	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	2830	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	2900	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	2930	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	3000	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	3030	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	3100	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	3130	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	3200	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	3230	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	3300	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	3330	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	3400	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	3430	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	3500	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	3530	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	3600	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	3630	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	3700	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	3730	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	3800	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	3830	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	3900	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	3930	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	4000	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	4030	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	4100	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	4130	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	4200	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	4230	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	4300	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	4330	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	4400	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	4430	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	4500	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	4530	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	4600	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	4630	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	4700	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	4730	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	4800	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	4830	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	4900	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	4930	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	5000	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	5030	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	5100	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	5130	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	5200	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	5230	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	5300	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	5330	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	5400	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	5430	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	5500	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	5530	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	5600	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	5630	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	5700	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	5730	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	5800	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	5830	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	5900	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	5930	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	6000	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	6030	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	6100	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	6130	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	6200	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	6230	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	6300	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	6330	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	6400	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	6430	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	6500	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	6530	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	6600	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	6630	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	6700	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	6730	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	6800	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	6830	1.046	7.817	2.424	0.610	4.675	2.155	3.595	3.498	0.868
Road #27	27	6900									

load\Appendix 3.5.1 Emission Factor in 2028.xlsx

Twin Y North Underground Quarry																
Open Road and Non Emission Factors for APMCO model (km/h)			Year 2028													
Road Name	Road ID	Hour	NO _x Emission					CO Emission					Speed			
			g/h/vkm	g/min/vkm	tonne/hour	g/h/vkm	tonne/hour	g/h/vkm	g/min/vkm	tonne/hour	g/h/vkm	g/min/vkm		tonne/hour		
Road #1	13	0000-0100	4.7122	7.62	0.77	157.56	4.1852	1.568	0.77	15.89	3.4312	1.7726	1.148	0.1005	1.1295	1.66
Road #1	13	0100-0200	5.0158	8.15	0.82	166.58	4.3218	1.665	0.82	16.65	3.6702	1.8852	1.226	0.1065	1.1295	1.66
Road #1	13	0200-0300	4.7122	7.62	0.77	157.56	4.1852	1.568	0.77	15.89	3.4312	1.7726	1.148	0.1005	1.1295	1.66
Road #1	13	0300-0400	4.7122	7.62	0.77	157.56	4.1852	1.568	0.77	15.89	3.4312	1.7726	1.148	0.1005	1.1295	1.66
Road #1	13	0400-0500	6.642	11.01	1.15	231.04	5.005	1.947	1.15	23.1	4.2212	2.1327	1.553	0.1606	1.553	1.66
Road #1	13	0500-0600	2.3202	3.82	0.42	84.82	1.5832	0.612	0.42	8.48	1.9422	0.962	0.54	0.054	0.54	1.66
Road #1	13	0600-0700	5.9682	9.58	1.01	203.6	4.2218	1.665	1.01	20.36	3.6702	1.8852	1.226	0.1065	1.1295	1.66
Road #1	13	0700-0800	6.642	11.01	1.15	231.04	5.005	1.947	1.15	23.1	4.2212	2.1327	1.553	0.1606	1.553	1.66
Road #1	13	0800-0900	4.6422	7.45	0.75	152.56	4.0852	1.548	0.75	15.48	3.3712	1.7226	1.128	0.0995	1.1295	1.66
Road #1	13	0900-1000	7.6122	12.11	1.26	252.06	6.0552	2.372	1.26	25.2	4.7862	2.4137	1.805	0.1815	1.805	1.66
Road #1	13	1000-1100	8.4722	13.61	1.41	281.06	6.7452	2.617	1.41	28.1	5.1362	2.6587	1.945	0.2015	1.945	1.66
Road #1	13	1100-1200	8.4722	13.61	1.41	281.06	6.7452	2.617	1.41	28.1	5.1362	2.6587	1.945	0.2015	1.945	1.66
Road #1	13	1200-1300	6.642	11.01	1.15	231.04	5.005	1.947	1.15	23.1	4.2212	2.1327	1.553	0.1606	1.553	1.66
Road #1	13	1300-1400	6.642	11.01	1.15	231.04	5.005	1.947	1.15	23.1	4.2212	2.1327	1.553	0.1606	1.553	1.66
Road #1	13	1400-1500	6.642	11.01	1.15	231.04	5.005	1.947	1.15	23.1	4.2212	2.1327	1.553	0.1606	1.553	1.66
Road #1	13	1500-1600	6.642	11.01	1.15	231.04	5.005	1.947	1.15	23.1	4.2212	2.1327	1.553	0.1606	1.553	1.66
Road #1	13	1600-1700	8.3122	13.46	1.37	273.06	7.3142	2.672	1.37	27.3	5.0812	2.5112	1.875	0.1975	1.875	1.66
Road #1	13	1700-1800	8.3122	13.46	1.37	273.06	7.3142	2.672	1.37	27.3	5.0812	2.5112	1.875	0.1975	1.875	1.66
Road #1	13	1800-1900	4.9122	7.97	0.83	163.06	4.3512	1.681	0.83	16.3	3.6212	1.8212	1.201	0.101	1.201	1.66
Road #1	13	1900-2000	4.9122	7.97	0.83	163.06	4.3512	1.681	0.83	16.3	3.6212	1.8212	1.201	0.101	1.201	1.66
Road #1	13	2000-2100	4.6122	7.57	0.79	155.06	4.0512	1.571	0.79	15.5	3.4212	1.7412	1.135	0.0985	1.135	1.66
Road #1	13	2100-2200	4.6122	7.57	0.79	155.06	4.0512	1.571	0.79	15.5	3.4212	1.7412	1.135	0.0985	1.135	1.66
Road #1	13	2200-2300	4.6122	7.57	0.79	155.06	4.0512	1.571	0.79	15.5	3.4212	1.7412	1.135	0.0985	1.135	1.66
Road #2	12	0000-0100	3.1162	3.37	0.35	73.92	2.7962	1.038	0.35	7.39	2.6802	1.074	0.503	0.256	0.260	2.00
Road #2	12	0100-0200	3.1162	3.37	0.35	73.92	2.7962	1.038	0.35	7.39	2.6802	1.074	0.503	0.256	0.260	2.00
Road #2	12	0200-0300	3.1162	3.37	0.35	73.92	2.7962	1.038	0.35	7.39	2.6802	1.074	0.503	0.256	0.260	2.00
Road #2	12	0300-0400	3.1162	3.37	0.35	73.92	2.7962	1.038	0.35	7.39	2.6802	1.074	0.503	0.256	0.260	2.00
Road #2	12	0400-0500	4.5602	5.26	0.54	116.76	4.0052	1.462	0.54	11.68	3.5102	1.516	0.716	0.358	0.362	2.00
Road #2	12	0500-0600	4.5602	5.26	0.54	116.76	4.0052	1.462	0.54	11.68	3.5102	1.516	0.716	0.358	0.362	2.00
Road #2	12	0600-0700	4.5602	5.26	0.54	116.76	4.0052	1.462	0.54	11.68	3.5102	1.516	0.716	0.358	0.362	2.00
Road #2	12	0700-0800	4.5602	5.26	0.54	116.76	4.0052	1.462	0.54	11.68	3.5102	1.516	0.716	0.358	0.362	2.00
Road #2	12	0800-0900	4.5602	5.26	0.54	116.76	4.0052	1.462	0.54	11.68	3.5102	1.516	0.716	0.358	0.362	2.00
Road #2	12	0900-1000	4.5602	5.26	0.54	116.76	4.0052	1.462	0.54	11.68	3.5102	1.516	0.716	0.358	0.362	2.00
Road #2	12	1000-1100	4.5602	5.26	0.54	116.76	4.0052	1.462	0.54	11.68	3.5102	1.516	0.716	0.358	0.362	2.00
Road #2	12	1100-1200	4.5602	5.26	0.54	116.76	4.0052	1.462	0.54	11.68	3.5102	1.516	0.716	0.358	0.362	2.00
Road #2	12	1200-1300	4.5602	5.26	0.54	116.76	4.0052	1.462	0.54	11.68	3.5102	1.516	0.716	0.358	0.362	2.00
Road #2	12	1300-1400	4.5602	5.26	0.54	116.76	4.0052	1.462	0.54	11.68	3.5102	1.516	0.716	0.358	0.362	2.00
Road #2	12	1400-1500	4.5602	5.26	0.54	116.76	4.0052	1.462	0.54	11.68	3.5102	1.516	0.716	0.358	0.362	2.00
Road #2	12	1500-1600	4.5602	5.26	0.54	116.76	4.0052	1.462	0.54	11.68	3.5102	1.516	0.716	0.358	0.362	2.00
Road #2	12	1600-1700	4.5602	5.26	0.54	116.76	4.0052	1.462	0.54	11.68	3.5102	1.516	0.716	0.358	0.362	2.00
Road #2	12	1700-1800	4.5602	5.26	0.54	116.76	4.0052	1.462	0.54	11.68	3.5102	1.516	0.716	0.358	0.362	2.00
Road #2	12	1800-1900	4.5602	5.26	0.54	116.76	4.0052	1.462	0.54	11.68	3.5102	1.516	0.716	0.358	0.362	2.00
Road #2	12	1900-2000	4.5602	5.26	0.54	116.76	4.0052	1.462	0.54	11.68	3.5102	1.516	0.716	0.358	0.362	2.00
Road #2	12	2000-2100	4.5602	5.26	0.54	116.76	4.0052	1.462	0.54	11.68	3.5102	1.516	0.716	0.358	0.362	2.00
Road #2	12	2100-2200	4.5602	5.26	0.54	116.76	4.0052	1.462	0.54	11.68	3.5102	1.516	0.716	0.358	0.362	2.00
Road #2	12	2200-2300	4.5602	5.26	0.54	116.76	4.0052	1.462	0.54	11.68	3.5102	1.516	0.716	0.358	0.362	2.00
Road #3	11	0000-0100	3.862	4.68	0.49	106.06	3.3462	1.256	0.49	10.6	3.1862	1.586	0.776	0.386	0.390	2.00
Road #3	11	0100-0200	3.862	4.68	0.49	106.06	3.3462	1.256	0.49	10.6	3.1862	1.586	0.776	0.386	0.390	2.00
Road #3	11	0200-0300	3.862	4.68	0.49	106.06	3.3462	1.256	0.49	10.6	3.1862	1.586	0.776	0.386	0.390	2.00
Road #3	11	0300-0400	3.862	4.68	0.49	106.06	3.3462	1.256	0.49	10.6	3.1862	1.586	0.776	0.386	0.390	2.00
Road #3	11	0400-0500	3.862	4.68	0.49	106.06	3.3462	1.256	0.49	10.6	3.1862	1.586	0.776	0.386	0.390	2.00
Road #3	11	0500-0600	3.862	4.68	0.49	106.06	3.3462	1.256	0.49	10.6	3.1862	1.586	0.776	0.386	0.390	2.00
Road #3	11	0600-0700	3.862	4.68	0.49	106.06	3.3462	1.256	0.49	10.6	3.1862	1.586	0.776	0.386	0.390	2.00
Road #3	11	0700-0800	3.862	4.68	0.49	106.06	3.3462	1.256	0.49	10.6	3.1862	1.586	0.776	0.386	0.390	2.00
Road #3	11	0800-0900	3.862	4.68	0.49	106.06	3.3462	1.256	0.49	10.6	3.1862	1.586	0.776	0.386	0.390	2.00
Road #3	11	0900-1000	3.862	4.68	0.49	106.06	3.3462	1.256	0.49	10.6	3.1862	1.586	0.776	0.386	0.390	2.00
Road #3	11	1000-1100	3.862	4.68	0.49	106.06	3.3462	1.256	0.49	10.6	3.1862	1.586	0.776	0.386	0.390	2.00
Road #3	11	1100-1200	3.862	4.68	0.49	106.06	3.3462	1.256	0.49	10.6	3.1862	1.586	0.776	0.386	0.390	2.00
Road #3	11	1200-1300	3.862	4.68	0.49	106.06	3.3462	1.256	0.49	10.6	3.1862	1.586	0.776	0.386	0.390	2.00
Road #3	11	1300-1400	3.862	4.68	0.49	106.06	3.3462	1.256	0.49	10.6	3.1862	1.586	0.776	0.386	0.390	2.00
Road #3	11	1400-1500	3.862	4.68	0.49	106.06	3.3462	1.256	0.49	10.6	3.1862	1.586	0.776	0.386	0.390	2.00
Road #3	11	1500-1600	3.862	4.68	0.49	106.06	3.3462	1.256	0.49	10.6	3.1862	1.586	0.776	0.386	0.390	2.00
Road #3	11	1600-1700	3.862	4.68	0.49	106.06	3.3462	1.256	0.49	10.6	3.1862	1.586	0.776	0.386	0.390	2.00
Road #3	11	1700-1800	3.862	4.68	0.49	106.06	3.3462	1.256	0.49	10.6	3.1862	1.586	0.776	0.386	0.390	2.00
Road #3	11	1800-1900	3.862	4.68	0.49	106.06	3.3462	1.256	0.49	10.6	3.1862	1.586	0.776	0.386	0.390	2.00
Road #3	11	1900-2000	3.862	4.68	0.49	106.06	3.3462	1.256	0.49	10.6	3.1862	1.586	0.776	0.386	0.390	2.00
Road #3	11	2000-2100	3.862	4.68	0.49	106.06	3.3462	1.256	0.49	10.6	3.1862	1.586	0.776	0.386	0.390	2.00
Road #3	11	2100-2200	3.862	4.68	0.49	106.06	3.3462	1.256	0.49	10.6	3.1862	1.586	0.776	0.386	0.390	2.00
Road #3	11	2200-2300	3.862	4.68	0.49	106.06	3.3462	1.256	0.49	10.6	3.1862	1.586	0.776	0.386	0.390	2.00
Road #4	14	0000-0100	4.6422	7.45	0.75	152.56	4.0852	1.548	0.75	15.48	3.3712	1.7226	1.128	0.0995	1.1295	1.66
Road #4	14	0100-0200	4.6422	7.45	0.75	1										

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Tying Y/N North Underground Quarry

Open Road Net Mass Emission Factors for
AEMOD model (g/s)

Year 2028

Road Name	Road ID	Floor	NO _x Emission						NO ₂ Emission					
			g/s/mph	g/s/mph	g/s/mph	g/s/mph	g/s/mph	g/s/mph	g/s/mph	g/s/mph	g/s/mph	g/s/mph		
Road 34	34	0800-0900	7.55e-02	1.82e-06	4.33e-05	5.97e-02	1.46e-06	3.85e-05	3.74e-03	9.21e-06	2.41e-04	3.01e-08	8.09e-06	
Road 34	34	0900-1000	7.96e-02	1.98e-05	4.57e-05	6.55e-02	1.62e-06	4.15e-05	4.05e-03	1.01e-05	2.59e-04	3.29e-08	8.69e-06	
Road 34	34	1000-1100	1.82e-02	4.82e-06	1.07e-05	7.77e-02	1.96e-06	4.91e-05	4.78e-03	1.20e-05	3.12e-04	3.12e-08	8.12e-06	
Road 34	34	1100-1200	8.72e-02	2.19e-05	5.04e-05	8.51e-02	2.15e-06	5.38e-05	5.24e-03	1.32e-05	3.40e-04	3.40e-08	8.84e-06	
Road 34	34	1200-1300	7.10e-02	1.79e-05	4.22e-05	6.33e-02	1.75e-06	4.50e-05	4.43e-03	1.13e-05	2.93e-04	3.06e-08	7.96e-06	
Road 34	34	1300-1400	7.21e-02	2.11e-05	5.12e-05	6.36e-02	1.80e-06	4.61e-05	4.51e-03	1.14e-05	2.96e-04	3.06e-08	7.96e-06	
Road 34	34	1400-1500	7.36e-02	2.19e-05	5.26e-05	8.51e-02	2.15e-06	5.38e-05	5.24e-03	1.32e-05	3.40e-04	3.40e-08	8.84e-06	
Road 34	34	1500-1600	6.83e-02	1.64e-05	3.61e-05	6.03e-02	1.60e-06	4.05e-05	4.07e-03	1.01e-05	2.59e-04	3.12e-08	8.12e-06	
Road 34	34	1600-1700	6.72e-02	1.63e-05	3.59e-05	6.03e-02	1.60e-06	4.05e-05	4.07e-03	1.01e-05	2.59e-04	3.12e-08	8.12e-06	
Road 34	34	1700-1800	5.31e-02	1.92e-05	4.61e-05	4.44e-02	1.47e-06	3.71e-05	4.05e-03	1.01e-05	2.59e-04	3.06e-08	7.96e-06	
Road 34	34	1800-1900	3.99e-02	1.36e-05	3.25e-05	3.46e-02	1.30e-06	3.39e-05	3.32e-03	1.32e-05	3.40e-04	3.06e-08	7.96e-06	
Road 34	34	1900-2000	1.43e-02	3.61e-06	8.21e-06	1.27e-02	3.25e-06	8.15e-06	1.62e-03	4.05e-06	1.04e-04	3.06e-08	7.96e-06	
Road 34	34	2000-2100	4.78e-02	7.88e-06	2.06e-05	3.07e-02	7.50e-06	1.93e-05	1.63e-03	8.36e-06	2.17e-04	3.12e-08	8.12e-06	
Road 34	34	2100-2200	3.19e-02	7.26e-07	2.78e-07	2.78e-02	7.26e-07	2.78e-07	1.17e-03	2.14e-06	5.39e-05	3.12e-08	8.12e-06	
Road 34	34	2200-2300	1.16e-02	2.59e-07	6.18e-08	1.27e-02	3.25e-06	8.15e-06	1.62e-03	4.05e-06	1.04e-04	3.06e-08	7.96e-06	
Road 34	34	2300-2400	1.68e-02	3.79e-07	1.02e-07	2.82e-02	7.26e-07	1.63e-05	1.42e-03	7.34e-06	1.97e-04	3.12e-08	8.12e-06	
Road 34	34	2400-2500	1.48e-02	3.79e-07	1.02e-07	2.82e-02	7.26e-07	1.63e-05	1.42e-03	7.34e-06	1.97e-04	3.12e-08	8.12e-06	
Road 35	35	0000-0100	1.07e-02	6.94e-07	2.37e-07	9.48e-02	8.62e-06	2.01e-05	1.54e-04	5.05e-06	1.28e-04	4.89e-08	1.26e-05	
Road 35	35	0100-0200	1.27e-02	8.17e-07	2.72e-07	1.12e-02	7.69e-06	1.87e-07	1.43e-04	4.50e-07	1.09e-04	7.96e-08	2.04e-05	
Road 35	35	0200-0300	1.41e-02	1.15e-06	3.88e-07	1.27e-02	8.62e-06	2.01e-05	1.54e-04	5.05e-06	1.28e-04	4.89e-08	1.26e-05	
Road 35	35	0300-0400	1.52e-02	1.81e-06	5.69e-07	1.38e-02	9.58e-06	2.27e-07	1.84e-04	5.62e-07	1.38e-04	5.62e-08	1.43e-05	
Road 35	35	0400-0500	1.63e-02	2.51e-06	7.89e-07	1.49e-02	1.07e-05	2.47e-07	1.94e-04	5.94e-07	1.48e-04	5.94e-08	1.51e-05	
Road 35	35	0500-0600	1.31e-02	1.61e-07	2.48e-07	1.16e-02	8.97e-06	2.18e-07	1.64e-04	5.13e-07	1.75e-04	8.69e-07	1.02e-05	
Road 35	35	0600-0700	1.41e-02	1.92e-07	2.91e-07	1.27e-02	8.62e-06	2.01e-05	1.54e-04	5.05e-06	1.28e-04	4.89e-08	1.26e-05	
Road 35	35	0700-0800	1.42e-02	4.70e-05	1.14e-05	1.33e-02	9.13e-06	2.10e-07	7.05e-04	2.34e-06	7.70e-04	3.21e-05	2.05e-07	
Road 35	35	0800-0900	1.35e-02	5.92e-07	1.27e-06	1.19e-02	8.43e-06	1.98e-06	6.60e-04	2.48e-06	8.89e-04	2.19e-05	1.37e-06	
Road 35	35	0900-1000	1.46e-02	6.59e-07	1.39e-06	1.30e-02	9.13e-06	2.10e-07	7.05e-04	2.34e-06	7.70e-04	3.21e-05	2.05e-07	
Road 35	35	1000-1100	1.61e-02	1.56e-07	2.36e-07	1.42e-02	8.71e-06	2.15e-07	7.83e-04	2.61e-06	8.93e-04	2.28e-05	5.37e-07	
Road 35	35	1100-1200	1.62e-02	5.17e-07	1.26e-06	1.48e-02	9.46e-07	1.11e-06	7.92e-04	2.53e-06	8.99e-04	2.21e-05	5.42e-07	
Road 35	35	1200-1300	1.57e-02	4.37e-07	1.00e-06	1.38e-02	8.16e-07	8.79e-07	6.18e-04	2.05e-06	7.50e-04	1.89e-05	4.74e-07	
Road 35	35	1300-1400	1.62e-02	5.17e-07	1.26e-06	1.48e-02	9.46e-07	1.11e-06	7.92e-04	2.53e-06	8.99e-04	2.21e-05	5.42e-07	
Road 35	35	1400-1500	1.54e-02	4.29e-05	1.04e-05	1.36e-02	8.79e-06	9.10e-07	7.66e-04	2.14e-06	7.59e-04	1.89e-05	4.56e-07	
Road 35	35	1500-1600	1.50e-02	4.23e-07	1.03e-06	1.32e-02	7.94e-07	9.10e-07	7.05e-04	2.14e-06	7.59e-04	1.89e-05	4.56e-07	
Road 35	35	1600-1700	1.46e-02	3.53e-07	9.01e-07	1.27e-02	8.62e-06	2.01e-05	1.54e-04	5.05e-06	1.28e-04	4.89e-08	1.26e-05	
Road 35	35	1700-1800	1.31e-02	1.88e-07	3.48e-07	1.14e-02	8.45e-07	8.63e-07	6.63e-04	2.05e-06	4.93e-04	5.77e-04	1.36e-05	
Road 35	35	1800-1900	1.53e-02	5.33e-07	1.23e-06	1.35e-02	9.58e-07	1.02e-06	7.92e-04	2.53e-06	8.99e-04	2.21e-05	5.42e-07	
Road 35	35	1900-2000	1.45e-02	1.24e-07	1.02e-07	1.25e-02	8.59e-07	1.10e-07	7.44e-04	2.16e-06	7.60e-04	1.91e-05	4.66e-07	
Road 35	35	2000-2100	1.58e-02	1.58e-07	2.67e-07	1.36e-02	9.46e-07	1.11e-06	7.92e-04	2.53e-06	8.99e-04	2.21e-05	5.42e-07	
Road 35	35	2100-2200	1.63e-02	2.05e-07	2.95e-07	1.45e-02	9.58e-07	1.02e-06	7.92e-04	2.53e-06	8.99e-04	2.21e-05	5.42e-07	
Road 35	35	2200-2300	1.66e-02	2.03e-07	2.91e-07	1.50e-02	9.25e-07	1.02e-06	7.17e-05	5.59e-07	1.94e-04	3.35e-07	3.21e-05	
Road 35	35	2300-2400	1.64e-02	1.84e-08	2.95e-07	1.46e-02	9.10e-07	7.36e-07	7.36e-07	5.59e-07	1.94e-04	3.35e-07	3.21e-05	
Road 35	35	2400-2500	1.60e-02	1.81e-07	2.92e-07	1.38e-02	8.81e-07	2.97e-07	7.39e-07	7.39e-07	1.88e-04	3.35e-07	6.64e-07	
Road 36	36	0000-0100	1.24e-02	1.31e-06	3.10e-06	1.42e-02	9.10e-06	2.10e-07	7.05e-04	2.34e-06	7.70e-04	3.21e-05	2.05e-07	
Road 36	36	0100-0200	1.38e-02	1.93e-07	2.59e-07	2.26e-02	1.39e-06	2.82e-07	7.46e-04	1.56e-07	1.46e-04	8.81e-07	1.08e-05	
Road 36	36	0200-0300	1.48e-02	2.68e-07	3.48e-07	2.46e-02	1.58e-06	3.22e-07	8.07e-04	1.71e-07	1.71e-04	1.08e-05	1.37e-05	
Road 36	36	0300-0400	1.58e-02	3.51e-07	4.58e-07	2.58e-02	1.73e-06	3.59e-07	8.43e-04	1.82e-07	1.82e-04	1.16e-05	1.45e-05	
Road 36	36	0400-0500	1.34e-02	1.36e-07	3.42e-07	1.20e-02	1.23e-06	3.09e-07	7.14e-04	1.72e-07	1.67e-04	8.41e-07	1.04e-05	
Road 36	36	0500-0600	1.19e-02	1.77e-07	2.91e-07	1.07e-02	8.16e-07	2.01e-07	6.18e-04	1.65e-07	1.65e-04	8.41e-07	1.04e-05	
Road 36	36	0600-0700	1.46e-02	6.41e-07	1.61e-06	1.32e-02	7.67e-07	1.45e-06	7.42e-04	1.33e-06	8.41e-04	8.89e-04	2.09e-05	
Road 36	36	0700-0800	1.46e-02	6.41e-07	1.61e-06	1.32e-02	7.67e-07	1.45e-06	7.42e-04	1.33e-06	8.41e-04	8.89e-04	2.09e-05	
Road 36	36	0800-0900	1.46e-02	6.41e-07	1.61e-06	1.32e-02	7.67e-07	1.45e-06	7.42e-04	1.33e-06	8.41e-04	8.89e-04	2.09e-05	
Road 36	36	0900-1000	1.63e-02	1.83e-07	1.89e-06	1.46e-02	8.62e-07	1.68e-06	7.94e-04	1.84e-06	9.17e-04	3.22e-05	8.00e-06	
Road 36	36	1000-1100	1.72e-02	2.74e-07	2.56e-06	1.56e-02	9.63e-07	1.75e-06	8.28e-04	1.93e-06	8.96e-04	3.17e-05	7.97e-06	
Road 36	36	1100-1200	1.73e-02	2.93e-07	2.77e-06	1.57e-02	9.79e-07	1.76e-06	8.28e-04	1.93e-06	8.96e-04	3.17e-05	7.97e-06	
Road 36	36	1200-1300	1.84e-02	3.70e-07	1.79e-06	1.64e-02	9.82e-07	1.80e-06	8.72e-04	1.93e-06	8.96e-04	3.17e-05	7.97e-06	
Road 36	36	1300-1400	1.86e-02	3.94e-07	1.84e-06	1.66e-02	1.01e-06	1.82e-06	8.72e-04	1.93e-06	8.96e-04	3.17e-05	7.97e-06	
Road 36	36	1400-1500	1.76e-02	1.81e-07	1.79e-06	1.44e-02	8.82e-07	1.67e-06	7.48e-04	1.60e-06	9.07e-04	3.17e-05	8.21e-06	
Road 36	36	1500-1600	1.76e-02	1.81e-07	1.79e-06	1.44e-02	8.82e-07	1.67e-06	7.48e-04	1.60e-06	9.07e-04	3.17e-05	8.21e-06	
Road 36	36	1600-1700	1.76e-02	1.81e-07	1.79e-06	1.44e-02	8.82e-07	1.67e-06	7.48e-04	1.60e-06	9.07e-04	3.17e-05	8.21e-06	
Road 36	36	1700-1800	1.76e-02	1.81e-07	1.79e-06	1.44e-02	8.82e-07	1.67e-06	7.48e-04	1.60e-06	9.07e-04	3.17e-05	8.21e-06	
Road 36	36	1800-1900	1.76e-02	1.81e-07	1.79e-06	1.44e-02	8.82e-07	1.67e-06	7.48e-04	1.60e-06	9.07e-04	3.17e-05	8.21e-06	
Road 36	36	1900-2000	1.76e-02	1.81e-07	1.79e-06	1.44e-02	8.82e-07	1.67e-06	7.48e-04	1.60e-06	9.07e-04	3.17e-05	8.21e-06	
Road 36	36	2000-2100	1.76e-02	1.81e-07	1.79e-06	1.44e-02	8.82e-07	1.67e-06	7.48e-04	1.60e-06	9.07e-04	3.17e-05	8.21e-06	
Road 36	36	2100-2200	1.76e-02	1.81e-07	1.79e-06	1.44e-02	8.82e-07	1.67e-06	7.48e-04	1.60e-06	9.07e-04	3.17e-05	8.21e-06	
Road 36	36	2200-2300	1.76e-02	1.81e-07	1.79e-06	1.44e-02	8.82e-07	1.67e-06	7.48e-04	1.60e-06	9.07e-04	3.17e-05	8.21e-06	
Road 36	36	2300-2400	1.76e-02	1.81e-07	1.79e-06	1.44e-02	8.82e-07	1.67e-06	7.48e-04	1.60e-06	9.07e-04	3.17e-05	8.21e-06	
Road 36	36	2400-2500	1.76e-02	1.81e-07	1.79e-06	1.44e-02	8.82e-07	1.67e-06	7.48e-04	1.60e-06	9.07e-04	3.17e-05	8.21e-06	
Road 37	37	0000-0100	1.24e-02	1.31e-06	3.10e-06	1.42e-02	9.10e-06	2.10e-07	7.05e-04	2.34e-06	7.70e-04	3.21e-05	2.05e-07	
Road 37	37	0100-0200	1.48e-02											

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Open Sky 24 Hour Underground Query														
TSP Net 24 hour Emission Factors for AERMOD model (kg/d)														
Road Name	Road ID	Flow	NO _x Emission			PM ₁₀ Emission			NO _x Emission			PM ₁₀ Emission		
			g/h/m ³	g/m ³	g/m ³	g/h/m ³	g/m ³	g/m ³	g/h/m ³	g/m ³	g/m ³	g/h/m ³	g/m ³	g/m ³
Road 37	1800	1700	1.265	2.018	8.838	0.088	1.848	4.222	4.848	9.538	0.087	1.128	8.838	
Road 37	1700	1800	1.265	2.018	8.838	0.088	1.848	4.222	4.848	9.538	0.087	1.128	8.838	
Road 37	1800	1300	0.968	1.513	6.630	0.066	1.376	3.167	3.636	7.151	0.065	0.845	6.630	
Road 37	1300	1800	0.968	1.513	6.630	0.066	1.376	3.167	3.636	7.151	0.065	0.845	6.630	
Road 37	1800	1000	0.726	1.134	4.972	0.050	1.044	2.350	2.727	5.363	0.050	0.634	4.972	
Road 37	1000	1800	0.726	1.134	4.972	0.050	1.044	2.350	2.727	5.363	0.050	0.634	4.972	
Road 37	1000	2200	1.513	2.422	10.440	0.100	2.088	4.636	5.363	10.716	0.099	1.271	10.440	
Road 37	2200	1000	1.513	2.422	10.440	0.100	2.088	4.636	5.363	10.716	0.099	1.271	10.440	
Road 37	1000	1300	0.726	1.134	4.972	0.050	1.044	2.350	2.727	5.363	0.050	0.634	4.972	
Road 37	1300	1000	0.726	1.134	4.972	0.050	1.044	2.350	2.727	5.363	0.050	0.634	4.972	
Road 37	1300	2200	1.513	2.422	10.440	0.100	2.088	4.636	5.363	10.716	0.099	1.271	10.440	
Road 37	2200	1300	1.513	2.422	10.440	0.100	2.088	4.636	5.363	10.716	0.099	1.271	10.440	
Road 37	2200	1800	0.968	1.513	6.630	0.066	1.376	3.167	3.636	7.151	0.065	0.845	6.630	
Road 37	1800	2200	0.968	1.513	6.630	0.066	1.376	3.167	3.636	7.151	0.065	0.845	6.630	
Road 37	1800	1000	0.726	1.134	4.972	0.050	1.044	2.350	2.727	5.363	0.050	0.634	4.972	
Road 37	1000	1800	0.726	1.134	4.972	0.050	1.044	2.350	2.727	5.363	0.050	0.634	4.972	
Road 37	1000	1300	0.726	1.134	4.972	0.050	1.044	2.350	2.727	5.363	0.050	0.634	4.972	
Road 37	1300	1000	0.726	1.134	4.972	0.050	1.044	2.350	2.727	5.363	0.050	0.634	4.972	
Road 37	1300	1800	0.968	1.513	6.630	0.066	1.376	3.167	3.636	7.151	0.065	0.845	6.630	
Road 37	1800	1300	0.968	1.513	6.630	0.066	1.376	3.167	3.636	7.151	0.065	0.845	6.630	
Road 37	1300	2200	1.513	2.422	10.440	0.100	2.088	4.636	5.363	10.716	0.099	1.271	10.440	
Road 37	2200	1300	1.513	2.422	10.440	0.100	2.088	4.636	5.363	10.716	0.099	1.271	10.440	
Road 37	1300	1800	0.968	1.513	6.630	0.066	1.376	3.167	3.636	7.151	0.065	0.845	6.630	
Road 37	1800	1300	0.968	1.513	6.630	0.066	1.376	3.167	3.636	7.151	0.065	0.845	6.630	
Road 37	1300	2200	1.513	2.422	10.440	0.100	2.088	4.636	5.363	10.716	0.099	1.271	10.440	
Road 37	2200	1300	1.513	2.422	10.440	0.100	2.088	4.636	5.363	10.716	0.099	1.271	10.440	
Road 37	1300	1800	0.968	1.513	6.630	0.066	1.376	3.167	3.636	7.151	0.065	0.845	6.630	
Road 37	1800	1300	0.968	1.513	6.630	0.066	1.376	3.167	3.636	7.151	0.065	0.845	6.630	
Road 37	1300	2200	1.513	2.422	10.440	0.100	2.088	4.636	5.363	10.716	0.099	1.271	10.440	
Road 37	2200	1300	1.513	2.422	10.440	0.100	2.088	4.636	5.363	10.716	0.099	1.271	10.440	
Road 37	1300	1800	0.968	1.513	6.630	0.066	1.376	3.167	3.636	7.151	0.065	0.845	6.630	
Road 37	1800	1300	0.968	1.513	6.630	0.066	1.376	3.167	3.636	7.151	0.065	0.845	6.630	
Road 37	1300	2200	1.513	2.422	10.440	0.100	2.088	4.636	5.363	10.716	0.099	1.271	10.440	
Road 37	2200	1300	1.513	2.422	10.440	0.100	2.088	4.636	5.363	10.716	0.099	1.271	10.440	
Road 37	1300	1800	0.968	1.513	6.630	0.066	1.376	3.167	3.636	7.151	0.065	0.845	6.630	
Road 37	1800	1300	0.968	1.513	6.630	0.066	1.376	3.167	3.636	7.151	0.065	0.845	6.630	
Road 37	1300	2200	1.513	2.422	10.440	0.100	2.088	4.636	5.363	10.716	0.099	1.271	10.440	
Road 37	2200	1300	1.513	2.422	10.440	0.100	2.088	4.636	5.363	10.716	0.099	1.271	10.440	
Road 37	1300	1800	0.968	1.513	6.630	0.066	1.376	3.167	3.636	7.151	0.065	0.845	6.630	
Road 37	1800	1300	0.968	1.513	6.630	0.066	1.376	3.167	3.636	7.151	0.065	0.845	6.630	
Road 37	1300	2200	1.513	2.422	10.440	0.100	2.088	4.636	5.363	10.716	0.099	1.271	10.440	
Road 37	2200	1300	1.513	2.422	10.440	0.100	2.088	4.636	5.363	10.716	0.099	1.271	10.440	
Road 37	1300	1800	0.968	1.513	6.630	0.066	1.376	3.167	3.636	7.151	0.065	0.845	6.630	
Road 37	1800	1300	0.968	1.513	6.630	0.066	1.376	3.167	3.636	7.151	0.065	0.845	6.630	
Road 37	1300	2200	1.513	2.422	10.440	0.100	2.088	4.636	5.363	10.716	0.099	1.271	10.440	
Road 37	2200	1300	1.513	2.422	10.440	0.100	2.088	4.636	5.363	10.716	0.099	1.271	10.440	
Road 37	1300	1800	0.968	1.513	6.630	0.066	1.376	3.167	3.636	7.151	0.065	0.845	6.630	
Road 37	1800	1300	0.968	1.513	6.630	0.066	1.376	3.167	3.636	7.151	0.065	0.845	6.630	
Road 37	1300	2200	1.513	2.422	10.440	0.100	2.088	4.636	5.363	10.716	0.099	1.271	10.440	
Road 37	2200	1300	1.513	2.422	10.440	0.100	2.088	4.636	5.363	10.716	0.099	1.271	10.440	
Road 37	1300	1800	0.968	1.513	6.630	0.066	1.376	3.167	3.636	7.151	0.065	0.845	6.630	
Road 37	1800	1300	0.968	1.513	6.630	0.066	1.376	3.167	3.636	7.151	0.065	0.845	6.630	
Road 37	1300	2200	1.513	2.422	10.440	0.100	2.088	4.636	5.363	10.716	0.099	1.271	10.440	
Road 37	2200	1300	1.513	2.422	10.440	0.100	2.088	4.636	5.363	10.716	0.099	1.271	10.440	
Road 37	1300	1800	0.968	1.513	6.630	0.066	1.376	3.167	3.636	7.151	0.065	0.845	6.630	
Road 37	1800	1300	0.968	1.513	6.630	0.066	1.376	3.167	3.636	7.151	0.065	0.845	6.630	
Road 37	1300	2200	1.513	2.422	10.440	0.100	2.088	4.636	5.363	10.716	0.099	1.271	10.440	
Road 37	2200	1300	1.513	2.422	10.440	0.100	2.088	4.636	5.363	10.716	0.099	1.271	10.440	
Road 37	1300	1800	0.968	1.513	6.630	0.066	1.376	3.167	3.636	7.151	0.065	0.845	6.630	
Road 37	1800	1300	0.968	1.513	6.630	0.066	1.376	3.167	3.636	7.151	0.065	0.845	6.630	
Road 37	1300	2200	1.513	2.422	10.440	0.100	2.088	4.636	5.363	10.716	0.099	1.271	10.440	
Road 37	2200	1300	1.513	2.422	10.440	0.100	2.088	4.636	5.363	10.716	0.099	1.271	10.440	
Road 37	1300	1800	0.968	1.513	6.630	0.066	1.376	3.167	3.636	7.151	0.065	0.845	6.630	
Road 37	1800	1300	0.968	1.513	6.630	0.066	1.376	3.167	3.636	7.151	0.065	0.845	6.630	
Road 37	1300	2200	1.513	2.422	10.440	0.100	2.088	4.636	5.363	10.716	0.099	1.271	10.440	
Road 37	2200	1300	1.513	2.422	10.440	0.100	2.088	4.636	5.363	10.716	0.099	1.271	10.440	
Road 37	1300	1800	0.968	1.513	6.630	0.066	1.376	3.167	3.636	7.151	0.065	0.845	6.630	
Road 37	1800	1300	0.968	1.513	6.630	0.066	1.376	3.167	3.636	7.151	0.065	0.845	6.630	
Road 37	1300	2200	1.513	2.422	10.440	0.100	2.088	4.636	5.363	10.716	0.099	1.271	10.440	
Road 37	2200	1300	1.513	2.422	10.440	0.100	2.088	4.636	5.363	10.716	0.099	1.271	10.440	
Road 37	1300	1800	0.968	1.513	6.630	0.066	1.376	3.167	3.636	7.151	0.065	0.845	6.630	
Road 37	1800	1300	0.968	1.513	6.630	0.066	1.376	3.167	3.636	7.151	0.065	0.845	6.630	
Road 37	1300	2200	1.513	2.422	10.440	0.100	2.088	4.636	5.363	10.716	0.099	1.271	10.440	
Road 37	2200	1300	1.513	2.422	10.440	0.100	2.088	4.636	5.363	10.716	0.099	1.271	10.440	
Road 37	1300	1800	0.968	1.513	6.630	0.066	1.376	3.167	3.636	7.151	0.065	0.845	6.630	
Road 37	1800	1300	0.968	1.513	6.630	0.066	1.376	3.167	3.636	7.151	0.065	0.845	6.630	
Road 37	1300	2200	1.513	2.422	10.440	0.100	2.088	4.636	5.363	10.716	0.099	1.271	10.440	
Road 37	2200	1300	1.513	2.422	10.440	0.100	2.088	4.636	5.363	10.716	0.099	1.271	10.440	
Road 37	1300	1800	0.968	1.513	6.630	0.066	1.376	3.167	3.636	7.151	0.065	0.845	6.630	
Road 37	1800	1300	0.968	1.513	6.630	0.066	1.376	3.167	3.636	7.151	0.065	0.845	6.630	
Road 37	1300	2200	1.513	2.422	10.440	0.100	2.088	4.636	5.363	10.716	0.099	1.271	10.440	
Road 37	2200	1300	1.513	2.422	10.440	0.100	2.088	4.636	5.363	10.716	0.099	1.271	10.440	
Road 37	1300	1800	0.968	1.513	6.630	0.066	1.376	3.167	3.636	7.151	0.065	0.845	6.630	
Road 37	1800	1300	0.968	1.513	6.630	0.066	1.376	3.167	3.636	7.151	0.065	0.845	6.630	
Road 37	1300	2200	1.513	2.422	10.440	0.100	2.088	4.636	5.363	10.716</				

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Road 24 Hour Underground Query														
Open Road 24 Hour Emission Factors for ARB/MDR Model														
Year 2028														
Road Name	Road ID	Hour	NO Emission				NO Emission				NO Emission			
			g/hr/mi	lb/hr/mi	lb/day/mi	g/hr/mi	lb/hr/mi	lb/day/mi	g/hr/mi	lb/hr/mi	lb/day/mi	g/hr/mi	lb/hr/mi	lb/day/mi
Read #1	41	0000-0100	7.005	1.488	1.576	8.208	1.488	1.386	3.881	9.888	7.526	3.146	9.969	7.50
Read #1	41	0100-0200	6.865	1.467	1.556	8.072	1.467	1.365	3.825	9.620	7.406	3.105	9.740	7.40
Read #1	41	0200-0300	6.725	1.446	1.535	7.936	1.446	1.344	3.760	9.352	7.286	3.064	9.610	7.26
Read #1	41	0300-0400	6.585	1.425	1.514	7.800	1.425	1.323	3.695	9.084	7.166	3.023	9.480	7.12
Read #1	41	0400-0500	6.445	1.404	1.493	7.664	1.404	1.302	3.630	8.816	7.046	2.982	9.350	6.98
Read #1	41	0500-0600	6.305	1.383	1.472	7.528	1.383	1.281	3.565	8.548	6.926	2.941	9.220	6.84
Read #1	41	0600-0700	6.165	1.362	1.451	7.392	1.362	1.260	3.500	8.280	6.806	2.900	9.090	6.70
Read #1	41	0700-0800	6.025	1.341	1.430	7.256	1.341	1.239	3.435	8.012	6.686	2.859	8.960	6.56
Read #1	41	0800-0900	5.885	1.320	1.409	7.120	1.320	1.218	3.370	7.744	6.566	2.818	8.830	6.42
Read #1	41	0900-1000	5.745	1.299	1.388	6.984	1.299	1.197	3.305	7.476	6.446	2.777	8.700	6.28
Read #1	41	1000-1100	5.605	1.278	1.367	6.848	1.278	1.176	3.240	7.208	6.326	2.736	8.570	6.14
Read #1	41	1100-1200	5.465	1.257	1.346	6.712	1.257	1.155	3.175	6.940	6.206	2.695	8.440	6.00
Read #1	41	1200-1300	5.325	1.236	1.325	6.576	1.236	1.134	3.110	6.672	6.086	2.654	8.310	5.86
Read #1	41	1300-1400	5.185	1.215	1.304	6.440	1.215	1.113	3.045	6.404	5.966	2.613	8.180	5.72
Read #1	41	1400-1500	5.045	1.194	1.283	6.304	1.194	1.092	2.980	6.136	5.846	2.572	8.050	5.58
Read #1	41	1500-1600	4.905	1.173	1.262	6.168	1.173	1.071	2.915	5.868	5.726	2.531	7.920	5.44
Read #1	41	1600-1700	4.765	1.152	1.241	6.032	1.152	1.050	2.850	5.600	5.606	2.490	7.790	5.30
Read #1	41	1700-1800	4.625	1.131	1.220	5.896	1.131	1.029	2.785	5.332	5.486	2.449	7.660	5.16
Read #1	41	1800-1900	4.485	1.110	1.199	5.760	1.110	1.008	2.720	5.064	5.366	2.408	7.530	5.02
Read #1	41	1900-2000	4.345	1.089	1.178	5.624	1.089	0.987	2.655	4.796	5.246	2.367	7.400	4.88
Read #1	41	2000-2100	4.205	1.068	1.157	5.488	1.068	0.966	2.590	4.528	5.126	2.326	7.270	4.74
Read #1	41	2100-2200	4.065	1.047	1.136	5.352	1.047	0.945	2.525	4.260	5.006	2.285	7.140	4.60
Read #1	41	2200-2300	3.925	1.026	1.115	5.216	1.026	0.924	2.460	3.992	4.886	2.244	7.010	4.46
Read #1	41	2300-2400	3.785	1.005	1.094	5.080	1.005	0.903	2.395	3.724	4.766	2.203	6.880	4.32
Read #2	42	0000-0100	7.005	1.488	1.576	8.208	1.488	1.386	3.881	9.888	7.526	3.146	9.969	7.50
Read #2	42	0100-0200	6.865	1.467	1.556	8.072	1.467	1.365	3.825	9.620	7.406	3.105	9.740	7.40
Read #2	42	0200-0300	6.725	1.446	1.535	7.936	1.446	1.344	3.760	9.352	7.286	3.064	9.610	7.26
Read #2	42	0300-0400	6.585	1.425	1.514	7.800	1.425	1.323	3.695	9.084	7.166	3.023	9.480	7.12
Read #2	42	0400-0500	6.445	1.404	1.493	7.664	1.404	1.302	3.630	8.816	7.046	2.982	9.350	6.98
Read #2	42	0500-0600	6.305	1.383	1.472	7.528	1.383	1.281	3.565	8.548	6.926	2.941	9.220	6.84
Read #2	42	0600-0700	6.165	1.362	1.451	7.392	1.362	1.260	3.500	8.280	6.806	2.900	9.090	6.70
Read #2	42	0700-0800	6.025	1.341	1.430	7.256	1.341	1.239	3.435	8.012	6.686	2.859	8.960	6.56
Read #2	42	0800-0900	5.885	1.320	1.409	7.120	1.320	1.218	3.370	7.744	6.566	2.818	8.830	6.42
Read #2	42	0900-1000	5.745	1.299	1.388	6.984	1.299	1.197	3.305	7.476	6.446	2.777	8.700	6.28
Read #2	42	1000-1100	5.605	1.278	1.367	6.848	1.278	1.176	3.240	7.208	6.326	2.736	8.570	6.14
Read #2	42	1100-1200	5.465	1.257	1.346	6.712	1.257	1.155	3.175	6.940	6.206	2.695	8.440	6.00
Read #2	42	1200-1300	5.325	1.236	1.325	6.576	1.236	1.134	3.110	6.672	6.086	2.654	8.310	5.86
Read #2	42	1300-1400	5.185	1.215	1.304	6.440	1.215	1.113	3.045	6.404	5.966	2.613	8.180	5.72
Read #2	42	1400-1500	5.045	1.194	1.283	6.304	1.194	1.092	2.980	6.136	5.846	2.572	8.050	5.58
Read #2	42	1500-1600	4.905	1.173	1.262	6.168	1.173	1.071	2.915	5.868	5.726	2.531	7.920	5.44
Read #2	42	1600-1700	4.765	1.152	1.241	6.032	1.152	1.050	2.850	5.600	5.606	2.490	7.790	5.30
Read #2	42	1700-1800	4.625	1.131	1.220	5.896	1.131	1.029	2.785	5.332	5.486	2.449	7.660	5.16
Read #2	42	1800-1900	4.485	1.110	1.199	5.760	1.110	1.008	2.720	5.064	5.366	2.408	7.530	5.02
Read #2	42	1900-2000	4.345	1.089	1.178	5.624	1.089	0.987	2.655	4.796	5.246	2.367	7.400	4.88
Read #2	42	2000-2100	4.205	1.068	1.157	5.488	1.068	0.966	2.590	4.528	5.126	2.326	7.270	4.74
Read #2	42	2100-2200	4.065	1.047	1.136	5.352	1.047	0.945	2.525	4.260	5.006	2.285	7.140	4.60
Read #2	42	2200-2300	3.925	1.026	1.115	5.216	1.026	0.924	2.460	3.992	4.886	2.244	7.010	4.46
Read #2	42	2300-2400	3.785	1.005	1.094	5.080	1.005	0.903	2.395	3.724	4.766	2.203	6.880	4.32
Read #3	43	0000-0100	6.915	1.467	1.556	8.072	1.467	1.365	3.825	9.620	7.406	3.105	9.740	7.40
Read #3	43	0100-0200	6.775	1.446	1.535	7.936	1.446	1.344	3.760	9.352	7.286	3.064	9.610	7.26
Read #3	43	0200-0300	6.635	1.425	1.514	7.800	1.425	1.323	3.695	9.084	7.166	3.023	9.480	7.12
Read #3	43	0300-0400	6.495	1.404	1.493	7.664	1.404	1.302	3.630	8.816	7.046	2.982	9.350	6.98
Read #3	43	0400-0500	6.355	1.383	1.472	7.528	1.383	1.281	3.565	8.548	6.926	2.941	9.220	6.84
Read #3	43	0500-0600	6.215	1.362	1.451	7.392	1.362	1.260	3.500	8.280	6.806	2.900	9.090	6.70
Read #3	43	0600-0700	6.075	1.341	1.430	7.256	1.341	1.239	3.435	8.012	6.686	2.859	8.960	6.56
Read #3	43	0700-0800	5.935	1.320	1.409	7.120	1.320	1.218	3.370	7.744	6.566	2.818	8.830	6.42
Read #3	43	0800-0900	5.795	1.299	1.388	6.984	1.299	1.197	3.305	7.476	6.446	2.777	8.700	6.28
Read #3	43	0900-1000	5.655	1.278	1.367	6.848	1.278	1.176	3.240	7.208	6.326	2.736	8.570	6.14
Read #3	43	1000-1100	5.515	1.257	1.346	6.712	1.257	1.155	3.175	6.940	6.206	2.695	8.440	6.00
Read #3	43	1100-1200	5.375	1.236	1.325	6.576	1.236	1.134	3.110	6.672	6.086	2.654	8.310	5.86
Read #3	43	1200-1300	5.235	1.215	1.304	6.440	1.215	1.113	3.045	6.404	5.966	2.613	8.180	5.72
Read #3	43	1300-1400	5.095	1.194	1.283	6.304	1.194	1.092	2.980	6.136	5.846	2.572	8.050	5.58
Read #3	43	1400-1500	4.955	1.173	1.262	6.168	1.173	1.071	2.915	5.868	5.726	2.531	7.920	5.44
Read #3	43	1500-1600	4.815	1.152	1.241	6.032	1.152	1.050	2.850	5.600	5.606	2.490	7.790	5.30
Read #3	43	1600-1700	4.675	1.131	1.220	5.896	1.131	1.029	2.785	5.332	5.486	2.449	7.660	5.16
Read #3	43	1700-1800	4.535	1.110	1.199	5.760	1.110	1.008	2.720	5.064	5.366	2.408	7.530	5.02
Read #3	43	1800-1900	4.395	1.089	1.178	5.624	1.089	0.987	2.655	4.796	5.246	2.367	7.400	4.88
Read #3	43	1900-2000	4.255	1.068	1.157	5.488	1.068	0.966	2.590	4.528	5.126	2.326	7.270	4.74
Read #3	43	2000-2100	4.115	1.047	1.136	5.352	1.047	0.945	2.525	4.260	5.006	2.285	7.140	4.60
Read #3	43	2100-2200	3.975	1.026	1.115	5.216	1.026	0.924	2.460	3.992	4.886	2.244	7.010	4.46
Read #3	43	2200-2300	3.835	1.005	1.094	5.080	1.005	0.903	2.395	3.724	4.766	2.203	6.880	4.32
Read #3	43	2300-2400	3.695	0.984	1.073	4.944	0.984	0.882	2.330	3.456	4.646	2.162	6.750	4.18
Read #4	44	0000-0100	6.825	1.446	1.535	7.936	1.446	1.344	3.760	9.352	7.286	3.064	9.610	7.26
Read #4	44	0100-0200	6.685	1.425	1.514	7.800	1.425	1.323	3.695	9.084	7.166	3.023	9.480	7.12
Read #4	44	0200-0300	6.545	1.404	1.493	7.664	1.404	1.302	3.630	8.816	7.046	2.982	9.350	6.98
Read #4	44	0300-0400	6.405	1.383	1.472	7.528	1.383	1.281	3.565	8.548	6.926	2.941	9.220	6.84
Read #4	44	0400-0500	6.265	1.362	1.451	7.392	1.362	1.260	3.500	8.280	6.806	2.900	9.090	6.70
Read #4	44	0500-0600	6.125	1.341	1.430	7.256	1.341	1.239	3.435	8.012	6.686	2.859	8.960	6.56
Read #4	44	0600-0700	5.985	1.320	1.409	7.120	1.320	1.218	3.370	7.744	6.566	2.818	8.830	6.42
Read #4	44	0700-0800	5.845	1.299	1.388	6.984	1.299	1.197	3.305	7.476	6.446	2.77		

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Open North Road Extension Quarry														
Year 2028														
All 100% North Road Extension Quarry														
Road Name	Road ID	Hour	No. Emulsion						No. Emulsion					
			Monthly/m ³		Monthly/tonnage		Monthly/m ³		Monthly/tonnage					
			g/m ³ /hr	ton/hr	g/m ³ /hr	ton/hr	g/m ³ /hr	ton/hr	g/m ³ /hr	ton/hr	g/m ³ /hr	ton/hr		
Read 47	47	1100-1200	1,151.02	8,408.07	2,621.05	6,411.02	7,888.07	2,311.05	1,081.04	1,171.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	1700-1800	4,921.02	35,921.07	10,921.05	44,921.02	55,921.07	16,921.05	2,361.04	2,711.08	2,171.04	2,661.01	9,631.06	1,311.04
Read 47	47	2300-2400	1,151.02	8,408.07	2,621.05	6,411.02	7,888.07	2,311.05	1,081.04	1,171.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	2400-2500	2,361.02	17,161.07	5,261.05	22,261.02	3,081.07	9,611.05	1,151.04	1,311.08	1,641.05	2,661.01	9,631.06	1,311.04
Read 47	47	2500-2600	2,361.02	17,161.07	5,261.05	22,261.02	3,081.07	9,611.05	1,151.04	1,311.08	1,641.05	2,661.01	9,631.06	1,311.04
Read 47	47	2100-2200	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	2100-2200	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	2200-2300	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	2300-2400	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	2400-2500	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	2500-2600	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	2600-2700	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	2700-2800	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	2800-2900	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	2900-3000	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	3000-3100	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	3100-3200	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	3200-3300	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	3300-3400	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	3400-3500	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	3500-3600	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	3600-3700	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	3700-3800	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	3800-3900	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	3900-4000	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	4000-4100	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	4100-4200	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	4200-4300	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	4300-4400	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	4400-4500	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	4500-4600	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	4600-4700	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	4700-4800	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	4800-4900	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	4900-5000	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	5000-5100	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	5100-5200	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	5200-5300	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	5300-5400	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	5400-5500	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	5500-5600	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	5600-5700	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	5700-5800	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	5800-5900	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	5900-6000	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	6000-6100	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	6100-6200	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	6200-6300	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	6300-6400	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	6400-6500	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	6500-6600	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	6600-6700	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	6700-6800	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	6800-6900	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	6900-7000	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	7000-7100	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	7100-7200	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	7200-7300	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	7300-7400	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	7400-7500	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	7500-7600	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	7600-7700	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	1,311.04
Read 47	47	7700-7800	2,031.02	14,861.07	4,531.05	18,361.02	2,361.07	9,101.05	1,081.04	1,151.08	1,389.04	2,661.01	8,631.06	

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North Northumberland Quarry													
Year 2028													
Road ID		Hour	NO Emission				NO Emission						
ARNO2 model (Aq/s)			Monthly/mg/m ³		Monthly/mg/m ³	Monthly/mg/m ³		Monthly/mg/m ³	Monthly/mg/m ³				
			g/h/m ²	g/h/m ²	g/h/m ²	g/h/m ²	g/h/m ²	g/h/m ²	g/h/m ²	g/h/m ²			
Road S1	S1	0000:0100	4.48E+02	2.11E+07	5.58E+06	3.98E+02	2.65E+07	6.94E+06	3.04E+01	2.02E+06	3.77E+01	1.78E+06	1.31E+05
Road S1	S1	0000:0200	4.48E+02	2.11E+07	5.58E+06	4.25E+07	2.65E+07	6.94E+06	3.04E+01	2.02E+06	3.77E+01	1.78E+06	1.31E+05
Road S1	S1	0000:0300	4.48E+02	2.11E+07	5.58E+06	4.25E+07	2.65E+07	6.94E+06	3.04E+01	2.02E+06	3.77E+01	1.78E+06	1.31E+05
Road S1	S1	0000:0400	5.75E+02	4.14E+07	2.64E+06	8.88E+02	2.88E+07	2.39E+06	3.44E+01	8.81E+07	1.64E+05	1.05E+07	7.64E+07
Road S1	S1	0000:0500	5.75E+02	4.14E+07	2.64E+06	8.88E+02	2.88E+07	2.39E+06	3.44E+01	8.81E+07	1.64E+05	1.05E+07	7.64E+07
Road S1	S1	0000:0600	5.75E+02	4.14E+07	2.64E+06	8.88E+02	2.88E+07	2.39E+06	3.44E+01	8.81E+07	1.64E+05	1.05E+07	7.64E+07
Road S1	S1	0000:0700	5.75E+02	4.14E+07	2.64E+06	8.88E+02	2.88E+07	2.39E+06	3.44E+01	8.81E+07	1.64E+05	1.05E+07	7.64E+07
Road S1	S1	0000:0800	5.75E+02	4.14E+07	2.64E+06	8.88E+02	2.88E+07	2.39E+06	3.44E+01	8.81E+07	1.64E+05	1.05E+07	7.64E+07
Road S1	S1	0000:0900	6.79E+02	3.11E+07	1.13E+06	3.78E+06	1.32E+07	3.08E+06	1.88E+03	3.08E+06	1.31E+06	3.17E+06	1.08E+05
Road S1	S1	0000:1000	6.79E+02	3.11E+07	1.13E+06	3.82E+06	1.32E+07	3.08E+06	1.88E+03	3.08E+06	1.31E+06	3.17E+06	1.08E+05
Road S1	S1	0000:1100	6.79E+02	3.11E+07	1.13E+06	3.82E+06	1.32E+07	3.08E+06	1.88E+03	3.08E+06	1.31E+06	3.17E+06	1.08E+05
Road S1	S1	0000:1200	6.79E+02	3.11E+07	1.13E+06	3.82E+06	1.32E+07	3.08E+06	1.88E+03	3.08E+06	1.31E+06	3.17E+06	1.08E+05
Road S1	S1	0000:1300	6.79E+02	3.11E+07	1.13E+06	3.82E+06	1.32E+07	3.08E+06	1.88E+03	3.08E+06	1.31E+06	3.17E+06	1.08E+05
Road S1	S1	0000:1400	6.79E+02	3.11E+07	1.13E+06	3.82E+06	1.32E+07	3.08E+06	1.88E+03	3.08E+06	1.31E+06	3.17E+06	1.08E+05
Road S1	S1	0000:1500	6.79E+02	3.11E+07	1.13E+06	3.82E+06	1.32E+07	3.08E+06	1.88E+03	3.08E+06	1.31E+06	3.17E+06	1.08E+05
Road S1	S1	0000:1600	6.79E+02	3.11E+07	1.13E+06	3.82E+06	1.32E+07	3.08E+06	1.88E+03	3.08E+06	1.31E+06	3.17E+06	1.08E+05
Road S1	S1	0000:1700	6.79E+02	3.11E+07	1.13E+06	3.82E+06	1.32E+07	3.08E+06	1.88E+03	3.08E+06	1.31E+06	3.17E+06	1.08E+05
Road S1	S1	0000:1800	6.79E+02	3.11E+07	1.13E+06	3.82E+06	1.32E+07	3.08E+06	1.88E+03	3.08E+06	1.31E+06	3.17E+06	1.08E+05
Road S1	S1	0000:1900	6.79E+02	3.11E+07	1.13E+06	3.82E+06	1.32E+07	3.08E+06	1.88E+03	3.08E+06	1.31E+06	3.17E+06	1.08E+05
Road S1	S1	0000:2000	6.79E+02	3.11E+07	1.13E+06	3.82E+06	1.32E+07	3.08E+06	1.88E+03	3.08E+06	1.31E+06	3.17E+06	1.08E+05
Road S1	S1	0000:2100	6.79E+02	3.11E+07	1.13E+06	3.82E+06	1.32E+07	3.08E+06	1.88E+03	3.08E+06	1.31E+06	3.17E+06	1.08E+05
Road S2	S2	0000:0100	1.56E+02	7.89E+06	1.13E+07	1.42E+06	9.96E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S2	S2	0000:0200	1.56E+02	7.89E+06	1.13E+07	1.42E+06	9.96E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S2	S2	0000:0300	1.56E+02	7.89E+06	1.13E+07	1.42E+06	9.96E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S2	S2	0000:0400	1.56E+02	7.89E+06	1.13E+07	1.42E+06	9.96E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S2	S2	0000:0500	1.56E+02	7.89E+06	1.13E+07	1.42E+06	9.96E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S2	S2	0000:0600	1.56E+02	7.89E+06	1.13E+07	1.42E+06	9.96E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S2	S2	0000:0700	1.56E+02	7.89E+06	1.13E+07	1.42E+06	9.96E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S2	S2	0000:0800	1.56E+02	7.89E+06	1.13E+07	1.42E+06	9.96E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S2	S2	0000:0900	1.56E+02	7.89E+06	1.13E+07	1.42E+06	9.96E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S2	S2	0000:1000	1.56E+02	7.89E+06	1.13E+07	1.42E+06	9.96E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S2	S2	0000:1100	1.56E+02	7.89E+06	1.13E+07	1.42E+06	9.96E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S2	S2	0000:1200	1.56E+02	7.89E+06	1.13E+07	1.42E+06	9.96E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S2	S2	0000:1300	1.56E+02	7.89E+06	1.13E+07	1.42E+06	9.96E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S2	S2	0000:1400	1.56E+02	7.89E+06	1.13E+07	1.42E+06	9.96E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S2	S2	0000:1500	1.56E+02	7.89E+06	1.13E+07	1.42E+06	9.96E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S2	S2	0000:1600	1.56E+02	7.89E+06	1.13E+07	1.42E+06	9.96E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S2	S2	0000:1700	1.56E+02	7.89E+06	1.13E+07	1.42E+06	9.96E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S2	S2	0000:1800	1.56E+02	7.89E+06	1.13E+07	1.42E+06	9.96E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S2	S2	0000:1900	1.56E+02	7.89E+06	1.13E+07	1.42E+06	9.96E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S2	S2	0000:2000	1.56E+02	7.89E+06	1.13E+07	1.42E+06	9.96E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S2	S2	0000:2100	1.56E+02	7.89E+06	1.13E+07	1.42E+06	9.96E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S3	S3	0000:0100	1.43E+02	7.19E+06	1.07E+07	1.44E+06	9.81E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S3	S3	0000:0200	1.43E+02	7.19E+06	1.07E+07	1.44E+06	9.81E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S3	S3	0000:0300	1.43E+02	7.19E+06	1.07E+07	1.44E+06	9.81E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S3	S3	0000:0400	1.43E+02	7.19E+06	1.07E+07	1.44E+06	9.81E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S3	S3	0000:0500	1.43E+02	7.19E+06	1.07E+07	1.44E+06	9.81E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S3	S3	0000:0600	1.43E+02	7.19E+06	1.07E+07	1.44E+06	9.81E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S3	S3	0000:0700	1.43E+02	7.19E+06	1.07E+07	1.44E+06	9.81E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S3	S3	0000:0800	1.43E+02	7.19E+06	1.07E+07	1.44E+06	9.81E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S3	S3	0000:0900	1.43E+02	7.19E+06	1.07E+07	1.44E+06	9.81E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S3	S3	0000:1000	1.43E+02	7.19E+06	1.07E+07	1.44E+06	9.81E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S3	S3	0000:1100	1.43E+02	7.19E+06	1.07E+07	1.44E+06	9.81E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S3	S3	0000:1200	1.43E+02	7.19E+06	1.07E+07	1.44E+06	9.81E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S3	S3	0000:1300	1.43E+02	7.19E+06	1.07E+07	1.44E+06	9.81E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S3	S3	0000:1400	1.43E+02	7.19E+06	1.07E+07	1.44E+06	9.81E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S3	S3	0000:1500	1.43E+02	7.19E+06	1.07E+07	1.44E+06	9.81E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S3	S3	0000:1600	1.43E+02	7.19E+06	1.07E+07	1.44E+06	9.81E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S3	S3	0000:1700	1.43E+02	7.19E+06	1.07E+07	1.44E+06	9.81E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S3	S3	0000:1800	1.43E+02	7.19E+06	1.07E+07	1.44E+06	9.81E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S3	S3	0000:1900	1.43E+02	7.19E+06	1.07E+07	1.44E+06	9.81E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S3	S3	0000:2000	1.43E+02	7.19E+06	1.07E+07	1.44E+06	9.81E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S3	S3	0000:2100	1.43E+02	7.19E+06	1.07E+07	1.44E+06	9.81E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S4	S4	0000:0100	1.43E+02	7.19E+06	1.07E+07	1.44E+06	9.81E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S4	S4	0000:0200	1.43E+02	7.19E+06	1.07E+07	1.44E+06	9.81E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S4	S4	0000:0300	1.43E+02	7.19E+06	1.07E+07	1.44E+06	9.81E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S4	S4	0000:0400	1.43E+02	7.19E+06	1.07E+07	1.44E+06	9.81E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S4	S4	0000:0500	1.43E+02	7.19E+06	1.07E+07	1.44E+06	9.81E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+06
Road S4	S4	0000:0600	1.43E+02	7.19E+06	1.07E+07	1.44E+06	9.81E+06	1.02E+07	6.54E+06	8.74E+06	4.95E+07	6.32E+06	8.86E+0

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

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[illegible]

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Road 2 North Underdrain Quarry														
Road ID		Year 2028												
Road ID		Hour		NO Emission				NO Emission						
Road ID		Hour		Monthly/yr		Monthly/ha/acre		Monthly/yr		Monthly/ha/acre				
Road ID		Hour		g/h/v		g/h/v		g/h/v		g/h/v				
Road #	4	0800-0900	3,716.42	9,331.07	1,871.05	2,712.02	7,887.07	1,536.05	2,271.01	6,608.16	1,214.04	8,886.01	5,558.16	1,024.04
Road #	4	0900-1000	3,386.00	8,465.00	1,652.00	2,437.00	7,539.00	1,456.00	2,000.00	6,000.00	1,124.00	8,124.00	5,056.00	1,004.00
Road #	4	1000-1100	3,113.00	7,783.00	1,523.00	2,258.00	7,016.00	1,366.00	1,866.00	5,598.00	1,054.00	7,652.00	4,702.00	924.00
Road #	4	1100-1200	4,126.00	9,747.07	1,607.00	3,406.00	6,667.07	1,344.07	2,275.01	5,247.00	1,054.00	8,252.00	4,362.00	8,745.05
Road #	4	1200-1300	5,389.00	12,450.00	2,076.00	4,386.00	8,772.00	1,692.00	2,936.00	6,866.00	1,336.00	9,202.00	5,646.00	1,106.00
Road #	4	1300-1400	5,124.00	11,944.00	1,984.00	4,438.00	8,298.00	1,598.00	2,336.00	6,338.00	1,187.00	8,474.00	5,222.00	7,648.00
Road #	4	1400-1500	5,516.00	12,545.00	2,332.00	4,436.00	8,436.00	1,574.00	2,758.00	6,398.00	1,266.00	8,662.00	5,126.00	8,136.00
Road #	4	1500-1600	5,589.00	12,688.00	2,356.00	4,436.00	8,436.00	1,574.00	2,758.00	6,398.00	1,266.00	8,662.00	5,126.00	8,136.00
Road #	4	1600-1700	5,116.00	11,736.00	1,847.00	4,275.00	8,454.00	1,568.00	2,308.00	5,116.00	1,080.00	2,114.00	4,888.00	8,768.00
Road #	4	1700-1800	4,888.00	11,488.00	1,736.00	4,275.00	8,454.00	1,568.00	2,308.00	5,116.00	1,080.00	2,114.00	4,888.00	8,768.00
Road #	4	1800-1900	2,426.00	5,116.00	2,226.00	2,246.00	8,446.00	1,578.00	2,022.01	8,546.00	1,714.00	1,714.00	7,726.00	1,446.00
Road #	4	1900-2000	2,426.00	5,116.00	2,226.00	2,246.00	8,446.00	1,578.00	2,022.01	8,546.00	1,714.00	1,714.00	7,726.00	1,446.00
Road #	4	2000-2100	2,426.00	5,116.00	2,226.00	2,246.00	8,446.00	1,578.00	2,022.01	8,546.00	1,714.00	1,714.00	7,726.00	1,446.00
Road #	4	2100-2200	2,426.00	5,116.00	2,226.00	2,246.00	8,446.00	1,578.00	2,022.01	8,546.00	1,714.00	1,714.00	7,726.00	1,446.00
Road #	4	2300-2400	2,426.00	5,116.00	2,226.00	2,246.00	8,446.00	1,578.00	2,022.01	8,546.00	1,714.00	1,714.00	7,726.00	1,446.00
Road #	5	0800-0900	3,716.42	9,331.07	1,871.05	2,712.02	7,887.07	1,536.05	2,271.01	6,608.16	1,214.04	8,886.01	5,558.16	1,024.04
Road #	5	0900-1000	3,386.00	8,465.00	1,652.00	2,437.00	7,539.00	1,456.00	2,000.00	6,000.00	1,124.00	8,124.00	5,056.00	1,004.00
Road #	5	1000-1100	3,113.00	7,783.00	1,523.00	2,258.00	7,016.00	1,366.00	1,866.00	5,598.00	1,054.00	7,652.00	4,702.00	924.00
Road #	5	1100-1200	4,126.00	9,747.07	1,607.00	3,406.00	6,667.07	1,344.07	2,275.01	5,247.00	1,054.00	8,252.00	4,362.00	8,745.05
Road #	5	1200-1300	5,389.00	12,450.00	2,076.00	4,386.00	8,772.00	1,692.00	2,936.00	6,866.00	1,336.00	9,202.00	5,646.00	1,106.00
Road #	5	1300-1400	5,124.00	11,944.00	1,984.00	4,438.00	8,298.00	1,598.00	2,336.00	6,338.00	1,187.00	8,474.00	5,222.00	7,648.00
Road #	5	1400-1500	5,516.00	12,545.00	2,332.00	4,436.00	8,436.00	1,574.00	2,758.00	6,398.00	1,266.00	8,662.00	5,126.00	8,136.00
Road #	5	1500-1600	5,589.00	12,688.00	2,356.00	4,436.00	8,436.00	1,574.00	2,758.00	6,398.00	1,266.00	8,662.00	5,126.00	8,136.00
Road #	5	1600-1700	5,116.00	11,736.00	1,847.00	4,275.00	8,454.00	1,568.00	2,308.00	5,116.00	1,080.00	2,114.00	4,888.00	8,768.00
Road #	5	1700-1800	4,888.00	11,488.00	1,736.00	4,275.00	8,454.00	1,568.00	2,308.00	5,116.00	1,080.00	2,114.00	4,888.00	8,768.00
Road #	5	1800-1900	2,426.00	5,116.00	2,226.00	2,246.00	8,446.00	1,578.00	2,022.01	8,546.00	1,714.00	1,714.00	7,726.00	1,446.00
Road #	5	1900-2000	2,426.00	5,116.00	2,226.00	2,246.00	8,446.00	1,578.00	2,022.01	8,546.00	1,714.00	1,714.00	7,726.00	1,446.00
Road #	5	2000-2100	2,426.00	5,116.00	2,226.00	2,246.00	8,446.00	1,578.00	2,022.01	8,546.00	1,714.00	1,714.00	7,726.00	1,446.00
Road #	5	2100-2200	2,426.00	5,116.00	2,226.00	2,246.00	8,446.00	1,578.00	2,022.01	8,546.00	1,714.00	1,714.00	7,726.00	1,446.00
Road #	5	2300-2400	2,426.00	5,116.00	2,226.00	2,246.00	8,446.00	1,578.00	2,022.01	8,546.00	1,714.00	1,714.00	7,726.00	1,446.00
Road #	6	0800-0900	3,716.42	9,331.07	1,871.05	2,712.02	7,887.07	1,536.05	2,271.01	6,608.16	1,214.04	8,886.01	5,558.16	1,024.04
Road #	6	0900-1000	3,386.00	8,465.00	1,652.00	2,437.00	7,539.00	1,456.00	2,000.00	6,000.00	1,124.00	8,124.00	5,056.00	1,004.00
Road #	6	1000-1100	3,113.00	7,783.00	1,523.00	2,258.00	7,016.00	1,366.00	1,866.00	5,598.00	1,054.00	7,652.00	4,702.00	924.00
Road #	6	1100-1200	4,126.00	9,747.07	1,607.00	3,406.00	6,667.07	1,344.07	2,275.01	5,247.00	1,054.00	8,252.00	4,362.00	8,745.05
Road #	6	1200-1300	5,389.00	12,450.00	2,076.00	4,386.00	8,772.00	1,692.00	2,936.00	6,866.00	1,336.00	9,202.00	5,646.00	1,106.00
Road #	6	1300-1400	5,124.00	11,944.00	1,984.00	4,438.00	8,298.00	1,598.00	2,336.00	6,338.00	1,187.00	8,474.00	5,222.00	7,648.00
Road #	6	1400-1500	5,516.00	12,545.00	2,332.00	4,436.00	8,436.00	1,574.00	2,758.00	6,398.00	1,266.00	8,662.00	5,126.00	8,136.00
Road #	6	1500-1600	5,589.00	12,688.00	2,356.00	4,436.00	8,436.00	1,574.00	2,758.00	6,398.00	1,266.00	8,662.00	5,126.00	8,136.00
Road #	6	1600-1700	5,116.00	11,736.00	1,847.00	4,275.00	8,454.00	1,568.00	2,308.00	5,116.00	1,080.00	2,114.00	4,888.00	8,768.00
Road #	6	1700-1800	4,888.00	11,488.00	1,736.00	4,275.00	8,454.00	1,568.00	2,308.00	5,116.00	1,080.00	2,114.00	4,888.00	8,768.00
Road #	6	1800-1900	2,426.00	5,116.00	2,226.00	2,246.00	8,446.00	1,578.00	2,022.01	8,546.00	1,714.00	1,714.00	7,726.00	1,446.00
Road #	6	1900-2000	2,426.00	5,116.00	2,226.00	2,246.00	8,446.00	1,578.00	2,022.01	8,546.00	1,714.00	1,714.00	7,726.00	1,446.00
Road #	6	2000-2100	2,426.00	5,116.00	2,226.00	2,246.00	8,446.00	1,578.00	2,022.01	8,546.00	1,714.00	1,714.00	7,726.00	1,446.00
Road #	6	2100-2200	2,426.00	5,116.00	2,226.00	2,246.00	8,446.00	1,578.00	2,022.01	8,546.00	1,714.00	1,714.00	7,726.00	1,446.00
Road #	6	2300-2400	2,426.00	5,116.00	2,226.00	2,246.00	8,446.00	1,578.00	2,022.01	8,546.00	1,714.00	1,714.00	7,726.00	1,446.00
Road #	7	0800-0900	3,716.42	9,331.07	1,871.05	2,712.02	7,887.07	1,536.05	2,271.01	6,608.16	1,214.04	8,886.01	5,558.16	1,024.04
Road #	7	0900-1000	3,386.00	8,465.00	1,652.00	2,437.00	7,539.00	1,456.00	2,000.00	6,000.00	1,124.00	8,124.00	5,056.00	1,004.00
Road #	7	1000-1100	3,113.00	7,783.00	1,523.00	2,258.00	7,016.00	1,366.00	1,866.00	5,598.00	1,054.00	7,652.00	4,702.00	924.00
Road #	7	1100-1200	4,126.00	9,747.07	1,607.00	3,406.00	6,667.07	1,344.07	2,275.01	5,247.00	1,054.00	8,252.00	4,362.00	8,745.05
Road #	7	1200-1300	5,389.00	12,450.00	2,076.00	4,386.00	8,772.00	1,692.00	2,936.00	6,866.00	1,336.00	9,202.00	5,646.00	1,106.00
Road #	7	1300-1400	5,124.00	11,944.00	1,984.00	4,438.00	8,298.00	1,598.00	2,336.00	6,338.00	1,187.00	8,474.00	5,222.00	7,648.00
Road #	7	1400-1500	5,516.00	12,545.00	2,332.00	4,436.00	8,436.00	1,574.00	2,758.00	6,398.00	1,266.00	8,662.00	5,126.00	8,136.00
Road #	7	1500-1600	5,589.00	12,688.00	2,356.00	4,436.00	8,436.00	1,574.00	2,758.00	6,398.00	1,266.00	8,662.00	5,126.00	8,136.00
Road #	7	1600-1700	5,116.00	11,736.00	1,847.00	4,275.00	8,454.00	1,568.00	2,308.00	5,116.00	1,080.00	2,114.00	4,888.00	8,768.00
Road #	7	1700-1800	4,888.00	11,488.00	1,736.00	4,275.00	8,454.00	1,568.00	2,308.00	5,116.00	1,080.00	2,114.00	4,888.00	8,768.00
Road #	7	1800-1900	2,426.00	5,116.00	2,226.00	2,246.00	8,446.00	1,578.00	2,022.01	8,546.00	1,714.00	1,714.00	7,726.00	1,446.00
Road #	7	1900-2000	2,426.00	5,116.00	2,226.00	2,246.00	8,446.00	1,578.00	2,022.01	8,546.00	1,714.00	1,714.00	7,726.00	1,446.00
Road #	7	2000-2100	2,426.00	5,116.00	2,226.00	2,246.00	8,446.00	1,578.00	2,022.01	8,546.00	1,714.00	1,714.00	7,726.00	1,446.00
Road #	7	2100-2200	2,426.00	5,116.00	2,226.00	2,246.00	8,446.00	1,578.00	2,022.01	8,546.00	1,714.00	1,714.00	7,726.00	1,446.00
Road #	7	2300-2400	2,426.00	5,116.00	2,226.00	2,246.00	8,446.00	1,578.00	2,022.01	8,546.00	1,714.00	1,714.00	7,726.00	1,446.00
Road #	8	0800-0900	3,716.42	9,331.07	1,871.05	2,712.02	7,887.07	1,536.05	2,271.01	6,608.16	1,214.04	8,886.01	5,558.16	1,024.04
Road #	8	0900-1000	3,386.00	8,465.00	1,652.00	2,437.00	7,539.00	1,456.00	2,000.00	6,000.00	1,124.00	8,124.00	5,056.00	1,004.00
Road #	8	1000-1100	3,113.00	7,783.00	1,523.00	2,258.00	7,016.00	1,366.00	1,866.00	5,598.00	1,054.00	7,652.00	4,702.00	924.00
Road #	8	1100-1200	4,126.00	9,747.07	1,607.00	3,406.00	6,667.07	1,344.07	2,275.01	5,247.00	1,054.00	8,252.00	4,362.00	8,745.05
Road #	8	1200-1300	5,389.00	12,450.00	2,076.00	4,386.00	8,772.00	1,692.00	2,936.00	6,866.00	1,336.00	9,202.00	5,646	

Secure\Environment Projects\60733229\1.01\Others\Air\Modellink\Appendix\Traffic\OpenRoad\Appendix 3.5.1 Emission Factor in 2028.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Top 24 Hour Emission Factors for ARMOAD model (Metric)																						
			Year		Metric												NO _x Emission		PM ₁₀ Emission		PM _{2.5} Emission	
Road Name	Road ID	Year	Metric			Metric			Metric			Metric			Metric			Metric				
			g/hour	g/min	tonne/hour	g/hour	g/min	tonne/hour	g/hour	g/min	tonne/hour	g/hour	g/min	tonne/hour	g/hour	g/min	tonne/hour	g/hour	g/min	tonne/hour		
Road 1	1500-1700	2000	5.089	0.832	0.077	8.606	0.252	3.658	0.688	3.861	1.188	0.576	3.198	4.288	0.528	4.078	0.508	0.208	1.028			
Road 1	1700-1900	2000	5.178	0.832	0.077	8.606	0.252	3.658	0.688	3.861	1.188	0.576	3.198	4.288	0.528	4.078	0.508	0.208	1.028			
Road 1	1900-2100	2000	2.844	0.422	0.042	4.644	0.242	2.152	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	2100-2300	2000	2.144	0.312	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	2300-2500	2000	2.474	0.342	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	2500-2700	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	2700-2900	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	2900-3100	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	3100-3300	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	3300-3500	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	3500-3700	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	3700-3900	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	3900-4100	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	4100-4300	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	4300-4500	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	4500-4700	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	4700-4900	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	4900-5100	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	5100-5300	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	5300-5500	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	5500-5700	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	5700-5900	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	5900-6100	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	6100-6300	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	6300-6500	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	6500-6700	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	6700-6900	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	6900-7100	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	7100-7300	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	7300-7500	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	7500-7700	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	7700-7900	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	7900-8100	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	8100-8300	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	8300-8500	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	8500-8700	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	8700-8900	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	8900-9100	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	9100-9300	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	9300-9500	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	9500-9700	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	9700-9900	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	9900-10100	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	10100-10300	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	10300-10500	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	10500-10700	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	10700-10900	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	10900-11100	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	11100-11300	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	11300-11500	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	11500-11700	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	11700-11900	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	11900-12100	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	12100-12300	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	12300-12500	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	12500-12700	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	12700-12900	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	12900-13100	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2.881	0.788	0.388	2.188	2.388	0.288	2.188	0.288	0.108	0.508			
Road 1	13100-13300	2000	2.184	0.322	0.032	3.444	0.242	1.652	0.488	2												

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Top North Undermines Factors for ARMAAD Model (Rat)																				
		Year		2020																
Road Name	Road ID	Hour	Moisture (mm)						Moisture (mm)						Moisture (mm)					
			Moisture (mm)		Moisture (mm)		Moisture (mm)		Moisture (mm)		Moisture (mm)		Moisture (mm)		Moisture (mm)		Moisture (mm)			
			g/henr	g/henr	tonne/hour	g/henr	g/henr	tonne/hour	g/henr	g/henr	tonne/hour	g/henr	g/henr	tonne/hour	g/henr	g/henr	tonne/hour			
Road 14	14	0800-0900	7.7862	4.186	2.605	0.589	0.586	1.7416	4.486	4.748	7.348	1.2774	4.110	6.240	1.934	0.45	0.45			
Road 14	14	0900-1000	7.7862	4.186	2.605	0.589	0.586	1.7416	4.486	4.748	7.348	1.2774	4.110	6.240	1.934	0.45	0.45			
Road 14	14	1000-1100	8.9412	5.122	3.018	0.672	0.668	1.9447	5.145	5.474	8.418	1.410	4.934	5.592	0.56	0.45	0.45			
Road 14	14	1100-1200	8.9412	5.122	3.018	0.672	0.668	1.9447	5.145	5.474	8.418	1.410	4.934	5.592	0.56	0.45	0.45			
Road 14	14	1200-1300	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	1300-1400	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	1400-1500	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	1500-1600	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	1600-1700	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	1700-1800	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	1800-1900	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	1900-2000	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	2000-2100	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	2100-2200	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	2200-2300	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	2300-2400	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	2400-2500	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	2500-2600	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	2600-2700	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	2700-2800	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	2800-2900	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	2900-3000	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	3000-3100	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	3100-3200	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	3200-3300	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	3300-3400	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	3400-3500	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	3500-3600	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	3600-3700	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	3700-3800	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	3800-3900	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	3900-4000	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	4000-4100	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	4100-4200	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	4200-4300	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	4300-4400	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	4400-4500	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	4500-4600	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	4600-4700	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	4700-4800	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	4800-4900	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	4900-5000	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	5000-5100	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	5100-5200	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	5200-5300	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	5300-5400	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	5400-5500	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	5500-5600	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	5600-5700	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	5700-5800	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	5800-5900	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	5900-6000	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	6000-6100	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	6100-6200	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	6200-6300	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	6300-6400	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	6400-6500	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	6500-6600	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	6600-6700	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	6700-6800	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	6800-6900	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	6900-7000	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	7000-7100	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	7100-7200	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	7200-7300	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	7300-7400	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	7400-7500	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	7500-7600	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7.601	0.35	5.204	6.138	1.08	0.4	0.4			
Road 14	14	7600-7700	1.061	0.61	0.38	2.145	0.86	1.075	1.935	0.35	7									

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Top North Underscreen Factors for
40mm Mesh

Year 2020														
Road Name	Road ID	Hour	No. Enmesh						No. Enmesh					
			Monthly/ha			Monthly/ha			Monthly/ha			Monthly/ha		
			g/ha/yr	1000/ha/yr	g/ha/yr	1000/ha/yr	g/ha/yr	1000/ha/yr	g/ha/yr	1000/ha/yr	g/ha/yr	1000/ha/yr	g/ha/yr	1000/ha/yr
Road 34	34	0800-0900	6.99E+02	1.70E+03	4.45E+01	1.90E+02	1.44E+06	1.78E+05	1.87E+01	9.48E+08	2.48E+04	1.34E+02	7.99E+08	2.00E+04
		0900-1000	6.92E+02	1.67E+03	4.38E+01	1.86E+02	1.41E+06	1.74E+05	1.83E+01	9.34E+08	2.44E+04	1.31E+02	7.84E+08	1.97E+04
Road 34	34	1000-1100	8.85E+02	2.22E+05	5.51E+01	2.43E+02	1.84E+06	3.70E+05	4.62E+01	1.02E+09	2.38E+04	1.47E+02	7.54E+09	1.97E+04
		1100-1200	7.22E+02	1.83E+03	4.56E+01	1.91E+02	1.41E+06	1.72E+05	1.78E+01	8.88E+08	2.28E+04	1.29E+02	7.44E+08	1.94E+04
Road 34	34	1300-1400	7.49E+02	1.93E+03	5.44E+01	2.13E+02	1.79E+06	4.87E+04	4.97E+01	1.18E+09	3.24E+04	1.51E+02	1.14E+09	2.88E+04
		1400-1500	7.18E+02	1.72E+03	5.20E+01	2.05E+02	1.68E+06	4.74E+04	4.74E+01	1.14E+09	3.18E+04	1.48E+02	1.10E+09	2.83E+04
Road 34	34	1600-1700	6.96E+02	1.69E+03	4.37E+01	1.87E+02	1.43E+06	1.73E+05	1.79E+01	8.94E+08	2.28E+04	1.28E+02	7.39E+08	1.93E+04
		1700-1800	6.92E+02	1.68E+03	4.37E+01	1.82E+02	1.31E+06	4.99E+04	4.88E+01	1.14E+09	3.24E+04	1.48E+02	1.28E+09	3.34E+04
Road 34	34	1900-2000	6.92E+02	1.68E+03	4.37E+01	1.82E+02	1.31E+06	4.99E+04	4.88E+01	1.14E+09	3.24E+04	1.48E+02	1.28E+09	3.34E+04
		2000-2100	6.92E+02	1.68E+03	4.37E+01	1.82E+02	1.31E+06	4.99E+04	4.88E+01	1.14E+09	3.24E+04	1.48E+02	1.28E+09	3.34E+04
Road 34	34	2300-2400	6.92E+02	1.68E+03	4.37E+01	1.82E+02	1.31E+06	4.99E+04	4.88E+01	1.14E+09	3.24E+04	1.48E+02	1.28E+09	3.34E+04
		2400-0100	6.92E+02	1.68E+03	4.37E+01	1.82E+02	1.31E+06	4.99E+04	4.88E+01	1.14E+09	3.24E+04	1.48E+02	1.28E+09	3.34E+04
Road 34	34	0100-0200	6.92E+02	1.68E+03	4.37E+01	1.82E+02	1.31E+06	4.99E+04	4.88E+01	1.14E+09	3.24E+04	1.48E+02	1.28E+09	3.34E+04
		0200-0300	6.92E+02	1.68E+03	4.37E+01	1.82E+02	1.31E+06	4.99E+04	4.88E+01	1.14E+09	3.24E+04	1.48E+02	1.28E+09	3.34E+04
Road 34	34	0300-0400	6.92E+02	1.68E+03	4.37E+01	1.82E+02	1.31E+06	4.99E+04	4.88E+01	1.14E+09	3.24E+04	1.48E+02	1.28E+09	3.34E+04
		0400-0500	6.92E+02	1.68E+03	4.37E+01	1.82E+02	1.31E+06	4.99E+04	4.88E+01	1.14E+09	3.24E+04	1.48E+02	1.28E+09	3.34E+04
Road 34	34	0500-0600	6.92E+02	1.68E+03	4.37E+01	1.82E+02	1.31E+06	4.99E+04	4.88E+01	1.14E+09	3.24E+04	1.48E+02	1.28E+09	3.34E+04
		0600-0700	6.92E+02	1.68E+03	4.37E+01	1.82E+02	1.31E+06	4.99E+04	4.88E+01	1.14E+09	3.24E+04	1.48E+02	1.28E+09	3.34E+04
Road 35	35	0800-0900	1.26E+03	3.16E+03	8.11E+01	3.26E+02	2.56E+06	6.51E+05	6.28E+02	1.52E+09	3.87E+04	2.42E+02	8.41E+07	2.10E+04
		0900-1000	1.24E+03	3.12E+03	7.99E+01	3.20E+02	2.52E+06	6.37E+05	6.13E+02	1.48E+09	3.79E+04	2.38E+02	8.25E+07	2.06E+04
Road 35	35	1000-1100	1.54E+03	3.91E+03	1.01E+02	3.81E+02	3.03E+07	7.67E+05	7.37E+01	1.81E+09	4.56E+04	2.85E+02	9.91E+07	2.45E+04
		1100-1200	1.26E+03	3.16E+03	8.11E+01	3.26E+02	2.56E+06	6.51E+05	6.28E+02	1.52E+09	3.87E+04	2.42E+02	8.41E+07	2.10E+04
Road 35	35	1300-1400	1.54E+03	3.91E+03	1.01E+02	3.81E+02	3.03E+07	7.67E+05	7.37E+01	1.81E+09	4.56E+04	2.85E+02	9.91E+07	2.45E+04
		1400-1500	1.54E+03	3.91E+03	1.01E+02	3.81E+02	3.03E+07	7.67E+05	7.37E+01	1.81E+09	4.56E+04	2.85E+02	9.91E+07	2.45E+04
Road 35	35	1600-1700	1.26E+03	3.16E+03	8.11E+01	3.26E+02	2.56E+06	6.51E+05	6.28E+02	1.52E+09	3.87E+04	2.42E+02	8.41E+07	2.10E+04
		1700-1800	1.24E+03	3.12E+03	7.99E+01	3.20E+02	2.52E+06	6.37E+05	6.13E+02	1.48E+09	3.79E+04	2.38E+02	8.25E+07	2.06E+04
Road 35	35	1900-2000	1.54E+03	3.91E+03	1.01E+02	3.81E+02	3.03E+07	7.67E+05	7.37E+01	1.81E+09	4.56E+04	2.85E+02	9.91E+07	2.45E+04
		2000-2100	1.54E+03	3.91E+03	1.01E+02	3.81E+02	3.03E+07	7.67E+05	7.37E+01	1.81E+09	4.56E+04	2.85E+02	9.91E+07	2.45E+04
Road 35	35	2300-2400	1.54E+03	3.91E+03	1.01E+02	3.81E+02	3.03E+07	7.67E+05	7.37E+01	1.81E+09	4.56E+04	2.85E+02	9.91E+07	2.45E+04
		2400-0100	1.54E+03	3.91E+03	1.01E+02	3.81E+02	3.03E+07	7.67E+05	7.37E+01	1.81E+09	4.56E+04	2.85E+02	9.91E+07	2.45E+04
Road 35	35	0100-0200	1.54E+03	3.91E+03	1.01E+02	3.81E+02	3.03E+07	7.67E+05	7.37E+01	1.81E+09	4.56E+04	2.85E+02	9.91E+07	2.45E+04
		0200-0300	1.54E+03	3.91E+03	1.01E+02	3.81E+02	3.03E+07	7.67E+05	7.37E+01	1.81E+09	4.56E+04	2.85E+02	9.91E+07	2.45E+04
Road 35	35	0300-0400	1.54E+03	3.91E+03	1.01E+02	3.81E+02	3.03E+07	7.67E+05	7.37E+01	1.81E+09	4.56E+04	2.85E+02	9.91E+07	2.45E+04
		0400-0500	1.54E+03	3.91E+03	1.01E+02	3.81E+02	3.03E+07	7.67E+05	7.37E+01	1.81E+09	4.56E+04	2.85E+02	9.91E+07	2.45E+04
Road 35	35	0500-0600	1.54E+03	3.91E+03	1.01E+02	3.81E+02	3.03E+07	7.67E+05	7.37E+01	1.81E+09	4.56E+04	2.85E+02	9.91E+07	2.45E+04
		0600-0700	1.54E+03	3.91E+03	1.01E+02	3.81E+02	3.03E+07	7.67E+05	7.37E+01	1.81E+09	4.56E+04	2.85E+02	9.91E+07	2.45E+04
Road 35	35	0700-0800	1.54E+03	3.91E+03	1.01E+02	3.81E+02	3.03E+07	7.67E+05	7.37E+01	1.81E+09	4.56E+04	2.85E+02	9.91E+07	2.45E+04
		0800-0900	1.54E+03	3.91E+03	1.01E+02	3.81E+02	3.03E+07	7.67E+05	7.37E+01	1.81E+09	4.56E+04	2.85E+02	9.91E+07	2.45E+04
Road 35	35	0900-1000	1.54E+03	3.91E+03	1.01E+02	3.81E+02	3.03E+07	7.67E+05	7.37E+01	1.81E+09	4.56E+04	2.85E+02	9.91E+07	2.45E+04
		1000-1100	1.54E+03	3.91E+03	1.01E+02	3.81E+02	3.03E+07	7.67E+05	7.37E+01	1.81E+09	4.56E+04	2.85E+02	9.91E+07	2.45E+04
Road 35	35	1100-1200	1.54E+03	3.91E+03	1.01E+02	3.81E+02	3.03E+07	7.67E+05	7.37E+01	1.81E+09	4.56E+04	2.85E+02	9.91E+07	2.45E+04
		1200-1300	1.54E+03	3.91E+03	1.01E+02	3.81E+02	3.03E+07	7.67E+05	7.37E+01	1.81E+09	4.56E+04	2.85E+02	9.91E+07	2.45E+04
Road 35	35	1300-1400	1.54E+03	3.91E+03	1.01E+02	3.81E+02	3.03E+07	7.67E+05	7.37E+01	1.81E+09	4.56E+04	2.85E+02	9.91E+07	2.45E+04
		1400-1500	1.54E+03	3.91E+03	1.01E+02	3.81E+02	3.03E+07	7.67E+05	7.37E+01	1.81E+09	4.56E+04	2.85E+02	9.91E+07	2.45E+04
Road 35	35	1500-1600	1.54E+03	3.91E+03	1.01E+02	3.81E+02	3.03E+07	7.67E+05	7.37E+01	1.81E+09	4.56E+04	2.85E+02	9.91E+07	2.45E+04
		1600-1700	1.54E+03	3.91E+03	1.01E+02	3.81E+02	3.03E+07	7.67E+05	7.37E+01	1.81E+09	4.56E+04	2.85E+02	9.91E+07	2.45E+04
Road 35	35	1700-1800	1.54E+03	3.91E+03	1.01E+02	3.81E+02	3.03E+07	7.67E+05	7.37E+01	1.81E+09	4.56E+04	2.85E+02	9.91E+07	2.45E+04
		1800-1900	1.54E+03	3.91E+03	1.01E+02	3.81E+02	3.03E+07	7.67E+05	7.37E+01	1.81E+09	4.56E+04	2.85E+02	9.91E+07	2.45E+04
Road 35	35	1900-2000	1.54E+03	3.91E+03	1.01E+02	3.81E+02	3.03E+07	7.67E+05	7.37E+01	1.81E+09	4.56E+04	2.85E+02	9.91E+07	2.45E+04
		2000-2100	1.54E+03	3.91E+03	1.01E+02	3.81E+02	3.03E+07	7.67E+05	7.37E+01	1.81E+09	4.56E+04	2.85E+02	9.91E+07	2.45E+04
Road 35	35	2100-2200	1.54E+03	3.91E+03	1.01E+02	3.81E+02	3.03E+07	7.67E+05	7.37E+01	1.81E+09	4.56E+04	2.85E+02	9.91E+07	2.45E+04
		2200-2300	1.54E+03	3.91E+03	1.01E+02	3.81E+02	3.03E+07	7.67E+05	7.37E+01	1.81E+09	4.56E+04	2.85E+02	9.91E+07	2.45E+04
Road 35	35	2300-2400	1.54E+03	3.91E+03	1.01E+02	3.81E+02	3.03E+07	7.67E+05	7.37E+01	1.81E+09	4.56E+04	2.85E+02	9.91E+07	2.45E+04
		2400-0100	1.54E+03	3.91E+03	1.01E+02	3.81E+02	3.03E+07	7.67E+05	7.37E+01	1.81E+09	4.56E+04	2.85E+02	9.91E+07	2.45E+04
Road 35	35	0100-0200	1.54E+03	3.91E+03	1.01E+02	3.81E+02	3.03E+07	7.67E+05	7.37E+01	1.81E+09	4.56E+04	2.85E+02	9.91E+07	2.45E+04
		0200-0300	1.54E+03	3.91E+03	1.01E+02	3.81E+02	3.03E+07	7.67E+05	7.37E+01	1.81E+09	4.56E+04	2.85E+02	9.91E+07	2.45E+04
Road 35	35	0300-0400	1.54E+03	3.91E+03	1.01E+02	3.81E+02	3.03E+07	7.67E+05	7.37E+01	1.81E+09	4.56E+04	2.85E+02	9.91E+07	2.45E+04
		0400-0500	1.54E+03	3.91E+03	1.01E+02	3.81E+02	3.03E+07	7.67E+05	7.37E+01	1.81E+09				

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Top North Undermined Quarry														
Key Data for 24 Hour Extraction Factors for														
4000M2 Quarry														
Year 2020														
Rock Name	Road ID	Hour	Moist/Hourly			No Enrichment			Moist/Hourly			No Enrichment		
			g/hour	1000/hour	Monthly/hourage	g/hour	1000/hour	Monthly/hourage	g/hour	1000/hour	Monthly/hourage	g/hour	1000/hour	Monthly/hourage
Round #1	47	1600-1700	6.38E-02	8.71E-07	2.747E-05	3.32E-02	7.26E-07	2.27E-05	3.18E-01	4.144E-05	1.15E-04	2.61E-05	4.37E-06	1.11E-04
Round #1	48	1600-1700	4.44E-02	6.00E-07	1.867E-05	2.26E-02	5.97E-07	1.81E-05	2.42E-01	3.147E-05	1.17E-04	2.64E-05	4.37E-06	1.11E-04
Round #1	49	1600-1700	4.44E-02	6.00E-07	1.867E-05	2.26E-02	5.97E-07	1.81E-05	2.42E-01	3.147E-05	1.17E-04	2.64E-05	4.37E-06	1.11E-04
Round #1	50	1600-1700	2.55E-02	3.54E-07	1.111E-05	1.217E-03	3.310E-07	9.40E-06	1.54E-01	2.145E-05	6.75E-05	1.27E-05	1.78E-05	5.75E-05
Round #1	51	1600-1700	2.13E-02	2.92E-07	9.00E-06	1.051E-03	2.292E-07	6.45E-06	1.34E-01	1.869E-05	5.75E-05	1.27E-05	1.78E-05	5.75E-05
Round #1	47	2100-2200	2.01E-02	3.14E-07	6.170E-06	1.90E-07	1.94E-07	5.84E-06	1.18E-01	1.49E-05	4.54E-05	1.18E-07	1.27E-07	1.97E-05
Round #1	48	2100-2200	1.91E-02	3.08E-07	6.08E-06	1.84E-07	1.87E-07	5.64E-06	1.16E-01	1.44E-05	4.44E-05	1.16E-07	1.25E-07	1.93E-05
Round #1	49	2100-2200	1.91E-02	3.08E-07	6.08E-06	1.84E-07	1.87E-07	5.64E-06	1.16E-01	1.44E-05	4.44E-05	1.16E-07	1.25E-07	1.93E-05
Round #1	50	2100-2200	1.61E-02	2.24E-07	4.881E-06	1.601E-07	1.63E-07	4.84E-06	1.04E-01	1.24E-05	3.74E-05	1.04E-07	1.11E-07	1.71E-05
Round #1	48	0000-0100	6.61E-02	2.24E-07	4.881E-06	1.601E-07	1.63E-07	4.84E-06	1.04E-01	1.24E-05	3.74E-05	1.04E-07	1.11E-07	1.71E-05
Round #1	49	0000-0100	6.61E-02	2.24E-07	4.881E-06	1.601E-07	1.63E-07	4.84E-06	1.04E-01	1.24E-05	3.74E-05	1.04E-07	1.11E-07	1.71E-05
Round #1	50	0000-0100	5.23E-02	1.82E-07	2.751E-06	1.431E-07	1.451E-07	2.42E-06	1.31E-01	1.15E-05	1.73E-05	2.08E-06	1.00E-06	1.51E-05
Round #1	48	0100-0500	5.97E-02	1.82E-07	2.751E-06	1.431E-07	1.451E-07	2.42E-06	1.31E-01	1.15E-05	1.73E-05	2.08E-06	1.00E-06	1.51E-05
Round #1	49	0100-0500	5.97E-02	1.82E-07	2.751E-06	1.431E-07	1.451E-07	2.42E-06	1.31E-01	1.15E-05	1.73E-05	2.08E-06	1.00E-06	1.51E-05
Round #1	50	0100-0500	6.31E-02	1.49E-07	2.570E-06	1.251E-07	1.26E-07	2.08E-06	1.47E-01	2.07E-05	3.12E-05	1.47E-06	1.75E-06	2.62E-05
Round #1	48	0500-0600	1.94E-02	1.49E-07	2.570E-06	1.251E-07	1.26E-07	2.08E-06	1.47E-01	2.07E-05	3.12E-05	1.47E-06	1.75E-06	2.62E-05
Round #1	49	0500-0600	1.94E-02	1.49E-07	2.570E-06	1.251E-07	1.26E-07	2.08E-06	1.47E-01	2.07E-05	3.12E-05	1.47E-06	1.75E-06	2.62E-05
Round #1	50	0500-0600	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	48	0600-0700	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	49	0600-0700	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	50	0600-0700	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	48	0700-0800	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	49	0700-0800	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	50	0700-0800	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	48	0800-0900	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	49	0800-0900	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	50	0800-0900	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	48	0900-1000	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	49	0900-1000	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	50	0900-1000	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	48	1000-1100	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	49	1000-1100	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	50	1000-1100	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	48	1100-1200	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	49	1100-1200	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	50	1100-1200	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	48	1200-1300	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	49	1200-1300	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	50	1200-1300	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	48	1300-1400	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	49	1300-1400	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	50	1300-1400	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	48	1400-1500	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	49	1400-1500	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	50	1400-1500	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	48	1500-1600	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	49	1500-1600	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	50	1500-1600	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	48	1600-1700	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	49	1600-1700	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	50	1600-1700	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	48	1700-1800	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	49	1700-1800	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	50	1700-1800	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	48	1800-1900	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	49	1800-1900	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	50	1800-1900	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	48	1900-2000	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	49	1900-2000	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	50	1900-2000	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	48	2000-2100	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	49	2000-2100	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	50	2000-2100	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E-01	9.40E-06	1.44E-04	1.31E-07	8.27E-07	2.12E-04
Round #1	48	2100-2200	1.69E-02	1.17E-06	5.210E-06	1.58E-07	1.60E-07	2.90E-06	1.20E					

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Top North Undermining Factors														
Year 2020			No. Emulsion											
Row Name	Row ID	Hour	Monthly/Yearly				Monthly/Yearly				Monthly/Yearly			
			g/hour	ton/hour	ton/month	ton/year	g/hour	ton/hour	ton/month	ton/year	g/hour	ton/hour	ton/month	ton/year
Row 41	41	0000-0100	7.02E-02	1.88E-07	1.56E-06	6.09E-02	1.46E-07	1.37E-06	3.80E-03	9.18E-07	8.54E-06	3.77E-03	7.33E-07	7.81E-06
Row 42	42	0000-0100	8.35E-02	2.16E-07	1.80E-06	7.20E-02	1.56E-07	1.46E-06	4.07E-03	7.37E-06	3.19E-05	6.41E-07	7.81E-06	
Row 43	43	0000-0100	9.53E-02	2.47E-07	2.05E-06	8.20E-02	1.76E-07	1.66E-06	4.67E-03	8.40E-06	3.62E-05	7.35E-07	9.14E-06	
Row 44	44	0000-0400	1.05E-01	1.29E-07	1.07E-06	9.20E-03	3.11E-07	1.26E-06	3.56E-03	6.97E-07	6.54E-06	4.29E-07	5.70E-06	
Row 45	45	0000-0400	1.24E-01	1.52E-07	1.27E-06	1.07E-02	3.59E-07	1.46E-06	4.19E-03	8.10E-06	5.44E-06	3.54E-07	4.59E-06	
Row 46	46	0000-0400	9.16E-02	1.80E-07	1.49E-06	5.97E-03	1.83E-07	1.73E-06	4.84E-03	6.47E-06	4.09E-05	8.02E-07	7.31E-06	
Row 47	47	0000-0700	7.72E-02	1.87E-07	1.56E-06	6.24E-03	2.46E-07	2.26E-06	5.97E-03	1.09E-06	1.39E-05	2.70E-06	1.36E-05	
Row 48	48	0000-0700	8.68E-02	2.14E-07	1.78E-06	7.12E-03	2.80E-07	2.60E-06	6.79E-03	1.26E-06	1.63E-05	3.25E-06	1.60E-05	
Row 49	49	0800-0800	8.87E-02	2.45E-07	8.02E-06	7.32E-02	2.74E-07	8.80E-06	4.34E-03	4.19E-05	4.12E-05	1.84E-05	7.20E-06	
Row 50	50	0800-0800	9.93E-02	2.76E-07	8.90E-06	8.12E-02	3.05E-07	9.70E-06	4.84E-03	4.69E-05	4.62E-05	2.06E-05	8.00E-06	
Row 51	51	0800-1100	1.09E-01	1.99E-07	8.84E-06	9.33E-02	7.73E-07	7.25E-06	4.54E-03	4.32E-05	4.24E-05	4.67E-05	1.87E-06	
Row 52	52	0800-1100	1.10E-01	2.00E-07	8.85E-06	9.34E-02	7.74E-07	7.26E-06	4.55E-03	4.33E-05	4.25E-05	4.68E-05	1.88E-06	
Row 53	53	1100-1100	1.10E-01	2.00E-07	8.85E-06	9.34E-02	7.74E-07	7.26E-06	4.55E-03	4.33E-05	4.25E-05	4.68E-05	1.88E-06	
Row 54	54	1300-1400	1.10E-01	2.00E-07	8.85E-06	9.34E-02	7.74E-07	7.26E-06	4.55E-03	4.33E-05	4.25E-05	4.68E-05	1.88E-06	
Row 55	55	1400-1600	1.10E-01	2.00E-07	8.85E-06	9.34E-02	7.74E-07	7.26E-06	4.55E-03	4.33E-05	4.25E-05	4.68E-05	1.88E-06	
Row 56	56	1500-1600	1.05E-01	2.62E-07	7.77E-06	8.65E-02	6.80E-07	6.18E-07	5.31E-03	4.72E-06	3.56E-05	3.46E-05	3.21E-05	
Row 57	57	1600-1700	1.05E-01	2.62E-07	7.77E-06	8.65E-02	6.80E-07	6.18E-07	5.31E-03	4.72E-06	3.56E-05	3.46E-05	3.21E-05	
Row 58	58	1700-1800	8.66E-02	3.11E-07	6.86E-06	2.46E-02	6.31E-07	1.57E-06	4.33E-03	1.05E-05	1.59E-05	1.86E-05	3.61E-05	
Row 59	59	2000-2100	7.22E-01	6.31E-07	1.36E-06	6.18E-02	5.28E-07	4.93E-06	3.86E-03	3.17E-07	3.76E-05	2.78E-05	2.61E-05	
Row 60	60	2000-2100	4.48E-01	1.04E-07	2.22E-06	3.74E-02	8.27E-07	6.16E-06	4.83E-03	3.97E-07	4.75E-05	3.41E-05	2.29E-05	
Row 61	61	2200-2300	4.93E-02	2.00E-07	2.00E-06	4.31E-02	1.09E-07	1.80E-07	2.73E-03	1.72E-05	1.15E-05	2.17E-06	1.60E-06	
Row 62	62	2300-2400	6.21E-02	2.50E-07	2.50E-06	5.31E-02	1.36E-07	2.25E-07	3.44E-03	2.22E-05	1.44E-05	2.69E-06	9.21E-06	
Row 63	63	0000-0100	7.02E-02	1.88E-07	1.56E-06	6.09E-02	1.46E-07	1.37E-06	3.80E-03	9.18E-07	8.54E-06	3.77E-03	7.33E-07	
Row 64	64	0000-0100	8.35E-02	2.16E-07	1.80E-06	7.20E-02	1.56E-07	1.46E-06	4.07E-03	7.37E-06	3.19E-05	6.41E-07	7.81E-06	
Row 65	65	0000-0100	9.53E-02	2.47E-07	2.05E-06	8.20E-02	1.76E-07	1.66E-06	4.67E-03	8.40E-06	3.62E-05	7.35E-07	9.14E-06	
Row 66	66	0000-0400	1.05E-01	1.29E-07	1.07E-06	9.20E-03	3.11E-07	1.26E-06	3.56E-03	6.97E-07	6.54E-06	4.29E-07	5.70E-06	
Row 67	67	0000-0400	1.24E-01	1.52E-07	1.27E-06	1.07E-02	3.59E-07	1.46E-06	4.19E-03	8.10E-06	5.44E-06	3.54E-07	4.59E-06	
Row 68	68	0000-0400	9.16E-02	1.80E-07	1.49E-06	5.97E-03	1.83E-07	1.73E-06	4.84E-03	6.47E-06	4.09E-05	8.02E-07	7.31E-06	
Row 69	69	0000-0700	7.72E-02	1.87E-07	1.56E-06	6.24E-03	2.46E-07	2.26E-06	5.97E-03	1.09E-06	1.39E-05	2.70E-06	1.36E-05	
Row 70	70	0000-0700	8.68E-02	2.14E-07	1.78E-06	7.12E-03	2.80E-07	2.60E-06	6.79E-03	1.26E-06	1.63E-05	3.25E-06	1.60E-05	
Row 71	71	0800-0800	8.87E-02	2.45E-07	8.02E-06	7.32E-02	2.74E-07	8.80E-06	4.34E-03	4.19E-05	4.12E-05	1.84E-05	7.20E-06	
Row 72	72	0800-0800	9.93E-02	2.76E-07	8.90E-06	8.12E-02	3.05E-07	9.70E-06	4.84E-03	4.69E-05	4.62E-05	2.06E-05	8.00E-06	
Row 73	73	0800-1100	1.09E-01	1.99E-07	8.84E-06	9.33E-02	7.73E-07	7.25E-06	4.54E-03	4.32E-05	4.24E-05	4.67E-05	1.87E-06	
Row 74	74	0800-1100	1.10E-01	2.00E-07	8.85E-06	9.34E-02	7.74E-07	7.26E-06	4.55E-03	4.33E-05	4.25E-05	4.68E-05	1.88E-06	
Row 75	75	1100-1100	1.10E-01	2.00E-07	8.85E-06	9.34E-02	7.74E-07	7.26E-06	4.55E-03	4.33E-05	4.25E-05	4.68E-05	1.88E-06	
Row 76	76	1300-1400	1.10E-01	2.00E-07	8.85E-06	9.34E-02	7.74E-07	7.26E-06	4.55E-03	4.33E-05	4.25E-05	4.68E-05	1.88E-06	
Row 77	77	1400-1600	1.10E-01	2.00E-07	8.85E-06	9.34E-02	7.74E-07	7.26E-06	4.55E-03	4.33E-05	4.25E-05	4.68E-05	1.88E-06	
Row 78	78	1500-1600	1.05E-01	2.62E-07	7.77E-06	8.65E-02	6.80E-07	6.18E-07	5.31E-03	4.72E-06	3.56E-05	3.46E-05	3.21E-05	
Row 79	79	1600-1700	1.05E-01	2.62E-07	7.77E-06	8.65E-02	6.80E-07	6.18E-07	5.31E-03	4.72E-06	3.56E-05	3.46E-05	3.21E-05	
Row 80	80	1700-1800	8.66E-02	3.11E-07	6.86E-06	2.46E-02	6.31E-07	1.57E-06	4.33E-03	1.05E-05	1.59E-05	1.86E-05	3.61E-05	
Row 81	81	2000-2100	7.22E-01	6.31E-07	1.36E-06	6.18E-02	5.28E-07	4.93E-06	3.86E-03	3.17E-07	3.76E-05	2.78E-05	2.61E-05	
Row 82	82	2000-2100	4.48E-01	1.04E-07	2.22E-06	3.74E-02	8.27E-07	6.16E-06	4.83E-03	3.97E-07	4.75E-05	3.41E-05	2.29E-05	
Row 83	83	2200-2300	4.93E-02	2.00E-07	2.00E-06	4.31E-02	1.09E-07	1.80E-07	2.73E-03	1.72E-05	1.15E-05	2.17E-06	1.60E-06	
Row 84	84	2300-2400	6.21E-02	2.50E-07	2.50E-06	5.31E-02	1.36E-07	2.25E-07	3.44E-03	2.22E-05	1.44E-05	2.69E-06	9.21E-06	
Row 85	85	0000-0100	7.02E-02	1.88E-07	1.56E-06	6.09E-02	1.46E-07	1.37E-06	3.80E-03	9.18E-07	8.54E-06	3.77E-03	7.33E-07	
Row 86	86	0000-0100	8.35E-02	2.16E-07	1.80E-06	7.20E-02	1.56E-07	1.46E-06	4.07E-03	7.37E-06	3.19E-05	6.41E-07	7.81E-06	
Row 87	87	0000-0100	9.53E-02	2.47E-07	2.05E-06	8.20E-02	1.76E-07	1.66E-06	4.67E-03	8.40E-06	3.62E-05	7.35E-07	9.14E-06	
Row 88	88	0000-0400	1.05E-01	1.29E-07	1.07E-06	9.20E-03	3.11E-07	1.26E-06	3.56E-03	6.97E-07	6.54E-06	4.29E-07	5.70E-06	
Row 89	89	0000-0400	1.24E-01	1.52E-07	1.27E-06	1.07E-02	3.59E-07	1.46E-06	4.19E-03	8.10E-06	5.44E-06	3.54E-07	4.59E-06	
Row 90	90	0000-0400	9.16E-02	1.80E-07	1.49E-06	5.97E-03	1.83E-07	1.73E-06	4.84E-03	6.47E-06	4.09E-05	8.02E-07	7.31E-06	
Row 91	91	0000-0700	7.72E-02	1.87E-07	1.56E-06	6.24E-03	2.46E-07	2.26E-06	5.97E-03	1.09E-06	1.39E-05	2.70E-06	1.36E-05	
Row 92	92	0000-0700	8.68E-02	2.14E-07	1.78E-06	7.12E-03	2.80E-07	2.60E-06	6.79E-03	1.26E-06	1.63E-05	3.25E-06	1.60E-05	
Row 93	93	0800-0800	8.87E-02	2.45E-07	8.02E-06	7.32E-02	2.74E-07	8.80E-06	4.34E-03	4.19E-05	4.12E-05	1.84E-05	7.20E-06	
Row 94	94	0800-0800	9.93E-02	2.76E-07	8.90E-06	8.12E-02	3.05E-07	9.70E-06	4.84E-03	4.69E-05	4.62E-05	2.06E-05	8.00E-06	
Row 95	95	0800-1100	1.09E-01	1.99E-07	8.84E-06	9.33E-02	7.73E-07	7.25E-06	4.54E-03	4.32E-05	4.24E-05	4.67E-05	1.87E-06	
Row 96	96	0800-1100	1.10E-01	2.00E-07	8.85E-06	9.34E-02	7.74E-07	7.26E-06	4.55E-03	4.33E-05	4.25E-05	4.68E-05	1.88E-06	
Row 97	97	1100-1100	1.10E-01	2.00E-07	8.85E-06	9.34E-02	7.74E-07	7.26E-06	4.55E-03	4.33E-05	4.25E-05	4.68E-05	1.88E-06	
Row 98	98	1300-1400	1.10E-01	2.00E-07	8.85E-06	9.34E-02	7.74E-07	7.26E-06	4.55E-03	4.33E-05	4.25E-05	4.68E-05	1.88E-06	
Row 99	99	1400-1600	1.10E-01	2.00E-07	8.85E-06	9.34E-02	7.74E-07	7.26E-06	4.55E-03	4.33E-05	4.25E-05	4.68E-05	1.88E-06	
Row 100	100	1500-1600	1.05E-01	2.62E-07	7.77E-06	8.65E-02	6.80E-07	6.18E-07	5.31E-03	4.72E-06	3.56E-05	3.46E-05	3.21E-05	
Row 101	101	1600-1700	1.05E-01	2.62E-07	7.77E-06	8.65E-02	6.80E-07	6.18E-07	5.31E-03	4.72E-06	3.56E-05	3.46E-05	3.21E-05	
Row 102	102	1700-1800	8.66E-02	3.11E-07	6.86E-06	2.46E-02	6.31E-07	1.57E-06	4.33E-03	1.05E-05	1.59E-05	1.86E-05	3.61E-05	
Row 103	103	2000-2100	7.22E-01	6.31E-07	1.36E-06	6.18E-02	5.28E-07	4.93E-06	3.86E-03	3.17E-07	3.76E-05	2.78E-05	2.61E-05	
Row 104	104	2000-2100	4.48E-01	1.04E-07	2.22E-06	3.74E-02	8.27E-07	6.16E-06	4.83E-03	3.97E-07	4.75E-05	3.41E-05	2.29E-05	
Row 105	105	2200-2300	4.93E-02	2.00E-07	2.00E-06	4.31E-02	1.09E-07	1.80E-07	2.73E-03	1.72E-05	1.15E-05	2.17E-06	1.60E-06	
Row 106	106	2300-2400	6.21E-02	2.50E-07	2.50E-06	5.31E-02	1.36E-07	2.25E-07	3.44E-03	2.22E-05	1.44E-05	2.69E-06	9.21E-06	
Row 107	107	0000-0100	7.02E-02	1.88E-07	1.56E-06	6.09E-02	1.46E-07	1.37E-06	3.80E-03	9.18E-07	8.54E-06	3.77E-03	7.33E-07	
Row 108														

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open N ₂ North Undermining Factors													
Year 2020													
42nd Avenue Road													
Road Name		Road ID		Floor		No. Emulsion				No. Emulsion			
						Monthly/Average		Monthly/Average		Monthly/Average		Monthly/Average	
						g/h/m ²	lb/ton/mi	g/h/m ²	lb/ton/mi	g/h/m ²	lb/ton/mi	g/h/m ²	lb/ton/mi
Road 54	54	0802-0900	1.6441	6.1117	0.1387	3.396	0.1147	1.1885	7.806	0.1228	6.6105	5.1461	2.4318
Road 54	54	0802-0900	1.8741	6.8107	0.1395	3.5467	0.1205	8.0541	2.1268	0.1212	7.4101	7.4101	2.4318
Road 54	54	0802-0900	2.1081	7.0103	0.1403	3.7019	0.1263	8.5586	2.5306	0.1219	7.9146	7.9146	2.4318
Road 54	54	1300-1400	2.9561	8.3227	0.1445	4.4725	0.1313	1.2115	0.5054	2.0088	6.698	7.0411	2.446
Road 54	54	1300-1400	2.7221	8.1223	0.1437	4.2721	0.1305	1.2115	0.5054	2.0088	6.698	7.0411	2.446
Road 54	54	1300-1400	2.4881	7.9217	0.1429	4.0727	0.1297	1.2115	0.5054	2.0088	6.698	7.0411	2.446
Road 54	54	1800-1900	2.4881	7.9217	0.1429	4.0727	0.1297	1.2115	0.5054	2.0088	6.698	7.0411	2.446
Road 54	54	1800-1900	2.7221	8.1223	0.1437	4.2721	0.1305	1.2115	0.5054	2.0088	6.698	7.0411	2.446
Road 54	54	1800-1900	2.9561	8.3227	0.1445	4.4725	0.1313	1.2115	0.5054	2.0088	6.698	7.0411	2.446
Road 54	54	1900-2000	2.4881	7.9217	0.1429	4.0727	0.1297	1.2115	0.5054	2.0088	6.698	7.0411	2.446
Road 54	54	1900-2000	2.7221	8.1223	0.1437	4.2721	0.1305	1.2115	0.5054	2.0088	6.698	7.0411	2.446
Road 54	54	1900-2000	2.9561	8.3227	0.1445	4.4725	0.1313	1.2115	0.5054	2.0088	6.698	7.0411	2.446
Road 54	54	2300-2400	1.7441	3.8867	0.0771	0.506	2.9067	0.6325	0.8361	1.6326	0.0808	7.126	1.1268
Road 54	54	2300-2400	1.9781	4.0863	0.0779	0.5262	3.1063	0.6525	0.8561	1.8362	0.0816	7.3266	1.1468
Road 54	54	2300-2400	2.2121	4.2859	0.0787	0.5464	3.3059	0.6725	0.8761	2.0358	0.0824	7.5272	1.1668
Road 54	54	2300-2400	2.4461	4.4855	0.0795	0.5666	3.5055	0.6925	0.8961	2.2354	0.0832	7.7278	1.1868
Road 54	54	2300-2400	2.6801	4.6851	0.0803	0.5868	3.7051	0.7125	0.9161	2.4350	0.084	7.9284	1.2068
Road 54	54	2300-2400	2.9141	4.8847	0.0811	0.607	3.9047	0.7325	0.9361	2.6346	0.0848	8.1290	1.2268
Road 54	54	2300-2400	3.1481	5.0843	0.0819	0.6272	4.1043	0.7525	0.9561	2.8342	0.0856	8.3296	1.2468
Road 54	54	2300-2400	3.3821	5.2839	0.0827	0.6474	4.3039	0.7725	0.9761	3.0338	0.0864	8.5302	1.2668
Road 54	54	2300-2400	3.6161	5.4835	0.0835	0.6676	4.5035	0.7925	0.9961	3.2334	0.0872	8.7308	1.2868
Road 54	54	2300-2400	3.8501	5.6831	0.0843	0.6878	4.7031	0.8125	1.0161	3.4330	0.088	8.9314	1.3068
Road 54	54	2300-2400	4.0841	5.8827	0.0851	0.708	4.9027	0.8325	1.0361	3.6326	0.0888	9.1320	1.3268
Road 54	54	2300-2400	4.3181	6.0823	0.0859	0.7282	5.1023	0.8525	1.0561	3.8322	0.0896	9.3326	1.3468
Road 54	54	2300-2400	4.5521	6.2819	0.0867	0.7484	5.3019	0.8725	1.0761	4.0318	0.0904	9.5332	1.3668
Road 54	54	2300-2400	4.7861	6.4815	0.0875	0.7686	5.5015	0.8925	1.0961	4.2314	0.0912	9.7338	1.3868
Road 54	54	2300-2400	5.0201	6.6811	0.0883	0.7888	5.7011	0.9125	1.1161	4.4310	0.092	9.9344	1.4068
Road 54	54	2300-2400	5.2541	6.8807	0.0891	0.809	5.9007	0.9325	1.1361	4.6306	0.0928	10.1350	1.4268
Road 54	54	2300-2400	5.4881	7.0803	0.0899	0.8292	6.1003	0.9525	1.1561	4.8302	0.0936	10.3356	1.4468
Road 54	54	2300-2400	5.7221	7.2799	0.0907	0.8494	6.3000	0.9725	1.1761	5.0298	0.0944	10.5362	1.4668
Road 54	54	2300-2400	5.9561	7.4795	0.0915	0.8696	6.5000	0.9925	1.1961	5.2294	0.0952	10.7368	1.4868
Road 54	54	2300-2400	6.1901	7.6791	0.0923	0.8898	6.7000	1.0125	1.2161	5.4290	0.096	10.9374	1.5068
Road 54	54	2300-2400	6.4241	7.8787	0.0931	0.91	6.9000	1.0325	1.2361	5.6286	0.0968	11.1380	1.5268
Road 54	54	2300-2400	6.6581	8.0783	0.0939	0.9302	7.1000	1.0525	1.2561	5.8282	0.0976	11.3386	1.5468
Road 54	54	2300-2400	6.8921	8.2779	0.0947	0.9504	7.3000	1.0725	1.2761	6.0278	0.0984	11.5392	1.5668
Road 54	54	2300-2400	7.1261	8.4775	0.0955	0.9706	7.5000	1.0925	1.2961	6.2274	0.0992	11.7398	1.5868
Road 54	54	2300-2400	7.3601	8.6771	0.0963	0.9908	7.7000	1.1125	1.3161	6.4270	0.1001	11.9404	1.6068
Road 54	54	2300-2400	7.5941	8.8767	0.0971	1.011	7.9000	1.1325	1.3361	6.6266	0.1009	12.1410	1.6268
Road 54	54	2300-2400	7.8281	9.0763	0.0979	1.0312	8.1000	1.1525	1.3561	6.8262	0.1017	12.3416	1.6468
Road 54	54	2300-2400	8.0621	9.2759	0.0987	1.0514	8.3000	1.1725	1.3761	7.0258	0.1025	12.5422	1.6668
Road 54	54	2300-2400	8.2961	9.4755	0.0995	1.0716	8.5000	1.1925	1.3961	7.2254	0.1033	12.7428	1.6868
Road 54	54	2300-2400	8.5301	9.6751	0.1003	1.0918	8.7000	1.2125	1.4161	7.4250	0.1041	12.9434	1.7068
Road 54	54	2300-2400	8.7641	9.8747	0.1011	1.112	8.9000	1.2325	1.4361	7.6246	0.1049	13.1440	1.7268
Road 54	54	2300-2400	8.9981	10.0743	0.1019	1.1322	9.1000	1.2525	1.4561	7.8242	0.1057	13.3446	1.7468
Road 54	54	2300-2400	9.2321	10.2739	0.1027	1.1524	9.3000	1.2725	1.4761	8.0238	0.1065	13.5452	1.7668
Road 54	54	2300-2400	9.4661	10.4735	0.1035	1.1726	9.5000	1.2925	1.4961	8.2234	0.1073	13.7458	1.7868
Road 54	54	2300-2400	9.7001	10.6731	0.1043	1.1928	9.7000	1.3125	1.5161	8.4230	0.1081	13.9464	1.8068
Road 54	54	2300-2400	9.9341	10.8727	0.1051	1.213	9.9000	1.3325	1.5361	8.6226	0.1089	14.1470	1.8268
Road 54	54	2300-2400	10.1681	11.0723	0.1059	1.2332	10.1000	1.3525	1.5561	8.8222	0.1097	14.3476	1.8468
Road 54	54	2300-2400	10.4021	11.2719	0.1067	1.2534	10.3000	1.3725	1.5761	9.0218	0.1105	14.5482	1.8668
Road 54	54	2300-2400	10.6361	11.4715	0.1075	1.2736	10.5000	1.3925	1.5961	9.2214	0.1113	14.7488	1.8868
Road 54	54	2300-2400	10.8701	11.6711	0.1083	1.2938	10.7000	1.4125	1.6161	9.4210	0.1121	14.9494	1.9068
Road 54	54	2300-2400	11.1041	11.8707	0.1091	1.314	10.9000	1.4325	1.6361	9.6206	0.1129	15.1500	1.9268
Road 54	54	2300-2400	11.3381	12.0703	0.1099	1.3342	11.1000	1.4525	1.6561	9.8202	0.1137	15.3506	1.9468
Road 54	54	2300-2400	11.5721	12.2699	0.1107	1.3544	11.3000	1.4725	1.6761	10.0198	0.1145	15.5512	1.9668
Road 54	54	2300-2400	11.8061	12.4695	0.1115	1.3746	11.5000	1.4925	1.6961	10.2194	0.1153	15.7518	1.9868
Road 54	54	2300-2400	12.0401	12.6691	0.1123	1.3948	11.7000	1.5125	1.7161	10.4190	0.1161	15.9524	2.0068
Road 54	54	2300-2400	12.2741	12.8687	0.1131	1.415	11.9000	1.5325	1.7361	10.6186	0.1169	16.1530	2.0268
Road 54	54	2300-2400	12.5081	13.0683	0.1139	1.4352	12.1000	1.5525	1.7561	10.8182	0.1177	16.3536	2.0468
Road 54	54	2300-2400	12.7421	13.2679	0.1147	1.4554	12.3000	1.5725	1.7761	11.0178	0.1185	16.5542	2.0668
Road 54	54	2300-2400	12.9761	13.4675	0.1155	1.4756	12.5000	1.5925	1.7961	11.2174	0.1193	16.7548	2.0868
Road 54	54	2300-2400	13.2101	13.6671	0.1163	1.4958	12.7000	1.6125	1.8161	11.4170	0.1201	16.9554	2.1068
Road 54	54	2300-2400	13.4441	13.8667	0.1171	1.516	12.9000	1.6325	1.8361	11.6166	0.1209	17.1560	2.1268
Road 54	54	2300-2400	13.6781	14.0663	0.1179	1.5362	13.1000	1.6525	1.8561	11.8162	0.1217	17.3566	2.1468
Road 54	54	2300-2400	13.9121	14.2659	0.1187	1.5564	13.3000	1.6725	1.8761	12.0158	0.1225	17.5572	2.1668
Road 54	54	2300-2400	14.1461	14.4655	0.1195	1.5766	13.5000	1.6925	1.8961	12.2154	0.1233	17.7578	2.1868
Road 54	54	2300-2400	14.3801	14.6651	0.1203	1.5968	13.7000	1.7125	1.9161	12.4150	0.1241	17.9584	2.2068
Road 54	54	2300-2400	14.6141	14.8647	0.1211	1.617	13.9000	1.7325	1.9361	12.6146	0.1249	18.1590	2.2268
Road 54	54	2300-2400	14.8481	15.0643	0.1219	1.6372	14.1000	1.7525	1.9561	12.8142	0.1257	18.3596	2.2468
Road 54	54	2300-2400	15.0821	15.2639	0.1227	1.6574	14.3000	1.7725	1.9761	13.0138	0.1265	18.5602	2.2668
Road 54	54	2300-2400	15.3161	15.4635	0.1235	1.6776	14.5000	1.7925	1.9961	13.2134	0.1273	18.7608	2.2868
Road 54	54	2300-2400	15.5501	15.6631	0.1243	1.6978	14.7000	1.8125	2.0161	13.4130	0.1281	18.9614	2.3068
Road 54	54	2300-2400	15.7841	15.8627	0.1251	1.718	14.9000	1.8325	2.0361	13.6126	0.1289	19.1620	2.3268
Road 54	54	2300-2400	16.0181	16.0623	0.1259	1.7382	15.1000	1.8525	2.0561	13.8122	0.1297	19.3626	2.3468
Road 54	54	2300-2400	16.2521	16.2619	0.1267	1.7584	15.3000	1.8725	2.0761	14.0118	0.1305	19.5632	2.3668
Road 54	54	2300-2400	16.4861	16.4615	0.1275	1.7786	15.5000	1.8925	2.0961	14.2114	0.1313	19.7638	2.3868
Road 54	54	2300-2400	16.7201	16.6611	0.1283	1.7988	15.7000	1.9125	2.1161	14.4110	0.1321	19.9644	2.4068
Road 54													

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Open Road Y4 Northbound Quarry													
Open Road Y4 North Emission Factors for ASBESTOS material													
Year 2008													
Route Name	Road ID	Hour	MD Emission				NO Emission						
			g/hr	g/hr	g/hr	g/hr	g/hr	g/hr	g/hr	g/hr			
			Monthly Average				Monthly Average						
			g/hr	g/hr	g/hr	g/hr	g/hr	g/hr	g/hr	g/hr	g/hr	g/hr	
Route 44	44	0800-0900	4.51E+02	4.51E+02	5.53E+02	3.86E+02	7.59E+02	4.69E+02	3.07E+02	6.09E+02	3.74E+02	5.07E+02	3.13E+02
Route 44	44	0900-1000	4.92E+02	4.92E+02	5.59E+02	4.36E+02	8.24E+02	4.94E+02	3.43E+02	6.75E+02	3.90E+02	5.26E+02	3.40E+02
Route 44	44	1000-1100	5.05E+02	5.05E+02	5.72E+02	4.50E+02	8.57E+02	5.07E+02	3.56E+02	6.97E+02	4.03E+02	5.40E+02	3.53E+02
Route 44	44	1100-1200	5.17E+02	5.17E+02	5.84E+02	4.62E+02	8.70E+02	5.19E+02	3.68E+02	7.10E+02	4.15E+02	5.52E+02	3.65E+02
Route 44	44	1200-1300	5.29E+02	5.29E+02	5.96E+02	4.74E+02	8.83E+02	5.31E+02	3.80E+02	7.23E+02	4.22E+02	5.65E+02	3.78E+02
Route 44	44	1300-1400	5.41E+02	5.41E+02	6.08E+02	4.86E+02	8.96E+02	5.43E+02	3.92E+02	7.36E+02	4.30E+02	5.78E+02	3.91E+02
Route 44	44	1400-1500	5.53E+02	5.53E+02	6.20E+02	4.98E+02	9.09E+02	5.55E+02	4.04E+02	7.49E+02	4.38E+02	5.90E+02	4.03E+02
Route 44	44	1500-1600	5.65E+02	5.65E+02	6.32E+02	5.10E+02	9.22E+02	5.67E+02	4.16E+02	7.62E+02	4.46E+02	6.02E+02	4.16E+02
Route 44	44	1600-1700	5.77E+02	5.77E+02	6.44E+02	5.22E+02	9.35E+02	5.79E+02	4.28E+02	7.75E+02	4.54E+02	6.14E+02	4.28E+02
Route 44	44	1700-1800	5.89E+02	5.89E+02	6.56E+02	5.34E+02	9.48E+02	5.91E+02	4.40E+02	7.88E+02	4.62E+02	6.26E+02	4.40E+02
Route 44	44	1800-1900	6.01E+02	6.01E+02	6.68E+02	5.46E+02	9.61E+02	6.03E+02	4.52E+02	8.01E+02	4.70E+02	6.38E+02	4.52E+02
Route 44	44	1900-2000	2.78E+02	2.78E+02	4.46E+02	2.47E+02	4.37E+02	3.93E+02	2.47E+02	3.17E+02	2.91E+02	3.39E+02	3.33E+02
Route 44	44	2000-2100	2.41E+02	2.41E+02	3.94E+02	2.10E+02	3.84E+02	3.40E+02	2.10E+02	2.81E+02	2.55E+02	3.03E+02	3.03E+02
Route 44	44	2100-2200	2.34E+02	2.34E+02	3.87E+02	2.03E+02	3.77E+02	3.33E+02	2.03E+02	2.74E+02	2.48E+02	2.96E+02	2.96E+02
Route 44	44	2200-2300	2.26E+02	2.26E+02	3.79E+02	1.95E+02	3.69E+02	3.25E+02	1.95E+02	2.66E+02	2.40E+02	2.88E+02	2.88E+02
Route 44	44	2300-2400	2.18E+02	2.18E+02	3.71E+02	1.87E+02	3.61E+02	3.17E+02	1.87E+02	2.58E+02	2.32E+02	2.80E+02	2.80E+02
Route 44	44	2400-2500	2.10E+02	2.10E+02	3.63E+02	1.79E+02	3.53E+02	3.09E+02	1.79E+02	2.50E+02	2.24E+02	2.72E+02	2.72E+02
Route 44	44	2500-2600	2.02E+02	2.02E+02	3.55E+02	1.71E+02	3.45E+02	3.01E+02	1.71E+02	2.42E+02	2.16E+02	2.64E+02	2.64E+02
Route 44	44	2600-2700	1.94E+02	1.94E+02	3.47E+02	1.63E+02	3.37E+02	2.93E+02	1.63E+02	2.34E+02	2.08E+02	2.56E+02	2.56E+02
Route 44	44	2700-2800	1.86E+02	1.86E+02	3.39E+02	1.55E+02	3.29E+02	2.85E+02	1.55E+02	2.26E+02	1.99E+02	2.48E+02	2.48E+02
Route 44	44	2800-2900	1.78E+02	1.78E+02	3.31E+02	1.47E+02	3.21E+02	2.77E+02	1.47E+02	2.18E+02	1.91E+02	2.40E+02	2.40E+02
Route 44	44	2900-3000	1.70E+02	1.70E+02	3.23E+02	1.39E+02	3.13E+02	2.69E+02	1.39E+02	2.10E+02	1.83E+02	2.32E+02	2.32E+02
Route 44	44	3000-3100	1.62E+02	1.62E+02	3.15E+02	1.31E+02	3.05E+02	2.61E+02	1.31E+02	2.02E+02	1.75E+02	2.24E+02	2.24E+02
Route 44	44	3100-3200	1.54E+02	1.54E+02	3.07E+02	1.23E+02	2.97E+02	2.53E+02	1.23E+02	1.94E+02	1.67E+02	2.16E+02	2.16E+02
Route 44	44	3200-3300	1.46E+02	1.46E+02	2.99E+02	1.15E+02	2.89E+02	2.49E+02	1.15E+02	1.86E+02	1.59E+02	2.08E+02	2.08E+02
Route 44	44	3300-3400	1.38E+02	1.38E+02	2.91E+02	1.07E+02	2.81E+02	2.41E+02	1.07E+02	1.78E+02	1.51E+02	2.00E+02	2.00E+02
Route 44	44	3400-3500	1.30E+02	1.30E+02	2.83E+02	9.9E+01	2.73E+02	2.33E+02	9.9E+01	1.70E+02	1.43E+02	1.92E+02	1.92E+02
Route 44	44	3500-3600	1.22E+02	1.22E+02	2.75E+02	9.1E+01	2.65E+02	2.25E+02	9.1E+01	1.62E+02	1.35E+02	1.84E+02	1.84E+02
Route 44	44	3600-3700	1.14E+02	1.14E+02	2.67E+02	8.3E+01	2.57E+02	2.17E+02	8.3E+01	1.54E+02	1.27E+02	1.76E+02	1.76E+02
Route 44	44	3700-3800	1.06E+02	1.06E+02	2.59E+02	7.5E+01	2.49E+02	2.09E+02	7.5E+01	1.46E+02	1.19E+02	1.68E+02	1.68E+02
Route 44	44	3800-3900	9.8E+01	9.8E+01	2.51E+02	6.7E+01	2.41E+02	2.01E+02	6.7E+01	1.38E+02	1.11E+02	1.60E+02	1.60E+02
Route 44	44	3900-4000	9.0E+01	9.0E+01	2.43E+02	5.9E+01	2.33E+02	1.93E+02	5.9E+01	1.30E+02	1.03E+02	1.52E+02	1.52E+02
Route 44	44	4000-4100	8.2E+01	8.2E+01	2.35E+02	5.1E+01	2.25E+02	1.85E+02	5.1E+01	1.22E+02	9.5E+01	1.44E+02	1.44E+02
Route 44	44	4100-4200	7.4E+01	7.4E+01	2.27E+02	4.3E+01	2.17E+02	1.77E+02	4.3E+01	1.14E+02	8.7E+01	1.36E+02	1.36E+02
Route 44	44	4200-4300	6.6E+01	6.6E+01	2.19E+02	3.5E+01	2.09E+02	1.69E+02	3.5E+01	1.06E+02	7.9E+01	1.28E+02	1.28E+02
Route 44	44	4300-4400	5.8E+01	5.8E+01	2.11E+02	2.7E+01	2.01E+02	1.61E+02	2.7E+01	9.8E+01	7.1E+01	1.20E+02	1.20E+02
Route 44	44	4400-4500	5.0E+01	5.0E+01	2.03E+02	1.9E+01	1.93E+02	1.53E+02	1.9E+01	9.0E+01	6.3E+01	1.12E+02	1.12E+02
Route 44	44	4500-4600	4.2E+01	4.2E+01	1.95E+02	1.1E+01	1.85E+02	1.45E+02	1.1E+01	8.2E+01	5.5E+01	1.04E+02	1.04E+02
Route 44	44	4600-4700	3.4E+01	3.4E+01	1.87E+02	3.0E+01	1.77E+02	1.37E+02	3.0E+01	7.4E+01	4.7E+01	9.6E+01	9.6E+01
Route 44	44	4700-4800	2.6E+01	2.6E+01	1.79E+02	2.2E+01	1.69E+02	1.29E+02	2.2E+01	6.6E+01	3.9E+01	8.8E+01	8.8E+01
Route 44	44	4800-4900	1.8E+01	1.8E+01	1.71E+02	1.4E+01	1.61E+02	1.21E+02	1.4E+01	5.8E+01	3.1E+01	8.0E+01	8.0E+01
Route 44	44	4900-5000	1.0E+01	1.0E+01	1.63E+02	6.0E+01	1.53E+02	1.13E+02	6.0E+01	5.0E+01	2.3E+01	7.2E+01	7.2E+01
Route 44	44	5000-5100	2.0E+00	2.0E+00	1.55E+02	4.0E+01	1.45E+02	1.05E+02	4.0E+01	4.0E+01	1.3E+01	6.2E+01	6.2E+01
Route 44	44	5100-5200	1.2E+00	1.2E+00	1.47E+02	3.2E+01	1.37E+02	9.7E+01	3.2E+01	3.2E+01	1.1E+01	5.4E+01	5.4E+01
Route 44	44	5200-5300	4.0E+00	4.0E+00	1.39E+02	2.4E+01	1.29E+02	8.9E+01	2.4E+01	2.4E+01	9.0E+00	4.6E+01	4.6E+01
Route 44	44	5300-5400	2.0E+00	2.0E+00	1.31E+02	1.6E+01	1.21E+02	8.1E+01	1.6E+01	1.6E+01	7.0E+00	4.0E+01	4.0E+01
Route 44	44	5400-5500	1.2E+00	1.2E+00	1.23E+02	8.0E+00	1.13E+02	7.3E+01	8.0E+00	8.0E+00	4.0E+00	3.2E+01	3.2E+01
Route 44	44	5500-5600	4.0E+00	4.0E+00	1.15E+02	6.0E+00	1.05E+02	6.5E+01	6.0E+00	6.0E+00	2.0E+00	2.4E+01	2.4E+01
Route 44	44	5600-5700	3.0E+00	3.0E+00	1.07E+02	4.0E+00	9.7E+01	5.7E+01	4.0E+00	4.0E+00	1.0E+00	1.6E+01	1.6E+01
Route 44	44	5700-5800	2.0E+00	2.0E+00	9.9E+01	3.0E+00	8.9E+01	4.9E+01	3.0E+00	3.0E+00	7.0E+00	1.0E+01	1.0E+01
Route 44	44	5800-5900	1.0E+00	1.0E+00	9.1E+01	2.0E+00	8.1E+01	4.1E+01	2.0E+00	2.0E+00	4.0E+00	5.0E+00	5.0E+00
Route 44	44	5900-6000	4.0E+00	4.0E+00	8.3E+01	1.0E+00	7.3E+01	3.3E+01	1.0E+00	1.0E+00	2.0E+00	2.0E+01	2.0E+01
Route 44	44	6000-6100	2.0E+00	2.0E+00	7.5E+01	6.0E+00	6.5E+01	2.5E+01	6.0E+00	6.0E+00	1.0E+00	1.0E+01	1.0E+01
Route 44	44	6100-6200	1.0E+00	1.0E+00	6.7E+01	4.0E+00	5.7E+01	1.7E+01	4.0E+00	4.0E+00	5.0E+00	5.0E+00	5.0E+00
Route 44	44	6200-6300	4.0E+00	4.0E+00	5.9E+01	2.0E+00	4.9E+01	1.3E+01	2.0E+00	2.0E+00	4.0E+00	4.0E+00	4.0E+00
Route 44	44	6300-6400	2.0E+00	2.0E+00	5.1E+01	1.0E+00	4.1E+01	1.1E+01	1.0E+00	1.0E+00	2.0E+00	2.0E+00	2.0E+00
Route 44	44	6400-6500	1.0E+00	1.0E+00	4.3E+01	6.0E+00	3.3E+01	9.0E+00	6.0E+00	6.0E+00	1.0E+00	1.0E+01	1.0E+01
Route 44	44	6500-6600	4.0E+00	4.0E+00	3.5E+01	4.0E+00	2.5E+01	7.0E+00	4.0E+00	4.0E+00	1.0E+00	1.0E+01	1.0E+01
Route 44	44	6600-6700	3.0E+00	3.0E+00	2.7E+01	3.0E+00	1.7E+01	5.0E+00	3.0E+00	3.0E+00	7.0E+00	7.0E+00	7.0E+00
Route 44	44	6700-6800	2.0E+00	2.0E+00	1.9E+01	2.0E+00	9.0E+00	3.0E+00	2.0E+00	2.0E+00	4.0E+00	4.0E+00	4.0E+00
Route 44	44	6800-6900	1.0E+00	1.0E+00	1.1E+01	1.0E+00	5.0E+00	1.0E+00	1.0E+00	1.0E+00	2.0E+00	2.0E+00	2.0E+00
Route 44	44	6900-7000	4.0E+00	4.0E+00	3.0E+01	4.0E+00	1.5E+01	3.0E+00	4.0E+00	4.0E+00	1.0E+00	1.0E+01	1.0E+01
Route 44	44	7000-7100	2.0E+00	2.0E+00	2.2E+01	2.0E+00	1.0E+01	2.0E+00	2.0E+00	2.0E+00	4.0E+00	4.0E+00	4.0E+00
Route 44	44	7100-7200	1.0E+00	1.0E+00	1.4E+01	1.0E+00	6.0E+00	1.0E+00	1.0E+00	1.0E+00	2.0E+00	2.0E+00	2.0E+00
Route 44	44	7200-7300	4.0E+00	4.0E+00	6.0E+00	4.0E+00	2.0E+01	4.0E+00	4.0E+00	4.0E+00	1.0E+00	1.0E+01	1.0E+01
Route 44	44	7300-7400	3.0E+00	3.0E+00	5.2E+00	3.0E+00	1.8E+01	3.0E+00	3.0E+00	3.0E+00	7.0E+00	7.0E+00	7.0E+00
Route 44	44	7400-7500	2.0E+00	2.0E+00	4.4E+00	2.0E+00	1.6E+01	2.0E+00	2.0E+00	2.0E+00	4.0E+00	4.0E+00	4.0E+00
Route 44	44	7500-7600	1.0E+00	1.0E+00	3.6E+00	1.0E+00	1.4E+01	1.0E+00	1.0E+00	1.0E+00	2.0E+00	2.0E+00	2.0E+00
Route 44	44	7600-7700	4.0E+00	4.0E+00	2.8E+00	4.0E+00	1.0E+01	4.0E+00	4.0E+00	4.0E+00	1.0E+00	1.0E+01	1.0E+01
Route 44	44	7700-7800	2.0E+00	2.0E+00	2.0E+00	2.0E+00	8.0E+00	2.0E+00	2.0E+00	2.0E+00	4.0E+00	4.0E+00	4.0E+00
Route 44	44	7800-7900	1.0E+00	1.0E+00	1.2E+00	1.0							

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Top North Underdrain Pans														
Q1 2024 North 2nd Emission Factors for APM200 model														
Year 2028														
Road name	Road ID	Hour	NO _x Emission				NO _y Emission				NO _z Emission			
			g/km/hour	g/km	g/km/hour	g/km	g/km/hour	g/km	g/km/hour	g/km	g/km/hour	g/km	g/km/hour	
Road 27	27000	1200	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	1800	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	2400	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	3000	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	3600	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	4200	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	4800	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	5400	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	6000	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	6600	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	7200	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	7800	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	8400	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	9000	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	9600	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	10200	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	10800	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	11400	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	12000	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	12600	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	13200	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	13800	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	14400	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	15000	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	15600	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	16200	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	16800	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	17400	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	18000	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	18600	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	19200	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	19800	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	20400	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	21000	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	21600	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	22200	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	22800	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	23400	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	24000	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	24600	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	25200	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	25800	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	26400	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	27000	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	27600	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	28200	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	28800	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	29400	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	30000	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	30600	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	31200	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	31800	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	32400	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	33000	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	33600	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	34200	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	34800	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	35400	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	36000	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	36600	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	37200	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	37800	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	38400	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	39000	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	39600	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	40200	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	40800	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	41400	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	42000	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	42600	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	43200	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	43800	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	44400	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	45000	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	45600	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	46200	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	46800	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	47400	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	48000	2.916	0.717	2.336	0.591	6.526	2.008	1.285	3.361	1.035	1.110	2.886	8.876
Road 27	27000	48600	2.916	0.71										

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Top North Understorey Factors for Year 2008

Year 2008															
Road Name	Road ID	Hour	NO ₂ Emission						NO ₂ Emission						
			Month/Jan/Feb			Month/March/Apr			Month/May/June			Month/July/Aug			
			g/hour	g/hour	time/hour	g/hour	g/hour	time/hour	g/hour	g/hour	time/hour	g/hour	g/hour	time/hour	
Road 34	34	0800-0900	6.600	6.600	1.575	0.15	5.115	1.330	0.35	5.315	0.35	9.115	2.200	3.045	4.745
Road 34	34	0900-1200	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	1200-1500	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	1500-1800	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	1800-2100	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	2100-2400	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	0800-0900	6.600	6.600	1.575	0.15	5.115	1.330	0.35	5.315	0.35	9.115	2.200	3.045	4.745
Road 34	34	0900-1200	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	1200-1500	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	1500-1800	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	1800-2100	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	2100-2400	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	0800-0900	6.600	6.600	1.575	0.15	5.115	1.330	0.35	5.315	0.35	9.115	2.200	3.045	4.745
Road 34	34	0900-1200	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	1200-1500	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	1500-1800	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	1800-2100	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	2100-2400	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	0800-0900	6.600	6.600	1.575	0.15	5.115	1.330	0.35	5.315	0.35	9.115	2.200	3.045	4.745
Road 34	34	0900-1200	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	1200-1500	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	1500-1800	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	1800-2100	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	2100-2400	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	0800-0900	6.600	6.600	1.575	0.15	5.115	1.330	0.35	5.315	0.35	9.115	2.200	3.045	4.745
Road 34	34	0900-1200	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	1200-1500	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	1500-1800	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	1800-2100	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	2100-2400	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	0800-0900	6.600	6.600	1.575	0.15	5.115	1.330	0.35	5.315	0.35	9.115	2.200	3.045	4.745
Road 34	34	0900-1200	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	1200-1500	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	1500-1800	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	1800-2100	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	2100-2400	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	0800-0900	6.600	6.600	1.575	0.15	5.115	1.330	0.35	5.315	0.35	9.115	2.200	3.045	4.745
Road 34	34	0900-1200	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	1200-1500	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	1500-1800	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	1800-2100	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	2100-2400	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	0800-0900	6.600	6.600	1.575	0.15	5.115	1.330	0.35	5.315	0.35	9.115	2.200	3.045	4.745
Road 34	34	0900-1200	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	1200-1500	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	1500-1800	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	1800-2100	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	2100-2400	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	0800-0900	6.600	6.600	1.575	0.15	5.115	1.330	0.35	5.315	0.35	9.115	2.200	3.045	4.745
Road 34	34	0900-1200	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	1200-1500	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	1500-1800	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	1800-2100	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	2100-2400	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	0800-0900	6.600	6.600	1.575	0.15	5.115	1.330	0.35	5.315	0.35	9.115	2.200	3.045	4.745
Road 34	34	0900-1200	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	1200-1500	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	1500-1800	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	1800-2100	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	2100-2400	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	0800-0900	6.600	6.600	1.575	0.15	5.115	1.330	0.35	5.315	0.35	9.115	2.200	3.045	4.745
Road 34	34	0900-1200	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	1200-1500	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	1500-1800	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	1800-2100	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	2100-2400	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	0800-0900	6.600	6.600	1.575	0.15	5.115	1.330	0.35	5.315	0.35	9.115	2.200	3.045	4.745
Road 34	34	0900-1200	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	1200-1500	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	1500-1800	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	1800-2100	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245
Road 34	34	2100-2400	8.500	8.500	2.125	0.35	8.150	2.075	0.50	8.650	0.50	12.115	3.085	4.165	5.245

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Top North Under Emission Factors for APM200 model (Year 2028)														
Road name	Road ID	Hour	NO _x Emission						NO Emission					
			Month/January			Month/February			Month/March			Month/April		
			g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour
Road #1	000001000	0.8452	1.5447	1.5458	1.7262	1.3787	1.2685	3.4885	3.3247	3.0718	3.1768	3.0751	7.3440	8.8964
		0.7155	1.2950	1.2950	1.4754	1.1279	1.0177	2.9185	2.7537	2.5008	2.6058	2.5008	6.1440	7.6964
Road #1	000001001	0.8452	1.5447	1.5458	1.7262	1.3787	1.2685	3.4885	3.3247	3.0718	3.1768	3.0751	7.3440	8.8964
		0.7155	1.2950	1.2950	1.4754	1.1279	1.0177	2.9185	2.7537	2.5008	2.6058	2.5008	6.1440	7.6964
Road #1	000001002	0.8452	1.5447	1.5458	1.7262	1.3787	1.2685	3.4885	3.3247	3.0718	3.1768	3.0751	7.3440	8.8964
		0.7155	1.2950	1.2950	1.4754	1.1279	1.0177	2.9185	2.7537	2.5008	2.6058	2.5008	6.1440	7.6964
Road #1	000001003	0.8452	1.5447	1.5458	1.7262	1.3787	1.2685	3.4885	3.3247	3.0718	3.1768	3.0751	7.3440	8.8964
		0.7155	1.2950	1.2950	1.4754	1.1279	1.0177	2.9185	2.7537	2.5008	2.6058	2.5008	6.1440	7.6964
Road #1	000001004	0.8452	1.5447	1.5458	1.7262	1.3787	1.2685	3.4885	3.3247	3.0718	3.1768	3.0751	7.3440	8.8964
		0.7155	1.2950	1.2950	1.4754	1.1279	1.0177	2.9185	2.7537	2.5008	2.6058	2.5008	6.1440	7.6964
Road #1	000001005	0.8452	1.5447	1.5458	1.7262	1.3787	1.2685	3.4885	3.3247	3.0718	3.1768	3.0751	7.3440	8.8964
		0.7155	1.2950	1.2950	1.4754	1.1279	1.0177	2.9185	2.7537	2.5008	2.6058	2.5008	6.1440	7.6964
Road #1	000001006	0.8452	1.5447	1.5458	1.7262	1.3787	1.2685	3.4885	3.3247	3.0718	3.1768	3.0751	7.3440	8.8964
		0.7155	1.2950	1.2950	1.4754	1.1279	1.0177	2.9185	2.7537	2.5008	2.6058	2.5008	6.1440	7.6964
Road #1	000001007	0.8452	1.5447	1.5458	1.7262	1.3787	1.2685	3.4885	3.3247	3.0718	3.1768	3.0751	7.3440	8.8964
		0.7155	1.2950	1.2950	1.4754	1.1279	1.0177	2.9185	2.7537	2.5008	2.6058	2.5008	6.1440	7.6964
Road #1	000001008	0.8452	1.5447	1.5458	1.7262	1.3787	1.2685	3.4885	3.3247	3.0718	3.1768	3.0751	7.3440	8.8964
		0.7155	1.2950	1.2950	1.4754	1.1279	1.0177	2.9185	2.7537	2.5008	2.6058	2.5008	6.1440	7.6964
Road #1	000001009	0.8452	1.5447	1.5458	1.7262	1.3787	1.2685	3.4885	3.3247	3.0718	3.1768	3.0751	7.3440	8.8964
		0.7155	1.2950	1.2950	1.4754	1.1279	1.0177	2.9185	2.7537	2.5008	2.6058	2.5008	6.1440	7.6964
Road #1	000001010	0.8452	1.5447	1.5458	1.7262	1.3787	1.2685	3.4885	3.3247	3.0718	3.1768	3.0751	7.3440	8.8964
		0.7155	1.2950	1.2950	1.4754	1.1279	1.0177	2.9185	2.7537	2.5008	2.6058	2.5008	6.1440	7.6964
Road #1	000001011	0.8452	1.5447	1.5458	1.7262	1.3787	1.2685	3.4885	3.3247	3.0718	3.1768	3.0751	7.3440	8.8964
		0.7155	1.2950	1.2950	1.4754	1.1279	1.0177	2.9185	2.7537	2.5008	2.6058	2.5008	6.1440	7.6964
Road #1	000001012	0.8452	1.5447	1.5458	1.7262	1.3787	1.2685	3.4885	3.3247	3.0718	3.1768	3.0751	7.3440	8.8964
		0.7155	1.2950	1.2950	1.4754	1.1279	1.0177	2.9185	2.7537	2.5008	2.6058	2.5008	6.1440	7.6964
Road #1	000001013	0.8452	1.5447	1.5458	1.7262	1.3787	1.2685	3.4885	3.3247	3.0718	3.1768	3.0751	7.3440	8.8964
		0.7155	1.2950	1.2950	1.4754	1.1279	1.0177	2.9185	2.7537	2.5008	2.6058	2.5008	6.1440	7.6964
Road #1	000001014	0.8452	1.5447	1.5458	1.7262	1.3787	1.2685	3.4885	3.3247	3.0718	3.1768	3.0751	7.3440	8.8964
		0.7155	1.2950	1.2950	1.4754	1.1279	1.0177	2.9185	2.7537	2.5008	2.6058	2.5008	6.1440	7.6964
Road #1	000001015	0.8452	1.5447	1.5458	1.7262	1.3787	1.2685	3.4885	3.3247	3.0718	3.1768	3.0751	7.3440	8.8964
		0.7155	1.2950	1.2950	1.4754	1.1279	1.0177	2.9185	2.7537	2.5008	2.6058	2.5008	6.1440	7.6964
Road #1	000001016	0.8452	1.5447	1.5458	1.7262	1.3787	1.2685	3.4885	3.3247	3.0718	3.1768	3.0751	7.3440	8.8964
		0.7155	1.2950	1.2950	1.4754	1.1279	1.0177	2.9185	2.7537	2.5008	2.6058	2.5008	6.1440	7.6964
Road #1	000001017	0.8452	1.5447	1.5458	1.7262	1.3787	1.2685	3.4885	3.3247	3.0718	3.1768	3.0751	7.3440	8.8964
		0.7155	1.2950	1.2950	1.4754	1.1279	1.0177	2.9185	2.7537	2.5008	2.6058	2.5008	6.1440	7.6964
Road #1	000001018	0.8452	1.5447	1.5458	1.7262	1.3787	1.2685	3.4885	3.3247	3.0718	3.1768	3.0751	7.3440	8.8964
		0.7155	1.2950	1.2950	1.4754	1.1279	1.0177	2.9185	2.7537	2.5008	2.6058	2.5008	6.1440	7.6964
Road #1	000001019	0.8452	1.5447	1.5458	1.7262	1.3787	1.2685	3.4885	3.3247	3.0718	3.1768	3.0751	7.3440	8.8964
		0.7155	1.2950	1.2950	1.4754	1.1279	1.0177	2.9185	2.7537	2.5008	2.6058	2.5008	6.1440	7.6964
Road #1	000001020	0.8452	1.5447	1.5458	1.7262	1.3787	1.2685	3.4885	3.3247	3.0718	3.1768	3.0751	7.3440	8.8964
		0.7155	1.2950	1.2950	1.4754	1.1279	1.0177	2.9185	2.7537	2.5008	2.6058	2.5008	6.1440	7.6964
Road #1	000001021	0.8452	1.5447	1.5458	1.7262	1.3787	1.2685	3.4885	3.3247	3.0718	3.1768	3.0751	7.3440	8.8964
		0.7155	1.2950	1.2950	1.4754	1.1279	1.0177	2.9185	2.7537	2.5008	2.6058	2.5008	6.1440	7.6964
Road #1	000001022	0.8452	1.5447	1.5458	1.7262	1.3787	1.2685	3.4885	3.3247	3.0718	3.1768	3.0751	7.3440	8.8964
		0.7155	1.2950	1.2950	1.4754	1.1279	1.0177	2.9185	2.7537	2.5008	2.6058	2.5008	6.1440	7.6964
Road #1	000001023	0.8452	1.5447	1.5458	1.7262	1.3787	1.2685	3.4885	3.3247	3.0718	3.1768	3.0751	7.3440	8.8964
		0.7155	1.2950	1.2950	1.4754	1.1279	1.0177	2.9185	2.7537	2.5008	2.6058	2.5008	6.1440	7.6964
Road #1	000001024	0.8452	1.5447	1.5458	1.7262	1.3787	1.2685	3.4885	3.3247	3.0718	3.1768	3.0751	7.3440	8.8964
		0.7155	1.2950	1.2950	1.4754	1.1279	1.0177	2.9185	2.7537	2.5008	2.6058	2.5008	6.1440	7.6964
Road #1	000001025	0.8452	1.5447	1.5458	1.7262	1.3787	1.2685	3.4885	3.3247	3.0718	3.1768	3.0751	7.3440	8.8964
		0.7155	1.2950	1.2950	1.4754	1.1279	1.0177	2.9185	2.7537	2.5008	2.6058	2.5008	6.1440	7.6964
Road #1	000001026	0.8452	1.5447	1.5458	1.7262	1.3787	1.2685	3.4885	3.3247	3.0718	3.1768	3.0751	7.3440	8.8964
		0.7155	1.2950	1.2950	1.4754	1.1279	1.0177	2.9185	2.7537	2.5008	2.6058	2.5008	6.1440	7.6964
Road #1	000001027	0.8452	1.5447	1.5458	1.7262	1.3787	1.2685	3.4885	3.3247	3.0718	3.1768	3.0751	7.3440	8.8964
		0.7155	1.2950	1.2950	1.4754	1.1279	1.0177	2.9185	2.7537	2.5008	2.6058	2.5008	6.1440	7.6964
Road #1	000001028	0.8452	1.5447	1.5458	1.7262	1.3787	1.2685	3.4885	3.3247	3.0718	3.1768	3.0751	7.3440	8.8964
		0.7155	1.2950	1.2950	1.4754	1.1279	1.0177	2.9185	2.7537	2.5008	2.6058	2.5008	6.1440	7.6964
Road #1	000001029	0.8452	1.5447	1.5458	1.7262	1.3787	1.2685	3.4885	3.3247	3.0718	3.1768	3.0751	7.3440	8.8964
		0.7155	1.2950	1.2950	1.4754	1.1279	1.0177	2.9185	2.7537	2.5008	2.6058	2.5008	6.1440	7.6964
Road #1	000001030	0.8452	1.5447	1.5458	1.7262	1.3787	1.2685	3.4885	3.3247	3.0718	3.1768	3.0751	7.3440	8.8964
		0.7155	1.2950	1.2950	1.4754	1.1279	1.0177	2.9185	2.7537	2.5008	2.6058	2.5008	6.1440	7.6964
Road #1	000001031	0.8452	1.5447	1.5458	1.7262	1.3787	1.2685	3.4885	3.3247	3.0718	3.1768	3.0751	7.3440	8.8964
		0.7155	1.2950	1.2950	1.4754	1.1279	1.0177	2.9185	2.7537	2.5008	2.6058	2.5008	6.1440	7.6964
Road #1	000001032	0.8452	1.5447	1.5458	1.7262	1.3787	1.2685	3.4885	3.3247	3.0718	3.1768	3.0751	7.3440	8.8964
		0.7155	1.2950	1.2950	1.4754	1.1279	1.0177	2.9185	2.7537	2.5008	2.6058	2.5008	6.1440	7.6964
Road #1	000001033	0.8452	1.5447	1.5458	1.7262	1.3787	1.2685	3.4885	3.3247	3.0718	3.1768	3.0751	7.3440	8.8964
		0.7155	1.2950	1.2950	1.4754	1.1279	1.0177	2.9185	2.7537	2.5008	2.6058	2.5008	6.1440	7.6964
Road #1	000001034	0.8452	1.5447	1.5458	1.7262	1.3787	1.2685	3.4885	3.3247	3.0718	3.1768	3.0751	7.3440	8.8964
		0.7155	1.2950	1.2950	1.4754	1.1279	1.0177	2.9185	2.7537	2.5008	2.6058	2.5008	6.1440	7.6964
Road #1	000001035	0.8452	1.5447	1.5458	1.7262	1.3787	1.2685	3.4885	3.3247	3.0718	3.1768	3.0751	7.3440	8.8964
		0.7155	1.2950	1.2950	1.4754	1.1279	1.0177	2.9185	2.7537	2.5008	2.6058	2.5008	6.1440	7.6964
Road #1	000001036	0.8452	1.5447	1.5458	1.7262	1.3787	1.2685	3.4885	3.3247	3.0718	3.1768	3.0751	7.3440	8.8964
		0.7155	1.2950	1.2950	1.4754	1.1279	1.0177	2.9185	2.7537	2.5008	2.6058	2.5008	6.1440	7.6964
Road #1	000001037	0.8452	1.5447	1.5458	1.7262	1.3787	1.2685	3.4885	3.3247	3.0718	3.1768	3.0751	7.3440	8.8964
		0.7155	1.2950											

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Open 24 hr Unit Exhaustion Factors for Air-Mixing and Noise														
Year 2028														
Road Name	Road ID	Hour	NO _x Emission						NO ₂ Emission					
			g/hour/mi	g/min	g/min/mi	g/hour/mi	g/min	g/min/mi	g/hour/mi	g/min	g/min/mi	g/hour/mi		
Road 44	00000000	14:00	4.195	8.245	5.075	4.067	7.217	4.376	2.837	5.548	3.424	2.396	4.717	2.915
		15:00	4.165	8.165	5.025	4.037	7.137	4.346	2.807	5.468	3.394	2.366	4.637	2.885
Road 44	10000000	14:00	4.840	8.840	5.725	4.689	8.232	4.848	3.545	6.228	3.926	2.766	4.938	3.085
		15:00	4.810	8.760	5.675	4.659	8.152	4.818	3.515	6.148	3.896	2.736	4.858	3.055
Road 44	13000000	14:00	5.100	9.100	5.950	4.940	8.477	4.746	3.320	5.846	3.658	2.620	4.964	3.065
		15:00	5.070	9.020	5.900	4.910	8.397	4.716	3.290	5.766	3.628	2.590	4.884	3.035
Road 44	14000000	14:00	5.770	9.770	6.175	5.570	9.133	5.066	3.770	6.588	4.060	2.870	5.135	3.185
		15:00	5.740	9.690	6.125	5.540	9.048	5.036	3.740	6.508	4.030	2.840	5.055	3.155
Road 44	15000000	14:00	6.440	9.940	6.345	6.240	9.447	5.266	4.040	6.888	4.360	3.080	5.408	3.375
		15:00	6.410	9.860	6.295	6.210	9.362	5.236	4.010	6.808	4.330	3.050	5.328	3.345
Road 44	17000000	14:00	7.720	9.720	6.345	7.140	8.447	5.266	4.040	6.888	4.360	3.080	5.408	3.375
		15:00	7.690	9.640	6.295	7.110	8.362	5.236	4.010	6.808	4.330	3.050	5.328	3.345
Road 44	18000000	14:00	8.400	9.400	6.345	7.820	8.447	5.266	4.040	6.888	4.360	3.080	5.408	3.375
		15:00	8.370	9.320	6.295	7.790	8.362	5.236	4.010	6.808	4.330	3.050	5.328	3.345
Road 44	19000000	14:00	9.080	9.080	6.345	8.500	8.447	5.266	4.040	6.888	4.360	3.080	5.408	3.375
		15:00	9.050	8.990	6.295	8.470	8.362	5.236	4.010	6.808	4.330	3.050	5.328	3.345
Road 44	20000000	14:00	9.760	8.760	6.345	9.180	8.447	5.266	4.040	6.888	4.360	3.080	5.408	3.375
		15:00	9.730	8.680	6.295	9.150	8.362	5.236	4.010	6.808	4.330	3.050	5.328	3.345
Road 45	00000000	2:00	4.195	8.245	5.075	4.067	7.217	4.376	2.837	5.548	3.424	2.396	4.717	2.915
		3:00	4.165	8.165	5.025	4.037	7.137	4.346	2.807	5.468	3.394	2.366	4.637	2.885
Road 45	10000000	2:00	4.840	8.840	5.725	4.689	8.232	4.848	3.545	6.228	3.926	2.766	4.938	3.085
		3:00	4.810	8.760	5.675	4.659	8.152	4.818	3.515	6.148	3.896	2.736	4.858	3.055
Road 45	13000000	2:00	5.100	9.100	5.950	4.940	8.477	4.746	3.320	5.846	3.658	2.620	4.964	3.065
		3:00	5.070	9.020	5.900	4.910	8.397	4.716	3.290	5.766	3.628	2.590	4.884	3.035
Road 45	14000000	2:00	5.770	9.770	6.175	5.570	9.133	5.066	3.770	6.588	4.060	2.870	5.135	3.185
		3:00	5.740	9.690	6.125	5.540	9.048	5.036	3.740	6.508	4.030	2.840	5.055	3.155
Road 45	15000000	2:00	6.440	9.940	6.345	6.240	9.447	5.266	4.040	6.888	4.360	3.080	5.408	3.375
		3:00	6.410	9.860	6.295	6.210	9.362	5.236	4.010	6.808	4.330	3.050	5.328	3.345
Road 45	17000000	2:00	7.720	9.720	6.345	7.140	8.447	5.266	4.040	6.888	4.360	3.080	5.408	3.375
		3:00	7.690	9.640	6.295	7.110	8.362	5.236	4.010	6.808	4.330	3.050	5.328	3.345
Road 45	18000000	2:00	8.400	9.400	6.345	7.820	8.447	5.266	4.040	6.888	4.360	3.080	5.408	3.375
		3:00	8.370	9.320	6.295	7.790	8.362	5.236	4.010	6.808	4.330	3.050	5.328	3.345
Road 45	19000000	2:00	9.080	9.080	6.345	8.500	8.447	5.266	4.040	6.888	4.360	3.080	5.408	3.375
		3:00	9.050	8.990	6.295	8.470	8.362	5.236	4.010	6.808	4.330	3.050	5.328	3.345
Road 45	20000000	2:00	9.760	8.760	6.345	9.180	8.447	5.266	4.040	6.888	4.360	3.080	5.408	3.375
		3:00	9.730	8.680	6.295	9.150	8.362	5.236	4.010	6.808	4.330	3.050	5.328	3.345
Road 46	00000000	2:00	4.195	8.245	5.075	4.067	7.217	4.376	2.837	5.548	3.424	2.396	4.717	2.915
		3:00	4.165	8.165	5.025	4.037	7.137	4.346	2.807	5.468	3.394	2.366	4.637	2.885
Road 46	10000000	2:00	4.840	8.840	5.725	4.689	8.232	4.848	3.545	6.228	3.926	2.766	4.938	3.085
		3:00	4.810	8.760	5.675	4.659	8.152	4.818	3.515	6.148	3.896	2.736	4.858	3.055
Road 46	13000000	2:00	5.100	9.100	5.950	4.940	8.477	4.746	3.320	5.846	3.658	2.620	4.964	3.065
		3:00	5.070	9.020	5.900	4.910	8.397	4.716	3.290	5.766	3.628	2.590	4.884	3.035
Road 46	14000000	2:00	5.770	9.770	6.175	5.570	9.133	5.066	3.770	6.588	4.060	2.870	5.135	3.185
		3:00	5.740	9.690	6.125	5.540	9.048	5.036	3.740	6.508	4.030	2.840	5.055	3.155
Road 46	15000000	2:00	6.440	9.940	6.345	6.240	9.447	5.266	4.040	6.888	4.360	3.080	5.408	3.375
		3:00	6.410	9.860	6.295	6.210	9.362	5.236	4.010	6.808	4.330	3.050	5.328	3.345
Road 46	17000000	2:00	7.720	9.720	6.345	7.140	8.447	5.266	4.040	6.888	4.360	3.080	5.408	3.375
		3:00	7.690	9.640	6.295	7.110	8.362	5.236	4.010	6.808	4.330	3.050	5.328	3.345
Road 46	18000000	2:00	8.400	9.400	6.345	7.820	8.447	5.266	4.040	6.888	4.360	3.080	5.408	3.375
		3:00	8.370	9.320	6.295	7.790	8.362	5.236	4.010	6.808	4.330	3.050	5.328	3.345
Road 46	19000000	2:00	9.080	9.080	6.345	8.500	8.447	5.266	4.040	6.888	4.360	3.080	5.408	3.375
		3:00	9.050	8.990	6.295	8.470	8.362	5.236	4.010	6.808	4.330	3.050	5.328	3.345
Road 46	20000000	2:00	9.760	8.760	6.345	9.180	8.447	5.266	4.040	6.888	4.360	3.080	5.408	3.375
		3:00	9.730	8.680	6.295	9.150	8.362	5.236	4.010	6.808	4.330	3.050	5.328	3.345
Road 47	00000000	2:00	4.195	8.245	5.075	4.067	7.217	4.376	2.837	5.548	3.424	2.396	4.717	2.915
		3:00	4.165	8.165	5.025	4.037	7.137	4.346	2.807	5.468	3.394	2.366	4.637	2.885
Road 47	10000000	2:00	4.840	8.840	5.725	4.689	8.232	4.848	3.545	6.228	3.926	2.766	4.938	3.085
		3:00	4.810	8.760	5.675	4.659	8.152	4.818	3.515	6.148	3.896	2.736	4.858	3.055
Road 47	13000000	2:00	5.100	9.100	5.950	4.940	8.477	4.746	3.320	5.846	3.658	2.620	4.964	3.065
		3:00	5.070	9.020	5.900	4.910	8.397	4.716	3.290	5.766	3.628	2.590	4.884	3.035
Road 47	14000000	2:00	5.770	9.770	6.175	5.570	9.133	5.066	3.770	6.588	4.060	2.870	5.135	3.185
		3:00	5.740	9.690	6.125	5.540	9.048	5.036	3.740	6.508	4.030	2.840	5.055	3.155
Road 47	15000000	2:00	6.440	9.940	6.345	6.240	9.447	5.266	4.040	6.888	4.360	3.080	5.408	3.375
		3:00	6.410	9.860	6.295	6.210	9.362	5.236	4.010	6.808	4.330	3.050	5.328	3.345
Road 47	17000000	2:00	7.720	9.720	6.345	7.140	8.447	5.266	4.040	6.888	4.360	3.080	5.408	3.375
		3:00	7.690	9.640	6.295	7.110	8.362	5.236	4.010	6.808	4.330	3.050	5.328	3.345
Road 47	18000000	2:00	8.400	9.400	6.345	7.820	8.447	5.266	4.040	6.888	4.360	3.080	5.408	3.375
		3:00	8.370	9.320	6.295	7.790	8.362	5.236	4.010	6.808	4.330	3.050	5.328	3.345
Road 47	19000000	2:00	9.080	9.080	6.345	8.500	8.447	5.266	4.040	6.888	4.360	3.080	5.408	3.375
		3:00	9.050	8.990	6.295	8.470	8.362	5.236	4.010	6.808	4.330	3.050	5.328	3.345
Road 47	20000000	2:00	9.760	8.760	6.345	9.180	8.447	5.266	4.040	6.888	4.360	3.080	5.408	3.375
		3:00	9.730	8.680	6.295	9.150	8.362	5.236	4.010	6.808	4.330	3.050	5.328	3.345

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Top 24 Hour Unrest Factors for All (continued)																	
		Year 2020		Year 2021													
Road Name	Road ID	Hour	No.Emerson					No.Emerson					No.Emerson				
			Month/year	g/hour	h/year	g/hour	h/year	Month/year	g/hour	h/year	g/hour	h/year	Month/year	g/hour	h/year		
Road #7	47	1800-1700	5.882	0.007	0.275	5.029	0.007	2.145	0.299	3.982	0.006	2.446	0.249	3.354	0.006		
Road #7	47	1700-1800	5.882	0.007	0.275	5.029	0.007	2.145	0.299	3.982	0.006	2.446	0.249	3.354	0.006		
Road #7	47	1800-1700	2.922	0.005	0.198	2.508	0.004	1.047	0.388	1.823	0.018	8.884	0.198	2.424	0.018		
Road #7	47	1700-1800	2.922	0.005	0.198	2.508	0.004	1.047	0.388	1.823	0.018	8.884	0.198	2.424	0.018		
Road #7	47	1800-1700	2.922	0.005	0.198	2.508	0.004	1.047	0.388	1.823	0.018	8.884	0.198	2.424	0.018		
Road #7	47	1700-1800	2.922	0.005	0.198	2.508	0.004	1.047	0.388	1.823	0.018	8.884	0.198	2.424	0.018		
Road #7	47	2000-2100	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	2100-2200	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	2200-2300	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	2300-0000	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	0000-0100	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	0100-0200	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	0200-0300	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	0300-0400	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	0400-0500	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	0500-0600	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	0600-0700	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	0700-0800	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	0800-0900	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	0900-1000	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	1000-1100	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	1100-1200	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	1200-1300	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	1300-1400	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	1400-1500	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	1500-1600	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	1600-1700	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	1700-1800	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	1800-1900	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	1900-2000	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	2000-2100	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	2100-2200	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	2200-2300	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	2300-0000	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	0000-0100	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	0100-0200	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	0200-0300	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	0300-0400	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	0400-0500	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	0500-0600	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	0600-0700	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	0700-0800	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	0800-0900	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	0900-1000	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	1000-1100	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	1100-1200	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	1200-1300	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	1300-1400	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	1400-1500	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	1500-1600	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	1600-1700	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	1700-1800	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	1800-1900	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	1900-2000	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	2000-2100	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	2100-2200	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	2200-2300	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	2300-0000	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	0000-0100	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	0100-0200	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	0200-0300	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	0300-0400	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	0400-0500	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	0500-0600	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	0600-0700	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	0700-0800	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	0800-0900	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	0900-1000	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	1000-1100	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	1100-1200	2.186	0.002	0.766	1.896	0.004	2.047	0.364	0.624	1.472	0.136	4.768	0.186	1.286	0.005	
Road #7	47	1200-1300	2.186	0.002	0.766	1.896	0.004	2.047	0.36								

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.1 Emission Factor in 2028.xlsx

Rising Yr North Underground Quarry													
Open Day 24hr Exhaust Factors for All AQMS Cells													
Year 2008			NO _x Emission						NO _x Emission				
Row Name	Row ID	Hour	Month/January		Month/February		Month/March		Month/April		Month/May		
			g/hr/wind	g/hr/wind	g/hr/wind	g/hr/wind	g/hr/wind	g/hr/wind	g/hr/wind	g/hr/wind	g/hr/wind	g/hr/wind	
Row051	51	0000-0100	4.132	2.754	3.075	3.676	2.647	4.585	2.786	3.192	3.854	2.451	3.836
Row052	52	0100-0200	4.444	2.989	3.325	3.956	2.882	4.915	3.027	3.435	4.197	2.682	4.089
Row053	53	0200-0300	4.140	2.562	2.908	3.164	2.627	3.548	2.651	3.988	2.674	2.843	3.175
Row054	54	0300-0400	4.140	2.562	2.908	3.164	2.627	3.548	2.651	3.988	2.674	2.843	3.175
Row055	55	0400-0500	4.140	2.562	2.908	3.164	2.627	3.548	2.651	3.988	2.674	2.843	3.175
Row056	56	0500-0600	5.304	3.562	2.581	4.024	3.367	2.548	3.221	4.747	3.776	2.788	3.828
Row057	57	0600-0700	5.304	3.562	2.581	4.024	3.367	2.548	3.221	4.747	3.776	2.788	3.828
Row058	58	0700-0800	5.304	3.562	2.581	4.024	3.367	2.548	3.221	4.747	3.776	2.788	3.828
Row059	59	0800-0900	5.873	4.024	3.185	4.536	3.585	2.585	3.665	5.196	4.234	3.246	4.346
Row060	60	0900-1000	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row061	61	1000-1100	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row062	62	1100-1200	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row063	63	1200-1300	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row064	64	1300-1400	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row065	65	1400-1500	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row066	66	1500-1600	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row067	67	1600-1700	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row068	68	1700-1800	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row069	69	1800-1900	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row070	70	1900-2000	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row071	71	2000-2100	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row072	72	2100-2200	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row073	73	2200-2300	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row074	74	2300-2400	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row075	75	0000-0100	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row076	76	0100-0200	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row077	77	0200-0300	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row078	78	0300-0400	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row079	79	0400-0500	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row080	80	0500-0600	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row081	81	0600-0700	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row082	82	0700-0800	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row083	83	0800-0900	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row084	84	0900-1000	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row085	85	1000-1100	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row086	86	1100-1200	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row087	87	1200-1300	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row088	88	1300-1400	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row089	89	1400-1500	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row090	90	1500-1600	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row091	91	1600-1700	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row092	92	1700-1800	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row093	93	1800-1900	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row094	94	1900-2000	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row095	95	2000-2100	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row096	96	2100-2200	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row097	97	2200-2300	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row098	98	2300-2400	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row099	99	0000-0100	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row100	100	0100-0200	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row101	101	0200-0300	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row102	102	0300-0400	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row103	103	0400-0500	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row104	104	0500-0600	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row105	105	0600-0700	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row106	106	0700-0800	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row107	107	0800-0900	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row108	108	0900-1000	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row109	109	1000-1100	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row110	110	1100-1200	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row111	111	1200-1300	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row112	112	1300-1400	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row113	113	1400-1500	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row114	114	1500-1600	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row115	115	1600-1700	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row116	116	1700-1800	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row117	117	1800-1900	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row118	118	1900-2000	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row119	119	2000-2100	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row120	120	2100-2200	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row121	121	2200-2300	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row122	122	2300-2400	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row123	123	0000-0100	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row124	124	0100-0200	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row125	125	0200-0300	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row126	126	0300-0400	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row127	127	0400-0500	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row128	128	0500-0600	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row129	129	0600-0700	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row130	130	0700-0800	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row131	131	0800-0900	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row132	132	0900-1000	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row133	133	1000-1100	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698	4.584	3.594	4.722
Row134	134	1100-1200	6.282	4.474	3.475	5.145	3.962	2.885	3.821	5.698			

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

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Road Name	Road ID	Hour	NO Emission						NO Emission						
			Monthly/Average			Monthly/Average			Monthly/Average			Monthly/Average			
			g/hour	tonnes/hour	Monthly/Average	g/hour	tonnes/hour	Monthly/Average	g/hour	tonnes/hour	Monthly/Average	g/hour	tonnes/hour	Monthly/Average	
Road 1	1	0000-0100	1.8992	2.8387	0.72	1.1782	1.8587	1.0287	1.9981	2.2487	0.58	1.1888	1.7987	1.9387	1.9887
	1	0100-0200	2.0687	3.0687	0.78	1.2687	2.0187	1.1087	2.1687	2.3687	0.60	1.2687	1.7787	1.9887	1.9887
	1	0200-0300	2.2387	3.2387	0.83	1.3387	2.1887	1.1587	2.3387	2.5387	0.62	1.3387	1.8287	1.9887	1.9887
	1	0300-0400	2.4087	3.4087	0.88	1.4087	2.3587	1.2087	2.5087	2.7087	0.64	1.4087	1.8787	1.9887	1.9887
	1	0400-0500	2.5787	3.5787	0.93	1.4787	2.5287	1.2587	2.6787	2.8587	0.66	1.4787	1.9287	1.9887	1.9887
	1	0500-0600	2.7487	3.7487	0.98	1.5487	2.6987	1.3087	2.8487	2.9487	0.68	1.5487	1.9787	1.9887	1.9887
	1	0600-0700	2.9187	3.9187	1.03	1.6187	2.8687	1.3587	3.0187	3.0387	0.70	1.6187	2.0287	1.9887	1.9887
	1	0700-0800	3.0887	4.0887	1.08	1.6887	3.0387	1.4087	3.1887	3.1587	0.72	1.6887	2.0787	1.9887	1.9887
	1	0800-0900	3.2587	4.2587	1.13	1.7587	3.2087	1.4587	3.3587	3.2287	0.74	1.7587	2.1287	1.9887	1.9887
	1	0900-1000	3.4287	4.4287	1.18	1.8287	3.3787	1.5087	3.5287	3.2987	0.76	1.8287	2.1787	1.9887	1.9887
Road 2	1	0000-0100	1.0987	1.0287	0.64	0.5687	1.2687	0.5187	1.0287	0.5587	0.38	0.4487	1.2187	1.7387	0.6587
	1	0100-0200	1.2687	1.1887	0.61	0.5387	1.4387	0.5687	1.1987	0.6087	0.40	0.4787	1.2687	1.7887	0.6887
	1	0200-0300	1.4387	1.2587	0.62	0.5487	1.6087	0.6187	1.2687	0.6587	0.42	0.5087	1.3187	1.8387	0.7187
	1	0300-0400	1.6087	1.3287	0.63	0.5587	1.7787	0.6687	1.3387	0.7087	0.44	0.5387	1.3687	1.8887	0.7487
	1	0400-0500	1.7787	1.3987	0.64	0.5687	1.9487	0.7187	1.4087	0.7587	0.46	0.5687	1.4187	1.9387	0.7787
	1	0500-0600	1.9487	1.4687	0.65	0.5787	2.1187	0.7687	1.4787	0.8087	0.48	0.5987	1.4687	1.9887	0.8087
	1	0600-0700	2.1187	1.5387	0.66	0.5887	2.2887	0.8187	1.5487	0.8587	0.50	0.6287	1.5187	2.0387	0.8387
	1	0700-0800	2.2887	1.6087	0.67	0.5987	2.4587	0.8687	1.6187	0.9087	0.52	0.6587	1.5687	2.0887	0.8687
	1	0800-0900	2.4587	1.6787	0.68	0.6087	2.6287	0.9187	1.6887	0.9587	0.54	0.6887	1.6187	2.1387	0.8987
	1	0900-1000	2.6287	1.7487	0.69	0.6187	2.7987	0.9687	1.7587	1.0087	0.56	0.7187	1.6687	2.1887	0.9287
Road 3	1	0000-0100	2.5000	3.6000	0.76	1.2600	2.7500	1.3377	3.0750	3.6400	0.91	1.5100	2.5700	3.0000	3.5500
	2	0400-0500	2.6800	3.8400	0.77	1.3400	2.9377	1.3277	3.2200	3.2100	1.2900	2.6300	3.1900	3.2900	3.6000
	3	0800-0900	2.9100	4.1000	0.77	1.4200	3.1800	1.4800	3.2400	3.1100	1.3100	2.9200	3.1900	3.3500	3.6000
	4	0600-0700	3.1100	4.2400	0.77	1.5000	3.4200	1.5200	2.3300	3.2800	1.3300	3.2400	3.2700	3.4000	3.7300
	5	1000-1100	3.3800	4.3800	0.77	1.5800	3.6600	1.5600	2.3800	3.3300	1.3500	3.2900	3.3200	3.4300	3.7300
	6	0800-0900	3.4400	4.4400	0.77	1.6600	3.9000	1.6000	2.4300	3.3800	1.3700	3.3400	3.3500	3.4600	3.7300
	7	0600-0700	3.6100	4.5800	0.77	1.7400	4.1400	1.6400	2.4800	3.4300	1.3900	3.3900	3.3800	3.4900	3.7300
	8	0400-0500	3.8800	4.7200	0.77	1.8200	4.3800	1.6800	2.5300	3.4800	1.4100	3.4400	3.4100	3.5200	3.7300
	9	0200-0300	4.1500	4.8600	0.77	1.9000	4.6200	1.7200	2.5800	3.5300	1.4300	3.4900	3.4400	3.5500	3.7300
	10	0000-0100	4.4200	5.0000	0.77	1.9800	4.8600	1.7600	2.6300	3.5800	1.4500	3.5400	3.4700	3.5800	3.7300
Road 4	1	0000-0100	1.8992	2.8387	0.72	1.1782	1.8587	1.0287	1.9981	2.2487	0.58	1.1888	1.7987	1.9387	1.9887
	1	0100-0200	2.0687	3.0687	0.78	1.2687	2.0187	1.1087	2.1687	2.3687	0.60	1.2687	1.7787	1.9887	1.9887
	1	0200-0300	2.2387	3.2387	0.83	1.3387	2.1887	1.1587	2.3387	2.5387	0.62	1.3387	1.8287	1.9887	1.9887
	1	0300-0400	2.4087	3.4087	0.88	1.4087	2.3587	1.2087	2.5087	2.7087	0.64	1.4087	1.8787	1.9887	1.9887
	1	0400-0500	2.5787	3.5787	0.93	1.4787	2.5287	1.2587	2.6787	2.8587	0.66	1.4787	1.9287	1.9887	1.9887
	1	0500-0600	2.7487	3.7487	0.98	1.5487	2.6987	1.3087	2.8487	2.9487	0.68	1.5487	1.9787	1.9887	1.9887
	1	0600-0700	2.9187	3.9187	1.03	1.6187	2.8687	1.3587	3.0187	3.0387	0.70	1.6187	2.0287	1.9887	1.9887
	1	0700-0800	3.0887	4.0887	1.08	1.6887	3.0387	1.4087	3.1887	3.1587	0.72	1.6887	2.0787	1.9887	1.9887
	1	0800-0900	3.2587	4.2587	1.13	1.7587	3.2087	1.4587	3.3587	3.2287	0.74	1.7587	2.1287	1.9887	1.9887
	1	0900-1000	3.4287	4.4287	1.18	1.8287	3.3787	1.5087	3.5287	3.2987	0.76	1.8287	2.1787	1.9887	1.9887
Road 5	1	0000-0100	1.0987	1.0287	0.64	0.5687	1.2687	0.5187	1.0287	0.5587	0.38	0.4487	1.2187	1.7387	0.6587
	1	0100-0200	1.2687	1.1887	0.61	0.5387	1.4387	0.5687	1.1987	0.6087	0.40	0.4787	1.2687	1.7887	0.6887
	1	0200-0300	1.4387	1.2587	0.62	0.5487	1.6087	0.6187	1.2687	0.6587	0.42	0.5087	1.3187	1.8387	0.7187
	1	0300-0400	1.6087	1.3287	0.63	0.5587	1.7787	0.6687	1.3387	0.7087	0.44	0.5387	1.3687	1.8887	0.7487
	1	0400-0500	1.7787	1.3987	0.64	0.5687	1.9487	0.7187	1.4087	0.7587	0.46	0.5687	1.4187	1.9387	0.7787
	1	0500-0600	1.9487	1.4687	0.65	0.5787	2.1187	0.7687	1.4787	0.8087	0.48	0.5987	1.4687	1.9887	0.8087
	1	0600-0700	2.1187	1.5387	0.66	0.5887	2.2887	0.8187	1.5487	0.8587	0.50	0.6287	1.5187	2.0387	0.8387
	1	0700-0800	2.2887	1.6087	0.67	0.5987	2.4587	0.8687	1.6187	0.9087	0.52	0.6587	1.5687	2.0887	0.8687
	1	0800-0900	2.4587	1.6787	0.68	0.6087	2.6287	0.9187	1.6887	0.9587	0.54	0.6887	1.6187	2.1387	0.8987
	1	0900-1000	2.6287	1.7487	0.69	0.6187	2.7987	0.9687	1.7587	1.0087	0.56	0.7187	1.6687	2.1887	0.9287
Road 6	1	0000-0100	2.5000	3.6000	0.76	1.2600	2.7500	1.3377	3.0750	3.6400	0.91	1.5100	2.5700	3.0000	3.5500
	2	0400-0500	2.6800	3.8400	0.77	1.3400	2.9377	1.3277	3.2200	3.2100	1.2900	2.6300	3.1900	3.2900	3.6000
	3	0800-0900	2.9100	4.1000	0.77	1.4200	3.1800	1.4800	3.2400	3.1100	1.3100	2.9200	3.1900	3.3500	3.6000
	4	0600-0700	3.1100	4.2400	0.77	1.5000	3.4200	1.5200	2.3300	3.2800	1.3300	3.2400	3.2700	3.4000	3.7300
	5	1000-1100	3.3800	4.3800	0.77	1.5800	3.6600	1.5600	2.3800	3.3300	1.3500	3.2900	3.3200	3.4300	3.7300
	6	0800-0900	3.4400	4.4400	0.77	1.6600	3.9000	1.6000	2.4300	3.3800	1.3700	3.3400	3.3500	3.4600	3.7300
	7	0600-0700	3.6100	4.5800	0.77	1.7400	4.1400	1.6400	2.4800	3.4300	1.3900	3.3900	3.3800	3.4900	3.7300
	8	0400-0500	3.8800	4.7200	0.77	1.8200	4.3800	1.6800	2.5300	3.4800	1.4100	3.4400	3.4100	3.5200	3.7300
	9	0200-0300	4.1500	4.8600	0.77	1.9000	4.6200	1.7200	2.5800	3.5300	1.4300	3.4900	3.4400	3.5500	3.7300
	10	0000-0100	4.4200	5.0000	0.77	1.9800	4.8600	1.7600	2.6300	3.5800	1.4500	3.5400	3.4700	3.5800	3.7300
Road 7	1	0000-0100	1.8992	2.8387	0.72	1.1782	1.8587	1.0287	1.9981	2.2487	0.58	1.1888	1.7987	1.9387	1.9887
	1	0100-0200	2.0687	3.0687	0.78	1.2687	2.0187	1.1087	2.1687	2.3687	0.60	1.2687	1.7787	1.9887	1.9887
	1	0200-0300	2.2387	3.2387	0.83	1.3387	2.1887	1.1587	2.3387	2.5387	0.62	1.3387	1.8287	1.9887	1.9887
	1	0300-0400	2.4087	3.4087	0.88	1.4087	2.3587	1.2087	2.5087	2.7087	0.64	1.4087	1.8787	1.9887	1.9887
	1	0400-0500	2.5787	3.5787	0.93	1.4787	2.5287	1.2587	2.6787	2.8587	0.66	1.4787	1.9287	1.9887	1.9887
	1	0500-0600	2.7487	3.7487	0.98	1.5487	2.6987	1.3087	2.8487	2.9487	0.68	1.5487	1.9787	1.9887	1.9887
	1	0600-0700	2.9187	3.9187	1.03	1.6187	2.8687	1.3587	3.0187	3.0387	0.70	1.6187	2.0287	1.9887	1.9887
	1	0700-0800	3.0887	4.0887	1.08	1.6887	3.0387	1.4087	3.1887	3.1587	0.72	1.6887	2.0787	1.9887	1.9887
	1	0800-0900	3.2587	4.2587	1.13	1.7587	3.2087	1.4587	3.3587	3.2287	0.74	1.7587	2.1287	1.9887	1.9887
	1	0900-1000	3.4287	4.4287	1.18	1.8287	3.3787	1.5087	3.5287	3.2987	0.76	1.8287	2.1787	1.9887	1.9887
Road 8	1	0000-0100	1.0987	1.0287	0.64	0.5687	1.2687	0.5187	1.0287	0.5587	0.38	0.4487	1.2187	1.7387	0.6587
	1	0100-0200	1.2687	1.1887	0.61	0.5387	1.4387	0.5687	1.1987	0.6087	0.40	0.4787	1.2687	1.7887	0.6887
	1	0200-0300	1.4387	1.2587	0.62	0.5487	1.6087	0.6187	1.2687	0.6587	0.42	0.5087	1.3187	1.8387	0.7187
	1	0300-0400	1.6087	1.3287	0.63	0.5587	1.7787	0.6687	1.3387	0.7087	0.44				

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Open N ₂ North Underway Quarterly														
Table 1: Open N ₂ Low Emission Factors for 40000 metric tons of N ₂ per year														
Road Name	Road ID	Hour	NO _x Emission						NO ₂ Emission					
			Month/throughput			Month/throughput			Month/throughput			Month/throughput		
			g/hour	g/ton	g/ton	g/hour	g/ton	g/ton	g/hour	g/ton	g/ton	g/hour	g/ton	g/ton
Road#4	4	0800-0900	2,966.42	8.8117	1,778.05	2,538.22	7,731.07	1,488.05	2,988.33	8,059.06	1,218.04	1,766.48	5,137.06	1,038.00
Road#4	4	0900-1000	4,000.00	12.1212	2,400.00	2,000.00	6,333.33	2,400.00	2,400.00	2,400.00	2,400.00	2,400.00	2,400.00	2,400.00
Road#4	4	1000-1100	4,000.00	12.1212	2,400.00	2,000.00	6,333.33	2,400.00	2,400.00	2,400.00	2,400.00	2,400.00	2,400.00	2,400.00
Road#4	4	1100-1200	3,864.00	7,475.07	1,550.00	1,376.00	3,864.00	1,376.00	2,540.00	4,932.80	8,059.06	2,245.41	5,137.06	832.00
Road#4	4	1200-1300	2,400.00	4,800.00	1,200.00	1,200.00	2,400.00	1,200.00	2,400.00	2,400.00	2,400.00	2,400.00	2,400.00	2,400.00
Road#4	4	1300-1400	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	1400-1500	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	1500-1600	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	1600-1700	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	1700-1800	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	1800-1900	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	1900-2000	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	2000-2100	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	2100-2200	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	2200-2300	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	2300-2400	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	2400-2500	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	2500-2600	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	2600-2700	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	2700-2800	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	2800-2900	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	2900-3000	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	3000-3100	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	3100-3200	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	3200-3300	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	3300-3400	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	3400-3500	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	3500-3600	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	3600-3700	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	3700-3800	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	3800-3900	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	3900-4000	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	4000-4100	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	4100-4200	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	4200-4300	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	4300-4400	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	4400-4500	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	4500-4600	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	4600-4700	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	4700-4800	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	4800-4900	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	4900-5000	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	5000-5100	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	5100-5200	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	5200-5300	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	5300-5400	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	5400-5500	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	5500-5600	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	5600-5700	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	5700-5800	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	5800-5900	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	5900-6000	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	6000-6100	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	6100-6200	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	6200-6300	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	6300-6400	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	6400-6500	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	6500-6600	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	6600-6700	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	6700-6800	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	6800-6900	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	6900-7000	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	7000-7100	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	7100-7200	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	7200-7300	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	7300-7400	1,800.00	3,600.00	900.00	900.00	1,800.00	900.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00	1,800.00
Road#4	4	7400-7500	1,800.00	3,600										

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Road Name	Road ID	Hour	NO _x Emission		CO Emission		PM ₁₀ Emission		PM _{2.5} Emission				
			g/min/mile	lb/min/mile	g/min/mile	lb/min/mile	g/min/mile	lb/min/mile	g/min/mile	lb/min/mile			
Road 7	1600-1700	7:00	4.70E-02	6.38E-07	7.88E-06	3.88E-02	5.31E-07	6.21E-06	3.55E-07	4.76E-06	5.58E-07	4.00E-06	4.69E-07
		7:30	3.56E-02	4.95E-07	5.95E-06	2.88E-02	4.61E-07	5.47E-06	3.10E-07	3.58E-06	2.88E-07	3.91E-06	4.51E-07
Road 8	1700-1800	8:00	3.46E-02	4.76E-07	5.45E-06	2.62E-02	4.16E-07	4.94E-06	2.54E-07	3.08E-06	1.68E-07	2.28E-06	2.61E-07
		8:30	3.46E-02	4.76E-07	5.45E-06	2.62E-02	4.16E-07	4.94E-06	2.54E-07	3.08E-06	1.68E-07	2.28E-06	2.61E-07
Road 9	1900-2000	9:00	2.30E-02	3.10E-07	3.64E-06	2.02E-02	2.74E-07	3.21E-06	2.43E-07	2.93E-06	4.18E-07	5.28E-07	6.11E-07
		9:30	2.25E-02	3.03E-07	3.57E-06	1.97E-02	2.68E-07	3.14E-06	2.38E-07	2.86E-06	4.10E-07	5.18E-07	6.00E-07
Road 10	2000-2100	10:00	2.25E-02	3.03E-07	3.57E-06	1.97E-02	2.68E-07	3.14E-06	2.38E-07	2.86E-06	4.10E-07	5.18E-07	6.00E-07
		10:30	2.08E-02	2.81E-07	3.37E-06	1.88E-02	2.51E-07	2.97E-06	2.47E-07	2.98E-06	3.94E-07	4.98E-07	5.79E-07
Road 11	2100-2200	11:00	2.25E-02	3.03E-07	3.57E-06	1.97E-02	2.68E-07	3.14E-06	2.38E-07	2.86E-06	4.10E-07	5.18E-07	6.00E-07
		11:30	2.44E-02	3.26E-07	3.95E-06	2.15E-02	2.88E-07	3.41E-06	2.58E-07	3.12E-06	4.35E-07	5.48E-07	6.39E-07
Road 12	2300-2400	12:00	3.63E-02	4.93E-07	5.99E-06	2.87E-02	4.59E-07	5.47E-06	2.88E-07	3.68E-06	5.21E-07	6.83E-07	8.13E-07
		12:30	3.64E-02	4.94E-07	5.99E-06	2.88E-02	4.60E-07	5.48E-06	2.89E-07	3.69E-06	5.22E-07	6.84E-07	8.14E-07
Road 13	0100-0200	1:00	3.78E-02	5.07E-07	6.14E-06	3.15E-02	4.90E-07	5.80E-06	3.33E-07	4.18E-06	5.26E-07	6.47E-07	7.60E-07
		1:30	2.44E-02	3.26E-07	3.95E-06	2.15E-02	2.88E-07	3.41E-06	2.58E-07	3.12E-06	4.35E-07	5.48E-07	6.39E-07
Road 14	0200-0300	2:00	4.07E-02	5.41E-07	6.55E-07	3.27E-02	5.19E-07	6.08E-06	3.47E-07	4.34E-06	5.26E-07	6.47E-07	7.60E-07
		2:30	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
Road 15	0300-0400	3:00	4.18E-02	5.55E-07	6.70E-07	3.37E-02	5.38E-07	6.27E-06	3.59E-07	4.46E-06	5.38E-07	6.59E-07	7.80E-07
		3:30	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
Road 16	0400-0500	4:00	4.07E-02	5.41E-07	6.55E-07	3.27E-02	5.19E-07	6.08E-06	3.47E-07	4.34E-06	5.26E-07	6.47E-07	7.60E-07
		4:30	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
Road 17	0500-0600	5:00	4.07E-02	5.41E-07	6.55E-07	3.27E-02	5.19E-07	6.08E-06	3.47E-07	4.34E-06	5.26E-07	6.47E-07	7.60E-07
		5:30	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
Road 18	0600-0700	6:00	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
		6:30	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
Road 19	0700-0800	7:00	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
		7:30	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
Road 20	0800-0900	8:00	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
		8:30	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
Road 21	0900-1000	9:00	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
		9:30	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
Road 22	1000-1100	10:00	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
		10:30	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
Road 23	1100-1200	11:00	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
		11:30	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
Road 24	1200-1300	12:00	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
		12:30	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
Road 25	1300-1400	13:00	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
		13:30	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
Road 26	1400-1500	14:00	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
		14:30	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
Road 27	1500-1600	15:00	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
		15:30	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
Road 28	1600-1700	16:00	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
		16:30	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
Road 29	1700-1800	17:00	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
		17:30	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
Road 30	1800-1900	18:00	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
		18:30	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
Road 31	1900-2000	19:00	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
		19:30	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
Road 32	2000-2100	20:00	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
		20:30	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
Road 33	2100-2200	21:00	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
		21:30	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
Road 34	2200-2300	22:00	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
		22:30	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
Road 35	2300-2400	23:00	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07
		23:30	4.44E-02	5.85E-07	7.19E-07	3.60E-02	5.72E-07	6.60E-06	3.76E-07	4.63E-06	5.54E-07	6.75E-07	7.97E-07

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Nt North Underpass Quarry Year 2028 at AEMPP model (road id)														
Road Name	Road ID	Hour	NO _x Emission				NO _x Emission							
			Monthly/Average		Monthly/Average		Monthly/Average		Monthly/Average					
			g/hour	tonnes/hour	g/hour	tonnes/hour	g/hour	tonnes/hour	g/hour	tonnes/hour				
Road 14	14	0800-0900	2.171E+02	1.091E-06	1.882E+05	6.751E-07	9.388E-07	1.608E+05	4.492E+02	8.838E-06	1.480E+05	1.832E+02	1.838E-06	9.932E+05
Road 14	14	0900-1000	2.281E+02	1.201E-06	2.001E+05	7.861E-07	1.051E-06	1.719E+05	5.602E+02	1.112E-05	1.592E+05	1.942E+02	1.948E-06	1.002E+06
Road 14	14	1000-1100	2.391E+02	1.311E-06	2.111E+05	8.961E-07	1.161E-06	1.829E+05	6.712E+02	1.222E-05	1.702E+05	2.052E+02	2.058E-06	1.112E+06
Road 14	14	1100-1200	2.501E+02	1.421E-06	2.221E+05	1.006E-06	1.271E-06	1.948E+05	7.822E+02	1.332E-05	1.812E+05	2.162E+02	2.168E-06	1.222E+06
Road 14	14	1200-1300	2.611E+02	1.531E-06	2.331E+05	1.116E-06	1.381E-06	2.067E+05	8.932E+02	1.442E-05	1.922E+05	2.272E+02	2.278E-06	1.332E+06
Road 14	14	1300-1400	2.721E+02	1.641E-06	2.441E+05	1.226E-06	1.491E-06	2.186E+05	1.003E+03	1.552E-05	2.032E+05	2.382E+02	2.388E-06	1.442E+06
Road 14	14	1400-1500	2.831E+02	1.751E-06	2.551E+05	1.336E-06	1.601E-06	2.305E+05	1.113E+03	1.662E-05	2.142E+05	2.492E+02	2.498E-06	1.552E+06
Road 14	14	1500-1600	2.941E+02	1.861E-06	2.661E+05	1.446E-06	1.711E-06	2.424E+05	1.223E+03	1.772E-05	2.252E+05	2.602E+02	2.608E-06	1.662E+06
Road 14	14	1600-1700	3.051E+02	1.971E-06	2.771E+05	1.556E-06	1.821E-06	2.543E+05	1.333E+03	1.882E-05	2.362E+05	2.712E+02	2.718E-06	1.772E+06
Road 14	14	1700-1800	3.161E+02	2.081E-06	2.881E+05	1.666E-06	1.931E-06	2.662E+05	1.443E+03	1.992E-05	2.472E+05	2.822E+02	2.828E-06	1.882E+06
Road 14	14	1800-1900	3.271E+02	2.191E-06	2.991E+05	1.776E-06	2.041E-06	2.781E+05	1.553E+03	2.102E-05	2.582E+05	2.932E+02	2.938E-06	1.992E+06
Road 14	14	1900-2000	3.381E+02	2.301E-06	3.101E+05	1.886E-06	2.151E-06	2.900E+05	1.663E+03	2.212E-05	2.692E+05	3.042E+02	3.048E-06	2.102E+06
Road 14	14	2000-2100	3.491E+02	2.411E-06	3.211E+05	1.996E-06	2.261E-06	3.019E+05	1.773E+03	2.322E-05	2.802E+05	3.152E+02	3.158E-06	2.212E+06
Road 14	14	2100-2200	3.601E+02	2.521E-06	3.321E+05	2.106E-06	2.371E-06	3.138E+05	1.883E+03	2.432E-05	2.912E+05	3.262E+02	3.268E-06	2.322E+06
Road 14	14	2200-2300	3.711E+02	2.631E-06	3.431E+05	2.216E-06	2.481E-06	3.257E+05	1.993E+03	2.542E-05	3.022E+05	3.372E+02	3.378E-06	2.432E+06
Road 14	14	2300-2400	3.821E+02	2.741E-06	3.541E+05	2.326E-06	2.591E-06	3.376E+05	2.103E+03	2.652E-05	3.132E+05	3.482E+02	3.488E-06	2.542E+06
Road 15	15	0800-0900	2.171E+02	1.091E-06	1.882E+05	6.751E-07	9.388E-07	1.608E+05	4.492E+02	8.838E-06	1.480E+05	1.832E+02	1.838E-06	9.932E+05
Road 15	15	0900-1000	2.281E+02	1.201E-06	2.001E+05	7.861E-07	1.051E-06	1.719E+05	5.602E+02	1.112E-05	1.592E+05	1.942E+02	1.948E-06	1.002E+06
Road 15	15	1000-1100	2.391E+02	1.311E-06	2.111E+05	8.961E-07	1.161E-06	1.829E+05	6.712E+02	1.222E-05	1.702E+05	2.052E+02	2.058E-06	1.112E+06
Road 15	15	1100-1200	2.501E+02	1.421E-06	2.221E+05	1.006E-06	1.271E-06	1.948E+05	7.822E+02	1.332E-05	1.812E+05	2.162E+02	2.168E-06	1.222E+06
Road 15	15	1200-1300	2.611E+02	1.531E-06	2.331E+05	1.116E-06	1.381E-06	2.067E+05	8.932E+02	1.442E-05	1.922E+05	2.272E+02	2.278E-06	1.332E+06
Road 15	15	1300-1400	2.721E+02	1.641E-06	2.441E+05	1.226E-06	1.491E-06	2.186E+05	1.003E+03	1.552E-05	2.032E+05	2.382E+02	2.388E-06	1.442E+06
Road 15	15	1400-1500	2.831E+02	1.751E-06	2.551E+05	1.336E-06	1.601E-06	2.305E+05	1.113E+03	1.662E-05	2.142E+05	2.492E+02	2.498E-06	1.552E+06
Road 15	15	1500-1600	2.941E+02	1.861E-06	2.661E+05	1.446E-06	1.711E-06	2.424E+05	1.223E+03	1.772E-05	2.252E+05	2.602E+02	2.608E-06	1.662E+06
Road 15	15	1600-1700	3.051E+02	1.971E-06	2.771E+05	1.556E-06	1.821E-06	2.543E+05	1.333E+03	1.882E-05	2.362E+05	2.712E+02	2.718E-06	1.772E+06
Road 15	15	1700-1800	3.161E+02	2.081E-06	2.881E+05	1.666E-06	1.931E-06	2.662E+05	1.443E+03	1.992E-05	2.472E+05	2.822E+02	2.828E-06	1.882E+06
Road 15	15	1800-1900	3.271E+02	2.191E-06	2.991E+05	1.776E-06	2.041E-06	2.781E+05	1.553E+03	2.102E-05	2.582E+05	2.932E+02	2.938E-06	1.992E+06
Road 15	15	1900-2000	3.381E+02	2.301E-06	3.101E+05	1.886E-06	2.151E-06	2.900E+05	1.663E+03	2.212E-05	2.692E+05	3.042E+02	3.048E-06	2.102E+06
Road 15	15	2000-2100	3.491E+02	2.411E-06	3.211E+05	1.996E-06	2.261E-06	3.019E+05	1.773E+03	2.322E-05	2.802E+05	3.152E+02	3.158E-06	2.212E+06
Road 15	15	2100-2200	3.601E+02	2.521E-06	3.321E+05	2.106E-06	2.371E-06	3.138E+05	1.883E+03	2.432E-05	2.912E+05	3.262E+02	3.268E-06	2.322E+06
Road 15	15	2200-2300	3.711E+02	2.631E-06	3.431E+05	2.216E-06	2.481E-06	3.257E+05	1.993E+03	2.542E-05	3.022E+05	3.372E+02	3.378E-06	2.432E+06
Road 15	15	2300-2400	3.821E+02	2.741E-06	3.541E+05	2.326E-06	2.591E-06	3.376E+05	2.103E+03	2.652E-05	3.132E+05	3.482E+02	3.488E-06	2.542E+06
Road 16	16	0800-0900	2.171E+02	1.091E-06	1.882E+05	6.751E-07	9.388E-07	1.608E+05	4.492E+02	8.838E-06	1.480E+05	1.832E+02	1.838E-06	9.932E+05
Road 16	16	0900-1000	2.281E+02	1.201E-06	2.001E+05	7.861E-07	1.051E-06	1.719E+05	5.602E+02	1.112E-05	1.592E+05	1.942E+02	1.948E-06	1.002E+06
Road 16	16	1000-1100	2.391E+02	1.311E-06	2.111E+05	8.961E-07	1.161E-06	1.829E+05	6.712E+02	1.222E-05	1.702E+05	2.052E+02	2.058E-06	1.112E+06
Road 16	16	1100-1200	2.501E+02	1.421E-06	2.221E+05	1.006E-06	1.271E-06	1.948E+05	7.822E+02	1.332E-05	1.812E+05	2.162E+02	2.168E-06	1.222E+06
Road 16	16	1200-1300	2.611E+02	1.531E-06	2.331E+05	1.116E-06	1.381E-06	2.067E+05	8.932E+02	1.442E-05	1.922E+05	2.272E+02	2.278E-06	1.332E+06
Road 16	16	1300-1400	2.721E+02	1.641E-06	2.441E+05	1.226E-06	1.491E-06	2.186E+05	1.003E+03	1.552E-05	2.032E+05	2.382E+02	2.388E-06	1.442E+06
Road 16	16	1400-1500	2.831E+02	1.751E-06	2.551E+05	1.336E-06	1.601E-06	2.305E+05	1.113E+03	1.662E-05	2.142E+05	2.492E+02	2.498E-06	1.552E+06
Road 16	16	1500-1600	2.941E+02	1.861E-06	2.661E+05	1.446E-06	1.711E-06	2.424E+05	1.223E+03	1.772E-05	2.252E+05	2.602E+02	2.608E-06	1.662E+06
Road 16	16	1600-1700	3.051E+02	1.971E-06	2.771E+05	1.556E-06	1.821E-06	2.543E+05	1.333E+03	1.882E-05	2.362E+05	2.712E+02	2.718E-06	1.772E+06
Road 16	16	1700-1800	3.161E+02	2.081E-06	2.881E+05	1.666E-06	1.931E-06	2.662E+05	1.443E+03	1.992E-05	2.472E+05	2.822E+02	2.828E-06	1.882E+06
Road 16	16	1800-1900	3.271E+02	2.191E-06	2.991E+05	1.776E-06	2.041E-06	2.781E+05	1.553E+03	2.102E-05	2.582E+05	2.932E+02	2.938E-06	1.992E+06
Road 16	16	1900-2000	3.381E+02	2.301E-06	3.101E+05	1.886E-06	2.151E-06	2.900E+05	1.663E+03	2.212E-05	2.692E+05	3.042E+02	3.048E-06	2.102E+06
Road 16	16	2000-2100	3.491E+02	2.411E-06	3.211E+05	1.996E-06	2.261E-06	3.019E+05	1.773E+03	2.322E-05	2.802E+05	3.152E+02	3.158E-06	2.212E+06
Road 16	16	2100-2200	3.601E+02	2.521E-06	3.321E+05	2.106E-06	2.371E-06	3.138E+05	1.883E+03	2.432E-05	2.912E+05	3.262E+02	3.268E-06	2.322E+06
Road 16	16	2200-2300	3.711E+02	2.631E-06	3.431E+05	2.216E-06	2.481E-06	3.257E+05	1.993E+03	2.542E-05	3.022E+05	3.372E+02	3.378E-06	2.432E+06
Road 16	16	2300-2400	3.821E+02	2.741E-06	3.541E+05	2.326E-06	2.591E-06	3.376E+05	2.103E+03	2.652E-05	3.132E+05	3.482E+02	3.488E-06	2.542E+06
Road 17	17	0800-0900	2.171E+02	1.091E-06	1.882E+05	6.751E-07	9.388E-07	1.608E+05	4.492E+02	8.838E-06	1.480E+05	1.832E+02	1.838E-06	9.932E+05
Road 17	17	0900-1000	2.281E+02	1.201E-06	2.001E+05	7.861E-07	1.051E-06	1.719E+05	5.602E+02	1.112E-05	1.592E+05	1.942E+02	1.948E-06	1.002E+06
Road 17	17	1000-1100	2.391E+02	1.311E-06	2.111E+05	8.961E-07	1.161E-06	1.829E+05	6.712E+02	1.222E-05	1.702E+05	2.052E+02	2.058E-06	1.112E+06
Road 17	17	1100-1200	2.501E+02	1.421E-06	2.221E+05	1.006E-06	1.271E-06	1.948E+05	7.822E+02	1.332E-05	1.812E+05	2.162E+02	2.168E-06	1.222E+06
Road 17	17	1200-1300	2.611E+02	1.531E-06	2.331E+05	1.116E-06	1.381E-06	2.067E+05	8.932E+02	1.442E-05	1.922E+05	2.272E+02	2.278E-06	1.332E+06
Road 17	17	1300-1400	2.721E+02	1.641E-06	2.441E+05	1.226E-06	1.491E-06	2.186E+05	1.003E+03	1.552E-05	2.032E+05	2.382E+02	2.388E-06	1.442E+06
Road 17	17	1400-1500	2.831E+02	1.751E-06	2.551E+05	1.336E-06	1.601E-06	2.305E+05	1.113E+03	1.662E-05	2.142E+05	2.492E+02	2.498E-06	1.552E+06
Road 17	17	1500-1600	2.941E+02	1.861E-06	2.661E+05	1.446E-06	1.711E-06	2.424E+05	1.223E+03	1.772E-05	2.252E+05	2.602E+02	2.608E-06	1.662E+06
Road 17	17	1600-1700	3.051E+02	1.971E-06	2.771E+05	1.556E-06	1.821E-06	2.543E+05	1.333E+03	1.882E-05	2.362E+05	2.712E+02	2.718E-06	1.772E+06
Road 17	17	1700-1800	3.161E+02	2.081E-06	2.881E+05	1.666E-06	1.931E-06	2.662E+05	1.443E+03	1.992E-05	2.472E+05	2.822E+02	2.828E-06	1.882E+06
Road 17	17	1800-1900	3.271E+02	2.191E-06	2.991E+05	1.776E-06	2.041E-06	2.781E+05	1.553E+03	2.102E-05	2.582E+05	2.932E+02	2.938E-06	1.992E+06
Road 17	17	1900-2000	3.381E+02	2.301E-06	3.101E+05	1.886E-06	2.151E-06	2.900E+05	1.663E+03	2.212E-05	2.692E+05	3.042E+02	3.048E-06	2.102E+06
Road 17														

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Road Name	Road ID	Hour	NO Emulsion				NO Emulsion							
			Month/Year/2028		Month/Year/2028		Month/Year/2028		Month/Year/2028					
			g/h/m ²	g/h/m ²	g/h/m ²	g/h/m ²	g/h/m ²	g/h/m ²	g/h/m ²	g/h/m ²				
Road 17	17	1600-1800	6.5121	7.8847	2.3056	5.9402	6.7947	1.9775	4.3716	4.8662	1.4554	4.7378	4.3216	1.3460
		1700-1900	4.6414	6.6715	2.0545	4.9855	5.4565	1.4365	3.7965	4.1654	1.3735	4.1265	3.7555	1.1605
Road 18	18	1600-1800	6.5121	7.8847	2.3056	5.9402	6.7947	1.9775	4.3716	4.8662	1.4554	4.7378	4.3216	1.3460
		1700-1900	4.6414	6.6715	2.0545	4.9855	5.4565	1.4365	3.7965	4.1654	1.3735	4.1265	3.7555	1.1605
Road 19	19	1600-1800	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
		1700-1900	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
Road 20	20	1600-1800	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
		1700-1900	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
Road 21	21	1700-1900	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
		1800-2000	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
Road 22	22	1700-1900	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
		1800-2000	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
Road 23	23	1700-1900	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
		1800-2000	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
Road 24	24	1700-1900	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
		1800-2000	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
Road 25	25	1700-1900	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
		1800-2000	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
Road 26	26	1700-1900	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
		1800-2000	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
Road 27	27	1700-1900	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
		1800-2000	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
Road 28	28	1700-1900	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
		1800-2000	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
Road 29	29	1700-1900	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
		1800-2000	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
Road 30	30	1700-1900	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
		1800-2000	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
Road 31	31	1700-1900	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
		1800-2000	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
Road 32	32	1700-1900	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
		1800-2000	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
Road 33	33	1700-1900	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
		1800-2000	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
Road 34	34	1700-1900	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
		1800-2000	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
Road 35	35	1700-1900	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
		1800-2000	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
Road 36	36	1700-1900	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
		1800-2000	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
Road 37	37	1700-1900	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
		1800-2000	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
Road 38	38	1700-1900	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
		1800-2000	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
Road 39	39	1700-1900	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
		1800-2000	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
Road 40	40	1700-1900	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
		1800-2000	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
Road 41	41	1700-1900	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
		1800-2000	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
Road 42	42	1700-1900	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
		1800-2000	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
Road 43	43	1700-1900	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
		1800-2000	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
Road 44	44	1700-1900	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
		1800-2000	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
Road 45	45	1700-1900	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
		1800-2000	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
Road 46	46	1700-1900	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
		1800-2000	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
Road 47	47	1700-1900	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
		1800-2000	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
Road 48	48	1700-1900	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
		1800-2000	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
Road 49	49	1700-1900	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
		1800-2000	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
Road 50	50	1700-1900	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
		1800-2000	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
Road 51	51	1700-1900	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
		1800-2000	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
Road 52	52	1700-1900	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
		1800-2000	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
Road 53	53	1700-1900	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
		1800-2000	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
Road 54	54	1700-1900	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
		1800-2000	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
Road 55	55	1700-1900	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.506	7.8895
		1800-2000	3.394	3.3237	8.7076	2.9097	2.9337	8.566	3.1475	3.088	9.009	2.757	2.5	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open N York Underground Quarry															
Top 20 Most Hazardous Factors for															
Atmospheric															
Year 2008															
Road Name		Road ID	Hour	No Emission				Emission				No Emission			
				g/h/m ³	g/m ³	tonne/hour	g/h/m ³	g/m ³	tonne/hour	g/h/m ³	g/m ³	tonne/hour	g/h/m ³	g/m ³	tonne/hour
Road 21	0000-0100	2346	0.305	0.727	0.000	2.889	0.000	1.562	0.244	1.015	0.000	1.936	0.000	0.305	1.229
Road 21	0000-0200	2346	0.173	0.351	0.000	1.365	0.000	0.782	0.125	0.516	0.000	1.049	0.000	0.173	0.665
Road 21	0000-0300	2346	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 21	0000-0400	2346	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 21	0000-0500	2346	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 21	0000-0600	2346	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 21	0000-0700	2346	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 21	0000-0800	2346	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 21	0000-0900	2346	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 21	0000-1000	2346	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 21	0000-1100	2346	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 21	0000-1200	2346	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 21	0000-1300	2346	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 21	0000-1400	2346	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 21	0000-1500	2346	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 21	0000-1600	2346	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 21	0000-1700	2346	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 21	0000-1800	2346	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 21	0000-1900	2346	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 21	0000-2000	2346	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 21	0000-2100	2346	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 21	0000-2200	2346	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 21	0000-2300	2346	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 22	0000-0100	2347	0.305	0.727	0.000	2.889	0.000	1.562	0.244	1.015	0.000	1.936	0.000	0.305	1.229
Road 22	0000-0200	2347	0.173	0.351	0.000	1.365	0.000	0.782	0.125	0.516	0.000	1.049	0.000	0.173	0.665
Road 22	0000-0300	2347	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 22	0000-0400	2347	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 22	0000-0500	2347	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 22	0000-0600	2347	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 22	0000-0700	2347	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 22	0000-0800	2347	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 22	0000-0900	2347	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 22	0000-1000	2347	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 22	0000-1100	2347	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 22	0000-1200	2347	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 22	0000-1300	2347	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 22	0000-1400	2347	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 22	0000-1500	2347	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 22	0000-1600	2347	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 22	0000-1700	2347	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 22	0000-1800	2347	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 22	0000-1900	2347	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 22	0000-2000	2347	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 22	0000-2100	2347	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 22	0000-2200	2347	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 22	0000-2300	2347	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 23	0000-0100	2348	0.305	0.727	0.000	2.889	0.000	1.562	0.244	1.015	0.000	1.936	0.000	0.305	1.229
Road 23	0000-0200	2348	0.173	0.351	0.000	1.365	0.000	0.782	0.125	0.516	0.000	1.049	0.000	0.173	0.665
Road 23	0000-0300	2348	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 23	0000-0400	2348	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 23	0000-0500	2348	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 23	0000-0600	2348	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 23	0000-0700	2348	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 23	0000-0800	2348	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 23	0000-0900	2348	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 23	0000-1000	2348	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 23	0000-1100	2348	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 23	0000-1200	2348	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 23	0000-1300	2348	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 23	0000-1400	2348	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 23	0000-1500	2348	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 23	0000-1600	2348	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 23	0000-1700	2348	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 23	0000-1800	2348	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 23	0000-1900	2348	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 23	0000-2000	2348	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 23	0000-2100	2348	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 23	0000-2200	2348	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 23	0000-2300	2348	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 24	0000-0100	2349	0.305	0.727	0.000	2.889	0.000	1.562	0.244	1.015	0.000	1.936	0.000	0.305	1.229
Road 24	0000-0200	2349	0.173	0.351	0.000	1.365	0.000	0.782	0.125	0.516	0.000	1.049	0.000	0.173	0.665
Road 24	0000-0300	2349	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695	0.000	0.119	0.437
Road 24	0000-0400	2349	0.119	0.232	0.000	0.892	0.000	0.508	0.083	0.342	0.000	0.695			

Twin Y North Underground Quarry												
Open Road No. 1000 Emission Factors for ANNUAL (t/a)												
		Year 2008		No. Emission				No. Emission				
Road Name	Road ID	Hour	Monthly/quarterly		Monthly/quarterly		Monthly/quarterly		Monthly/quarterly		Monthly/quarterly	
			g/hour	g/min	tonne/hour	g/min	tonne/hour	g/hour	g/min	tonne/hour	g/hour	g/min
Road #24	24	0800-0900	1,042.0	1.77	4.94	8.82	1,731.0	4.38	4.84	6.42	2,384.0	4.13
Road #24	24	0900-1000	1,229.0	2.05	5.70	10.3	2,062.0	5.10	5.62	7.68	2,640.0	4.40
Road #24	24	1000-1100	1,404.0	2.34	6.58	12.0	2,393.0	5.73	6.25	8.63	3,036.0	5.22
Road #24	24	1100-1200	1,589.0	2.65	7.50	13.5	2,624.0	6.30	6.82	9.43	3,360.0	5.82
Road #24	24	1200-1300	1,774.0	2.95	8.48	15.0	2,855.0	6.83	7.35	10.14	3,684.0	6.32
Road #24	24	1300-1400	1,959.0	3.26	9.46	16.5	3,086.0	7.47	8.00	11.04	4,008.0	6.82
Road #24	24	1400-1500	2,144.0	3.56	10.44	18.0	3,317.0	8.11	8.63	11.94	4,332.0	7.32
Road #24	24	1500-1600	2,329.0	3.87	11.42	19.5	3,548.0	8.75	9.27	12.84	4,656.0	7.82
Road #24	24	1600-1700	2,514.0	4.17	12.40	21.0	3,779.0	9.39	9.91	13.74	4,980.0	8.32
Road #24	24	1700-1800	2,699.0	4.48	13.38	22.5	4,010.0	10.03	10.55	14.64	5,304.0	8.82
Road #24	24	1800-1900	2,884.0	4.78	14.36	24.0	4,241.0	10.67	11.19	15.54	5,628.0	9.32
Road #24	24	1900-2000	3,069.0	5.09	15.34	25.5	4,472.0	11.31	11.83	16.44	5,952.0	9.82
Road #24	24	2000-2100	3,254.0	5.39	16.32	27.0	4,703.0	11.95	12.35	17.34	6,276.0	10.32
Road #24	24	2100-2200	3,439.0	5.69	17.30	28.5	4,934.0	12.59	12.87	18.24	6,600.0	10.82
Road #24	24	2200-2300	3,624.0	6.00	18.28	30.0	5,165.0	13.23	13.39	19.14	6,924.0	11.32
Road #24	24	2300-2400	3,809.0	6.30	19.26	31.5	5,396.0	13.87	13.91	20.04	7,248.0	11.82
Road #24	24	0000-0100	3,994.0	6.60	20.24	33.0	5,627.0	14.51	14.43	20.94	7,572.0	12.32
Road #24	24	0100-0200	4,179.0	6.91	21.22	34.5	5,858.0	15.15	15.07	21.84	7,896.0	12.82
Road #24	24	0200-0300	4,364.0	7.21	22.20	36.0	6,089.0	15.79	15.71	22.74	8,220.0	13.32
Road #24	24	0300-0400	4,549.0	7.51	23.18	37.5	6,320.0	16.43	16.35	23.64	8,544.0	13.82
Road #24	24	0400-0500	4,734.0	7.82	24.16	39.0	6,551.0	17.07	16.99	24.54	8,868.0	14.32
Road #24	24	0500-0600	4,919.0	8.12	25.14	40.5	6,782.0	17.71	17.63	25.44	9,192.0	14.82
Road #24	24	0600-0700	5,104.0	8.42	26.12	42.0	7,013.0	18.35	18.27	26.34	9,516.0	15.32
Road #24	24	0700-0800	5,289.0	8.73	27.10	43.5	7,244.0	18.99	18.91	27.24	9,840.0	15.82
Road #24	24	0800-0900	5,474.0	9.03	28.08	45.0	7,475.0	19.63	19.55	28.14	10,164.0	16.32
Road #24	24	0900-1000	5,659.0	9.34	29.06	46.5	7,706.0	20.27	20.19	29.04	10,488.0	16.82
Road #24	24	1000-1100	5,844.0	9.64	29.99	48.0	7,937.0	20.91	20.83	29.94	10,812.0	17.32
Road #24	24	1100-1200	6,029.0	9.95	30.97	49.5	8,168.0	21.55	21.47	30.84	11,136.0	17.82
Road #24	24	1200-1300	6,214.0	10.25	31.95	51.0	8,399.0	22.19	22.11	31.74	11,460.0	18.32
Road #24	24	1300-1400	6,400.0	10.55	32.93	52.5	8,630.0	22.83	22.75	32.64	11,784.0	18.82
Road #24	24	1400-1500	6,585.0	10.86	33.91	54.0	8,861.0	23.47	23.39	33.54	12,108.0	19.32
Road #24	24	1500-1600	6,770.0	11.16	34.89	55.5	9,092.0	24.11	24.03	34.44	12,432.0	19.82
Road #24	24	1600-1700	6,955.0	11.46	35.87	57.0	9,323.0	24.75	24.67	35.34	12,756.0	20.32
Road #24	24	1700-1800	7,140.0	11.77	36.85	58.5	9,554.0	25.39	25.31	36.24	13,080.0	20.82
Road #24	24	1800-1900	7,325.0	12.07	37.83	60.0	9,785.0	26.03	25.95	37.14	13,404.0	21.32
Road #24	24	1900-2000	7,510.0	12.37	38.81	61.5	10,016.0	26.67	26.59	38.04	13,728.0	21.82
Road #24	24	2000-2100	7,695.0	12.68	39.79	63.0	10,247.0	27.31	27.23	38.94	14,052.0	22.32
Road #24	24	2100-2200	7,880.0	12.98	40.77	64.5	10,478.0	27.95	27.87	39.84	14,376.0	22.82
Road #24	24	2200-2300	8,065.0	13.28	41.75	66.0	10,709.0	28.59	28.51	40.74	14,700.0	23.32
Road #24	24	2300-2400	8,250.0	13.58	42.73	67.5	10,940.0	29.23	29.15	41.64	15,024.0	23.82
Road #24	24	0000-0100	8,435.0	13.89	43.71	69.0	11,171.0	29.87	29.79	42.54	15,348.0	24.32
Road #24	24	0100-0200	8,620.0	14.19	44.69	70.5	11,402.0	30.51	30.43	43.44	15,672.0	24.82
Road #24	24	0200-0300	8,805.0	14.49	45.67	72.0	11,633.0	31.15	31.07	44.34	15,996.0	25.32
Road #24	24	0300-0400	8,990.0	14.79	46.65	73.5	11,864.0	31.79	31.71	45.24	16,320.0	25.82
Road #24	24	0400-0500	9,175.0	15.09	47.63	75.0	12,095.0	32.43	32.35	46.14	16,644.0	26.32
Road #24	24	0500-0600	9,360.0	15.39	48.61	76.5	12,326.0	33.07	32.99	47.04	16,968.0	26.82
Road #24	24	0600-0700	9,545.0	15.69	49.59	78.0	12,557.0	33.71	33.63	47.94	17,292.0	27.32
Road #24	24	0700-0800	9,730.0	15.99	50.57	79.5	12,788.0	34.35	34.27	48.84	17,616.0	27.82
Road #24	24	0800-0900	9,915.0	16.29	51.55	81.0	13,019.0	34.99	34.91	49.74	17,940.0	28.32
Road #24	24	0900-1000	10,100.0	16.59	52.53	82.5	13,250.0	35.63	35.55	50.64	18,264.0	28.82
Road #24	24	1000-1100	10,285.0	16.89	53.51	84.0	13,481.0	36.27	36.19	51.54	18,588.0	29.32
Road #24	24	1100-1200	10,470.0	17.19	54.49	85.5	13,712.0	36.91	36.83	52.44	18,912.0	29.82
Road #24	24	1200-1300	10,655.0	17.49	55.47	87.0	13,943.0	37.55	37.47	53.34	19,236.0	30.32
Road #24	24	1300-1400	10,840.0	17.79	56.45	88.5	14,174.0	38.19	38.11	54.24	19,560.0	30.82
Road #24	24	1400-1500	11,025.0	18.09	57.43	90.0	14,405.0	38.83	38.75	55.14	19,884.0	31.32
Road #24	24	1500-1600	11,210.0	18.39	58.41	91.5	14,636.0	39.47	39.39	56.04	20,208.0	31.82
Road #24	24	1600-1700	11,395.0	18.69	59.39	93.0	14,867.0	40.11	40.03	56.94	20,532.0	32.32
Road #24	24	1700-1800	11,580.0	18.99	60.37	94.5	15,098.0	40.75	40.67	57.84	20,856.0	32.82
Road #24	24	1800-1900	11,765.0	19.29	61.35	96.0	15,329.0	41.39	41.31	58.74	21,180.0	33.32
Road #24	24	1900-2000	11,950.0	19.59	62.33	97.5	15,560.0	42.03	41.95	59.64	21,504.0	33.82
Road #24	24	2000-2100	12,135.0	19.89	63.31	99.0	15,791.0	42.67	42.59	60.54	21,828.0	34.32
Road #24	24	2100-2200	12,320.0	20.19	64.29	100.5	16,022.0	43.31	43.23	61.44	22,152.0	34.82
Road #24	24	2200-2300	12,505.0	20.49	65.27	102.0	16,253.0	43.95	43.87	62.34	22,476.0	35.32
Road #24	24	2300-2400	12,690.0	20.79	66.25	103.5	16,484.0	44.59	44.51	63.24	22,800.0	35.82
Road #24	24	0000-0100	12,875.0	21.09	67.23	105.0	16,715.0	45.23	45.15	64.14	23,124.0	36.32
Road #24	24	0100-0200	13,060.0	21.39	68.21	106.5	16,946.0	45.87	45.79	65.04	23,448.0	36.82
Road #24	24	0200-0300	13,245.0	21.69	69.19	108.0	17,177.0	46.51	46.43	65.94	23,772.0	37.32
Road #24	24	0300-0400	13,430.0	21.99	70.17	109.5	17,408.0	47.15	47.07	66.84	24,096.0	37.82
Road #24	24	0400-0500	13,615.0	22.29	71.15	111.0	17,639.0	47.79	47.71	67.74	24,420.0	38.32
Road #24	24	0500-0600	13,800.0	22.59	72.13	112.5	17,870.0	48.43	48.35	68.64	24,744.0	38.82
Road #24	24	0600-0700	13,985.0	22.89	73.11	114.0	18,101.0	49.07	48.99	69.54	25,068.0	39.32
Road #24	24	0700-0800	14,170.0	23.19	74.09	115.5	18,332.0	49.71	49.63	70.44	25,392.0	39.82
Road #24	24	0800-0900	14,355.0	23.49	75.07	117.0	18,563.0	50.35	50.27	71.34	25,716.0	40.32
Road #24	24	0900-1000	14,540.0	23.79	76.05	118.5	18,794.0	50.99	50.91	72.24	26,040.0	40.82
Road #24	24	1000-1100	14,725.0	24.09	77.03	120.0	19,025.0	51.63	51.55	73.14	26,364.0	41.32
Road #24	24	1100-1200	14,910.0	24.39	78.01	121.5	19,256.0	52.27	52.19	74.04	26,688.0	41.82
Road #24	24	1200-1300	15,095.0	24.69	78.99	123.0	19,487.0	52.91	52.83	74.94	27,012.0	42.32
Road #24	24	1300-1400	15,280.0	24.99	79.97	124.5	19,718.0	53.55	53.47	75.84	27,336.0	42.82
Road #24	24	1400-1500	15,465.0	25.29	80.95	126.0	19,949.0	54.19	54.11	76.74	27,660.0	43.32
Road #24	24	1500-1600	15,650.0	25.59	81.93	127.5	20,180.0	54.83	54.75	77.64	27,984.0	43.82
Road #24	24	1600-1700	15,835.0	25.89	82.91	129.0	20,411.0	55.47	55.39	78.54	28,308.0	44.32
Road #24	24	1700-1800	16,020.0	26.19	83.89	130.5	20,642.0	56.11	56.03	79.44	28,632.0	44.82
Road #24	24	1800-1900	16,205.0	26.49	84.87	132.0	20,873.0	56.75	56.67	80.34	28,956.0	45.32
Road #24	24	1900-2000	16,390.0	26.79	85.85	133.5	21,104.0	57.39	57.31	81.24	29,280.0	45.82
Road #24	24	2000-2100	16,575.0	27.09	86.83	135.0	21,335.0	58.03	57.95	82.14	29,604.0	46.32
Road #24	24	2100-2200	16,760.0	27.39	87.81	136.5	21,566.0	58.67	58.59	83.04	29,928.0	46.82
Road #24	24	2200-2300	16,945.0									

Open Y North Underway Query

Ship ID and Max Estimation Factors for
ATFNOE (in %)

Year 2028

Road Name	Road ID	Hour	No. Emulsion						No Emulsion		
			g/h/m ²	g/m ²	tonne/m ²	g/h/m ²	g/m ²	tonne/m ²	g/h/m ²	tonne/m ²	g/h/m ²
Road 27	27	1600-1700	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	1700-1800	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	1800-1900	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	1900-2000	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	2000-2100	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	2100-2200	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	2200-2300	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	2300-2400	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	2400-2500	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	2500-2600	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	2600-2700	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	2700-2800	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	2800-2900	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	2900-3000	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	3000-3100	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	3100-3200	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	3200-3300	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	3300-3400	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	3400-3500	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	3500-3600	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	3600-3700	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	3700-3800	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	3800-3900	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	3900-4000	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	4000-4100	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	4100-4200	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	4200-4300	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	4300-4400	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	4400-4500	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	4500-4600	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	4600-4700	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	4700-4800	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	4800-4900	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	4900-5000	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	5000-5100	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	5100-5200	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	5200-5300	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	5300-5400	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	5400-5500	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	5500-5600	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	5600-5700	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	5700-5800	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	5800-5900	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	5900-6000	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	6000-6100	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	6100-6200	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	6200-6300	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	6300-6400	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	6400-6500	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	6500-6600	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	6600-6700	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	6700-6800	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	6800-6900	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	6900-7000	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	7000-7100	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	7100-7200	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	7200-7300	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	7300-7400	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	7400-7500	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	7500-7600	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	7600-7700	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	7700-7800	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	7800-7900	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	7900-8000	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	8000-8100	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	8100-8200	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	8200-8300	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	8300-8400	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	8400-8500	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	8500-8600	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	8600-8700	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	8700-8800	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	8800-8900	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	8900-9000	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	9000-9100	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	9100-9200	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	9200-9300	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	9300-9400	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	9400-9500	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	9500-9600	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	9600-9700	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	9700-9800	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	9800-9900	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30
Road 27	27	9900-10000	2.960	0.71	2.73	2.026	0.48	0.47	1.995	1.298	0.30

Twin H North Underground Quarry														
Open Road to North East Emulsion Factors for ANFO/AN														
		Year 2008		No Emulsion					No Emulsion					
Road Name	Road ID	Hour	Monthly/average			Monthly/average			Monthly/average			Monthly/average		
			g/min/ft	g/min/ft	tonne/ft	g/min/ft	g/min/ft	tonne/ft	g/min/ft	g/min/ft	tonne/ft	g/min/ft	tonne/ft	
Road #1	31	0000-0100	4,272	4,022	1,491	3,876	4,022	1,491	3,986	1,145	1,039	0.75	1,039	0.92
Road #1	31	0100-0200	4,739	4,589	1,700	4,439	4,589	1,700	4,439	1,145	1,039	0.75	1,039	0.92
Road #1	31	0200-0300	5,106	4,956	1,809	4,857	4,956	1,809	4,857	1,145	1,039	0.75	1,039	0.92
Road #1	31	0300-0400	5,106	4,956	1,809	4,857	4,956	1,809	4,857	1,145	1,039	0.75	1,039	0.92
Road #1	31	0400-0500	5,831	5,681	2,112	5,681	5,831	2,112	5,681	1,406	1,290	0.94	1,290	1.17
Road #1	31	0500-0600	5,831	5,681	2,112	5,681	5,831	2,112	5,681	1,406	1,290	0.94	1,290	1.17
Road #1	31	0600-0700	5,831	5,681	2,112	5,681	5,831	2,112	5,681	1,406	1,290	0.94	1,290	1.17
Road #1	31	0700-0800	6,202	6,052	2,285	6,052	6,202	2,285	6,052	1,406	1,290	0.94	1,290	1.17
Road #1	31	0800-0900	6,414	6,264	2,394	6,264	6,414	2,394	6,264	1,406	1,290	0.94	1,290	1.17
Road #1	31	0900-1000	7,225	7,042	2,634	7,042	7,225	2,634	7,042	1,588	1,462	1.07	1,462	1.32
Road #1	31	1000-1100	7,225	7,042	2,634	7,042	7,225	2,634	7,042	1,588	1,462	1.07	1,462	1.32
Road #1	31	1100-1200	7,692	7,482	2,831	7,482	7,692	2,831	7,482	1,588	1,462	1.07	1,462	1.32
Road #1	31	1200-1300	7,692	7,482	2,831	7,482	7,692	2,831	7,482	1,588	1,462	1.07	1,462	1.32
Road #1	31	1300-1400	8,159	7,949	3,028	7,949	8,159	3,028	7,949	1,588	1,462	1.07	1,462	1.32
Road #1	31	1400-1500	8,362	8,142	3,126	8,142	8,362	3,126	8,142	1,588	1,462	1.07	1,462	1.32
Road #1	31	1500-1600	8,362	8,142	3,126	8,142	8,362	3,126	8,142	1,588	1,462	1.07	1,462	1.32
Road #1	31	1600-1700	8,746	8,516	3,279	8,516	8,746	3,279	8,516	1,588	1,462	1.07	1,462	1.32
Road #1	31	1700-1800	8,746	8,516	3,279	8,516	8,746	3,279	8,516	1,588	1,462	1.07	1,462	1.32
Road #1	31	1800-1900	9,130	8,942	3,431	8,942	9,130	3,431	8,942	1,588	1,462	1.07	1,462	1.32
Road #1	31	1900-2000	9,130	8,942	3,431	8,942	9,130	3,431	8,942	1,588	1,462	1.07	1,462	1.32
Road #1	31	2000-2100	9,130	8,942	3,431	8,942	9,130	3,431	8,942	1,588	1,462	1.07	1,462	1.32
Road #1	31	2100-2200	9,342	9,142	3,528	9,142	9,342	3,528	9,142	1,588	1,462	1.07	1,462	1.32
Road #1	31	2200-2300	9,342	9,142	3,528	9,142	9,342	3,528	9,142	1,588	1,462	1.07	1,462	1.32
Road #1	31	2300-2400	9,342	9,142	3,528	9,142	9,342	3,528	9,142	1,588	1,462	1.07	1,462	1.32
Road #2	32	0000-0100	4,386	4,136	1,540	3,980	4,136	1,540	4,040	1,154	1,048	0.76	1,048	0.93
Road #2	32	0100-0200	4,853	4,703	1,747	4,597	4,703	1,747	4,597	1,154	1,048	0.76	1,048	0.93
Road #2	32	0200-0300	5,220	5,070	1,856	4,964	5,070	1,856	4,964	1,154	1,048	0.76	1,048	0.93
Road #2	32	0300-0400	5,220	5,070	1,856	4,964	5,070	1,856	4,964	1,154	1,048	0.76	1,048	0.93
Road #2	32	0400-0500	5,945	5,795	2,159	5,795	5,945	2,159	5,795	1,415	1,309	0.95	1,309	1.18
Road #2	32	0500-0600	5,945	5,795	2,159	5,795	5,945	2,159	5,795	1,415	1,309	0.95	1,309	1.18
Road #2	32	0600-0700	5,945	5,795	2,159	5,795	5,945	2,159	5,795	1,415	1,309	0.95	1,309	1.18
Road #2	32	0700-0800	6,316	6,166	2,332	6,166	6,316	2,332	6,166	1,415	1,309	0.95	1,309	1.18
Road #2	32	0800-0900	6,528	6,378	2,441	6,378	6,528	2,441	6,378	1,415	1,309	0.95	1,309	1.18
Road #2	32	0900-1000	7,349	7,166	2,680	7,166	7,349	2,680	7,166	1,597	1,471	1.09	1,471	1.34
Road #2	32	1000-1100	7,349	7,166	2,680	7,166	7,349	2,680	7,166	1,597	1,471	1.09	1,471	1.34
Road #2	32	1100-1200	7,816	7,633	2,877	7,633	7,816	2,877	7,633	1,597	1,471	1.09	1,471	1.34
Road #2	32	1200-1300	7,816	7,633	2,877	7,633	7,816	2,877	7,633	1,597	1,471	1.09	1,471	1.34
Road #2	32	1300-1400	8,283	8,099	3,074	8,099	8,283	3,074	8,099	1,597	1,471	1.09	1,471	1.34
Road #2	32	1400-1500	8,486	8,292	3,172	8,292	8,486	3,172	8,292	1,597	1,471	1.09	1,471	1.34
Road #2	32	1500-1600	8,486	8,292	3,172	8,292	8,486	3,172	8,292	1,597	1,471	1.09	1,471	1.34
Road #2	32	1600-1700	8,869	8,675	3,325	8,675	8,869	3,325	8,675	1,597	1,471	1.09	1,471	1.34
Road #2	32	1700-1800	8,869	8,675	3,325	8,675	8,869	3,325	8,675	1,597	1,471	1.09	1,471	1.34
Road #2	32	1800-1900	9,252	9,058	3,519	9,058	9,252	3,519	9,058	1,597	1,471	1.09	1,471	1.34
Road #2	32	1900-2000	9,252	9,058	3,519	9,058	9,252	3,519	9,058	1,597	1,471	1.09	1,471	1.34
Road #2	32	2000-2100	9,252	9,058	3,519	9,058	9,252	3,519	9,058	1,597	1,471	1.09	1,471	1.34
Road #2	32	2100-2200	9,464	9,260	3,617	9,260	9,464	3,617	9,260	1,597	1,471	1.09	1,471	1.34
Road #2	32	2200-2300	9,464	9,260	3,617	9,260	9,464	3,617	9,260	1,597	1,471	1.09	1,471	1.34
Road #2	32	2300-2400	9,464	9,260	3,617	9,260	9,464	3,617	9,260	1,597	1,471	1.09	1,471	1.34
Road #3	33	0000-0100	4,497	4,247	1,590	4,041	4,247	1,590	4,141	1,150	1,044	0.76	1,044	0.93
Road #3	33	0100-0200	4,964	4,814	1,797	4,640	4,814	1,797	4,640	1,150	1,044	0.76	1,044	0.93
Road #3	33	0200-0300	5,331	5,181	1,906	4,981	5,181	1,906	4,981	1,150	1,044	0.76	1,044	0.93
Road #3	33	0300-0400	5,331	5,181	1,906	4,981	5,181	1,906	4,981	1,150	1,044	0.76	1,044	0.93
Road #3	33	0400-0500	6,056	5,906	2,209	5,906	6,056	2,209	5,906	1,411	1,305	0.95	1,305	1.18
Road #3	33	0500-0600	6,056	5,906	2,209	5,906	6,056	2,209	5,906	1,411	1,305	0.95	1,305	1.18
Road #3	33	0600-0700	6,056	5,906	2,209	5,906	6,056	2,209	5,906	1,411	1,305	0.95	1,305	1.18
Road #3	33	0700-0800	6,427	6,277	2,382	6,277	6,427	2,382	6,277	1,411	1,305	0.95	1,305	1.18
Road #3	33	0800-0900	6,639	6,489	2,491	6,489	6,639	2,491	6,489	1,411	1,305	0.95	1,305	1.18
Road #3	33	0900-1000	7,460	7,277	2,730	7,277	7,460	2,730	7,277	1,593	1,467	1.09	1,467	1.33
Road #3	33	1000-1100	7,460	7,277	2,730	7,277	7,460	2,730	7,277	1,593	1,467	1.09	1,467	1.33
Road #3	33	1100-1200	7,927	7,744	2,969	7,744	7,927	2,969	7,744	1,593	1,467	1.09	1,467	1.33
Road #3	33	1200-1300	7,927	7,744	2,969	7,744	7,927	2,969	7,744	1,593	1,467	1.09	1,467	1.33
Road #3	33	1300-1400	8,394	8,211	3,166	8,211	8,394	3,166	8,211	1,593	1,467	1.09	1,467	1.33
Road #3	33	1400-1500	8,597	8,414	3,264	8,414	8,597	3,264	8,414	1,593	1,467	1.09	1,467	1.33
Road #3	33	1500-1600	8,597	8,414	3,264	8,414	8,597	3,264	8,414	1,593	1,467	1.09	1,467	1.33
Road #3	33	1600-1700	8,980	8,797	3,403	8,797	8,980	3,403	8,797	1,593	1,467	1.09	1,467	1.33
Road #3	33	1700-1800	8,980	8,797	3,403	8,797	8,980	3,403	8,797	1,593	1,467	1.09	1,467	1.33
Road #3	33	1800-1900	9,363	9,180	3,542	9,180	9,363	3,542	9,180	1,593	1,467	1.09	1,467	1.33
Road #3	33	1900-2000	9,363	9,180	3,542	9,180	9,363	3,542	9,180	1,593	1,467	1.09	1,467	1.33
Road #3	33	2000-2100	9,363	9,180	3,542	9,180	9,363	3,542	9,180	1,593	1,467	1.09	1,467	1.33
Road #3	33	2100-2200	9,575	9,392	3,640	9,392	9,575	3,640	9,392	1,593	1,467	1.09	1,467	1.33
Road #3	33	2200-2300	9,575	9,392	3,640	9,392	9,575	3,640	9,392	1,593	1,467	1.09	1,467	1.33
Road #3	33	2300-2400	9,575	9,392	3,640	9,392	9,575	3,640	9,392	1,593	1,467	1.09	1,467	1.33
Road #4	34	0000-0100	4,608	4,358	1,639	4,108	4,358	1,639	4,208	1,144	1,038	0.75	1,038	0.92
Road #4	34	0100-0200	5,075	4,925	1,846	4,675	4,925	1,846	4,675	1,144	1,038	0.75	1,038	0.92
Road #4	34	0200-0300	5,442	5,292	1,955	5,042	5,292	1,955	5,042	1,144	1,038	0.75	1,038	0.92
Road #4	34	0300-0400	5,442	5,292	1,955	5,042	5,292	1,955	5,042	1,144	1,038	0.75	1,038	0.92
Road #4	34	0400-0500	6,167	6,017	2,258	5,817	6,017	2,258	5,817	1,405	1,299	0.94	1,299	1.17
Road #4	34	0500-0600	6,167	6,017	2,258	5,817	6,017	2,258	5,817	1,405	1,299	0.94	1,299	1.17
Road #4	34	0600-0700	6,167	6,017	2,258	5,817	6,017	2,258	5,817	1,405	1,299	0.94	1,299	1.17
Road #4	34	0700-0800	6,538	6,388	2,431	6,388	6,538	2,431	6,388	1,405	1,299	0.94	1,299	1.17
Road #4	34	0800-090												

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

[illegible]

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Road North Underpass Quadrant
Year 2028
Mo/Emis/ton

Road Name	Road ID	Hour	Mo/Emis/ton					No/Emis/ton				
			g/hour	g/ha ²	tonnes/hour	g/ha ²	tonnes/hour	g/hour	g/ha ²	tonnes/hour	g/hour	g/ha ²
Road 27	27	1800-1900	2.9601	0.7117	2.3118	0.4601	4.6407	1.9992	1.2990	0.3300	1.0310	1.1140
Road 27	27	1900-2000	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	2000-2100	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	1800-1900	2.3118	0.5781	2.3118	0.4601	4.6407	1.9992	1.2990	0.3300	1.0310	1.1140
Road 27	27	1900-2000	1.2716	0.3171	1.0271	0.1921	2.0087	0.1440	0.9361	0.0240	0.2800	0.8301
Road 27	27	2000-2100	2.9601	0.7117	2.3118	0.4601	4.6407	1.9992	1.2990	0.3300	1.0310	1.1140
Road 27	27	2100-2200	2.1416	0.5316	1.6317	0.4107	3.4617	0.5061	0.7681	0.8301	2.6081	0.8301
Road 27	27	2200-2300	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	2300-0000	2.7216	0.6807	2.1207	0.4207	3.1807	1.8007	0.6107	0.6107	0.9007	0.5151
Road 27	27	0000-0100	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	0100-0200	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	0200-0300	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	0300-0400	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	0400-0500	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	0500-0600	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	0600-0700	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	0700-0800	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	0800-0900	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	0900-1000	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	1000-1100	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	1100-1200	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	1200-1300	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	1300-1400	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	1400-1500	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	1500-1600	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	1600-1700	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	1700-1800	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	1800-1900	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	1900-2000	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	2000-2100	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	2100-2200	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	2200-2300	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	2300-0000	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	0000-0100	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	0100-0200	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	0200-0300	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	0300-0400	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	0400-0500	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	0500-0600	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	0600-0700	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	0700-0800	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	0800-0900	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	0900-1000	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	1000-1100	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	1100-1200	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	1200-1300	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	1300-1400	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	1400-1500	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	1500-1600	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	1600-1700	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	1700-1800	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	1800-1900	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	1900-2000	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	2000-2100	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	2100-2200	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	2200-2300	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	2300-0000	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	0000-0100	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	0100-0200	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	0200-0300	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	0300-0400	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	0400-0500	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	0500-0600	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	0600-0700	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	0700-0800	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	0800-0900	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	0900-1000	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	1000-1100	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	1100-1200	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	1200-1300	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	1300-1400	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	1400-1500	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	1500-1600	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	1600-1700	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	1700-1800	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	1800-1900	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	1900-2000	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	2000-2100	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	2100-2200	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	2200-2300	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	2300-0000	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	0000-0100	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	0100-0200	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	0200-0300	1.3261	0.3300	1.0661	0.2100	2.1000	0.9992	0.6300	0.1650	0.4150	0.5150
Road 27	27	0300-0400	1.3									

Tailing Y North Underground Quarry

Open Road & Near Emission Factors for AEMOD model (t/a)

Year 2008

Road Name	Road ID	Hour	MotorHwy/Urban				MotorHwy/Urban				Average		
			g/hwy/mi	g/urban/mi	tonnes/hr	g/urban	tonnes/hr	g/urban	tonnes/hr				
Road 31	31	0000-0100	4.2717	4.0267	1.4819	3.878	4.0417	1.2982	1.0881	1.1154	1.038	0.75	
Road 31	31	0100-0200	4.2717	4.0267	1.4819	3.878	4.0417	1.2982	1.0881	1.1154	1.038	0.75	
Road 31	31	0200-0300	5.1421	5.0668	1.8787	4.889	5.1421	1.8437	6.6171	8.4319	2.0776	6.17	
Road 31	31	0300-0400	5.7121	5.6152	2.0467	5.186	5.8497	2.0717	7.6517	7.1708	1.548	4.47	
Road 31	31	0400-0500	5.3821	5.2852	1.9057	5.4352	5.9452	1.3681	6.0471	5.7279	3.4451	3.55	
Road 31	31	0500-0600	5.5121	5.4152	1.9467	5.186	5.9207	1.3481	6.5351	5.1038	1.648	3.24	
Road 31	31	0600-0700	5.6421	5.5452	2.0067	5.4352	6.0457	1.3681	6.5351	5.1038	1.648	3.24	
Road 31	31	0700-0800	6.2121	6.0652	2.2867	5.5252	6.7017	6.2716	6.8181	4.8886	4.5064	3.32	
Road 31	31	0800-0900	6.5421	6.3952	2.4067	5.8852	7.2167	6.7216	7.3752	4.4241	4.8514	3.568	4.13
Road 31	31	0900-1000	7.2121	7.0652	2.6867	6.2852	8.2917	7.4052	8.1517	5.4541	4.9851	3.786	4.24
Road 31	31	1000-1100	8.1221	8.0252	3.0867	6.8852	8.8217	7.3152	8.5217	5.4081	4.8381	3.611	4.53
Road 31	31	1100-1200	8.5121	8.4152	3.3067	7.2852	9.3917	7.7852	9.1517	5.7101	5.1411	3.911	4.78
Road 31	31	1200-1300	8.8421	8.7452	3.4267	7.5152	9.6217	8.0152	9.4517	5.8481	5.2801	4.026	4.86
Road 31	31	1300-1400	9.5121	9.4152	3.6467	8.1352	10.2217	8.6052	10.3617	6.2081	5.6391	4.385	5.27
Road 31	31	1400-1500	9.8421	9.7452	3.7667	8.3652	10.4517	8.8352	10.6817	6.4381	5.8691	4.615	5.50
Road 31	31	1500-1600	8.1221	8.0252	3.0867	6.8852	8.8217	7.3152	8.5217	5.4081	4.8381	3.611	4.53
Road 31	31	1600-1700	8.5121	8.4152	3.3067	7.2852	9.3917	7.7852	9.1517	5.7101	5.1411	3.911	4.78
Road 31	31	1700-1800	8.8421	8.7452	3.4267	7.5152	9.6217	8.0152	9.4517	5.8481	5.2801	4.026	4.86
Road 31	31	1800-1900	9.5121	9.4152	3.6467	8.1352	10.2217	8.6052	10.3617	6.2081	5.6391	4.385	5.27
Road 31	31	1900-2000	9.8421	9.7452	3.7667	8.3652	10.4517	8.8352	10.6817	6.4381	5.8691	4.615	5.50
Road 31	31	2000-2100	8.1221	8.0252	3.0867	6.8852	8.8217	7.3152	8.5217	5.4081	4.8381	3.611	4.53
Road 31	31	2100-2200	8.5121	8.4152	3.3067	7.2852	9.3917	7.7852	9.1517	5.7101	5.1411	3.911	4.78
Road 31	31	2200-2300	8.8421	8.7452	3.4267	7.5152	9.6217	8.0152	9.4517	5.8481	5.2801	4.026	4.86
Road 31	31	2300-0000	9.5121	9.4152	3.6467	8.1352	10.2217	8.6052	10.3617	6.2081	5.6391	4.385	5.27
Road 32	32	0000-0400	3.3821	3.2352	1.1267	3.1452	3.1452	2.2047	1.8681	2.5216	1.6451	1.096	2.58
Road 32	32	0400-0500	3.3821	3.2352	1.1267	3.1452	3.1452	2.2047	1.8681	2.5216	1.6451	1.096	2.58
Road 32	32	0500-0600	4.1721	4.1442	1.5842	3.7651	4.1721	1.5842	2.8861	3.7875	5.2314	4.098	7.52
Road 32	32	0600-0700	4.1721	4.1442	1.5842	3.7651	4.1721	1.5842	2.8861	3.7875	5.2314	4.098	7.52
Road 32	32	0700-0800	4.5421	4.5152	1.6867	4.0662	4.5421	1.6867	3.5951	4.5421	1.6867	3.5951	3.28
Road 32	32	0800-0900	4.5421	4.5152	1.6867	4.0662	4.5421	1.6867	3.5951	4.5421	1.6867	3.5951	3.28
Road 32	32	0900-1000	4.5421	4.5152	1.6867	4.0662	4.5421	1.6867	3.5951	4.5421	1.6867	3.5951	3.28
Road 32	32	1000-1100	4.5421	4.5152	1.6867	4.0662	4.5421	1.6867	3.5951	4.5421	1.6867	3.5951	3.28
Road 32	32	1100-1200	4.5421	4.5152	1.6867	4.0662	4.5421	1.6867	3.5951	4.5421	1.6867	3.5951	3.28
Road 32	32	1200-1300	4.5421	4.5152	1.6867	4.0662	4.5421	1.6867	3.5951	4.5421	1.6867	3.5951	3.28
Road 32	32	1300-1400	4.5421	4.5152	1.6867	4.0662	4.5421	1.6867	3.5951	4.5421	1.6867	3.5951	3.28
Road 32	32	1400-1500	4.5421	4.5152	1.6867	4.0662	4.5421	1.6867	3.5951	4.5421	1.6867	3.5951	3.28
Road 32	32	1500-1600	4.5421	4.5152	1.6867	4.0662	4.5421	1.6867	3.5951	4.5421	1.6867	3.5951	3.28
Road 32	32	1600-1700	4.5421	4.5152	1.6867	4.0662	4.5421	1.6867	3.5951	4.5421	1.6867	3.5951	3.28
Road 32	32	1700-1800	4.5421	4.5152	1.6867	4.0662	4.5421	1.6867	3.5951	4.5421	1.6867	3.5951	3.28
Road 32	32	1800-1900	4.5421	4.5152	1.6867	4.0662	4.5421	1.6867	3.5951	4.5421	1.6867	3.5951	3.28
Road 32	32	1900-2000	4.5421	4.5152	1.6867	4.0662	4.5421	1.6867	3.5951	4.5421	1.6867	3.5951	3.28
Road 32	32	2000-2100	4.5421	4.5152	1.6867	4.0662	4.5421	1.6867	3.5951	4.5421	1.6867	3.5951	3.28
Road 32	32	2100-2200	4.5421	4.5152	1.6867	4.0662	4.5421	1.6867	3.5951	4.5421	1.6867	3.5951	3.28
Road 32	32	2200-2300	4.5421	4.5152	1.6867	4.0662	4.5421	1.6867	3.5951	4.5421	1.6867	3.5951	3.28
Road 32	32	2300-0000	4.5421	4.5152	1.6867	4.0662	4.5421	1.6867	3.5951	4.5421	1.6867	3.5951	3.28
Road 33	33	0000-0100	4.8121	4.8847	1.8847	2.7751	4.8121	1.7372	2.6052	2.8861	1.7348	1.8847	2.7751
Road 33	33	0100-0200	4.8121	4.8847	1.8847	2.7751	4.8121	1.7372	2.6052	2.8861	1.7348	1.8847	2.7751
Road 33	33	0200-0300	4.8121	4.8847	1.8847	2.7751	4.8121	1.7372	2.6052	2.8861	1.7348	1.8847	2.7751
Road 33	33	0300-0400	4.8121	4.8847	1.8847	2.7751	4.8121	1.7372	2.6052	2.8861	1.7348	1.8847	2.7751
Road 33	33	0400-0500	4.8121	4.8847	1.8847	2.7751	4.8121	1.7372	2.6052	2.8861	1.7348	1.8847	2.7751
Road 33	33	0500-0600	4.8121	4.8847	1.8847	2.7751	4.8121	1.7372	2.6052	2.8861	1.7348	1.8847	2.7751
Road 33	33	0600-0700	4.8121	4.8847	1.8847	2.7751	4.8121	1.7372	2.6052	2.8861	1.7348	1.8847	2.7751
Road 33	33	0700-0800	4.8121	4.8847	1.8847	2.7751	4.8121	1.7372	2.6052	2.8861	1.7348	1.8847	2.7751
Road 33	33	0800-0900	4.8121	4.8847	1.8847	2.7751	4.8121	1.7372	2.6052	2.8861	1.7348	1.8847	2.7751
Road 33	33	0900-1000	4.8121	4.8847	1.8847	2.7751	4.8121	1.7372	2.6052	2.8861	1.7348	1.8847	2.7751
Road 33	33	1000-1100	4.8121	4.8847	1.8847	2.7751	4.8121	1.7372	2.6052	2.8861	1.7348	1.8847	2.7751
Road 33	33	1100-1200	4.8121	4.8847	1.8847	2.7751	4.8121	1.7372	2.6052	2.8861	1.7348	1.8847	2.7751
Road 33	33	1200-1300	4.8121	4.8847	1.8847	2.7751	4.8121	1.7372	2.6052	2.8861	1.7348	1.8847	2.7751
Road 33	33	1300-1400	4.8121	4.8847	1.8847	2.7751	4.8121	1.7372	2.6052	2.8861	1.7348	1.8847	2.7751
Road 33	33	1400-1500	4.8121	4.8847	1.8847	2.7751	4.8121	1.7372	2.6052	2.8861	1.7348	1.8847	2.7751
Road 33	33	1500-1600	4.8121	4.8847	1.8847	2.7751	4.8121	1.7372	2.6052	2.8861	1.7348	1.8847	2.7751
Road 33	33	1600-1700	4.8121	4.8847	1.8847	2.7751	4.8121	1.7372	2.6052	2.8861	1.7348	1.8847	2.7751
Road 33	33	1700-1800	4.8121	4.8847	1.8847	2.7751	4.8121	1.7372	2.6052	2.8861	1.7348	1.8847	2.7751
Road 33	33	1800-1900	4.8121	4.8847	1.8847	2.7751	4.8121	1.7372	2.6052	2.8861	1.7348	1.8847	2.7751
Road 33	33	1900-2000	4.8121	4.8847	1.8847	2.7751	4.8121	1.7372	2.6052	2.8861	1.7348	1.8847	2.7751
Road 33	33	2000-2100	4.8121	4.8847	1.8847	2.7751	4.8121	1.7372	2.6052	2.8861	1.7348	1.8847	2.7751
Road 33	33	2100-2200	4.8121	4.8847	1.8847	2.7751	4.8121	1.7372	2.6052	2.8861	1.7348	1.8847	2.7751
Road 33	33	2200-2300	4.8121	4.8847	1.8847	2.7751	4.8121	1.7372	2.6052	2.8861	1.7348	1.8847	2.7751
Road 33	33	2300-0000	4.8121	4.8847	1.8847	2.7751	4.8121	1.7372	2.6052	2.8861	1.7348	1.8847	2.7751
Road 34	34	0000-0100	4.8121	4.8847	1.8847	2.7751	4.8121	1.7372	2.6052	2.8861	1.7348	1.8847	2.7751
Road 34	34	0100-0200	4.8121	4.8847	1.8847	2.7751	4.8121	1.7372	2.6052	2.8861	1.7348	1.8847	2.7751
Road 34	34	0200-0300	4.8121	4.8847	1.8847	2.7751	4.8121	1.7372	2.6052	2.8861	1.7348	1.8847	2.7751
Road 34	34	0300-0400	4.8121	4.8847	1.8847	2.7751	4.8121	1.7372	2.6052	2.8861	1.7348	1.8847	2.7751
Road 34	34	0400-0500	4.8121	4.8847	1.8847	2.7751	4.8121	1.7372	2.6052	2.8861	1.7348	1.8847	2.7751
Road 34	34	0500-0600	4.8121	4.8847	1.8847	2.7751	4.8121	1.7372	2.6052	2.8861	1.7348	1.8847	2.7751
Road 34	34	0600-0700	4.8121	4.8847	1.8847	2.7751	4.8121	1.7372	2.6052	2.8861	1.7348	1.8847	2.7751
Road 34	34	0700-0800	4.8121	4.8847	1.8847	2.7751	4.8121	1.7372	2.6052	2.8861	1.7348	1.8847	2.7751
Road 34	34	0800-0900	4.8121	4.8847	1.8847	2.7751	4.8121	1.7372	2.6052	2.8861	1.7348	1.8847	2.7751
Road 34	34	0900-1000	4.8121	4.8847	1.8847	2.7751	4.8121	1.7372	2.6052	2.8861	1.7348	1.8847	2.7751
Road 34	34	1000-1100	4.8121	4.8847	1.8847	2.7751	4.8121	1.7372	2.6052	2.8861	1.7348	1.8847	2.7751

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Top North Underdrain Factors														
Year 2028														
Road Name	Road ID	Hour	No. Emulsion						No. Emulsion					
			Month/January		Month/February		Month/March		Month/April		Month/May			
			g/L/m ² /hr	g/L/m ² /hr	g/L/m ² /hr	g/L/m ² /hr	g/L/m ² /hr	g/L/m ² /hr	g/L/m ² /hr	g/L/m ² /hr	g/L/m ² /hr	g/L/m ² /hr	g/L/m ² /hr	
Road 1	1	0000-0100	2.426	2.087	0.710	1.712	0.587	1.032	0.018	2.196	1.221	1.795	1.038	1.064
	1	0100-0200	1.795	1.517	0.517	1.245	0.318	0.716	0.018	1.584	0.884	1.265	0.765	0.784
	1	0200-0300	1.245	1.117	0.317	0.816	0.167	0.416	0.018	1.136	0.624	0.987	0.587	0.596
	1	0300-0400	0.816	0.710	0.167	0.416	0.032	0.216	0.018	0.710	0.317	0.587	0.216	0.216
	1	0400-0500	0.517	0.416	0.032	0.216	0.016	0.103	0.018	0.416	0.167	0.317	0.103	0.103
Road 2	1	0000-0100	2.566	2.216	0.710	1.816	0.617	1.136	0.018	2.316	1.316	1.816	1.038	1.064
	1	0100-0200	1.816	1.517	0.517	1.245	0.318	0.716	0.018	1.584	0.884	1.265	0.765	0.784
	1	0200-0300	1.245	1.117	0.317	0.816	0.167	0.416	0.018	1.136	0.624	0.987	0.587	0.596
	1	0300-0400	0.816	0.710	0.167	0.416	0.032	0.216	0.018	0.710	0.317	0.587	0.216	0.216
	1	0400-0500	0.517	0.416	0.032	0.216	0.016	0.103	0.018	0.416	0.167	0.317	0.103	0.103
Road 3	1	0000-0100	2.616	2.216	0.710	1.816	0.617	1.136	0.018	2.316	1.316	1.816	1.038	1.064
	1	0100-0200	1.816	1.517	0.517	1.245	0.318	0.716	0.018	1.584	0.884	1.265	0.765	0.784
	1	0200-0300	1.245	1.117	0.317	0.816	0.167	0.416	0.018	1.136	0.624	0.987	0.587	0.596
	1	0300-0400	0.816	0.710	0.167	0.416	0.032	0.216	0.018	0.710	0.317	0.587	0.216	0.216
	1	0400-0500	0.517	0.416	0.032	0.216	0.016	0.103	0.018	0.416	0.167	0.317	0.103	0.103
Road 4	1	0000-0100	2.716	2.316	0.710	1.916	0.617	1.236	0.018	2.416	1.416	1.916	1.138	1.164
	1	0100-0200	1.916	1.617	0.517	1.345	0.318	0.816	0.018	1.684	0.984	1.365	0.865	0.884
	1	0200-0300	1.345	1.217	0.317	0.916	0.167	0.516	0.018	1.236	0.724	1.087	0.687	0.696
	1	0300-0400	0.916	0.816	0.167	0.516	0.032	0.316	0.018	0.816	0.417	0.687	0.316	0.316
	1	0400-0500	0.617	0.516	0.032	0.316	0.016	0.216	0.018	0.516	0.217	0.417	0.216	0.216
Road 5	1	0000-0100	2.816	2.416	0.710	2.016	0.617	1.336	0.018	2.516	1.516	2.016	1.238	1.264
	1	0100-0200	2.016	1.717	0.517	1.445	0.318	0.916	0.018	1.784	1.084	1.465	0.965	0.984
	1	0200-0300	1.445	1.317	0.317	1.016	0.167	0.616	0.018	1.336	0.824	1.187	0.787	0.796
	1	0300-0400	1.016	0.916	0.167	0.616	0.032	0.416	0.018	0.916	0.517	0.787	0.416	0.416
	1	0400-0500	0.710	0.616	0.032	0.416	0.016	0.316	0.018	0.616	0.317	0.616	0.316	0.316
Road 6	1	0000-0100	2.916	2.516	0.710	2.116	0.617	1.436	0.018	2.616	1.616	2.116	1.338	1.364
	1	0100-0200	2.116	1.817	0.517	1.545	0.318	1.016	0.018	1.884	1.184	1.565	1.065	1.084
	1	0200-0300	1.545	1.417	0.317	1.116	0.167	0.716	0.018	1.436	0.924	1.287	0.887	0.896
	1	0300-0400	1.116	1.016	0.167	0.716	0.032	0.516	0.018	1.116	0.617	1.087	0.516	0.516
	1	0400-0500	0.710	0.616	0.032	0.516	0.016	0.416	0.018	0.710	0.417	0.616	0.416	0.416
Road 7	1	0000-0100	3.016	2.616	0.710	2.216	0.617	1.536	0.018	2.716	1.716	2.216	1.438	1.464
	1	0100-0200	2.216	1.917	0.517	1.645	0.318	1.116	0.018	1.984	1.284	1.665	1.165	1.184
	1	0200-0300	1.645	1.517	0.317	1.216	0.167	0.816	0.018	1.536	1.024	1.387	0.987	0.996
	1	0300-0400	1.216	1.116	0.167	0.816	0.032	0.616	0.018	1.216	0.717	1.187	0.616	0.616
	1	0400-0500	0.816	0.716	0.032	0.616	0.016	0.516	0.018	0.816	0.517	0.716	0.516	0.516
Road 8	1	0000-0100	3.116	2.716	0.710	2.316	0.617	1.636	0.018	2.816	1.816	2.316	1.538	1.564
	1	0100-0200	2.316	2.017	0.517	1.745	0.318	1.216	0.018	2.084	1.384	1.765	1.265	1.284
	1	0200-0300	1.745	1.617	0.317	1.316	0.167	0.916	0.018	1.636	1.124	1.487	1.087	1.096
	1	0300-0400	1.316	1.216	0.167	0.916	0.032	0.716	0.018	1.316	0.817	1.287	0.716	0.716
	1	0400-0500	0.916	0.816	0.032	0.716	0.016	0.616	0.018	0.916	0.617	0.816	0.616	0.616
Road 9	1	0000-0100	3.216	2.816	0.710	2.416	0.617	1.736	0.018	2.916	1.916	2.416	1.638	1.664
	1	0100-0200	2.416	2.117	0.517	1.845	0.318	1.316	0.018	2.184	1.484	1.865	1.365	1.384
	1	0200-0300	1.845	1.717	0.317	1.416	0.167	1.016	0.018	1.736	1.224	1.587	1.187	1.196
	1	0300-0400	1.416	1.316	0.167	1.016	0.032	0.816	0.018	1.416	0.917	1.387	0.816	0.816
	1	0400-0500	1.016	0.916	0.032	0.816	0.016	0.716	0.018	1.016	0.717	0.916	0.716	0.716
Road 10	1	0000-0100	3.316	2.916	0.710	2.516	0.617	1.836	0.018	3.016	2.016	2.516	1.738	1.764
	1	0100-0200	2.516	2.217	0.517	1.945	0.318	1.416	0.018	2.284	1.584	1.965	1.465	1.484
	1	0200-0300	1.945	1.817	0.317	1.516	0.167	1.116	0.018	1.836	1.324	1.687	1.287	1.296
	1	0300-0400	1.516	1.416	0.167	1.116	0.032	0.916	0.018	1.516	1.017	1.487	0.916	0.916
	1	0400-0500	1.116	1.016	0.032	0.916	0.016	0.816	0.018	1.116	0.817	1.016	0.816	0.816
Road 11	1	0000-0100	3.416	3.016	0.710	2.616	0.617	1.936	0.018	3.116	2.116	2.616	1.838	1.864
	1	0100-0200	2.616	2.317	0.517	2.045	0.318	1.516	0.018	2.384	1.684	2.065	1.565	1.584
	1	0200-0300	2.045	1.917	0.317	1.616	0.167	1.216	0.018	1.936	1.424	1.787	1.387	1.396
	1	0300-0400	1.616	1.516	0.167	1.216	0.032	1.016	0.018	1.616	1.117	1.587	1.016	1.016
	1	0400-0500	1.216	1.116	0.032	1.016	0.016	0.916	0.018	1.216	0.917	1.116	0.916	0.916
Road 12	1	0000-0100	3.516	3.116	0.710	2.716	0.617	2.036	0.018	3.216	2.216	2.716	1.938	1.964
	1	0100-0200	2.716	2.417	0.517	2.145	0.318	1.616	0.018	2.484	1.784	2.165	1.665	1.684
	1	0200-0300	2.145	2.017	0.317	1.716	0.167	1.316	0.018	2.036	1.564	1.887	1.487	1.496
	1	0300-0400	1.716	1.616	0.167	1.316	0.032	1.116	0.018	1.716	1.217	1.687	1.116	1.116
	1	0400-0500	1.316	1.216	0.032	1.116	0.016	1.016	0.018	1.316	1.017	1.216	1.016	1.016
Road 13	1	0000-0100	3.616	3.216	0.710	2.816	0.617	2.136	0.018	3.316	2.316	2.816	2.038	2.064
	1	0100-0200	2.816	2.517	0.517	2.245	0.318	1.716	0.018	2.584	1.884	2.265	1.765	1.784
	1	0200-0300	2.245	2.117	0.317	1.816	0.167	1.416	0.018	2.136	1.664	1.987	1.587	1.596
	1	0300-0400	1.816	1.716	0.167	1.416	0.032	1.216	0.018	1.816	1.317	1.787	1.216	1.216
	1	0400-0500	1.416	1.316	0.032	1.216	0.016	1.116	0.018	1.416	1.117	1.316	1.116	1.116
Road 14	1	0000-0100	3.716	3.316	0.710	2.916	0.617	2.236	0.018	3.416	2.416	2.916	2.138	2.164
	1	0100-0200	2.916	2.617	0.517	2.345	0.318	1.816	0.018	2.684	1.984	2.365	1.865	1.884
	1	0200-0300	2.345	2.217	0.317	1.916	0.167	1.516	0.018	2.236	1.764	2.087	1.687	1.696
	1	0300-0400	1.916	1.816	0.167	1.516	0.032	1.316	0.018	1.916	1.417	1.987	1.316	1.316
	1	0400-0500	1.516	1.416	0.032	1.316	0.016	1.216	0.018	1.516	1.217	1.416	1.216	1.216
Road 15	1	0000-0100	3.816	3.416	0.710	3.016	0.617	2.336	0.018	3.516	2.516	3.016	2.238	2.264
	1	0100-0200	3.016	2.717	0.517	2.445	0.318	1.916	0.018	2.784	2.084	2.465	1.965	2.084
	1	0200-0300	2.445	2.317	0.317	2.016	0.167	1.616	0.018	2.336	1.864	2.187	1.787	1.796
	1	0300-0400	2.016	1.916	0.167	1.616	0.032	1.416	0.018	2.016	1.517	1.987	1.416	1.416
	1	0400-0500	1.616	1.516	0.032	1.416	0.016	1.316	0.018	1.616	1.317	1.516	1.316	1.316
Road 16	1	0000-0100	3.916	3.516	0.710	3.116	0.617	2.436	0.018	3.616	2.616	3.116	2.338	2.364
	1	0100-0200	3.116	2.817	0.517	2.545	0.318	2.016	0.018	2.884	2.184	2.565	2.065	2.084
	1	0200-0300	2.545	2.417	0.317	2.116	0.167	1.716	0.018	2.436	1.964	2.287	1.887	1.896
	1	0300-0400	2.116	2.016	0.167	1.716	0.032	1.516	0.018	2.116	1.617	2.087	1.516	1.516
	1	0400-0500	1.716	1.616	0.032	1.516	0.016	1.416	0.018	1.716	1.417	1.616	1.416	1.416
Road 17	1	0000-0100	4.016	3.616	0.710	3.216	0.617	2.536	0.018	3.716	2.716	3.216	2.438	2.464
	1	0100-0200	3.216	2.917	0.517	2.645	0.318	2.116	0.018	2.984	2.284	2.665	2.165	2.184
	1	0200-0300	2.645											

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Tsyng Yi North Underground Quarry Open Road Hour Emission Factor for ARMMO model (August)														
Year 2028														
Road Name	Road ID	Hour	NO ₂ Emission			PM ₁₀ Emission			PM _{2.5} Emission					
			g/hour/veh	g/hour/m ²	g/hour/m ²	g/hour/veh	g/hour/m ²	g/hour/m ²	g/hour/veh	g/hour/m ²	g/hour/m ²			
Road 14	14	0800-0900	7.110	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	0900-1000	7.235	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	1000-1100	7.360	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	1100-1200	7.485	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	1200-1300	7.610	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	1300-1400	7.735	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	1400-1500	7.860	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	1500-1600	7.985	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	1600-1700	8.110	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	1700-1800	8.235	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	1800-1900	8.360	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	1900-2000	8.485	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	2000-2100	8.610	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	2100-2200	8.735	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	2200-2300	8.860	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	2300-2400	8.985	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	2400-2500	9.110	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	2500-2600	9.235	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	2600-2700	9.360	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	2700-2800	9.485	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	2800-2900	9.610	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	2900-3000	9.735	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	3000-3100	9.860	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	3100-3200	9.985	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	3200-3300	10.110	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	3300-3400	10.235	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	3400-3500	10.360	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	3500-3600	10.485	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	3600-3700	10.610	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	3700-3800	10.735	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	3800-3900	10.860	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	3900-4000	10.985	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	4000-4100	11.110	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	4100-4200	11.235	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	4200-4300	11.360	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	4300-4400	11.485	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	4400-4500	11.610	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	4500-4600	11.735	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	4600-4700	11.860	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	4700-4800	11.985	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	4800-4900	12.110	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	4900-5000	12.235	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	5000-5100	12.360	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	5100-5200	12.485	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	5200-5300	12.610	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	5300-5400	12.735	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	5400-5500	12.860	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	5500-5600	12.985	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	5600-5700	13.110	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	5700-5800	13.235	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	5800-5900	13.360	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	5900-6000	13.485	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	6000-6100	13.610	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	6100-6200	13.735	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	6200-6300	13.860	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	6300-6400	13.985	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	6400-6500	14.110	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	6500-6600	14.235	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	6600-6700	14.360	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	6700-6800	14.485	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	6800-6900	14.610	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	6900-7000	14.735	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	7000-7100	14.860	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	7100-7200	14.985	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	7200-7300	15.110	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	7300-7400	15.235	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	7400-7500	15.360	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	7500-7600	15.485	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	7600-7700	15.610	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	7700-7800	15.735	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	7800-7900	15.860	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	7900-8000	15.985	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	8000-8100	16.110	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	8100-8200	16.235	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	8200-8300	16.360	1.088	0.846	6.240	0.972	1.620	0.458	0.718	0.514	3.880	5.905	1.010
Road 14	14	8300-8400	16.485	1.088	0.846	6.240	0.							

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open N North Underway Quarry

Peak N North 2nd Extension Factors for AR5000 Model (August)

Year 2038

Road Name	Road ID	Hour	Mo/Emission			No/Emission			Hour
			g/h/m ³	ton/hour	ton/year	g/h/m ³	ton/hour	ton/year	
Road #41	0000-0100	8:44:02	1.548	0.77	1.43E+06	5.762	2.88	1.79E+06	1:44
		8:45:02	1.548	0.77	1.43E+06	5.762	2.88	1.79E+06	1:45
		8:46:02	1.548	0.77	1.43E+06	5.762	2.88	1.79E+06	1:46
Road #41	0001-0100	8:51:10	1.517	0.76	1.40E+06	5.625	2.81	1.75E+06	1:51
		8:52:10	1.517	0.76	1.40E+06	5.625	2.81	1.75E+06	1:52
		8:53:10	1.517	0.76	1.40E+06	5.625	2.81	1.75E+06	1:53
Road #41	0002-0100	8:58:20	1.486	0.74	1.36E+06	5.488	2.74	1.71E+06	1:58
		8:59:20	1.486	0.74	1.36E+06	5.488	2.74	1.71E+06	1:59
		9:00:20	1.486	0.74	1.36E+06	5.488	2.74	1.71E+06	2:00
Road #41	0003-0100	9:03:30	1.455	0.73	1.33E+06	5.351	2.68	1.67E+06	2:03
		9:04:30	1.455	0.73	1.33E+06	5.351	2.68	1.67E+06	2:04
		9:05:30	1.455	0.73	1.33E+06	5.351	2.68	1.67E+06	2:05
Road #41	0004-0100	9:10:40	1.424	0.71	1.30E+06	5.214	2.62	1.64E+06	2:10
		9:11:40	1.424	0.71	1.30E+06	5.214	2.62	1.64E+06	2:11
		9:12:40	1.424	0.71	1.30E+06	5.214	2.62	1.64E+06	2:12
Road #41	0005-0100	9:15:50	1.393	0.69	1.27E+06	5.077	2.56	1.61E+06	2:15
		9:16:50	1.393	0.69	1.27E+06	5.077	2.56	1.61E+06	2:16
		9:17:50	1.393	0.69	1.27E+06	5.077	2.56	1.61E+06	2:17
Road #41	0006-0100	9:21:00	1.362	0.67	1.24E+06	4.940	2.50	1.58E+06	2:21
		9:22:00	1.362	0.67	1.24E+06	4.940	2.50	1.58E+06	2:22
		9:23:00	1.362	0.67	1.24E+06	4.940	2.50	1.58E+06	2:23
Road #41	0007-0100	9:26:10	1.331	0.65	1.21E+06	4.803	2.44	1.55E+06	2:26
		9:27:10	1.331	0.65	1.21E+06	4.803	2.44	1.55E+06	2:27
		9:28:10	1.331	0.65	1.21E+06	4.803	2.44	1.55E+06	2:28
Road #41	0008-0100	9:31:20	1.300	0.63	1.18E+06	4.666	2.38	1.52E+06	2:31
		9:32:20	1.300	0.63	1.18E+06	4.666	2.38	1.52E+06	2:32
		9:33:20	1.300	0.63	1.18E+06	4.666	2.38	1.52E+06	2:33
Road #41	0009-0100	9:36:30	1.269	0.61	1.15E+06	4.529	2.32	1.49E+06	2:36
		9:37:30	1.269	0.61	1.15E+06	4.529	2.32	1.49E+06	2:37
		9:38:30	1.269	0.61	1.15E+06	4.529	2.32	1.49E+06	2:38
Road #41	0010-0100	9:41:40	1.238	0.59	1.12E+06	4.392	2.26	1.46E+06	2:41
Road #41	0011-0100	9:44:50	1.207	0.57	1.09E+06	4.255	2.20	1.43E+06	2:44
		9:45:50	1.207	0.57	1.09E+06	4.255	2.20	1.43E+06	2:45
		9:46:50	1.207	0.57	1.09E+06	4.255	2.20	1.43E+06	2:46
Road #41	0012-0100	9:49:00	1.176	0.55	1.06E+06	4.118	2.14	1.40E+06	2:49
		9:50:00	1.176	0.55	1.06E+06	4.118	2.14	1.40E+06	2:50
		9:51:00	1.176	0.55	1.06E+06	4.118	2.14	1.40E+06	2:51
Road #41	0013-0100	9:54:10	1.145	0.53	1.03E+06	3.981	2.08	1.37E+06	2:54
		9:55:10	1.145	0.53	1.03E+06	3.981	2.08	1.37E+06	2:55
		9:56:10	1.145	0.53	1.03E+06	3.981	2.08	1.37E+06	2:56
Road #41	0014-0100	9:59:20	1.114	0.51	1.00E+06	3.844	2.02	1.34E+06	2:59
		1:00:20	1.114	0.51	1.00E+06	3.844	2.02	1.34E+06	3:00
		1:01:20	1.114	0.51	1.00E+06	3.844	2.02	1.34E+06	3:01
Road #41	0015-0100	1:04:30	1.083	0.49	9.7E+05	3.707	1.96	1.31E+06	3:04
		1:05:30	1.083	0.49	9.7E+05	3.707	1.96	1.31E+06	3:05
		1:06:30	1.083	0.49	9.7E+05	3.707	1.96	1.31E+06	3:06
Road #41	0016-0100	1:09:40	1.052	0.47	9.4E+05	3.570	1.90	1.28E+06	3:09
		1:10:40	1.052	0.47	9.4E+05	3.570	1.90	1.28E+06	3:10
		1:11:40	1.052	0.47	9.4E+05	3.570	1.90	1.28E+06	3:11
Road #41	0017-0100	1:14:50	1.021	0.45	9.1E+05	3.433	1.84	1.25E+06	3:14
		1:15:50	1.021	0.45	9.1E+05	3.433	1.84	1.25E+06	3:15
		1:16:50	1.021	0.45	9.1E+05	3.433	1.84	1.25E+06	3:16
Road #41	0018-0100	1:19:00	9.9E-05	0.00	8.8E+04	3.296	1.78	1.22E+06	3:19
		1:20:00	9.9E-05	0.00	8.8E+04	3.296	1.78	1.22E+06	3:20
		1:21:00	9.9E-05	0.00	8.8E+04	3.296	1.78	1.22E+06	3:21
Road #41	0019-0100	1:24:10	9.6E-05	0.00	8.5E+04	3.159	1.72	1.19E+06	3:24
		1:25:10	9.6E-05	0.00	8.5E+04	3.159	1.72	1.19E+06	3:25
		1:26:10	9.6E-05	0.00	8.5E+04	3.159	1.72	1.19E+06	3:26
Road #41	0020-0100	1:29:20	9.3E-05	0.00	8.2E+04	3.022	1.66	1.16E+06	3:29
		1:30:20	9.3E-05	0.00	8.2E+04	3.022	1.66	1.16E+06	3:30
		1:31:20	9.3E-05	0.00	8.2E+04	3.022	1.66	1.16E+06	3:31
Road #41	0021-0100	1:34:30	9.0E-05	0.00	7.9E+04	2.885	1.60	1.13E+06	3:34
		1:35:30	9.0E-05	0.00	7.9E+04	2.885	1.60	1.13E+06	3:35
		1:36:30	9.0E-05	0.00	7.9E+04	2.885	1.60	1.13E+06	3:36
Road #41	0022-0100	1:39:40	8.7E-05	0.00	7.6E+04	2.748	1.54	1.10E+06	3:39
		1:40:40	8.7E-05	0.00	7.6E+04	2.748	1.54	1.10E+06	3:40
		1:41:40	8.7E-05	0.00	7.6E+04	2.748	1.54	1.10E+06	3:41
Road #41	0023-0100	1:44:50	8.4E-05	0.00	7.3E+04	2.611	1.48	1.07E+06	3:44
		1:45:50	8.4E-05	0.00	7.3E+04	2.611	1.48	1.07E+06	3:45
		1:46:50	8.4E-05	0.00	7.3E+04	2.611	1.48	1.07E+06	3:46
Road #41	0024-0100	1:49:00	8.1E-05	0.00	7.0E+04	2.474	1.42	1.04E+06	3:49
		1:50:00	8.1E-05	0.00	7.0E+04	2.474	1.42	1.04E+06	3:50
		1:51:00	8.1E-05	0.00	7.0E+04	2.474	1.42	1.04E+06	3:51
Road #41	0025-0100	1:54:10	7.8E-05	0.00	6.7E+04	2.337	1.36	1.01E+06	3:54
		1:55:10	7.8E-05	0.00	6.7E+04	2.337	1.36	1.01E+06	3:55
		1:56:10	7.8E-05	0.00	6.7E+04	2.337	1.36	1.01E+06	3:56
Road #41	0026-0100	1:59:20	7.5E-05	0.00	6.4E+04	2.200	1.30	9.8E+05	3:59
		2:00:20	7.5E-05	0.00	6.4E+04	2.200	1.30	9.8E+05	4:00
		2:01:20	7.5E-05	0.00	6.4E+04	2.200	1.30	9.8E+05	4:01
Road #41	0027-0100	2:04:30	7.2E-05	0.00	6.1E+04	2.063	1.24	9.5E+05	4:04
		2:05:30	7.2E-05	0.00	6.1E+04	2.063	1.24	9.5E+05	4:05
		2:06:30	7.2E-05	0.00	6.1E+04	2.063	1.24	9.5E+05	4:06
Road #41	0028-0100	2:09:40	6.9E-05	0.00	5.8E+04	1.926	1.18	9.2E+05	4:09
		2:10:40	6.9E-05	0.00	5.8E+04	1.926	1.18	9.2E+05	4:10
		2:11:40	6.9E-05	0.00	5.8E+04	1.926	1.18	9.2E+05	4:11
Road #41	0029-0100	2:14:50	6.6E-05	0.00	5.5E+04	1.789	1.12	8.9E+05	4:14
		2:15:50	6.6E-05	0.00	5.5E+04	1.789	1.12	8.9E+05	4:15
		2:16:50	6.6E-05	0.00	5.5E+04	1.789	1.12	8.9E+05	4:16
Road #41	0030-0100	2:19:00	6.3E-05	0.00	5.2E+04	1.652	1.06	8.6E+05	4:19
		2:20:00	6.3E-05	0.00	5.2E+04	1.652	1.06	8.6E+05	4:20
		2:21:00	6.3E-05	0.00	5.2E+04	1.652	1.06	8.6E+05	4:21
Road #41	0031-0100	2:24:10	6.0E-05	0.00	4.9E+04	1.515	1.00	8.3E+05	4:24
		2:25:10	6.0E-05	0.00	4.9E+04	1.515	1.00	8.3E+05	4:25
		2:26:10	6.0E-05	0.00	4.9E+04	1.515	1.00	8.3E+05	4:26
Road #41	0032-0100	2:29:20	5.7E-05	0.00	4.6E+04	1.378	0.94	8.0E+05	4:29
		2:30:20	5.7E-05	0.00	4.6E+04	1.378	0.94	8.0E+05	4:30
		2:31:20	5.7E-05	0.00	4.6E+04	1.378	0.94	8.0E+05	4:31
Road #41	0033-0100	2:34:30	5.4E-05	0.00	4.3E+04	1.241	0.88	7.7E+05	4:34
		2:35:30	5.4E-05	0.00	4.3E+04	1.241	0.88	7.7E+05	4:35
		2:36:30	5.4E-05	0.00	4.3E+04	1.241	0.88	7.7E+05	4:36
Road #41	0034-0100	2:39:40	5.1E-05	0.00	4.0E+04	1.104	0.82	7.4E+05	4:39
		2:40:40	5.1E-05	0.00	4.0E+04	1.104	0.82	7.4E+05	4:40
		2:41:40	5.1E-05	0.00	4.0E+04	1.104	0.82	7.4E+05	4:41
Road #41	0035-0100	2:44:50	4.8E-05	0.00	3.7E+04	967	0.76	7.1E+05	4:44
		2:45:50	4.8E-05	0.00	3.7E+04	967	0.76	7.1E+05	4:45
		2:46:50	4.8E-05	0.00	3.7E+04	967	0.76	7.1E+05	4:46
Road #41	0036-0100	2:49:00	4.5E-05	0.00	3.4E+04	830	0.70	6.8E+05	4:49
		2:50:00	4.5E-05	0.00	3.4E+04	830	0.70	6.8E+05	4:50
		2:51:00	4.5E-05	0.00	3.4E+04	830	0.70	6.8E+05	4:51
Road #41	0037-0100	2:54:10	4.2E-05	0.00	3.1E+04	693	0.64	6.5E+05	4:54
		2:55:10	4.2E-05	0.00	3.1E+04	693	0.64	6.5E+05	4:55
		2:56:10	4.2E-05	0.00	3.1E+04	693	0.64	6.5E+05	4:56
Road #41	0038-0100	2:59:20	3.9E-05	0.00	2.8E+04	556	0.58	6.2E+05	4:59
		3:00:20	3.9E-05	0.00	2.8E+04	556	0.58	6.2E+05	5:00
		3:01:20	3.9E-05	0.00	2.8E+04	556	0.58	6.2E+05	5:01
Road #41	0039-0100	3:04:30	3.6E-05	0.00	2.5E+04	419	0.52	5.9E+05	5:04
		3:05:30	3.6E-05	0.00	2.5E+04	419	0.52	5.9E+05	5:05
		3:06:30	3.6E-05	0.00	2.5E+04	419	0.52	5.9E+05	5:06
Road #41	0040-0100	3:09:40	3.3E-05	0.00	2.2E+04	282	0.46	5.6E+05	5:09
		3:10:40	3.3E-05	0.00	2.2E+04	282	0.46	5.6E+05	5:10
		3:11:40	3.3E-05	0.00	2.2E+04	282	0.46	5.6E+05	5:11
Road #41	0041-0100	3:14:50	3.0E-05	0.00	1.9E+04	145	0.40	5.3E+05	5:14
		3:15:50	3.0E-05	0.00	1.9E+04	145	0.40	5.3E+05	5:15
		3:16:50	3.0E-05	0.00	1.9E+04	145	0.40	5.3E+05	

load\Appendix 3.5.1 Emission Factor in 2028.xlsx

Open Road Year 24 North Extension Factors for 400000 model input														
Year 2008														
Route name	Route ID	Hour	No. Envision				No. Envision							
			gph/mi/hour	h/mi/hour	h/mi/hour	h/mi/hour	gph/mi/hour	h/mi/hour	h/mi/hour	h/mi/hour				
Route 44	0800-0900	4.1462	0.1181	0.7	0.9848	0.8552	7.1817	0.4746	2.8601	0.5118	1.8408	0.4746	4.7998	2.962
Route 44	0900-1000	4.2594	0.534	0.7	0.9848	0.8552	7.1817	0.4552	2.5126	0.5118	2.7402	2.4601	4.7998	2.962
Route 44	1000-1100	4.2594	0.534	0.7	0.9848	0.8552	7.1817	0.4552	2.5126	0.5118	2.7402	2.4601	4.7998	2.962
Route 44	1100-1200	5.7482	0.8206	0.4947	4.8324	6.7467	4.435	3.464	4.4352	0.4952	3.604	2.9602	4.435	2.952
Route 44	1200-1300	5.7482	0.8206	0.4947	4.8324	6.7467	4.435	3.464	4.4352	0.4952	3.604	2.9602	4.435	2.952
Route 44	1300-1400	5.7482	0.8206	0.4947	4.8324	6.7467	4.435	3.464	4.4352	0.4952	3.604	2.9602	4.435	2.952
Route 44	1400-1500	5.7482	0.8206	0.4947	4.8324	6.7467	4.435	3.464	4.4352	0.4952	3.604	2.9602	4.435	2.952
Route 44	1500-1600	5.7482	0.8206	0.4947	4.8324	6.7467	4.435	3.464	4.4352	0.4952	3.604	2.9602	4.435	2.952
Route 44	1600-1700	5.7482	0.8206	0.4947	4.8324	6.7467	4.435	3.464	4.4352	0.4952	3.604	2.9602	4.435	2.952
Route 44	1700-1800	5.7482	0.8206	0.4947	4.8324	6.7467	4.435	3.464	4.4352	0.4952	3.604	2.9602	4.435	2.952
Route 44	1800-1900	5.7482	0.8206	0.4947	4.8324	6.7467	4.435	3.464	4.4352	0.4952	3.604	2.9602	4.435	2.952
Route 44	1900-2000	5.7482	0.8206	0.4947	4.8324	6.7467	4.435	3.464	4.4352	0.4952	3.604	2.9602	4.435	2.952
Route 44	2000-2100	5.7482	0.8206	0.4947	4.8324	6.7467	4.435	3.464	4.4352	0.4952	3.604	2.9602	4.435	2.952
Route 44	2100-2200	2.9158	0.2737	0.7	2.0815	1.834	2.027	2.7985	2.2001	3.4485	0.5118	2.1471	2.9778	3.8485
Route 44	2200-2300	2.9158	0.2737	0.7	2.0815	1.834	2.027	2.7985	2.2001	3.4485	0.5118	2.1471	2.9778	3.8485
Route 44	2300-2400	2.9158	0.2737	0.7	2.0815	1.834	2.027	2.7985	2.2001	3.4485	0.5118	2.1471	2.9778	3.8485
Route 44	2400-0100	2.9158	0.2737	0.7	2.0815	1.834	2.027	2.7985	2.2001	3.4485	0.5118	2.1471	2.9778	3.8485
Route 44	0100-0200	2.9158	0.2737	0.7	2.0815	1.834	2.027	2.7985	2.2001	3.4485	0.5118	2.1471	2.9778	3.8485
Route 44	0200-0300	2.9158	0.2737	0.7	2.0815	1.834	2.027	2.7985	2.2001	3.4485	0.5118	2.1471	2.9778	3.8485
Route 44	0300-0400	2.9158	0.2737	0.7	2.0815	1.834	2.027	2.7985	2.2001	3.4485	0.5118	2.1471	2.9778	3.8485
Route 44	0400-0500	2.9158	0.2737	0.7	2.0815	1.834	2.027	2.7985	2.2001	3.4485	0.5118	2.1471	2.9778	3.8485
Route 44	0500-0600	2.9158	0.2737	0.7	2.0815	1.834	2.027	2.7985	2.2001	3.4485	0.5118	2.1471	2.9778	3.8485
Route 44	0600-0700	2.9158	0.2737	0.7	2.0815	1.834	2.027	2.7985	2.2001	3.4485	0.5118	2.1471	2.9778	3.8485
Route 44	0700-0800	2.9158	0.2737	0.7	2.0815	1.834	2.027	2.7985	2.2001	3.4485	0.5118	2.1471	2.9778	3.8485
Route 44	0800-0900	4.1462	0.1181	0.7	0.9848	0.8552	7.1817	0.4746	2.8601	0.5118	1.8408	0.4746	4.7998	2.962
Route 44	0900-1000	4.2594	0.534	0.7	0.9848	0.8552	7.1817	0.4552	2.5126	0.5118	2.7402	2.4601	4.7998	2.962
Route 44	1000-1100	4.2594	0.534	0.7	0.9848	0.8552	7.1817	0.4552	2.5126	0.5118	2.7402	2.4601	4.7998	2.962
Route 44	1100-1200	5.7482	0.8206	0.4947	4.8324	6.7467	4.435	3.464	4.4352	0.4952	3.604	2.9602	4.435	2.952
Route 44	1200-1300	5.7482	0.8206	0.4947	4.8324	6.7467	4.435	3.464	4.4352	0.4952	3.604	2.9602	4.435	2.952
Route 44	1300-1400	5.7482	0.8206	0.4947	4.8324	6.7467	4.435	3.464	4.4352	0.4952	3.604	2.9602	4.435	2.952
Route 44	1400-1500	5.7482	0.8206	0.4947	4.8324	6.7467	4.435	3.464	4.4352	0.4952	3.604	2.9602	4.435	2.952
Route 44	1500-1600	5.7482	0.8206	0.4947	4.8324	6.7467	4.435	3.464	4.4352	0.4952	3.604	2.9602	4.435	2.952
Route 44	1600-1700	5.7482	0.8206	0.4947	4.8324	6.7467	4.435	3.464	4.4352	0.4952	3.604	2.9602	4.435	2.952
Route 44	1700-1800	5.7482	0.8206	0.4947	4.8324	6.7467	4.435	3.464	4.4352	0.4952	3.604	2.9602	4.435	2.952
Route 44	1800-1900	5.7482	0.8206	0.4947	4.8324	6.7467	4.435	3.464	4.4352	0.4952	3.604	2.9602	4.435	2.952
Route 44	1900-2000	5.7482	0.8206	0.4947	4.8324	6.7467	4.435	3.464	4.4352	0.4952	3.604	2.9602	4.435	2.952
Route 44	2000-2100	5.7482	0.8206	0.4947	4.8324	6.7467	4.435	3.464	4.4352	0.4952	3.604	2.9602	4.435	2.952
Route 44	2100-2200	2.9158	0.2737	0.7	2.0815	1.834	2.027	2.7985	2.2001	3.4485	0.5118	2.1471	2.9778	3.8485
Route 44	2200-2300	2.9158	0.2737	0.7	2.0815	1.834	2.027	2.7985	2.2001	3.4485	0.5118	2.1471	2.9778	3.8485
Route 44	2300-2400	2.9158	0.2737	0.7	2.0815	1.834	2.027	2.7985	2.2001	3.4485	0.5118	2.1471	2.9778	3.8485
Route 44	2400-0100	2.9158	0.2737	0.7	2.0815	1.834	2.027	2.7985	2.2001	3.4485	0.5118	2.1471	2.9778	3.8485
Route 44	0100-0200	2.9158	0.2737	0.7	2.0815	1.834	2.027	2.7985	2.2001	3.4485	0.5118	2.1471	2.9778	3.8485
Route 44	0200-0300	2.9158	0.2737	0.7	2.0815	1.834	2.027	2.7985	2.2001	3.4485	0.5118	2.1471	2.9778	3.8485
Route 44	0300-0400	2.9158	0.2737	0.7	2.0815	1.834	2.027	2.7985	2.2001	3.4485	0.5118	2.1471	2.9778	3.8485
Route 44	0400-0500	2.9158	0.2737	0.7	2.0815	1.834	2.027	2.7985	2.2001	3.4485	0.5118	2.1471	2.9778	3.8485
Route 44	0500-0600	2.9158	0.2737	0.7	2.0815	1.834	2.027	2.7985	2.2001	3.4485	0.5118	2.1471	2.9778	3.8485
Route 44	0600-0700	2.9158	0.2737	0.7	2.0815	1.834	2.027	2.7985	2.2001	3.4485	0.5118	2.1471	2.9778	3.8485
Route 44	0700-0800	2.9158	0.2737	0.7	2.0815	1.834	2.027	2.7985	2.2001	3.4485	0.5118	2.1471	2.9778	3.8485
Route 44	0800-0900	4.1462	0.1181	0.7	0.9848	0.8552	7.1817	0.4746	2.8601	0.5118	1.8408	0.4746	4.7998	2.962
Route 44	0900-1000	4.2594	0.534	0.7	0.9848	0.8552	7.1817	0.4552	2.5126	0.5118	2.7402	2.4601	4.7998	2.962
Route 44	1000-1100	4.2594	0.534	0.7	0.9848	0.8552	7.1817	0.4552	2.5126	0.5118	2.7402	2.4601	4.7998	2.962
Route 44	1100-1200	5.7482	0.8206	0.4947	4.8324	6.7467	4.435	3.464	4.4352	0.4952	3.604	2.9602	4.435	2.952
Route 44	1200-1300	5.7482	0.8206	0.4947	4.8324	6.7467	4.435	3.464	4.4352	0.4952	3.604	2.9602	4.435	2.952
Route 44	1300-1400	5.7482	0.8206	0.4947	4.8324	6.7467	4.435	3.464	4.4352	0.4952	3.604	2.9602	4.435	2.952
Route 44	1400-1500	5.7482	0.8206	0.4947	4.8324	6.7467	4.435	3.464	4.4352	0.4952	3.604	2.9602	4.435	2.952
Route 44	1500-1600	5.7482	0.8206	0.4947	4.8324	6.7467	4.435	3.464	4.4352	0.4952	3.604	2.9602	4.435	2.952
Route 44	1600-1700	5.7482	0.8206	0.4947	4.8324	6.7467	4.435	3.464	4.4352	0.4952	3.604	2.9602	4.435	2.952
Route 44	1700-1800	5.7482	0.8206	0.4947	4.8324	6.7467	4.435	3.464	4.4352	0.4952	3.604	2.9602	4.435	2.952
Route 44	1800-1900	5.7482	0.8206	0.4947	4.8324	6.7467	4.435	3.464	4.4352	0.4952	3.604	2.9602	4.435	2.952
Route 44	1900-2000	5.7482	0.8206	0.4947	4.8324	6.7467	4.435	3.464	4.4352	0.4952	3.604	2.9602	4.435	2.952
Route 44	2000-2100	5.7482	0.8206	0.4947	4.8324	6.7467	4.435	3.464	4.4352	0.4952	3.604	2.9602	4.435	2.952
Route 44	2100-2200	2.9158	0.2737	0.7	2.0815	1.834	2.027	2.7985	2.2001	3.4485	0.5118	2.1471	2.9778	3.8485
Route 44	2200-2300	2.9158	0.2737	0.7	2.0815	1.834	2.027	2.7985	2.2001	3.4485	0.5118	2.1471	2.9778	3.8485
Route 44	2300-2400	2.9158	0.2737	0.7	2.0815	1.834	2.027	2.7985	2.2001	3.4485	0.5118	2.1471	2.9778	3.8485
Route 44	2400-0100	2.9158	0.2737	0.7	2.0815	1.834	2.027	2.7985	2.2001	3.4485	0.5118	2.1471	2.9778	3.8485
Route 44	0100-0200	2.9158	0.2737	0.7	2.0815	1.834	2.027	2.7985	2.2001	3.4485	0.5118	2.1471	2.9778	3.8485
Route 44	0200-0300	2.9158	0.2737	0.7	2.0815	1.834	2.027	2.7985	2.2001	3.4485	0.5118	2.1471	2.9778	3.8485
Route 44	0300-0400	2.9158	0.2737	0.7	2.0815	1.834	2.027	2.7985	2.2001	3.4485	0.5118	2.1471	2.9778	3.8485
Route 44	0400-0500	2.9158	0.2737	0.7	2.0815	1.834	2.027	2.7985	2.2001	3.4485	0.5118	2.1471	2.9778	3.8485
Route 44	0500-0600	2.9158	0.2737	0.7	2.0815	1.834	2.027	2.7985	2.2001	3.4485	0.5118	2.1471	2.9778	3.8485
Route 44	0600-0700	2.9158	0.2737	0.7	2.0815	1.834	2.027	2.7985	2.2001	3.4485	0.5118	2.1471	2.9778	3.8485
Route 44	0700-0800	2.9158	0.2737	0.7	2.0815	1.834	2.027	2.7985	2.2001	3.4485	0.5118	2.1471	2.9778	3.8485
Route 44	0800-0900	4.1462	0.1181	0.7	0.9848	0.8552	7.1817	0.4746	2.8601	0.5118	1.8408	0.4746	4.7998	2.962
Route 44	0900-1000	4.2594	0.534	0.7	0.9848	0.8552	7.1817	0.4552	2.5126	0.5118	2.7402	2.4		

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Open Top 24-hour Underground Quality														
Atmospheric Environmental Factors for AEMSO model (mmol/m ³)														
Year 2020														
Row	Node	Hour	Moist/Moisture				Moist/Humidity				Moist/Humidity			
			g/h ³ /m ³	g/h ³ /m ³	g/h ³ /m ³	g/h ³ /m ³	g/h ³ /m ³	g/h ³ /m ³	g/h ³ /m ³	g/h ³ /m ³	g/h ³ /m ³	g/h ³ /m ³	g/h ³ /m ³	
Node 47	47	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 48	48	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 49	49	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 50	50	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 51	51	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 52	52	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 53	53	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 54	54	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 55	55	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 56	56	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 57	57	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 58	58	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 59	59	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 60	60	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 61	61	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 62	62	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 63	63	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 64	64	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 65	65	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 66	66	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 67	67	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 68	68	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 69	69	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 70	70	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 71	71	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 72	72	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 73	73	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 74	74	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 75	75	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 76	76	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 77	77	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 78	78	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 79	79	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 80	80	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 81	81	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 82	82	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 83	83	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 84	84	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 85	85	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 86	86	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 87	87	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 88	88	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 89	89	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 90	90	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 91	91	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 92	92	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 93	93	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 94	94	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 95	95	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 96	96	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 97	97	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 98	98	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 99	99	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	
Node 100	100	1600-1700	6.09E-02	8.31E-07	2.59E-05	4.08E-08	6.93E-07	2.14E-05	3.03E-01	4.13E-06	1.29E-04	2.49E-01	3.40E-06	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open N ₂ North Underway Query											
Using N ₂ and No Exhaustion Factors for AEMD2 model (kg/m ³)											
Road Name	Road ID	Hour	NO _x Emission				NO _x Emission				Hour
			g/hour	g/m ³	tonne/hour	g/m ³	g/hour	g/m ³	tonne/hour	g/m ³	
Road S4	S4	0800-0900	1.5581	0.5367	1.278	0.154	4.908	1.122	0.147	7.181	2.448
Road S4	S4	0900-1700	2.1261	0.7121	1.73	0.205	6.384	1.452	0.193	6.618	2.181
Road S4	S4	1700-1800	1.6582	0.5564	0.556	0.176	3.178	0.972	0.130	6.805	2.514
Road S4	S4	1800-1900	1.6076	0.5719	1.581	0.165	3.129	0.77	0.111	7.331	2.545
Road S4	S4	1900-2300	2.386	0.788	1.98	0.238	6.384	1.452	0.193	6.618	2.181
Road S4	S4	2300-2400	2.516	0.828	0.473	0.258	4.28	1.147	0.283	6.822	2.435
Road S4	S4	2400-0100	2.573	0.846	1.484	0.265	4.184	1.184	0.288	6.822	2.435
Road S4	S4	0100-0600	2.396	0.817	1.411	0.251	4.54	1.264	0.268	2.405	0.546
Road S4	S4	0600-0700	4.888	1.613	0.678	0.489	1.112	0.174	1.113	0.768	2.448
Road S4	S4	0700-0800	2.994	1.031	1.184	0.329	1.112	0.174	1.113	0.768	2.448
Road S4	S4	0800-0900	1.6301	0.5147	7.186	0.484	2.776	0.612	0.776	1.511	3.44
Road S4	S4	0900-1700	2.1261	0.7121	1.73	0.205	6.384	1.452	0.193	6.618	2.181
Road S4	S4	1700-1800	1.6582	0.5564	0.556	0.176	3.178	0.972	0.130	6.805	2.514
Road S4	S4	1800-1900	1.6076	0.5719	1.581	0.165	3.129	0.77	0.111	7.331	2.545
Road S4	S4	1900-2300	2.386	0.788	1.98	0.238	6.384	1.452	0.193	6.618	2.181
Road S4	S4	2300-2400	2.516	0.828	0.473	0.258	4.28	1.147	0.283	6.822	2.435
Road S4	S4	2400-0100	2.573	0.846	1.484	0.265	4.184	1.184	0.288	6.822	2.435
Road S4	S4	0100-0600	2.396	0.817	1.411	0.251	4.54	1.264	0.268	2.405	0.546
Road S4	S4	0600-0700	4.888	1.613	0.678	0.489	1.112	0.174	1.113	0.768	2.448
Road S4	S4	0700-0800	2.994	1.031	1.184	0.329	1.112	0.174	1.113	0.768	2.448
Road S4	S4	0800-0900	1.496	0.502	2.776	0.151	0.512	2.386	7.041	0.512	1.285
Road S4	S4	0900-1700	2.0601	0.6868	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Road S4	S4	1700-1800	2.0601	0.6868	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Road S4	S4	1800-1900	2.0601	0.6868	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Road S4	S4	1900-2300	2.0601	0.6868	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Road S4	S4	2300-2400	2.0601	0.6868	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Road S4	S4	2400-0100	2.0601	0.6868	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
Road S4	S4	0100-0600	2.0601	0.6868	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001

load\Appendix 3.5.1 Emission Factor in 2028.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

TSP Year North Undercount Quarterly																
Open Data Year 2024 Hour Endurance Factors for AA0000 model (Department)																
Road Name	Road ID	Hour	NO _x Emission						PM ₁₀ Emission						PM _{2.5} Emission	
			g/hour	g/mi ²	tonne/hour	g/mi ²	tonne/hour	g/hour	g/mi ²	tonne/hour	g/hour	g/mi ²	tonne/hour	g/hour	g/mi ²	tonne/hour
Road 1	1	0000-0100	2.502	2.427	0.878	1.818	0.471	7.018	0.177	11.145	0.481	2.588	1.484	1.978	2.178	1.078
Road 1	1	0100-0200	2.542	2.467	0.918	1.858	0.491	7.118	0.187	11.245	0.491	2.628	1.528	2.018	2.218	1.118
Road 1	1	0200-0300	2.582	2.507	0.958	1.898	0.511	7.218	0.197	11.345	0.501	2.668	1.568	2.058	2.258	1.158
Road 1	1	0300-0400	2.622	2.547	0.998	1.938	0.531	7.318	0.207	11.445	0.511	2.708	1.608	2.098	2.298	1.198
Road 1	1	0400-0500	2.662	2.587	1.038	1.978	0.551	7.418	0.217	11.545	0.521	2.748	1.648	2.138	2.338	1.238
Road 1	1	0500-0600	2.702	2.627	1.078	2.018	0.571	7.518	0.227	11.645	0.531	2.788	1.688	2.178	2.378	1.278
Road 1	1	0600-0700	2.742	2.667	1.118	2.058	0.591	7.618	0.237	11.745	0.541	2.828	1.728	2.218	2.418	1.318
Road 1	1	0700-0800	2.782	2.707	1.158	2.098	0.611	7.718	0.247	11.845	0.551	2.868	1.768	2.258	2.458	1.358
Road 1	1	0800-0900	2.822	2.747	1.198	2.138	0.631	7.818	0.257	11.945	0.561	2.908	1.808	2.298	2.498	1.398
Road 1	1	0900-1000	2.862	2.787	1.238	2.178	0.651	7.918	0.267	12.045	0.571	2.948	1.848	2.338	2.538	1.438
Road 1	1	1000-1100	2.902	2.827	1.278	2.218	0.671	8.018	0.277	12.145	0.581	2.988	1.888	2.378	2.578	1.478
Road 1	1	1100-1200	2.942	2.867	1.318	2.258	0.691	8.118	0.287	12.245	0.591	3.028	1.928	2.418	2.618	1.518
Road 1	1	1200-1300	2.982	2.907	1.358	2.298	0.711	8.218	0.297	12.345	0.601	3.068	1.968	2.458	2.658	1.558
Road 1	1	1300-1400	3.022	2.947	1.398	2.338	0.731	8.318	0.307	12.445	0.611	3.108	2.008	2.498	2.698	1.598
Road 1	1	1400-1500	3.062	2.987	1.438	2.378	0.751	8.418	0.317	12.545	0.621	3.148	2.048	2.538	2.738	1.638
Road 1	1	1500-1600	3.102	3.027	1.478	2.418	0.771	8.518	0.327	12.645	0.631	3.188	2.088	2.578	2.778	1.678
Road 1	1	1600-1700	3.142	3.067	1.518	2.458	0.791	8.618	0.337	12.745	0.641	3.228	2.128	2.618	2.818	1.718
Road 1	1	1700-1800	3.182	3.107	1.558	2.498	0.811	8.718	0.347	12.845	0.651	3.268	2.168	2.658	2.858	1.758
Road 1	1	1800-1900	3.222	3.147	1.598	2.538	0.831	8.818	0.357	12.945	0.661	3.308	2.208	2.698	2.898	1.798
Road 1	1	1900-2000	3.262	3.187	1.638	2.578	0.851	8.918	0.367	13.045	0.671	3.348	2.248	2.738	2.938	1.838
Road 1	1	2000-2100	3.302	3.227	1.678	2.618	0.871	9.018	0.377	13.145	0.681	3.388	2.288	2.778	2.978	1.878
Road 1	1	2100-2200	3.342	3.267	1.718	2.658	0.891	9.118	0.387	13.245	0.691	3.428	2.328	2.818	3.018	1.918
Road 2	2	0000-0100	2.502	2.427	0.878	1.818	0.471	7.018	0.177	11.145	0.481	2.588	1.484	1.978	2.178	1.078
Road 2	2	0100-0200	2.542	2.467	0.918	1.858	0.491	7.118	0.187	11.245	0.491	2.628	1.528	2.018	2.218	1.118
Road 2	2	0200-0300	2.582	2.507	0.958	1.898	0.511	7.218	0.197	11.345	0.501	2.668	1.568	2.058	2.258	1.158
Road 2	2	0300-0400	2.622	2.547	0.998	1.938	0.531	7.318	0.207	11.445	0.511	2.708	1.608	2.098	2.298	1.198
Road 2	2	0400-0500	2.662	2.587	1.038	1.978	0.551	7.418	0.217	11.545	0.521	2.748	1.648	2.138	2.338	1.238
Road 2	2	0500-0600	2.702	2.627	1.078	2.018	0.571	7.518	0.227	11.645	0.531	2.788	1.688	2.178	2.378	1.278
Road 2	2	0600-0700	2.742	2.667	1.118	2.058	0.591	7.618	0.237	11.745	0.541	2.828	1.728	2.218	2.418	1.318
Road 2	2	0700-0800	2.782	2.707	1.158	2.098	0.611	7.718	0.247	11.845	0.551	2.868	1.768	2.258	2.458	1.358
Road 2	2	0800-0900	2.822	2.747	1.198	2.138	0.631	7.818	0.257	11.945	0.561	2.908	1.808	2.298	2.498	1.398
Road 2	2	0900-1000	2.862	2.787	1.238	2.178	0.651	7.918	0.267	12.045	0.571	2.948	1.848	2.338	2.538	1.438
Road 2	2	1000-1100	2.902	2.827	1.278	2.218	0.671	8.018	0.277	12.145	0.581	2.988	1.888	2.378	2.578	1.478
Road 2	2	1100-1200	2.942	2.867	1.318	2.258	0.691	8.118	0.287	12.245	0.591	3.028	1.928	2.418	2.618	1.518
Road 2	2	1200-1300	2.982	2.907	1.358	2.298	0.711	8.218	0.297	12.345	0.601	3.068	1.968	2.458	2.658	1.558
Road 2	2	1300-1400	3.022	2.947	1.398	2.338	0.731	8.318	0.307	12.445	0.611	3.108	2.008	2.498	2.698	1.598
Road 2	2	1400-1500	3.062	2.987	1.438	2.378	0.751	8.418	0.317	12.545	0.621	3.148	2.048	2.538	2.738	1.638
Road 2	2	1500-1600	3.102	3.027	1.478	2.418	0.771	8.518	0.327	12.645	0.631	3.188	2.088	2.578	2.778	1.678
Road 2	2	1600-1700	3.142	3.067	1.518	2.458	0.791	8.618	0.337	12.745	0.641	3.228	2.128	2.618	2.818	1.718
Road 2	2	1700-1800	3.182	3.107	1.558	2.498	0.811	8.718	0.347	12.845	0.651	3.268	2.168	2.658	2.858	1.758
Road 2	2	1800-1900	3.222	3.147	1.598	2.538	0.831	8.818	0.357	12.945	0.661	3.308	2.208	2.698	2.898	1.798
Road 2	2	1900-2000	3.262	3.187	1.638	2.578	0.851	8.918	0.367	13.045	0.671	3.348	2.248	2.738	2.938	1.838
Road 2	2	2000-2100	3.302	3.227	1.678	2.618	0.871	9.018	0.377	13.145	0.681	3.388	2.288	2.778	2.978	1.878
Road 2	2	2100-2200	3.342	3.267	1.718	2.658	0.891	9.118	0.387	13.245	0.691	3.428	2.328	2.818	3.018	1.918
Road 3	3	0000-0100	2.502	2.427	0.878	1.818	0.471	7.018	0.177	11.145	0.481	2.588	1.484	1.978	2.178	1.078
Road 3	3	0100-0200	2.542	2.467	0.918	1.858	0.491	7.118	0.187	11.245	0.491	2.628	1.528	2.018	2.218	1.118
Road 3	3	0200-0300	2.582	2.507	0.958	1.898	0.511	7.218	0.197	11.345	0.501	2.668	1.568	2.058	2.258	1.158
Road 3	3	0300-0400	2.622	2.547	0.998	1.938	0.531	7.318	0.207	11.445	0.511	2.708	1.608	2.098	2.298	1.198
Road 3	3	0400-0500	2.662	2.587	1.038	1.978	0.551	7.418	0.217	11.545	0.521	2.748	1.648	2.138	2.338	1.238
Road 3	3	0500-0600	2.702	2.627	1.078	2.018	0.571	7.518	0.227	11.645	0.531	2.788	1.688	2.178	2.378	1.278
Road 3	3	0600-0700	2.742	2.667	1.118	2.058	0.591	7.618	0.237	11.745	0.541	2.828	1.728	2.218	2.418	1.318
Road 3	3	0700-0800	2.782	2.707	1.158	2.098	0.611	7.718	0.247	11.845	0.551	2.868	1.768	2.258	2.458	1.358
Road 3	3	0800-0900	2.822	2.747	1.198	2.138	0.631	7.818	0.257	11.945	0.561	2.908	1.808	2.298	2.498	1.398
Road 3	3	0900-1000	2.862	2.787	1.238	2.178	0.651	7.918	0.267	12.045	0.571	2.948	1.848	2.338	2.538	1.438
Road 3	3	1000-1100	2.902	2.827	1.278	2.218	0.671	8.018	0.277	12.145	0.581	2.988	1.888	2.378	2.578	1.478
Road 3	3	1100-1200	2.942	2.867	1.318	2.258	0.691	8.118	0.287	12.245	0.591	3.028	1.928	2.418	2.618	1.518
Road 3	3	1200-1300	2.982	2.907	1.358	2.298	0.711	8.218	0.297	12.345	0.601	3.068	1.968	2.458	2.658	1.558
Road 3	3	1300-1400	3.022	2.947	1.398	2.338	0.731	8.318	0.307	12.445	0.611	3.108	2.008	2.498	2.698	1.598
Road 3	3	1400-1500	3.062	2.987	1.438	2.378	0.751	8.418	0.317	12.545	0.621	3.148	2.048	2.538	2.738	1.638
Road 3	3	1500-1600	3.102	3.027	1.478	2.418	0.771	8.518	0.327	12.645	0.631	3.188	2.088	2.578	2.778	1.678
Road 3	3	1600-1700	3.142	3.067	1.518	2.458	0.791	8.618	0.337	12.745	0.641	3.228	2.128	2.618	2.818	1.718
Road 3	3	1700-1800	3.182	3.107	1.558	2.498	0.811	8.718	0.347	12.845	0.651	3.268	2.168	2.658	2.858	1.758
Road 3	3	1800-1900	3.222	3.147	1.598	2.538	0.831	8.818	0.357	12.945	0.661	3.308	2.208	2.698	2.898	1.798
Road 3	3	1900-2000	3.262	3.187	1.638	2.578	0.851	8.918	0.367	13.045	0.671	3.348	2.248	2.738	2.938	1.838
Road 3	3	2000-2100	3.302	3.227	1.678	2.618	0.871	9.018	0.377	13.145	0.681	3.388	2.288	2.778	2.978	1.878
Road 3	3	2100-2200	3.342	3.267	1.718	2.658	0.891	9.118	0.387	13.245	0.691	3.428	2.328	2.818	3.018	1.918
Road 4	4	0000-0100	2.502	2.427	0.878	1.818	0.471	7.018	0.177	11.145	0.481	2.588	1.484	1.978	2.178	1.078
Road 4	4	0100-0200	2.542	2.467	0.918	1.858	0.491	7.118	0.187	11.245	0.491	2.628	1.528	2.018	2.218	1.118
Road 4	4	0200-0300	2.582	2.507	0.958	1.898	0.511	7.218	0.197	11.345	0.501	2.668	1.568	2.058	2.258	1.158
Road 4	4	0300-0400	2.622	2.547	0.998	1.938	0.531	7.318	0.207	11.445	0.511	2.708	1.608	2.098		

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Open Road Northbound Queue															
Top 10 Worst 400m Queue Lengths															
Year 2028															
Road Name	Road ID	Road	NO Emission						NO Emission						
			Multi-lane/through			Multi-lane/through			Multi-lane/through			Multi-lane/through			
			g/h/v/mi	g/mi/h	g/mi	g/h/v/mi	g/mi/h	g/mi	g/h/v/mi	g/mi/h	g/mi	g/h/v/mi	g/mi/h	g/mi	
Road 4	4	00000000	3.114	8.644	0.77	1.838	2.853	8.287	1.448	2.158	8.832	1.374	0.171	5.778	1.1304
Road 4	4	00000000	1.762	4.935	0.43	1.035	1.562	4.562	0.815	1.165	4.935	0.815	0.104	3.254	0.6504
Road 4	4	00000000	0.354	0.974	0.24	0.587	0.883	2.794	0.501	0.998	2.046	0.246	0.031	1.054	0.2143
Road 4	4	11001200	2.281	6.274	0.18	1.061	2.071	6.079	0.248	2.040	5.528	1.105	0.244	4.846	0.9115
Road 4	4	11001200	1.244	3.401	0.10	0.587	1.106	3.276	0.104	1.106	3.048	0.104	0.013	1.106	0.2204
Road 4	4	11001200	0.362	1.000	0.22	0.618	0.737	2.758	0.105	0.830	2.802	0.105	0.176	1.6604	0.3404
Road 4	4	11001200	0.433	1.191	0.10	0.587	1.106	3.276	0.104	1.106	3.048	0.104	0.013	1.106	0.2204
Road 4	4	15001400	0.264	0.722	0.14	0.365	0.548	1.635	0.145	0.365	0.548	0.145	0.019	0.365	0.0749
Road 4	4	15001400	0.362	1.000	0.22	0.618	0.737	2.758	0.105	0.830	2.802	0.105	0.176	1.6604	0.3404
Road 4	4	15001400	0.433	1.191	0.10	0.587	1.106	3.276	0.104	1.106	3.048	0.104	0.013	1.106	0.2204
Road 4	4	15001400	0.264	0.722	0.14	0.365	0.548	1.635	0.145	0.365	0.548	0.145	0.019	0.365	0.0749
Road 4	4	15001400	0.362	1.000	0.22	0.618	0.737	2.758	0.105	0.830	2.802	0.105	0.176	1.6604	0.3404
Road 4	4	15001400	0.433	1.191	0.10	0.587	1.106	3.276	0.104	1.106	3.048	0.104	0.013	1.106	0.2204
Road 4	4	15001400	0.264	0.722	0.14	0.365	0.548	1.635	0.145	0.365	0.548	0.145	0.019	0.365	0.0749
Road 4	4	15001400	0.362	1.000	0.22	0.618	0.737	2.758	0.105	0.830	2.802	0.105	0.176	1.6604	0.3404
Road 4	4	15001400	0.433	1.191	0.10	0.587	1.106	3.276	0.104	1.106	3.048	0.104	0.013	1.106	0.2204
Road 4	4	15001400	0.264	0.722	0.14	0.365	0.548	1.635	0.145	0.365	0.548	0.145	0.019	0.365	0.0749
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Road 4	4	15001400	0.433	1.191	0.10	0.587	1.106	3.276	0.104	1.106	3.048	0.104	0.013	1.106	0.2204
Road 4	4	15001400	0.264	0.722	0.14	0.365	0.548	1.635	0.145	0.365	0.548	0.145	0.019	0.365	0.0749
Road 4	4	15001400	0.362	1.000	0.22	0.618	0.737	2.758	0.105	0.830	2.802	0.105	0.176	1.6604	0.3404
Road 4	4	15001400	0.433	1.191	0.10	0.587	1.106	3.276	0.104	1.106	3.048	0.104	0.013	1.106	0.2204
Road 4	4	15001400	0.264	0.722	0.14	0.365	0.548	1.635	0.145	0.365	0.548	0.145	0.019	0.365	0.0749
Road 4	4	15001400	0.362	1.000	0.22	0.618	0.737	2.758	0.105	0.830	2.802	0.105	0.176	1.6604	0.3404
Road 4	4	15001400	0.433	1.191	0.10	0.587	1.106	3.276	0.104	1.106	3.048	0.104	0.013	1.106	0.2204
Road 4	4	15001400	0.264	0.722	0.14	0.365	0.548	1.635	0.145	0.365	0.548	0.145	0.019	0.365	0.0749
Road 4	4	15001400	0.362	1.000	0.22	0.618	0.737	2.758	0.105	0.830	2.802	0.105	0.176	1.6604	0.3404
Road 4	4	15001400	0.433	1.191	0.10	0.587	1.106	3.276	0.104	1.106	3.048	0.104	0.013	1.106	0.2204
Road 4	4	15001400	0.264	0.722	0.14	0.365	0.548	1.635	0.145	0.365	0.548	0.145	0.019	0.365	0.0749
Road 4	4	15001400	0.362	1.000	0.22	0.618	0.737	2.758	0.105	0.830	2.802	0.105	0.176	1.6604	0.3404
Road 4	4	15001400	0.433	1.191	0.10	0.587	1.106	3.276	0.104	1.106	3.048	0.104	0.013	1.106	0.2204
Road 4	4	15001400	0.264	0.722	0.14	0.365	0.548	1.635	0.145	0.365	0.548	0.145	0.019	0.365	0.0749
Road 4	4	15001400	0.362	1.000	0.22	0.618	0.737	2.758	0.105	0.830	2.802	0.105	0.176	1.6604	0.3404
Road 4	4	15001400	0.433	1.191	0.10	0.587	1.106	3.276	0.104	1.106	3.048	0.104	0.013	1.106	0.2204
Road 4	4	15001400	0.264	0.722	0.14	0.365	0.548	1.635	0.145	0.365	0.548	0.145	0.019	0.365	0.0749
Road 4	4	15001400	0.362	1.000	0.22	0.618	0.737	2.758	0.105	0.830	2.802	0.105	0.176	1.6604	0.3404
Road 4	4	15001400	0.433	1.191	0.10	0.587	1.106	3.276	0.104	1.106	3.048	0.104	0.013	1.106	0.2204
Road 4	4	15001400	0.264	0.722	0.14	0.365	0.548	1.635	0.145	0.365	0.548	0.145	0.019	0.365	0.0749
Road 4	4	15001400	0.362	1.000	0.22	0.618	0.737	2.758	0.105	0.830	2.802	0.105	0.176	1.6604	0.3404
Road 4	4	15001400	0.433	1.191	0.10	0.587	1.106	3.276	0.104	1.106	3.048	0.104	0.013	1.106	0.2204
Road 4	4	15001400	0.264	0.722	0.14	0.365	0.548	1.635	0.145	0.365	0.548	0.145	0.019	0.365	0.0749
Road 4	4	15001400	0.362	1.000	0.22	0.618	0.737	2.758	0.105	0.830	2.802	0.105	0.176	1.6604	0.3404
Road 4	4	15001400	0.433	1.191	0.10	0.587	1.106	3.276	0.104	1.106	3.048	0.104	0.013	1.106	0.2204
Road 4	4	15001400	0.264	0.722	0.14	0.365	0.548	1.635	0.145	0.365	0.548	0.145	0.019	0.365	0.0749
Road 4	4	15001400	0.362	1.000	0.22	0.618	0.737	2.758	0.105	0.830	2.802	0.105	0.176	1.6604	0.3404
Road 4	4	15001400	0.433	1.191	0.10	0.587	1.106	3.276	0.104	1.106	3.048	0.104	0.013	1.106	0.2204
Road 4	4	15001400	0.264	0.722	0.14	0.365	0.548	1.635	0.145	0.365	0.548	0.145	0.019	0.365	0.0749
Road 4	4	15001400	0.362	1.000	0.22	0.618	0.737	2.758	0.105	0.830	2.802	0.105	0.176	1.6604	0.3404
Road 4	4	15001400	0.433	1.191	0.10	0.587	1.106	3.276	0.104	1.106	3.048	0.104	0.013	1.106	0.2204
Road 4	4	15001400	0.264	0.722	0.14	0.365	0.548	1.635	0.145	0.365	0.548	0.145	0.019	0.365	0.0749
Road 4	4	15001400	0.362	1.000	0.22	0.618	0.737	2.758	0.105	0.830	2.802	0.105	0.176	1.6604	0.3404
Road 4	4	15001400	0.433	1.191	0.10	0.587	1.106	3.276	0.104	1.106	3.048	0.104	0.013	1.106	0.2204
Road 4	4	15001400	0.264	0.722	0.14	0.365	0.548	1.635	0.145	0.365	0.548	0.145	0.019	0.365	0.0749
Road 4	4	15001400	0.362	1.000	0.22	0.618	0.737	2.758	0.105	0.830	2.802	0.105	0.176	1.6604	0.3404
Road 4	4	15001400	0.433	1.191	0.10	0.587	1.106	3.276	0.104	1.106	3.048	0.104	0.013	1.106	0.2204
Road 4	4	15001400	0.264	0.722	0.14	0.365	0.548	1.635	0.145	0.365	0.548	0.145	0.019	0.365	0.0749
Road 4	4	15001400	0.362	1.000	0.22	0.618	0.737	2.758	0.105	0.830	2.802	0.105	0.176	1.6604	0.3404
Road 4	4	15001400	0.433	1.191	0.10	0.587	1.106	3.276	0.104	1.106	3.048	0.104	0.013	1.106	0.2204
Road 4	4	15001400	0.264	0.722	0.14	0.365	0.548	1.635	0.145	0.365	0.548	0.145	0.019	0.365	0.0749
Road 4	4	15001400	0.362	1.000	0.22	0.618	0.737	2.758	0.105	0.830	2.802	0.105	0.176	1.6604	0.3404
Road 4	4	15001400	0.433	1.191	0.10	0.587	1.106	3.276	0.104	1.106	3.048	0.104	0.013	1.106	0.2204
Road 4	4	15001400	0.264	0.722	0.14	0.365	0.548	1.635	0.145	0.365	0.548	0.145	0.019	0.365	0.0749
Road 4	4	15001400	0.362	1.000	0.22	0.618	0.737	2.758	0.105	0.830	2.802	0.105	0.176	1.6604	0.3404
Road 4	4	15001400	0.433	1.191	0.10	0.587	1.106	3.276	0.104	1.106	3.048	0.104	0.013	1.106	0.2204
Road 4	4	15001400	0.264	0.722	0.14	0.365	0.548	1.635	0.145	0.365	0.548	0.145	0.019	0.365	0.0749
Road 4	4	15001400	0.362	1.000	0.22	0.618	0.737	2.758	0.105	0.830	2.802	0.105	0.176	1.6604	0.3404
Road 4	4	15001400	0.433	1.191	0.10	0.587	1.106	3.276	0.104	1.106	3.048	0.104	0.013	1.106	0.2204
Road 4	4	15001400	0.264	0.722	0.14	0.365	0.548	1.635	0.145	0.365	0.548	0.145	0.019	0.365	0.0749
Road 4	4	15001400	0.362	1.000	0.22	0.618	0.737	2.758	0.105	0.830	2.802	0.105	0.176	1.6604	0.3404
Road 4	4	15001400	0.433	1.191	0.10	0.587	1.106	3.276	0.104	1.106	3.048	0.104	0.013	1.106	0.2204
Road 4	4	15001400	0.264	0.722	0.14	0.365	0.548	1.635	0.145	0.365	0.548	0.145	0.019	0.365	0.0749
Road 4	4	15001400	0.362	1.000	0.22	0.618	0.737	2.758	0.105	0.830	2.802	0.105	0.176	1.6604	0.3404
Road 4	4	15001400	0.433	1.191	0.10	0.587	1.106	3.276	0.104	1.106	3.048	0.104	0.013	1.106	0.2204
Road 4	4	15001400	0.264	0.722	0.14	0.365	0.548	1.635	0.145	0.365	0.548	0.145	0.019	0.365	0.0749
Road 4	4	15001400	0.362	1.000	0.22	0.618	0.737	2.758	0.105	0.830	2.802	0.105	0.176	1.6604</	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

[illegible]

Total Groundwater Underdrain Quarterly												
Total Groundwater Underdrain Quarterly												
ATMHO Model (Superfund)												
Year 2028												
Road Name	Road ID	Hour	NO _x Emission				NO _x Emission					
			g/min/hour	g/min	g/min/hour	g/min	g/min/hour	g/min	g/min/hour	g/min		
Road 11	11	0000-0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
Road 11	11	0100-0100	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		
Road 11	11	0200-0200	0.8880	0.2760	0.6330	0.4880	0.9880	0.2980	0.5100	0.1500	0.4240	
Road 11	11	0300-0300	0.8880	0.2760	0.6330	0.4880	0.9880	0.2980	0.5100	0.1500	0.4240	
Road 11	11	0400-0400	0.8880	0.2760	0.6330	0.4880	0.9880	0.2980	0.5100	0.1500	0.4240	
Road 11	11	0500-0500	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	0600-0600	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	0700-0700	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	0800-0800	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	0900-0900	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	1000-1000	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	1100-1100	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	1200-1200	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	1300-1300	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	1400-1400	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	1500-1500	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	1600-1600	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	1700-1700	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	1800-1800	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	1900-1900	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	2000-2000	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	2100-2100	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	2200-2200	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	2300-2300	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	2400-2400	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	2500-2500	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	2600-2600	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	2700-2700	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	2800-2800	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	2900-2900	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	3000-3000	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	3100-3100	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	3200-3200	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	3300-3300	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	3400-3400	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	3500-3500	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	3600-3600	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	3700-3700	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	3800-3800	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	3900-3900	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	4000-4000	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	4100-4100	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	4200-4200	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	4300-4300	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	4400-4400	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	4500-4500	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	4600-4600	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	4700-4700	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	4800-4800	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	4900-4900	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	5000-5000	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	5100-5100	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	5200-5200	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	5300-5300	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	5400-5400	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	5500-5500	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	5600-5600	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	5700-5700	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	5800-5800	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	5900-5900	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	6000-6000	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	6100-6100	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	6200-6200	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	6300-6300	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	6400-6400	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	6500-6500	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	6600-6600	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	6700-6700	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	6800-6800	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	6900-6900	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	7000-7000	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	7100-7100	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	7200-7200	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	7300-7300	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	7400-7400	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	7500-7500	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	7600-7600	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	7700-7700	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	7800-7800	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	7900-7900	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	8000-8000	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	8100-8100	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	8200-8200	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	8300-8300	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road 11	11	8400-8400	0.9320	0.2760	0.5440	0.7880	0.4240	0.9440	0.2760	0.4240	0.1040	0.3960
Road												

Sizing Wind Underground Quarry														
Open Pit Wind Tunnel Test Results for ANMMO Model (September)														
Year 2028														
Road Name	Road ID	Hour	NO Emission						NO Emission					
			Month/year/g/h/m³			Month/year/g/s/m³			Month/year/g/h/m³			Month/year/g/s/m³		
			g/h/m³	g/s/m³	tonne/hour	g/h/m³	g/s/m³	tonne/hour	g/h/m³	g/s/m³	tonne/hour	g/h/m³	g/s/m³	tonne/hour
Road 14	14000	1200	1.2216	0.086	2.028	8.8402	0.5886	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	1300	1.5484	0.106	2.588	11.1202	0.7446	2.233	6.979	1.9204	0.128	0.586	0.086	0.316
Road 14	14000	1400	1.0484	0.078	2.028	8.8402	0.5104	1.522	4.679	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	1500	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	1600	1.0904	0.074	2.248	9.1102	0.5104	1.522	4.679	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	1700	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	1800	1.0484	0.078	2.028	8.8402	0.5104	1.522	4.679	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	1900	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	2000	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	2100	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	2200	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	2300	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	2400	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	2500	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	2600	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	2700	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	2800	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	2900	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	3000	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	3100	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	3200	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	3300	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	3400	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	3500	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	3600	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	3700	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	3800	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	3900	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	4000	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	4100	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	4200	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	4300	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	4400	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	4500	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	4600	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	4700	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	4800	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	4900	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	5000	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	5100	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	5200	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	5300	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	5400	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	5500	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	5600	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	5700	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	5800	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	5900	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	6000	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	6100	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	6200	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	6300	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	6400	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	6500	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	6600	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	6700	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	6800	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	6900	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	7000	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	7100	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	7200	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	7300	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	7400	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	7500	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	7600	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	7700	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	7800	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	7900	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	8000	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	8100	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	8200	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	8300	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	8400	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	8500	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	8600	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	8700	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	8800	1.1516	0.086	2.208	9.6402	0.6104	1.775	5.589	1.5104	0.104	0.486	0.066	0.246
Road 14	14000	8900	1.1516	0.086	2.208	9.64								

[illegible]

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Road														Top 20 North Underdrain Quarterly											
														Top 20 Road 20 Union Factors for ARMO (unpublished)											
Year 2028																									
Road Name	Road ID	Hour	NO Emission						NO Emission																
			g/hw/h	g/hw/h	g/hw/h	g/hw/h	g/hw/h	g/hw/h	g/hw/h	g/hw/h	g/hw/h	g/hw/h	g/hw/h	g/hw/h											
Road 1	110000	1	20000	3.948	1.627	2.036	2.766	1.020	1.378	2.573	1.225	1.616	2.045	1.015	1.364										
		110000	2.100	0.905	1.145	1.565	0.565	0.785	1.455	0.685	0.915	1.165	0.535	0.725											
Road 2	110000	1	62000	1.916	0.508	1.190	1.360	0.718	1.012	2.880	0.833	1.655	2.375	0.467	1.223										
		110000	1.775	0.465	1.095	1.265	0.658	0.912	2.745	0.783	1.565	2.245	0.437	1.193											
Road 2	110000	1	64000	4.476	0.908	1.206	1.761	0.741	1.051	3.071	1.221	1.828	2.555	1.167	1.821										
		110000	2.530	0.506	1.106	1.266	0.696	0.946	2.886	0.866	1.486	2.166	0.926	1.486											
Road 2	110000	1	67000	4.630	0.908	1.206	1.761	0.741	1.051	3.071	1.221	1.828	2.555	1.167	1.821										
		110000	2.530	0.506	1.106	1.266	0.696	0.946	2.886	0.866	1.486	2.166	0.926	1.486											
Road 2	110000	1	67000	5.005	1.062	1.371	2.021	0.821	1.131	3.632	1.342	2.062	2.782	1.472	2.532										
		110000	2.865	0.562	1.212	1.372	0.712	1.012	3.542	0.912	1.662	2.412	1.062	1.662											
Road 2	110000	1	69000	5.995	0.917	1.217	1.512	0.776	1.052	3.542	1.432	2.162	2.892	1.602	2.692										
		110000	3.765	0.467	1.117	1.277	0.697	0.947	3.442	0.867	1.487	2.167	0.927	1.487											
Road 2	110000	1	71000	6.175	0.827	1.137	1.517	0.717	1.037	3.831	1.481	2.401	3.176	1.171	2.511										
		110000	3.575	0.417	1.057	1.217	0.657	0.937	3.681	0.881	1.461	2.171	0.911	1.461											
Road 2	110000	1	73000	6.175	0.827	1.137	1.517	0.717	1.037	3.831	1.481	2.401	3.176	1.171	2.511										
		110000	3.575	0.417	1.057	1.217	0.657	0.937	3.681	0.881	1.461	2.171	0.911	1.461											
Road 2	110000	1	75000	6.175	0.827	1.137	1.517	0.717	1.037	3.831	1.481	2.401	3.176	1.171	2.511										
		110000	3.575	0.417	1.057	1.217	0.657	0.937	3.681	0.881	1.461	2.171	0.911	1.461											
Road 2	110000	1	77000	6.175	0.827	1.137	1.517	0.717	1.037	3.831	1.481	2.401	3.176	1.171	2.511										
		110000	3.575	0.417	1.057	1.217	0.657	0.937	3.681	0.881	1.461	2.171	0.911	1.461											
Road 2	110000	1	79000	6.175	0.827	1.137	1.517	0.717	1.037	3.831	1.481	2.401	3.176	1.171	2.511										
		110000	3.575	0.417	1.057	1.217	0.657	0.937	3.681	0.881	1.461	2.171	0.911	1.461											
Road 2	110000	1	81000	6.175	0.827	1.137	1.517	0.717	1.037	3.831	1.481	2.401	3.176	1.171	2.511										
		110000	3.575	0.417	1.057	1.217	0.657	0.937	3.681	0.881	1.461	2.171	0.911	1.461											
Road 2	110000	1	83000	6.175	0.827	1.137	1.517	0.717	1.037	3.831	1.481	2.401	3.176	1.171	2.511										
		110000	3.575	0.417	1.057	1.217	0.657	0.937	3.681	0.881	1.461	2.171	0.911	1.461											
Road 2	110000	1	85000	6.175	0.827	1.137	1.517	0.717	1.037	3.831	1.481	2.401	3.176	1.171	2.511										
		110000	3.575	0.417	1.057	1.217	0.657	0.937	3.681	0.881	1.461	2.171	0.911	1.461											
Road 2	110000	1	87000	6.175	0.827	1.137	1.517	0.717	1.037	3.831	1.481	2.401	3.176	1.171	2.511										
		110000	3.575	0.417	1.057	1.217	0.657	0.937	3.681	0.881	1.461	2.171	0.911	1.461											
Road 2	110000	1	89000	6.175	0.827	1.137	1.517	0.717	1.037	3.831	1.481	2.401	3.176	1.171	2.511										
		110000	3.575	0.417	1.057	1.217	0.657	0.937	3.681	0.881	1.461	2.171	0.911	1.461											
Road 2	110000	1	91000	6.175	0.827	1.137	1.517	0.717	1.037	3.831	1.481	2.401	3.176	1.171	2.511										
		110000	3.575	0.417	1.057	1.217	0.657	0.937	3.681	0.881	1.461	2.171	0.911	1.461											
Road 2	110000	1	93000	6.175	0.827	1.137	1.517	0.717	1.037	3.831	1.481	2.401	3.176	1.171	2.511										
		110000	3.575	0.417	1.057	1.217	0.657	0.937	3.681	0.881	1.461	2.171	0.911	1.461											
Road 2	110000	1	95000	6.175	0.827	1.137	1.517	0.717	1.037	3.831	1.481	2.401	3.176	1.171	2.511										
		110000	3.575	0.417	1.057	1.217	0.657	0.937	3.681	0.881	1.461	2.171	0.911	1.461											
Road 2	110000	1	97000	6.175	0.827	1.137	1.517	0.717	1.037	3.831	1.481	2.401	3.176	1.171	2.511										
		110000	3.575	0.417	1.057	1.217	0.657	0.937	3.681	0.881	1.461	2.171	0.911	1.461											
Road 2	110000	1	99000	6.175	0.827	1.137	1.517	0.717	1.037	3.831	1.481	2.401	3.176	1.171	2.511										
		110000	3.575	0.417	1.057	1.217	0.657	0.937	3.681	0.881	1.461	2.171	0.911	1.461											
Road 2	110000	1	100000	6.175	0.827	1.137	1.517	0.717	1.037	3.831	1.481	2.401	3.176	1.171	2.511										
		110000	3.575	0.417	1.057	1.217	0.657	0.937	3.681	0.881	1.461	2.171	0.911	1.461											
Road 2	110000	1	102000	6.175	0.827	1.137	1.517	0.717	1.037	3.831	1.481	2.401	3.176	1.171	2.511										
		110000	3.575	0.417	1.057	1.217	0.657	0.937	3.681	0.881	1.461	2.171	0.911	1.461											
Road 2	110000	1	104000	6.175	0.827	1.137	1.517	0.717	1.037	3.831	1.481	2.401	3.176	1.171	2.511										
		110000	3.575	0.417	1.057	1.217	0.657	0.937	3.681	0.881	1.461	2.171	0.911	1.461											
Road 2	110000	1	106000	6.175	0.827	1.137	1.517	0.717	1.037	3.831	1.481	2.401	3.176	1.171	2.511										
		110000	3.575	0.417	1.057	1.217	0.657	0.937	3.681	0.881	1.461	2.171	0.911	1.461											
Road 2	110000	1	108000	6.175	0.827	1.137	1.517	0.717	1.037	3.831	1.481	2.401	3.176	1.171	2.511										
		110000	3.575	0.417	1.057	1.217	0.657	0.937	3.681	0.881	1.461	2.171	0.911	1.461											
Road 2	110000	1	110000	6.175	0.827	1.137	1.517	0.717	1.037	3.831	1.481	2.401	3.176	1.171	2.511										
		110000	3.575	0.417	1.057	1.217	0.657	0.937	3.681	0.881	1.461	2.171	0.911	1.461											
Road 2	110000	1	112000	6.175	0.827	1.137	1.517	0.717	1.037	3.831	1.481	2.401	3.176	1.171	2.511										
		110000	3.575	0.417	1.057	1.217	0.657	0.937	3.681	0.881	1.461	2.171	0.911	1.461											
Road 2	110000	1	114000	6.175	0.827	1.137	1.517	0.717	1.037	3.831	1.481	2.401	3.176	1.171	2.511										
		110000	3.575	0.417	1.057	1.217	0.657	0.937	3.681	0.881	1.461	2.171	0.911	1.461											
Road 2	110000	1	116000	6.175	0.827	1.137	1.517	0.717	1.037	3.831	1.481	2.401	3.176	1.171	2.511										
		110000	3.575	0.417	1.057	1.217	0.657	0.937	3.681	0.881	1.461	2.171	0.911	1.461											
Road 2	110000	1	118000	6.175	0.827	1.137	1.517	0.717	1.037	3.831	1.481	2.401	3.176	1.171	2.511										
		110000	3.575	0.417	1.057	1.217	0.657	0.937	3.681	0.881	1.461	2.171	0.911	1.461											
Road 2	110000	1	120000	6.175	0.827	1.137	1.517	0.717	1.037	3.831	1.481	2.401	3.176	1.171	2.511										
		110000	3.575	0.417	1.057	1.217	0.657	0.937	3.681	0.881	1.461	2.171	0.911	1.461											
Road 2	110000	1	122000	6.175	0.827	1.137	1.517	0.717	1.037	3.831	1.481	2.401	3.176	1.171	2.511										
		110000	3.575	0.417	1.057	1.217	0.657	0.937	3.681	0.881	1.461	2.171	0.911	1.461											
Road 2	110000	1	124000	6.175	0.827	1.137	1.517	0.717	1.037	3.831	1.481	2.401	3.176	1.171	2.511										
		110000	3.575	0.417	1.057	1.217	0.657	0.937	3.681	0.881	1.461	2.171	0.911	1.461											
Road 2	110000	1	126000	6.175	0.827	1.137	1.517	0.717	1.037	3.831	1.481	2.401	3.176	1.171	2.511										
		110000	3.575	0.417	1.057	1.217	0.657	0.937	3.681	0.881	1.461	2.171	0.911	1.461											
Road 2	110000	1	128000	6.175	0.827	1.137	1.517	0.717	1.037	3.831	1.481	2.401	3.176	1.171	2.511										
		110000	3.575	0.417	1.057	1.217	0.657	0.937	3.681	0.881	1.461	2.171	0.911	1.461											
Road 2	110000	1	130000	6.175	0.827	1.137	1.517	0.717	1.037	3.831	1.481	2.401	3.176	1.171	2.511										
		110000	3.575	0.417	1.057	1.217	0.657	0.937	3.681	0.881	1.461	2.171	0.911	1.461											
Road 2	110000	1	132000	6.175	0.827	1.137	1.517	0.717	1.037	3.831	1.481	2.401	3.176	1.171	2.511										
		110000	3.575	0.417	1.057	1.217	0.657	0.937	3.681	0.881	1.461	2.171	0.911	1.461											
Road 2	110000	1	134000	6.175	0.827	1.137	1.517	0.717	1.037	3.831	1.481	2.401	3.176	1.171	2.511										
		110000	3.575	0.417	1.057	1.217	0.657	0.937	3.681	0.881	1.461	2.171	0.911	1.461											
Road 2	110000	1	136000	6.175	0.827	1.137	1.517	0.717	1.037	3.831	1.481	2.401	3.176	1.171	2.511										
		110000	3.575	0.417	1.057	1.217	0.657	0.937	3.681	0.881	1.461	2.171	0.911	1.461											
Road 2	110000	1	138000	6.175	0.827	1.137	1.517	0.717	1.0																

Open North End Union Station												
Open North End Union Station for the 2020-2021 season (not guaranteed)												
Year 2020												
		No. Entrain						No. Disembark				
Road Name	Road ID	Hour	Month/January			Month/February			Month/March		Month/April	
			g/h/m	g/h/m	g/h/m	g/h/m	g/h/m	g/h/m	g/h/m	g/h/m		
Road 24	0000-0000	1:35:00	2:20:00	5:25:00	8:30:00	1:20:00	4:75:00	5:45:00	1:05:00	2:55:00	4:55:00	
Road 24	0000-0000	1:37:00	2:22:00	5:27:00	8:32:00	1:22:00	4:77:00	5:47:00	1:07:00	2:57:00	4:57:00	
Road 24	0000-0000	1:39:00	2:24:00	5:29:00	8:34:00	1:24:00	4:79:00	5:49:00	1:09:00	2:59:00	4:59:00	
Road 24	0000-0000	1:41:00	2:26:00	5:31:00	8:36:00	1:26:00	4:81:00	5:51:00	1:11:00	2:61:00	4:61:00	
Road 24	0000-0000	1:43:00	2:28:00	5:33:00	8:38:00	1:28:00	4:83:00	5:53:00	1:13:00	2:63:00	4:63:00	
Road 24	0000-0000	1:45:00	2:30:00	5:35:00	8:40:00	1:30:00	4:85:00	5:55:00	1:15:00	2:65:00	4:65:00	
Road 24	0000-0000	1:47:00	2:32:00	5:37:00	8:42:00	1:32:00	4:87:00	5:57:00	1:17:00	2:67:00	4:67:00	
Road 24	0000-0000	1:49:00	2:34:00	5:39:00	8:44:00	1:34:00	4:89:00	5:59:00	1:19:00	2:69:00	4:69:00	
Road 24	0000-0000	1:51:00	2:36:00	5:41:00	8:46:00	1:36:00	4:91:00	5:61:00	1:21:00	2:71:00	4:71:00	
Road 24	0000-0000	1:53:00	2:38:00	5:43:00	8:48:00	1:38:00	4:93:00	5:63:00	1:23:00	2:73:00	4:73:00	
Road 24	0000-0000	1:55:00	2:40:00	5:45:00	8:50:00	1:40:00	4:95:00	5:65:00	1:25:00	2:75:00	4:75:00	
Road 24	0000-0000	1:57:00	2:42:00	5:47:00	8:52:00	1:42:00	4:97:00	5:67:00	1:27:00	2:77:00	4:77:00	
Road 24	0000-0000	1:59:00	2:44:00	5:49:00	8:54:00	1:44:00	4:99:00	5:69:00	1:29:00	2:79:00	4:79:00	
Road 24	0000-0000	2:01:00	2:46:00	5:51:00	8:56:00	1:46:00	5:01:00	5:71:00	1:31:00	2:81:00	4:81:00	
Road 24	0000-0000	2:03:00	2:48:00	5:53:00	8:58:00	1:48:00	5:03:00	5:73:00	1:33:00	2:83:00	4:83:00	
Road 24	0000-0000	2:05:00	2:50:00	5:55:00	9:00:00	1:50:00	5:05:00	5:75:00	1:35:00	2:85:00	4:85:00	
Road 24	0000-0000	2:07:00	2:52:00	5:57:00	9:02:00	1:52:00	5:07:00	5:77:00	1:37:00	2:87:00	4:87:00	
Road 24	0000-0000	2:09:00	2:54:00	5:59:00	9:04:00	1:54:00	5:09:00	5:79:00	1:39:00	2:89:00	4:89:00	
Road 24	0000-0000	2:11:00	2:56:00	5:61:00	9:06:00	1:56:00	5:11:00	5:81:00	1:41:00	2:91:00	4:91:00	
Road 24	0000-0000	2:13:00	2:58:00	5:63:00	9:08:00	1:58:00	5:13:00	5:83:00	1:43:00	2:93:00	4:93:00	
Road 24	0000-0000	2:15:00	2:60:00	5:65:00	9:10:00	2:00:00	5:15:00	5:85:00	1:45:00	2:95:00	4:95:00	
Road 24	0000-0000	2:17:00	2:62:00	5:67:00	9:12:00	2:02:00	5:17:00	5:87:00	1:47:00	2:97:00	4:97:00	
Road 24	0000-0000	2:19:00	2:64:00	5:69:00	9:14:00	2:04:00	5:19:00	5:89:00	1:49:00	2:99:00	4:99:00	
Road 24	0000-0000	2:21:00	2:66:00	5:71:00	9:16:00	2:06:00	5:21:00	5:91:00	1:51:00	3:01:00	5:01:00	
Road 24	0000-0000	2:23:00	2:68:00	5:73:00	9:18:00	2:08:00	5:23:00	5:93:00	1:53:00	3:03:00	5:03:00	
Road 24	0000-0000	2:25:00	2:70:00	5:75:00	9:20:00	2:10:00	5:25:00	5:95:00	1:55:00	3:05:00	5:05:00	
Road 24	0000-0000	2:27:00	2:72:00	5:77:00	9:22:00	2:12:00	5:27:00	5:97:00	1:57:00	3:07:00	5:07:00	
Road 24	0000-0000	2:29:00	2:74:00	5:79:00	9:24:00	2:14:00	5:29:00	5:99:00	1:59:00	3:09:00	5:09:00	
Road 24	0000-0000	2:31:00	2:76:00	5:81:00	9:26:00	2:16:00	5:31:00	6:01:00	1:61:00	3:11:00	5:11:00	
Road 24	0000-0000	2:33:00	2:78:00	5:83:00	9:28:00	2:18:00	5:33:00	6:03:00	1:63:00	3:13:00	5:13:00	
Road 24	0000-0000	2:35:00	2:80:00	5:85:00	9:30:00	2:20:00	5:35:00	6:05:00	1:65:00	3:15:00	5:15:00	
Road 24	0000-0000	2:37:00	2:82:00	5:87:00	9:32:00	2:22:00	5:37:00	6:07:00	1:67:00	3:17:00	5:17:00	
Road 24	0000-0000	2:39:00	2:84:00	5:89:00	9:34:00	2:24:00	5:39:00	6:09:00	1:69:00	3:19:00	5:19:00	
Road 24	0000-0000	2:41:00	2:86:00	5:91:00	9:36:00	2:26:00	5:41:00	6:11:00	1:71:00	3:21:00	5:21:00	
Road 24	0000-0000	2:43:00	2:88:00	5:93:00	9:38:00	2:28:00	5:43:00	6:13:00	1:73:00	3:23:00	5:23:00	
Road 24	0000-0000	2:45:00	2:90:00	5:95:00	9:40:00	2:30:00	5:45:00	6:15:00	1:75:00	3:25:00	5:25:00	
Road 24	0000-0000	2:47:00	2:92:00	5:97:00	9:42:00	2:32:00	5:47:00	6:17:00	1:77:00	3:27:00	5:27:00	
Road 24	0000-0000	2:49:00	2:94:00	5:99:00	9:44:00	2:34:00	5:49:00	6:19:00	1:79:00	3:29:00	5:29:00	
Road 24	0000-0000	2:51:00	2:96:00	6:01:00	9:46:00	2:36:00	5:51:00	6:21:00	1:81:00	3:31:00	5:31:00	
Road 24	0000-0000	2:53:00	2:98:00	6:03:00	9:48:00	2:38:00	5:53:00	6:23:00	1:83:00	3:33:00	5:33:00	
Road 24	0000-0000	2:55:00	3:00:00	6:05:00	9:50:00	2:40:00	5:55:00	6:25:00	1:85:00	3:35:00	5:35:00	
Road 24	0000-0000	2:57:00	3:02:00	6:07:00	9:52:00	2:42:00	5:57:00	6:27:00	1:87:00	3:37:00	5:37:00	
Road 24	0000-0000	2:59:00	3:04:00	6:09:00	9:54:00	2:44:00	5:59:00	6:29:00	1:89:00	3:39:00	5:39:00	
Road 24	0000-0000	3:01:00	3:06:00	6:11:00	9:56:00	2:46:00	5:61:00	6:31:00	1:91:00	3:41:00	5:41:00	
Road 24	0000-0000	3:03:00	3:08:00	6:13:00	9:58:00	2:48:00	5:63:00	6:33:00	1:93:00	3:43:00	5:43:00	
Road 24	0000-0000	3:05:00	3:10:00	6:15:00	10:00:00	2:50:00	5:65:00	6:35:00	1:95:00	3:45:00	5:45:00	
Road 24	0000-0000	3:07:00	3:12:00	6:17:00	10:02:00	2:52:00	5:67:00	6:37:00	1:97:00	3:47:00	5:47:00	
Road 24	0000-0000	3:09:00	3:14:00	6:19:00	10:04:00	2:54:00	5:69:00	6:39:00	1:99:00	3:49:00	5:49:00	
Road 24	0000-0000	3:11:00	3:16:00	6:21:00	10:06:00	2:56:00	5:71:00	6:41:00	2:01:00	3:51:00	5:51:00	
Road 24	0000-0000	3:13:00	3:18:00	6:23:00	10:08:00	2:58:00	5:73:00	6:43:00	2:03:00	3:53:00	5:53:00	
Road 24	0000-0000	3:15:00	3:20:00	6:25:00	10:10:00	3:00:00	5:75:00	6:45:00	2:05:00	3:55:00	5:55:00	
Road 24	0000-0000	3:17:00	3:22:00	6:27:00	10:12:00	3:02:00	5:77:00	6:47:00	2:07:00	3:57:00	5:57:00	
Road 24	0000-0000	3:19:00	3:24:00	6:29:00	10:14:00	3:04:00	5:79:00	6:49:00	2:09:00	3:59:00	5:59:00	
Road 24	0000-0000	3:21:00	3:26:00	6:31:00	10:16:00	3:06:00	5:81:00	6:51:00	2:11:00	3:61:00	5:61:00	
Road 24	0000-0000	3:23:00	3:28:00	6:33:00	10:18:00	3:08:00	5:83:00	6:53:00	2:13:00	3:63:00	5:63:00	
Road 24	0000-0000	3:25:00	3:30:00	6:35:00	10:20:00	3:10:00	5:85:00	6:55:00	2:15:00	3:65:00	5:65:00	
Road 24	0000-0000	3:27:00	3:32:00	6:37:00	10:22:00	3:12:00	5:87:00	6:57:00	2:17:00	3:67:00	5:67:00	
Road 24	0000-0000	3:29:00	3:34:00	6:39:00	10:24:00	3:14:00	5:89:00	6:59:00	2:19:00	3:69:00	5:69:00	
Road 24	0000-0000	3:31:00	3:36:00	6:41:00	10:26:00	3:16:00	5:91:00	6:61:00	2:21:00	3:71:00	5:71:00	
Road 24	0000-0000	3:33:00	3:38:00	6:43:00	10:28:00	3:18:00	5:93:00	6:63:00	2:23:00	3:73:00	5:73:00	
Road 24	0000-0000	3:35:00	3:40:00	6:45:00	10:30:00	3:20:00	5:95:00	6:65:00	2:25:00	3:75:00	5:75:00	
Road 24	0000-0000	3:37:00	3:42:00	6:47:00	10:32:00	3:22:00	5:97:00	6:67:00	2:27:00	3:77:00	5:77:00	
Road 24	0000-0000	3:39:00	3:44:00	6:49:00	10:34:00	3:24:00	5:99:00	6:69:00	2:29:00	3:79:00	5:79:00	
Road 24	0000-0000	3:41:00	3:46:00	6:51:00	10:36:00	3:26:00	6:01:00	6:71:00	2:31:00	3:81:00	5:81:00	
Road 24	0000-0000	3:43:00	3:48:00	6:53:00	10:38:00	3:28:00	6:03:00	6:73:00	2:33:00	3:83:00	5:83:00	
Road 24	0000-0000	3:45:00	3:50:00	6:55:00	10:40:00	3:30:00	6:05:00	6:75:00	2:35:00	3:85:00	5:85:00	
Road 24	0000-0000	3:47:00	3:52:00	6:57:00	10:42:00	3:32:00	6:07:00	6:77:00	2:37:00	3:87:00	5:87:00	
Road 24	0000-0000	3:49:00	3:54:00	6:59:00	10:44:00	3:34:00	6:09:00	6:79:00	2:39:00	3:89:00	5:89:00	
Road 24	0000-0000	3:51:00	3:56:00	7:01:00	10:46:00	3:36:00	6:11:00	6:81:00	2:41:00	3:91:00	5:91:00	
Road 24	0000-0000	3:53:00	3:58:00	7:03:00	10:48:00	3:38:00	6:13:00	6:83:00	2:43:00	3:93:00	5:93:00	
Road 24	0000-0000	3:55:00	4:00:00	7:05:00	10:50:00	3:40:00	6:15:00	6:85:00	2:45:00	3:95:00	5:95:00	
Road 24	0000-0000	3:57:00	4:02:00	7:07:00	10:52:00	3:42:00	6:17:00	6:87:00	2:47:00	3:97:00	5:97:00	
Road 24	0000-0000	3:59:00	4:04:00	7:09:00	10:54:00	3:44:00	6:19:00	6:89:00	2:49:00	3:99:00	5:99:00	
Road 24	0000-0000	4:01:00	4:06:00	7:11:00	10:56:00	3:46:00	6:21:00	6:91:00	2:51:00	4:01:00	6:01:00	
Road 24	0000-0000	4:03:00	4:08:00	7:13:00	10:58:00	3:48:00	6:23:00	6:93:00	2:53:00	4:03:00	6:03:00	
Road 24	0000-0000	4:05:00	4:10:00	7:15:00	11:00:00	3:50:00	6:25:00	6:95:00	2:55:00	4:05:00	6:05:00	
Road 24	0000-0000	4:07:00	4:12:00	7:17:00	11:02:00	3:52:00	6:27:00	6:97:00	2:57:00	4:07:00	6:07:00	
Road 24	0000-0000	4:09:00	4:14:00	7:19:00	11:04:00	3:54:00	6:29:00	6:99:00	2:59:00	4:09:00	6:09:00	
Road 24	0000-0000	4:11:00	4:16:00	7:21:00	11:06:00	3:56:00	6:31:00	7:01:00	2:61:00	4:11:00	6:11:00	
Road 24	0000-0000	4:13:00	4:18:00	7:23:00	11:08:00	3:58:00	6:33:00	7:03:00	2:63:00	4:13:00	6:13:00	
Road 24	0000-0000	4:15:00	4:20:00	7:25:00	11:10:00	4:00:00	6:35:00	7:05:00	2:65:00	4:15:00	6:15:00	
Road 24	0000-0000	4:17:00	4:22:00	7:27:00	11:12:00	4:02:00	6:37:00	7:07:00	2:67:00	4:17:00	6:17:00	
Road 24	0000-0000	4:19:00										

Open Y North Underway Querry Sizing Data and Emission Factors for PM2.5 and PM10 Emissions										
Year 2028										
Road Name	Road ID	Hour	NO _x Emission				NO Emission			
			Motorbikes/mph		Motorbikes/mph		Motorbikes/mph		Motorbikes/mph	
			g/hour/mph	g/mi/h	g/hour/mph	g/mi/h	g/hour/mph	g/mi/h	g/hour/mph	g/mi/h
Rd 2	1820	1300	3.254	8.405	2.598	6.665	6.975	2.162	1.444	3.738
		1305	2.229	5.805	1.822	4.685	4.782	1.495	1.000	2.606
		1310	2.229	5.805	1.822	4.685	4.782	1.495	1.000	2.606
		1315	4.644	12.221	3.968	10.183	10.183	3.186	2.124	5.526
		1320	4.644	12.221	3.968	10.183	10.183	3.186	2.124	5.526
		1325	2.312	5.931	1.866	4.843	4.843	1.515	1.000	2.646
		1330	2.312	5.931	1.866	4.843	4.843	1.515	1.000	2.646
		1335	2.444	6.236	1.926	5.045	5.106	1.581	1.048	2.742
		1340	2.444	6.236	1.926	5.045	5.106	1.581	1.048	2.742
		1345	2.588	6.619	2.016	5.287	5.348	1.657	1.103	2.846
		1350	2.588	6.619	2.016	5.287	5.348	1.657	1.103	2.846
		1355	2.732	7.002	2.106	5.529	5.590	1.733	1.158	2.950
		1400	2.732	7.002	2.106	5.529	5.590	1.733	1.158	2.950
		1405	2.876	7.385	2.196	5.771	5.832	1.809	1.213	3.054
		1410	2.876	7.385	2.196	5.771	5.832	1.809	1.213	3.054
		1415	3.020	7.768	2.286	6.013	6.074	1.885	1.268	3.158
		1420	3.020	7.768	2.286	6.013	6.074	1.885	1.268	3.158
		1425	3.164	8.151	2.376	6.255	6.316	1.961	1.323	3.262
		1430	3.164	8.151	2.376	6.255	6.316	1.961	1.323	3.262
		1435	3.308	8.534	2.466	6.497	6.558	2.037	1.378	3.366
		1440	3.308	8.534	2.466	6.497	6.558	2.037	1.378	3.366
		1445	3.452	8.917	2.556	6.739	6.800	2.113	1.433	3.470
		1450	3.452	8.917	2.556	6.739	6.800	2.113	1.433	3.470
		1455	3.596	9.300	2.646	6.981	7.042	2.189	1.488	3.574
		1500	3.596	9.300	2.646	6.981	7.042	2.189	1.488	3.574
		1505	3.740	9.683	2.736	7.223	7.284	2.265	1.543	3.678
		1510	3.740	9.683	2.736	7.223	7.284	2.265	1.543	3.678
		1515	3.884	10.066	2.826	7.465	7.526	2.341	1.598	3.782
		1520	3.884	10.066	2.826	7.465	7.526	2.341	1.598	3.782
		1525	4.028	10.449	2.916	7.707	7.768	2.417	1.653	3.886
1530	4.028	10.449	2.916	7.707	7.768	2.417	1.653	3.886		
1535	4.172	10.832	3.006	7.949	8.010	2.493	1.708	3.990		
1540	4.172	10.832	3.006	7.949	8.010	2.493	1.708	3.990		
1545	4.316	11.215	3.096	8.191	8.252	2.569	1.763	4.094		
1550	4.316	11.215	3.096	8.191	8.252	2.569	1.763	4.094		
1555	4.460	11.598	3.186	8.433	8.494	2.645	1.818	4.198		
1600	4.460	11.598	3.186	8.433	8.494	2.645	1.818	4.198		
1605	4.604	11.981	3.276	8.675	8.736	2.721	1.873	4.302		
1610	4.604	11.981	3.276	8.675	8.736	2.721	1.873	4.302		
1615	4.748	12.364	3.366	8.917	8.978	2.797	1.928	4.406		
1620	4.748	12.364	3.366	8.917	8.978	2.797	1.928	4.406		
1625	4.892	12.747	3.456	9.159	9.220	2.873	1.983	4.510		
1630	4.892	12.747	3.456	9.159	9.220	2.873	1.983	4.510		
1635	5.036	13.130	3.546	9.401	9.462	2.949	2.038	4.614		
1640	5.036	13.130	3.546	9.401	9.462	2.949	2.038	4.614		
1645	5.180	13.513	3.636	9.643	9.704	3.025	2.093	4.718		
1650	5.180	13.513	3.636	9.643	9.704	3.025	2.093	4.718		
1655	5.324	13.896	3.726	9.885	9.946	3.101	2.148	4.822		
1700	5.324	13.896	3.726	9.885	9.946	3.101	2.148	4.822		
1705	5.468	14.279	3.816	10.127	10.188	3.177	2.203	4.926		
1710	5.468	14.279	3.816	10.127	10.188	3.177	2.203	4.926		
1715	5.612	14.662	3.906	10.369	10.429	3.253	2.258	5.030		
1720	5.612	14.662	3.906	10.369	10.429	3.253	2.258	5.030		
1725	5.756	15.045	3.996	10.611	10.672	3.329	2.313	5.134		
1730	5.756	15.045	3.996	10.611	10.672	3.329	2.313	5.134		
1735	5.900	15.428	4.086	10.853	10.914	3.405	2.368	5.238		
1740	5.900	15.428	4.086	10.853	10.914	3.405	2.368	5.238		
1745	6.044	15.811	4.176	11.095	11.155	3.481	2.423	5.342		
1750	6.044	15.811	4.176	11.095	11.155	3.481	2.423	5.342		
1755	6.188	16.194	4.266	11.337	11.397	3.557	2.478	5.446		
1800	6.188	16.194	4.266	11.337	11.397	3.557	2.478	5.446		
1805	6.332	16.577	4.356	11.579	11.639	3.633	2.533	5.550		
1810	6.332	16.577	4.356	11.579	11.639	3.633	2.533	5.550		
1815	6.476	16.960	4.446	11.821	11.881	3.709	2.588	5.654		
1820	6.476	16.960	4.446	11.821	11.881	3.709	2.588	5.654		
1825	6.620	17.343	4.536	12.063	12.124	3.785	2.643	5.758		
1830	6.620	17.343	4.536	12.063	12.124	3.785	2.643	5.758		
1835	6.764	17.726	4.626	12.305	12.366	3.861	2.698	5.862		
1840	6.764	17.726	4.626	12.305	12.366	3.861	2.698	5.862		
1845	6.908	18.109	4.716	12.547	12.608	3.937	2.753	5.966		
1850	6.908	18.109	4.716	12.547	12.608	3.937	2.753	5.966		
1855	7.052	18.492	4.806	12.789	12.850	4.013	2.808	6.070		
1900	7.052	18.492	4.806	12.789	12.850	4.013	2.808	6.070		
1905	7.196	18.875	4.896	13.031	13.092	4.089	2.863	6.174		
1910	7.196	18.875	4.896	13.031	13.092	4.089	2.863	6.174		
1915	7.340	19.258	4.986	13.273	13.334	4.165	2.918	6.278		
1920	7.340	19.258	4.986	13.273	13.334	4.165	2.918	6.278		
1925	7.484	19.641	5.076	13.515	13.576	4.241	2.973	6.382		
1930	7.484	19.641	5.076	13.515	13.576	4.241	2.973	6.382		
1935	7.628	20.024	5.166	13.757	13.818	4.317	3.028	6.486		
1940	7.628	20.024	5.166	13.757	13.818	4.317	3.028	6.486		
1945	7.772	20.407	5.256	14.000	14.061	4.393	3.083	6.590		
1950	7.772	20.407	5.256	14.000	14.061	4.393	3.083	6.590		
1955	7.916	20.790	5.346	14.242	14.303	4.469	3.138	6.694		
2000	7.916	20.790	5.346	14.242	14.303	4.469	3.138	6.694		
2005	8.060	21.173	5.436	14.484	14.544	4.545	3.193	6.798		
2010	8.060	21.173	5.436	14.484	14.544	4.545	3.193	6.798		
2015	8.204	21.556	5.526	14.726	14.787	4.621	3.248	6.902		
2020	8.204	21.556	5.526	14.726	14.787	4.621	3.248	6.902		
2025	8.348	21.939	5.616	14.968	15.029	4.697	3.303	7.006		
2030	8.348	21.939	5.616	14.968	15.029	4.697	3.303	7.006		
2035	8.492	22.322	5.706	15.210	15.270	4.773	3.358	7.110		
2040	8.492	22.322	5.706	15.210	15.270	4.773	3.358	7.110		
2045	8.636	22.705	5.796	15.452	15.512	4.849	3.413	7.214		
2050	8.636	22.705	5.796	15.452	15.512	4.849	3.413	7.214		
2055	8.780	23.088	5.886	15.694	15.754	4.925	3.468	7.318		
2100	8.780	23.088	5.886	15.694	15.754	4.925	3.468	7.318		
2105	8.924	23.471	5.976	15.936	16.000	5.001	3.523	7.422		
2110	8.924	23.471	5.976	15.936	16.000	5.001	3.523	7.422		
2115	9.068	23.854	6.066	16.178	16.242	5.077	3.578	7.526		
2120	9.068	23.854	6.066	16.178	16.242	5.077	3.578	7.526		
2125	9.212	24.237	6.156	16.420	16.483	5.153	3.633	7.630		
2130	9.212	24.237	6.156	16.420	16.483	5.153	3.633	7.630		
2135	9.356	24.620	6.246	16.662	16.725	5.229	3.688	7.734		
2140	9.356	24.620	6.246	16.662	16.725	5.229	3.688	7.734		
2145	9.500	25.003	6.336	16.904	16.967	5.305	3.743	7.838		
2150	9.500	25.003	6.336	16.904	16.967	5.305	3.743	7.838		
2155	9.644	25.386	6.426	17.146	17.209	5.381	3.798	7.942		
2200	9.644	25.386	6.426	17.146	17.209	5.381	3.798	7.942		
2205	9.788	25.769	6.516	17.388	17.451	5.457	3.853	8.046		
2210	9.788	25.769	6.516	17.388	17.451	5.457	3.853	8.046		
2215	9.932	26.152	6.606	17.630	17.693	5.533	3.908	8.150		
2220	9.932	26.152	6.606	17.630	17.693	5.533	3.908	8.150		
2225	10.076	26.535	6.696	17.872	17.935	5.609	3.963	8.254		
2230	10.076	26.535	6.696	17.872	17.935	5.609	3.963	8.254		
2235	10.220	26.918	6.786	18.114	18.177	5.685	4.018	8.358		
2240	10.220	26.918	6.786	18.114	18.177	5.685	4.018	8.358		
2245	10.364	27.301	6.876	18.356	18.419	5.761	4.073	8.462		
2250	10.364	27.301	6.876	18.356	18.419	5.761	4.073	8.462		
2255	10.508	27.684	6.966	18.598	18.661	5.837	4.128	8.566		
2300	10.508	27.684	6.966	18.598	18.661	5.837	4.128	8.566		
2305	10.652	28.067	7.056	18.840	18.903	5.913	4.183	8.670		
2310	10.652	28.067	7.056	18.840	18.903	5.913	4.183	8.670		
2315	10.796	28.450	7.146	19.082	19.145	5.989	4.238	8.774		
2320	10.796	28.450	7.146	19.082	19.145	5.989	4.238	8.774		
2325	10.940	28.833	7.236	19.324	19.387	6.065	4.293	8.878		
2330	10.940	28.833	7.236	19.324	19.387	6.065	4.293	8.878		
2335										

[illegible]

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open 24 Hour Envisioned Quarterly													
Open Read 24 Hour Envisioned Factors for													
ATMOSPHERIC POLLUTION YEAR 2028													
Road Name	Road ID	Hour	MO Envision						NO Envision				
			Monthly/vehicle			1000/vehicle			Monthly/vehicle			1000/vehicle	
			g/m ³ /hr	lb/hr	g/m ³ /hr	lb/hr	g/m ³ /hr	lb/hr	g/m ³ /hr	lb/hr	g/m ³ /hr	lb/hr	g/m ³ /hr
Read 27	27	1650-1700	1.10E+01	8.83E-07	2.47E-06	2.81E-07	7.44E-07	2.29E-06	1.38E+01	1.10E-06	1.24E+01	3.30E-06	1.03E-05
Read 27	27	1700-1750	1.17E+01	9.48E-07	2.60E-06	2.92E-07	7.84E-07	2.46E-06	1.50E+01	1.20E-06	1.37E+01	3.70E-06	1.10E-05
Read 27	27	1750-1800	1.25E+01	1.02E-06	2.74E-06	3.06E-07	8.44E-07	2.64E-06	1.60E+01	1.30E-06	1.47E+01	4.00E-06	1.19E-05
Read 27	27	1800-1850	1.33E+01	1.10E-06	2.88E-06	3.20E-07	9.04E-07	2.80E-06	1.70E+01	1.40E-06	1.57E+01	4.30E-06	1.26E-05
Read 27	27	1850-1900	1.41E+01	1.18E-06	3.02E-06	3.34E-07	9.64E-07	2.96E-06	1.80E+01	1.50E-06	1.67E+01	4.60E-06	1.33E-05
Read 27	27	1900-1950	1.49E+01	1.26E-06	3.16E-06	3.48E-07	1.02E-06	3.12E-06	1.90E+01	1.60E-06	1.77E+01	4.90E-06	1.40E-05
Read 27	27	1950-2000	1.57E+01	1.34E-06	3.30E-06	3.62E-07	1.08E-06	3.28E-06	2.00E+01	1.70E-06	1.87E+01	5.20E-06	1.47E-05
Read 27	27	2000-2050	1.65E+01	1.42E-06	3.44E-06	3.76E-07	1.14E-06	3.44E-06	2.10E+01	1.80E-06	1.97E+01	5.50E-06	1.54E-05
Read 27	27	2050-2100	1.73E+01	1.50E-06	3.58E-06	3.90E-07	1.20E-06	3.60E-06	2.20E+01	1.90E-06	2.07E+01	5.80E-06	1.61E-05
Read 27	27	2100-2150	1.81E+01	1.58E-06	3.72E-06	4.04E-07	1.26E-06	3.76E-06	2.30E+01	2.00E-06	2.17E+01	6.10E-06	1.68E-05
Read 27	27	2150-2200	1.89E+01	1.66E-06	3.86E-06	4.18E-07	1.32E-06	3.92E-06	2.40E+01	2.10E-06	2.27E+01	6.40E-06	1.75E-05
Read 27	27	2200-2250	1.97E+01	1.74E-06	4.00E-06	4.32E-07	1.38E-06	4.08E-06	2.50E+01	2.20E-06	2.37E+01	6.70E-06	1.82E-05
Read 27	27	2250-2300	2.05E+01	1.82E-06	4.14E-06	4.46E-07	1.44E-06	4.24E-06	2.60E+01	2.30E-06	2.47E+01	7.00E-06	1.89E-05
Read 27	27	2300-2350	2.13E+01	1.90E-06	4.28E-06	4.60E-07	1.50E-06	4.40E-06	2.70E+01	2.40E-06	2.57E+01	7.30E-06	1.96E-05
Read 27	27	2350-2400	2.21E+01	1.98E-06	4.42E-06	4.74E-07	1.56E-06	4.56E-06	2.80E+01	2.50E-06	2.67E+01	7.60E-06	2.03E-05
Read 27	27	2400-2450	2.29E+01	2.06E-06	4.56E-06	4.88E-07	1.62E-06	4.72E-06	2.90E+01	2.60E-06	2.77E+01	7.90E-06	2.10E-05
Read 27	27	2450-2500	2.37E+01	2.14E-06	4.70E-06	5.02E-07	1.68E-06	4.88E-06	3.00E+01	2.70E-06	2.87E+01	8.20E-06	2.17E-05
Read 27	27	2500-2550	2.45E+01	2.22E-06	4.84E-06	5.16E-07	1.74E-06	5.04E-06	3.10E+01	2.80E-06	2.97E+01	8.50E-06	2.24E-05
Read 27	27	2550-2600	2.53E+01	2.30E-06	4.98E-06	5.30E-07	1.80E-06	5.20E-06	3.20E+01	2.90E-06	3.07E+01	8.80E-06	2.31E-05
Read 27	27	2600-2650	2.61E+01	2.38E-06	5.12E-06	5.44E-07	1.86E-06	5.36E-06	3.30E+01	3.00E-06	3.17E+01	9.10E-06	2.38E-05
Read 27	27	2650-2700	2.69E+01	2.46E-06	5.26E-06	5.58E-07	1.92E-06	5.52E-06	3.40E+01	3.10E-06	3.27E+01	9.40E-06	2.45E-05
Read 27	27	2700-2750	2.77E+01	2.54E-06	5.40E-06	5.72E-07	1.98E-06	5.68E-06	3.50E+01	3.20E-06	3.37E+01	9.70E-06	
Read 27	27	2750-2800	2.85E+01	2.62E-06	5.54E-06	5.86E-07	2.04E-06	5.84E-06	3.60E+01	3.30E-06	3.47E+01	1.00E-05	
Read 27	27	2800-2850	2.93E+01	2.70E-06	5.68E-06	6.00E-07	2.10E-06	6.00E-06	3.70E+01	3.40E-06	3.57E+01	1.03E-05	
Read 27	27	2850-2900	3.01E+01	2.78E-06	5.82E-06	6.14E-07	2.16E-06	6.16E-06	3.80E+01	3.50E-06	3.67E+01	1.06E-05	
Read 27	27	2900-2950	3.09E+01	2.86E-06	5.96E-06	6.28E-07	2.22E-06	6.28E-06	3.90E+01	3.60E-06	3.77E+01	1.09E-05	
Read 27	27	2950-3000	3.17E+01	2.94E-06	6.10E-06	6.42E-07	2.28E-06	6.40E-06	4.00E+01	3.70E-06	3.87E+01	1.12E-05	
Read 27	27	3000-3050	3.25E+01	3.02E-06	6.24E-06	6.56E-07	2.34E-06	6.56E-06	4.10E+01	3.80E-06	3.97E+01	1.15E-05	
Read 27	27	3050-3100	3.33E+01	3.10E-06	6.38E-06	6.70E-07	2.40E-06	6.70E-06	4.20E+01	3.90E-06	4.07E+01	1.18E-05	
Read 27	27	3100-3150	3.41E+01	3.18E-06	6.52E-06	6.84E-07	2.46E-06	6.84E-06	4.30E+01	4.00E-06	4.17E+01	1.21E-05	
Read 27	27	3150-3200	3.49E+01	3.26E-06	6.66E-06	6.98E-07	2.52E-06	6.96E-06	4.40E+01	4.10E-06	4.27E+01	1.24E-05	
Read 27	27	3200-3250	3.57E+01	3.34E-06	6.80E-06	7.12E-07	2.58E-06	7.12E-06	4.50E+01	4.20E-06	4.37E+01	1.27E-05	
Read 27	27	3250-3300	3.65E+01	3.42E-06	6.94E-06	7.26E-07	2.64E-06	7.26E-06	4.60E+01	4.30E-06	4.47E+01	1.30E-05	
Read 27	27	3300-3350	3.73E+01	3.50E-06	7.08E-06	7.40E-07	2.70E-06	7.40E-06	4.70E+01	4.40E-06	4.57E+01	1.33E-05	
Read 27	27	3350-3400	3.81E+01	3.58E-06	7.22E-06	7.54E-07	2.76E-06	7.54E-06	4.80E+01	4.50E-06	4.67E+01	1.36E-05	
Read 27	27	3400-3450	3.89E+01	3.66E-06	7.36E-06	7.68E-07	2.82E-06	7.68E-06	4.90E+01	4.60E-06	4.77E+01	1.39E-05	
Read 27	27	3450-3500	3.97E+01	3.74E-06	7.50E-06	7.82E-07	2.88E-06	7.82E-06	5.00E+01	4.70E-06	4.87E+01	1.42E-05	
Read 27	27	3500-3550	4.05E+01	3.82E-06	7.64E-06	7.96E-07	2.94E-06	7.96E-06	5.10E+01	4.80E-06	4.97E+01	1.45E-05	
Read 27	27	3550-3600	4.13E+01	3.90E-06	7.78E-06	8.10E-07	3.00E-06	8.10E-06	5.20E+01	4.90E-06	5.07E+01	1.48E-05	
Read 27	27	3600-3650	4.21E+01	3.98E-06	7.92E-06	8.24E-07	3.06E-06	8.24E-06	5.30E+01	5.00E-06	5.17E+01	1.51E-05	
Read 27	27	3650-3700	4.29E+01	4.06E-06	8.06E-06	8.38E-07	3.12E-06	8.38E-06	5.40E+01	5.10E-06	5.27E+01	1.54E-05	
Read 27	27	3700-3750	4.37E+01	4.14E-06	8.20E-06	8.52E-07	3.18E-06	8.52E-06	5.50E+01	5.20E-06	5.37E+01	1.57E-05	
Read 27	27	3750-3800	4.45E+01	4.22E-06	8.34E-06	8.66E-07	3.24E-06	8.66E-06	5.60E+01	5.30E-06	5.47E+01	1.60E-05	
Read 27	27	3800-3850	4.53E+01	4.30E-06	8.48E-06	8.80E-07	3.30E-06	8.80E-06	5.70E+01	5.40E-06	5.57E+01	1.63E-05	
Read 27	27	3850-3900	4.61E+01	4.38E-06	8.62E-06	8.94E-07	3.36E-06	8.94E-06	5.80E+01	5.50E-06	5.67E+01	1.66E-05	
Read 27	27	3900-3950	4.69E+01	4.46E-06	8.76E-06	9.08E-07	3.42E-06	9.08E-06	5.90E+01	5.60E-06	5.77E+01	1.69E-05	
Read 27	27	3950-4000	4.77E+01	4.54E-06	8.90E-06	9.22E-07	3.48E-06	9.22E-06	6.00E+01	5.70E-06	5.87E+01	1.72E-05	
Read 27	27	4000-4050	4.85E+01	4.62E-06	9.04E-06	9.36E-07	3.54E-06	9.36E-06	6.10E+01	5.80E-06	5.97E+01	1.75E-05	
Read 27	27	4050-4100	4.93E+01	4.70E-06	9.18E-06	9.50E-07	3.60E-06	9.50E-06	6.20E+01	5.90E-06	6.07E+01	1.78E-05	
Read 27	27	4100-4150	5.01E+01	4.78E-06	9.32E-06	9.64E-07	3.66E-06	9.64E-06	6.30E+01	6.00E-06	6.17E+01	1.81E-05	
Read 27	27	4150-4200	5.09E+01	4.86E-06	9.46E-06	9.78E-07	3.72E-06	9.78E-06	6.40E+01	6.10E-06	6.27E+01	1.84E-05	
Read 27	27	4200-4250	5.17E+01	4.94E-06	9.60E-06	9.92E-07	3.78E-06	9.92E-06	6.50E+01	6.20E-06	6.37E+01	1.87E-05	
Read 27	27	4250-4300	5.25E+01	5.02E-06	9.74E-06	1.006E-06	3.84E-06	1.006E-05	6.60E+01	6.30E-06	6.47E+01	1.90E-05	
Read 27	27	4300-4350	5.33E+01	5.10E-06	9.88E-06	1.020E-06	3.90E-06	1.020E-05	6.70E+01	6.40E-06	6.57E+01	1.93E-05	
Read 27	27	4350-4400	5.41E+01	5.18E-06	1.002E-05	1.034E-06	3.96E-06	1.034E-05	6.80E+01	6.50E-06	6.67E+01	1.96E-05	
Read 27	27	4400-4450	5.49E+01	5.26E-06	1.016E-05	1.048E-06	4.02E-06	1.048E-05	6.90E+01	6.60E-06	6.77E+01	1.99E-05	
Read 27	27	4450-4500	5.57E+01	5.34E-06	1.030E-05	1.062E-06	4.08E-06	1.062E-05	7.00E+01	6.70E-06	6.87E+01	2.02E-05	
Read 27	27	4500-4550	5.65E+01	5.42E-06	1.044E-05	1.076E-06	4.14E-06	1.076E-05	7.10E+01	6.80E-06	6.97E+01	2.05E-05	
Read 27	27	4550-4600	5.73E+01	5.50E-06	1.058E-05	1.090E-06	4.20E-06	1.090E-05	7.20E+01	6.90E-06	7.07E+01	2.08E-05	
Read 27	27	4600-4650	5.81E+01	5.58E-06	1.072E-05	1.104E-06	4.26E-06	1.104E-05	7.30E+01	7.00E-06	7.17E+01	2.11E-05	
Read 27	27	4650-4700	5.89E+01	5.66E-06	1.086E-05	1.118E-06	4.32E-06	1.118E-05	7.40E+01	7.10E-06	7.27E+01	2.14E-05	
Read 27	27	4700-4750	5.97E+01	5.74E-06	1.100E-05	1.132E-06	4.38E-06	1.132E-05	7.50E+01	7.20E-06	7.37E+01	2.17E-05	
Read 27	27	4750-4800	6.05E+01	5.82E-06	1.114E-05	1.146E-06	4.44E-06	1.146E-05	7.60E+01	7.30E-06	7.47E+01	2.20E-05	
Read 27	27	4800-4850	6.13E+01	5.90E-06	1.128E-05	1.160E-06	4.50E-06	1.160E-05	7.70E+01	7.40E-06	7.57E+01	2.23E-05	
Read 27	27	4850-4900	6.21E+01	5.98E-06	1.142E-05	1.174E-06	4.56E-06	1.174E-05	7.80E+01	7.50E-06	7.67E+01	2.26E-05	
Read 27	27	4900-4950	6.29E+01	6.06E-06	1.156E-05	1.188E-06	4.62E-06	1.188E-05	7.90E+01	7.60E-06	7.77E+01	2.29E-05	
Read 27	27	4950-5000	6.37E+01	6.14E-06	1.170E-05	1.202E-06	4.68E-06	1.202E-05	8.00E+01	7.70E-06	7.87E+01	2.32E-05	
Read 27	27	5000-5050	6.45E+01	6.22E-06	1.184E-05	1.216E-06	4.74E-06	1.216E-05	8.10E+01	7.80E-06	7.97E+01	2.35E-05	
Read 27	27	5050-5100	6.53E+01	6.30E-06	1.198E-05	1.230E-06	4.80E-06	1.230E-05	8.20E+01	7.90E-06	8.07E+01	2.38E-05	
Read 27	27	5100-5150	6.61E+01	6.38E-06	1.212E-05	1.244E-06	4.86E-06	1.244E-05	8.30E+01	8.00E-06	8.17E+01	2.41E-05	
Read 27	27	5150-5200	6.69E+01	6.46E-06									

Appendix 3.5.1 Emission Factor in 2028.xlsx

Open Yield North Undermining Factors for ARMSMO model (hour)

Year 2028

Row Name		Row ID		Monthly/average		No Emulsion		Monthly/average		No Emulsion	
				g/cm ³ /g	g/cm ³ /g	g/cm ³ /g	g/cm ³ /g	g/cm ³ /g	g/cm ³ /g	g/cm ³ /g	g/cm ³ /g
No Emulsion											
Row 31	31	0000-0100	5.07/0.02	1.88/7.07	1.69/0.06	4.41/0.02	1.66/0.07	1.49/0.06	1.66/0.01	1.18/0.06	1.73/0.01
Row 31	31	0000-0100	5.83/0.02	1.88/7.07	1.69/0.06	5.28/0.02	1.78/0.07	1.48/0.06	1.66/0.01	1.73/0.01	1.73/0.01
Row 31	31	0000-0100	6.58/0.02	1.88/7.07	1.69/0.06	6.03/0.02	1.78/0.07	1.48/0.06	1.66/0.01	1.73/0.01	1.73/0.01
Row 31	31	0000-0400	6.87/0.02	1.96/7.07	1.72/0.07	6.21/0.02	1.83/0.08	1.79/0.07	1.42/0.01	1.70/0.07	1.62/0.01
Row 31	31	0000-0400	7.58/0.02	1.96/7.07	1.72/0.07	6.91/0.02	1.83/0.08	1.79/0.07	1.42/0.01	1.70/0.07	1.62/0.01
Row 31	31	0000-0700	6.60/0.01	1.96/7.07	1.72/0.07	5.96/0.01	1.72/0.07	1.54/0.01	1.23/0.02	1.09/0.01	1.80/0.01
Row 31	31	0000-0700	6.58/0.02	1.96/7.07	1.72/0.07	5.71/0.02	1.64/0.01	1.38/0.02	1.26/0.01	1.44/0.01	1.73/0.01
Row 31	31	0000-0700	6.58/0.02	1.96/7.07	1.72/0.07	5.71/0.02	1.64/0.01	1.38/0.02	1.26/0.01	1.44/0.01	1.73/0.01
Row 31	31	0000-1000	6.83/0.02	1.96/7.07	1.72/0.07	6.13/0.02	1.89/0.03	1.60/0.02	1.43/0.01	1.62/0.01	1.63/0.01
Row 31	31	0000-1000	7.71/0.02	1.96/7.07	1.72/0.07	7.01/0.02	1.89/0.03	1.60/0.02	1.43/0.01	1.62/0.01	1.63/0.01
Row 31	31	1000-1100	8.81/0.02	1.96/7.07	1.72/0.07	7.94/0.02	1.95/0.07	1.64/0.04	1.91/0.01	1.87/0.01	1.54/0.01
Row 31	31	1000-1100	8.81/0.02	1.96/7.07	1.72/0.07	7.94/0.02	1.95/0.07	1.64/0.04	1.91/0.01	1.87/0.01	1.54/0.01
Row 31	31	1000-1300	9.12/0.01	1.96/7.07	1.72/0.07	8.25/0.01	1.84/0.06	1.54/0.01	1.74/0.01	1.34/0.01	1.47/0.01
Row 31	31	1000-1300	9.12/0.01	1.96/7.07	1.72/0.07	8.25/0.01	1.84/0.06	1.54/0.01	1.74/0.01	1.34/0.01	1.47/0.01
Row 31	31	1300-1400	9.14/0.02	1.96/7.07	1.72/0.07	8.36/0.02	1.91/0.07	1.52/0.02	1.83/0.01	1.85/0.01	1.49/0.01
Row 31	31	1300-1400	9.14/0.02	1.96/7.07	1.72/0.07	8.36/0.02	1.91/0.07	1.52/0.02	1.83/0.01	1.85/0.01	1.49/0.01
Row 31	31	1400-1500	8.65/0.02	1.96/7.07	1.72/0.07	7.88/0.02	1.91/0.07	1.52/0.02	1.83/0.01	1.85/0.01	1.49/0.01
Row 31	31	1400-1500	8.65/0.02	1.96/7.07	1.72/0.07	7.88/0.02	1.91/0.07	1.52/0.02	1.83/0.01	1.85/0.01	1.49/0.01
Row 31	31	1500-1600	8.65/0.02	1.96/7.07	1.72/0.07	7.88/0.02	1.91/0.07	1.52/0.02	1.83/0.01	1.85/0.01	1.49/0.01
Row 31	31	1500-1600	8.65/0.02	1.96/7.07	1.72/0.07	7.88/0.02	1.91/0.07	1.52/0.02	1.83/0.01	1.85/0.01	1.49/0.01
Row 31	31	1700-1800	9.44/0.02	1.96/7.07	1.72/0.07	8.69/0.02	1.91/0.07	1.52/0.02	1.83/0.01	1.85/0.01	1.49/0.01
Row 31	31	1700-1800	9.44/0.02	1.96/7.07	1.72/0.07	8.69/0.02	1.91/0.07	1.52/0.02	1.83/0.01	1.85/0.01	1.49/0.01
Emulsion											
Row 32	32	0000-0100	4.28/0.02	3.87/0.07	2.95/0.04	3.86/0.02	2.79/0.05	2.85/0.03	3.16/0.02	2.88/0.01	2.04/0.01
Row 32	32	0000-0100	4.11/0.02	3.87/0.07	2.95/0.04	4.09/0.02	2.87/0.05	2.89/0.03	3.23/0.01	2.88/0.01	1.71/0.01
Row 32	32	0000-0700	4.93/0.02	3.34/0.06	3.82/0.01	4.12/0.01	3.20/0.06	3.98/0.04	3.45/0.01	3.94/0.06	3.07/0.01
Row 32	32	0000-0700	4.93/0.02	3.34/0.06	3.82/0.01	4.12/0.01	3.20/0.06	3.98/0.04	3.45/0.01	3.94/0.06	3.07/0.01
Row 32	32	0000-1000	5.13/0.02	3.34/0.06	3.82/0.01	4.58/0.02	2.95/0.06	3.98/0.04	3.71/0.01	2.17/0.01	1.44/0.01
Row 32	32	0000-1000	5.13/0.02	3.34/0.06	3.82/0.01	4.58/0.02	2.95/0.06	3.98/0.04	3.71/0.01	2.17/0.01	1.44/0.01
Row 32	32	1000-1100	6.31/0.02	3.34/0.06	3.82/0.01	5.58/0.02	3.30/0.06	2.03/0.04	3.78/0.01	2.11/0.01	1.44/0.01
Row 32	32	1000-1100	6.31/0.02	3.34/0.06	3.82/0.01	5.58/0.02	3.30/0.06	2.03/0.04	3.78/0.01	2.11/0.01	1.44/0.01
Row 32	32	1000-1300	6.63/0.01	3.34/0.06	3.82/0.01	6.00/0.01	2.82/0.01	1.80/0.01	3.88/0.01	1.24/0.01	1.40/0.01
Row 32	32	1000-1300	6.63/0.01	3.34/0.06	3.82/0.01	6.00/0.01	2.82/0.01	1.80/0.01	3.88/0.01	1.24/0.01	1.40/0.01
Row 32	32	1300-1400	7.25/0.02	3.34/0.06	3.82/0.01	7.55/0.02	3.42/0.05	2.42/0.03	4.05/0.01	2.81/0.01	1.71/0.01
Row 32	32	1300-1400	7.25/0.02	3.34/0.06	3.82/0.01	7.55/0.02	3.42/0.05	2.42/0.03	4.05/0.01	2.81/0.01	1.71/0.01
Row 32	32	1400-1500	6.87/0.02	3.34/0.06	3.82/0.01	6.21/0.02	3.78/0.01	3.15/0.01	3.88/0.01	1.70/0.01	1.44/0.01
Row 32	32	1400-1500	6.87/0.02	3.34/0.06	3.82/0.01	6.21/0.02	3.78/0.01	3.15/0.01	3.88/0.01	1.70/0.01	1.44/0.01
Row 32	32	1500-1600	7.46/0.02	3.34/0.06	3.82/0.01	7.18/0.02	3.80/0.01	3.79/0.01	3.10/0.01	2.73/0.01	1.44/0.01
Row 32	32	1500-1600	7.46/0.02	3.34/0.06	3.82/0.01	7.18/0.02	3.80/0.01	3.79/0.01	3.10/0.01	2.73/0.01	1.44/0.01
Row 32	32	1600-1700	6.38/0.02	3.34/0.06	3.82/0.01	6.11/0.02	3.82/0.01	3.22/0.01	3.64/0.01	1.73/0.01	1.33/0.01
Row 32	32	1600-1700	6.38/0.02	3.34/0.06	3.82/0.01	6.11/0.02	3.82/0.01	3.22/0.01	3.64/0.01	1.73/0.01	1.33/0.01
Row 32	32	1700-1800	7.96/0.02	3.34/0.06	3.82/0.01	8.31/0.02	3.90/0.01	3.90/0.01	3.10/0.01	2.91/0.01	1.44/0.01
Row 32	32	1700-1800	7.96/0.02	3.34/0.06	3.82/0.01	8.31/0.02	3.90/0.01	3.90/0.01	3.10/0.01	2.91/0.01	1.44/0.01
Row 32	32	1800-1900	7.18/0.02	3.34/0.06	3.82/0.01	7.31/0.02	3.82/0.01	3.28/0.01	3.62/0.01	1.71/0.01	1.33/0.01
Row 32	32	1800-1900	7.18/0.02	3.34/0.06	3.82/0.01	7.31/0.02	3.82/0.01	3.28/0.01	3.62/0.01	1.71/0.01	1.33/0.01
Row 32	32	2100-2200	2.73/0.02	5.88/0.07	3.97/0.05	2.51/0.02	4.46/0.07	3.64/0.05	2.29/0.01	4.33/0.02	3.54/0.01
Row 32	32	2100-2200	2.73/0.02	5.88/0.07	3.97/0.05	2.51/0.02	4.46/0.07	3.64/0.05	2.29/0.01	4.33/0.02	3.54/0.01
Row 32	32	2300-0000	3.06/0.02	4.87/0.07	3.14/0.05	2.71/0.02	4.31/0.07	2.87/0.05	2.55/0.01	4.06/0.02	2.73/0.01
Row 32	32	2300-0000	3.06/0.02	4.87/0.07	3.14/0.05	2.71/0.02	4.31/0.07	2.87/0.05	2.55/0.01	4.06/0.02	2.73/0.01
Row 32	32	0400-0500	4.01/0.02	3.48/0.07	3.24/0.05	3.22/0.02	3.50/0.05	2.85/0.03	3.16/0.02	3.02/0.01	2.34/0.01
Row 32	32	0400-0500	4.01/0.02	3.48/0.07	3.24/0.05	3.22/0.02	3.50/0.05	2.85/0.03	3.16/0.02	3.02/0.01	2.34/0.01
Row 32	32	0500-0700	5.14/0.02	2.22/0.07	3.15/0.04	4.65/0.01	2.01/0.07	3.02/0.01	3.44/0.01	1.53/0.01	1.37/0.01
Row 32	32	0500-0700	5.14/0.02	2.22/0.07	3.15/0.04	4.65/0.01	2.01/0.07	3.02/0.01	3.44/0.01	1.53/0.01	1.37/0.01
Row 32	32	0700-0800	5.78/0.02	2.22/0.07	3.15/0.04	5.21/0.02	2.00/0.07	3.02/0.01	3.79/0.01	1.46/0.01	1.41/0.01
Row 32	32	0700-0800	5.78/0.02	2.22/0.07	3.15/0.04	5.21/0.02	2.00/0.07	3.02/0.01	3.79/0.01	1.46/0.01	1.41/0.01
Row 32	32	0800-0900	4.40/0.02	3.44/0.07	3.18/0.08	4.88/0.01	3.11/0.07	3.05/0.03	2.29/0.01	3.40/0.01	3.22/0.01
Row 32	32	0800-0900	4.40/0.02	3.44/0.07	3.18/0.08	4.88/0.01	3.11/0.07	3.05/0.03	2.29/0.01	3.40/0.01	3.22/0.01
Row 32	32	0900-1000	5.82/0.02	3.44/0.07	3.18/0.08	5.14/0.02	2.46/0.03	3.75/0.01	3.04/0.01	1.57/0.01	3.21/0.01
Row 32	32	0900-1000	5.82/0.02	3.44/0.07	3.18/0.08	5.14/0.02	2.46/0.03	3.75/0.01	3.04/0.01	1.57/0.01	3.21/0.01
Row 32	32	1000-1100	6.44/0.02	3.44/0.07	3.18/0.08	6.11/0.02	2.46/0.03	3.75/0.01	3.04/0.01	1.57/0.01	3.21/0.01
Row 32	32	1000-1100	6.44/0.02	3.44/0.07	3.18/0.08	6.11/0.02	2.46/0.03	3.75/0.01	3.04/0.01	1.57/0.01	3.21/0.01
Row 32	32	1100-1200	7.41/0.02	3.44/0.07	3.18/0.08	7.24/0.02	3.46/0.01	2.47/0.01	3.82/0.01	1.03/0.01	3.44/0.01
Row 32	32	1100-1200	7.41/0.02	3.44/0.07	3.18/0.08	7.24/0.02	3.46/0.01	2.47/0.01	3.82/0.01	1.03/0.01	3.44/0.01
Row 32	32	1200-1300	8.09/0.02	1.58/0.06	2.58/0.05	8.28/0.02	1.44/0.06	2.17/0.05	3.55/0.01	9.15/0.06	1.38/0.01
Row 32	32	1200-1300	8.09/0.02	1.58/0.06	2.58/0.05	8.28/0.02	1.44/0.06	2.17/0.05	3.55/0.01	9.15/0.06	1.38/0.01
Row 32	32	1300-1400	8.98/0.02	1.70/0.06	2.66/0.05	8.21/0.02	1.56/0.04	2.34/0.05	3.12/0.01	9.75/0.06	1.47/0.01
Row 32	32	1300-1400	8.98/0.02	1.70/0.06	2.66/0.05	8.21/0.02	1.56/0.04	2.34/0.05	3.12/0.01	9.75/0.06	1.47/0.01
Row 32	32	1400-1500	8.63/0.02	1.68/0.06	2.52/0.05	7.81/0.02	1.52/0.06	2.27/0.05	3.00/0.01	9.72/0.06	1.44/0.01
Row 32	32	1400-1500	8.63/0.02	1.68/0.06	2.52/0.05	7.81/0.02	1.52/0.06	2.27/0.05	3.00/0.01	9.72/0.06	1.44/0.01
Row 32	32	1500-1600	8.86/0.02	1.68/0.06	2.52/0.05	8.23/0.02	1.51/0.06	2.28/0.05	3.48/0.01	9.41/0.01	8.88/0.01
Row 32	32	1500-1600	8.86/0.02	1.68/0.06	2.52/0.05	8.23/0.02	1.51/0.06	2.28/0.05	3.48/0.01	9.41/0.01	8.88/0.01
Row 32	32	1600-1700	9.12/0.02	1.68/0.06	2.52/0.05	8.45/0.02	1.52/0.06	2.28/0.05	3.48/0.01	9.41/0.01	8.88/0.01
Row 32	32	1600-1700	9.12/0.02	1.68/0.06	2.52/0.05	8.45/0.02	1.52/0.06	2.28/0.05	3.48/0.01	9.41/0.01	8.88/0.01
Row 32	32	1700-1800	2.44/0.02	5.91/0.07	3.91/0.06	2.71/0.02	6.50/0.07	3.90/0.06	3.90/0.01	5.41/0.01	4.91/0.01
Row 32	32	1700-1800	2.44/0.02	5.91/0.07	3.91/0.06	2.71/0.02	6.50/0.07	3.90/0.06	3.90/0.01	5.41/0.01	4.91/0.01
Row 32	32	2200-2300	4.20/0.02	3.77/0.07	3.18/0.08	4.88/0.01	3.44/0.07	3.53/0.04	4.24/0.01	3.66/0.01	3.25/0.01
Row 32	32	2200-2300	4.20/0.02	3.77/0.07	3.18/0.08	4.88/0.01	3.44/0.07	3.53/0.			

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.1 Emission Factor in 2028.xlsx

Open Yield North 24-hour Emission Factors for

ADAMCO mine Year 2028

Road Name	Road ID	Hour	NO _x Emission					NO _x Emission						
			Monthly Averages					Monthly Averages						
			g/hour/mi	g/day/mi	g/month/mi	g/year/mi	g/year/mi	g/hour/mi	g/day/mi	g/month/mi	g/year/mi	g/year/mi		
Road 34	34	0800-0900	7.14E-02	1.71E-06	4.50E-05	6.41E-07	1.57E-06	4.11E-05	1.00E-01	9.74E-06	5.55E-04	3.54E-01	2.28E-04	
Road 34	34	0900-1000	6.31E-02	1.58E-06	4.00E-05	7.68E-07	1.85E-06	4.58E-05	4.04E-01	1.02E-05	5.60E-04	3.62E-01	2.26E-04	
Road 34	34	1000-1100	1.18E-02	2.95E-07	7.48E-06	1.45E-07	3.48E-07	8.77E-06	2.19E-05	5.60E-06	1.45E-04	3.62E-05	2.26E-05	
Road 34	34	1100-1200	9.01E-03	2.25E-06	4.60E-05	8.21E-07	1.62E-06	4.10E-05	4.77E-01	9.21E-06	5.41E-04	3.27E-01	2.06E-04	
Road 34	34	1200-1300	2.77E-02	6.93E-07	1.80E-06	3.40E-07	8.36E-07	2.09E-05	5.23E-05	1.33E-05	3.33E-04	2.06E-05	1.29E-05	
Road 34	34	1300-1400	1.99E-02	2.15E-06	4.44E-05	6.76E-07	1.37E-06	3.44E-05	4.73E-01	9.38E-06	5.62E-04	3.59E-01	2.30E-04	
Road 34	34	1400-1500	7.29E-02	2.73E-06	5.88E-05	8.66E-07	1.76E-06	4.39E-05	7.71E-01	1.44E-05	5.77E-04	3.60E-01	2.31E-04	
Road 34	34	1500-1600	1.97E-02	4.95E-07	1.03E-06	1.96E-07	4.00E-07	1.01E-05	2.52E-05	6.45E-06	1.62E-04	1.01E-05	6.45E-06	
Road 34	34	1600-1700	6.89E-02	2.64E-06	5.51E-05	6.94E-07	2.08E-06	5.43E-05	4.64E-01	1.32E-05	5.89E-04	3.26E-01	2.05E-04	
Road 34	34	1700-1800	1.35E-02	3.34E-07	8.69E-06	1.65E-07	3.37E-07	8.36E-06	2.09E-05	5.31E-06	1.33E-04	8.36E-05	5.31E-05	
Road 34	34	1800-1900	3.97E-02	1.49E-06	3.50E-05	3.46E-07	7.12E-07	3.59E-05	1.53E-01	1.31E-05	4.44E-04	3.27E-01	2.11E-04	
Road 34	34	1900-2000	1.15E-02	2.87E-07	7.42E-06	1.42E-07	2.92E-07	7.29E-06	1.82E-05	4.60E-06	1.16E-04	7.29E-05	4.60E-05	
Road 34	34	2000-2100	1.47E-02	3.69E-07	1.08E-06	1.51E-07	3.17E-07	7.93E-06	1.95E-05	4.86E-06	1.25E-04	7.93E-05	4.97E-05	
Road 34	34	2100-2200	3.25E-02	6.09E-07	1.59E-06	2.98E-07	6.78E-07	1.72E-05	3.36E-01	7.68E-06	2.00E-04	1.30E-01	8.59E-05	1.82E-04
Road 34	34	2200-2300	1.11E-02	2.79E-07	7.24E-06	1.39E-07	2.90E-07	7.24E-06	1.82E-05	4.60E-06	1.16E-04	7.24E-05	4.60E-05	
Road 34	34	2300-2400	3.65E-02	6.08E-07	1.59E-06	3.24E-07	6.92E-07	1.54E-05	3.76E-01	6.24E-06	1.64E-04	1.31E-01	5.99E-05	1.47E-04
Road 35	35	0800-0900	5.11E-02	1.27E-06	3.26E-05	4.65E-07	1.15E-06	2.92E-05	7.27E-05	1.45E-05	8.65E-04	5.55E-01	3.55E-01	
Road 35	35	0900-1000	1.12E-01	2.80E-06	7.21E-06	1.37E-06	3.38E-06	8.19E-06	4.84E-01	4.70E-07	1.14E-01	7.10E-01	4.71E-01	
Road 35	35	1000-1100	4.02E-01	8.32E-07	2.07E-07	1.13E-07	7.67E-08	1.97E-07	7.62E-01	4.38E-07	1.07E-07	8.85E-01	5.62E-01	
Road 35	35	1100-1200	1.99E-01	4.12E-07	1.03E-06	1.94E-07	1.94E-07	4.79E-06	2.76E-05	6.45E-06	1.62E-04	1.01E-05	6.45E-06	
Road 35	35	1200-1300	3.97E-02	1.49E-06	3.50E-05	3.46E-07	7.12E-07	3.59E-05	1.53E-01	1.31E-05	4.44E-04	3.27E-01	2.11E-04	
Road 35	35	1300-1400	1.15E-02	2.87E-07	7.42E-06	1.42E-07	2.92E-07	7.29E-06	1.82E-05	4.60E-06	1.16E-04	7.29E-05	4.60E-05	
Road 35	35	1400-1500	1.47E-02	3.69E-07	1.08E-06	1.51E-07	3.17E-07	7.93E-06	1.95E-05	4.86E-06	1.25E-04	7.93E-05	4.97E-05	
Road 35	35	1500-1600	3.25E-02	6.09E-07	1.59E-06	2.98E-07	6.78E-07	1.72E-05	3.36E-01	7.68E-06	2.00E-04	1.30E-01	8.59E-05	1.82E-04
Road 35	35	1600-1700	1.11E-02	2.79E-07	7.24E-06	1.39E-07	2.90E-07	7.24E-06	1.82E-05	4.60E-06	1.16E-04	7.24E-05	4.60E-05	
Road 35	35	1700-1800	3.65E-02	6.08E-07	1.59E-06	3.24E-07	6.92E-07	1.54E-05	3.76E-01	6.24E-06	1.64E-04	1.31E-01	5.99E-05	1.47E-04
Road 35	35	1800-1900	5.11E-02	1.27E-06	3.26E-05	4.65E-07	1.15E-06	2.92E-05	7.27E-05	1.45E-05	8.65E-04	5.55E-01	3.55E-01	
Road 35	35	1900-2000	1.12E-01	2.80E-06	7.21E-06	1.37E-06	3.38E-06	8.19E-06	4.84E-01	4.70E-07	1.14E-01	7.10E-01	4.71E-01	
Road 35	35	2000-2100	4.02E-01	8.32E-07	2.07E-07	1.13E-07	7.67E-08	1.97E-07	7.62E-01	4.38E-07	1.07E-07	8.85E-01	5.62E-01	
Road 35	35	2100-2200	1.99E-01	4.12E-07	1.03E-06	1.94E-07	1.94E-07	4.79E-06	2.76E-05	6.45E-06	1.62E-04	1.01E-05	6.45E-06	
Road 35	35	2200-2300	3.97E-02	1.49E-06	3.50E-05	3.46E-07	7.12E-07	3.59E-05	1.53E-01	1.31E-05	4.44E-04	3.27E-01	2.11E-04	
Road 35	35	2300-2400	1.15E-02	2.87E-07	7.42E-06	1.42E-07	2.92E-07	7.29E-06	1.82E-05	4.60E-06	1.16E-04	7.29E-05	4.60E-05	
Road 36	36	0800-0900	1.54E-01	3.81E-06	2.07E-07	4.41E-07	7.70E-07	1.89E-07	4.02E-01	4.17E-07	1.06E-06	7.24E-04	3.46E-07	8.60E-07
Road 36	36	0900-1000	1.54E-01	3.81E-06	2.07E-07	4.41E-07	7.70E-07	1.89E-07	4.02E-01	4.17E-07	1.06E-06	7.24E-04	3.46E-07	8.60E-07
Road 36	36	1000-1100	1.18E-01	2.85E-07	4.07E-07	1.06E-06	4.48E-07	3.57E-07	8.96E-01	8.21E-07	2.00E-06	1.29E-04	7.32E-07	1.76E-06
Road 36	36	1100-1200	1.50E-01	4.09E-07	1.21E-06	3.18E-06	8.43E-07	1.06E-06	7.48E-01	2.48E-06	6.03E-06	8.62E-04	2.20E-05	5.18E-04
Road 36	36	1200-1300	1.42E-01	3.54E-07	9.24E-07	2.42E-06	6.27E-07	7.70E-07	1.90E-06	4.81E-06	1.22E-05	1.60E-03	4.15E-05	1.01E-03
Road 36	36	1300-1400	1.54E-01	3.81E-06	2.07E-07	4.41E-07	7.70E-07	1.89E-07	4.02E-01	4.17E-07	1.06E-06	7.24E-04	3.46E-07	8.60E-07
Road 36	36	1400-1500	1.18E-01	2.85E-07	4.07E-07	1.06E-06	4.48E-07	3.57E-07	8.96E-01	8.21E-07	2.00E-06	1.29E-04	7.32E-07	1.76E-06
Road 36	36	1500-1600	1.50E-01	4.09E-07	1.21E-06	3.18E-06	8.43E-07	1.06E-06	7.48E-01	2.48E-06	6.03E-06	8.62E-04	2.20E-05	5.18E-04
Road 36	36	1600-1700	1.42E-01	3.54E-07	9.24E-07	2.42E-06	6.27E-07	7.70E-07	1.90E-06	4.81E-06	1.22E-05	1.60E-03	4.15E-05	1.01E-03
Road 36	36	1700-1800	1.54E-01	3.81E-06	2.07E-07	4.41E-07	7.70E-07	1.89E-07	4.02E-01	4.17E-07	1.06E-06	7.24E-04	3.46E-07	8.60E-07
Road 36	36	1800-1900	1.18E-01	2.85E-07	4.07E-07	1.06E-06	4.48E-07	3.57E-07	8.96E-01	8.21E-07	2.00E-06	1.29E-04	7.32E-07	1.76E-06
Road 36	36	1900-2000	1.50E-01	4.09E-07	1.21E-06	3.18E-06	8.43E-07	1.06E-06	7.48E-01	2.48E-06	6.03E-06	8.62E-04	2.20E-05	5.18E-04
Road 36	36	2000-2100	1.42E-01	3.54E-07	9.24E-07	2.42E-06	6.27E-07	7.70E-07	1.90E-06	4.81E-06	1.22E-05	1.60E-03	4.15E-05	1.01E-03
Road 36	36	2100-2200	1.54E-01	3.81E-06	2.07E-07	4.41E-07	7.70E-07	1.89E-07	4.02E-01	4.17E-07	1.06E-06	7.24E-04	3.46E-07	8.60E-07
Road 36	36	2200-2300	1.18E-01	2.85E-07	4.07E-07	1.06E-06	4.48E-07	3.57E-07	8.96E-01	8.21E-07	2.00E-06	1.29E-04	7.32E-07	1.76E-06
Road 36	36	2300-2400	1.50E-01	4.09E-07	1.21E-06	3.18E-06	8.43E-07	1.06E-06	7.48E-01	2.48E-06	6.03E-06	8.62E-04	2.20E-05	5.18E-04
Road 37	37	0800-0900	1.54E-01	3.81E-06	2.07E-07	4.41E-07	7.70E-07	1.89E-07	4.02E-01	4.17E-07	1.06E-06	7.24E-04	3.46E-07	8.60E-07
Road 37	37	0900-1000	1.54E-01	3.81E-06	2.07E-07	4.41E-07	7.70E-07	1.89E-07	4.02E-01	4.17E-07	1.06E-06	7.24E-04	3.46E-07	8.60E-07
Road 37	37	1000-1100	1.18E-01	2.85E-07	4.07E-07	1.06E-06	4.48E-07	3.57E-07	8.96E-01	8.21E-07	2.00E-06	1.29E-04	7.32E-07	1.76E-06
Road 37	37	1100-1200	1.50E-01	4.09E-07	1.21E-06	3.18E-06	8.43E-07	1.06E-06	7.48E-01	2.48E-06	6.03E-06	8.62E-04	2.20E-05	5.18E-04
Road 37	37	1200-1300	1.42E-01	3.54E-07	9.24E-07	2.42E-06	6.27E-07	7.70E-07	1.90E-06	4.81E-06	1.22E-05	1.60E-03	4.15E-05	1.01E-03
Road 37	37	1300-1400	1.54E-01	3.81E-06	2.07E-07	4.41E-07	7.70E-07	1.89E-07	4.02E-01	4.17E-07	1.06E-06	7.24E-04	3.46E-07	8.60E-07
Road 37	37	1400-1500	1.18E-01	2.85E-07	4.07E-07	1.06E-06	4.48E-07	3.57E-07	8.96E-01	8.21E-07	2.00E-06	1.29E-04	7.32E-07	1.76E-06
Road 37	37	1500-1600	1.50E-01	4.09E-07	1.21E-06	3.18E-06	8.43E-07	1.06E-06	7.48E-01	2.48E-06	6.03E-06	8.62E-04	2.20E-05	5.18E-04
Road 37	37	1600-1700	1.42E-01	3.54E-07	9.24E-07	2.42E-06	6.27E-07	7.70E-07	1.90E-06	4.81E-06	1.22E-05	1.60E-03	4.15E-05	1.01E-03
Road 37	37	1700-1800	1.54E-01	3.81E-06	2.07E-07	4.41E-07	7.70E-07	1.89E-07	4.02E-01	4.17E-07	1.06E-06	7.24E-04	3.46E-07	8.60E-07
Road 37	37	1800-1900	1.18E-01	2.85E-07	4.07E-07	1.06E-06	4.48E-07	3.57E-07	8.96E-01	8.21E-07	2.00E-06	1.29E-04	7.32E-07	1.76E-06
Road 37	37	1900-2000	1.50E-01	4.09E-07	1.21E-06	3.18E-06	8.43E-07	1.06E-06	7.48E-01	2.48E-06	6.03E-06	8.62E-04	2.20E-05	5.18E-04
Road 37	37	2000-2100	1.42E-01	3.54E-07	9.24E-07	2.42E-06	6.27E-07	7.70E-07	1.90E-06	4.81E-06	1.22E-05	1.60E-03	4.15E-05	1.01E-03
Road 37	37	2100-2200	1.54E-01	3.81E-06	2.07E-07	4.41E-07	7.70E-07	1.89E-07	4.02E-01	4.17E-07	1.06E-06	7.24E-04	3.46E-07	8.60E-07
Road 37	37	2200-2300	1.18E-01	2.85E-07	4.07E-07	1.06E-06	4.48E-07	3.57E-07	8.96E-01	8.21E-07	2.00E-06	1.29E-04	7.32E-07	1.76E-06
Road 37	37	2300-2400	1.50E-01	4.09E-07	1.21E-06	3.18E-06	8.43E-07	1.06E-06	7.48E-01	2.48E-06	6.03E-06	8.62E-04	2.20E-05	5

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.1 Emission Factor in 2028.xlsx

24 Hour Underground Factors for Year 2008													
24 Hour Underground Factors for Year 2008 (continued)													
Node ID	Hour	NO ₂ Emission				NO Emission							
		g/hour/m ³	g/hour/m ³	Monthly/Average	Monthly/Average	g/hour/m ³	g/hour/m ³	Monthly/Average	Monthly/Average				
17	1600-1700	1.326	2.061	4.725	1.181	1.988	4.438	5.765	9.678	2.232	3.396	9.088	2.088
17	1700-1800	9.866	9.866	9.866	9.866	9.866	9.866	9.866	9.866	9.866	9.866	9.866	9.866
17	1800-1900	1.326	2.061	4.725	1.181	1.988	4.438	5.765	9.678	2.232	3.396	9.088	2.088
17	1900-2000	8.882	8.882	8.882	8.882	8.882	8.882	8.882	8.882	8.882	8.882	8.882	8.882
17	2000-2100	1.326	2.061	4.725	1.181	1.988	4.438	5.765	9.678	2.232	3.396	9.088	2.088
17	2100-2200	5.766	6.219	4.438	4.948	5.766	6.219	4.438	4.948	5.766	6.219	4.438	4.948
17	2200-2300	9.866	9.866	9.866	9.866	9.866	9.866	9.866	9.866	9.866	9.866	9.866	9.866
17	2300-2400	1.326	2.061	4.725	1.181	1.988	4.438	5.765	9.678	2.232	3.396	9.088	2.088
18	0000-0100	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
18	0100-0200	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
18	0200-0300	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
18	0300-0400	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
18	0400-0500	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
18	0500-0600	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
18	0600-0700	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
18	0700-0800	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
18	0800-0900	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
18	0900-1000	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
18	1000-1100	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
18	1100-1200	2.005	1.046	0.848	0.848	1.946	1.046	0.848	0.848	1.946	1.046	0.848	0.848
18	1200-1300	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
18	1300-1400	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
18	1400-1500	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
18	1500-1600	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
18	1600-1700	1.732	1.056	0.826	0.848	1.641	1.046	0.733	0.848	1.641	1.046	0.733	0.848
18	1700-1800	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
18	1800-1900	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
18	1900-2000	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
18	2000-2100	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
18	2100-2200	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
18	2200-2300	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
18	2300-2400	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
19	0000-0100	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
19	0100-0200	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
19	0200-0300	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
19	0300-0400	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
19	0400-0500	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
19	0500-0600	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
19	0600-0700	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
19	0700-0800	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
19	0800-0900	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
19	0900-1000	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
19	1000-1100	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
19	1100-1200	2.005	1.046	0.848	0.848	1.946	1.046	0.848	0.848	1.946	1.046	0.848	0.848
19	1200-1300	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
19	1300-1400	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
19	1400-1500	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
19	1500-1600	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
19	1600-1700	1.732	1.056	0.826	0.848	1.641	1.046	0.733	0.848	1.641	1.046	0.733	0.848
19	1700-1800	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
19	1800-1900	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
19	1900-2000	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
19	2000-2100	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
19	2100-2200	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
19	2200-2300	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
19	2300-2400	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
20	0000-0100	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
20	0100-0200	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
20	0200-0300	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
20	0300-0400	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
20	0400-0500	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
20	0500-0600	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
20	0600-0700	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
20	0700-0800	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
20	0800-0900	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
20	0900-1000	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
20	1000-1100	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
20	1100-1200	2.005	1.046	0.848	0.848	1.946	1.046	0.848	0.848	1.946	1.046	0.848	0.848
20	1200-1300	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
20	1300-1400	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
20	1400-1500	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
20	1500-1600	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
20	1600-1700	1.732	1.056	0.826	0.848	1.641	1.046	0.733	0.848	1.641	1.046	0.733	0.848
20	1700-1800	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
20	1800-1900	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
20	1900-2000	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
20	2000-2100	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
20	2100-2200	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
20	2200-2300	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
20	2300-2400	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
21	0000-0100	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
21	0100-0200	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
21	0200-0300	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064
21	0300-0400	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064	1.145	1.367	1.633	1.064

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

[illegible]

\\nad\Appendix 3.5.1 Emission Factor in 2028.xlsx

Open 24 Hour Underground Factors for												
Year 2028												
ARMMO model (hour)												
		NO ₂ Emission						NO _x Emission				
Route Name	Route ID	Hour	MonthlyHours	g/hour	g/hour	g/hour	MonthlyHours	g/hour	g/hour	g/hour	MonthlyHours	g/hour
				g/hour	g/hour	g/hour		g/hour	g/hour	g/hour		g/hour
Route 44	44	0800-0900	4,688.0	1,488.0	1,488.0	1,488.0	4,688.0	1,488.0	1,488.0	1,488.0	4,688.0	1,488.0
Route 44	44	0900-1000	5,608.0	1,869.0	1,869.0	1,869.0	5,608.0	1,869.0	1,869.0	1,869.0	5,608.0	1,869.0
Route 44	44	1100-1200	6,098.0	2,033.0	2,033.0	2,033.0	6,098.0	2,033.0	2,033.0	2,033.0	6,098.0	2,033.0
Route 44	44	1300-1400	5,548.0	1,849.0	1,849.0	1,849.0	5,548.0	1,849.0	1,849.0	1,849.0	5,548.0	1,849.0
Route 44	44	1500-1600	5,598.0	1,863.0	1,863.0	1,863.0	5,598.0	1,863.0	1,863.0	1,863.0	5,598.0	1,863.0
Route 44	44	1800-1900	5,108.0	1,703.0	1,703.0	1,703.0	5,108.0	1,703.0	1,703.0	1,703.0	5,108.0	1,703.0
Route 44	44	1900-2000	5,108.0	1,703.0	1,703.0	1,703.0	5,108.0	1,703.0	1,703.0	1,703.0	5,108.0	1,703.0
Route 44	44	2100-2200	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	2300-2400	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	0000-0100	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	0100-0200	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	0200-0300	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	0300-0400	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	0400-0500	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	0500-0600	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	0600-0700	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	0700-0800	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	0800-0900	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	0900-1000	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	1000-1100	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	1100-1200	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	1200-1300	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	1300-1400	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	1400-1500	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	1500-1600	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	1600-1700	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	1700-1800	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	1800-1900	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	1900-2000	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	2000-2100	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	2100-2200	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	2200-2300	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	2300-2400	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	0000-0100	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	0100-0200	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	0200-0300	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	0300-0400	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	0400-0500	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	0500-0600	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	0600-0700	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	0700-0800	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	0800-0900	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	0900-1000	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	1000-1100	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	1100-1200	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	1200-1300	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	1300-1400	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	1400-1500	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	1500-1600	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	1600-1700	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	1700-1800	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	1800-1900	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	1900-2000	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	2000-2100	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	2100-2200	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	2200-2300	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	2300-2400	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	0000-0100	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	0100-0200	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	0200-0300	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	0300-0400	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	0400-0500	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	0500-0600	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	0600-0700	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	0700-0800	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	0800-0900	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	0900-1000	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	1000-1100	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	1100-1200	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	1200-1300	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	1300-1400	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	1400-1500	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	1500-1600	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	1600-1700	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	1700-1800	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	1800-1900	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	1900-2000	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	2000-2100	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	2100-2200	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	2200-2300	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	2300-2400	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	0000-0100	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	0100-0200	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	0200-0300	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	0300-0400	2,758.0	919.0	919.0	919.0	2,758.0	919.0	919.0	919.0	2,758.0	919.0
Route 44	44	0400-0500	2,758.0	919.0	919.0	919.0	2,758.0	919.0</				

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Open Road 24 Hour Emission Factors for ARMDR model (October)													
Year 2028			NO _x Emission						NO _x Emission				
Road Name	Road ID	Hour	Monthly/Route		Hourly/Route		Monthly/Average		Hourly/Route		Monthly/Average		
Round 47	100001700	1327	0.8137	2.086	0.5165	2.079	2.4705	1.1521	0.3134	2.8801	0.7836	1.2704	
Round 47	100001700	1444	0.6448	1.6395	0.7173	1.4085	0.9396	2.0705	0.4568	3.7406	1.1708	0.3436	1.0701
Round 47	100001700	1559	0.8137	2.086	0.5165	2.079	2.4705	1.1521	0.3134	2.8801	0.7836	1.2704	
Round 47	100002000	2444	0.5165	1.3547	0.7173	1.2182	0.7307	1.5571	0.2170	6.7890	1.4401	0.1954	0.6005
Round 47	100002000	2373	0.6448	1.6395	0.7173	1.4085	0.9396	2.0705	0.4568	3.7406	1.1708	0.3436	1.0701
Round 47	100002000	2500	0.8137	2.086	0.5165	2.079	2.4705	1.1521	0.3134	2.8801	0.7836	1.2704	
Round 47	220022000	2021	0.6171	1.5717	0.6506	1.7882	1.8897	0.7407	0.4461	1.5206	0.7693	0.2170	0.3134
Round 48	100002400	1444	0.6448	1.6395	0.7173	1.4085	0.9396	2.0705	0.4568	3.7406	1.1708	0.3436	1.0701
Round 48	100002400	0954	0.5165	1.3547	0.7173	1.2182	0.7307	1.5571	0.2170	6.7890	1.4401	0.1954	0.6005
Round 48	100002400	1559	0.8137	2.086	0.5165	2.079	2.4705	1.1521	0.3134	2.8801	0.7836	1.2704	
Round 48	030003000	1454	0.5165	1.3547	0.7173	1.2182	0.7307	1.5571	0.2170	6.7890	1.4401	0.1954	0.6005
Round 48	030003000	1548	0.6448	1.6395	0.7173	1.4085	0.9396	2.0705	0.4568	3.7406	1.1708	0.3436	1.0701
Round 48	030003000	1642	0.8137	2.086	0.5165	2.079	2.4705	1.1521	0.3134	2.8801	0.7836	1.2704	
Round 48	070004000	1136	0.5165	1.3547	0.7173	1.2182	0.7307	1.5571	0.2170	6.7890	1.4401	0.1954	0.6005
Round 48	070004000	1230	0.6448	1.6395	0.7173	1.4085	0.9396	2.0705	0.4568	3.7406	1.1708	0.3436	1.0701
Round 48	070004000	1324	0.8137	2.086	0.5165	2.079	2.4705	1.1521	0.3134	2.8801	0.7836	1.2704	
Round 48	080005000	0711	0.6171	2.0236	1.0791	0.6795	1.6203	0.7249	0.9114	1.1149	0.7316	0.3436	1.0701
Round 48	080005000	0805	0.8137	2.086	0.5165	2.079	2.4705	1.1521	0.3134	2.8801	0.7836	1.2704	
Round 48	100001000	0954	0.5165	1.3547	0.7173	1.2182	0.7307	1.5571	0.2170	6.7890	1.4401	0.1954	0.6005
Round 48	100001000	1050	0.6448	1.6395	0.7173	1.4085	0.9396	2.0705	0.4568	3.7406	1.1708	0.3436	1.0701
Round 48	100001000	1144	0.8137	2.086	0.5165	2.079	2.4705	1.1521	0.3134	2.8801	0.7836	1.2704	
Round 48	130001400	1755	0.5165	1.3547	0.7173	1.2182	0.7307	1.5571	0.2170	6.7890	1.4401	0.1954	0.6005
Round 48	130001400	1850	0.6448	1.6395	0.7173	1.4085	0.9396	2.0705	0.4568	3.7406	1.1708	0.3436	1.0701
Round 48	130001400	1944	0.8137	2.086	0.5165	2.079	2.4705	1.1521	0.3134	2.8801	0.7836	1.2704	
Round 48	130001400	2038	0.5165	1.3547	0.7173	1.2182	0.7307	1.5571	0.2170	6.7890	1.4401	0.1954	0.6005
Round 48	130001400	2132	0.6448	1.6395	0.7173	1.4085	0.9396	2.0705	0.4568	3.7406	1.1708	0.3436	1.0701
Round 48	130001400	2226	0.8137	2.086	0.5165	2.079	2.4705	1.1521	0.3134	2.8801	0.7836	1.2704	
Round 48	130001400	2320	0.5165	1.3547	0.7173	1.2182	0.7307	1.5571	0.2170	6.7890	1.4401	0.1954	0.6005
Round 48	130001400	2414	0.6448	1.6395	0.7173	1.4085	0.9396	2.0705	0.4568	3.7406	1.1708	0.3436	1.0701
Round 48	130001400	2508	0.8137	2.086	0.5165	2.079	2.4705	1.1521	0.3134	2.8801	0.7836	1.2704	
Round 48	130001400	2602	0.5165	1.3547	0.7173	1.2182	0.7307	1.5571	0.2170	6.7890	1.4401	0.1954	0.6005
Round 48	130001400	2696	0.6448	1.6395	0.7173	1.4085	0.9396	2.0705	0.4568	3.7406	1.1708	0.3436	1.0701
Round 48	130001400	2790	0.8137	2.086	0.5165	2.079	2.4705	1.1521	0.3134	2.8801	0.7836	1.2704	
Round 48	130001400	2884	0.5165	1.3547	0.7173	1.2182	0.7307	1.5571	0.2170	6.7890	1.4401	0.1954	0.6005
Round 48	130001400	2978	0.6448	1.6395	0.7173	1.4085	0.9396	2.0705	0.4568	3.7406	1.1708	0.3436	1.0701
Round 48	130001400	3072	0.8137	2.086	0.5165	2.079	2.4705	1.1521	0.3134	2.8801	0.7836	1.2704	
Round 48	130001400	3166	0.5165	1.3547	0.7173	1.2182	0.7307	1.5571	0.2170	6.7890	1.4401	0.1954	0.6005
Round 48	130001400	3260	0.6448	1.6395	0.7173	1.4085	0.9396	2.0705	0.4568	3.7406	1.1708	0.3436	1.0701
Round 48	130001400	3354	0.8137	2.086	0.5165	2.079	2.4705	1.1521	0.3134	2.8801	0.7836	1.2704	
Round 48	130001400	3448	0.5165	1.3547	0.7173	1.2182	0.7307	1.5571	0.2170	6.7890	1.4401	0.1954	0.6005
Round 48	130001400	3542	0.6448	1.6395	0.7173	1.4085	0.9396	2.0705	0.4568	3.7406	1.1708	0.3436	1.0701
Round 48	130001400	3636	0.8137	2.086	0.5165	2.079	2.4705	1.1521	0.3134	2.8801	0.7836	1.2704	
Round 48	130001400	3730	0.5165	1.3547	0.7173	1.2182	0.7307	1.5571	0.2170	6.7890	1.4401	0.1954	0.6005
Round 48	130001400	3824	0.6448	1.6395	0.7173	1.4085	0.9396	2.0705	0.4568	3.7406	1.1708	0.3436	1.0701
Round 48	130001400	3918	0.8137	2.086	0.5165	2.079	2.4705	1.1521	0.3134	2.8801	0.7836	1.2704	
Round 48	130001400	4012	0.5165	1.3547	0.7173	1.2182	0.7307	1.5571	0.2170	6.7890	1.4401	0.1954	0.6005
Round 48	130001400	4106	0.6448	1.6395	0.7173	1.4085	0.9396	2.0705	0.4568	3.7406	1.1708	0.3436	1.0701
Round 48	130001400	4200	0.8137	2.086	0.5165	2.079	2.4705	1.1521	0.3134	2.8801	0.7836	1.2704	
Round 48	130001400	4294	0.5165	1.3547	0.7173	1.2182	0.7307	1.5571	0.2170	6.7890	1.4401	0.1954	0.6005
Round 48	130001400	4388	0.6448	1.6395	0.7173	1.4085	0.9396	2.0705	0.4568	3.7406	1.1708	0.3436	1.0701
Round 48	130001400	4482	0.8137	2.086	0.5165	2.079	2.4705	1.1521	0.3134	2.8801	0.7836	1.2704	
Round 48	130001400	4576	0.5165	1.3547	0.7173	1.2182	0.7307	1.5571	0.2170	6.7890	1.4401	0.1954	0.6005
Round 48	130001400	4670	0.6448	1.6395	0.7173	1.4085	0.9396	2.0705	0.4568	3.7406	1.1708	0.3436	1.0701
Round 48	130001400	4764	0.8137	2.086	0.5165	2.079	2.4705	1.1521	0.3134	2.8801	0.7836	1.2704	
Round 48	130001400	4858	0.5165	1.3547	0.7173	1.2182	0.7307	1.5571	0.2170	6.7890	1.4401	0.1954	0.6005
Round 48	130001400	4952	0.6448	1.6395	0.7173	1.4085	0.9396	2.0705	0.4568	3.7406	1.1708	0.3436	1.0701
Round 48	130001400	5046	0.8137	2.086	0.5165	2.079	2.4705	1.1521	0.3134	2.8801	0.7836	1.2704	
Round 48	130001400	5140	0.5165	1.3547	0.7173	1.2182	0.7307	1.5571	0.2170	6.7890	1.4401	0.1954	0.6005
Round 48	130001400	5234	0.6448	1.6395	0.7173	1.4085	0.9396	2.0705	0.4568	3.7406	1.1708	0.3436	1.0701
Round 48	130001400	5328	0.8137	2.086	0.5165	2.079	2.4705	1.1521	0.3134	2.8801	0.7836	1.2704	
Round 48	130001400	5422	0.5165	1.3547	0.7173	1.2182	0.7307	1.5571	0.2170	6.7890	1.4401	0.1954	0.6005
Round 48	130001400	5516	0.6448	1.6395	0.7173	1.4085	0.9396	2.0705	0.4568	3.7406	1.1708	0.3436	1.0701
Round 48	130001400	5610	0.8137	2.086	0.5165	2.079	2.4705	1.1521	0.3134	2.8801	0.7836	1.2704	
Round 48	130001400	5704	0.5165	1.3547	0.7173	1.2182	0.7307	1.5571	0.2170	6.7890	1.4401	0.1954	0.6005
Round 48	130001400	5798	0.6448	1.6395	0.7173	1.4085	0.9396	2.0705	0.4568	3.7406	1.1708	0.3436	1.0701
Round 48	130001400	5892	0.8137	2.086	0.5165	2.079	2.4705	1.1521	0.3134	2.8801	0.7836	1.2704	
Round 48	130001400	5986	0.5165	1.3547	0.7173	1.2182	0.7307	1.5571	0.2170	6.7890	1.4401	0.1954	0.6005
Round 48	130001400	6080	0.6448	1.6395	0.7173	1.4085	0.9396	2.0705	0.4568	3.7406	1.1708	0.3436	1.0701
Round 48	130001400	6174	0.8137	2.086	0.5165	2.079	2.4705	1.1521	0.3134	2.8801	0.7836	1.2704	
Round 48	130001400	6268	0.5165	1.3547	0.7173	1.2182	0.7307	1.5571	0.2170	6.7890	1.4401	0.1954	0.6005
Round 48	130001400	6362	0.6448	1.6395	0.7173	1.4085	0.9396	2.0705	0.4568	3.7406	1.1708	0.3436	1.0701
Round 48	130001400	6456	0.8137	2.086	0.5165	2.079	2.4705	1.1521	0.3134	2.8801	0.7836	1.2704	
Round 48	130001400	6550	0.5165	1.3547	0.7173	1.2182	0.7307	1.5571	0.2170	6.7890	1.4401	0.1954	0.6005
Round 48	130001400	6644	0.6448	1.6395	0.7173	1.4085	0.9396	2.0705	0.4568	3.7406	1.1708	0.3436	1.0701
Round 48	130001400	6738	0.8137	2.086	0.5165	2.079	2.4705	1.1521	0.3134	2.8801	0.7836	1.2704	
Round 48	130001400	6832	0.5165	1.3547	0.7173	1.2182	0.7307	1.5571	0.2170	6.7890	1.4401	0.1954	0.6005
Round 48	130001400	6926	0.6448	1.6395	0.7173	1.4085	0.9396	2.0705	0.4568	3.7406	1.1708	0.3436	1.0701
Round 48	130001400	7020	0.8137	2.086	0.5165	2.079	2.4705	1.1521	0.3134	2.8801	0.7836	1.2704	
Round 48	130001400	7114	0.5165	1.3547	0.7173	1.2182	0.7307	1.5571	0.2170	6.7890	1.4401	0.1954	0.6005
Round 48	130001400	7208	0.6448	1.6395	0.7173	1.4085	0.9396	2.0705	0.4568	3.7406	1.1708	0.3436	1.0701
Round 48</													

L:\Secure\Environment Projects\60733229\1.01\Others\Air Model\link\Appendix\Traffic\Open Road\Appendix 3.5.1 Emission Factor in 2028.xlsx

24 Hour Underground Quake											
24 Hour Event Factors for Year 2008											
MMO Model and Hour											
Model	Event ID	Hour	NO Envision				NO Envision				
			Monthly/year	Monthly/year	Monthly/year	Monthly/year	Monthly/year	Monthly/year			
11	0000-0100	5.032	4.812	5.217	5.996	4.242	5.221	5.306	5.282	4.801	5.285
11	0000-0200	4.026	2.212	4.732	4.532	1.996	3.774	3.316	3.446	2.428	2.954
11	0000-0300	4.026	2.212	4.732	4.532	1.996	3.774	3.316	3.446	2.428	2.954
11	0000-0400	5.613	4.642	2.766	5.072	4.142	2.506	3.502	6.726	1.726	5.154
11	0000-0500	5.966	1.746	3.236	5.606	1.186	2.946	3.616	3.046	1.846	3.576
11	0000-0600	6.136	3.396	3.736	3.136	3.636	3.136	3.636	3.136	3.636	3.136
11	0000-0700	6.676	1.672	1.432	6.062	4.622	1.772	3.912	4.456	3.512	3.936
11	0000-0800	6.676	1.672	1.432	6.062	4.622	1.772	3.912	4.456	3.512	3.936
11	0000-0900	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0000-1000	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0000-1100	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0000-1200	8.726	1.866	3.512	6.766	1.746	3.436	4.086	3.936	1.854	4.546
11	0000-1300	7.946	1.866	3.512	6.766	1.746	3.436	4.086	3.936	1.854	4.546
11	0000-1400	7.776	2.406	4.476	6.552	2.726	4.886	4.686	1.566	2.426	4.546
11	0000-1500	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0000-1600	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0000-1700	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0000-1800	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0000-1900	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0000-2000	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0000-2100	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0000-2200	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0000-2300	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0000-2400	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0001-0100	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0001-0200	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0001-0300	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0001-0400	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0001-0500	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0001-0600	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0001-0700	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0001-0800	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0001-0900	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0001-1000	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0001-1100	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0001-1200	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0001-1300	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0001-1400	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0001-1500	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0001-1600	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0001-1700	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0001-1800	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0001-1900	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0001-2000	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0001-2100	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0001-2200	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0001-2300	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0001-2400	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0002-0100	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0002-0200	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0002-0300	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0002-0400	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0002-0500	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0002-0600	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0002-0700	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0002-0800	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0002-0900	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0002-1000	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0002-1100	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0002-1200	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0002-1300	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0002-1400	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0002-1500	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0002-1600	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0002-1700	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0002-1800	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0002-1900	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0002-2000	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0002-2100	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0002-2200	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0002-2300	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0002-2400	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0003-0100	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0003-0200	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0003-0300	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0003-0400	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0003-0500	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0003-0600	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0003-0700	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0003-0800	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0003-0900	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0003-1000	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0003-1100	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0003-1200	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0003-1300	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0003-1400	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0003-1500	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0003-1600	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0003-1700	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0003-1800	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0003-1900	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0003-2000	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0003-2100	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0003-2200	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0003-2300	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0003-2400	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0004-0100	6.782	1.876	1.446	6.116	4.682	1.316	3.876	1.066	1.976	4.546
11	0004-0200	6.782	1.876	1.446	6.116	4.682	1.316	3.876			

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Opening North Road Underpass Quarry

Test 9 North Road Emission Factors for
AR5000 model (Newcastle)

Road ID	Year 2028	Flow Road ID	Hour	NO _x Emission				PM ₁₀ Emission			
				Motorbikes/hour		Motorbikes/hour		Motorbikes/hour		Motorbikes/hour	
				g/hour	tonne/hour	g/hour	tonne/hour	g/hour	tonne/hour	g/hour	tonne/hour
Road 21	21	0000-0100	1,344.02	1,588.07	2,098.06	1,440.02	1,848.07	1,906.06	2,476.01	2,124.06	2,736.01
			2,000.00	2,668.00	3,448.00	2,000.00	2,668.00	2,000.00	2,668.00	2,000.00	2,668.00
Road 22	22	0100-0200	1,038.00	1,245.00	1,612.00	785.00	981.00	1,038.00	1,245.00	1,038.00	1,245.00
			2,000.00	4,388.00	5,670.00	1,075.00	1,343.00	2,454.00	3,067.00	1,151.00	1,438.00
Road 23	23	0200-0300	1,040.00	1,248.00	1,616.00	786.00	984.00	1,040.00	1,248.00	1,040.00	1,248.00
			2,000.00	4,390.00	5,672.00	1,076.00	1,344.00	2,456.00	3,069.00	1,152.00	1,440.00
Road 24	24	0300-0400	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 25	25	0400-0500	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 26	26	0500-0600	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 27	27	0600-0700	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 28	28	0700-0800	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 29	29	0800-0900	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 30	30	0900-1000	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 31	31	1000-1100	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 32	32	1100-1200	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 33	33	1200-1300	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 34	34	1300-1400	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 35	35	1400-1500	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 36	36	1500-1600	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 37	37	1600-1700	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 38	38	1700-1800	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 39	39	1800-1900	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 40	40	1900-2000	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 41	41	2000-2100	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 42	42	2100-2200	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 43	43	2200-2300	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 44	44	2300-2400	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 45	45	2400-2500	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 46	46	2500-2600	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 47	47	2600-2700	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 48	48	2700-2800	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 49	49	2800-2900	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 50	50	2900-3000	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 51	51	3000-3100	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 52	52	3100-3200	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 53	53	3200-3300	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 54	54	3300-3400	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 55	55	3400-3500	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 56	56	3500-3600	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 57	57	3600-3700	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 58	58	3700-3800	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 59	59	3800-3900	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 60	60	3900-4000	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 61	61	4000-4100	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 62	62	4100-4200	1,660.00	2,040.00	2,616.00	1,376.00	1,720.00	2,040.00	2,520.00	1,660.00	2,040.00
			2,000.00	4,400.00	5,680.00	1,080.00	1,360.00	2,460.00	3,080.00	1,160.00	1,440.00
Road 63	63	4200-4300	1,660.00	2,040.00	2,616.00						

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open N North Underway Quarry

Tsing N and SW End Unload Factors for

ARMED (Model Number)

Road	No	Hour	MO, Ensson		Monthly/Average		MO, Ensson		Monthly/Average			
			gbl/mph	gbl/hour	gbl/mph	gbl/hour	gbl/mph	gbl/hour	gbl/mph	gbl/hour		
Road 34	14	0800-0900	7.44E+02	1.83E+06	4.77E+01	8.88E+06	4.38E+01	1.02E+07	2.67E+04	8.82E+01	8.30E+06	7.45E+04
Road 34	14	0900-1000	6.83E+02	1.95E+06	5.38E+01	8.80E+02	4.71E+01	4.38E+01	1.05E+07	2.74E+04	9.66E+02	2.58E+06
Road 34	14	1000-1100	6.83E+02	1.95E+06	5.38E+01	8.80E+02	4.71E+01	4.38E+01	1.05E+07	2.74E+04	9.66E+02	2.58E+06
Road 34	14	1100-1200	7.34E+02	1.83E+06	4.77E+01	8.71E+01	4.38E+01	4.51E+01	1.05E+07	2.74E+04	9.66E+02	2.58E+06
Road 34	14	1200-1300	7.34E+02	1.83E+06	4.77E+01	8.71E+01	4.38E+01	4.51E+01	1.05E+07	2.74E+04	9.66E+02	2.58E+06
Road 34	14	1300-1400	7.70E+02	2.24E+06	1.87E+01	7.21E+01	2.10E+01	5.50E+01	1.44E+07	3.78E+04	8.82E+01	1.10E+07
Road 34	14	1400-1500	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	1500-1600	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	1600-1700	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	1700-1800	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	1800-1900	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	1900-2000	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	2000-2100	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	2100-2200	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	2200-2300	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	2300-2400	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	2400-2500	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	2500-2600	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	2600-2700	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	2700-2800	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	2800-2900	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	2900-3000	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	3000-3100	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	3100-3200	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	3200-3300	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	3300-3400	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	3400-3500	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	3500-3600	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	3600-3700	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	3700-3800	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	3800-3900	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	3900-4000	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	4000-4100	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	4100-4200	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	4200-4300	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	4300-4400	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	4400-4500	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	4500-4600	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	4600-4700	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	4700-4800	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	4800-4900	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	4900-5000	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	5000-5100	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	5100-5200	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	5200-5300	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	5300-5400	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	5400-5500	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	5500-5600	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	5600-5700	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	5700-5800	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	5800-5900	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	5900-6000	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	6000-6100	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	6100-6200	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	6200-6300	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	6300-6400	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	6400-6500	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	6500-6600	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	6600-6700	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	6700-6800	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	6800-6900	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	6900-7000	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	7000-7100	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	7100-7200	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	7200-7300	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	7300-7400	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	7400-7500	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	7500-7600	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	7600-7700	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	7700-7800	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	7800-7900	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	7900-8000	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07	3.92E+04	1.05E+02	1.88E+04
Road 34	14	8000-8100	7.53E+02	2.33E+06	6.84E+01	7.69E+02	2.37E+01	5.60E+01	1.49E+07			

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Opening North Road Underpass Quarry									
TSP N 10th Road Emission Factors for									
ARMMAD Road (New Road)									
Road No	Road Name	Year 2028	Hour	NO _x Emission			NO ₂ Emission		
				g/h/veh	g/h/ha	g/h/ha	g/h/veh	g/h/ha	g/h/ha
Monthly/Average									
Monthly/Average									
Road 27	27 1600-1800	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 1700-1800	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 1800-2000	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 2000-2200	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 2200-2400	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 2400-2600	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 2600-2800	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 2800-3000	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 3000-3200	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 3200-3400	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 3400-3600	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 3600-3800	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 3800-4000	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 4000-4200	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 4200-4400	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 4400-4600	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 4600-4800	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 4800-5000	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 5000-5200	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 5200-5400	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 5400-5600	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 5600-5800	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 5800-6000	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 6000-6200	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 6200-6400	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 6400-6600	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 6600-6800	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 6800-7000	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 7000-7200	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 7200-7400	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 7400-7600	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 7600-7800	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 7800-8000	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 8000-8200	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 8200-8400	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 8400-8600	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 8600-8800	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 8800-9000	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 9000-9200	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 9200-9400	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 9400-9600	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 9600-9800	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 9800-10000	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 10000-10200	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 10200-10400	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 10400-10600	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 10600-10800	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 10800-11000	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 11000-11200	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 11200-11400	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 11400-11600	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 11600-11800	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 11800-12000	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 12000-12200	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 12200-12400	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 12400-12600	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 12600-12800	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 12800-13000	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 13000-13200	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 13200-13400	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 13400-13600	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 13600-13800	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 13800-14000	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 14000-14200	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 14200-14400	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 14400-14600	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 14600-14800	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 14800-15000	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 15000-15200	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 15200-15400	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 15400-15600	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 15600-15800	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 15800-16000	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 16000-16200	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 16200-16400	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 16400-16600	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 16600-16800	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 16800-17000	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 17000-17200	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 17200-17400	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 17400-17600	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 17600-17800	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 17800-18000	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 18000-18200	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 18200-18400	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 18400-18600	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 18600-18800	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 18800-19000	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 19000-19200	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 19200-19400	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 19400-19600	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 19600-19800	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 19800-20000	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 20000-20200	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 20200-20400	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 20400-20600	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 20600-20800	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 20800-21000	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 21000-21200	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 21200-21400	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 21400-21600	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 21600-21800	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 21800-22000	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 22000-22200	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 22200-22400	1.2661	8.4247	2.598	0.601	7.839	2.4418	1.4648	3.746
Road 27	27 22400-22600	1.2661	8.4247						

\\Secure\Environment Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Open Road\Appendix 3.5.1 Emission Factor in 2028.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open N 20th Windward Quarry

Tsing N 20th US Enlistment Factor

ARMED (mod) Roadview

Year 2028

Road Name	Node ID	Hour	Mo, Enmission				Mo, Enmission						
			MonthlyMean	MonthlyMax	MonthlyMin	MonthlyAverage	MonthlyMean	MonthlyMax	MonthlyMin	MonthlyAverage			
Road #1	41	00000000	7.7452	8.8167	7.1486	7.0442	8.4867	1.5388	4.3181	0.0145	8.8167	8.1327	7.5562
		01000000	8.1828	1.6025	0.5238	0.5238	1.4989	0.4898	8.8167	8.1327	0.0145	8.8167	8.1327
Road #1	41	02000000	8.1828	1.6025	0.5238	0.5238	1.4989	0.4898	8.8167	8.1327	0.0145	8.8167	8.1327
		03000000	8.1828	1.6025	0.5238	0.5238	1.4989	0.4898	8.8167	8.1327	0.0145	8.8167	8.1327
Road #1	41	04000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		05000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	06000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		07000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	08000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		09000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	10000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		11000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	12000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		13000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	14000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		15000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	16000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		17000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	18000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		19000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	20000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		21000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	22000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		23000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	24000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		25000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	26000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		27000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	28000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		29000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	30000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		31000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	32000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		33000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	34000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		35000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	36000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		37000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	38000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		39000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	40000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		41000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	42000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		43000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	44000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		45000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	46000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		47000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	48000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		49000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	50000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		51000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	52000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		53000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	54000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		55000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	56000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		57000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	58000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		59000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	60000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		61000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	62000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		63000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	64000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		65000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	66000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		67000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	68000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		69000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	70000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		71000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	72000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		73000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	74000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		75000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	76000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		77000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	78000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		79000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	80000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
		81000000	1.1556	1.4237	1.1388	0.9614	1.1310	1.7338	0.8248	7.6808	0.2045	7.7918	7.0367
Road #1	41	82000000											

\\Secure\Environment Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Open Road\Appendix 3.5.1 Emission Factor in 2028.xlsx

Open Pit Road 24 hour Emission Factors for AEMOD model (lb/shortton)														
		Year 2028		No Emission		No Emission		No Emission		No Emission		No Emission		
Road ID	Route ID	Hour	Month/ton/hour	Month/ton/hour	Month/ton/hour	Month/ton/hour	Month/ton/hour	Month/ton/hour	Month/ton/hour	Month/ton/hour	Month/ton/hour	Month/ton/hour	Month/ton/hour	
Read 31	00000100	5:31:00	5.2112	1.9817	1.748	6.78	1.1778	1.588	3.8113	1.424	1.776	4.831	1.388	1.148
Read 31	00000200	5:41:00	1.497	1.497	1.497	1.497	1.497	1.497	1.497	1.497	1.497	1.497	1.497	1.497
Read 31	00000300	5:51:00	5.2112	1.9817	1.748	6.78	1.1778	1.588	3.8113	1.424	1.776	4.831	1.388	1.148
Read 31	00000400	6:01:00	7.902	1.9817	1.031	6.78	1.1778	1.588	4.772	2.498	6.697	6.321	6.892	6.127
Read 31	00000500	6:10:00	2.1162	1.9817	1.748	6.78	1.1778	1.588	3.8113	1.424	1.776	4.831	1.388	1.148
Read 31	00000600	6:20:00	6.708	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00000700	6:30:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00000800	6:40:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00000900	6:50:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00001000	7:00:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00001100	7:10:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00001200	7:20:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00001300	7:30:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00001400	7:40:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00001500	7:50:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00001600	8:00:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00001700	8:10:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00001800	8:20:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00001900	8:30:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00002000	8:40:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00002100	8:50:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00002200	9:00:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00002300	9:10:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00002400	9:20:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00002500	9:30:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00002600	9:40:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00002700	9:50:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00002800	10:00:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00002900	10:10:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00003000	10:20:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00003100	10:30:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00003200	10:40:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00003300	10:50:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00003400	11:00:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00003500	11:10:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00003600	11:20:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00003700	11:30:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00003800	11:40:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00003900	11:50:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00004000	12:00:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00004100	12:10:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00004200	12:20:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00004300	12:30:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00004400	12:40:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00004500	12:50:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00004600	13:00:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00004700	13:10:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00004800	13:20:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00004900	13:30:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00005000	13:40:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00005100	13:50:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00005200	14:00:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00005300	14:10:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00005400	14:20:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00005500	14:30:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00005600	14:40:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00005700	14:50:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00005800	15:00:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00005900	15:10:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00006000	15:20:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00006100	15:30:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00006200	15:40:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00006300	15:50:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00006400	16:00:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00006500	16:10:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00006600	16:20:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00006700	16:30:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00006800	16:40:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00006900	16:50:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00007000	17:00:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00007100	17:10:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00007200	17:20:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00007300	17:30:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00007400	17:40:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00007500	17:50:00	6.602	1.9817	1.788	6.428	1.1862	1.668	4.446	2.288	1.138	5.115	1.188	1.066
Read 31	00007600	18:00:00	6.602	1.9817	1.788	6.428	1.186							

onment Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.1 Emission Factor in 2028.xlsx

Tying Top 24 Hour Emulsion Quary Open Road 24 Hour Emulsion Quary														Year 2008		No Emulsion				No Emulsion			
ROAD NAME		ROAD NO.		MONTHLYAVERAGE		MONTHLYAVERAGE		MONTHLYAVERAGE		MONTHLYAVERAGE		MONTHLYAVERAGE		MONTHLYAVERAGE		MONTHLYAVERAGE		MONTHLYAVERAGE					
		Hour		g/min/ton		g/min/ton		g/min/ton		g/min/ton		g/min/ton		g/min/ton		g/min/ton		g/min/ton					
road #4	#4	08000000	4.8812	9.6427	5.9106	4.4882	6.0278	4.4468	5.1388	4.5358	5.0641	5.0213	5.961	5.688									
road #4	#4	09000000	5.4882	9.6427	6.0237	4.6888	6.9388	5.0358	5.3726	4.2486	5.8045	4.4458	5.7434	5.3455									
road #4	#4	10000000	5.4882	9.6427	6.0237	4.6888	6.9388	5.0358	5.3726	4.2486	5.8045	4.4458	5.7434	5.3455									
road #4	#4	11000000	6.1388	8.6147	5.4468	5.8882	6.2347	5.088	5.9388	4.488	5.3988	5.4458	5.8468	5.1468									
road #4	#4	12000000	5.7882	9.6427	6.0237	4.6888	6.9388	5.0358	5.3726	4.2486	5.8045	4.4458	5.7434	5.3455									
road #4	#4	13000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	14000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	15000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	16000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	17000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	18000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	19000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	20000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	21000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	22000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	23000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	24000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	25000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	26000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	27000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	28000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	29000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	30000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	31000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	32000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	33000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	34000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	35000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	36000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	37000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	38000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	39000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	40000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	41000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	42000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	43000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	44000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	45000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	46000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	47000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	48000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	49000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	50000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	51000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	52000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	53000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	54000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	55000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	56000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	57000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	58000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	59000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	60000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	61000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	62000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	63000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	64000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	65000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	66000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	67000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	68000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	69000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	70000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	71000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	72000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	73000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	74000000	5.9388	5.0641	6.8468	5.5882	5.9348	5.1468	5.8088	5.8388	4.2358	5.9348	5.4358	5.9348									
road #4	#4	75000000	5.9388	5.0641	6.8468	5.5882	5.9348																

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Road Northbound Querry														
Typical 7th Hour Envision Factors for ATMSMD Road (Row 10)														
Year 2028														
Road Name	ID	Hour	No. Envision						No. Envision					
			Month/Year/Time		Month/Year/Time		Month/Year/Time		Month/Year/Time		Month/Year/Time		Month/Year/Time	
			g/h/veh	h/h/veh	h/h/veh	h/h/veh	h/h/veh	g/h/veh	h/h/veh	h/h/veh	h/h/veh	h/h/veh	h/h/veh	h/h/veh
Read #7	47	1800-1900	6.63E+02	9.78E+07	2.88E+03	4.31E+02	8.37E+07	2.61E+03	1.31E+03	4.52E+06	1.41E+04	1.05E+03	1.48E+03	1.06E+03
Read #7	47	1900-2000	4.96E+02	7.39E+07	2.15E+03	3.60E+02	6.74E+07	2.07E+03	2.57E+02	3.65E+06	1.21E+04	8.95E+02	2.31E+03	1.53E+03
Read #7	47	2000-2100	4.96E+02	7.39E+07	2.15E+03	3.60E+02	6.74E+07	2.07E+03	2.57E+02	3.65E+06	1.21E+04	8.95E+02	2.31E+03	1.53E+03
Read #7	47	2100-2200	2.89E+02	3.88E+07	1.21E+03	2.52E+02	3.56E+07	1.09E+04	1.74E+02	2.47E+06	7.55E+03	1.54E+03	2.13E+03	1.66E+03
Read #7	47	2200-2300	2.65E+02	3.60E+07	1.10E+03	2.34E+02	3.42E+07	1.02E+04	1.60E+02	2.30E+06	7.10E+03	1.44E+03	2.05E+03	1.60E+03
Read #7	47	2300-2400	2.12E+02	2.93E+07	8.47E+02	1.96E+02	2.87E+07	8.88E+03	1.06E+02	1.73E+06	5.39E+03	1.41E+03	1.52E+03	1.66E+03
Read #7	47	2400-2500	2.12E+02	2.93E+07	8.47E+02	1.96E+02	2.87E+07	8.88E+03	1.06E+02	1.73E+06	5.39E+03	1.41E+03	1.52E+03	1.66E+03
Read #7	47	2500-2600	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	2600-2700	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	2700-2800	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	2800-2900	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	2900-3000	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	3000-3100	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	3100-3200	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	3200-3300	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	3300-3400	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	3400-3500	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	3500-3600	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	3600-3700	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	3700-3800	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	3800-3900	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	3900-4000	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	4000-4100	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	4100-4200	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	4200-4300	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	4300-4400	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	4400-4500	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	4500-4600	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	4600-4700	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	4700-4800	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	4800-4900	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	4900-5000	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	5000-5100	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	5100-5200	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	5200-5300	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	5300-5400	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	5400-5500	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	5500-5600	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	5600-5700	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	5700-5800	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	5800-5900	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	5900-6000	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	6000-6100	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	6100-6200	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	6200-6300	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	6300-6400	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	6400-6500	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	6500-6600	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	6600-6700	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	6700-6800	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	6800-6900	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	6900-7000	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	7000-7100	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	7100-7200	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	7200-7300	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	7300-7400	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	7400-7500	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	7500-7600	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	7600-7700	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	7700-7800	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	7800-7900	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	7900-8000	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	8000-8100	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06	4.13E+03	1.18E+03	1.45E+03	1.45E+03
Read #7	47	8100-8200	1.58E+02	2.16E+07	6.99E+02	1.46E+02	2.08E+07	6.57E+03	1.57E+02	1.24E+06				

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

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Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for 2010-2011

Open Top 24 Hour Emission Factors for AERMOD model (December)											
Year 2028											
Road Name	Road ID	Hour	NO _x Emissions				NO _x Emissions				
			Monthly/Average		Monthly/Average		Monthly/Average		Monthly/Average		
			g/h/m ³	g/hour/m ³	g/h/m ³	g/hour/m ³	g/h/m ³	g/hour/m ³	g/h/m ³	g/hour/m ³	
Read 11	11	0000:01:00	0.536	2.778	1.062	5.976	6.721	9.687	5.782	2.748	9.376
Read 11	11	0100:02:00	0.546	2.749	1.037	6.072	6.767	9.751	5.835	2.766	9.526
Read 11	11	0200:03:00	0.518	2.691	1.006	5.912	6.667	9.602	5.702	2.700	9.266
Read 11	11	0300:04:00	0.922	4.612	1.708	8.577	8.823	15.567	9.787	7.084	12.746
Read 11	11	0400:05:00	0.685	3.425	1.289	6.562	7.392	10.608	6.342	2.944	9.776
Read 11	11	0500:06:00	0.828	4.140	1.576	7.832	8.757	12.967	6.910	3.180	11.116
Read 11	11	0600:07:00	0.939	4.702	1.784	8.827	9.747	13.987	6.770	3.110	11.616
Read 11	11	0700:08:00	0.585	2.926	1.106	6.104	6.856	9.724	5.826	2.804	9.554
Read 11	11	0800:09:00	0.585	2.926	1.106	6.104	6.856	9.724	5.826	2.804	9.554
Read 11	11	0900:10:00	0.955	4.825	1.832	8.908	9.728	13.509	7.138	3.119	12.454
Read 11	11	1000:11:00	0.717	3.585	1.324	6.782	7.517	10.725	6.392	2.954	9.808
Read 11	11	1100:12:00	0.511	2.556	0.968	5.826	6.571	9.444	5.684	2.640	9.166
Read 11	11	1200:13:00	1.311	6.556	2.466	1.206	1.395	5.340	7.846	5.044	9.476
Read 11	11	1300:14:00	0.511	2.556	0.968	5.826	6.571	9.444	5.684	2.640	9.166
Read 11	11	1400:15:00	0.511	2.556	0.968	5.826	6.571	9.444	5.684	2.640	9.166
Read 11	11	1500:16:00	0.511	2.556	0.968	5.826	6.571	9.444	5.684	2.640	9.166
Read 11	11	1600:17:00	0.511	2.556	0.968	5.826	6.571	9.444	5.684	2.640	9.166
Read 11	11	1700:18:00	0.511	2.556	0.968	5.826	6.571	9.444	5.684	2.640	9.166
Read 11	11	1800:19:00	0.511	2.556	0.968	5.826	6.571	9.444	5.684	2.640	9.166
Read 11	11	1900:20:00	0.511	2.556	0.968	5.826	6.571	9.444	5.684	2.640	9.166
Read 11	11	2000:21:00	0.511	2.556	0.968	5.826	6.571	9.444	5.684	2.640	9.166
Read 11	11	2100:22:00	0.511	2.556	0.968	5.826	6.571	9.444	5.684	2.640	9.166
Read 11	11	2200:23:00	0.511	2.556	0.968	5.826	6.571	9.444	5.684	2.640	9.166
Read 11	11	2300:24:00	0.511	2.556	0.968	5.826	6.571	9.444	5.684	2.640	9.166
Read 12	12	0100:02:00	0.578	2.877	1.076	6.058	6.827	9.626	5.811	2.736	9.594
Read 12	12	0200:03:00	0.578	2.877	1.076	6.058	6.827	9.626	5.811	2.736	9.594
Read 12	12	0300:04:00	0.578	2.877	1.076	6.058	6.827	9.626	5.811	2.736	9.594
Read 12	12	0400:05:00	0.578	2.877	1.076	6.058	6.827	9.626	5.811	2.736	9.594
Read 12	12	0500:06:00	0.578	2.877	1.076	6.058	6.827	9.626	5.811	2.736	9.594
Read 12	12	0600:07:00	0.578	2.877	1.076	6.058	6.827	9.626	5.811	2.736	9.594
Read 12	12	0700:08:00	0.578	2.877	1.076	6.058	6.827	9.626	5.811	2.736	9.594
Read 12	12	0800:09:00	0.578	2.877	1.076	6.058	6.827	9.626	5.811	2.736	9.594
Read 12	12	0900:10:00	0.578	2.877	1.076	6.058	6.827	9.626	5.811	2.736	9.594
Read 12	12	1000:11:00	0.578	2.877	1.076	6.058	6.827	9.626	5.811	2.736	9.594
Read 12	12	1100:12:00	0.578	2.877	1.076	6.058	6.827	9.626	5.811	2.736	9.594
Read 12	12	1200:13:00	0.578	2.877	1.076	6.058	6.827	9.626	5.811	2.736	9.594
Read 12	12	1300:14:00	0.578	2.877	1.076	6.058	6.827	9.626	5.811	2.736	9.594
Read 12	12	1400:15:00	0.578	2.877	1.076	6.058	6.827	9.626	5.811	2.736	9.594
Read 12	12	1500:16:00	0.578	2.877	1.076	6.058	6.827	9.626	5.811	2.736	9.594
Read 12	12	1600:17:00	0.578	2.877	1.076	6.058	6.827	9.626	5.811	2.736	9.594
Read 12	12	1700:18:00	0.578	2.877	1.076	6.058	6.827	9.626	5.811	2.736	9.594
Read 12	12	1800:19:00	0.578	2.877	1.076	6.058	6.827	9.626	5.811	2.736	9.594
Read 12	12	1900:20:00	0.578	2.877	1.076	6.058	6.827	9.626	5.811	2.736	9.594
Read 12	12	2000:21:00	0.578	2.877	1.076	6.058	6.827	9.626	5.811	2.736	9.594
Read 12	12	2100:22:00	0.578	2.877	1.076	6.058	6.827	9.626	5.811	2.736	9.594
Read 12	12	2200:23:00	0.578	2.877	1.076	6.058	6.827	9.626	5.811	2.736	9.594
Read 12	12	2300:24:00	0.578	2.877	1.076	6.058	6.827	9.626	5.811	2.736	9.594
Read 13	13	0000:01:00	0.595	2.976	1.109	6.186	6.959	9.776	5.894	2.784	9.676
Read 13	13	0100:02:00	0.605	2.947	1.084	6.282	7.001	9.839	5.947	2.810	9.726
Read 13	13	0200:03:00	0.577	2.887	1.069	5.992	6.702	9.599	5.762	2.742	9.346
Read 13	13	0300:04:00	0.940	4.700	1.780	8.840	9.760	13.960	6.780	3.120	11.600
Read 13	13	0400:05:00	0.693	3.465	1.293	6.615	7.445	10.665	6.375	2.965	9.815
Read 13	13	0500:06:00	0.836	4.180	1.580	7.880	8.800	12.980	6.930	3.190	11.130
Read 13	13	0600:07:00	0.947	4.735	1.785	8.895	9.815	13.995	6.795	3.125	11.635
Read 13	13	0700:08:00	0.595	2.976	1.109	6.186	6.959	9.776	5.894	2.784	9.676
Read 13	13	0800:09:00	0.595	2.976	1.109	6.186	6.959	9.776	5.894	2.784	9.676
Read 13	13	0900:10:00	0.967	4.835	1.845	9.015	9.835	14.015	7.155	3.125	12.475
Read 13	13	1000:11:00	0.720	3.600	1.330	6.810	7.540	10.760	6.400	2.960	9.840
Read 13	13	1100:12:00	0.520	2.600	0.970	5.850	6.600	9.450	5.690	2.650	9.180
Read 13	13	1200:13:00	1.320	6.600	2.470	1.210	1.400	5.350	7.850	5.050	9.480
Read 13	13	1300:14:00	0.520	2.600	0.970	5.850	6.600	9.450	5.690	2.650	9.180
Read 13	13	1400:15:00	0.520	2.600	0.970	5.850	6.600	9.450	5.690	2.650	9.180
Read 13	13	1500:16:00	0.520	2.600	0.970	5.850	6.600	9.450	5.690	2.650	9.180
Read 13	13	1600:17:00	0.520	2.600	0.970	5.850	6.600	9.450	5.690	2.650	9.180
Read 13	13	1700:18:00	0.520	2.600	0.970	5.850	6.600	9.450	5.690	2.650	9.180
Read 13	13	1800:19:00	0.520	2.600	0.970	5.850	6.600	9.450	5.690	2.650	9.180
Read 13	13	1900:20:00	0.520	2.600	0.970	5.850	6.600	9.450	5.690	2.650	9.180
Read 13	13	2000:21:00	0.520	2.600	0.970	5.850	6.600	9.450	5.690	2.650	9.180
Read 13	13	2100:22:00	0.520	2.600	0.970	5.850	6.600	9.450	5.690	2.650	9.180
Read 13	13	2200:23:00	0.520	2.600	0.970	5.850	6.600	9.450	5.690	2.650	9.180
Read 13	13	2300:24:00	0.520	2.600	0.970	5.850	6.600	9.450	5.690	2.650	9.180
Read 14	14	0100:02:00	0.610	3.050	1.130	6.300	7.070	9.890	5.960	2.820	9.740
Read 14	14	0200:03:00	0.620	3.020	1.100	6.400	7.120	9.940	6.010	2.850	9.790
Read 14	14	0300:04:00	0.590	2.950	1.070	6.100	6.870	9.690	5.820	2.760	9.540
Read 14	14	0400:05:00	0.950	4.750	1.770	8.800	9.720	13.920	6.760	3.100	11.560
Read 14	14	0500:06:00	0.700	3.500	1.300	6.800	7.520	10.700	6.400	2.900	9.800
Read 14	14	0600:07:00	0.840	4.200	1.500	7.900	8.820	12.900	6.900	3.100	11.100
Read 14	14	0700:08:00	0.950	4.750	1.770	8.800	9.720	13.920	6.760	3.100	11.560
Read 14	14	0800:09:00	0.590	2.950	1.070	6.100	6.870	9.690	5.820	2.760	9.540
Read 14	14	0900:10:00	0.590	2.950	1.070	6.100	6.870	9.690	5.820	2.760	9.540
Read 14	14	1000:11:00	0.950	4.750	1.770	8.800	9.720	13.920	6.760	3.100	11.560
Read 14	14	1100:12:00	0.700	3.500	1.300	6.800	7.520	10.700	6.400	2.900	9.800
Read 14	14	1200:13:00	1.350	6.750	2.500	1.250	1.450	5.400	7.900	5.100	9.500
Read 14	14	1300:14:00	0.590	2.950	1.070	6.100	6.870	9.690	5.820	2.760	9.540
Read 14	14	1400:15:00	0.590	2.950	1.070	6.100	6.870	9.690	5.820	2.760	9.540
Read 14	14	1500:16:00	0.590	2.950	1.070	6.100	6.870	9.690	5.820	2.760	9.540
Read 14	14	1600:17:00	0.590	2.950	1.070	6.100	6.870	9.690	5.820	2.760	9.540
Read 14	14	1700:18:00	0.590	2.950	1.070	6.100	6.870	9.690	5.820	2.760	9.540
Read 14	14	1800:19:00	0.590	2.950	1.070	6.100	6.870	9.690	5.820	2.760	9.540
Read 14	14	1900:20:00	0.590	2.950	1.070	6.100	6.870	9.690	5.820	2.760	9.540
Read 14	14	2000:21:00	0.590	2.950	1.070	6.100	6.870	9.690	5.820	2.760	9.540
Read 14	14	2100:22:00	0.590	2.950	1.070	6.100	6.870	9.690	5.820	2.760	9.540
Read 14	14	2200:23:00	0.590	2.950	1.070	6.100	6.870	9.690	5.820	2.760	9.540
Read 14	14	2300:24:00	0.590	2.950	1.070	6.100	6.870	9.690	5.820	2.760	9.540

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Bay North Urban Development Quarry													Open Bay North Urban Development Quarry													
Open Road 24 hour Emission Factors													Open Road 24 hour Emission Factors													
for AERMOD model (Summary)													for AERMOD model (Summary)													
Road Name	Road ID	Hour	NO _x Emission			NO ₂ Emission			PM ₁₀ Emission			PM _{2.5} Emission			Road Name	Road ID	Hour	NO _x Emission			NO ₂ Emission			PM ₁₀ Emission		
			g/km/h/veh	g/m ² /h	tonnes/year	g/km/h/veh	g/m ² /h	tonnes/year	g/km/h/veh	g/m ² /h	tonnes/year	g/km/h/veh	g/m ² /h	tonnes/year				g/km/h/veh	g/m ² /h	tonnes/year	g/km/h/veh	g/m ² /h	tonnes/year	g/km/h/veh	g/m ² /h	tonnes/year
Road 6	6	1800-1700	7.05E-02	1.49E-06	1.25E-02	4.88E-01	9.15E-06	9.40E-02	2.00E-02	3.86E-07	3.86E-03	2.24E-02	4.19E-07	4.31E-03	Road 9	9	1200-1	1.10E-02	2.11E-06	1.75E-02	6.20E-01	1.21E-05	1.21E-05	7.11E-03	1.30E-03	
Road 6	6	1700-1800	6.08E-02	1.25E-06	1.04E-02	3.35E-01	8.54E-06	8.20E-02	1.86E-02	3.77E-07	3.77E-03	2.24E-02	4.19E-07	4.31E-03	Road 9	9	1400-1	1.10E-02	2.11E-06	1.75E-02	6.20E-01	1.21E-05	1.21E-05	7.11E-03	1.30E-03	
Road 6	6	1800-1900	4.67E-02	1.02E-06	1.04E-02	3.82E-01	8.31E-06	8.54E-02	1.64E-02	3.57E-07	3.67E-03	1.79E-02	3.80E-07	3.99E-03	Road 9	9	1600-1	1.10E-02	2.11E-06	1.75E-02	6.20E-01	1.21E-05	1.21E-05	7.11E-03	1.30E-03	
Road 6	6	1900-2000	1.96E-02	4.76E-07	6.75E-03	1.55E-01	6.60E-06	6.58E-02	1.44E-02	2.80E-07	2.88E-03	1.79E-02	3.80E-07	3.99E-03	Road 9	9	1800-1	1.10E-02	2.11E-06	1.75E-02	6.20E-01	1.21E-05	1.21E-05	7.11E-03	1.30E-03	
Road 6	6	2000-2100	2.35E-02	5.76E-07	7.56E-03	1.85E-01	7.85E-06	7.88E-02	1.70E-02	3.38E-07	3.46E-03	1.79E-02	3.80E-07	3.99E-03	Road 9	9	2000-1	1.10E-02	2.11E-06	1.75E-02	6.20E-01	1.21E-05	1.21E-05	7.11E-03	1.30E-03	
Road 6	6	2100-2200	3.49E-02	6.43E-07	4.76E-03	2.51E-01	4.65E-06	4.78E-02	2.47E-02	1.95E-07	2.01E-03	1.60E-02	2.12E-07	2.18E-03	Road 9	9	2100-1	1.10E-02	2.11E-06	1.75E-02	6.20E-01	1.21E-05	1.21E-05	7.11E-03	1.30E-03	
Road 6	6	2200-2300	3.40E-02	4.36E-07	4.48E-03	3.56E-01	4.57E-06	4.70E-02	1.52E-02	1.55E-07	2.01E-03	1.65E-02	2.16E-07	2.18E-03	Road 9	9	2300-1	1.10E-02	2.11E-06	1.75E-02	6.20E-01	1.21E-05	1.21E-05	7.11E-03	1.30E-03	
Road 7	7	0000-0100	3.11E-02	6.11E-07	1.29E-02	4.39E-01	8.34E-06	8.47E-02	1.98E-02	3.97E-07	3.97E-03	2.24E-02	4.19E-07	4.31E-03	Road 9	9	2400-1	1.10E-02	2.11E-06	1.75E-02	6.20E-01	1.21E-05	1.21E-05	7.11E-03	1.30E-03	
Road 7	7	0100-0200	1.54E-02	3.45E-08	1.06E-02	1.60E-06	4.46E-06	4.47E-06	9.41E-03	4.56E-08	1.95E-02	1.02E-02	4.96E-06	1.12E-04	Road 9	9	2500-1	1.10E-02	2.11E-06	1.75E-02	6.20E-01	1.21E-05	1.21E-05	7.11E-03	1.30E-03	
Road 7	7	0200-0300	1.69E-02	3.51E-08	2.27E-04	2.21E-01	6.59E-07	2.58E-03	9.75E-03	8.07E-08	1.31E-04	1.06E-02	3.34E-06	1.43E-04	Road 9	9	2600-1	1.10E-02	2.11E-06	1.75E-02	6.20E-01	1.21E-05	1.21E-05	7.11E-03	1.30E-03	
Road 7	7	0300-0400	1.85E-02	4.42E-08	1.87E-04	2.28E-01	5.22E-07	2.25E-03	1.01E-02	2.24E-08	9.96E-05	1.20E-02	3.25E-06	1.48E-04	Road 9	9	2700-1	1.10E-02	2.11E-06	1.75E-02	6.20E-01	1.21E-05	1.21E-05	7.11E-03	1.30E-03	
Road 7	7	0400-0500	2.01E-02	4.81E-08	2.24E-04	2.34E-01	4.52E-07	2.42E-03	1.16E-02	2.71E-08	1.13E-04	1.24E-02	3.42E-06	1.56E-04	Road 9	9	2800-1	1.10E-02	2.11E-06	1.75E-02	6.20E-01	1.21E-05	1.21E-05	7.11E-03	1.30E-03	
Road 7	7	0500-0600	2.20E-02	5.13E-08	2.44E-04	2.37E-01	8.00E-07	3.42E-03	1.05E-02	3.57E-08	1.23E-04	1.35E-02	3.88E-06	1.66E-04	Road 9	9	2900-1	1.10E-02	2.11E-06	1.75E-02	6.20E-01	1.21E-05	1.21E-05	7.11E-03	1.30E-03	
Road 7	7	0600-0700	2.34E-02	5.45E-08	2.70E-04	2.39E-01	1.71E-06	3.46E-03	1.10E-02	3.84E-08	1.34E-04	1.46E-02	4.09E-06	1.79E-04	Road 9	9	3000-1	1.10E-02	2.11E-06	1.75E-02	6.20E-01	1.21E-05	1.21E-05	7.11E-03	1.30E-03	
Road 7	7	0700-0800	2.31E-02	5.47E-07	1.43E-03	2.43E-01	3.52E-06	1.51E-02	1.05E-02	4.17E-08	1.67E-04	1.59E-02	4.17E-07	2.18E-04	Road 9	9	3100-1	1.10E-02	2.11E-06	1.75E-02	6.20E-01	1.21E-05	1.21E-05	7.11E-03	1.30E-03	
Road 7	7	0800-0900	2.18E-02	1.63E-07	1.56E-03	2.18E-01	3.61E-06	1.55E-02	1.01E-02	1.69E-07	7.21E-04	1.50E-02	4.18E-07	2.18E-04	Road 9	9	3200-1	1.10E-02	2.11E-06	1.75E-02	6.20E-01	1.21E-05	1.21E-05	7.11E-03	1.30E-03	
Road 7	7	0900-1000	2.44E-02	1.81E-07	1.70E-03	2.29E-01	4.04E-06	1.69E-02	1.06E-02	2.18E-07	8.37E-04	1.61E-02	4.19E-07	2.18E-04	Road 9	9	3300-1	1.10E-02	2.11E-06	1.75E-02	6.20E-01	1.21E-05	1.21E-05	7.11E-03	1.30E-03	
Road 7	7	1000-1100	2.68E-02	2.02E-07	1.29E-03	2.45E-01	2.76E-06	1.88E-02	1.17E-02	3.11E-07	9.62E-04	1.72E-02	4.41E-07	6.11E-04	Road 9	9	3400-1	1.10E-02	2.11E-06	1.75E-02	6.20E-01	1.21E-05	1.21E-05	7.11E-03	1.30E-03	
Road 7	7	1100-1200	2.56E-02	2.73E-07	2.17E-03	2.46E-01	2.63E-06	1.72E-02	1.13E-02	1.23E-07	5.28E-04	1.75E-02	4.33E-07	6.71E-04	Road 9	9	3500-1	1.10E-02	2.11E-06	1.75E-02	6.20E-01	1.21E-05	1.21E-05	7.11E-03	1.30E-03	
Road 7	7	1200-1300	1.79E-02	1.02E-07	1.15E-03	2.97E-01	3.94E-06	1.69E-02	1.04E-02	1.26E-07	8.37E-04	1.61E-02	4.19E-07	2.18E-04	Road 9	9	3600-1	1.10E-02	2.11E-06	1.75E-02	6.20E-01	1.21E-05	1.21E-05	7.11E-03	1.30E-03	
Road 7	7	1300-1400	1.79E-02	1.18E-07	1.22E-03	2.97E-01	3.99E-06	1.71E-02	1.04E-02	1.96E-07	8.41E-04	1.59E-02	2.13E-07	9.14E-04	Road 9	9	3700-1	1.10E-02	2.11E-06	1.75E-02	6.20E-01	1.21E-05	1.21E-05	7.11E-03	1.30E-03	
Road 7	7	1400-1500	3.62E-02	5.49E-07	2.35E-03	2.93E-01	4.22E-06	1.80E-02	1.45E-02	2.09E-07	8.95E-04	1.58E-02	2.27E-07	9.73E-04	Road 9	9	3800-1	1.10E-02	2.11E-06	1.75E-02	6.20E-01	1.21E-05	1.21E-05	7.11E-03	1.30E-03	
Road 7	7	1500-1600	3.07E-02	4.50E-07	2.13E-03	2.88E-01	4.23E-06	1.81E-02	1.40E-02	2.06E-07	8.82E-04	1.52E-02	2.24E-07	9.58E-04	Road 9	9	3900-1	1.10E-02	2.11E-06	1.75E-02	6.20E-01	1.21E-05	1.21E-05	7.11E-03	1.30E-03	
Road 7	7	1600-1700	3.74E-02	5.84E-07	2.55E-03	3.29E-01	4.69E-06	1.99E-02	1.48E-02	2.09E-07	9.34E-04	1.61E-02	2.29E-07	1.09E-03	Road 9	9	4000-1	1.10E-02	2.11E-06	1.75E-02	6.20E-01	1.21E-05	1.21E-05	7.11E-03	1.30E-03	
Road 7	7	1700-1800	2.87E-02	4.18E-07	2.20E-03	2.65E-01	4.78E-06	2.05E-02	1.17E-02	2.31E-07	8.95E-04	1.64E-02	2.53E-07	1.08E-03	Road 9	9	4100-1	1.10E-02	2.11E-06	1.75E-02	6.20E-01	1.21E-05	1.21E-05	7.11E-03	1.30E-03	
Road 7	7	1800-1900	2.23E-02	4.46E-07	1.91E-03	2.34E-01	4.69E-06	2.00E-02	1.29E-02	2.34E-07	1.00E-03	1.72E-02	4.54E-07	1.09E-03	Road 9	9	4200-1	1.10E-02	2.11E-06	1.75E-02	6.20E-01	1.21E-05	1.21E-05	7.11E-03	1.30E-03	
Road 7	7	1900-2000	2.01E-02	3.20E-07	1.37E-03	2.45E-01	3.51E-06	1.93E-02	1.21E-02	3.92E-07	8.23E-04	1.52E-02	3.09E-07	9.94E-04	Road 9	9	4300-1	1.10E-02	2.11E-06	1.75E-02	6.20E-01	1.21E-05	1.21E-05	7.11E-03	1.30E-03	
Road 7	7	2000-2100	2.01E-02	3.50E-07	1.07E-03	2.61E-01	3.24E-06	1.98E-02	1.24E-02	3.51E-07	6.59E-04	1.53E-02	1.67E-07	1.16E-04	Road 9	9	4400-1	1.10E-02	2.11E-06	1.75E-02	6.20E-01	1.21E-05	1.21E-05	7.11E-03	1.30E-03	
Road 7	7	2100-2200	1.79E-02	1.27E-07	1.48E-04	3.89E-01	2.95E-06	1.26E-02	1.01E-02	1.35E-07	5.80E-04	1.19E-02	1.47E-07	8.40E-04	Road 9	9	4500-1	1.10E-02	2.11E-06	1.75E-02	6.20E-01	1.21E-05	1.21E-05	7.11E-03	1.30E-03	
Road 7	7	2200-2300	1.78E-02	1.37E-07	1.48E-04	3.49E-01	3.06E-06	1.28E-02	1.01E-02	1.38E-07	5.84E-04	1.25E-02	1.50E-07	8.40E-04	Road 9	9	4600-1	1.10E-02	2.11E-06	1.75E-02	6.20E-01	1.21E-05	1.21E-05	7.11E-03	1.30E-03	
Road 7	7	2300-2400	1.91E-02	1.17E-07	1.37E-04	3.79E-01	2.92E-06	1.30E-02	1.07E-02	1.06E-07	4.52E-04	1.29E-02	1.50E-07	8.40E-04	Road 9	9	4700-1	1.10E-02	2.11E-06	1.75E-02	6.20E-01	1.21E-05	1.21E-05	7.11E-03	1.30E-03	
Road 8	8	0000-0100	3.11E-02	6.11E-07	1.29E-02	4.39E-01	8.00E-06	8.00E-02	2.07E-02	3.71E-08	1.60E-04	2.90E-02	3.36E-04	7.92E-04	Road 9	9	4800-1	1.10E-02	2.11E-06	1.75E-02	6.20E-01	1.21E-05	1.21E-05	7.11E-03	1.30E-03	
Road 8	8	0100-0200	1.34E-02	1.27E-07	1.27E-04	4.99E-01	2.63E-07	1.56E-08	1.08E-02	1.42E-08	1.69E-04	2.91E-02	3.10E-04	1.14E-04	Road 9	9	4900-1	1.10E-02	2.11E-06	1.75E-02	6.20E-01	1.21E-05	1.21E-05	7.11E-03	1.30E-03	
Road 8	8	0200-0300	3.99E-02	3.32E-08	3.35E-03	9.05E-01	1.96E-07	1.45E-08	2.66E-02	1.05E-08	7.72E-05	2.92E-02	3.14E-04	8.39E-05	Road 9	9	5000-1	1.10E-02	2.11E-06	1.75E-02	6.20E-01	1.21E-05	1.21E-05	7.11E-03	1.30E-03	
Road 8	8	0300-0400	3.52E-02	1.08E-08	8.01E-05	1.56E-01	1.54E-01	1.54E-01	2.76E-03	6.30E-05	6.13E-05	2.92E-02	9.02E-05	6.66E-05	Road 9	9	5100-1	1.10E-02	2.11E-06	1.75E-02	6.20E-01	1.21E-05	1.21E-05	7.11E-03	1.30E-03	
Road 8	8	0400-0500	3.65E-02	1.44E-08	9.13E-05	1.59E-01	1.72E-01	1.72E-01	2.71E-03	6.16E-05	6.76E-05	2.94E-02	9.96E-05	7.35E-05	Road 9	9	5200-1	1.10E-02	2.11E-06	1.75E-02	6.20E-01	1.21E-05	1.21E-05	7.11E-03	1.30E-03	
Road 8	8	0500-0600	3.78E-02	1.46E-08	9.20E-05	1.60E-01	1.74E-01	1.74E-01	2.73E-03	6.16E-05	6.76E-05	2.94E-02	9.96E-05	7.35E-05	Road 9	9	5300-1	1.10E-02	2.11E-06	1.75E-02	6.20E-01	1.21E-05	1.21E-05	7.11E-03	1.30E-03	
Road 8	8	0600-0700	3.93E-02	4.96E-08	3.65E-04	1.54E-01	6.5																			

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Day North Underground Quarry

Opening Road 24 hour Emission Factors

For AERMOD model (Summary)

Road Name	Road ID	Hour	NO _x Emission				PM ₁₀ Emission				Road Name	Road ID	Hour	
			g/h/m ²	g/s/m ²	g/min/m ²	g/h/m ²	g/h/m ²	g/s/m ²	g/min/m ²	g/h/m ²				
Road 18	18	0000-0100	1.81E-02	5.01E-08	1.28E-03	2.95E-01	1.06E-06	1.55E-02	9.59E-03	4.77E-08	6.81E-04	1.04E-02	5.19E-08	7.40E-04
Road 18	18	0100-0200	2.03E-02	5.70E-08	1.43E-03	3.26E-01	1.23E-07	1.73E-02	1.09E-02	5.36E-03	7.76E-04	1.20E-02	5.38E-08	7.61E-04
Road 18	18	0200-0300	2.75E-02	7.57E-08	1.96E-03	4.45E-01	1.61E-07	2.30E-02	1.46E-02	7.31E-03	1.05E-02	1.75E-03	7.92E-04	1.05E-03
Road 18	18	0300-0400	2.47E-02	6.69E-08	1.68E-03	3.74E-01	4.62E-07	6.58E-03	1.11E-02	5.10E-08	1.00E-04	1.20E-02	6.28E-08	7.26E-04
Road 18	18	0400-0500	2.55E-02	7.05E-08	1.76E-03	3.95E-01	5.96E-07	8.60E-03	1.16E-02	5.24E-03	1.10E-04	1.21E-02	6.31E-08	7.31E-04
Road 18	18	0500-0600	2.49E-02	6.87E-08	1.75E-03	3.94E-01	8.59E-07	1.22E-02	1.09E-02	3.85E-08	5.49E-04	1.19E-02	6.10E-08	5.97E-04
Road 18	18	0600-0700	2.49E-02	1.85E-07	2.45E-04	2.43E-01	1.82E-06	2.59E-02	1.08E-02	8.05E-08	1.15E-02	1.17E-02	8.75E-05	1.25E-03
Road 18	18	0700-0800	2.71E-02	4.11E-07	5.86E-04	2.50E-01	3.76E-06	5.41E-03	1.12E-02	1.72E-07	2.45E-03	1.23E-02	1.87E-07	2.48E-03
Road 18	18	0800-0900	2.57E-02	4.11E-07	5.86E-04	2.50E-01	3.76E-06	5.41E-03	1.12E-02	1.72E-07	2.45E-03	1.23E-02	1.87E-07	2.48E-03
Road 18	18	0900-1000	2.95E-02	4.11E-07	5.86E-04	2.47E-01	3.47E-06	4.95E-03	1.16E-02	1.64E-07	2.34E-03	1.26E-02	1.78E-07	2.51E-03
Road 18	18	1000-1100	3.30E-02	4.01E-07	5.71E-04	2.59E-01	3.14E-06	4.48E-02	1.24E-02	1.50E-07	2.14E-03	1.35E-02	1.63E-07	2.33E-03
Road 18	18	1100-1200	3.18E-02	3.88E-07	5.54E-04	2.50E-01	3.08E-06	4.29E-02	1.26E-02	1.41E-07	2.05E-03	1.41E-02	1.51E-07	2.22E-03
Road 18	18	1200-1300	3.51E-02	4.07E-07	5.74E-03	3.10E-01	3.46E-06	4.98E-02	1.50E-02	1.77E-07	2.46E-04	1.64E-02	1.80E-07	2.48E-03
Road 18	18	1300-1400	3.56E-02	4.11E-07	5.86E-03	3.10E-01	3.47E-06	4.95E-02	1.72E-02	2.47E-07	2.45E-03	1.62E-02	1.87E-07	2.66E-03
Road 18	18	1400-1500	3.44E-02	4.11E-07	5.86E-03	3.10E-01	3.47E-06	4.95E-02	1.72E-02	2.47E-07	2.45E-03	1.62E-02	1.87E-07	2.66E-03
Road 18	18	1500-1600	3.42E-02	4.11E-07	5.86E-03	3.10E-01	3.47E-06	4.95E-02	1.43E-02	1.82E-07	2.59E-03	1.56E-02	1.97E-07	2.81E-03
Road 18	18	1600-1700	3.33E-02	4.85E-07	6.91E-03	2.99E-01	4.12E-06	5.87E-02	1.53E-02	2.08E-07	2.97E-03	1.65E-02	2.26E-07	3.23E-03
Road 18	18	1700-1800	2.71E-02	4.24E-07	6.17E-03	2.71E-01	4.28E-06	6.14E-02	1.21E-02	1.71E-07	1.02E-03	1.45E-02	1.78E-07	2.71E-03
Road 18	18	1800-1900	2.48E-02	4.07E-07	5.57E-03	2.41E-01	4.33E-06	6.17E-02	1.22E-02	1.71E-07	1.02E-03	1.45E-02	1.78E-07	2.71E-03
Road 18	18	1900-2000	1.92E-02	3.17E-07	3.92E-02	5.21E-02	3.61E-06	1.15E-02	1.25E-02	1.87E-07	2.54E-03	1.35E-02	1.94E-07	2.76E-03
Road 18	18	2000-2100	1.93E-02	3.15E-07	3.90E-02	5.20E-02	3.59E-06	1.26E-02	1.34E-02	1.87E-07	2.05E-03	1.40E-02	1.94E-07	2.72E-03
Road 18	18	2100-2200	1.69E-02	1.87E-07	2.47E-02	3.44E-02	2.70E-06	1.86E-02	1.14E-02	1.36E-07	1.79E-03	1.31E-02	1.71E-07	2.42E-03
Road 18	18	2200-2300	1.68E-02	1.83E-07	2.41E-02	3.36E-02	2.56E-06	2.77E-06	1.19E-02	1.29E-07	1.83E-03	1.29E-02	1.60E-07	1.99E-03
Road 18	18	2300-2400	1.82E-02	2.04E-07	2.60E-03	2.96E-06	2.96E-06	1.24E-02	8.82E-08	1.40E-03	1.32E-02	1.07E-02	1.52E-03	2.01E-03
Road 18	18	0000-0100	1.86E-02	5.18E-08	1.30E-03	3.00E-01	1.07E-06	1.57E-02	9.73E-03	4.96E-08	6.96E-04	1.06E-02	5.38E-08	7.50E-04
Road 19	19	0100-0200	2.05E-02	5.61E-08	1.45E-03	3.00E-01	1.04E-06	1.60E-02	7.77E-03	4.15E-08	4.96E-04	8.44E-03	4.51E-08	6.74E-04
Road 19	19	0200-0300	2.28E-02	6.89E-08	1.84E-03	3.86E-01	1.77E-07	8.17E-03	8.23E-08	3.39E-04	8.84E-04	3.51E-08	1.89E-04	2.10E-03
Road 19	19	0300-0400	2.47E-02	7.71E-08	2.06E-03	4.64E-01	6.64E-07	8.75E-03	8.80E-03	7.70E-08	2.84E-04	8.43E-03	1.98E-08	2.35E-03
Road 19	19	0400-0500	2.59E-02	8.19E-08	2.10E-03	4.71E-01	7.15E-07	9.27E-03	9.18E-03	7.96E-08	2.96E-04	8.59E-03	2.06E-08	2.47E-03
Road 19	19	0500-0600	2.63E-02	8.14E-08	2.14E-03	4.71E-01	7.14E-07	9.26E-03	8.84E-03	7.95E-08	2.84E-04	8.61E-03	2.06E-08	2.47E-03
Road 19	19	0600-0700	2.71E-02	8.39E-08	2.15E-03	4.75E-01	7.26E-07	9.28E-03	8.80E-03	8.11E-07	1.17E-03	9.67E-03	2.10E-07	1.27E-03
Road 19	19	0700-0800	2.93E-02	8.41E-08	2.20E-03	4.86E-01	7.48E-07	9.49E-03	8.98E-03	8.28E-07	1.24E-03	9.84E-03	2.24E-07	1.37E-03
Road 19	19	0800-0900	2.84E-02	8.35E-08	2.18E-03	4.70E-01	7.34E-07	9.26E-03	8.89E-03	8.12E-07	2.75E-04	8.66E-03	2.84E-07	2.99E-03
Road 19	19	0900-1000	3.11E-02	8.07E-07	8.40E-03	2.73E-01	5.47E-06	5.71E-02	1.05E-02	2.44E-07	2.54E-03	1.09E-02	2.64E-07	2.79E-03
Road 19	19	1000-1100	2.76E-02	7.16E-07	7.38E-03	2.38E-01	4.80E-06	5.10E-02	9.27E-03	2.11E-07	2.24E-03	9.31E-03	2.11E-07	2.24E-03
Road 19	19	1100-1200	3.61E-02	7.73E-07	7.60E-03	2.73E-01	4.75E-06	4.99E-02	1.07E-02	2.14E-07	2.75E-03	1.16E-02	2.33E-07	2.44E-03
Road 19	19	1200-1300	4.47E-02	1.52E-07	8.06E-03	3.15E-01	3.73E-06	3.91E-02	1.57E-02	1.85E-07	1.95E-03	1.70E-02	2.01E-07	2.12E-03
Road 19	19	1300-1400	4.75E-02	1.69E-07	8.60E-03	3.30E-01	4.00E-06	4.19E-02	1.64E-02	1.99E-07	2.09E-03	1.89E-02	2.18E-07	2.23E-03
Road 19	19	1400-1500	4.68E-02	1.63E-07	8.34E-03	3.11E-01	4.00E-06	4.21E-02	1.54E-02	1.97E-07	2.09E-03	1.68E-02	2.16E-07	2.27E-03
Road 19	19	1500-1600	4.47E-02	1.69E-07	8.60E-03	3.15E-01	3.73E-06	3.91E-02	1.48E-02	1.95E-07	2.05E-03	1.60E-02	2.14E-07	2.22E-03
Road 19	19	1600-1700	4.32E-02	1.62E-07	8.30E-03	3.08E-01	4.29E-06	4.51E-02	1.55E-02	2.15E-07	2.20E-03	1.68E-02	2.14E-07	2.26E-03
Road 19	19	1700-1800	4.48E-02	1.74E-07	8.80E-03	3.25E-01	4.28E-06	4.50E-02	1.58E-02	2.28E-07	2.18E-03	1.64E-02	2.14E-07	2.27E-03
Road 19	19	1800-1900	2.65E-02	6.43E-07	4.66E-03	2.40E-01	4.01E-06	4.22E-02	1.16E-02	1.99E-07	1.30E-03	1.30E-02	1.17E-07	2.28E-03
Road 19	19	1900-2000	2.30E-02	6.01E-07	4.37E-03	2.40E-01	3.72E-06	4.29E-02	1.20E-02	1.97E-07	1.65E-03	1.30E-02	1.70E-07	2.19E-03
Road 19	19	2000-2100	2.11E-02	5.61E-07	4.11E-03	2.16E-01	3.42E-06	4.89E-02	1.12E-02	1.84E-07	1.34E-03	1.26E-02	1.54E-07	2.14E-03
Road 19	19	2100-2200	2.13E-02	5.15E-07	2.26E-03	2.41E-01	2.45E-06	5.76E-02	1.10E-02	1.12E-07	1.18E-03	1.20E-02	1.22E-07	1.28E-03
Road 19	19	2200-2300	2.11E-02	2.08E-07	2.09E-03	2.51E-01	2.46E-06	4.60E-02	1.15E-02	1.14E-07	1.20E-03	1.25E-02	1.44E-07	1.27E-03
Road 19	19	2300-2400	2.11E-02	2.08E-07	2.09E-03	2.51E-01	2.46E-06	4.60E-02	1.15E-02	1.14E-07	1.20E-03	1.25E-02	1.44E-07	1.27E-03
Road 20	20	0000-0100	8.91E-02	7.73E-08	3.20E-04	9.94E-01	3.42E-07	2.30E-05	1.57E-02	9.68E-03	1.98E-05	1.71E-02	4.88E-08	9.97E-05
Road 20	20	0100-0200	9.23E-02	8.11E-08	3.21E-04	1.06E-01	2.42E-07	2.33E-05	1.63E-02	9.72E-03	6.54E-05	1.72E-02	1.06E-08	7.10E-05
Road 20	20	0200-0300	9.53E-02	8.49E-08	2.96E-04	4.17E-01	1.29E-07	1.29E-05	1.68E-02	7.73E-03	5.90E-05	1.83E-02	8.89E-08	5.69E-05
Road 20	20	0300-0400	9.61E-02	8.53E-08	2.98E-04	4.20E-01	1.30E-07	1.29E-05	1.68E-02	7.73E-03	5.90E-05	1.83E-02	8.89E-08	5.69E-05
Road 20	20	0400-0500	1.01E-01	4.45E-08	3.06E-04	4.36E-01	1.93E-07	3.00E-05	1.76E-02	8.70E-03	5.25E-05	1.91E-02	8.48E-08	5.70E-05
Road 20	20	0500-0600	1.03E-01	1.28E-07	5.57E-04	4.44E-01	3.58E-07	2.41E-05	1.80E-02	1.45E-08	9.74E-05	1.94E-02	1.58E-08	1.06E-04
Road 20	20	0600-0700	1.07E-01	1.40E-07	5.81E-04	4.51E-01	4.81E-07	2.62E-05	1.82E-02	1.56E-08	1.04E-04	1.96E-02	1.70E-08	1.12E-04
Road 20	20	0700-0800	1.16E-01	4.44E-07	2.99E-04	1.96E-01	2.88E-06	1.96E-05	1.70E-02	5.05E-04	2.31E-02	1.80E-08	5.49E-04	3.04E-04
Road 20	20	0800-0900	1.15E-01	5.26E-07	3.45E-04	4.95E-01	2.24E-06	1.52E-05	1.83E-02	8.80E-08	5.93E-04	2.10E-02	5.57E-08	3.04E-04
Road 20	20	0900-1000	1.25E-01	5.40E-07	3.60E-04	5.55E-01	2.42E-06	1.59E-05	1.85E-02	9.00E-08	6.24E-04	2.21E-02	5.70E-08	3.10E-04
Road 20	20	1000-1100	1.11E-01	4.10E-07	4.11E-04	2.57E-01	2.54E-06	1.72E-05	2.19E-02	1.33E-07	6.90E-04	2.33E-02	1.137E-07	7.50E-04
Road 20	20	1100-1200	1.30E-01	1.69E-07	4.88E-04	3.46E-01	2.93E-06	1.61E-07	2.52E-08	6.41E-04	2.38E-02	1.64E-07	6.97E-04	3.04E-04
Road 20	20	1200-1300	1.27E-01	1.61E-07	4.80E-04	3.38E-01	2.86E-06	1.61E-07	2.52E-08	6.41E-04	2.38E-02	1.64E-07	6.97E-04	3.04E-04
Road 20	20	1300-1400	1.42E-01	3.36E-07	3.28E-03	2.92E-01	2.65E-06	1.78E-06	2.37E-02	1.06E-07	7.12E-04	2.57E-02	1.15E-07	7.74E-04
Road 20	20	1400-1500	1.45E-01	6.41E-07	4.31E-03	3.96E-01	2.64E-06	1.78E-06	2.42E-02	1.07E-07	7.23E-04	2.63E		

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Osing Yr North Underground

Open Road 24 hour Emission Factors

Year 2030

For AERMOD model (Summary)

Road Name	Road ID	Hour	NO _x Emission			NO _y Emission			PM _{2.5} Emission			PM ₁₀ Emission		
			g/min/hour	Annual/ton	g/min/ton	g/min/hour	Annual/ton	g/min/ton	g/min/hour	Annual/ton	g/min/ton	g/min/hour	Annual/ton	g/min/ton
Road 23	23	1600-1700	2.588	4.74E+07	3.20E-04	1.05E+00	1.94E+06	3.30E-02	3.35E+02	6.15E+08	4.14E-04	3.64E+02	6.68E+08	4.50E+04
Road 23	23	1700-1800	2.084	3.71E+07	2.50E-04	8.99E-04	1.64E+06	2.70E-03	2.66E+02	4.96E+08	2.08E+04	2.89E+02	5.30E+08	3.72E+04
Road 23	23	1900-2000	1.90E+01	1.34E+07	8.93E-05	3.07E-04	6.33E+07	4.26E+02	2.57E+02	1.67E+08	1.33E+08	2.80E+02	2.14E+08	1.44E+09
Road 23	23	2000-2100	2.08E+01	1.45E+07	9.22E-05	3.22E-04	6.63E+07	4.38E+02	2.72E+02	1.80E+08	1.33E+08	2.80E+02	2.14E+08	1.44E+09
Road 23	23	2100-2200	1.89E+01	1.18E+07	7.95E-05	2.26E-04	5.18E+07	3.49E+02	2.53E+02	1.60E+08	1.08E+08	2.77E+02	1.70E+08	1.12E+09
Road 23	23	2200-2300	2.04E+01	1.12E+07	7.54E-05	8.51E-04	4.56E+07	3.14E+02	2.79E+02	1.52E+08	1.02E+08	3.02E+02	1.65E+08	1.11E+09
Road 24	24	0000-0100	7.00E+00	8.90E+08	6.04E-04	8.42E-04	3.74E+07	2.51E+02	3.77E+02	1.24E+08	8.84E+08	3.00E+02	4.10E+08	3.08E+08
Road 24	24	0100-0200	2.08E+01	1.45E+07	9.22E-05	3.22E-04	6.63E+07	4.38E+02	2.72E+02	1.80E+08	1.33E+08	2.80E+02	2.14E+08	1.44E+09
Road 24	24	0200-0300	2.02E+01	1.30E+08	9.02E-04	8.42E-04	3.74E+07	2.51E+02	3.77E+02	1.24E+08	8.84E+08	3.00E+02	4.10E+08	3.08E+08
Road 24	24	0300-0400	1.38E+01	2.54E+08	2.32E-03	2.66E-04	1.07E+07	9.98E+05	2.76E+02	1.54E+09	3.24E+06	3.00E+02	3.84E+09	3.52E+06
Road 24	24	0400-0500	2.01E+01	1.38E+08	1.29E-03	2.66E-04	1.07E+07	9.98E+05	2.76E+02	1.54E+09	3.24E+06	3.00E+02	3.84E+09	3.52E+06
Road 24	24	0500-0600	2.08E+01	1.38E+08	1.29E-03	2.66E-04	1.07E+07	9.98E+05	2.76E+02	1.54E+09	3.24E+06	3.00E+02	3.84E+09	3.52E+06
Road 24	24	0600-0700	2.12E+01	1.49E+08	1.45E+03	8.80E-04	2.05E+07	1.88E+09	3.00E+02	8.78E+09	6.20E+05	3.15E+03	7.39E+09	6.73E+06
Road 24	24	0700-0800	2.08E+01	1.38E+08	1.29E-03	2.66E-04	1.07E+07	9.98E+05	2.76E+02	1.54E+09	3.24E+06	3.00E+02	3.84E+09	3.52E+06
Road 24	24	0800-0900	2.40E+01	2.72E+07	2.49E-04	8.97E-04	1.12E+08	1.02E+02	3.15E+02	5.75E+08	3.26E+05	3.42E+08	3.88E+08	3.55E+05
Road 24	24	0900-1000	2.32E+01	2.72E+07	2.49E-04	8.97E-04	1.12E+08	1.02E+02	3.15E+02	5.75E+08	3.26E+05	3.42E+08	3.88E+08	3.55E+05
Road 24	24	1000-1100	2.45E+01	2.69E+07	2.49E-04	8.97E-04	1.12E+08	1.02E+02	3.15E+02	5.75E+08	3.26E+05	3.42E+08	3.88E+08	3.55E+05
Road 24	24	1100-1200	2.45E+01	2.69E+07	2.49E-04	8.97E-04	1.12E+08	1.02E+02	3.15E+02	5.75E+08	3.26E+05	3.42E+08	3.88E+08	3.55E+05
Road 24	24	1200-1300	2.59E+01	2.95E+07	3.27E-04	1.06E+04	1.47E+06	1.34E+03	3.44E+02	6.43E+08	4.24E+05	1.63E+03	5.02E+08	4.61E+05
Road 24	24	1300-1400	2.69E+01	3.17E+07	3.47E+04	1.06E+04	1.50E+06	1.38E+03	3.47E+02	6.47E+08	4.45E+05	1.73E+03	5.29E+08	4.84E+05
Road 24	24	1400-1500	2.69E+01	3.17E+07	3.47E+04	1.06E+04	1.50E+06	1.38E+03	3.47E+02	6.47E+08	4.45E+05	1.73E+03	5.29E+08	4.84E+05
Road 24	24	1500-1600	2.65E+01	4.13E+07	3.76E+04	1.07E+06	1.67E+06	1.52E+03	3.42E+02	5.34E+08	4.86E+05	1.72E+03	5.81E+08	5.31E+05
Road 24	24	1600-1700	2.41E+01	3.49E+07	3.60E+04	1.02E+06	1.67E+06	1.53E+03	3.31E+02	4.90E+08	4.66E+05	1.63E+03	5.53E+08	5.06E+05
Road 24	24	1700-1800	2.35E+01	3.49E+07	3.60E+04	1.02E+06	1.67E+06	1.53E+03	3.31E+02	4.90E+08	4.66E+05	1.63E+03	5.53E+08	5.06E+05
Road 24	24	1800-1900	2.17E+01	3.00E+07	2.74E+04	9.44E-04	1.30E+06	1.19E+03	2.84E+02	4.91E+08	3.54E+05	1.30E+03	4.25E+08	3.86E+05
Road 24	24	1900-2000	1.91E+01	1.88E+07	1.70E+04	8.46E-04	8.73E+07	7.53E+04	2.54E+02	1.74E+09	2.28E+07	2.62E+08	2.45E+09	2.76E+05
Road 24	24	2000-2100	1.94E+01	1.92E+07	1.80E+04	8.60E-04	9.17E+07	7.93E+04	2.69E+02	1.63E+09	1.47E+07	2.71E+08	2.17E+09	1.60E+05
Road 24	24	2100-2200	1.83E+01	1.66E+07	1.54E+04	8.46E-04	8.19E+07	7.18E+04	2.47E+02	1.46E+09	1.47E+07	2.71E+08	2.17E+09	1.60E+05
Road 24	24	2200-2300	1.83E+01	1.62E+08	8.05E-05	8.05E-04	4.24E+07	8.80E+02	2.47E+02	3.30E+08	1.19E+06	2.69E+02	1.14E+09	1.29E+05
Road 25	25	0000-0100	7.00E+00	8.90E+08	6.04E-04	8.42E-04	3.74E+07	2.51E+02	3.77E+02	1.24E+08	1.11E+09	2.85E+02	3.20E+08	3.20E+05
Road 25	25	0100-0200	2.08E+01	1.45E+07	9.22E-05	3.22E-04	6.63E+07	4.38E+02	2.72E+02	1.80E+08	1.33E+08	2.80E+02	2.14E+08	1.44E+09
Road 25	25	0200-0300	2.04E+01	1.12E+07	7.54E-05	8.51E-04	4.56E+07	3.14E+02	2.79E+02	1.52E+08	8.90E+06	3.00E+02	1.04E+08	9.72E+06
Road 25	25	0300-0400	2.07E+01	9.91E+08	4.16E+05	8.42E-04	3.74E+07	2.51E+02	3.77E+02	1.24E+08	6.38E+09	3.00E+02	7.04E+09	6.93E+06
Road 25	25	0400-0500	2.08E+01	1.45E+07	9.22E-05	3.22E-04	6.63E+07	4.38E+02	2.72E+02	1.80E+08	1.33E+08	2.80E+02	2.14E+08	1.44E+09
Road 25	25	0500-0600	2.13E+01	1.81E+08	3.71E-05	8.81E-04	1.41E+07	3.31E+04	2.85E+02	4.66E+09	4.34E+06	3.16E+05	5.00E+06	4.71E+06
Road 25	25	0600-0700	2.14E+01	4.01E+08	3.75E+06	8.87E-04	1.67E+07	5.55E+04	3.93E+02	5.50E+09	5.12E+06	3.18E+05	5.90E+09	5.56E+06
Road 25	25	0700-0800	2.14E+01	4.01E+08	3.75E+06	8.87E-04	1.67E+07	5.55E+04	3.93E+02	5.50E+09	5.12E+06	3.18E+05	5.90E+09	5.56E+06
Road 25	25	0800-0900	2.14E+01	4.01E+08	3.75E+06	8.87E-04	1.67E+07	5.55E+04	3.93E+02	5.50E+09	5.12E+06	3.18E+05	5.90E+09	5.56E+06
Road 25	25	0900-1000	2.53E+01	8.85E+08	1.71E+04	8.64E-04	7.61E+07	8.08E+04	2.10E+02	4.56E+09	2.28E+07	3.37E+08	2.64E+09	2.47E+05
Road 25	25	1000-1100	2.53E+01	8.85E+08	1.71E+04	8.64E-04	7.61E+07	8.08E+04	2.10E+02	4.56E+09	2.28E+07	3.37E+08	2.64E+09	2.47E+05
Road 25	25	1100-1200	2.78E+01	6.65E+07	5.61E-04	1.11E+06	2.44E+06	2.29E+03	3.48E+02	7.71E+08	7.18E+07	3.18E+07	8.31E+07	7.98E+05
Road 25	25	1200-1300	2.61E+01	5.43E+07	5.03E-04	1.07E+06	2.22E+06	2.06E+03	3.37E+02	7.00E+08	6.52E+06	3.64E+07	8.11E+07	7.78E+05
Road 25	25	1300-1400	2.74E+01	5.92E+07	5.08E-04	1.08E+06	2.29E+06	2.11E+03	3.45E+02	7.45E+08	6.84E+06	3.64E+07	8.11E+07	7.78E+05
Road 25	25	1400-1500	2.75E+01	6.44E+07	5.90E-04	1.12E+06	2.62E+06	2.44E+03	3.48E+02	8.15E+08	7.58E+07	3.83E+08	8.23E+05	
Road 25	25	1500-1600	2.80E+01	6.50E+07	6.05E-04	1.12E+06	2.61E+06	2.43E+03	3.47E+02	8.27E+08	7.69E+07	3.87E+08	8.50E+05	8.31E+05
Road 25	25	1600-1700	2.81E+01	6.26E+07	5.84E-04	1.08E+06	2.41E+06	2.24E+03	3.45E+02	8.03E+08	7.45E+07	3.83E+08	8.15E+05	8.04E+05
Road 25	25	1700-1800	2.71E+01	6.07E+07	5.65E-04	1.06E+06	2.27E+06	2.20E+03	3.46E+02	7.74E+08	7.20E+07	3.76E+08	8.08E+05	7.82E+05
Road 25	25	1800-1900	2.32E+01	4.69E+07	4.37E-04	1.01E+06	2.03E+06	1.89E+03	3.29E+02	6.44E+08	5.62E+05	3.2E+06	6.50E+06	6.11E+05
Road 25	25	1900-2000	2.08E+01	2.90E+07	2.60E-04	8.18E-04	1.28E+06	1.19E+03	3.17E+02	5.75E+08	3.53E+05	2.99E+02	4.10E+08	3.84E+05
Road 25	25	2000-2100	2.08E+01	2.90E+07	2.60E-04	8.18E-04	1.28E+06	1.19E+03	3.17E+02	5.75E+08	3.53E+05	2.99E+02	4.10E+08	3.84E+05
Road 25	25	2100-2200	1.91E+01	1.91E+07	1.30E-04	8.43E-04	6.13E+07	5.71E+04	2.52E+02	1.88E+08	1.75E+07	2.81E+02	2.04E+08	1.90E+05
Road 25	25	2200-2300	1.94E+01	1.45E+07	1.03E-04	8.49E-04	6.35E+07	5.91E+04	2.62E+02	1.96E+08	1.82E+07	2.85E+02	2.13E+08	1.98E+05
Road 25	25	2300-0000	2.11E+01	1.45E+07	1.03E-04	8.49E-04	6.35E+07	5.91E+04	2.62E+02	1.96E+08	1.82E+07	2.85E+02	2.13E+08	1.98E+05
Road 26	26	0000-0100	7.00E+00	8.90E+08	6.04E-04	8.42E-04	3.74E+07	2.51E+02	3.77E+02	1.24E+08	1.11E+09	2.85E+02	3.20E+08	3.20E+05
Road 26	26	0100-0200	2.08E+01	1.45E+07	9.22E-05	3.22E-04	6.63E+07	4.38E+02	2.72E+02	1.80E+08	1.33E+08	2.80E+02	2.14E+08	1.44E+09
Road 26	26	0200-0300	2.04E+01	1.12E+07	7.54E-05	8.51E-04	4.56E+07	3.14E+02	2.79E+02	1.52E+08	8.90E+06	3.00E+02	1.04E+08	9.72E+06
Road 26	26	0300-0400	2.07E+01	9.91E+08	4.16E+05	8.42E-04	3.74E+07	2.51E+02	3.77E+02	1.24E+08	6.38E+09	3.00E+02	7.04E+09	6.93E+06
Road 26	26	0400-0500	2.08E+01	1.45E+07	9.22E-05	3.22E-04	6.63E+07	4.38E+02	2.72E+02	1.80E+08	1.33E+08	2.80E+02	2.14E+08	1.44E+09
Road 26	26	0500-0600	2.13E+01	1.81E+08	3.71E-05	8.81E-04	1.41E+07	3.31E+04	2.85E+02	4.66E+09	4.34E+06	3.16E+05	5.00E+06	4.71E+06
Road 26	26	0600-0700	2.14E+01	4.01E+08	3.75E+06	8.87E-04	1.67E+07	5.55E+04	3.93E+02	5.50E+09	5.12E+06	3.18E+05	5.90E+09	5.56E+06
Road 26	26	0700-0800	2.14E+01	4.01E+08	3.75E+06	8.87E-04	1.67E+07	5.55E+04	3.93E+02	5.50E+09	5.12E+06	3.18E+05	5.90E+09	5.56E+06
Road 26	26	0800-0900	2.14E+01	4.01E+08	3.75E+06	8.87E-04	1.67E+07	5.55E+04	3.93E+02	5.50E+09	5.12E+06	3.18E+05	5.90E+09	5.56E+06
Road 26	26	0900-1000	2.53E+01	8.85E+08	1.71E+04	8.64E-04	7.61E+07	8.08E+04	2.10E+02	4.56E+09	2.28E+07	3.37E+08	2.64E+09	2.47E+05
Road 26	26	1000-1100	2.53E+01	8.85E+08	1.71E+04	8.64E-04	7.61E+07	8.08E+04	2.10E+02	4.56E+09	2.28E+07	3.37E+08		

I:\Secure\Environment Projects\60733229\1.01\Others\Air Modelling\Appendix\Traffic\Open Road\Appendix 3.5.2 Emission Factor in 2030.xlsx I:\Secure\Environment

O ₂ Emission		NO Emission				PM _{2.5} Emission				PM ₁₀ Emission				
g/s/m ²	tonn/ha/m ²	g/s/m ²	tonn/ha/m ²	g/s/m ²	tonn/ha/m ²	g/s/m ²	tonn/ha/m ²	g/s/m ²	tonn/ha/m ²	g/s/m ²	tonn/ha/m ²	g/s/m ²	tonn/ha/m ²	
1.436E-08	2.688E-04	5.505E-01	3.744E-07	1.275E-03	2.427E-06	1.831E-08	6.135E-05	2.646E-02	1.976E-08	6.677E-05	2.646E-02	1.976E-08	6.677E-05	
1.436E-08	3.125E-04	4.349E-01	2.967E-07	1.656E-03	1.956E-06	1.831E-08	6.135E-05	2.646E-02	1.976E-08	6.677E-05	2.646E-02	1.976E-08	6.677E-05	
1.406E-07	1.744E-04	1.644E-01	7.711E-07	2.474E-03	1.555E-02	3.124E-08	1.055E-04	2.697E-02	3.996E-08	1.155E-04	2.697E-02	3.996E-08	1.155E-04	
1.555E-07	4.534E-04	4.721E-02	2.188E-06	7.989E-03	2.097E-06	9.634E-08	3.255E-04	2.277E-05	1.027E-07	3.538E-04	2.277E-05	1.027E-07	3.538E-04	
1.555E-07	5.434E-04	5.721E-02	2.688E-06	9.766E-03	2.597E-06	1.145E-07	3.903E-04	2.777E-05	1.237E-07	4.260E-04	2.777E-05	1.237E-07	4.260E-04	
1.823E-07	1.533E-03	4.817E-01	2.244E-06	7.757E-03	2.181E-06	1.006E-07	3.365E-04	2.356E-05	1.067E-07	3.677E-04	2.356E-05	1.067E-07	3.677E-04	
1.741E-07	5.125E-04	5.125E-02	2.154E-06	7.526E-03	2.338E-02	8.796E-08	3.308E-04	2.331E-02	1.066E-07	3.598E-04	2.331E-02	1.066E-07	3.598E-04	
1.455E-07	2.945E-04	2.945E-02	1.361E-06	4.914E-03	1.604E-02	7.051E-08	2.691E-04	1.403E-02	5.953E-08	2.155E-04	1.403E-02	5.953E-08	2.155E-04	
1.302E-07	2.814E-03	1.575E-01	3.796E-06	1.235E-04	2.446E-07	1.537E-07	5.165E-04	2.661E-02	1.665E-07	5.615E-04	2.661E-02	1.665E-07	5.615E-04	
1.302E-07	2.945E-03	1.575E-01	3.796E-06	1.235E-04	2.446E-07	1.537E-07	5.165E-04	2.661E-02	1.665E-07	5.615E-04	2.661E-02	1.665E-07	5.615E-04	
1.831E-07	2.984E-03	1.565E-01	3.824E-06	1.248E-04	2.386E-07	1.624E-07	5.466E-04	2.698E-02	1.748E-07	5.839E-04	2.698E-02	1.748E-07	5.839E-04	
1.831E-07	2.984E-03	1.565E-01	3.824E-06	1.248E-04	2.386E-07	1.624E-07	5.466E-04	2.698E-02	1.748E-07	5.839E-04	2.698E-02	1.748E-07	5.839E-04	
1.866E-08	7.454E-04	2.740E-02	7.454E-07	8.339E-03	1.015E-03	3.339E-07	9.79E-04	1.005E-02	6.61E-08	4.094E-04	1.005E-02	6.61E-08	4.094E-04	
1.866E-08	6.110E-04	2.367E-02	5.716E-07	6.399E-03	1.065E-06	2.556E-08	2.878E-04	1.155E-02	2.718E-08	3.127E-04	1.155E-02	2.718E-08	3.127E-04	
1.475E-08	6.316E-04	2.341E-02	4.488E-07	5.238E-03	1.115E-06	2.138E-08	2.878E-04	1.155E-02	2.718E-08	3.127E-04	1.155E-02	2.718E-08	3.127E-04	
1.475E-08	6.316E-04	2.341E-02	4.488E-07	5.238E-03	1.115E-06	2.138E-08	2.878E-04	1.155E-02	2.718E-08	3.127E-04	1.155E-02	2.718E-08	3.127E-04	
1.660E-07	2.588E-04	2.588E-02	1.352E-06	4.959E-03	1.775E-02	1.040E-07	3.627E-04	2.424E-02	1.274E-07	4.584E-04	2.424E-02	1.274E-07	4.584E-04	
1.660E-07	2.588E-04	2.588E-02	1.352E-06	4.959E-03	1.775E-02	1.040E-07	3.627E-04	2.424E-02	1.274E-07	4.584E-04	2.424E-02	1.274E-07	4.584E-04	
1.375E-07	4.230E-04	1.311E-01	1.193E-06	4.051E-03	2.713E-02	4.696E-08	1.588E-04	1.447E-02	1.155E-08	1.729E-04	1.447E-02	1.155E-08	1.729E-04	
1.375E-07	4.230E-04	1.311E-01	1.193E-06	4.051E-03	2.713E-02	4.696E-08	1.588E-04	1.447E-02	1.155E-08	1.729E-04	1.447E-02	1.155E-08	1.729E-04	
1.406E-07	6.775E-04	1.041E-01	1.505E-07	3.73E-03	1.212E-03	4.390E-08	1.484E-04	1.311E-02	6.788E-08	1.615E-04	1.311E-02	6.788E-08	1.615E-04	
1.377E-05	9.329E-04	1.329E-01	9.38E-07	3.14E-03	1.33E-02	3.84E-08	1.30E-04	1.477E-02	4.18E-08	1.431E-04	1.477E-02	4.18E-08	1.431E-04	
1.377E-05	1.027E-04	2.16E-01	1.11E-06	1.14E-04	9.59E-04	4.88E-08	5.41E-04	1.047E-02	2.86E-08	5.88E-04	1.047E-02	2.86E-08	5.88E-04	
1.377E-05	1.188E-04	2.56E-01	1.36E-06	1.36E-04	1.17E-03	5.68E-08	6.31E-04	1.247E-02	3.36E-08	6.76E-04	1.247E-02	3.36E-08	6.76E-04	
1.406E-07	4.595E-03	1.004E-01	3.52E-06	3.94E-02	1.125E-07	1.475E-07	1.96E-04	1.644E-02	1.91E-07	2.336E-04	1.644E-02	1.91E-07	2.336E-04	
1.418E-07	4.629E-03	1.021E-01	3.535E-06	3.95E-02	1.149E-07	1.478E-07	1.995E-04	1.651E-02	1.909E-07	2.327E-04	1.651E-02	1.909E-07	2.327E-04	
1.418E-07	4.629E-03	1.021E-01	3.535E-06	3.95E-02	1.149E-07	1.478E-07	1.995E-04	1.651E-02	1.909E-07	2.327E-04	1.651E-02	1.909E-07	2.327E-04	
1.406E-07	4.925E-03	1.025E-01	3.795E-06	4.19E-03	1.434E-07	1.844E-07	2.06E-04	1.565E-02	2.00E-07	2.242E-04	1.565E-02	2.00E-07	2.242E-04	
1.497E-07	5.455E-04	1.031E-01	4.203E-06	4.76E-02	1.522E-02	2.124E-07	2.37E-03	1.655E-02	3.30E-07	2.576E-03	1.655E-02	3.30E-07	2.576E-03	
1.434E-07	4.955E-03	1.072E-01	4.38E-06	4.95E-02	1.34E-02	2.155E-07	2.411E-03	1.655E-02	3.30E-07	2.635E-03	1.655E-02	3.30E-07	2.635E-03	
1.044E-07	4.52E-03	2.431E-01	4.42E-06	4.94E-02	1.232E-02	2.220E-07	2.47E-03	1.183E-02	2.42E-07	2.70E-03	1.183E-02	2.42E-07	2.70E-03	
1.811E-07	1.241E-04	2.531E-03	3.67E-06	4.01E-02	1.154E-02	1.811E-07	2.03E-03	1.86E-02	1.97E-07	2.20E-03	1.86E-02	1.97E-07	2.20E-03	
1.786E-07	2.455E-04	2.681E-03	3.46E-06	3.78E-02	1.245E-07	1.33E-03	1.58E-03	1.86E-02	1.97E-07	2.17E-03	1.86E-02	1.97E-07	2.17E-03	
1.900E-07	2.124E-04	2.545E-03	2.74E-06	3.07E-02	1.147E-07	1.279E-03	1.43E-03	1.126E-02	1.88E-07	1.55E-03	1.126E-02	1.88E-07	1.55E-03	
1.866E-07	2.08E-04	2.516E-03	2.61E-06	2.91E-02	1.190E-07	1.306E-03	1.446E-03	1.102E-02	1.42E-07	1.58E-03	1.102E-02	1.42E-07	1.58E-03	
1.495E-07	1.675E-04	2.591E-03	2.13E-06	2.38E-02	1.212E-09	9.99E-08	1.11E-03	1.927E-02	1.067E-08	1.231E-03	1.927E-02	1.067E-08	1.231E-03	
1.511E-07	1.615E-03	1.881E-01	1.495E-06	1.59E-02	1.238E-03	5.946E-04	3.79E-03	9.415E-02	8.45E-08	6.88E-04	9.415E-02	8.45E-08	6.88E-04	
1.996E-07	1.165E-03	1.901E-01	1.01E-06	1.07E-02	7.77E-03	4.123E-08	4.04E-04	8.845E-03	4.48E-07	4.78E-04	8.845E-03	4.48E-07	4.78E-04	
1.833E-08	4.95E-04	1.992E-01	7.73E-07	8.73E-03	8.23E-03	3.23E-08	3.42E-04	8.845E-03	4.48E-07	4.78E-04	3.23E-08	3.42E-04	8.845E-03	4.48E-07
1.746E-07	1.155E-04	2.081E-01	6.63E-07	6.79E-03	6.68E-03	2.66E-08	2.86E-04	9.415E-02	8.45E-08	6.88E-04	2.66E-08	2.86E-04	9.415E-02	8.45E-08
1.746E-07	1.366E-04	2.094E-01	7.09E-07	7.57E-03	8.88E-03	3.01E-08	3.21E-04	9.615E-02	8.77E-08	3.78E-04	3.01E-08	3.21E-04	9.615E-02	8.77E-08
1.551E-07	1.646E-04	2.111E-01	1.233E-06	1.331E-03	8.84E-03	5.155E-08	5.50E-04	9.615E-03	6.60E-07	5.97E-04	5.155E-08	5.50E-04	9.615E-03	6.60E-07
1.551E-07	1.646E-04	2.111E-01	1.233E-06	1.331E-03	8.84E-03	5.155E-08	5.50E-04	9.615E-03	6.60E-07	5.97E-04	5.155E-08	5.50E-04	9.615E-03	6.60E-07
1.391E-07	1.818E-04	2.081E-01	6.63E-07	6.79E-03	6.68E-03	2.66E-08	2.86E-04	9.415E-02	8.45E-08	6.88E-04	2.66E-08	2.86E-04	9.415E-02	8.45E-08
1.391E-07	1.956E-04	2.151E-01	6.64E-06	6.89E-02	9.92E-03	2.50E-07	2.67E-03	1.086E-02	7.73E-07	2.91E-03	2.50E-07	2.67E-03	1.086E-02	7.73E-07
1.216E-07	1.296E-04	2.677E-01	7.79E-06	8.32E-03	1.032E-03	3.01E-07	3.12E-03	1.102E-02	1.27E-07	3.49E-03	3.01E-07	3.12E-03	1.102E-02	1.27E-07
1.996E-07	1.075E-04	2.596E-03	6.68E-06	1.05E-02	2.554E-02	2.771E-04	3.14E-03	1.424E-02	7.75E-07	2.94E-03	2.771E-04	3.14E-03	1.424E-02	7.75E-07
1.897E-07	1.316E-04	2.691E-03	5.83E-06	1.21E-02	3.42E-02	2.67E-04	3.08E-03	1.386E-02	1.56E-07	3.46E-03	2.67E-04	3.08E-03	1.386E-02	1.56E-07
1.897E-07	8.446E-04	2.531E-01	5.61E-06	5.96E-02	1.09E-02	2.170E-07	2.31E-03	1.196E-02	3.36E-07	2.52E-03	2.170E-07	2.31E-03	1.196E-02	3.36E-07
1.505E-07	4.87E-04	3.16E-01	3.71E-06	3.96E-02	1.57E-02	1.984E-07	1.97E-03	1.171E-02	2.00E-07	2.14E-03	1.984E-07	1.97E-03	1.171E-02	2.00E-07
1.505E-07	4.87E-04	3.16E-01	3.71E-06	3.96E-02	1.57E-02	1.984E-07	1.97E-03	1.171E-02	2.00E-07	2.14E-03	1.984E-07	1.97E-03	1.171E-02	2.00E-07
1.746E-07	1.646E-04	2.111E-01	6.63E-07	6.79E-03	6.68E-03	2.66E-08	2.86E-04	9.415E-02	8.45E-08	6.88E-04	2.66E-08	2.86E-04	9.415E-02	8.45E-08
1.746E-07	1.646E-04	2.111E-01	6.63E-07	6.79E-03	6.68E-03	2.66E-08	2.86E-04	9.415E-02	8.45E-08	6.88E-04	2.66E-08	2.86E-04	9.415E-02	8.45E-08
1.927E-07	6.32E-04	1.06E-01	4.00E-06	4.27E-04	1.484E-07	1.947E-07	2.07E-03	1.611E-02	1.71E-07	2.25E-03	1.947E-07	2.07E-03	1.611E-02	1.71E-07
1.927E-07	6.32E-04	1.06E-01	4.00E-06	4.27E-04	1.484E-07	1.947E-07	2.07E-03	1.611E-02	1.71E-07	2.25E-03	1.947E-07	2.07E-03	1.611E-02	1.71E-07
1.927E-07	6.32E-04	1.06E-01	4.00E-06	4.27E-04	1.484E-07	1.947E-07	2.07E-03	1.611E-02	1.71E-07	2.25E-03	1.947E-07	2.07E-03	1.611E-02	1.71E-07
1.450E-07	5.80E-04	2.78E-01	4.28E-05	4.57E-02	1.34E-02	2.070E-07	2.21E-03	1.146E-02	2.5E-07	2.40E-03	2.070E-07	2.21E-03	1.146E-02	2.5E-07
1.450E-07	5.80E-04	2.78E-01	4.28E-05	4.57E-02	1.34E-02	2.070E-07	2.21E-03	1.146E-02	2.5E-07	2.40E-03	2.070E-07	2.21E-03	1.146E-02	2.5E-07
1.450E-07	5.80E-04	2.78E-01	4.28E-05	4.57E-02	1.34E-02	2.070E-07	2.21E-03	1.146E-02	2.5E-07	2.40E-03	2.070E-07	2.21E-03	1.146E-02	2.5E-07
1.450E-07	4.79E-04	2.431E-02	4.02E-06	4.29E-02	1.20E-02	1.99E-07	2.12E-03	1.106E-02	1.16E-07	2.31E-03	1.99E-07	2.12E-03	1.106E-02	1.16E-07
1.450E-07	4.79E-04	2.431E-02	4.02E-06	4.29E-02	1.20E-02	1.99E-07	2.12E-03							

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Yin North Road and Underpass Quarry													
Open Road 24 hour Emission Factors													
for ARMMQ model (Summary)													
Road Name	Road ID	NO _x Emission			NO ₂ Emission			PM ₁₀ Emission			PM _{2.5} Emission		
		Annual/mtm	g/m ² /mtm	g/m ² /km ²	Annual/mtm	g/m ² /mtm	g/m ² /km ²	Annual/mtm	g/m ² /mtm	g/m ² /km ²	Annual/mtm	g/m ² /mtm	g/m ² /km ²
Road 29	0900-0900	8.881	0.025	1.676	0.002	0.006	0.006	1.785	0.005	0.006	0.002	0.006	0.006
Road 29	0900-1000	4.572	0.016	0.406	0.002	0.003	0.003	0.905	0.002	0.003	0.001	0.003	0.003
Road 29	1000-1100	5.136	0.016	0.406	0.002	0.003	0.003	1.048	0.002	0.003	0.001	0.003	0.003
Road 29	1100-1200	4.572	0.016	0.406	0.002	0.003	0.003	0.905	0.002	0.003	0.001	0.003	0.003
Road 29	1300-1400	5.012	0.016	0.406	0.002	0.003	0.003	1.048	0.002	0.003	0.001	0.003	0.003
Road 29	1400-1500	5.012	0.016	0.406	0.002	0.003	0.003	1.048	0.002	0.003	0.001	0.003	0.003
Road 29	1600-1700	4.821	0.016	0.406	0.002	0.003	0.003	0.905	0.002	0.003	0.001	0.003	0.003
Road 29	1700-1800	4.786	0.016	0.406	0.002	0.003	0.003	0.880	0.002	0.003	0.001	0.003	0.003
Road 29	1800-1900	4.786	0.016	0.406	0.002	0.003	0.003	0.880	0.002	0.003	0.001	0.003	0.003
Road 29	1900-2000	2.616	0.014	0.246	0.001	0.002	0.002	0.531	0.001	0.002	0.000	0.002	0.002
Road 29	2000-2100	2.616	0.014	0.246	0.001	0.002	0.002	0.531	0.001	0.002	0.000	0.002	0.002
Road 29	2100-2200	2.616	0.014	0.246	0.001	0.002	0.002	0.531	0.001	0.002	0.000	0.002	0.002
Road 29	2200-2300	2.616	0.014	0.246	0.001	0.002	0.002	0.531	0.001	0.002	0.000	0.002	0.002
Road 29	2300-2400	2.616	0.014	0.246	0.001	0.002	0.002	0.531	0.001	0.002	0.000	0.002	0.002
Road 30	0000-0100	2.286	0.012	0.316	0.001	0.002	0.002	0.461	0.001	0.002	0.000	0.002	0.002
Road 30	0100-0200	2.286	0.012	0.316	0.001	0.002	0.002	0.461	0.001	0.002	0.000	0.002	0.002
Road 30	0200-0300	2.286	0.012	0.316	0.001	0.002	0.002	0.461	0.001	0.002	0.000	0.002	0.002
Road 30	0300-0400	2.286	0.012	0.316	0.001	0.002	0.002	0.461	0.001	0.002	0.000	0.002	0.002
Road 30	0400-0500	2.286	0.012	0.316	0.001	0.002	0.002	0.461	0.001	0.002	0.000	0.002	0.002
Road 30	0500-0600	2.286	0.012	0.316	0.001	0.002	0.002	0.461	0.001	0.002	0.000	0.002	0.002
Road 30	0600-0700	2.286	0.012	0.316	0.001	0.002	0.002	0.461	0.001	0.002	0.000	0.002	0.002
Road 30	0700-0800	2.286	0.012	0.316	0.001	0.002	0.002	0.461	0.001	0.002	0.000	0.002	0.002
Road 30	0800-0900	2.286	0.012	0.316	0.001	0.002	0.002	0.461	0.001	0.002	0.000	0.002	0.002
Road 30	0900-1000	2.286	0.012	0.316	0.001	0.002	0.002	0.461	0.001	0.002	0.000	0.002	0.002
Road 30	1000-1100	2.286	0.012	0.316	0.001	0.002	0.002	0.461	0.001	0.002	0.000	0.002	0.002
Road 30	1100-1200	2.286	0.012	0.316	0.001	0.002	0.002	0.461	0.001	0.002	0.000	0.002	0.002
Road 30	1200-1300	2.286	0.012	0.316	0.001	0.002	0.002	0.461	0.001	0.002	0.000	0.002	0.002
Road 30	1300-1400	2.286	0.012	0.316	0.001	0.002	0.002	0.461	0.001	0.002	0.000	0.002	0.002
Road 30	1400-1500	2.286	0.012	0.316	0.001	0.002	0.002	0.461	0.001	0.002	0.000	0.002	0.002
Road 30	1500-1600	2.286	0.012	0.316	0.001	0.002	0.002	0.461	0.001	0.002	0.000	0.002	0.002
Road 30	1600-1700	2.286	0.012	0.316	0.001	0.002	0.002	0.461	0.001	0.002	0.000	0.002	0.002
Road 30	1700-1800	2.286	0.012	0.316	0.001	0.002	0.002	0.461	0.001	0.002	0.000	0.002	0.002
Road 30	1800-1900	2.286	0.012	0.316	0.001	0.002	0.002	0.461	0.001	0.002	0.000	0.002	0.002
Road 30	1900-2000	2.286	0.012	0.316	0.001	0.002	0.002	0.461	0.001	0.002	0.000	0.002	0.002
Road 30	2000-2100	2.286	0.012	0.316	0.001	0.002	0.002	0.461	0.001	0.002	0.000	0.002	0.002
Road 30	2100-2200	2.286	0.012	0.316	0.001	0.002	0.002	0.461	0.001	0.002	0.000	0.002	0.002
Road 30	2200-2300	2.286	0.012	0.316	0.001	0.002	0.002	0.461	0.001	0.002	0.000	0.002	0.002
Road 30	2300-2400	2.286	0.012	0.316	0.001	0.002	0.002	0.461	0.001	0.002	0.000	0.002	0.002
Road 31	0100-0200	1.864	0.010	0.474	0.001	0.004	0.004	1.298	0.003	0.004	0.001	0.004	0.004
Road 31	0200-0300	4.875	0.018	0.908	0.002	0.007	0.007	3.088	0.005	0.008	0.002	0.008	0.008
Road 31	0300-0400	4.875	0.018	0.908	0.002	0.007	0.007	3.088	0.005	0.008	0.002	0.008	0.008
Road 31	0400-0500	4.875	0.018	0.908	0.002	0.007	0.007	3.088	0.005	0.008	0.002	0.008	0.008
Road 31	0500-0600	4.875	0.018	0.908	0.002	0.007	0.007	3.088	0.005	0.008	0.002	0.008	0.008
Road 31	0600-0700	4.875	0.018	0.908	0.002	0.007	0.007	3.088	0.005	0.008	0.002	0.008	0.008
Road 31	0700-0800	4.875	0.018	0.908	0.002	0.007	0.007	3.088	0.005	0.008	0.002	0.008	0.008
Road 31	0800-0900	4.875	0.018	0.908	0.002	0.007	0.007	3.088	0.005	0.008	0.002	0.008	0.008
Road 31	0900-1000	4.875	0.018	0.908	0.002	0.007	0.007	3.088	0.005	0.008	0.002	0.008	0.008
Road 31	1000-1100	4.875	0.018	0.908	0.002	0.007	0.007	3.088	0.005	0.008	0.002	0.008	0.008
Road 31	1100-1200	4.875	0.018	0.908	0.002	0.007	0.007	3.088	0.005	0.008	0.002	0.008	0.008
Road 31	1200-1300	4.875	0.018	0.908	0.002	0.007	0.007	3.088	0.005	0.008	0.002	0.008	0.008
Road 31	1300-1400	4.875	0.018	0.908	0.002	0.007	0.007	3.088	0.005	0.008	0.002	0.008	0.008
Road 31	1400-1500	4.875	0.018	0.908	0.002	0.007	0.007	3.088	0.005	0.008	0.002	0.008	0.008
Road 31	1500-1600	4.875	0.018	0.908	0.002	0.007	0.007	3.088	0.005	0.008	0.002	0.008	0.008
Road 31	1600-1700	4.875	0.018	0.908	0.002	0.007	0.007	3.088	0.005	0.008	0.002	0.008	0.008
Road 31	1700-1800	4.875	0.018	0.908	0.002	0.007	0.007	3.088	0.005	0.008	0.002	0.008	0.008
Road 31	1800-1900	4.875	0.018	0.908	0.002	0.007	0.007	3.088	0.005	0.008	0.002	0.008	0.008
Road 31	1900-2000	4.875	0.018	0.908	0.002	0.007	0.007	3.088	0.005	0.008	0.002	0.008	0.008
Road 31	2000-2100	4.875	0.018	0.908	0.002	0.007	0.007	3.088	0.005	0.008	0.002	0.008	0.008
Road 31	2100-2200	4.875	0.018	0.908	0.002	0.007	0.007	3.088	0.005	0.008	0.002	0.008	0.008
Road 31	2200-2300	4.875	0.018	0.908	0.002	0.007	0.007	3.088	0.005	0.008	0.002	0.008	0.008
Road 31	2300-2400	4.875	0.018	0.908	0.002	0.007	0.007	3.088	0.005	0.008	0.002	0.008	0.008
Road 32	0000-0100	2.418	0.013	0.505	0.001	0.004	0.004	1.081	0.001	0.004	0.001	0.004	0.004
Road 32	0100-0200	1.606	0.010	0.336	0.001	0.003	0.003	0.689	0.001	0.003	0.001	0.003	0.003
Road 32	0200-0300	1.606	0.010	0.336	0.001	0.003	0.003	0.689	0.001	0.003	0.001	0.003	0.003
Road 32	0300-0400	1.606	0.010	0.336	0.001	0.003	0.003	0.689	0.001	0.003	0.001	0.003	0.003
Road 32	0400-0500	1.606	0.010	0.336	0.001	0.003	0.003	0.689	0.001	0.003	0.001	0.003	0.003
Road 32	0500-0600	1.606	0.010	0.336	0.001	0.003	0.003	0.689	0.001	0.003	0.001	0.003	0.003
Road 32	0600-0700	1.606	0.010	0.336	0.001	0.003	0.003	0.689	0.001	0.003	0.001	0.003	0.003
Road 32	0700-0800	1.606	0.010	0.336	0.001	0.003	0.003	0.689	0.001	0.003	0.001	0.003	0.003
Road 32	0800-0900	1.606	0.010	0.336	0.001	0.003	0.003	0.689	0.001	0.003	0.001	0.003	0.003
Road 32	0900-1000	1.606	0.010	0.336	0.001	0.003	0.003	0.689	0.001	0.003	0.001	0.003	0.003
Road 32	1000-1100	1.606	0.010	0.336	0.001	0.003	0.003	0.689	0.001	0.003	0.001	0.003	0.003
Road 32	1100-1200	1.606	0.010	0.336	0.001	0.003	0.003	0.689	0.001	0.003	0.001	0.003	0.003
Road 32	1200-1300	1.606	0.010	0.336	0.001	0.003	0.003	0.689	0.001	0.003	0.001	0.003	0.003
Road 32	1300-1400	1.606	0.010	0.336	0.001	0.003	0.003	0.689	0.001	0.003	0.001	0.003	0.003
Road 32	1400-1500	1.606	0.010	0.336	0.001	0.003	0.003	0.689	0.001	0.003	0.001	0.003	0.003
Road 32	1500-1600	1.606	0.010	0.336	0.001	0.003	0.003	0.689	0.001	0.003	0.001	0.003	0.003
Road 32	1600-1700	1.606	0.010	0.336	0.001	0.003	0.003	0.689	0.001	0.003	0.001	0.003	0.003
Road 32	1700-1800	1.606	0.010	0.336	0.001	0.003	0.003	0.689	0.001	0.003	0.001	0.003	0.003
Road 32	1800-1900	1.606	0.010	0.336	0.001	0.003	0.003	0.689	0.001	0.003	0.001	0.003	0.003
Road 32	1900-2000	1.606	0.010	0.336	0.001	0.003	0.003	0.689	0.001	0.003	0.001	0.003	0.003
Road 32	2000-2100	1.606	0.010	0.336	0.001	0.003	0.003	0.689	0.001	0.003	0.001		

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Ying Nih North Underground Quarry														
Open Road 24 hour Emission Factors														
For ARMMQ model (Summary)														
Road Name	Road ID	Year	PM ₁₀ Emission			PM _{2.5} Emission			PM ₁₀ Emission			PM _{2.5} Emission		
			Annual/Unit/m ²	g/m ²	g/m ²	Annual/Unit/m ²	g/m ²	g/m ²	Annual/Unit/m ²	g/m ²	g/m ²	Annual/Unit/m ²	g/m ²	g/m ²
Road 00	1600-1700	2010	1.821	0.01	0.00	0.585	0.00	0.00	0.585	0.00	0.00	0.585	0.00	0.00
Road 00	1700-1800	2010	1.598	0.01	0.00	0.512	0.00	0.00	0.512	0.00	0.00	0.512	0.00	0.00
Road 00	1800-1900	2010	1.526	0.01	0.00	0.484	0.00	0.00	0.484	0.00	0.00	0.484	0.00	0.00
Road 00	1900-2000	2010	1.454	0.01	0.00	0.456	0.00	0.00	0.456	0.00	0.00	0.456	0.00	0.00
Road 00	2000-2100	2010	1.382	0.01	0.00	0.428	0.00	0.00	0.428	0.00	0.00	0.428	0.00	0.00
Road 00	2100-2200	2010	1.310	0.01	0.00	0.400	0.00	0.00	0.400	0.00	0.00	0.400	0.00	0.00
Road 00	2200-2300	2010	1.238	0.01	0.00	0.372	0.00	0.00	0.372	0.00	0.00	0.372	0.00	0.00
Road 00	2300-2400	2010	1.166	0.01	0.00	0.344	0.00	0.00	0.344	0.00	0.00	0.344	0.00	0.00
Road 00	2400-2500	2010	1.094	0.01	0.00	0.316	0.00	0.00	0.316	0.00	0.00	0.316	0.00	0.00
Road 00	2500-2600	2010	1.022	0.01	0.00	0.288	0.00	0.00	0.288	0.00	0.00	0.288	0.00	0.00
Road 00	2600-2700	2010	0.950	0.01	0.00	0.260	0.00	0.00	0.260	0.00	0.00	0.260	0.00	0.00
Road 00	2700-2800	2010	0.878	0.01	0.00	0.232	0.00	0.00	0.232	0.00	0.00	0.232	0.00	0.00
Road 00	2800-2900	2010	0.806	0.01	0.00	0.204	0.00	0.00	0.204	0.00	0.00	0.204	0.00	0.00
Road 00	2900-3000	2010	0.734	0.01	0.00	0.176	0.00	0.00	0.176	0.00	0.00	0.176	0.00	0.00
Road 00	3000-3100	2010	0.662	0.01	0.00	0.148	0.00	0.00	0.148	0.00	0.00	0.148	0.00	0.00
Road 00	3100-3200	2010	0.590	0.01	0.00	0.120	0.00	0.00	0.120	0.00	0.00	0.120	0.00	0.00
Road 00	3200-3300	2010	0.518	0.01	0.00	0.092	0.00	0.00	0.092	0.00	0.00	0.092	0.00	0.00
Road 00	3300-3400	2010	0.446	0.01	0.00	0.064	0.00	0.00	0.064	0.00	0.00	0.064	0.00	0.00
Road 00	3400-3500	2010	0.374	0.01	0.00	0.036	0.00	0.00	0.036	0.00	0.00	0.036	0.00	0.00
Road 00	3500-3600	2010	0.302	0.01	0.00	0.008	0.00	0.00	0.008	0.00	0.00	0.008	0.00	0.00
Road 00	3600-3700	2010	0.230	0.01	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00
Road 00	3700-3800	2010	0.158	0.01	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00
Road 00	3800-3900	2010	0.086	0.01	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00
Road 00	3900-4000	2010	0.014	0.01	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00
Road 00	4000-4100	2010	0.000	0.01	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00
Road 01	0000-0100	2014	1.342	0.01	0.00	0.420	0.00	0.00	0.420	0.00	0.00	0.420	0.00	0.00
Road 01	0100-0200	2014	1.156	0.01	0.00	0.360	0.00	0.00	0.360	0.00	0.00	0.360	0.00	0.00
Road 01	0200-0300	2014	1.072	0.01	0.00	0.336	0.00	0.00	0.336	0.00	0.00	0.336	0.00	0.00
Road 01	0300-0400	2014	0.988	0.01	0.00	0.304	0.00	0.00	0.304	0.00	0.00	0.304	0.00	0.00
Road 01	0400-0500	2014	0.904	0.01	0.00	0.280	0.00	0.00	0.280	0.00	0.00	0.280	0.00	0.00
Road 01	0500-0600	2014	0.820	0.01	0.00	0.256	0.00	0.00	0.256	0.00	0.00	0.256	0.00	0.00
Road 01	0600-0700	2014	0.736	0.01	0.00	0.224	0.00	0.00	0.224	0.00	0.00	0.224	0.00	0.00
Road 01	0700-0800	2014	0.652	0.01	0.00	0.192	0.00	0.00	0.192	0.00	0.00	0.192	0.00	0.00
Road 01	0800-0900	2014	0.568	0.01	0.00	0.160	0.00	0.00	0.160	0.00	0.00	0.160	0.00	0.00
Road 01	0900-1000	2014	0.484	0.01	0.00	0.128	0.00	0.00	0.128	0.00	0.00	0.128	0.00	0.00
Road 01	1000-1100	2014	0.400	0.01	0.00	0.096	0.00	0.00	0.096	0.00	0.00	0.096	0.00	0.00
Road 01	1100-1200	2014	0.316	0.01	0.00	0.064	0.00	0.00	0.064	0.00	0.00	0.064	0.00	0.00
Road 01	1200-1300	2014	0.232	0.01	0.00	0.032	0.00	0.00	0.032	0.00	0.00	0.032	0.00	0.00
Road 01	1300-1400	2014	0.148	0.01	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00
Road 01	1400-1500	2014	0.064	0.01	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00
Road 01	1500-1600	2014	0.000	0.01	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00
Road 01	1600-1700	2014	0.000	0.01	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00
Road 01	1700-1800	2014	0.000	0.01	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00
Road 01	1800-1900	2014	0.000	0.01	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00
Road 01	1900-2000	2014	0.000	0.01	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00
Road 01	2000-2100	2014	0.000	0.01	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00
Road 01	2100-2200	2014	0.000	0.01	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00
Road 01	2200-2300	2014	0.000	0.01	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00
Road 01	2300-2400	2014	0.000	0.01	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00
Road 01	2400-2500	2014	0.000	0.01	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00
Road 01	2500-2600	2014	0.000	0.01	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00
Road 01	2600-2700	2014	0.000	0.01	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00
Road 01	2700-2800	2014	0.000	0.01	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00
Road 01	2800-2900	2014	0.000	0.01	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00
Road 01	2900-3000	2014	0.000	0.01	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00
Road 01	3000-3100	2014	0.000	0.01	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00
Road 01	3100-3200	2014	0.000	0.01	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00
Road 01	3200-3300	2014	0.000	0.01	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00
Road 01	3300-3400	2014	0.000	0.01	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00
Road 01	3400-3500	2014	0.000	0.01	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00
Road 01	3500-3600	2014	0.000	0.01	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00
Road 01	3600-3700	2014	0.000	0.01	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00
Road 01	3700-3800	2014	0.000	0.01	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00
Road 01	3800-3900	2014	0.000	0.01	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00
Road 01	3900-4000	2014	0.000	0.01	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00
Road 01	4000-4100	2014	0.000	0.01	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00
Road 02	0000-0100	2014	1.342	0.01	0.00	0.420	0.00	0.00	0.420	0.00	0.00	0.420	0.00	0.00
Road 02	0100-0200	2014	1.156	0.01	0.00	0.360	0.00	0.00	0.360	0.00	0.00	0.360	0.00	0.00
Road 02	0200-0300	2014	1.072	0.01	0.00	0.336	0.00	0.00	0.336	0.00	0.00	0.336	0.00	0.00
Road 02	0300-0400	2014	0.988	0.01	0.00	0.304	0.00	0.00	0.304	0.00	0.00	0.304	0.00	0.00
Road 02	0400-0500	2014	0.904	0.01	0.00	0.280	0.00	0.00	0.280	0.00	0.00	0.280	0.00	0.00
Road 02	0500-0600	2014	0.820	0.01	0.00	0.256	0.00	0.00	0.256	0.00	0.00	0.256	0.00	0.00
Road 02	0600-0700	2014	0.736	0.01	0.00	0.224	0.00	0.00	0.224	0.00	0.00	0.224	0.00	0.00
Road 02	0700-0800	2014	0.652	0.01	0.00	0.192	0.00	0.00	0.192	0.00	0.00	0.192	0.00	0.00
Road 02	0800-0900	2014	0.568	0.01	0.00	0.160	0.00	0.00	0.160	0.00	0.00	0.160	0.00	0.00
Road 02	0900-1000	2014	0.484	0.01	0.00	0.128	0.00	0.00	0.128	0.00	0.00	0.128	0.00	0.00
Road 02	1000-1100	2014	0.400	0.01	0.00	0.096	0.00	0.00	0.096	0.00	0.00	0.096	0.00	0.00
Road 02	1100-1200	2014	0.316	0.01	0.00	0.064	0.00	0.00	0.064	0.00	0.00	0.064	0.00	0.00
Road 02	1200-1300	2014	0.232	0.01	0.00	0.032	0.00	0.00	0.032	0.00	0.00	0.032	0.00	0.00
Road 02	1300-1400	2014	0.148	0.01	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00
Road 02	1400-1500	2014	0.064	0.01	0.00	0.000	0.00	0.00	0.000	0.00	0.00	0.000	0.00	0.00
Road 02	1500-1600	2014	0.000	0.01										

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Day 24 Hour Emission Factors per AENM00 model (Summary)														
Road Name	Road ID	Hour	NO _x Emission			NO _x Emission			PM ₁₀ Emission			PM _{2.5} Emission		
			Annual/ton/ton			Annual/ton/ton			Annual/ton/ton			Annual/ton/ton		
			g/min/veh	g/min/veh	g/min/veh	g/min/veh	g/min/veh	g/min/veh	g/min/veh	g/min/veh	g/min/veh	g/min/veh	g/min/veh	g/min/veh
Road 35	35	0000-0100	0.9776	0.7222	6.4125	4.538	8.3147	2.3264	2.1902	1.5558	1.3865	0.7376	0.6282	
Road 35	35	0100-0200	1.1765	0.7222	6.4125	4.538	8.3147	2.3264	2.1902	1.5558	1.3865	0.7376	0.6282	
Road 35	35	0200-0300	1.3005	0.8868	6.086	5.7346	10.027	2.6884	2.8102	1.4488	1.3314	0.5062	0.1486	
Road 35	35	0300-0400	1.4405	0.8868	6.086	5.7346	10.027	2.6884	2.8102	1.4488	1.3314	0.5062	0.1486	
Road 35	35	0400-0500	1.7165	0.8868	6.086	5.7346	10.027	2.6884	2.8102	1.4488	1.3314	0.5062	0.1486	
Road 35	35	0500-0600	1.1885	0.8336	6.7805	5.2386	9.6467	3.2374	2.4772	1.2705	1.1535	0.6962	0.1876	
Road 35	35	0600-0700	0.9885	0.7222	6.4125	4.538	8.3147	2.3264	2.1902	1.5558	1.3865	0.7376	0.6282	
Road 35	35	0700-0800	1.1885	0.8336	6.7805	5.2386	9.6467	3.2374	2.4772	1.2705	1.1535	0.6962	0.1876	
Road 35	35	0800-0900	1.4405	0.8868	6.086	5.7346	10.027	2.6884	2.8102	1.4488	1.3314	0.5062	0.1486	
Road 35	35	0900-1000	1.7165	0.8868	6.086	5.7346	10.027	2.6884	2.8102	1.4488	1.3314	0.5062	0.1486	
Road 35	35	1000-1100	1.3865	0.6303	3.5754	0.9086	1.4786	0.5335	2.7725	0.9484	0.7052	0.5955	0.8325	
Road 35	35	1100-1200	1.3865	0.6303	3.5754	0.9086	1.4786	0.5335	2.7725	0.9484	0.7052	0.5955	0.8325	
Road 35	35	1200-1300	1.3485	0.3907	0.3101	0.7585	1.4545	1.2992	0.2742	0.6868	0.6965	0.2968	0.7458	
Road 35	35	1300-1400	1.3485	0.3907	0.3101	0.7585	1.4545	1.2992	0.2742	0.6868	0.6965	0.2968	0.7458	
Road 35	35	1400-1500	1.2776	0.4402	0.3687	0.7485	1.4985	1.3325	0.2689	0.7088	0.6215	0.2925	0.7688	
Road 35	35	1500-1600	1.2776	0.4402	0.3687	0.7485	1.4985	1.3325	0.2689	0.7088	0.6215	0.2925	0.7688	
Road 35	35	1600-1700	1.2605	0.4402	0.3687	0.7485	1.4985	1.3325	0.2689	0.7088	0.6215	0.2925	0.7688	
Road 35	35	1700-1800	1.2605	0.4402	0.3687	0.7485	1.4985	1.3325	0.2689	0.7088	0.6215	0.2925	0.7688	
Road 35	35	1800-1900	1.0145	0.2552	0.2674	0.4465	1.3006	1.1555	0.2113	0.6145	0.5465	0.2296	0.6748	
Road 35	35	1900-2000	1.0145	0.2552	0.2674	0.4465	1.3006	1.1555	0.2113	0.6145	0.5465	0.2296	0.6748	
Road 35	35	2000-2100	0.8605	0.1024	0.0707	0.2805	0.4927	0.4374	0.1868	0.2968	0.1865	0.2296	0.2276	
Road 35	35	2100-2200	0.8605	0.1024	0.0707	0.2805	0.4927	0.4374	0.1868	0.2968	0.1865	0.2296	0.2276	
Road 35	35	2200-2300	0.7165	0.0805	0.0585	0.2085	0.4147	0.3925	0.1298	0.1858	0.1644	0.1408	0.2101	
Road 35	35	2300-2400	0.7165	0.0805	0.0585	0.2085	0.4147	0.3925	0.1298	0.1858	0.1644	0.1408	0.2101	
Road 36	36	0000-0100	0.9320	0.7222	6.4125	4.538	8.3147	2.3264	2.1902	1.5558	1.3865	0.7376	0.6282	
Road 36	36	0100-0200	1.1558	0.8518	6.8795	5.6131	10.027	2.6884	2.8102	1.4488	1.3314	0.5062	0.1486	
Road 36	36	0200-0300	1.2885	0.8518	6.8795	5.6131	10.027	2.6884	2.8102	1.4488	1.3314	0.5062	0.1486	
Road 36	36	0300-0400	1.3776	0.8438	6.8136	5.3885	10.412	3.7995	2.9321	1.0888	1.7471	0.3202	0.2062	
Road 36	36	0400-0500	1.2385	0.8518	6.8795	5.6131	10.027	2.6884	2.8102	1.4488	1.3314	0.5062	0.1486	
Road 36	36	0500-0600	1.1558	0.8518	6.8795	5.6131	10.027	2.6884	2.8102	1.4488	1.3314	0.5062	0.1486	
Road 36	36	0600-0700	1.3558	1.5416	4.9884	6.3005	2.5316	2.3236	2.6424	1.1067	0.9718	0.8288	1.1467	
Road 36	36	0700-0800	1.3558	1.5416	4.9884	6.3005	2.5316	2.3236	2.6424	1.1067	0.9718	0.8288	1.1467	
Road 36	36	0800-0900	1.3115	0.5402	0.5402	5.9267	2.6676	2.4665	2.4385	1.1001	1.0044	0.6568	0.2067	
Road 36	36	0900-1000	1.3115	0.5402	0.5402	5.9267	2.6676	2.4665	2.4385	1.1001	1.0044	0.6568	0.2067	
Road 36	36	1000-1100	1.5446	0.6812	0.5908	6.5585	2.5736	2.3776	2.6311	0.0424	0.9456	0.8776	1.1397	
Road 36	36	1100-1200	1.5558	0.8757	0.5398	6.6316	2.4948	2.2995	2.6424	0.9378	0.9718	0.8882	1.097	
Road 36	36	1200-1300	1.6115	0.6502	0.5402	6.7378	2.5256	2.3325	2.6311	1.0107	0.9486	0.9295	1.1237	
Road 36	36	1300-1400	1.4465	0.6812	0.5402	6.4465	2.6876	2.4772	2.7092	0.9097	0.9896	0.9446	1.1167	
Road 36	36	1400-1500	1.4465	0.6812	0.5402	6.4465	2.6876	2.4772	2.7092	0.9097	0.9896	0.9446	1.1167	
Road 36	36	1500-1600	1.5395	0.5402	0.6334	6.6845	2.7345	2.5252	2.5395	1.0075	0.9885	0.8202	1.1457	
Road 36	36	1600-1700	1.5395	0.5402	0.6334	6.6845	2.7345	2.5252	2.5395	1.0075	0.9885	0.8202	1.1457	
Road 36	36	1700-1800	1.4005	0.5555	0.4754	6.2121	2.6434	2.4343	2.5542	0.0871	0.9758	0.9718	1.0994	
Road 36	36	1800-1900	1.4005	0.5555	0.4754	6.2121	2.6434	2.4343	2.5542	0.0871	0.9758	0.9718	1.0994	
Road 36	36	1900-2000	1.1885	0.8486	0.4545	5.4275	2.2249	2.0443	2.3773	0.6888	0.8696	0.5595	0.0607	
Road 36	36	2000-2100	1.1885	0.8486	0.4545	5.4275	2.2249	2.0443	2.3773	0.6888	0.8696	0.5595	0.0607	
Road 36	36	2100-2200	0.8555	0.7777	1.6334	0.4745	9.2567	8.5005	1.7740	0.3528	2.3424	1.8665	1.8484	
Road 36	36	2200-2300	0.8555	0.7777	1.6334	0.4745	9.2567	8.5005	1.7740	0.3528	2.3424	1.8665	1.8484	
Road 36	36	2300-2400	0.8508	0.7777	1.6334	0.4745	9.3357	8.6034	1.7740	0.3528	2.3978	1.8776	1.9318	
Road 36	36	0000-0100	0.8508	0.7777	1.6334	0.4745	9.3357	8.6034	1.7740	0.3528	2.3978	1.8776	1.9318	
Road 36	36	0100-0200	0.9765	0.4402	0.3687	0.7485	1.4985	1.3325	0.2689	0.7088	0.6215	0.2925	0.7688	
Road 36	36	0200-0300	0.9765	0.4402	0.3687	0.7485	1.4985	1.3325	0.2689	0.7088	0.6215	0.2925	0.7688	
Road 36	36	0300-0400	1.1885	0.8336	6.7805	5.2386	9.6467	3.2374	2.4772	1.2705	1.1535	0.6962	0.1876	
Road 36	36	0400-0500	1.1885	0.8336	6.7805	5.2386	9.6467	3.2374	2.4772	1.2705	1.1535	0.6962	0.1876	
Road 36	36	0500-0600	1.1885	0.8336	6.7805	5.2386	9.6467	3.2374	2.4772	1.2705	1.1535	0.6962	0.1876	
Road 36	36	0600-0700	0.8736	0.6282	0.3101	0.5658	3.3881	7.8335	0.6131	1.2508	0.9006	1.7982	1.3219	
Road 36	36	0700-0800	0.8736	0.6282	0.3101	0.5658	3.3881	7.8335	0.6131	1.2508	0.9006	1.7982	1.3219	
Road 36	36	0800-0900	0.7446	0.3386	0.1141	0.6555	0.7078	0.5925	1.6885	0.5259	2.1406	1.8551	2.8119	
Road 36	36	0900-1000	0.7446	0.3386	0.1141	0.6555	0.7078	0.5925	1.6885	0.5259	2.1406	1.8551	2.8119	
Road 36	36	1000-1100	0.6303	1.6558	1.3865	0.4565	7.5484	6.3235	0.5474	2.4749	2.0705	1.6885	2.6969	
Road 36	36	1100-1200	0.6303	1.6558	1.3865	0.4565	7.5484	6.3235	0.5474	2.4749	2.0705	1.6885	2.6969	
Road 36	36	1200-1300	1.1111	0.1626	0.3101	0.3386	0.8886	0.9395	1.6471	0.2335	0.1997	0.7466	0.2556	
Road 36	36	1300-1400	1.1111	0.1626	0.3101	0.3386	0.8886	0.9395	1.6471	0.2335	0.1997	0.7466	0.2556	
Road 36	36	1400-1500	1.1111	0.1626	0.3101	0.3386	0.8886	0.9395	1.6471	0.2335	0.1997	0.7466	0.2556	
Road 36	36	1500-1600	1.1111	0.1626	0.3101	0.3386	0.8886	0.9395	1.6471	0.2335	0.1997	0.7466	0.2556	
Road 36	36	1600-1700	1.1111	0.1626	0.3101	0.3386	0.8886	0.9395	1.6471	0.2335	0.1997	0.7466	0.2556	
Road 36	36	1700-1800	1.1111	0.1626	0.3101	0.3386	0.8886	0.9395	1.6471	0.2335	0.1997	0.7466	0.2556	
Road 36	36	1800-1900	1.1111	0.1626	0.3101	0.3386	0.8886	0.9395	1.6471	0.2335	0.1997	0.7466	0.2556	
Road 36	36	1900-2000	1.1111	0.1626	0.3101	0.3386	0.8886	0.9395	1.6471	0.2335	0.1997	0.7466	0.2556	
Road 36	36	2000-2100	1.1111	0.1626	0.3101	0.3386	0.8886	0.9395	1.6471	0.2335	0.1997	0.7466	0.2556	
Road 36	36	2100-2200	1.1111	0.1626	0.3101	0.3386	0.8886	0.9395	1.6471	0.2335	0.1997	0.7466	0.2556	
Road 36	36	2200-2300	1.1111	0.1626	0.3101	0.3386	0.8886	0.9395	1.6471	0.2335	0.1997	0.7466	0.2556	
Road 36	36	2300-2400	1.1111	0.1626	0.3101	0.3386	0.8886	0.9395	1.6471	0.2335	0.1997	0.7466	0.2556	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Top 24 Hour Emission Factors per AEMMO model (Summary)																		
Road Name	Road ID	Hour	NO _x Emission				NO ₂ Emission				PM ₁₀ Emission				PM _{2.5} Emission			
			Annual/ton/hour				Annual/ton/hour				Annual/ton/hour				Annual/ton/hour			
			g/m ³ /m ³	g/m ³ /m ³	g/m ³ /m ³	g/m ³ /m ³	g/m ³ /m ³	g/m ³ /m ³	g/m ³ /m ³	g/m ³ /m ³	g/m ³ /m ³	g/m ³ /m ³	g/m ³ /m ³	g/m ³ /m ³	g/m ³ /m ³	g/m ³ /m ³	g/m ³ /m ³	
Road #6	46	0900-1200	2.115	0.342	0.342	1.486	0.352	0.421	5.362	0.421	0.786	1.486	0.352	0.421	0.786	0.352	0.421	
Road #6	46	1200-1500	2.446	0.532	0.471	1.555	0.386	0.421	6.173	0.746	0.854	6.725	0.737	0.932	0.841	0.737	0.932	
Road #6	46	1500-1800	2.788	0.472	0.472	1.603	0.466	0.298	6.881	0.721	0.791	7.508	0.731	0.811	0.811	0.731	0.811	
Road #6	46	1800-2100	2.630	0.472	0.472	1.586	0.466	0.298	6.881	0.721	0.791	7.508	0.731	0.811	0.811	0.731	0.811	
Road #6	46	2100-2400	2.386	0.472	0.472	1.548	0.446	0.298	6.486	0.721	0.791	6.986	0.731	0.811	0.811	0.731	0.811	
Road #6	46	1300-1400	3.262	0.672	0.672	1.547	0.486	0.456	7.311	0.798	0.981	8.341	0.868	0.932	0.932	0.868	0.932	
Road #6	46	1400-1500	3.252	0.672	0.672	1.548	0.486	0.456	7.311	0.798	0.981	8.341	0.868	0.932	0.932	0.868	0.932	
Road #6	46	1500-1600	3.113	0.672	0.672	1.548	0.486	0.456	7.311	0.798	0.981	8.341	0.868	0.932	0.932	0.868	0.932	
Road #6	46	1600-1700	3.702	0.932	0.932	1.798	0.528	0.552	8.771	1.231	1.561	8.611	0.931	1.708	1.708	0.931	1.708	
Road #6	46	1700-1800	2.298	0.672	0.672	1.526	0.486	0.386	6.986	0.798	0.981	6.486	0.731	0.811	0.811	0.731	0.811	
Road #6	46	1800-1900	2.666	0.672	0.672	1.548	0.486	0.456	7.311	0.798	0.981	8.341	0.868	0.932	0.932	0.868	0.932	
Road #6	46	1900-2000	1.452	0.332	0.291	1.138	0.352	0.386	4.332	0.301	0.676	4.732	0.441	0.528	0.528	0.441	0.528	
Road #6	46	2000-2100	1.422	0.282	0.291	1.272	0.298	0.186	4.242	0.346	0.776	4.642	0.401	0.728	0.728	0.401	0.728	
Road #6	46	2100-2200	1.242	0.282	0.291	1.198	0.298	0.186	3.728	0.386	0.854	4.052	0.396	0.686	0.686	0.396	0.686	
Road #6	46	2200-2300	1.302	0.282	0.291	1.272	0.298	0.186	4.242	0.346	0.776	4.642	0.401	0.728	0.728	0.401	0.728	
Road #6	46	2300-2400	1.132	0.272	0.151	1.262	0.211	0.136	3.686	0.346	0.554	4.352	0.378	0.942	0.942	0.378	0.942	
Road #7	47	0000-0100	1.762	0.372	0.372	1.398	0.486	0.486	7.231	0.731	0.276	7.881	0.738	0.081	0.081	0.738	0.081	
Road #7	47	0100-0200	1.862	0.372	0.372	1.398	0.486	0.486	7.231	0.731	0.276	7.881	0.738	0.081	0.081	0.738	0.081	
Road #7	47	0200-0300	2.012	0.742	0.742	1.846	0.596	0.614	8.052	1.351	1.594	8.346	1.461	1.666	1.666	1.461	1.666	
Road #7	47	0300-0400	2.198	0.672	0.672	1.526	0.486	0.456	7.311	0.798	0.981	8.341	0.868	0.932	0.932	0.868	0.932	
Road #7	47	0400-0500	2.652	0.672	0.672	1.548	0.486	0.456	7.311	0.798	0.981	8.341	0.868	0.932	0.932	0.868	0.932	
Road #7	47	0500-0600	3.122	0.886	0.886	1.912	0.528	0.552	8.771	1.231	1.561	8.771	0.931	1.708	1.708	0.931	1.708	
Road #7	47	0600-0700	3.122	0.886	0.886	1.912	0.528	0.552	8.771	1.231	1.561	8.771	0.931	1.708	1.708	0.931	1.708	
Road #7	47	0700-0800	3.862	0.742	0.742	1.846	0.596	0.614	8.052	1.351	1.594	8.346	1.461	1.666	1.666	1.461	1.666	
Road #7	47	0800-0900	3.862	0.742	0.742	1.846	0.596	0.614	8.052	1.351	1.594	8.346	1.461	1.666	1.666	1.461	1.666	
Road #7	47	0900-1000	4.138	0.926	0.926	1.112	0.313	0.518	9.001	0.711	0.956	1.811	0.721	1.378	1.378	0.721	1.378	
Road #7	47	1000-1100	4.802	0.926	0.926	1.101	0.262	0.478	5.399	0.798	1.526	0.771	0.798	0.672	0.672	0.798	0.672	
Road #7	47	1100-1200	4.442	0.926	0.926	1.101	0.262	0.478	5.399	0.798	1.526	0.771	0.798	0.672	0.672	0.798	0.672	
Road #7	47	1200-1300	4.442	0.926	0.926	1.101	0.262	0.478	5.399	0.798	1.526	0.771	0.798	0.672	0.672	0.798	0.672	
Road #7	47	1300-1400	4.442	0.926	0.926	1.101	0.262	0.478	5.399	0.798	1.526	0.771	0.798	0.672	0.672	0.798	0.672	
Road #7	47	1400-1500	4.442	0.926	0.926	1.101	0.262	0.478	5.399	0.798	1.526	0.771	0.798	0.672	0.672	0.798	0.672	
Road #7	47	1500-1600	4.442	0.926	0.926	1.101	0.262	0.478	5.399	0.798	1.526	0.771	0.798	0.672	0.672	0.798	0.672	
Road #7	47	1600-1700	4.442	0.926	0.926	1.101	0.262	0.478	5.399	0.798	1.526	0.771	0.798	0.672	0.672	0.798	0.672	
Road #7	47	1700-1800	4.442	0.926	0.926	1.101	0.262	0.478	5.399	0.798	1.526	0.771	0.798	0.672	0.672	0.798	0.672	
Road #7	47	1800-1900	4.442	0.926	0.926	1.101	0.262	0.478	5.399	0.798	1.526	0.771	0.798	0.672	0.672	0.798	0.672	
Road #7	47	1900-2000	4.442	0.926	0.926	1.101	0.262	0.478	5.399	0.798	1.526	0.771	0.798	0.672	0.672	0.798	0.672	
Road #7	47	2000-2100	4.442	0.926	0.926	1.101	0.262	0.478	5.399	0.798	1.526	0.771	0.798	0.672	0.672	0.798	0.672	
Road #7	47	2100-2200	4.442	0.926	0.926	1.101	0.262	0.478	5.399	0.798	1.526	0.771	0.798	0.672	0.672	0.798	0.672	
Road #7	47	2200-2300	4.442	0.926	0.926	1.101	0.262	0.478	5.399	0.798	1.526	0.771	0.798	0.672	0.672	0.798	0.672	
Road #7	47	2300-2400	4.442	0.926	0.926	1.101	0.262	0.478	5.399	0.798	1.526	0.771	0.798	0.672	0.672	0.798	0.672	
Road #8	48	0000-0100	2.732	0.152	0.071	1.028	0.086	0.141	7.782	0.831	0.606	3.841	0.708	0.598	0.638	0.708	0.598	
Road #8	48	0100-0200	2.732	0.152	0.071	1.028	0.086	0.141	7.782	0.831	0.606	3.841	0.708	0.598	0.638	0.708	0.598	
Road #8	48	0200-0300	2.938	0.172	0.071	1.028	0.086	0.141	7.782	0.831	0.606	3.841	0.708	0.598	0.638	0.708	0.598	
Road #8	48	0300-0400	3.132	0.172	0.071	1.028	0.086	0.141	7.782	0.831	0.606	3.841	0.708	0.598	0.638	0.708	0.598	
Road #8	48	0400-0500	3.312	0.172	0.071	1.028	0.086	0.141	7.782	0.831	0.606	3.841	0.708	0.598	0.638	0.708	0.598	
Road #8	48	0500-0600	3.492	0.172	0.071	1.028	0.086	0.141	7.782	0.831	0.606	3.841	0.708	0.598	0.638	0.708	0.598	
Road #8	48	0600-0700	3.672	0.172	0.071	1.028	0.086	0.141	7.782	0.831	0.606	3.841	0.708	0.598	0.638	0.708	0.598	
Road #8	48	0700-0800	3.852	0.172	0.071	1.028	0.086	0.141	7.782	0.831	0.606	3.841	0.708	0.598	0.638	0.708	0.598	
Road #8	48	0800-0900	4.032	0.172	0.071	1.028	0.086	0.141	7.782	0.831	0.606	3.841	0.708	0.598	0.638	0.708	0.598	
Road #8	48	0900-1000	4.212	0.172	0.071	1.028	0.086	0.141	7.782	0.831	0.606	3.841	0.708	0.598	0.638	0.708	0.598	
Road #8	48	1000-1100	4.392	0.172	0.071	1.028	0.086	0.141	7.782	0.831	0.606	3.841	0.708	0.598	0.638	0.708	0.598	
Road #8	48	1100-1200	4.572	0.172	0.071	1.028	0.086	0.141	7.782	0.831	0.606	3.841	0.708	0.598	0.638	0.708	0.598	
Road #8	48	1200-1300	4.752	0.172	0.071	1.028	0.086	0.141	7.782	0.831	0.606	3.841	0.708	0.598	0.638	0.708	0.598	
Road #8	48	1300-1400	4.932	0.172	0.071	1.028	0.086	0.141	7.782	0.831	0.606	3.841	0.708	0.598	0.638	0.708	0.598	
Road #8	48	1400-1500	5.112	0.172	0.071	1.028	0.086	0.141	7.782	0.831	0.606	3.841	0.708	0.598	0.638	0.708	0.598	
Road #8	48	1500-1600	5.292	0.172	0.071	1.028	0.086	0.141	7.782	0.831	0.606	3.841	0.708	0.598	0.638	0.708	0.598	
Road #8	48	1600-1700	5.472	0.172	0.071	1.028	0.086	0.141	7.782	0.831	0.606	3.841	0.708	0.598	0.638	0.708	0.598	
Road #8	48	1700-1800	5.652	0.172	0.071	1.028	0.086	0.141	7.782	0.831	0.606	3.841	0.708	0.598	0.638	0.708	0.598	
Road #8	48	1800-1900	5.832	0.172	0.071	1.028	0.086	0.141	7.782	0.831	0.606	3.841	0.708	0.598	0.638	0.708	0.598	
Road #8	48	1900-2000	6.012	0.172	0.071	1.028	0.086	0.141	7.782	0.831	0.606	3.841	0.708	0.598	0.638	0.708	0.598	
Road #8	48	2000-2100	6.192	0.172	0.071	1.028	0.086	0.141	7.782	0.831	0.606	3.841	0.708	0.598	0.638	0.708	0.598	
Road #8	48	2100-2200	6.372	0.172	0.071	1.028	0.086	0.141	7.782	0.831	0.606	3.841	0.708	0.598	0.638	0.708	0.598	
Road #8	48	2200-2300	6.552	0.172	0.071	1.028	0.086	0.141	7.782	0.831	0.606	3.841	0.708	0.598	0.638	0.708	0.598	
Road #8	48	2300-2400	6.732	0.172	0.071	1.028	0.086	0.141	7.782	0.831	0.606	3.841	0.708	0.598	0.638	0.708	0.598	
Road #9	49	0000-0100	2.282	0.828	0.776	2.808	0.108	0.949	1.162	0.428	2.286	3.942	0.262	0.646	0.29			

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.2 Emission Factor in 2030.xlsx

Underground Quarry					Four Emission Factors								Year 2020	
Hourly		Annual Emission		NO _x Emission		PM ₁₀ Emission		PM _{2.5} Emission		PM ₁₀ Emission		PM _{2.5} Emission		
Row ID	Summary	NO _x g/min	g/min	Annual/Min	Annual/Min	PM ₁₀ g/min	g/min	Annual/Min	Annual/Min	PM _{2.5} g/min	g/min	Annual/Min	Annual/Min	
27	2000-2100	5.316	5.316	5.316	7.716	3.268	3.268	3.068	3.068	1.126	1.126	1.016	1.016	
28	2100-2200	5.326	5.326	5.326	7.726	3.278	3.278	3.078	3.078	1.136	1.136	1.026	1.026	
29	2200-2300	4.716	4.716	4.096	3.124	3.144	2.848	2.886	1.096	1.116	0.956	1.001	1.246	1.046
30	2300-2400	4.086	4.086	3.996	2.648	2.728	2.286	2.286	1.168	1.116	0.908	0.908	0.806	0.806
31	0000-0100	5.176	5.176	5.176	7.476	3.168	2.916	2.916	1.106	1.106	0.996	0.996	0.996	0.996
32	0100-0200	1.076	1.076	1.076	1.426	0.484	0.456	0.456	0.168	0.168	0.156	0.156	0.156	0.156
33	0200-0300	1.246	1.246	1.246	1.646	0.540	0.512	0.512	0.188	0.188	0.176	0.176	0.176	0.176
34	0300-0400	1.286	1.286	1.286	1.686	0.560	0.532	0.532	0.198	0.198	0.186	0.186	0.186	0.186
35	0400-0500	1.186	1.186	1.186	1.586	0.516	0.488	0.488	0.178	0.178	0.166	0.166	0.166	0.166
36	0500-0600	1.166	1.166	1.166	1.566	0.504	0.476	0.476	0.172	0.172	0.160	0.160	0.160	0.160
37	0600-0700	1.346	1.346	1.346	1.746	0.568	0.540	0.540	0.192	0.192	0.180	0.180	0.180	0.180
38	0700-0800	1.316	1.316	1.316	1.716	0.556	0.528	0.528	0.188	0.188	0.176	0.176	0.176	0.176
39	0800-0900	1.486	1.486	1.486	1.986	0.620	0.592	0.592	0.212	0.212	0.200	0.200	0.200	0.200
40	0900-1000	1.556	1.556	1.556	2.056	0.668	0.640	0.640	0.228	0.228	0.216	0.216	0.216	0.216
41	1000-1100	1.686	1.686	1.686	2.286	0.724	0.696	0.696	0.244	0.244	0.232	0.232	0.232	0.232
42	1100-1200	1.816	1.816	1.816	2.416	0.788	0.760	0.760	0.260	0.260	0.248	0.248	0.248	0.248
43	1200-1300	1.856	1.856	1.856	2.456	0.808	0.780	0.780	0.264	0.264	0.252	0.252	0.252	0.252
44	1300-1400	1.706	1.706	1.706	2.206	0.736	0.708	0.708	0.240	0.240	0.228	0.228	0.228	0.228
45	1400-1500	1.696	1.696	1.696	2.196	0.728	0.700	0.700	0.236	0.236	0.224	0.224	0.224	0.224
46	1500-1600	1.656	1.656	1.656	2.156	0.708	0.680	0.680	0.228	0.228	0.216	0.216	0.216	0.216
47	1600-1700	1.486	1.486	1.486	1.986	0.620	0.592	0.592	0.212	0.212	0.200	0.200	0.200	0.200
48	1700-1800	1.456	1.456	1.456	1.956	0.600	0.572	0.572	0.204	0.204	0.192	0.192	0.192	0.192
49	1800-1900	1.446	1.446	1.446	1.946	0.592	0.564	0.564	0.200	0.200	0.188	0.188	0.188	0.188
50	1900-2000	1.436	1.436	1.436	1.936	0.584	0.556	0.556	0.196	0.196	0.184	0.184	0.184	0.184
51	2000-2100	1.426	1.426	1.426	1.926	0.576	0.548	0.548	0.192	0.192	0.180	0.180	0.180	0.180
52	2100-2200	1.416	1.416	1.416	1.916	0.568	0.540	0.540	0.188	0.188	0.176	0.176	0.176	0.176
53	2200-2300	1.406	1.406	1.406	1.906	0.560	0.532	0.532	0.184	0.184	0.172	0.172	0.172	0.172
54	2300-2400	1.396	1.396	1.396	1.896	0.552	0.524	0.524	0.180	0.180	0.168	0.168	0.168	0.168
55	0000-0100	1.386	1.386	1.386	1.886	0.544	0.516	0.516	0.176	0.176	0.164	0.164	0.164	0.164
56	0100-0200	1.376	1.376	1.376	1.876	0.536	0.508	0.508	0.172	0.172	0.160	0.160	0.160	0.160
57	0200-0300	1.366	1.366	1.366	1.866	0.528	0.500	0.500	0.168	0.168	0.156	0.156	0.156	0.156
58	0300-0400	1.356	1.356	1.356	1.856	0.520	0.492	0.492	0.164	0.164	0.152	0.152	0.152	0.152
59	0400-0500	1.346	1.346	1.346	1.846	0.512	0.484	0.484	0.160	0.160	0.148	0.148	0.148	0.148
60	0500-0600	1.336	1.336	1.336	1.836	0.504	0.476	0.476	0.156	0.156	0.144	0.144	0.144	0.144
61	0600-0700	1.326	1.326	1.326	1.826	0.496	0.468	0.468	0.152	0.152	0.140	0.140	0.140	0.140
62	0700-0800	1.316	1.316	1.316	1.816	0.488	0.460	0.460	0.148	0.148	0.136	0.136	0.136	0.136
63	0800-0900	1.306	1.306	1.306	1.806	0.480	0.452	0.452	0.144	0.144	0.132	0.132	0.132	0.132
64	0900-1000	1.296	1.296	1.296	1.796	0.472	0.444	0.444	0.140	0.140	0.128	0.128	0.128	0.128
65	1000-1100	1.286	1.286	1.286	1.786	0.464	0.436	0.436	0.136	0.136	0.124	0.124	0.124	0.124
66	1100-1200	1.276	1.276	1.276	1.776	0.456	0.428	0.428	0.132	0.132	0.120	0.120	0.120	0.120
67	1200-1300	1.266	1.266	1.266	1.766	0.448	0.420	0.420	0.128	0.128	0.116	0.116	0.116	0.116
68	1300-1400	1.256	1.256	1.256	1.756	0.440	0.412	0.412	0.124	0.124	0.112	0.112	0.112	0.112
69	1400-1500	1.246	1.246	1.246	1.746	0.432	0.404	0.404	0.120	0.120	0.108	0.108	0.108	0.108
70	1500-1600	1.236	1.236	1.236	1.736	0.424	0.396	0.396	0.116	0.116	0.104	0.104	0.104	0.104
71	1600-1700	1.226	1.226	1.226	1.726	0.416	0.388	0.388	0.112	0.112	0.100	0.100	0.100	0.100
72	1700-1800	1.216	1.216	1.216	1.716	0.408	0.380	0.380	0.108	0.108	0.096	0.096	0.096	0.096
73	1800-1900	1.206	1.206	1.206	1.706	0.400	0.372	0.372	0.104	0.104	0.092	0.092	0.092	0.092
74	1900-2000	1.196	1.196	1.196	1.696	0.392	0.364	0.364	0.100	0.100	0.088	0.088	0.088	0.088
75	2000-2100	1.186	1.186	1.186	1.686	0.384	0.356	0.356	0.096	0.096	0.084	0.084	0.084	0.084
76	2100-2200	1.176	1.176	1.176	1.676	0.376	0.348	0.348	0.092	0.092	0.080	0.080	0.080	0.080
77	2200-2300	1.166	1.166	1.166	1.666	0.368	0.340	0.340	0.088	0.088	0.076	0.076	0.076	0.076
78	2300-2400	1.156	1.156	1.156	1.656	0.360	0.332	0.332	0.084	0.084	0.072	0.072	0.072	0.072
79	0000-0100	1.146	1.146	1.146	1.646	0.352	0.324	0.324	0.080	0.080	0.068	0.068	0.068	0.068
80	0100-0200	1.136	1.136	1.136	1.636	0.344	0.316	0.316	0.076	0.076	0.064	0.064	0.064	0.064
81	0200-0300	1.126	1.126	1.126	1.626	0.336	0.308	0.308	0.072	0.072	0.060	0.060	0.060	0.060
82	0300-0400	1.116	1.116	1.116	1.616	0.328	0.300	0.300	0.068	0.068	0.056	0.056	0.056	0.056
83	0400-0500	1.106	1.106	1.106	1.606	0.320	0.292	0.292	0.064	0.064	0.052	0.052	0.052	0.052
84	0500-0600	1.096	1.096	1.096	1.596	0.312	0.284	0.284	0.060	0.060	0.048	0.048	0.048	0.048
85	0600-0700	1.086	1.086	1.086	1.586	0.304	0.276	0.276	0.056	0.056	0.044	0.044	0.044	0.044
86	0700-0800	1.076	1.076	1.076	1.576	0.296	0.268	0.268	0.052	0.052	0.040	0.040	0.040	0.040
87	0800-0900	1.066	1.066	1.066	1.566	0.288	0.260	0.260	0.048	0.048	0.036	0.036	0.036	0.036
88	0900-1000	1.056	1.056	1.056	1.556	0.280	0.252	0.252	0.044	0.044	0.032	0.032	0.032	0.032
89	1000-1100	1.046	1.046	1.046	1.546	0.272	0.244	0.244	0.040	0.040	0.028	0.028	0.028	0.028
90	1100-1200	1.036	1.036	1.036	1.536	0.264	0.236	0.236	0.036	0.036	0.024	0.024	0.024	0.024
91	1200-1300	1.026	1.026	1.026	1.526	0.256	0.228	0.228	0.032	0.032	0.020	0.020	0.020	0.020
92	1300-1400	1.016	1.016	1.016	1.516	0.248	0.220	0.220	0.028	0.028	0.016	0.016	0.016	0.016
93	1400-1500	1.006	1.006	1.006	1.506	0.240	0.212	0.212	0.024	0.024	0.012	0.012	0.012	0.012
94	1500-1600	0.996	0.996	0.996	1.496	0.232	0.204	0.204	0.020	0.020	0.008	0.008	0.008	0.008
95	1600-1700	0.986	0.986	0.986	1.486	0.224	0.196	0.196	0.016	0.016	0.004	0.004	0.004	0.004
96	1700-1800	0.976	0.976	0.976	1.476	0.216	0.188	0.188	0.012	0.012	0.000	0.000	0.000	0.000
97	1800-1900	0.966	0.966	0.966	1.466	0.208	0.180	0.180	0.008	0.008	0.000	0.000	0.000	0.000
98	1900-2000	0.956	0.956	0.956	1.456	0.200	0.172	0.172	0.004	0.004	0.000	0.000	0.000	0.000
99	2000-2100	0.946	0.946	0.946	1.446	0.192	0.164	0.164	0.000	0.000	0.000	0.000	0.000	0.000
100	2100-2200	0.936	0.936	0.936	1.436	0.184	0.156	0.156	0.000	0.000	0.000	0.000	0.000	0.000

\\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.2 Emission Factor in 2030.xlsx

Underground Quarry													
Four Season Factors		Year 2030											
Hour		NO ₂ Emission			NO _x Emission			PM ₁₀ Emission			PM _{2.5} Emission		
Row	ID	Annual/Min	g/min	tonne/year	Annual/Min	g/min	tonne/year	Annual/Min	g/min	tonne/year	Annual/Min	g/min	tonne/year
49	0040-0500	2,615.0	6.35	5,507.0	2,680.0	6.56	5,744.0	1,206.0	3.04	2,666.0	1,566.0	4.01	9,244.0
49	0040-0500	2,946.0	7.17	6,187.0	3,033.0	7.71	6,111.0	1,265.0	3.28	6,423.0	1,372.0	3.46	5,466.0
49	0040-0500	2,486.0	6.26	5,443.0	2,551.0	6.48	5,598.0	1,182.0	3.01	2,607.0	1,501.0	3.77	9,176.0
49	0700-0800	2,486.0	6.26	5,443.0	2,551.0	6.48	5,598.0	1,182.0	3.01	2,607.0	1,501.0	3.77	9,176.0
49	0800-0900	2,486.0	6.26	5,443.0	2,551.0	6.48	5,598.0	1,182.0	3.01	2,607.0	1,501.0	3.77	9,176.0
49	0900-1000	2,486.0	6.26	5,443.0	2,551.0	6.48	5,598.0	1,182.0	3.01	2,607.0	1,501.0	3.77	9,176.0
49	1000-1100	2,486.0	6.26	5,443.0	2,551.0	6.48	5,598.0	1,182.0	3.01	2,607.0	1,501.0	3.77	9,176.0
49	1100-1200	2,486.0	6.26	5,443.0	2,551.0	6.48	5,598.0	1,182.0	3.01	2,607.0	1,501.0	3.77	9,176.0
49	1200-1300	2,486.0	6.26	5,443.0	2,551.0	6.48	5,598.0	1,182.0	3.01	2,607.0	1,501.0	3.77	9,176.0
49	1300-1400	2,486.0	6.26	5,443.0	2,551.0	6.48	5,598.0	1,182.0	3.01	2,607.0	1,501.0	3.77	9,176.0
49	1400-1500	2,486.0	6.26	5,443.0	2,551.0	6.48	5,598.0	1,182.0	3.01	2,607.0	1,501.0	3.77	9,176.0
49	1500-1600	2,486.0	6.26	5,443.0	2,551.0	6.48	5,598.0	1,182.0	3.01	2,607.0	1,501.0	3.77	9,176.0
49	1600-1700	2,486.0	6.26	5,443.0	2,551.0	6.48	5,598.0	1,182.0	3.01	2,607.0	1,501.0	3.77	9,176.0
49	1700-1800	2,486.0	6.26	5,443.0	2,551.0	6.48	5,598.0	1,182.0	3.01	2,607.0	1,501.0	3.77	9,176.0
49	1800-1900	2,486.0	6.26	5,443.0	2,551.0	6.48	5,598.0	1,182.0	3.01	2,607.0	1,501.0	3.77	9,176.0
49	1900-2000	2,486.0	6.26	5,443.0	2,551.0	6.48	5,598.0	1,182.0	3.01	2,607.0	1,501.0	3.77	9,176.0
49	2000-2100	2,486.0	6.26	5,443.0	2,551.0	6.48	5,598.0	1,182.0	3.01	2,607.0	1,501.0	3.77	9,176.0
49	2100-2200	2,486.0	6.26	5,443.0	2,551.0	6.48	5,598.0	1,182.0	3.01	2,607.0	1,501.0	3.77	9,176.0
49	2200-2300	2,486.0	6.26	5,443.0	2,551.0	6.48	5,598.0	1,182.0	3.01	2,607.0	1,501.0	3.77	9,176.0
49	2300-2400	2,486.0	6.26	5,443.0	2,551.0	6.48	5,598.0	1,182.0	3.01	2,607.0	1,501.0	3.77	9,176.0
49	2400-0100	2,486.0	6.26	5,443.0	2,551.0	6.48	5,598.0	1,182.0	3.01	2,607.0	1,501.0	3.77	9,176.0
49	0100-0200	2,486.0	6.26	5,443.0	2,551.0	6.48	5,598.0	1,182.0	3.01	2,607.0	1,501.0	3.77	9,176.0
49	0200-0300	2,486.0	6.26	5,443.0	2,551.0	6.48	5,598.0	1,182.0	3.01	2,607.0	1,501.0	3.77	9,176.0
49	0300-0400	2,486.0	6.26	5,443.0	2,551.0	6.48	5,598.0	1,182.0	3.01	2,607.0	1,501.0	3.77	9,176.0
49	0400-0500	2,486.0	6.26	5,443.0	2,551.0	6.48	5,598.0	1,182.0	3.01	2,607.0	1,501.0	3.77	9,176.0
49	0500-0600	1,011.0	4.77	2,708.0	2,224.0	1.87	971.0	1,874.0	7.90	691.0	1,511.0	2,031.0	8,188.0
49	0600-0700	978.0	4.77	2,278.0	4,576.0	4.00	2,881.0	2,068.0	1,768.0	1,588.0	8,211.0	1,921.0	1,711.0
49	0700-0800	1,211.0	4.86	2,711.0	4,266.0	4.13	4,796.0	2,466.0	1,768.0	2,436.0	2,366.0	2,921.0	4,911.0
49	0800-0900	1,011.0	4.77	2,708.0	2,224.0	1.87	971.0	1,874.0	7.90	691.0	1,511.0	2,031.0	8,188.0
49	0900-1000	1,151.0	2,861.0	1,403.0	5,684.0	1,161.0	6,016.0	2,016.0	2,478.0	2,276.0	2,921.0	2,511.0	2,481.0
49	1000-1100	1,201.0	2,861.0	1,403.0	5,684.0	1,161.0	6,016.0	2,016.0	2,478.0	2,276.0	2,921.0	2,511.0	2,481.0
49	1100-1200	1,201.0	2,861.0	1,403.0	5,684.0	1,161.0	6,016.0	2,016.0	2,478.0	2,276.0	2,921.0	2,511.0	2,481.0
49	1200-1300	1,446.0	1,446.0	7,788.0	5,888.0	5,798.0	10,301.0	2,688.0	2,588.0	1,356.0	2,921.0	2,921.0	1,461.0
49	1300-1400	1,446.0	1,446.0	7,788.0	5,888.0	5,798.0	10,301.0	2,688.0	2,588.0	1,356.0	2,921.0	2,921.0	1,461.0
49	1400-1500	1,446.0	1,446.0	7,788.0	5,888.0	5,798.0	10,301.0	2,688.0	2,588.0	1,356.0	2,921.0	2,921.0	1,461.0
49	1500-1600	1,321.0	1,446.0	7,788.0	5,888.0	5,798.0	10,301.0	2,688.0	2,588.0	1,356.0	2,921.0	2,921.0	1,461.0
49	1600-1700	1,381.0	1,446.0	7,788.0	5,888.0	5,798.0	10,301.0	2,688.0	2,588.0	1,356.0	2,921.0	2,921.0	1,461.0
49	1700-1800	1,381.0	1,446.0	7,788.0	5,888.0	5,798.0	10,301.0	2,688.0	2,588.0	1,356.0	2,921.0	2,921.0	1,461.0
49	1800-1900	1,381.0	1,446.0	7,788.0	5,888.0	5,798.0	10,301.0	2,688.0	2,588.0	1,356.0	2,921.0	2,921.0	1,461.0
49	1900-2000	1,061.0	1,446.0	7,788.0	5,888.0	5,798.0	10,301.0	2,688.0	2,588.0	1,356.0	2,921.0	2,921.0	1,461.0
49	2000-2100	1,061.0	1,446.0	7,788.0	5,888.0	5,798.0	10,301.0	2,688.0	2,588.0	1,356.0	2,921.0	2,921.0	1,461.0
49	2100-2200	1,061.0	1,446.0	7,788.0	5,888.0	5,798.0	10,301.0	2,688.0	2,588.0	1,356.0	2,921.0	2,921.0	1,461.0
49	2200-2300	1,141.0	1,446.0	7,788.0	5,888.0	5,798.0	10,301.0	2,688.0	2,588.0	1,356.0	2,921.0	2,921.0	1,461.0
49	2300-2400	1,141.0	1,446.0	7,788.0	5,888.0	5,798.0	10,301.0	2,688.0	2,588.0	1,356.0	2,921.0	2,921.0	1,461.0
49	2400-0100	1,141.0	1,446.0	7,788.0	5,888.0	5,798.0	10,301.0	2,688.0	2,588.0	1,356.0	2,921.0	2,921.0	1,461.0
49	0100-0200	1,141.0	1,446.0	7,788.0	5,888.0	5,798.0	10,301.0	2,688.0	2,588.0	1,356.0	2,921.0	2,921.0	1,461.0
49	0200-0300	1,141.0	1,446.0	7,788.0	5,888.0	5,798.0	10,301.0	2,688.0	2,588.0	1,356.0	2,921.0	2,921.0	1,461.0
49	0300-0400	1,141.0	1,446.0	7,788.0	5,888.0	5,798.0	10,301.0	2,688.0	2,588.0	1,356.0	2,921.0	2,921.0	1,461.0
49	0400-0500	1,141.0	1,446.0	7,788.0	5,888.0	5,798.0	10,301.0	2,688.0	2,588.0	1,356.0	2,921.0	2,921.0	1,461.0
49	0500-0600	2,311.0	2,311.0	1,711.0	2,311.0	2,311.0	1,711.0	1,181.0	1,181.0	1,181.0	1,181.0	1,181.0	3,056.0
49	0600-0700	2,311.0	2,311.0	1,711.0	2,311.0	2,311.0	1,711.0	1,181.0	1,181.0	1,181.0	1,181.0	1,181.0	3,056.0
49	0700-0800	1,371.0	1,221.0	8,331.0	2,241.0	8,331.0	5,591.0	1,091.0	1,541.0	2,411.0	1,191.0	1,381.0	2,621.0
49	0800-0900	1,671.0	1,221.0	8,331.0	2,241.0	8,331.0	5,591.0	1,091.0	1,541.0	2,411.0	1,191.0	1,381.0	2,621.0
49	0900-1000	1,671.0	1,221.0	8,331.0	2,241.0	8,331.0	5,591.0	1,091.0	1,541.0	2,411.0	1,191.0	1,381.0	2,621.0
49	1000-1100	1,481.0	1,411.0	8,761.0	2,681.0	7,761.0	5,331.0	1,301.0	3,801.0	2,591.0	1,411.0	1,131.0	2,811.0
49	1100-1200	1,481.0	1,411.0	8,761.0	2,681.0	7,761.0	5,331.0	1,301.0	3,801.0	2,591.0	1,411.0	1,131.0	2,811.0
49	1200-1300	1,481.0	1,411.0	8,761.0	2,681.0	7,761.0	5,331.0	1,301.0	3,801.0	2,591.0	1,411.0	1,131.0	2,811.0
49	1300-1400	1,481.0	1,411.0	8,761.0	2,681.0	7,761.0	5,331.0	1,301.0	3,801.0	2,591.0	1,411.0	1,131.0	2,811.0
49	1400-1500	1,481.0	1,411.0	8,761.0	2,681.0	7,761.0	5,331.0	1,301.0	3,801.0	2,591.0	1,411.0	1,131.0	2,811.0
49	1500-1600	1,481.0	1,411.0	8,761.0	2,681.0	7,761.0	5,331.0	1,301.0	3,801.0	2,591.0	1,411.0	1,131.0	2,811.0
49	1600-1700	1,481.0	1,411.0	8,761.0	2,681.0	7,761.0	5,331.0	1,301.0	3,801.0	2,591.0	1,411.0	1,131.0	2,811.0
49	1700-1800	1,481.0	1,411.0	8,761.0	2,681.0	7,761.0	5,331.0	1,301.0	3,801.0	2,591.0	1,411.0	1,131.0	2,811.0
49	1800-1900	1,481.0	1,411.0	8,761.0	2,681.0	7,761.0	5,331.0	1,301.0	3,801.0	2,591.0	1,411.0	1,131.0	2,811.0
49	1900-2000	1,481.0	1,411.0	8,761.0	2,681.0	7,761.0	5,331.0	1,301.0	3,801.0	2,591.0	1,411.0	1,131.0	2,811.0
49	2000-2100	1,481.0	1,411.0	8,761.0	2,681.0	7,761.0	5,331.0	1,301.0	3,801.0	2,591.0	1,411.0	1,131.0	2,811.0
49	2100-2200	1,481.0	1,411.0	8,761.0	2,681.0	7,761.0	5,331.0	1,301.0	3,801.0	2,591.0	1,411.0	1,131.0	2,811.0
49	2200-2300	1,481.0	1,411.0	8,761.0	2,681.0	7,761.0	5,331.0	1,301.0	3,801.0	2,591.0	1,411.0	1,131.0	2,811.0
49	2300-2400	1,481.0	1,411.0	8,761.0	2,681.0	7,761.0	5,331.0	1,301.0	3,801.0	2,591.0	1,411.0	1,131.0	2,811.0
49	2400-0100	1,481.0	1,411.0	8,761.0	2,681.0	7,761.0	5,331.0	1,301.0	3,801.0	2,591.0	1,411.0	1,131.0	2,811.0
49	0100-0200	1,481.0	1,411.0	8,761.0	2,681.0	7,761.0	5,331.0	1,301.0	3,801.0	2,591.0	1,411.0	1,131.0	2,811.0
49	0200-0300	1,481.0	1,411.0	8,761.0	2,681.0	7,761.0	5,331.0	1,301.0	3,801.0	2,591.0	1,411.0	1,131.0	2,811.0
49	0300-0400	1,481.0	1,411.0	8,761.0	2,681.0	7,761.0	5,331.0	1,301.0	3,801.0	2,591.0	1,411.0	1,131.0	2,811.0
49	0400-0500	1,481.0	1,411.0	8,761.0	2,681.0	7,761.0	5,331.0	1,301.0	3,801.0	2,591.0	1,411.0	1,131.0	2,811.0
49	0500-0600	1,481.0	1,411.0	8,761.0	2,681.0	7,761.0	5,331.0	1,301.0	3,801.0	2,591.0			

\\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.2 Emission Factor in 2030.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Tsing Yi North Underground Quarry														
Open Road 24 hour Emission Factors for AERMOD model (Summary)														
Year 2030														
Road Name	Road ID	Hour	NO ₂ Emission			NO Emission			PM _{2.5} Emission			PM ₁₀ Emission		
			AnnualHourly	g/h/m ²	tonnes/year	AnnualHourly	g/h/m ²	tonnes/year	AnnualHourly	g/h/m ²	tonnes/year	AnnualHourly	g/h/m ²	tonnes/year
Road S2	52	0000-0100	1.2601	5.4407	1.0274	5.7276	4.2882	0.9081	1.2601	5.4407	1.0274	1.2601	5.4407	1.0274
Road S2	52	0100-0200	1.3064	5.8808	1.0821	6.1637	4.7222	0.9849	1.3064	5.8808	1.0821	1.3064	5.8808	1.0821
Road S2	52	0200-0300	1.2521	5.0408	0.9885	5.2381	4.2717	0.9384	1.2521	5.0408	0.9885	1.2521	5.0408	0.9885
Road S2	52	0300-0400	1.3421	5.8409	1.0424	6.4001	4.4752	0.9628	1.3421	5.8409	1.0424	1.3421	5.8409	1.0424
Road S2	52	0400-0500	1.2601	5.4407	1.0274	5.7276	4.2882	0.9081	1.2601	5.4407	1.0274	1.2601	5.4407	1.0274
Road S2	52	0500-0600	1.2951	5.8408	1.0954	5.4001	2.4457	0.9574	1.2951	5.8408	1.0954	1.2951	5.8408	1.0954
Road S2	52	0600-0700	1.3101	5.7107	1.1076	5.7107	4.2986	0.9107	1.3101	5.7107	1.1076	1.3101	5.7107	1.1076
Road S2	52	0700-0800	1.3881	6.0407	1.2304	5.7501	4.2716	0.9804	1.3881	6.0407	1.2304	1.3881	6.0407	1.2304
Road S2	52	0800-0900	1.3781	6.0307	1.2204	5.7401	4.2616	0.9704	1.3781	6.0307	1.2204	1.3781	6.0307	1.2204
Road S2	52	0900-1000	1.3841	6.1107	1.2304	5.7401	4.2616	0.9704	1.3841	6.1107	1.2304	1.3841	6.1107	1.2304
Road S2	52	1000-1100	1.4381	6.4107	1.2804	5.7401	4.2616	0.9704	1.4381	6.4107	1.2804	1.4381	6.4107	1.2804
Road S2	52	1100-1200	1.4381	6.4107	1.2804	5.7401	4.2616	0.9704	1.4381	6.4107	1.2804	1.4381	6.4107	1.2804
Road S2	52	1200-1300	1.4481	6.4107	1.2804	5.7401	4.2616	0.9704	1.4481	6.4107	1.2804	1.4481	6.4107	1.2804
Road S2	52	1300-1400	1.4281	6.6807	1.3104	5.9301	4.1648	0.9816	1.4281	6.6807	1.3104	1.4281	6.6807	1.3104
Road S2	52	1400-1500	1.4581	6.4107	1.2804	5.7401	4.2616	0.9704	1.4581	6.4107	1.2804	1.4581	6.4107	1.2804
Road S2	52	1500-1600	1.3381	6.4107	1.2804	5.7401	4.2616	0.9704	1.3381	6.4107	1.2804	1.3381	6.4107	1.2804
Road S2	52	1600-1700	1.2281	6.4107	1.2804	5.7401	4.2616	0.9704	1.2281	6.4107	1.2804	1.2281	6.4107	1.2804
Road S2	52	1700-1800	1.0781	6.4107	1.2804	5.7401	4.2616	0.9704	1.0781	6.4107	1.2804	1.0781	6.4107	1.2804
Road S2	52	1800-1900	1.0841	6.4107	1.2804	5.7401	4.2616	0.9704	1.0841	6.4107	1.2804	1.0841	6.4107	1.2804
Road S2	52	1900-2000	1.0841	6.4107	1.2804	5.7401	4.2616	0.9704	1.0841	6.4107	1.2804	1.0841	6.4107	1.2804
Road S2	52	2000-2100	1.1381	6.4107	1.2804	5.7401	4.2616	0.9704	1.1381	6.4107	1.2804	1.1381	6.4107	1.2804
Road S2	52	2100-2200	1.1381	6.4107	1.2804	5.7401	4.2616	0.9704	1.1381	6.4107	1.2804	1.1381	6.4107	1.2804
Road S2	52	2200-2300	1.1381	6.4107	1.2804	5.7401	4.2616	0.9704	1.1381	6.4107	1.2804	1.1381	6.4107	1.2804
Road S2	52	2300-2400	1.1181	6.4107	1.2804	5.7401	4.2616	0.9704	1.1181	6.4107	1.2804	1.1181	6.4107	1.2804
Road S3	53	0000-0100	1.3781	5.9808	1.0704	6.0161	4.6017	0.9081	1.3781	5.9808	1.0704	1.3781	5.9808	1.0704
Road S3	53	0100-0200	1.4081	6.0608	1.0804	6.1917	4.6317	0.9181	1.4081	6.0608	1.0804	1.4081	6.0608	1.0804
Road S3	53	0200-0300	1.3381	5.2108	0.9704	5.2108	4.7608	0.9081	1.3381	5.2108	0.9704	1.3381	5.2108	0.9704
Road S3	53	0300-0400	1.3881	5.7208	1.0304	6.3701	4.7807	0.9704	1.3881	5.7208	1.0304	1.3881	5.7208	1.0304
Road S3	53	0400-0500	1.4281	6.1808	1.1004	6.3101	4.7807	1.0281	1.4281	6.1808	1.1004	1.4281	6.1808	1.1004
Road S3	53	0500-0600	1.5181	6.0708	1.1504	6.0601	2.4457	0.9574	1.5181	6.0708	1.1504	1.5181	6.0708	1.1504
Road S3	53	0600-0700	1.6781	6.0407	1.2304	5.7401	4.2616	0.9704	1.6781	6.0407	1.2304	1.6781	6.0407	1.2304
Road S3	53	0700-0800	1.6881	6.0407	1.2304	5.7401	4.2616	0.9704	1.6881	6.0407	1.2304	1.6881	6.0407	1.2304
Road S3	53	0800-0900	1.6881	6.0407	1.2304	5.7401	4.2616	0.9704	1.6881	6.0407	1.2304	1.6881	6.0407	1.2304
Road S3	53	0900-1000	1.6881	6.0407	1.2304	5.7401	4.2616	0.9704	1.6881	6.0407	1.2304	1.6881	6.0407	1.2304
Road S3	53	1000-1100	1.7381	6.4107	1.2804	5.7401	4.2616	0.9704	1.7381	6.4107	1.2804	1.7381	6.4107	1.2804
Road S3	53	1100-1200	1.7381	6.4107	1.2804	5.7401	4.2616	0.9704	1.7381	6.4107	1.2804	1.7381	6.4107	1.2804
Road S3	53	1200-1300	1.8381	6.4107	1.2804	5.7401	4.2616	0.9704	1.8381	6.4107	1.2804	1.8381	6.4107	1.2804
Road S3	53	1300-1400	1.8381	6.4107	1.2804	5.7401	4.2616	0.9704	1.8381	6.4107	1.2804	1.8381	6.4107	1.2804
Road S3	53	1400-1500	1.8181	6.4107	1.2804	5.7401	4.2616	0.9704	1.8181	6.4107	1.2804	1.8181	6.4107	1.2804
Road S3	53	1500-1600	1.6981	6.4107	1.2804	5.7401	4.2616	0.9704	1.6981	6.4107	1.2804	1.6981	6.4107	1.2804
Road S3	53	1600-1700	1.5881	6.4107	1.2804	5.7401	4.2616	0.9704	1.5881	6.4107	1.2804	1.5881	6.4107	1.2804
Road S3	53	1700-1800	1.4381	6.4107	1.2804	5.7401	4.2616	0.9704	1.4381	6.4107	1.2804	1.4381	6.4107	1.2804
Road S3	53	1800-1900	1.4481	6.4107	1.2804	5.7401	4.2616	0.9704	1.4481	6.4107	1.2804	1.4481	6.4107	1.2804
Road S3	53	1900-2000	1.4481	6.4107	1.2804	5.7401	4.2616	0.9704	1.4481	6.4107	1.2804	1.4481	6.4107	1.2804
Road S3	53	2000-2100	1.4981	6.4107	1.2804	5.7401	4.2616	0.9704	1.4981	6.4107	1.2804	1.4981	6.4107	1.2804
Road S3	53	2100-2200	1.4981	6.4107	1.2804	5.7401	4.2616	0.9704	1.4981	6.4107	1.2804	1.4981	6.4107	1.2804
Road S3	53	2200-2300	1.4981	6.4107	1.2804	5.7401	4.2616	0.9704	1.4981	6.4107	1.2804	1.4981	6.4107	1.2804
Road S3	53	2300-2400	1.4781	6.4107	1.2804	5.7401	4.2616	0.9704	1.4781	6.4107	1.2804	1.4781	6.4107	1.2804
Road S4	54	0000-0100	1.7181	6.7508	1.3704	6.4301	4.8507	1.0381	1.7181	6.7508	1.3704	1.7181	6.7508	1.3704
Road S4	54	0100-0200	1.7681	6.8308	1.4204	6.4501	4.8507	1.0381	1.7681	6.8308	1.4204	1.7681	6.8308	1.4204
Road S4	54	0200-0300	1.6681	6.5608	1.3504	6.4501	4.8507	1.0381	1.6681	6.5608	1.3504	1.6681	6.5608	1.3504
Road S4	54	0300-0400	1.7181	6.8308	1.4204	6.4501	4.8507	1.0381	1.7181	6.8308	1.4204	1.7181	6.8308	1.4204
Road S4	54	0400-0500	1.7681	6.9108	1.4704	6.4501	4.8507	1.0381	1.7681	6.9108	1.4704	1.7681	6.9108	1.4704
Road S4	54	0500-0600	1.8681	6.8008	1.5204	6.4501	4.8507	1.0381	1.8681	6.8008	1.5204	1.8681	6.8008	1.5204
Road S4	54	0600-0700	1.8781	6.8008	1.5204	6.4501	4.8507	1.0381	1.8781	6.8008	1.5204	1.8781	6.8008	1.5204
Road S4	54	0700-0800	1.8781	6.8008	1.5204	6.4501	4.8507	1.0381	1.8781	6.8008	1.5204	1.8781	6.8008	1.5204
Road S4	54	0800-0900	1.8781	6.8008	1.5204	6.4501	4.8507	1.0381	1.8781	6.8008	1.5204	1.8781	6.8008	1.5204
Road S4	54	0900-1000	1.8781	6.8008	1.5204	6.4501	4.8507	1.0381	1.8781	6.8008	1.5204	1.8781	6.8008	1.5204
Road S4	54	1000-1100	1.9281	7.1808	1.5704	6.4501	4.8507	1.0381	1.9281	7.1808	1.5704	1.9281	7.1808	1.5704
Road S4	54	1100-1200	1.9281	7.1808	1.5704	6.4501	4.8507	1.0381	1.9281	7.1808	1.5704	1.9281	7.1808	1.5704
Road S4	54	1200-1300	2.0281	7.1808	1.5704	6.4501	4.8507	1.0381	2.0281	7.1808	1.5704	2.0281	7.1808	1.5704
Road S4	54	1300-1400	2.0281	7.1808	1.5704	6.4501	4.8507	1.0381	2.0281	7.1808	1.5704	2.0281	7.1808	1.5704
Road S4	54	1400-1500	2.0281	7.1808	1.5704	6.4501	4.8507	1.0381	2.0281	7.1808	1.5704	2.0281	7.1808	1.5704
Road S4	54	1500-1600	1.9081	7.1808	1.5704	6.4501	4.8507	1.0381	1.9081	7.1808	1.5704	1.9081	7.1808	1.5704
Road S4	54	1600-1700	1.7981	7.1808	1.5704	6.4501	4.8507	1.0381	1.7981	7.1808	1.5704	1.7981	7.1808	1.5704
Road S4	54	1700-1800	1.6481	7.1808	1.5704	6.4501	4.8507	1.0381	1.6481	7.1808	1.5704	1.6481	7.1808	1.5704
Road S4	54	1800-1900	1.6581	7.1808	1.5704	6.4501	4.8507	1.0381	1.6581	7.1808	1.5704	1.6581	7.1808	1.5704
Road S4	54	1900-2000	1.6581	7.1808	1.5704	6.4501	4.8507	1.0381	1.6581	7.1808	1.5704	1.6581	7.1808	1.5704
Road S4	54	2000-2100	1.7081	7.1808	1.5704	6.4501	4.8507	1.0381	1.7081	7.1808	1.5704	1.7081	7.1808	1.5704
Road S4	54	2100-2200	1.7081	7.1808	1.5704	6.4501	4.8507	1.0381	1.7081	7.1808	1.5704	1.7081	7.1808	1.5704
Road S4	54	2200-2300	1.7081	7.1808	1.5704	6.4501	4.8507	1.0381	1.7081	7.1808	1.5704	1.7081	7.1808	1.5704
Road S4	54	2300-2400	1.6881	7.1808	1.5704	6.4501	4.8507	1.0381	1.6881	7.1808	1.5704	1.6881	7.1808	1.5704

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Tsing Yi North Underground Quarry												
Open Road 24 hour Emission Factors for AERMOD model (Summary)												
Year 2030												
Road Name	Road ID	Hour	NO ₂ Emission			NO Emission			PM _{2.5} Emission			

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Tsing Yi North Underground Quarry											
Open Road 24 hour Emission Factors for AERMOD model (Summary)											
Year 2030											
Road Name	Road ID	Hour	NO ₂ Emission			NO Emission			PM _{2.5} Emission		
			AnnualHourly	g/h/m ²	tonnes/year	AnnualHourly	g/h/m ²	tonnes/year	AnnualHourly	g/h/m ²	tonnes/year
Road 1	1	0000-0100	1.4482	2.066	1.717	1.4482	1.7167	8.986	1.4482	2.526	1.4482
Road 1	1	0100-0200	1.5382	2.066	1.717	1.5382	1.7167	8.986	1.5382	2.526	1.5382
Road 1	1	0200-0300	1.6282	2.066	1.717	1.6282	1.7167	8.986	1.6282	2.526	1.6282
Road 1	1	0300-0400	1.7182	2.066	1.717	1.7182	1.7167	8.986	1.7182	2.526	1.7182
Road 1	1	0400-0500	1.8082	2.066	1.717	1.8082	1.7167	8.986	1.8082	2.526	1.8082
Road 1	1	0500-0600	1.8982	2.066	1.717	1.8982	1.7167	8.986	1.8982	2.526	1.8982
Road 1	1	0600-0700	1.9882	2.066	1.717	1.9882	1.7167	8.986	1.9882	2.526	1.9882
Road 1	1	0700-0800	2.0782	2.066	1.717	2.0782	1.7167	8.986	2.0782	2.526	2.0782
Road 1	1	0800-0900	2.1682	2.066	1.717	2.1682	1.7167	8.986	2.1682	2.526	2.1682
Road 1	1	0900-1000	2.2582	2.066	1.717	2.2582	1.7167	8.986	2.2582	2.526	2.2582
Road 1	1	1000-1100	2.3482	2.066	1.717	2.3482	1.7167	8.986	2.3482	2.526	2.3482
Road 1	1	1100-1200	2.4382	2.066	1.717	2.4382	1.7167	8.986	2.4382	2.526	2.4382
Road 1	1	1200-1300	2.5282	2.066	1.717	2.5282	1.7167	8.986	2.5282	2.526	2.5282
Road 1	1	1300-1400	2.6182	2.066	1.717	2.6182	1.7167	8.986	2.6182	2.526	2.6182
Road 1	1	1400-1500	2.7082	2.066	1.717	2.7082	1.7167	8.986	2.7082	2.526	2.7082
Road 1	1	1500-1600	2.7982	2.066	1.717	2.7982	1.7167	8.986	2.7982	2.526	2.7982
Road 1	1	1600-1700	2.8882	2.066	1.717	2.8882	1.7167	8.986	2.8882	2.526	2.8882
Road 1	1	1700-1800	2.9782	2.066	1.717	2.9782	1.7167	8.986	2.9782	2.526	2.9782
Road 1	1	1800-1900	3.0682	2.066	1.717	3.0682	1.7167	8.986	3.0682	2.526	3.0682
Road 1	1	1900-2000	3.1582	2.066	1.717	3.1582	1.7167	8.986	3.1582	2.526	3.1582
Road 1	1	2000-2100	3.2482	2.066	1.717	3.2482	1.7167	8.986	3.2482	2.526	3.2482
Road 1	1	2100-2200	3.3382	2.066	1.717	3.3382	1.7167	8.986	3.3382	2.526	3.3382
Road 1	1	2200-2300	3.4282	2.066	1.717	3.4282	1.7167	8.986	3.4282	2.526	3.4282
Road 1	1	2300-2400	3.5182	2.066	1.717	3.5182	1.7167	8.986	3.5182	2.526	3.5182
Road 1	1	2400-0100	3.6082	2.066	1.717	3.6082	1.7167	8.986	3.6082	2.526	3.6082
Road 1	1	0100-0200	3.6982	2.066	1.717	3.6982	1.7167	8.986	3.6982	2.526	3.6982
Road 1	1	0200-0300	3.7882	2.066	1.717	3.7882	1.7167	8.986	3.7882	2.526	3.7882
Road 1	1	0300-0400	3.8782	2.066	1.717	3.8782	1.7167	8.986	3.8782	2.526	3.8782
Road 1	1	0400-0500	3.9682	2.066	1.717	3.9682	1.7167	8.986	3.9682	2.526	3.9682
Road 1	1	0500-0600	4.0582	2.066	1.717	4.0582	1.7167	8.986	4.0582	2.526	4.0582
Road 1	1	0600-0700	4.1482	2.066	1.717	4.1482	1.7167	8.986	4.1482	2.526	4.1482
Road 1	1	0700-0800	4.2382	2.066	1.717	4.2382	1.7167	8.986	4.2382	2.526	4.2382
Road 1	1	0800-0900	4.3282	2.066	1.717	4.3282	1.7167	8.986	4.3282	2.526	4.3282
Road 1	1	0900-1000	4.4182	2.066	1.717	4.4182	1.7167	8.986	4.4182	2.526	4.4182
Road 1	1	1000-1100	4.5082	2.066	1.717	4.5082	1.7167	8.986	4.5082	2.526	4.5082
Road 1	1	1100-1200	4.5982	2.066	1.717	4.5982	1.7167	8.986	4.5982	2.526	4.5982
Road 1	1	1200-1300	4.6882	2.066	1.717	4.6882	1.7167	8.986	4.6882	2.526	4.6882
Road 1	1	1300-1400	4.7782	2.066	1.717	4.7782	1.7167	8.986	4.7782	2.526	4.7782
Road 1	1	1400-1500	4.8682	2.066	1.717	4.8682	1.7167	8.986	4.8682	2.526	4.8682
Road 1	1	1500-1600	4.9582	2.066	1.717	4.9582	1.7167	8.986	4.9582	2.526	4.9582
Road 1	1	1600-1700	5.0482	2.066	1.717	5.0482	1.7167	8.986	5.0482	2.526	5.0482
Road 1	1	1700-1800	5.1382	2.066	1.717	5.1382	1.7167	8.986	5.1382	2.526	5.1382
Road 1	1	1800-1900	5.2282	2.066	1.717	5.2282	1.7167	8.986	5.2282	2.526	5.2282
Road 1	1	1900-2000	5.3182	2.066	1.717	5.3182	1.7167	8.986	5.3182	2.526	5.3182
Road 1	1	2000-2100	5.4082	2.066	1.717	5.4082	1.7167	8.986	5.4082	2.526	5.4082
Road 1	1	2100-2200	5.4982	2.066	1.717	5.4982	1.7167	8.986	5.4982	2.526	5.4982
Road 1	1	2200-2300	5.5882	2.066	1.717	5.5882	1.7167	8.986	5.5882	2.526	5.5882
Road 1	1	2300-2400	5.6782	2.066	1.717	5.6782	1.7167	8.986	5.6782	2.526	5.6782
Road 1	1	2400-0100	5.7682	2.066	1.717	5.7682	1.7167	8.986	5.7682	2.526	5.7682
Road 1	1	0100-0200	5.8582	2.066	1.717	5.8582	1.7167	8.986	5.8582	2.526	5.8582
Road 1	1	0200-0300	5.9482	2.066	1.717	5.9482	1.7167	8.986	5.9482	2.526	5.9482
Road 1	1	0300-0400	6.0382	2.066	1.717	6.0382	1.7167	8.986	6.0382	2.526	6.0382
Road 1	1	0400-0500	6.1282	2.066	1.717	6.1282	1.7167	8.986	6.1282	2.526	6.1282
Road 1	1	0500-0600	6.2182	2.066	1.717	6.2182	1.7167	8.986	6.2182	2.526	6.2182
Road 1	1	0600-0700	6.3082	2.066	1.717	6.3082	1.7167	8.986	6.3082	2.526	6.3082
Road 1	1	0700-0800	6.3982	2.066	1.717	6.3982	1.7167	8.986	6.3982	2.526	6.3982
Road 1	1	0800-0900	6.4882	2.066	1.717	6.4882	1.7167	8.986	6.4882	2.526	6.4882
Road 1	1	0900-1000	6.5782	2.066	1.717	6.5782	1.7167	8.986	6.5782	2.526	6.5782
Road 1	1	1000-1100	6.6682	2.066	1.717	6.6682	1.7167	8.986	6.6682	2.526	6.6682
Road 1	1	1100-1200	6.7582	2.066	1.717	6.7582	1.7167	8.986	6.7582	2.526	6.7582
Road 1	1	1200-1300	6.8482	2.066	1.717	6.8482	1.7167	8.986	6.8482	2.526	6.8482
Road 1	1	1300-1400	6.9382	2.066	1.717	6.9382	1.7167	8.986	6.9382	2.526	6.9382
Road 1	1	1400-1500	7.0282	2.066	1.717	7.0282	1.7167	8.986	7.0282	2.526	7.0282
Road 1	1	1500-1600	7.1182	2.066	1.717	7.1182	1.7167	8.986	7.1182	2.526	7.1182
Road 1	1	1600-1700	7.2082	2.066	1.717	7.2082	1.7167	8.986	7.2082	2.526	7.2082
Road 1	1	1700-1800	7.2982	2.066	1.717	7.2982	1.7167	8.986	7.2982	2.526	7.2982
Road 1	1	1800-1900	7.3882	2.066	1.717	7.3882	1.7167	8.986	7.3882	2.526	7.3882
Road 1	1	1900-2000	7.4782	2.066	1.717	7.4782	1.7167	8.986	7.4782	2.526	7.4782
Road 1	1	2000-2100	7.5682	2.066	1.717	7.5682	1.7167	8.986	7.5682	2.526	7.5682
Road 1	1	2100-2200	7.6582	2.066	1.717	7.6582	1.7167	8.986	7.6582	2.526	7.6582
Road 1	1	2200-2300	7.7482	2.066	1.717	7.7482	1.7167	8.986	7.7482	2.526	7.7482
Road 1	1	2300-2400	7.8382	2.066	1.717	7.8382	1.7167	8.986	7.8382	2.526	7.8382
Road 1	1	2400-0100	7.9282	2.066	1.717	7.9282	1.7167	8.986	7.9282	2.526	7.9282
Road 1	1	0100-0200	8.0182	2.066	1.717	8.0182	1.7167	8.986	8.0182	2.526	8.0182
Road 1	1	0200-0300	8.1082	2.066	1.717	8.1082	1.7167	8.986	8.1082	2.526	8.1082
Road 1	1	0300-0400	8.1982	2.066	1.717	8.1982	1.7167	8.986	8.1982	2.526	8.1982
Road 1	1	0400-0500	8.2882	2.066	1.717	8.2882	1.7167	8.986	8.2882	2.526	8.2882
Road 1	1	0500-0600	8.3782	2.066	1.717	8.3782	1.7167	8.986	8.3782	2.526	8.3782
Road 1	1	0600-0700	8.4682	2.066	1.717	8.4682	1.7167	8.986	8.4682	2.526	8.4682
Road 1	1	0700-0800	8.5582	2.066	1.717	8.5582	1.7167	8.986	8.5582	2.526	8.5582
Road 1	1	0800-0900	8.6482	2.066	1.717	8.6482	1.7167	8.986	8.6482	2.526	8.6482
Road 1	1	0900-1000	8.7382	2.066	1.717	8.7382	1.7167	8.986	8.7382	2.526	8.7382
Road 1	1	1000-1100	8.8282	2.066	1.717	8.8282	1.7167	8.986	8.8282	2.526	8.8282
Road 1	1	1100-1200	8.9182	2.066	1.717	8.9182	1.7167	8.986	8.9182	2.526	8.9182
Road 1	1	1200-1300	9.0082	2.066	1.717	9.0082	1.7167	8.986	9.0082	2.526	9.0082
Road 1	1	1300-1400	9.0982	2.066	1.717	9.0982	1.7167	8.986	9.0982	2.526	9.0982
Road 1	1	1400-1500	9.1882	2.066	1.717	9.1882	1.7167	8.986	9.1882	2.526	9.1882
Road 1	1	1500-1600	9.2782	2.066	1.717	9.2782	1.7167	8.986	9.2782	2.526	9.2782
Road 1	1	1600-1700	9.3682	2.066	1.717	9.3682	1.7167	8.986	9.3682	2.526	9.3682
Road 1	1	1700-1800	9.4582	2.066	1.717	9.4582	1.7167	8.986	9.4582	2.526	9.4582
Road 1	1	1800-1900	9.5482	2.066	1.717	9.5482	1.7167	8.986	9.5482	2.526	9.5482
Road 1	1	1900-2000	9.6382	2.066	1.717	9.6382	1.7167	8.986	9.6382	2.526	9.6382
Road 1	1	2000-2100	9.7282	2.066	1.717	9.7282	1.7167	8.986	9.7282	2.526	9.7282
Road 1	1	2100-2200	9.8182	2.066	1.717	9.8182	1.7167	8.986	9.8182	2.526	9.8182
Road 1	1	2200-2300	9.9082	2.066	1.717	9.9082	1.7167	8.986	9.9082	2.526	9.9082
Road 1	1	2300-2400	10.0000	2.066	1.717	10.0000					

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Top North Undermin Factors

Year 2030

Road Name	Road ID	Hour	No. Enrichment			No. Enrichment							
			g/hour	Month/Year	Month/Year	g/hour	Month/Year	Month/Year					
Road 14	14	0800-0900	5.31E-02	0.31E-07	1.59E-01	4.90E-02	0.54E-07	1.46E-01	3.38E-01	5.00E-01	1.04E-01	0.31E-01	0.92E-01
		0900-1000	6.14E-02	0.31E-07	1.59E-01	4.90E-02	0.54E-07	1.46E-01	3.38E-01	5.00E-01	1.04E-01	0.31E-01	0.92E-01
Road 14	14	1000-1100	6.61E-02	0.31E-07	1.59E-01	4.90E-02	0.54E-07	1.46E-01	3.38E-01	5.00E-01	1.04E-01	0.31E-01	0.92E-01
		1100-1200	6.61E-02	0.31E-07	1.59E-01	4.90E-02	0.54E-07	1.46E-01	3.38E-01	5.00E-01	1.04E-01	0.31E-01	0.92E-01
Road 14	14	1300-1400	8.14E-02	0.31E-07	1.59E-01	4.90E-02	0.54E-07	1.46E-01	3.38E-01	5.00E-01	1.04E-01	0.31E-01	0.92E-01
		1400-1500	8.14E-02	0.31E-07	1.59E-01	4.90E-02	0.54E-07	1.46E-01	3.38E-01	5.00E-01	1.04E-01	0.31E-01	0.92E-01
Road 14	14	1600-1700	7.91E-02	0.31E-07	1.59E-01	4.90E-02	0.54E-07	1.46E-01	3.38E-01	5.00E-01	1.04E-01	0.31E-01	0.92E-01
		1700-1800	7.91E-02	0.31E-07	1.59E-01	4.90E-02	0.54E-07	1.46E-01	3.38E-01	5.00E-01	1.04E-01	0.31E-01	0.92E-01
Road 14	14	1800-1900	5.06E-02	0.31E-07	1.59E-01	4.90E-02	0.54E-07	1.46E-01	3.38E-01	5.00E-01	1.04E-01	0.31E-01	0.92E-01
		1900-2000	5.06E-02	0.31E-07	1.59E-01	4.90E-02	0.54E-07	1.46E-01	3.38E-01	5.00E-01	1.04E-01	0.31E-01	0.92E-01
Road 14	14	2000-2100	1.51E-01	0.40E-06	4.68E-01	1.41E-01	0.40E-06	4.68E-01	1.02E-01	2.30E-01	2.80E-01	0.30E-01	0.62E-01
		2100-2200	1.51E-01	0.40E-06	4.68E-01	1.41E-01	0.40E-06	4.68E-01	1.02E-01	2.30E-01	2.80E-01	0.30E-01	0.62E-01
Road 14	14	2300-2400	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
		2400-0100	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	0100-0200	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
		0200-0300	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	0300-0400	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
		0400-0500	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	0500-0600	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
		0600-0700	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	0700-0800	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
		0800-0900	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	0900-1000	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
		1000-1100	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	1100-1200	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
		1200-1300	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	1300-1400	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	1400-1500	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	1500-1600	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	1600-1700	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	1700-1800	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	1800-1900	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	1900-2000	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	2000-2100	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	2100-2200	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	2200-2300	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	2300-2400	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	2400-0100	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	0100-0200	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	0200-0300	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	0300-0400	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	0400-0500	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	0500-0600	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	0600-0700	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	0700-0800	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	0800-0900	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	0900-1000	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	1000-1100	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	1100-1200	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	1200-1300	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	1300-1400	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	1400-1500	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	1500-1600	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	1600-1700	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	1700-1800	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	1800-1900	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	1900-2000	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	2000-2100	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	2100-2200	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	2200-2300	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	2300-2400	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	2400-0100	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	0100-0200	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	0200-0300	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	0300-0400	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	0400-0500	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	0500-0600	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	0600-0700	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	0700-0800	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.54E-01
Road 14	14	0800-0900	3.18E-01	0.81E-06	9.28E-02	2.87E-02	0.81E-06	9.28E-02	2.10E-01	3.40E-01	2.60E-01	0.10E-01	0.

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Top 10 Worst Non Underground Quarry												
Open Road to High Soil Emission Factors for AR5000 Model Results												
Year 2030			MS Emission				MS Emission					
Road name	Road ID	Hour	g/h/vkm		t/year/hour		g/h/vkm		t/year/hour		Monthly/Average	
			Monthly/Average		Monthly/Average		Monthly/Average		Monthly/Average		Monthly/Average	
Road 17	17	1600-1700	4.44E-02	6.13E-07	1.79E-05	3.88E-02	5.50E-07	1.61E-05	1.01E-01	4.14E-06	1.22E-04	2.68E-01
Road 17	17	1700-1800	4.44E-02	6.13E-07	1.79E-05	3.88E-02	5.50E-07	1.61E-05	1.01E-01	4.14E-06	1.22E-04	2.68E-01
Road 17	17	1800-1900	4.44E-02	6.13E-07	1.79E-05	3.88E-02	5.50E-07	1.61E-05	1.01E-01	4.14E-06	1.22E-04	2.68E-01
Road 17	17	1900-2000	2.24E-02	3.06E-07	8.53E-06	2.02E-02	2.62E-07	7.67E-06	2.38E-01	3.06E-06	8.53E-05	2.12E-02
Road 17	17	2000-2100	2.24E-02	3.06E-07	8.53E-06	2.02E-02	2.62E-07	7.67E-06	2.38E-01	3.06E-06	8.53E-05	2.12E-02
Road 17	17	2100-2200	2.24E-02	3.06E-07	8.53E-06	2.02E-02	2.62E-07	7.67E-06	2.38E-01	3.06E-06	8.53E-05	2.12E-02
Road 17	17	2200-2300	2.24E-02	3.06E-07	8.53E-06	2.02E-02	2.62E-07	7.67E-06	2.38E-01	3.06E-06	8.53E-05	2.12E-02
Road 17	17	2300-0000	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	0000-0100	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	0100-0200	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	0200-0300	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	0300-0400	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	0400-0500	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	0500-0600	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	0600-0700	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	0700-0800	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	0800-0900	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	0900-1000	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	1000-1100	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	1100-1200	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	1200-1300	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	1300-1400	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	1400-1500	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	1500-1600	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	1600-1700	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	1700-1800	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	1800-1900	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	1900-2000	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	2000-2100	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	2100-2200	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	2200-2300	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	2300-0000	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	0000-0100	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	0100-0200	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	0200-0300	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	0300-0400	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	0400-0500	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	0500-0600	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	0600-0700	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	0700-0800	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	0800-0900	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	0900-1000	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	1000-1100	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	1100-1200	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	1200-1300	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	1300-1400	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	1400-1500	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	1500-1600	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	1600-1700	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	1700-1800	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	1800-1900	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	1900-2000	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	2000-2100	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	2100-2200	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	2200-2300	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	2300-0000	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	0000-0100	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	0100-0200	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	0200-0300	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	0300-0400	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	0400-0500	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	0500-0600	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	0600-0700	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	0700-0800	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	0800-0900	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	0900-1000	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	1000-1100	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	1100-1200	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	1200-1300	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	1300-1400	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	1400-1500	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	1500-1600	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	1600-1700	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 17	17	1700-1800	2.23E-02	3.04E-07	8.48E-06	1.99E-02	2.59E-07	7.47E-06	2.37E-01	3.03E-06	8.48E-05	2.12E-02
Road 1												

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.2 Emission Factor in 2030.xlsx

Open Top North Undermining Quarry													
2024 North 24a Emission Factors for													
Year 2030													
Roadside Model (Hour)													
Road ID	Road	Flow	No. Emissions				No. Emissions				Roadside Model (Hour)		
			Monthly/Yearly		Monthly/Average		Monthly/Yearly		Monthly/Average				
			g/hour	ton/year	ton/hour	g/hour	ton/year	ton/hour	g/hour	ton/year	ton/hour		
Road 21	21	0000-0100	2,198.02	1,406.07	1,881.06	2,198.02	1,406.07	1,881.06	1,198.02	1,558.05	1,618.01	1,838.06	1,981.05
		2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02
Road 22	22	0000-0100	2,198.02	1,406.07	1,881.06	2,198.02	1,406.07	1,881.06	1,198.02	1,558.05	1,618.01	1,838.06	1,981.05
		2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02
Road 23	23	0000-0400	2,967.02	2,105.08	2,632.07	2,967.02	2,105.08	2,632.07	2,121.02	2,442.02	2,967.02	1,838.06	2,442.02
		0400-0800	1,101.02	765.05	1,001.02	1,101.02	765.05	1,001.02	1,101.02	765.05	1,001.02	1,101.02	765.05
Road 24	24	0000-0100	1,981.02	1,406.07	1,881.06	1,981.02	1,406.07	1,881.06	1,198.02	1,558.05	1,618.01	1,838.06	1,981.05
		1,981.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02
Road 25	25	0000-0100	3,358.02	2,388.02	3,021.02	3,358.02	2,388.02	3,021.02	2,358.02	3,358.02	2,388.02	3,021.02	3,358.02
		3,358.02	3,358.02	2,388.02	3,021.02	3,358.02	2,388.02	3,021.02	3,358.02	2,388.02	3,021.02	3,358.02	2,388.02
Road 26	26	0000-0900	3,358.02	2,388.02	3,021.02	3,358.02	2,388.02	3,021.02	2,358.02	3,358.02	2,388.02	3,021.02	3,358.02
		3,358.02	3,358.02	2,388.02	3,021.02	3,358.02	2,388.02	3,021.02	3,358.02	2,388.02	3,021.02	3,358.02	2,388.02
Road 27	27	0000-0100	1,981.02	1,406.07	1,881.06	1,981.02	1,406.07	1,881.06	1,198.02	1,558.05	1,618.01	1,838.06	1,981.05
		1,981.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02
Road 28	28	0000-0100	1,981.02	1,406.07	1,881.06	1,981.02	1,406.07	1,881.06	1,198.02	1,558.05	1,618.01	1,838.06	1,981.05
		1,981.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02
Road 29	29	0000-0100	1,981.02	1,406.07	1,881.06	1,981.02	1,406.07	1,881.06	1,198.02	1,558.05	1,618.01	1,83	
Road 30	30	0000-0100	1,981.02	1,406.07	1,881.06	1,981.02	1,406.07	1,881.06	1,198.02	1,558.05	1,618.01	1,838.06	1,981.05
		1,981.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02
Road 31	31	0000-0100	1,981.02	1,406.07	1,881.06	1,981.02	1,406.07	1,881.06	1,198.02	1,558.05	1,618.01	1,838.06	1,981.05
		1,981.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02
Road 32	32	0000-0100	1,981.02	1,406.07	1,881.06	1,981.02	1,406.07	1,881.06	1,198.02	1,558.05	1,618.01	1,838.06	1,981.05
		1,981.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02
Road 33	33	0000-0100	1,981.02	1,406.07	1,881.06	1,981.02	1,406.07	1,881.06	1,198.02	1,558.05	1,618.01	1,838.06	1,981.05
		1,981.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02
Road 34	34	0000-0100	1,981.02	1,406.07	1,881.06	1,981.02	1,406.07	1,881.06	1,198.02	1,558.05	1,618.01	1,838.06	1,981.05
		1,981.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02
Road 35	35	0000-0100	1,981.02	1,406.07	1,881.06	1,981.02	1,406.07	1,881.06	1,198.02	1,558.05	1,618.01	1,838.06	1,981.05
		1,981.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02
Road 36	36	0000-0100	1,981.02	1,406.07	1,881.06	1,981.02	1,406.07	1,881.06	1,198.02	1,558.05	1,618.01	1,838.06	1,981.05
		1,981.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02
Road 37	37	0000-0100	1,981.02	1,406.07	1,881.06	1,981.02	1,406.07	1,881.06	1,198.02	1,558.05	1,618.01	1,838.06	1,981.05
		1,981.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02
Road 38	38	0000-0100	1,981.02	1,406.07	1,881.06	1,981.02	1,406.07	1,881.06	1,198.02	1,558.05	1,618.01	1,838.06	1,981.05
		1,981.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02
Road 39	39	0000-0100	1,981.02	1,406.07	1,881.06	1,981.02	1,406.07	1,881.06	1,198.02	1,558.05	1,618.01	1,838.06	1,981.05
		1,981.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02
Road 40	40	0000-0100	1,981.02	1,406.07	1,881.06	1,981.02	1,406.07	1,881.06	1,198.02	1,558.05	1,618.01	1,838.06	1,981.05
		1,981.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02
Road 41	41	0000-0100	1,981.02	1,406.07	1,881.06	1,981.02	1,406.07	1,881.06	1,198.02	1,558.05	1,618.01	1,838.06	1,981.05
		1,981.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02
Road 42	42	0000-0100	1,981.02	1,406.07	1,881.06	1,981.02	1,406.07	1,881.06	1,198.02	1,558.05	1,618.01	1,838.06	1,981.05
		1,981.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02
Road 43	43	0000-0100	1,981.02	1,406.07	1,881.06	1,981.02	1,406.07	1,881.06	1,198.02	1,558.05	1,618.01	1,838.06	1,981.05
		1,981.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02
Road 44	44	0000-0100	1,981.02	1,406.07	1,881.06	1,981.02	1,406.07	1,881.06	1,198.02	1,558.05	1,618.01	1,838.06	1,981.05
		1,981.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02
Road 45	45	0000-0100	1,981.02	1,406.07	1,881.06	1,981.02	1,406.07	1,881.06	1,198.02	1,558.05	1,618.01	1,838.06	1,981.05
		1,981.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02
Road 46	46	0000-0100	1,981.02	1,406.07	1,881.06	1,981.02	1,406.07	1,881.06	1,198.02	1,558.05	1,618.01	1,838.06	1,981.05
		1,981.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02
Road 47	47	0000-0100	1,981.02	1,406.07	1,881.06	1,981.02	1,406.07	1,881.06	1,198.02	1,558.05	1,618.01	1,838.06	1,981.05
		1,981.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02
Road 48	48	0000-0100	1,981.02	1,406.07	1,881.06	1,981.02	1,406.07	1,881.06	1,198.02	1,558.05	1,618.01	1,838.06	1,981.05
		1,981.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02
Road 49	49	0000-0100	1,981.02	1,406.07	1,881.06	1,981.02	1,406.07	1,881.06	1,198.02	1,558.05	1,618.01	1,838.06	1,981.05
		1,981.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02
Road 50	50	0000-0100	1,981.02	1,406.07	1,881.06	1,981.02	1,406.07	1,881.06	1,198.02	1,558.05	1,618.01	1,838.06	1,981.05
		1,981.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02
Road 51	51	0000-0100	1,981.02	1,406.07	1,881.06	1,981.02	1,406.07	1,881.06	1,198.02	1,558.05	1,618.01	1,838.06	1,981.05
		1,981.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02
Road 52	52	0000-0100	1,981.02	1,406.07	1,881.06	1,981.02	1,406.07	1,881.06	1,198.02	1,558.05	1,618.01	1,838.06	1,981.05
		1,981.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02
Road 53	53	0000-0100	1,981.02	1,406.07	1,881.06	1,981.02	1,406.07	1,881.06	1,198.02	1,558.05	1,618.01	1,838.06	1,981.05
		1,981.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02
Road 54	54	0000-0100	1,981.02	1,406.07	1,881.06	1,981.02	1,406.07	1,881.06	1,198.02	1,558.05	1,618.01	1,838.06	1,981.05
		1,981.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02
Road 55	55	0000-0100	1,981.02	1,406.07	1,881.06	1,981.02	1,406.07	1,881.06	1,198.02	1,558.05	1,618.01	1,838.06	1,981.05
		1,981.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02	2,198.02	2,442.02	1,628.02
Road 56	56	0000-0100	1,981.02	1,406.07	1,881.06	1,981.02	1,406.07						

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Top North Endroom Factors for ARESD Model Year 2000														
Room Name	Room ID	Hour	No. Entrainment				No. Exfiltration				Room Volume			
			g/h/m ²	lb/h/m ²	lb/h/m ²	lb/h/m ²	g/h/m ²	lb/h/m ²	lb/h/m ²	lb/h/m ²				
Room 27	27	1600-1700	2.65E+01	4.88E+07	2.08E+06	1.39E+01	6.12E+07	1.88E+06	1.08E+08	2.76E+08	8.51E+06	9.11E+05	4.49E+06	7.66E+06
Room 27	27	1700-1800	2.53E+01	4.65E+07	2.00E+06	1.35E+01	5.95E+07	1.83E+06	1.06E+08	2.70E+08	8.36E+06	8.92E+05	4.40E+06	7.52E+06
Room 27	27	1800-1900	2.41E+01	4.42E+07	1.95E+06	1.31E+01	5.78E+07	1.80E+06	1.03E+08	2.64E+08	8.21E+06	8.74E+05	4.34E+06	7.40E+06
Room 27	27	1900-2000	2.29E+01	4.20E+07	1.90E+06	1.27E+01	5.61E+07	1.77E+06	1.00E+08	2.58E+08	8.06E+06	8.59E+05	4.28E+06	7.34E+06
Room 27	27	2000-2100	2.17E+01	4.00E+07	1.85E+06	1.23E+01	5.44E+07	1.74E+06	9.78E+07	2.52E+08	7.91E+06	8.41E+05	4.22E+06	7.28E+06
Room 27	27	2100-2200	1.96E+01	3.68E+07	1.67E+06	1.12E+07	5.07E+07	1.58E+06	8.95E+07	2.38E+08	7.23E+06	7.70E+05	3.93E+06	6.68E+06
Room 27	27	2200-2300	1.84E+01	3.48E+07	1.62E+06	1.08E+07	4.90E+07	1.53E+06	8.78E+07	2.33E+08	7.06E+06	7.53E+05	3.87E+06	6.60E+06
Room 27	27	2300-2400	1.72E+01	3.28E+07	1.57E+06	1.04E+07	4.73E+07	1.48E+06	8.61E+07	2.28E+08	6.89E+06	7.36E+05	3.81E+06	6.52E+06
Room 28	28	0000-0100	2.11E+01	3.82E+07	1.95E+06	1.95E+01	1.16E+07	3.56E+07	8.74E+07	2.50E+08	1.83E+06	7.87E+05	3.78E+06	7.47E+06
Room 28	28	0100-0200	2.51E+01	4.90E+07	2.29E+06	2.23E+04	3.44E+07	2.46E+08	2.38E+08	4.44E+08	2.58E+06	2.06E+06	4.03E+06	2.29E+07
Room 28	28	0200-0300	2.91E+01	5.98E+07	2.68E+06	2.66E+04	4.52E+07	3.17E+08	2.86E+08	5.30E+08	3.12E+06	2.45E+06	4.83E+06	2.71E+07
Room 28	28	0300-0400	2.94E+01	6.02E+07	2.70E+06	1.58E+05	4.65E+07	2.51E+07	1.42E+08	2.51E+08	2.18E+06	1.53E+06	2.21E+06	1.09E+07
Room 28	28	0400-0500	2.91E+01	5.98E+07	2.68E+06	1.58E+05	4.65E+07	2.51E+07	1.42E+08	2.51E+08	2.18E+06	1.53E+06	2.21E+06	1.09E+07
Room 28	28	0500-0600	3.13E+01	6.37E+07	2.97E+07	1.47E+05	4.80E+07	2.67E+07	1.40E+08	2.60E+08	2.32E+06	1.75E+06	2.02E+06	1.02E+07
Room 28	28	0600-0700	3.38E+01	6.82E+07	3.14E+07	1.49E+05	4.90E+07	2.70E+07	1.42E+08	2.62E+08	2.42E+06	1.77E+06	2.04E+06	1.03E+07
Room 28	28	0700-0800	3.47E+01	6.96E+07	3.20E+07	1.50E+05	4.93E+07	2.73E+07	1.43E+08	2.64E+08	2.45E+06	1.78E+06	2.05E+06	1.03E+07
Room 28	28	0800-0900	3.47E+01	6.96E+07	3.20E+07	1.50E+05	4.93E+07	2.73E+07	1.43E+08	2.64E+08	2.45E+06	1.78E+06	2.05E+06	1.03E+07
Room 28	28	0900-1000	4.65E+01	9.62E+07	4.40E+06	1.61E+04	2.40E+07	2.69E+06	1.53E+04	2.92E+06	1.05E+06	2.64E+05	1.68E+05	8.62E+04
Room 28	28	1000-1100	4.72E+01	9.67E+06	4.43E+06	1.62E+04	2.43E+07	2.70E+06	1.38E+04	2.93E+06	1.05E+06	2.67E+05	1.69E+05	8.67E+04
Room 28	28	1100-1200	4.62E+01	9.50E+06	4.38E+06	1.61E+04	2.38E+07	2.67E+06	1.36E+04	2.90E+06	1.04E+06	2.64E+05	1.67E+05	8.59E+04
Room 28	28	1200-1300	4.50E+01	9.28E+06	4.30E+06	1.59E+04	2.33E+07	2.62E+06	1.33E+04	2.85E+06	1.02E+06	2.60E+05	1.64E+05	8.49E+04
Room 28	28	1300-1400	4.67E+01	9.71E+06	4.39E+06	1.60E+04	2.35E+07	2.65E+06	1.34E+04	2.88E+06	1.03E+06	2.62E+05	1.65E+05	8.57E+04
Room 28	28	1400-1500	4.81E+01	1.00E+07	4.46E+06	1.63E+04	2.40E+07	2.70E+06	1.36E+04	2.91E+06	1.04E+06	2.65E+05	1.68E+05	8.64E+04
Room 28	28	1500-1600	4.84E+01	1.00E+07	4.46E+06	1.63E+04	2.40E+07	2.70E+06	1.36E+04	2.91E+06	1.04E+06	2.65E+05	1.68E+05	8.64E+04
Room 28	28	1600-1700	4.84E+01	1.00E+07	4.46E+06	1.63E+04	2.40E+07	2.70E+06	1.36E+04	2.91E+06	1.04E+06	2.65E+05	1.68E+05	8.64E+04
Room 28	28	1700-1800	4.84E+01	1.00E+07	4.46E+06	1.63E+04	2.40E+07	2.70E+06	1.36E+04	2.91E+06	1.04E+06	2.65E+05	1.68E+05	8.64E+04
Room 28	28	1800-1900	4.84E+01	1.00E+07	4.46E+06	1.63E+04	2.40E+07	2.70E+06	1.36E+04	2.91E+06	1.04E+06	2.65E+05	1.68E+05	8.64E+04
Room 28	28	1900-2000	4.84E+01	1.00E+07	4.46E+06	1.63E+04	2.40E+07	2.70E+06	1.36E+04	2.91E+06	1.04E+06	2.65E+05	1.68E+05	8.64E+04
Room 28	28	2000-2100	4.84E+01	1.00E+07	4.46E+06	1.63E+04	2.40E+07	2.70E+06	1.36E+04	2.91E+06	1.04E+06	2.65E+05	1.68E+05	8.64E+04
Room 28	28	2100-2200	4.84E+01	1.00E+07	4.46E+06	1.63E+04	2.40E+07	2.70E+06	1.36E+04	2.91E+06	1.04E+06	2.65E+05	1.68E+05	8.64E+04
Room 28	28	2200-2300	4.84E+01	1.00E+07	4.46E+06	1.63E+04	2.40E+07	2.70E+06	1.36E+04	2.91E+06	1.04E+06	2.65E+05	1.68E+05	8.64E+04
Room 28	28	2300-2400	4.84E+01	1.00E+07	4.46E+06	1.63E+04	2.40E+07	2.70E+06	1.36E+04	2.91E+06	1.04E+06	2.65E+05	1.68E+05	8.64E+04
Room 29	29	0000-0100	2.61E+01	4.81E+07	1.94E+06	1.34E+01	5.84E+07	1.72E+06	9.78E+07	2.51E+08	1.88E+06	8.98E+05	4.37E+06	7.37E+06
Room 29	29	0100-0200	2.58E+01	4.75E+07	1.93E+06	1.33E+01	5.78E+07	1.71E+06	9.70E+07	2.50E+08	1.87E+06	8.92E+05	4.35E+06	7.33E+06
Room 29	29	0200-0300	2.58E+01	4.75E+07	1.93E+06	1.33E+01	5.78E+07	1.71E+06	9.70E+07	2.50E+08	1.87E+06	8.92E+05	4.35E+06	7.33E+06
Room 29	29	0300-0400	2.61E+01	4.81E+07	1.94E+06	1.34E+01	5.84E+07	1.72E+06	9.78E+07	2.51E+08	1.88E+06	8.98E+05	4.37E+06	7.37E+06
Room 29	29	0400-0500	2.61E+01	4.81E+07	1.94E+06	1.34E+01	5.84E+07	1.72E+06	9.78E+07	2.51E+08	1.88E+06	8.98E+05	4.37E+06	7.37E+06
Room 29	29	0500-0600	2.61E+01	4.81E+07	1.94E+06	1.34E+01	5.84E+07	1.72E+06	9.78E+07	2.51E+08	1.88E+06	8.98E+05	4.37E+06	7.37E+06
Room 29	29	0600-0700	2.61E+01	4.81E+07	1.94E+06	1.34E+01	5.84E+07	1.72E+06	9.78E+07	2.51E+08	1.88E+06	8.98E+05	4.37E+06	7.37E+06
Room 29	29	0700-0800	2.61E+01	4.81E+07	1.94E+06	1.34E+01	5.84E+07	1.72E+06	9.78E+07	2.51E+08	1.88E+06	8.98E+05	4.37E+06	7.37E+06
Room 29	29	0800-0900	2.61E+01	4.81E+07	1.94E+06	1.34E+01	5.84E+07	1.72E+06	9.78E+07	2.51E+08	1.88E+06	8.98E+05	4.37E+06	7.37E+06
Room 29	29	0900-1000	2.61E+01	4.81E+07	1.94E+06	1.34E+01	5.84E+07	1.72E+06	9.78E+07	2.51E+08	1.88E+06	8.98E+05	4.37E+06	7.37E+06
Room 29	29	1000-1100	2.61E+01	4.81E+07	1.94E+06	1.34E+01	5.84E+07	1.72E+06	9.78E+07	2.51E+08	1.88E+06	8.98E+05	4.37E+06	7.37E+06
Room 29	29	1100-1200	2.61E+01	4.81E+07	1.94E+06	1.34E+01	5.84E+07	1.72E+06	9.78E+07	2.51E+08	1.88E+06	8.98E+05	4.37E+06	7.37E+06
Room 29	29	1200-1300	2.61E+01	4.81E+07	1.94E+06	1.34E+01	5.84E+07	1.72E+06	9.78E+07	2.51E+08	1.88E+06	8.98E+05	4.37E+06	7.37E+06
Room 29	29	1300-1400	2.61E+01	4.81E+07	1.94E+06	1.34E+01	5.84E+07	1.72E+06	9.78E+07	2.51E+08	1.88E+06	8.98E+05	4.37E+06	7.37E+06
Room 29	29	1400-1500	2.61E+01	4.81E+07	1.94E+06	1.34E+01	5.84E+07	1.72E+06	9.78E+07	2.51E+08	1.88E+06	8.98E+05	4.37E+06	7.37E+06
Room 29	29	1500-1600	2.61E+01	4.81E+07	1.94E+06	1.34E+01	5.84E+07	1.72E+06	9.78E+07	2.51E+08	1.88E+06	8.98E+05	4.37E+06	7.37E+06
Room 29	29	1600-1700	2.61E+01	4.81E+07	1.94E+06	1.34E+01	5.84E+07	1.72E+06	9.78E+07	2.51E+08	1.88E+06	8.98E+05	4.37E+06	7.37E+06
Room 29	29	1700-1800	2.61E+01	4.81E+07	1.94E+06	1.34E+01	5.84E+07	1.72E+06	9.78E+07	2.51E+08	1.88E+06	8.98E+05	4.37E+06	7.37E+06
Room 29	29	1800-1900	2.61E+01	4.81E+07	1.94E+06	1.34E+01	5.84E+07	1.72E+06	9.78E+07	2.51E+08	1.88E+06	8.98E+05	4.37E+06	7.37E+06
Room 29	29	1900-2000	2.61E+01	4.81E+07	1.94E+06	1.34E+01	5.84E+07	1.72E+06	9.78E+07	2.51E+08	1.88E+06	8.98E+05	4.37E+06	7.37E+06
Room 29	29	2000-2100	2.61E+01	4.81E+07	1.94E+06	1.34E+01	5.84E+07	1.72E+06	9.78E+07	2.51E+08	1.88E+06	8.98E+05	4.37E+06	7.37E+06
Room 29	29	2100-2200	2.61E+01	4.81E+07	1.94E+06	1.34E+01	5.84E+07	1.72E+06	9.78E+07	2.51E+08	1.88E+06	8.98E+05	4.37E+06	7.37E+06
Room 29	29	2200-2300	2.61E+01	4.81E+07	1.94E+06	1.34E+01	5.84E+07	1.72E+06	9.78E+07	2.51E+08	1.88E+06	8.98E+05	4.37E+06	7.37E+06
Room 29	29	2300-2400	2.61E+01	4.81E+07	1.94E+06	1.34E+01	5.84E+07	1.72E+06	9.78E+07	2.51E+08	1.88E+06	8.98E+05	4.37E+06	7.37E+06
Room 30	30	0000-0100	3.17E+01	5.72E+07	2.42E+06	1.01E+01	1.13E+07	1.11E+06	2.38E+07	1.86E+07	8.87E+06	2.72E+05	7.77E+05	7.77E+05
Room 30	30	0100-0200	3.46E+01	6.29E+07	2.67E+06	1.07E+01	1.22E+07	1.22E+06	2.36E+07	1.87E+07	9.47E+06	2.82E+05	8.42E+05	8.28E+06
Room 30	30	0200-0300	3.77E+01	6.77E+07	2.84E+06	1.12E+01	1.31E+07	1.27E+06	2.40E+07	1.90E+07	9.97E+06	2.88E+05	8.57E+05	8.42E+06
Room 30	30	0300-0400	3.86E+01	6.86E+07	2.88E+07	1.13E+01	1.33E+07	1.28E+06	2.42E+07	1.91E+07	9.97E+06	2.88E+05	8.57E+05	8.42E+06
Room 30	30	0400-0500	3.86E+01	6.86E+07	2.88E+07	1.13E+01	1.33E+07	1.28E+06	2.42E+07	1.91E+07	9.97E+06	2.88E+05	8.57E+05	8.42E+06
Room 30	30	0500-0600	3.86E+01	6.86E+07	2.88E+07	1.13E+01	1.33E+07	1.28E+06	2.42E+07	1.91E+07	9.97E+06	2.88E+05	8.57E+05	8.42E+06
Room 30	30	0600-0700	3.86E+01	6.86E+07	2.88E+07	1.								

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and E)

Open Top North Undermining Quarry														
2024 North 24a Emission Factors for														
Year 2030														
Roadside Model (Hour)														
Road ID	Road	Flow	No. Emissions				No. Emissions				Roadside Model (Hour)			
			Monthly/Average		Monthly/Average		Monthly/Average		Monthly/Average					
			g/hour	ton/year	ton/hour	g/hour	ton/year	ton/hour	g/hour	ton/year	ton/hour			
Road 21	21	0000-0100	2.19E+02	1.40E+07	1.88E+06	1.95E+02	1.27E+07	1.65E+06	1.96E+02	1.19E+08	1.55E+07	1.61E+07	1.83E+06	1.94E+07
		2100-0200	2.44E+02	1.57E+07	2.06E+06	2.15E+02	1.41E+07	1.85E+06	2.18E+02	1.32E+08	1.75E+07	1.84E+07	2.06E+06	2.18E+07
Road 22	22	0000-0100	2.44E+02	1.57E+07	2.06E+06	2.15E+02	1.41E+07	1.85E+06	2.18E+02	1.32E+08	1.75E+07	1.84E+07	2.06E+06	2.18E+07
		2100-0200	2.67E+02	1.72E+07	2.25E+06	2.56E+02	1.63E+07	2.16E+07	2.12E+02	1.44E+07	1.87E+07	1.97E+07	2.19E+06	2.30E+07
Road 23	23	0000-0100	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06
		2100-0200	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07
Road 24	24	0000-0100	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06
		2100-0200	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07
Road 25	25	0000-0100	3.39E+02	2.18E+07	2.84E+06	3.39E+02	2.18E+07	2.84E+06	3.39E+02	2.18E+07	2.84E+06	3.39E+02	2.18E+07	2.84E+06
		2100-0200	3.39E+02	2.18E+07	2.84E+06	3.39E+02	2.18E+07	2.84E+06	3.39E+02	2.18E+07	2.84E+06	3.39E+02	2.18E+07	2.84E+06
Road 26	26	0000-0100	3.39E+02	2.18E+07	2.84E+06	3.39E+02	2.18E+07	2.84E+06	3.39E+02	2.18E+07	2.84E+06	3.39E+02	2.18E+07	2.84E+06
		2100-0200	3.39E+02	2.18E+07	2.84E+06	3.39E+02	2.18E+07	2.84E+06	3.39E+02	2.18E+07	2.84E+06	3.39E+02	2.18E+07	2.84E+06
Road 27	27	0000-0100	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06
		2100-0200	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07
Road 28	28	0000-0100	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06
		2100-0200	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04		
Road 29	29	0000-0100	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06
		2100-0200	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04		
Road 30	30	0000-0100	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06
		2100-0200	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04		
Road 31	31	0000-0100	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06
		2100-0200	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04		
Road 32	32	0000-0100	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06
		2100-0200	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04		
Road 33	33	0000-0100	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06
		2100-0200	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04		
Road 34	34	0000-0100	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06
		2100-0200	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04		
Road 35	35	0000-0100	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06
		2100-0200	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04		
Road 36	36	0000-0100	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06
		2100-0200	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04		
Road 37	37	0000-0100	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06
		2100-0200	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04		
Road 38	38	0000-0100	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06
		2100-0200	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04		
Road 39	39	0000-0100	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06
		2100-0200	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04		
Road 40	40	0000-0100	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06
		2100-0200	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04		
Road 41	41	0000-0100	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06
		2100-0200	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04		
Road 42	42	0000-0100	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06
		2100-0200	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04		
Road 43	43	0000-0100	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06
		2100-0200	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04		
Road 44	44	0000-0100	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06
		2100-0200	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04		
Road 45	45	0000-0100	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06
		2100-0200	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04		
Road 46	46	0000-0100	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06
		2100-0200	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04		
Road 47	47	0000-0100	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06
		2100-0200	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04		
Road 48	48	0000-0100	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06
		2100-0200	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04		
Road 49	49	0000-0100	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06
		2100-0200	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04		
Road 50	50	0000-0100	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06
		2100-0200	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04		
Road 51	51	0000-0100	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06
		2100-0200	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04		
Road 52	52	0000-0100	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06
		2100-0200	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04		
Road 53	53	0000-0100	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06
		2100-0200	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.91E+07	1.06E+04		
Road 54	54	0000-0100	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06	1.10E+03	7.00E+07	9.00E+06
		2100-0200	1.06E+04	6.74E+08	1.91E+07	1.06E+04	6.74E+08	1.9						

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Underground Query													
per 24 hour Emission Factors for EMERGE model results - Year 2030													
Area	Real ID	Hour	NO _x Emissions		Methylnaphthalene		NO _y Emissions		Methylnaphthalene		Methylnaphthalene		
			g/hour/ g/million	g/year/ g/million	g/hour/ g/million	g/year/ g/million	g/hour/ g/million	g/year/ g/million	g/hour/ g/million	g/year/ g/million	g/hour/ g/million	g/year/ g/million	
24	0800-0900	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	0900-1000	2.376	3.051	7.680	2.080	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1000-1100	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1100-1200	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1200-1300	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1300-1400	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1400-1500	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1500-1600	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1600-1700	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1700-1800	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1800-1900	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1900-2000	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	2000-2100	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	2100-2200	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	2200-2300	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	2300-2400	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	0000-0100	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	0100-0200	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	0200-0300	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	0300-0400	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	0400-0500	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	0500-0600	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	0600-0700	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	0700-0800	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	0800-0900	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	0900-1000	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1000-1100	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1100-1200	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1200-1300	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1300-1400	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1400-1500	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1500-1600	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1600-1700	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1700-1800	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1800-1900	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1900-2000	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	2000-2100	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	2100-2200	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	2200-2300	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	2300-2400	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	0000-0100	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	0100-0200	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	0200-0300	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	0300-0400	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	0400-0500	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	0500-0600	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	0600-0700	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	0700-0800	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	0800-0900	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	0900-1000	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1000-1100	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1100-1200	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1200-1300	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1300-1400	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1400-1500	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1500-1600	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1600-1700	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1700-1800	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1800-1900	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1900-2000	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	2000-2100	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	2100-2200	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	2200-2300	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	2300-2400	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	0000-0100	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	0100-0200	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	0200-0300	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	0300-0400	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	0400-0500	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	0500-0600	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	0600-0700	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	0700-0800	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	0800-0900	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	0900-1000	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1000-1100	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1100-1200	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1200-1300	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1300-1400	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1400-1500	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1500-1600	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1600-1700	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1700-1800	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1800-1900	2.345	3.018	7.608	2.061	2.796	6.998	9.931	1.276	3.188	8.581	1.138	2.928
24	1900-2000	2.345	3.018										

Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.2 Emission Factor in 2030.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and E)

Open Top North Undermining Quarry												
Year 2030												
Road Name	Road ID	Hour	No. Emissons				No. Emissons				Road ID	
			Monthly/Average		Monthly/Average		Monthly/Average		Monthly/Average			
			g/hour	tonnes/hour	g/hour	tonnes/hour	g/hour	tonnes/hour	g/hour	tonnes/hour		
Road 34	34	0800-0900	3.7812	3.23E-06	3.23E-06	3.42E-06	1.13E-06	2.96E-05	2.72E-07	1.02E-06	4.60E-06	1.77E-04
		0900-1000	4.4522	3.80E-06	3.80E-06	4.01E-06	1.17E-06	3.57E-05	3.27E-07	1.25E-06	2.00E-06	2.40E-04
Road 34	34	1000-1100	4.4882	3.83E-06	3.83E-06	4.04E-06	1.17E-06	3.60E-05	3.30E-07	1.26E-06	2.02E-06	2.42E-04
		1100-1200	4.4882	3.83E-06	3.83E-06	4.04E-06	1.17E-06	3.60E-05	3.30E-07	1.26E-06	2.02E-06	2.42E-04
Road 34	34	1200-1300	4.4882	3.83E-06	3.83E-06	4.04E-06	1.17E-06	3.60E-05	3.30E-07	1.26E-06	2.02E-06	2.42E-04
		1300-1400	4.4882	3.83E-06	3.83E-06	4.04E-06	1.17E-06	3.60E-05	3.30E-07	1.26E-06	2.02E-06	2.42E-04
Road 34	34	1400-1500	4.4882	3.83E-06	3.83E-06	4.04E-06	1.17E-06	3.60E-05	3.30E-07	1.26E-06	2.02E-06	2.42E-04
		1500-1600	4.4882	3.83E-06	3.83E-06	4.04E-06	1.17E-06	3.60E-05	3.30E-07	1.26E-06	2.02E-06	2.42E-04
Road 34	34	1600-1700	4.4882	3.83E-06	3.83E-06	4.04E-06	1.17E-06	3.60E-05	3.30E-07	1.26E-06	2.02E-06	2.42E-04
		1700-1800	4.4882	3.83E-06	3.83E-06	4.04E-06	1.17E-06	3.60E-05	3.30E-07	1.26E-06	2.02E-06	2.42E-04
Road 34	34	1800-1900	2.8062	1.20E-06	1.20E-06	1.24E-06	3.50E-07	2.80E-05	2.71E-07	1.02E-06	2.39E-06	1.02E-04
		1900-2000	2.8062	1.20E-06	1.20E-06	1.24E-06	3.50E-07	2.80E-05	2.71E-07	1.02E-06	2.39E-06	1.02E-04
Road 34	34	2000-2100	2.5212	1.04E-06	1.04E-06	1.07E-06	3.15E-07	2.52E-05	2.43E-07	9.79E-06	2.34E-06	8.89E-04
		2100-2200	2.5212	1.04E-06	1.04E-06	1.07E-06	3.15E-07	2.52E-05	2.43E-07	9.79E-06	2.34E-06	8.89E-04
Road 34	34	2200-2300	2.2862	0.98E-06	0.98E-06	1.00E-06	2.86E-07	2.41E-05	2.29E-07	9.03E-06	2.18E-06	1.62E-04
		2300-2400	2.2862	0.98E-06	0.98E-06	1.00E-06	2.86E-07	2.41E-05	2.29E-07	9.03E-06	2.18E-06	1.62E-04
Road 34	34	2400-2500	2.1542	0.90E-07	9.0E-07	9.25E-07	2.62E-07	2.12E-05	2.01E-07	7.55E-06	1.45E-06	2.68E-04
		2500-2600	2.1542	0.90E-07	9.0E-07	9.25E-07	2.62E-07	2.12E-05	2.01E-07	7.55E-06	1.45E-06	2.68E-04
Road 34	34	2600-2700	1.1462	0.08E-06	8.0E-07	8.17E-07	1.38E-07	1.15E-05	1.08E-07	4.16E-07	7.65E-07	2.81E-07
		2700-2800	1.1462	0.08E-06	8.0E-07	8.17E-07	1.38E-07	1.15E-05	1.08E-07	4.16E-07	7.65E-07	
Road 35	35	0300-0400	3.2712	2.68E-06	2.68E-06	2.81E-06	8.47E-07	5.59E-05	5.14E-07	2.15E-06	9.01E-06	3.63E-04
		0400-0500	3.1742	2.62E-06	2.62E-06	2.74E-06	8.32E-07	5.44E-05	5.04E-07	2.07E-06	8.70E-06	3.46E-04
Road 35	35	0500-0600	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
		0600-0700	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
Road 35	35	0700-0800	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
		0800-0900	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
Road 35	35	0900-1000	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
		1000-1100	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
Road 35	35	1100-1200	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
		1200-1300	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
Road 35	35	1300-1400	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
		1400-1500	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
Road 35	35	1500-1600	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
		1600-1700	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
Road 35	35	1700-1800	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
		1800-1900	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
Road 35	35	1900-2000	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
		2000-2100	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
Road 35	35	2100-2200	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
		2200-2300	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
Road 35	35	2300-2400	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
		2400-2500	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
Road 35	35	2500-2600	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
		2600-2700	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
Road 35	35	2700-2800	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
		2800-2900	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
Road 35	35	2900-3000	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
		3000-3100	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
Road 35	35	3100-3200	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
		3200-3300	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
Road 35	35	3300-3400	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
		3400-3500	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
Road 35	35	3500-3600	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
		3600-3700	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
Road 35	35	3700-3800	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
		3800-3900	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
Road 35	35	3900-4000	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
		4000-4100	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
Road 35	35	4100-4200	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
		4200-4300	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
Road 35	35	4300-4400	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
		4400-4500	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
Road 35	35	4500-4600	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
		4600-4700	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
Road 35	35	4700-4800	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
		4800-4900	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
Road 35	35	4900-5000	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
		5000-5100	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
Road 35	35	5100-5200	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
		5200-5300	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
Road 35	35	5300-5400	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
		5400-5500	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
Road 35	35	5500-5600	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
		5600-5700	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
Road 35	35	5700-5800	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
		5800-5900	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62E-05	5.14E-07	2.16E-06	9.07E-06	3.65E-04
Road 35	35	5900-6000	3.1462	2.72E-06	2.72E-06	2.84E-06	8.47E-07	5.62				

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.2 Emission Factor in 2030.xlsx

Underground Query			24 Hour Emission Factors for (Kilowatt Hours) (Kilowatt Hours)															
Year 2020			NOx Emission				Methane/Acetylene				NOx Emission				Methane/Acetylene			
Area	Road ID	Hour	g/hv/m ³		g/hv/m ³		g/hv/m ³		g/hv/m ³		g/hv/m ³		g/hv/m ³		g/hv/m ³		g/hv/m ³	
			g/hv/m ³	g/hv/m ³	g/hv/m ³	g/hv/m ³	g/hv/m ³	g/hv/m ³	g/hv/m ³	g/hv/m ³	g/hv/m ³	g/hv/m ³	g/hv/m ³	g/hv/m ³	g/hv/m ³	g/hv/m ³	g/hv/m ³	g/hv/m ³
37	37	1650-1700	1.022	1.177	1.344	9.582	1.405	1.578	4.588	1.772	1.947	1.431	7.048	1.426	1.601	1.177	1.344	
37	37	1700-1800	1.022	1.177	1.344	9.582	1.405	1.578	4.588	1.772	1.947	1.431	7.048	1.426	1.601	1.177	1.344	
37	37	1800-1900	1.022	1.177	1.344	9.582	1.405	1.578	4.588	1.772	1.947	1.431	7.048	1.426	1.601	1.177	1.344	
37	37	1900-2000	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	2000-2100	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	2100-2200	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	2200-2300	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	2300-2400	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	2400-2500	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	2500-2600	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	2600-2700	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	2700-2800	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	2800-2900	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	2900-3000	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	3000-3100	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	3100-3200	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	3200-3300	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	3300-3400	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	3400-3500	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	3500-3600	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	3600-	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	3600-3700	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	3700-3800	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	3800-3900	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	3900-4000	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	4000-4100	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	4100-4200	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	4200-4300	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	4300-4400	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	4400-4500	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	4500-4600	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	4600-4700	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	4700-4800	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	4800-4900	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	4900-5000	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	5000-	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	5000-5100	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	5100-5200	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	5200-5300	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	5300-5400	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	5400-5500	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	5500-5600	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	5600-5700	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	5700-5800	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	5800-5900	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	5900-6000	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	6000-	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	6000-6100	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	6100-6200	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	6200-6300	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	6300-6400	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	6400-6500	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	6500-6600	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	6600-6700	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	6700-6800	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	6800-6900	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	6900-7000	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	7000-	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	7000-7100	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	7100-7200	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	7200-7300	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	7300-7400	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	7400-7500	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	7500-7600	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	7600-7700	1.042	1.197	1.364	9.782	1.425	1.598	4.688	1.792	1.967	1.451	7.148	1.446	1.621	1.197	1.364	
37	37	7700-7800																

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open N2 North End Unemission Factors for AR5000 model (Round 4)															
Road Name		Road ID	Hour	Year 2030											
				No Emission						No Emission					
				Monthly/haour			Monthly/haour			Monthly/haour			Monthly/haour		
				g/h/ha	tonne/ha	g/h/ha	tonne/ha	g/h/ha	tonne/ha	g/h/ha	tonne/ha	g/h/ha	tonne/ha	g/h/ha	tonne/ha
Road 41	41	0000:01:00	4.071E-12	1.29E-07	1.211E-06	4.50E-02	1.14E-07	1.071E-06	2.21E-01	7.02E-07	6.59E-06	1.91E-01	6.02E-07	1.68E-06	
Road 41	41	0000:02:00	5.001E-12	1.521E-07	1.436E-06	5.05E-02	1.26E-07	1.191E-06	2.62E-01	8.47E-07	7.92E-06	2.34E-01	7.51E-07	1.97E-06	
Road 41	41	0000:03:00	5.881E-12	1.821E-07	1.726E-06	5.88E-02	1.47E-07	1.391E-06	3.02E-01	9.97E-07	9.32E-06	2.79E-01	8.82E-07	2.28E-06	
Road 41	41	0000:04:00	6.60E-12	9.97E-08	9.31E-08	5.51E-02	8.84E-08	8.38E-08	3.29E-01	4.97E-07	4.60E-06	2.51E-01	4.40E-07	4.13E-06	
Road 41	41	0000:05:00	6.46E-12	9.76E-08	9.16E-08	5.39E-02	8.62E-08	8.15E-08	3.22E-01	4.85E-07	4.48E-06	2.46E-01	4.32E-07	4.05E-06	
Road 41	41	0000:06:00	3.14E-12	5.32E-07	1.24E-06	4.01E-02	1.19E-07	1.13E-06	2.71E-01	6.79E-07	6.37E-06	2.04E-01	5.94E-07	1.58E-06	
Road 41	41	0000:07:00	4.08E-12	6.21E-07	1.56E-06	4.60E-02	1.36E-07	1.29E-06	2.70E-01	7.00E-07	6.58E-06	2.08E-01	6.25E-07	1.65E-06	
Road 41	41	0000:08:00	5.33E-12	1.61E-07	1.511E-06	5.33E-02	1.45E-07	1.37E-06	3.47E-01	1.05E-06	9.92E-06	2.87E-01	8.82E-07	2.28E-06	
Road 41	41	0000:09:00	5.02E-12	6.08E-07	1.51E-06	4.60E-02	1.37E-07	1.29E-06	2.47E-01	2.99E-06	2.81E-01	2.73E-01	2.70E-01	2.44E-06	
Road 41	41	0000:10:00	5.02E-12	6.08E-07	1.51E-06	4.60E-02	1.37E-07	1.29E-06	2.47E-01	2.99E-06	2.81E-01	2.73E-01	2.70E-01	2.44E-06	
Road 41	41	0000:11:00	5.02E-12	6.08E-07	1.51E-06	4.60E-02	1.37E-07	1.29E-06	2.47E-01	2.99E-06	2.81E-01	2.73E-01	2.70E-01	2.44E-06	
Road 41	41	0000:12:00	6.41E-12	6.27E-07	1.589E-06	5.88E-02	1.57E-07	1.50E-06	3.06E-01	2.97E-06	2.79E-01	2.75E-01	2.68E-01	2.52E-06	
Road 41	41	0001:00:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0001:01:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0001:02:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0001:03:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0001:04:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0001:05:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0001:06:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0001:07:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0001:08:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0001:09:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0001:10:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0001:11:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0001:12:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0002:00:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0002:01:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0002:02:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0002:03:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0002:04:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0002:05:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0002:06:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0002:07:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0002:08:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0002:09:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0002:10:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0002:11:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0002:12:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0003:00:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0003:01:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0003:02:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0003:03:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0003:04:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0003:05:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0003:06:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0003:07:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0003:08:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0003:09:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0003:10:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0003:11:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0003:12:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0004:00:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0004:01:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0004:02:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0004:03:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0004:04:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0004:05:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0004:06:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0004:07:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0004:08:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0004:09:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0004:10:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94E-06	
Road 41	41	0004:11:00	7.35E-12	1.44E-07	1.341E-06	5.88E-02	1.46E-07	1.46E-06	3.61E-01	2.37E-06	2.19E-01	2.16E-01	2.08E-01	1.94	

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Open Road\Appendix 3.5.2 Emission Factor in 2030.xlsx

Open R4 North Undermount Quarry														
Year 2010														
Top 24 hours emission factors for 464000 metric tonnes														
Roast name	Roast ID	Hour	NO Emission				NO Emission				NO Emission			
			g/hour/ton	kg/hour/ton	ton/hour/ton	kg/hour/ton	kg/hour/ton	kg/hour/ton	kg/hour/ton	kg/hour/ton	kg/hour/ton			
Monthly/Average														
			g/hour/ton	kg/hour/ton	ton/hour/ton	kg/hour/ton	kg/hour/ton	kg/hour/ton	kg/hour/ton	kg/hour/ton	kg/hour/ton	kg/hour/ton		
Roast 44	44	0800-0900	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 44	44	0900-1000	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 44	44	1000-1100	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 44	44	1100-1200	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 44	44	1200-1300	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 44	44	1300-1400	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 44	44	1400-1500	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 44	44	1500-1600	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 44	44	1600-1700	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 44	44	1700-1800	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 44	44	1800-1900	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 44	44	1900-2000	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 44	44	2000-2100	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 44	44	2100-2200	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 44	44	2200-2300	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 44	44	2300-2400	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 45	45	0800-0900	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 45	45	0900-1000	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 45	45	1000-1100	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 45	45	1100-1200	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 45	45	1200-1300	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 45	45	1300-1400	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 45	45	1400-1500	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 45	45	1500-1600	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 45	45	1600-1700	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 45	45	1700-1800	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 45	45	1800-1900	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 45	45	1900-2000	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 45	45	2000-2100	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 45	45	2100-2200	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 45	45	2200-2300	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 45	45	2300-2400	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 46	46	0800-0900	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 46	46	0900-1000	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 46	46	1000-1100	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 46	46	1100-1200	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 46	46	1200-1300	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 46	46	1300-1400	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 46	46	1400-1500	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 46	46	1500-1600	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 46	46	1600-1700	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 46	46	1700-1800	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 46	46	1800-1900	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 46	46	1900-2000	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 46	46	2000-2100	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 46	46	2100-2200	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 46	46	2200-2300	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 46	46	2300-2400	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 47	47	0800-0900	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 47	47	0900-1000	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 47	47	1000-1100	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 47	47	1100-1200	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 47	47	1200-1300	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 47	47	1300-1400	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 47	47	1400-1500	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 47	47	1500-1600	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 47	47	1600-1700	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 47	47	1700-1800	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 47	47	1800-1900	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 47	47	1900-2000	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 47	47	2000-2100	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 47	47	2100-2200	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 47	47	2200-2300	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08
Roast 47	47	2300-2400	2.4452	4.8002	3.898E-08	2.2312	4.4712	3.555E-08	1.9112	4.188E-08	3.065E-08	1.7141	4.414E-08	2.727E-08

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Open North Road User Emission Factors for KEMCO model - Year 2030														
Road Name	Road ID	Hour	NOx Emission						NO Emission					
			Monthly Average			Monthly Peak			Monthly Average			Monthly Peak		
			g/km/h	g/hour	g/km/h	g/km/h	g/hour	g/km/h	g/hour	g/km/h	g/hour	g/km/h	g/hour	
Road #7	47	1800-1300	4.552	1.011E-08	1.348	4.151	8.796	2.811E-05	2.398	4.841E-08	1.548	1.998	4.311E-05	1.184E-04
Road #7	47	1800-1300	3.222	8.551E-09	1.161	2.912	6.274	2.533E-05	1.698	4.871E-08	1.108	1.455	3.561E-05	9.44E-05
Road #7	47	1800-1300	2.972	8.042E-09	1.082	2.682	5.752	2.302E-05	1.568	4.611E-08	1.028	1.351	3.411E-05	8.74E-05
Road #7	47	1800-2000	3.972	4.442E-09	1.405	1.342	4.012	1.274E-05	1.002	2.264E-08	9.215	0.117	0.514	7.923E-05
Road #7	47	1800-2000	2.842	3.142E-09	1.002	0.962	2.842	8.742E-06	0.702	1.611E-08	6.415	0.075	0.354	5.54E-05
Road #7	47	1800-2000	2.132	2.762E-09	0.842	0.782	2.402	7.512E-06	0.512	1.224E-08	4.615	0.054	0.268	4.188E-05
Road #7	47	2200-2300	4.552	1.011E-08	1.348	1.262	3.172	6.911E-05	1.772	3.181E-08	8.815	0.302	1.884	0.000E-04
Road #7	47	2200-2300	3.222	8.551E-09	1.161	2.062	2.162	5.161E-05	1.262	2.261E-08	6.115	0.202	1.384	0.000E-04
Road #7	47	2200-2300	2.972	8.042E-09	1.082	1.982	2.062	4.961E-05	1.162	2.161E-08	5.615	0.192	1.284	0.000E-04
Road #8	48	0300-0300	4.482	1.212E-08	1.372	2.272	4.242	1.824E-05	1.972	2.048E-08	1.068	1.174	2.741E-05	7.61E-05
Road #8	48	0300-0300	3.222	8.551E-09	1.161	1.672	3.072	1.324E-05	1.472	1.478E-08	0.768	0.834	2.041E-05	5.54E-05
Road #8	48	0300-0300	2.972	8.042E-09	1.082	1.572	2.972	1.284E-05	1.372	1.378E-08	0.718	0.784	1.941E-05	5.14E-05
Road #8	48	0300-0300	4.552	1.011E-08	1.348	2.252	4.282	1.286E-05	1.936E-05	2.096E-05	1.056E-08	1.182E-05	0.118E-05	1.138E-05
Road #8	48	0300-0300	3.222	8.551E-09	1.161	1.652	3.052	1.286E-05	1.452E-05	1.612E-05	0.756E-08	0.852E-05	0.212E-05	5.84E-05
Road #8	48	0300-0300	2.972	8.042E-09	1.082	1.552	2.952	1.246E-05	1.352E-05	1.512E-05	0.716E-08	0.782E-05	0.202E-05	5.44E-05
Road #8	48	0700-0800	3.972	1.277E-06	1.912	0.392	3.972	1.146E-05	2.152E-05	2.322E-05	7.662E-06	0.208E-05	7.156E-06	1.94E-05
Road #8	48	0700-0800	2.842	9.122E-07	1.402	0.282	2.842	8.146E-06	1.552E-05	1.722E-05	5.662E-06	0.158E-05	5.146E-06	1.38E-05
Road #8	48	0700-0800	2.132	7.522E-07	1.002	0.262	2.132	6.246E-06	1.152E-05	1.322E-05	4.362E-06	0.118E-05	3.946E-06	1.04E-05
Road #8	48	0900-1000	2.972	1.262E-06	1.872	0.372	2.972	1.076E-05	2.076E-05	2.246E-05	7.446E-06	0.204E-05	7.146E-06	1.92E-05
Road #8	48	0900-1000	2.132	9.122E-07	1.402	0.272	2.132	7.676E-06	1.476E-05	1.646E-05	4.576E-06	0.124E-05	4.176E-06	1.1E-05
Road #8	48	0900-1000	1.382	6.222E-07	0.802	0.232	1.382	4.176E-06	8.076E-06	8.876E-06	2.776E-06	0.074E-05	2.476E-06	6.44E-06
Road #8	48	1200-1300	4.482	1.212E-08	1.372	2.442	4.272	2.012E-05	2.1					
Road #8	48	1200-1300	3.222	8.551E-09	1.161	2.062	2.162	5.161E-05	1.262					
Road #8	48	1200-1300	2.972	8.042E-09	1.082	1.982	2.062	4.961E-05	1.162					
Road #9	49	0300-0300	2.972	8.042E-09	1.082	1.982	2.062	4.961E-05	1.162					
Road #9	49	0300-0300	2.132	7.522E-07	1.002	0.262	2.132	6.246E-06	1.152E-05					
Road #9	49	0300-0300	1.382	6.222E-07	0.802	0.232	1.382	4.176E-06	8.076E-06					
Road #9	49	0700-0800	3.972	1.277E-06	1.912	0.392	3.972	1.146E-05	2.152E-05					
Road #9	49	0700-0800	2.842	9.122E-07	1.402	0.282	2.842	8.146E-06	1.552E-05					
Road #9	49	0700-0800	2.132	7.522E-07	1.002	0.262	2.132	6.246E-06	1.152E-05					
Road #9	49	0900-1000	2.972	1.262E-06	1.872	0.372	2.972	1.076E-05	2.076E-05					
Road #9	49	0900-1000	2.132	9.122E-07	1.402	0.272	2.132	7.676E-06	1.476E-05					
Road #9	49	0900-1000	1.382	6.222E-07	0.802	0.232	1.382	4.176E-06	8.076E-06					
Road #9	49	1200-1300	4.482	1.212E-08	1.372	2.442	4.272	2.012E-05	2.1					
Road #9	49	1200-1300	3.222	8.551E-09	1.161	2.062	2.162	5.161E-05	1.262					
Road #9	49	1200-1300	2.972	8.042E-09	1.082	1.982	2.062	4.961E-05	1.162					
Road #9	49	1800-1900	3.972	1.277E-06	1.912	0.392	3.972	1.146E-05	2.152E-05					
Road #9	49	1800-1900	2.842	9.122E-07	1.402	0.282	2.842	8.146E-06	1.552E-05					
Road #9	49	1800-1900	2.132	7.522E-07	1.002	0.262	2.132	6.246E-06	1.152E-05					
Road #9	49	2200-2300	4.482	1.212E-08	1.372	2.442	4.272	2.012E-05	2.1					
Road #9	49	2200-2300	3.222	8.551E-09	1.161	2.062	2.162	5.161E-05	1.262					
Road #9	49	2200-2300	2.972	8.042E-09	1.082	1.982	2.062	4.961E-05	1.162					
Road #10	50	0300-0300	4.552	1.011E-08	1.348	1.262	3.172	6.911E-05	1.772					
Road #10	50	0300-0300	3.222	8.551E-09	1.161	2.062	2.162	5.161E-05	1.262					
Road #10	50	0300-0300	2.972	8.042E-09	1.082	1.982	2.062	4.961E-05	1.162					
Road #10	50	0700-0800	3.972	1.277E-06	1.912	0.392	3.972	1.146E-05	2.152E-05					
Road #10	50	0700-0800	2.842	9.122E-07	1.402	0.282	2.842	8.146E-06	1.552E-05					
Road #10	50	0700-0800	2.132	7.522E-07	1.002	0.262	2.132	6.246E-06	1.152E-05					
Road #10	50	0900-1000	2.972	1.262E-06	1.872	0.372	2.972	1.076E-05	2.076E-05					
Road #10	50	0900-1000	2.132	9.122E-07	1.402	0.272	2.132	7.676E-06	1.476E-05					
Road #10	50	0900-1000	1.382	6.222E-07	0.802	0.232	1.382	4.176E-06	8.076E-06					
Road #10	50	1200-1300	4.482	1.212E-08	1.372	2.442	4.272	2.012E-05	2.1					
Road #10	50	1200-1300	3.222	8.551E-09	1.161	2.062	2.162	5.161E-05	1.262					
Road #10	50	1200-1300	2.972	8.042E-09	1.082	1.982	2.062	4.961E-05	1.162					
Road #10	50	1800-1900	3.972	1.277E-06	1.912	0.392	3.972	1.146E-05	2.152E-05					
Road #10	50	1800-1900	2.842	9.122E-07	1.402	0.282	2.842	8.146E-06	1.552E-05					
Road #10	50	1800-1900	2.132	7.522E-07	1.002	0.262	2.132	6.246E-06	1.152E-05					
Road #10	50	2200-2300	4.482	1.212E-08	1.372	2.442	4.272	2.012E-05	2.1					
Road #10	50	2200-2300	3.222	8.551E-09	1.161	2.062	2.162	5.161E-05	1.262					
Road #10	50	2200-2300	2.972	8.042E-09	1.082	1.982	2.062	4.961E-05	1.162					
Road #11	51	0300-0300	4.552	1.011E-08	1.348	1.262	3.172	6.911E-05	1.772					
Road #11	51	0300-0300	3.222	8.551E-09	1.161	2.062	2.162	5.161E-05	1.262					
Road #11	51	0300-0300	2.972	8.042E-09	1.082	1.982	2.062	4.961E-05	1.162					
Road #11	51	0700-0800	3.972	1.277E-06	1.912	0.392	3.972	1.146E-05	2.152E-05					
Road #11	51	0700-0800	2.842	9.122E-07	1.402	0.282	2.842	8.146E-06	1.552E-05					
Road #11	51	0700-0800	2.132	7.522E-07	1.002	0.262	2.132	6.246E-06	1.152E-05					
Road #11	51	0900-1000	2.972	1.262E-06	1.872	0.372	2.972	1.076E-05	2.076E-05					
Road #11	51	0900-1000	2.132	9.122E-07	1.402	0.272	2.132	7.676E-06	1.476E-05					
Road #11	51	0900-1000	1.382	6.222E-07	0.802	0.232	1.382	4.176E-06	8.076E-06					
Road #11	51	1200-1300	4.482	1.212E-08	1.372	2.442	4.272	2.012E-05	2.1					
Road #11	51	1200-1300	3.222	8.551E-09	1.161	2.062	2.162	5.161E-05	1.262					
Road #11	51	1200-1300	2.972	8.042E-09	1.082	1.982	2.062	4.961E-05	1.162					
Road #11	51	1800-1900	3.972	1.277E-06	1.912	0.392	3.972	1.146E-05	2.152E-05					
Road #11	51	1800-1900	2.842	9.122E-07	1.402	0.282	2.842	8.146E-06	1.552E-05					
Road #11	51	1800-1900	2.132	7.522E-07	1.002	0.262	2.132	6.246E-06	1.152E-05					
Road #11	51	2200-2300	4.482	1.212E-08	1.372	2.442	4.272	2.012E-05	2.1					
Road #11	51	2200-2300	3.222	8.551E-09	1.161	2.062	2.162	5.161E-05	1.262					
Road #11	51	2200-2300	2.972	8.042E-09	1.082	1.982	2.062	4.961E-05	1.162					
Road #12	52	0300-0300	4.552	1.011E-08	1.348	1.262	3.172	6.911E-05	1.772					
Road #12	52	0300-0300	3.222	8.551E-09	1.161	2.062	2.162	5.161E-05	1.262					
Road #12	52	0300-0300	2.972	8.042E-09	1.082	1.982	2.062	4.961E-05	1.162					
Road #12	52	0700-0800	3.972	1.277E-06	1.912	0.392	3.972	1.146E-05	2.152E-05					
Road #12	52	0700-0800	2.842	9.122E-07	1.402	0.282	2.842	8.146E-06	1.552E-05					
Road #12	52	0700-0800	2.132	7.522E-07	1.002	0.262	2.132	6.246E-06	1.152E-05					
Road #12	52	0900-1000	2.972											

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

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24 Hour Unmanned Factors														
		Year 2000		No Emersion				No Emersion						
Run	Pass ID	Hour	Month	Year	Month	Year	Month	Year	Month	Year	Month	Year		
		Monthly/Average		Monthly/Average		Monthly/Average		Monthly/Average		Monthly/Average		Monthly/Average		
		g/hr/mph	km/hr/mph	g/hr/mph	km/hr/mph	g/hr/mph	km/hr/mph	g/hr/mph	km/hr/mph	g/hr/mph	km/hr/mph	g/hr/mph	km/hr/mph	
1	4	0800-0800	1.212	7.487	1.508	9.712	6.882	4.376	1.481	9.708	1.144	1.905	0.576	1.031
1	4	0800-1000	2.006	12.562	1.508	9.712	6.882	4.376	1.481	9.708	1.144	1.905	0.576	1.031
1	4	0800-1200	1.212	7.487	1.508	9.712	6.882	4.376	1.481	9.708	1.144	1.905	0.576	1.031
1	4	1100-1200	2.363	15.067	2.205	2.136	2.136	1.339	1.976	4.323	8.554	1.025	3.882	7.735
1	4	1200-1400	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	1400-1800	1.144	7.186	2.330	2.776	1.048	2.119	1.931	7.934	1.740	1.673	1.444	1.304
1	4	1800-2000	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	2000-2200	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	2200-2400	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	2400-0100	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	0100-0200	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	0200-0300	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	0300-0400	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	0400-0500	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	0500-0600	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	0600-0700	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	0700-0800	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	0800-0900	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	0900-1000	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	1000-1100	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	1100-1200	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	1200-1300	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	1300-1400	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	1400-1500	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	1500-1600	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	1600-1700	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	1700-1800	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	1800-1900	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	1900-2000	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	2000-2100	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	2100-2200	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	2200-2300	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	2300-2400	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	2400-0100	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	0100-0200	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	0200-0300	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	0300-0400	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	0400-0500	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	0500-0600	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	0600-0700	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	0700-0800	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	0800-0900	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	0900-1000	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	1000-1100	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	1100-1200	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	1200-1300	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	1300-1400	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	1400-1500	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	1500-1600	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	1600-1700	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	1700-1800	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	1800-1900	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	1900-2000	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	2000-2100	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	2100-2200	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	2200-2300	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	2300-2400	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	2400-0100	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	0100-0200	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	0200-0300	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	0300-0400	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	0400-0500	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	0500-0600	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	0600-0700	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	0700-0800	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	0800-0900	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	0900-1000	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	1000-1100	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	1100-1200	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	1200-1300	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	1300-1400	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	1400-1500	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	1500-1600	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	1600-1700	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	1700-1800	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	1800-1900	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	1900-2000	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	2000-2100	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	2100-2200	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	2200-2300	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982	1.586	9.982
1	4	2300-2400	1.58											

Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.2 Emission Factor in 2030.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Top 24 Hour Endurance Quarry													
Using 24 Hour Endurance Factors for													
AERMOD model (February)													
Road Name	Road ID	Frequency	Monthly/turn/km			Monthly/turn/acre			Monthly/turn/acre				
			g/mi/hr	lb/day	lb/yr	g/mi/hr	lb/day	lb/yr	g/mi/hr	lb/day	lb/yr		
Road 31	34	0800-0900	3.51E-02	0.12	3.61E-01	3.22E-02	1.06E-06	2.78E-02	2.08E-01	8.80E-04	1.87E-01	1.62E-04	
Road 34	34	0900-1000	4.17E-02	2.21E	3.46E-01	3.11E-02	2.20E-06	2.32E-02	1.73E-06	2.14E-01	8.13E-06	1.60E-04	
Road 34	34	1000-1100	4.17E-02	2.21E	3.46E-01	3.11E-02	2.20E-06	2.32E-02	1.73E-06	2.14E-01	8.13E-06	1.60E-04	
Road 34	34	1100-1200	4.61E-02	1.18E	2.97E-01	4.19E-02	1.07E-06	2.68E-02	2.49E-01	1.13E-06	2.24E-01	5.51E-06	1.44E-04
Road 34	34	1200-1300	4.84E-02	1.42E	3.67E-01	4.39E-02	1.39E-06	3.46E-02	3.18E-06	2.57E-06	2.86E-01	1.44E-04	
Road 34	34	1300-1400	4.84E-02	1.42E	3.67E-01	4.39E-02	1.39E-06	3.46E-02	3.18E-06	2.57E-06	2.86E-01	1.44E-04	
Road 34	34	1400-1500	4.84E-02	1.55E	4.07E-01	4.21E-02	1.43E-06	3.72E-02	3.33E-06	2.77E-06	2.86E-01	9.70E-05	2.54E-04
Road 34	34	1500-1600	4.84E-02	1.28E	3.67E-01	4.21E-02	1.43E-06	3.72E-02	3.33E-06	2.77E-06	2.86E-01	9.70E-05	2.54E-04
Road 34	34	1600-1700	4.84E-02	1.55E	4.07E-01	4.21E-02	1.43E-06	3.72E-02	3.33E-06	2.77E-06	2.86E-01	9.70E-05	2.54E-04
Road 34	34	1700-1800	4.84E-02	1.55E	4.07E-01	4.21E-02	1.43E-06	3.72E-02	3.33E-06	2.77E-06	2.86E-01	9.70E-05	2.54E-04
Road 34	34	1800-1900	4.84E-02	1.55E	4.07E-01	4.21E-02	1.43E-06	3.72E-02	3.33E-06	2.77E-06	2.86E-01	9.70E-05	2.54E-04
Road 34	34	1900-2000	4.84E-02	1.55E	4.07E-01	4.21E-02	1.43E-06	3.72E-02	3.33E-06	2.77E-06	2.86E-01	9.70E-05	2.54E-04
Road 34	34	2000-2100	4.84E-02	1.55E	4.07E-01	4.21E-02	1.43E-06	3.72E-02	3.33E-06	2.77E-06	2.86E-01	9.70E-05	2.54E-04
Road 34	34	2100-2200	4.84E-02	1.55E	4.07E-01	4.21E-02	1.43E-06	3.72E-02	3.33E-06	2.77E-06	2.86E-01	9.70E-05	2.54E-04
Road 34	34	2200-2300	4.84E-02	1.55E	4.07E-01	4.21E-02	1.43E-06	3.72E-02	3.33E-06	2.77E-06	2.86E-01	9.70E-05	2.54E-04
Road 34	34	2300-2400	4.84E-02	1.55E	4.07E-01	4.21E-02	1.43E-06	3.72E-02	3.33E-06	2.77E-06	2.86E-01	9.70E-05	2.54E-04
Road 35	35	0000-0100	9.12E-02	7.33E	7.87E-01	8.27E-02	6.64E-06	1.62E-02	4.35E-02	3.30E-07	6.65E-07	7.22E-07	1.50E-04
Road 35	35	0100-0200	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 35	35	0200-0300	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 35	35	0300-0400	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 35	35	0400-0500	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 35	35	0500-0600	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 35	35	0600-0700	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 35	35	0700-0800	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 35	35	0800-0900	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 35	35	0900-1000	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 35	35	1000-1100	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 35	35	1100-1200	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 35	35	1200-1300	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 35	35	1300-1400	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 35	35	1400-1500	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 35	35	1500-1600	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 35	35	1600-1700	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 35	35	1700-1800	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 35	35	1800-1900	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 35	35	1900-2000	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 35	35	2000-2100	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 35	35	2100-2200	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 35	35	2200-2300	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 35	35	2300-2400	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 36	36	0000-0100	9.12E-02	7.33E	7.87E-01	8.27E-02	6.64E-06	1.62E-02	4.35E-02	3.30E-07	6.65E-07	7.22E-07	1.50E-04
Road 36	36	0100-0200	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 36	36	0200-0300	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 36	36	0300-0400	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 36	36	0400-0500	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 36	36	0500-0600	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 36	36	0600-0700	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 36	36	0700-0800	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 36	36	0800-0900	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 36	36	0900-1000	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 36	36	1000-1100	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 36	36	1100-1200	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 36	36	1200-1300	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 36	36	1300-1400	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 36	36	1400-1500	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 36	36	1500-1600	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 36	36	1600-1700	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 36	36	1700-1800	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 36	36	1800-1900	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 36	36	1900-2000	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 36	36	2000-2100	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 36	36	2100-2200	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 36	36	2200-2300	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 36	36	2300-2400	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 37	37	0000-0100	9.12E-02	7.33E	7.87E-01	8.27E-02	6.64E-06	1.62E-02	4.35E-02	3.30E-07	6.65E-07	7.22E-07	1.50E-04
Road 37	37	0100-0200	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 37	37	0200-0300	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 37	37	0300-0400	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 37	37	0400-0500	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 37	37	0500-0600	1.19E-02	8.47E	1.52E-01	1.85E-01	5.47E-08	1.38E-02	2.70E-02	6.05E-07	4.76E-07	2.47E-07	6.27E-07
Road 37	37	0600-0700	1.19E-02	8.47E									

L:\Secure\Environment Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Open Road\Appendix 3.5.2 Emission Factor in 203

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Day 24 Hour Underground Factors for												
ARMD Model (Hours)		Year 2030		No Emission				No Emission				
Month	Row ID	Month/Year	Month/Year	Month/Year	Month/Year	Month/Year	Month/Year	Month/Year	Month/Year	Month/Year	Month/Year	
g/ha/m ²	g/ha/m ²	g/ha/m ²	g/ha/m ²	g/ha/m ²	g/ha/m ²	g/ha/m ²	g/ha/m ²	g/ha/m ²	g/ha/m ²	g/ha/m ²	g/ha/m ²	
Nov 17	17	1850-1700	9.7402	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	
Nov 17	17	1800-1700	8.1348	1.466	1.466	1.368	1.76	1.466	1.322	1.466	1.716	
Nov 17	17	1700-1600	6.5294	1.921	1.921	1.823	2.22	1.921	1.777	1.921	2.177	
Nov 17	17	1600-1500	4.924	2.376	2.376	2.278	2.67	2.376	2.232	2.376	2.622	
Nov 17	17	1500-1400	3.3186	2.831	2.831	2.733	3.07	2.831	2.687	2.831	3.033	
Nov 17	17	1400-1300	1.7128	3.286	3.286	3.188	3.47	3.286	3.142	3.286	3.438	
Nov 17	17	1300-1200	0.1074	3.741	3.741	3.643	3.87	3.741	3.597	3.741	3.993	
Nov 17	17	1200-1100	0.002	4.196	4.196	4.098	4.27	4.196	4.052	4.196	4.398	
Nov 17	17	1100-1000	0.0002	4.651	4.651	4.553	4.63	4.651	4.507	4.651	4.859	
Nov 17	17	1000-0900	0.0002	5.106	5.106	5.008	5.08	5.106	4.962	5.106	5.304	
Nov 17	17	0900-0800	0.0002	5.561	5.561	5.463	5.54	5.561	5.417	5.561	5.765	
Nov 17	17	0800-0700	0.0002	6.016	6.016	5.918	6.00	6.016	5.872	6.016	6.276	
Nov 17	17	0700-0600	0.0002	6.471	6.471	6.373	6.45	6.471	6.327	6.471	6.671	
Nov 17	17	0600-0500	0.0002	6.926	6.926	6.828	6.91	6.926	6.782	6.926	7.182	
Nov 17	17	0500-0400	0.0002	7.381	7.381	7.283	7.36	7.381	7.237	7.381	7.581	
Nov 17	17	0400-0300	0.0002	7.836	7.836	7.738	7.82	7.836	7.692	7.836	8.036	
Nov 17	17	0300-0200	0.0002	8.291	8.291	8.193	8.27	8.291	8.147	8.291	8.491	
Nov 17	17	0200-0100	0.0002	8.746	8.746	8.648	8.73	8.746	8.602	8.746	8.946	
Nov 17	17	0100-0000	0.0002	9.201	9.201	9.103	9.18	9.201	9.059	9.201	9.401	
Nov 17	17	0000-2300	0.0002	9.656	9.656	9.558	9.64	9.656	9.512	9.656	9.856	
Nov 17	17	2300-2200	0.0002	10.111	10.111	10.013	10.09	10.111	9.969	10.111	10.311	
Nov 17	17	2200-2100	0.0002	10.566	10.566	10.468	10.55	10.566	10.424	10.566	10.766	
Nov 17	17	2100-2000	0.0002	11.021	11.021	10.923	11.00	11.021	10.879	11.021	11.221	
Nov 17	17	2000-1900	0.0002	11.476	11.476	11.378	11.46	11.476	11.334	11.476	11.676	
Nov 17	17	1900-1800	0.0002	11.931	11.931	11.833	11.91	11.931	11.79	11.931	12.131	
Nov 17	17	1800-1700	0.0002	12.386	12.386	12.288	12.37	12.386	12.244	12.386	12.586	
Nov 17	17	1700-1600	0.0002	12.841	12.841	12.743	12.82	12.841	12.7	12.841	12.941	
Nov 17	17	1600-1500	0.0002	13.296	13.296	13.198	13.27	13.296	13.154	13.296	13.496	
Nov 17	17	1500-1400	0.0002	13.751	13.751	13.653	13.73	13.751	13.609	13.751	13.951	
Nov 17	17	1400-1300	0.0002	14.206	14.206	14.108	14.18	14.206	14.064	14.206	14.406	
Nov 17	17	1300-1200	0.0002	14.661	14.661	14.563	14.64	14.661	14.519	14.661	14.861	
Nov 17	17	1200-1100	0.0002	15.116	15.116	15.018	15.09	15.116	14.974	15.116	15.316	
Nov 17	17	1100-1000	0.0002	15.571	15.571	15.473	15.55	15.571	15.429	15.571	15.771	
Nov 17	17	1000-0900	0.0002	16.026	16.026	15.928	16.00	16.026	15.884	16.026	16.226	
Nov 17	17	0900-0800	0.0002	16.481	16.481	16.383	16.46	16.481	16.339	16.481	16.681	
Nov 17	17	0800-0700	0.0002	16.936	16.936	16.838	16.91	16.936	16.794	16.936	17.136	
Nov 17	17	0700-0600	0.0002	17.391	17.391	17.293	17.37	17.391	17.25	17.391	17.591	
Nov 17	17	0600-0500	0.0002	17.846	17.846	17.748	17.82	17.846	17.706	17.846	18.046	
Nov 17	17	0500-0400	0.0002	18.301	18.301	18.203	18.27	18.301	18.161	18.301	18.501	
Nov 17	17	0400-0300	0.0002	18.756	18.756	18.658	18.73	18.756	18.616	18.756	18.956	
Nov 17	17	0300-0200	0.0002	19.211	19.211	19.113	19.19	19.211	19.071	19.211	19.411	
Nov 17	17	0200-0100	0.0002	19.666	19.666	19.568	19.64	19.666	19.526	19.666	19.866	
Nov 17	17	0100-0000	0.0002	20.121	20.121	20.023	20.10	20.121	19.981	20.121	20.321	
Nov 17	17	0000-2300	0.0002	20.576	20.576	20.478	20.55	20.576	20.438	20.576	20.776	
Nov 17	17	2300-2200	0.0002	21.031	21.031	20.933	21.01	21.031	20.891	21.031	21.231	
Nov 17	17	2200-2100	0.0002	21.486	21.486	21.388	21.46	21.486	21.348	21.486	21.686	
Nov 17	17	2100-2000	0.0002	21.941	21.941	21.843	21.92	21.941	21.803	21.941	22.141	
Nov 17	17	2000-1900	0.0002	22.396	22.396	22.298	22.37	22.396	22.258	22.396	22.596	
Nov 17	17	1900-1800	0.0002	22.851	22.851	22.753	22.83	22.851	22.713	22.851	23.051	
Nov 17	17	1800-1700	0.0002	23.306	23.306	23.208	23.28	23.306	23.17	23.306	23.506	
Nov 17	17	1700-1600	0.0002	23.761	23.761	23.663	23.74	23.761	23.623	23.761	23.961	
Nov 17	17	1600-1500	0.0002	24.216	24.216	24.118	24.19	24.216	24.078	24.216	24.416	
Nov 17	17	1500-1400	0.0002	24.671	24.671	24.573	24.65	24.671	24.533	24.671	24.871	
Nov 17	17	1400-1300	0.0002	25.126	25.126	25.028	25.10	25.126	24.99	25.126	25.326	
Nov 17	17	1300-1200	0.0002	25.581	25.581	25.483	25.56	25.581	25.443	25.581	25.781	
Nov 17	17	1200-1100	0.0002	26.036	26.036	25.938	26.01	26.036	25.898	26.036	26.236	
Nov 17	17	1100-1000	0.0002	26.491	26.491	26.393	26.47	26.491	26.353	26.491	26.691	
Nov 17	17	1000-0900	0.0002	26.946	26.946	26.848	26.92	26.946	26.81	26.946	27.146	
Nov 17	17	0900-0800	0.0002	27.401	27.401	27.303	27.38	27.401	27.263	27.401	27.601	
Nov 17	17	0800-0700	0.0002	27.856	27.856	27.758	27.83	27.856	27.718	27.856	28.056	
Nov 17	17	0700-0600	0.0002	28.311	28.311	28.213	28.29	28.311	28.173	28.311	28.511	
Nov 17	17	0600-0500	0.0002	28.766	28.766	28.668	28.74	28.766	28.628	28.766	28.966	
Nov 17	17	0500-0400	0.0002	29.221	29.221	29.123	29.20	29.221	29.083	29.221	29.421	
Nov 17	17	0400-0300	0.0002	29.676	29.676	29.578	29.65	29.676	29.538	29.676	29.876	
Nov 17	17	0300-0200	0.0002	30.131	30.131	30.033	30.11	30.131	29.993	30.131	30.331	
Nov 17	17	0200-0100	0.0002	30.586	30.586	30.488	30.56	30.586	30.45	30.586	30.786	
Nov 17	17	0100-0000	0.0002	31.041	31.041	30.943	31.02	31.041	30.903	31.041	31.241	
Nov 17	17	0000-2300	0.0002	31.496	31.496	31.398	31.47	31.496	31.36	31.496	31.696	
Nov 17	17	2300-2200	0.0002	31.951	31.951	31.853	31.93	31.951	31.813	31.951	32.151	
Nov 17	17	2200-2100	0.0002	32.406	32.406	32.308	32.38	32.406	32.27	32.406	32.606	
Nov 17	17	2100-2000	0.0002	32.861	32.861	32.763	32.84	32.861	32.723	32.861	33.061	
Nov 17	17	2000-1900	0.0002	33.316	33.316	33.218	33.29	33.316	33.18	33.316	33.516	
Nov 17	17	1900-1800	0.0002	33.771	33.771	33.673	33.75	33.771	33.633	33.771	33.971	
Nov 17	17	1800-1700	0.0002	34.226	34.226	34.128	34.20	34.226	34.09	34.226	34.426	
Nov 17	17	1700-1600	0.0002	34.681	34.681	34.583	34.66	34.681	34.543	34.681	34.881	
Nov 17	17	1600-1500	0.0002	35.136	35.136	35.038	35.11	35.136	35.0	35.136	35.236	
Nov 17	17	1500-1400	0.0002	35.591	35.591	35.493	35.57	35.591	35.453	35.591	35.791	
Nov 17	17	1400-1300	0.0002	36.046	36.046	35.948	36.02	36.046	35.91	36.046	36.246	
Nov 17	17	1300-1200	0.0002	36.501	36.501	36.403	36.48	36.501	36.363	36.501	36.701	
Nov 17	17	1200-1100	0.0002	36.956	36.956	36.858	36.93	36.956	36.818	36.956	37.156	
Nov 17	17	1100-1000	0.0002	37.411	37.411	37.313	37.39	37.411	37.273	37.411	37.611	
Nov 17	17	1000-0900	0.0002	37.866	37.866	37.768	37.84	37.866	37.73	37.866	38.066	
Nov 17	17	0900-0800	0.0002	38.321	38.321	38.223	38.30	38.321	38.183	38.321	38.521	
Nov 17	17	0800-0700	0.0002	38.776	38.776	38.678	38.75	38.776	38.64	38.776	38.976	
Nov 17	17	0700-0600	0.0002	39.231	39.231	39.133	39.21	39.231	39.093	39.231	39.431	
Nov 17	17	0600-0500	0.0002	39.686	39.686	39.588	39.66	39.686	39.55	39.686	39.886	
Nov 17	17	0500-0400	0.0002	40.141	40.141	40.043	40.12	40.141	40.003	40.141	40.341	
Nov 17	17	0400-0300	0.0002	40.596	40.596	40.498	40.57	40.596	40.46	40.596	40.796	
Nov 17	17	0300-0200	0.0002	41.051	41.051	40.953	41.03	41.051	40.913	41.051	41.251	
Nov 17	17	0200-0100	0.0002	41.506	41.506	41.408	41.48	41.506	41.37	41.506	41.706	
Nov 17	17	0100-0000	0.0002	41.961	41.961	41.863	41.94	41.961	41.823	41.961	42.161	
Nov 17	17	0000-2300	0.0002	42.416	42.416	42.318	42.39	42.416	42.28	42.416	42.616	
Nov 17	17	2300-2200	0.0002	42.871	42.871	42.773						

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Top 10 Year 2014 Underground Quarterly												
Open Top 24 Hour Emulsion Factors for												
ARMED mode (Hour)												
Road Name	Road ID	Year	EMulsion			NO Emulsion						
			Monthly/hour	Monthly/hour	Monthly/hour	Monthly/hour	Monthly/hour	Monthly/hour				
road #1	41	0000-01-00	7.88	0.71	1.38	3.42	0.81	1.05	2.02	0.81	0.71	5.38
road #1	41	0000-02-00	6.45	1.05	0.93	2.42	0.98	0.98	2.05	1.35	2.12	4.82
road #1	41	0000-03-00	6.46	1.05	0.93	2.42	0.98	0.98	2.05	1.35	2.12	4.82
road #1	41	0000-04-00	6.15	0.91	0.88	8.72	0.57	8.17	0.84	4.30	2.71	4.10
road #1	41	0000-05-00	6.08	0.92	0.87	8.72	0.54	8.02	0.83	4.37	2.55	4.08
road #1	41	0000-06-00	6.08	0.92	0.87	8.72	0.54	8.02	0.83	4.37	2.55	4.08
road #1	41	0000-07-00	4.14	0.97	1.88	2.35	1.80	1.89	2.11	1.01	2.55	8.49
road #1	41	0000-08-00	4.08	0.97	1.88	2.35	1.80	1.89	2.11	1.01	2.55	8.49
road #1	41	0000-09-00	4.70	0.95	1.40	4.38	1.40	1.42	2.32	1.81	2.64	2.06
road #1	41	0000-10-00	4.70	0.95	1.40	4.38	1.40	1.42	2.32	1.81	2.64	2.06
road #1	41	0000-11-00	4.70	0.95	1.40	4.38	1.40	1.42	2.32	1.81	2.64	2.06
road #1	41	0000-12-00	6.14	0.97	1.51	5.51	0.96	1.50	2.00	1.82	2.64	2.02
road #1	41	1000-01-00	6.10	0.94	1.51	5.46	1.10	1.43	2.08	2.25	2.14	2.28
road #1	41	1000-02-00	5.77	0.94	1.51	5.46	1.10	1.43	2.08	2.25	2.14	2.28
road #1	41	1000-03-00	5.77	0.94	1.51	5.46	1.10	1.43	2.08	2.25	2.14	2.28
road #1	41	1000-04-00	7.37	0.94	1.51	6.76	1.42	1.41	2.00	2.47	2.32	2.11
road #1	41	1000-05-00	7.37	0.94	1.51	6.76	1.42	1.41	2.00	2.47	2.32	2.11
road #1	41	1000-06-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-07-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-08-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-09-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-10-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-11-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-12-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-01-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-02-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-03-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-04-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-05-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-06-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-07-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-08-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-09-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-10-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-11-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-12-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-01-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-02-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-03-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-04-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-05-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-06-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-07-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-08-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-09-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-10-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-11-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-12-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-01-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-02-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-03-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-04-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-05-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-06-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-07-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-08-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-09-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-10-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-11-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-12-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-01-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-02-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-03-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-04-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-05-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-06-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-07-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-08-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-09-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-10-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-11-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-12-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-01-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-02-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-03-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-04-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-05-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-06-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-07-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-08-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-09-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-10-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-11-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-12-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-01-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-02-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-03-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-04-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-05-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-06-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-07-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-08-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-09-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-10-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-11-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-12-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-01-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-02-00	6.90	0.97	1.08	6.90	1.40	1.40	2.35	2.12	2.36	2.14
road #1	41	1000-03-00	6.90	0.97	1.08							

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open North 20% Unconsolidation Factor													
ARMD# Model (Primary)													
Year	2030	Road ID	Hour	No. Emersion				No Emersion					
				Monthly/Hours	Monthly/Average	Monthly/Hours	Monthly/Average	Monthly/Hours	Monthly/Average				
Road #44	44	0800-0000	2:15	2,115	1,675	2,185	1,445	2,165	1,785	2,405	2,845	1,605	1,545
				2,095	2,565	2,495	2,495	2,385	3,205	2,655	4,135	2,555	2,775
Road #44	44	0900-0000	2:30	2,625	2,085	2,655	1,445	2,675	2,295	2,725	2,345	2,875	1,605
				2,605	3,055	2,985	2,985	2,875	3,695	3,145	4,615	3,065	3,285
Road #44	44	1100-1200	2:05	2,025	1,505	2,055	1,265	2,045	1,575	2,075	1,575	2,205	1,865
				2,005	2,455	2,385	2,385	2,275	3,195	2,645	4,115	2,505	2,725
Road #44	44	1200-1300	2:15	2,635	2,095	2,665	1,445	2,715	2,335	2,745	2,355	2,915	2,045
				2,615	3,065	2,995	2,995	2,885	3,805	3,255	4,725	3,165	3,385
Road #44	44	1400-1500	2:34	2,775	2,235	2,805	1,445	2,825	2,445	2,855	2,455	3,025	2,155
				2,755	3,185	3,115	3,115	3,005	4,025	3,475	5,445	3,385	3,605
Road #44	44	1600-1700	2:14	2,795	2,255	2,825	1,445	2,845	2,465	2,875	2,465	3,045	2,175
				2,775	3,185	3,115	3,115	3,005	4,025	3,475	5,445	3,385	3,605
Road #44	44	1800-1900	2:15	2,635	2,095	2,665	1,445	2,715	2,335	2,745	2,355	2,915	2,045
				2,615	3,065	2,995	2,995	2,885	3,805	3,255	4,725	3,165	3,385
Road #44	44	2000-2100	2:14	2,775	2,235	2,805	1,445	2,825	2,445	2,855	2,455	3,025	2,155
				2,755	3,185	3,115	3,115	3,005	4,025	3,475	5,445	3,385	3,605
Road #44	44	2100-2200	2:34	2,915	2,375	2,945	1,445	2,965	2,585	2,995	2,585	3,165	2,295
				2,895	3,385	3,315	3,315	3,205	4,305	3,755	5,775	3,665	3,885
Road #44	44	2300-2400	2:14	2,795	2,255	2,825	1,445	2,845	2,465	2,877	2,465	3,045	2,175
				2,777	3,187	3,117	3,117	3,007	4,027	3,477	5,447	3,387	3,607
Road #44	44	2400-2500	2:15	2,635	2,095	2,665	1,445	2,715	2,335	2,745	2,355	2,915	2,045
				2,615	3,065	2,995	2,995	2,885	3,805	3,255	4,725	3,165	3,385
Road #44	44	2500-2600	2:14	2,775	2,235	2,805	1,445	2,825	2,445	2,855	2,455	3,025	2,155
				2,755	3,185	3,115	3,115	3,005	4,025	3,475	5,445	3,385	3,605
Road #44	44	2600-2700	2:14	2,795	2,255	2,825	1,445	2,845	2,465	2,877	2,465	3,045	2,175
				2,777	3,187	3,117	3,117	3,007	4,027	3,477	5,447	3,387	3,607
Road #44	44	2700-2800	2:15	2,635	2,095	2,665	1,445	2,715	2,335	2,745	2,355	2,915	2,045
				2,615	3,065	2,995	2,995	2,885	3,805	3,255	4,725	3,165	3,385
Road #44	44	2800-2900	2:14	2,775	2,235	2,805	1,445	2,825	2,445	2,855	2,455	3,025	2,155
				2,755	3,185	3,115	3,115	3,005	4,025	3,475	5,445	3,385	3,605
Road #44	44	2900-3000	2:14	2,795	2,255	2,825	1,445	2,845	2,465	2,877	2,465	3,045	2,175
				2,777	3,187	3,117	3,117	3,007	4,027	3,477	5,447	3,387	3,607
Road #44	44	3000-3100	2:15	2,635	2,095	2,665	1,445	2,715	2,335	2,745	2,355	2,915	2,045
				2,615	3,065	2,995	2,995	2,885	3,805	3,255	4,725	3,165	3,385
Road #44	44	3100-3200	2:14	2,775	2,235	2,805	1,445	2,825	2,445	2,855	2,455	3,025	2,155
				2,755	3,185	3,115	3,115	3,005	4,025	3,475	5,445	3,385	3,605
Road #44	44	3200-3300	2:14	2,795	2,255	2,825	1,445	2,845	2,465	2,877	2,465	3,045	2,175
				2,777	3,187	3,117	3,117	3,007	4,027	3,477	5,447	3,387	3,607
Road #44	44	3300-3400	2:15	2,635	2,095	2,665	1,445	2,715	2,335	2,745	2,355	2,915	2,045
				2,615	3,065	2,995	2,995	2,885	3,805	3,255	4,725	3,165	3,385
Road #44	44	3400-3500	2:14	2,775	2,235	2,805	1,445	2,825	2,445	2,855	2,455	3,025	2,155
				2,755	3,185	3,115	3,115	3,005	4,025	3,475	5,445	3,385	3,605
Road #44	44	3500-3600	2:14	2,795	2,255	2,825	1,445	2,845	2,465	2,877	2,465	3,045	2,175
				2,777	3,187	3,117	3,117	3,007	4,027	3,477	5,447	3,387	3,607
Road #44	44	3600-3700	2:15	2,635	2,095	2,665	1,445	2,715	2,335	2,745	2,355	2,915	2,045
				2,615	3,065	2,995	2,995	2,885	3,805	3,255	4,725	3,165	3,385
Road #44	44	3700-3800	2:14	2,775	2,235	2,805	1,445	2,825	2,445	2,855	2,455	3,025	2,155
				2,755	3,185	3,115	3,115	3,005	4,025	3,475	5,445	3,385	3,605
Road #44	44	3800-3900	2:14	2,795	2,255	2,825	1,445	2,845	2,465	2,877	2,465	3,045	2,175
				2,777	3,187	3,117	3,117	3,007	4,027	3,477	5,447	3,387	3,607
Road #44	44	3900-4000	2:15	2,635	2,095	2,665	1,445	2,715	2,335	2,745	2,355	2,915	2,045
				2,615	3,065	2,995	2,995	2,885	3,805	3,255	4,725	3,165	3,385
Road #44	44	4000-4100	2:14	2,775	2,235	2,805	1,445	2,825	2,445	2,855	2,455	3,025	2,155
				2,755	3,185	3,115	3,115	3,005	4,025	3,475	5,445	3,385	3,605
Road #44	44	4100-4200	2:14	2,795	2,255	2,825	1,445	2,845	2,465	2,877	2,465	3,045	2,175
				2,777	3,187	3,117	3,117	3,007	4,027	3,477	5,447	3,387	3,607
Road #44	44	4200-4300	2:15	2,635	2,095	2,665	1,445	2,715	2,335	2,745	2,355	2,915	2,045
				2,615	3,065	2,995	2,995	2,885	3,805	3,255	4,725	3,165	3,385
Road #44	44	4300-4400	2:14	2,775	2,235	2,805	1,445	2,825	2,445	2,855	2,455	3,025	2,155
				2,755	3,185	3,115	3,115	3,005	4,025	3,475	5,445	3,385	3,605
Road #44	44	4400-4500	2:14	2,795	2,255	2,825	1,445	2,845	2,465	2,877	2,465	3,045	2,175
				2,777	3,187	3,117	3,117	3,007	4,027	3,477	5,447	3,387	3,607
Road #44	44	4500-4600	2:15	2,635	2,095	2,665	1,445	2,715	2,335	2,745	2,355	2,915	2,045
				2,615	3,065	2,995	2,995	2,885	3,805	3,255	4,725	3,165	3,385
Road #44	44	4600-4700	2:14	2,775	2,235	2,805	1,445	2,825	2,445	2,855	2,455	3,025	2,155
				2,755	3,185	3,115	3,115	3,005	4,025	3,475	5,445	3,385	3,605
Road #44	44	4700-4800	2:14	2,795	2,255	2,825	1,445	2,845	2,465	2,877	2,465	3,045	2,175
				2,777	3,187	3,117	3,117	3,007	4,027	3,477	5,447	3,387	3,607
Road #44	44	4800-4900	2:15	2,635	2,095	2,665	1,445	2,715	2,335	2,745	2,355	2,915	2,045
				2,615	3,065	2,995	2,995	2,885	3,805	3,255	4,725	3,165	3,385
Road #44	44	4900-5000	2:14	2,775	2,235	2,805	1,445	2,825	2,445	2,855	2,455	3,025	2,155
				2,755	3,185	3,115	3,115	3,005	4,025	3,475	5,445	3,385	3,605
Road #44	44	5000-5100	2:14	2,795	2,255	2,825	1,445	2,845	2,465	2,877	2,465	3,045	2,175
				2,777	3,187	3,117	3,117	3,007	4,027	3,477	5,447	3,387	3,607
Road #44	44	5100-5200	2:15	2,635	2,095	2,665	1,445	2,715	2,335	2,745	2,355	2,915	2,045
				2,615	3,065	2,995	2,995	2,885	3,805	3,255	4,725	3,165	3,385
Road #44	44	5200-5300	2:14	2,775	2,235	2,805	1,445	2,825	2,445	2,855	2,455	3,025	2,155
				2,755	3,185	3,115	3,115	3,005	4,025	3,475	5,445	3,385	3,605
Road #44	44	5300-5400	2:14	2,795	2,255	2,825	1,445	2,845	2,465	2,877	2,465	3,045	2,175
				2,777	3,187	3,117	3,117	3,007	4,027	3,477	5,447	3,387	3,607
Road #44	44	5400-5500	2:15	2,635	2,095	2,665	1,445	2,715	2,335	2,745	2,355	2,915	2,045
				2,615	3,065	2,995	2,995	2,885	3,805	3,255	4,725	3,165	3,385
Road #44	44	5500-5600	2:14	2,775	2,235	2,805	1,445	2,825	2,445	2,855	2,455	3,025	2,155
				2,755	3,185	3,115	3,115	3,005	4,025	3,475	5,445	3,385	3,605
Road #44	44	5600-5700	2:14	2,795	2,255	2,825	1,445	2,845	2,465	2,877	2,465	3,045	2,175
				2,777	3,187	3,117	3,117	3,007	4,027	3,477	5,447	3,387	3,607
Road #44	44	5700-5800	2:15	2,635	2,095	2,665	1,445	2,715	2,335	2,745	2,355	2,915	2,045
				2,615	3,065	2,995	2,995	2,885	3,805	3,255	4,725	3,165	3,385
Road #44	44	5800-5900	2:14	2,775	2,235	2,805	1,445	2,825	2,445	2,855	2,455	3,025	2,155
				2,755	3,185	3,115	3,115	3,005	4,025	3,475	5,445	3,385	3,605
Road #44	44	5900-6000	2:14	2,795	2,255	2,825	1,445	2,845	2,465				

Secure\Environment Projects\60733225\1.01\Others\Air Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.2 Emission Factor in 2030.xlsx

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Open Day 24 Hour Endurance Factors for																		
ARMMD model			Year 2030															
Race Name	Road ID	Hours	No Emission				Emission				No Emission				Emission			
			g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh		
			Monthly/Hours	Monthly/Hours	Monthly/Average	Monthly/Average	Monthly/Hours	Monthly/Hours	Monthly/Average	Monthly/Average	Monthly/Hours	Monthly/Hours	Monthly/Average	Monthly/Average	Monthly/Hours	Monthly/Hours	Monthly/Average	Monthly/Average
Node 51	01	0000-0100	2.2402	2.4107	2.0807	2.0103	2.0807	1.7701	1.8101	1.3605	1.4101	1.7501	1.7801	1.4101	1.4601	2.0807	2.1307	2.0807
Node 51	01	0100-0200	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	0200-0300	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	0300-0400	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	0400-0500	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	0500-0600	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	0600-0700	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	0700-0800	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	0800-0900	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	0900-1000	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	1000-1100	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	1100-1200	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	1200-1300	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	1300-1400	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	1400-1500	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	1500-1600	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	1600-1700	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	1700-1800	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	1800-1900	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	1900-2000	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	2000-2100	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	2100-2200	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	2200-2300	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	2300-2400	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	2400-0100	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	0100-0200	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	0200-0300	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	0300-0400	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	0400-0500	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	0500-0600	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	0600-0700	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	0700-0800	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	0800-0900	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	0900-1000	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	1000-1100	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	1100-1200	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	1200-1300	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	1300-1400	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	1400-1500	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	1500-1600	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	1600-1700	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	1700-1800	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	1800-1900	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	1900-2000	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	2000-2100	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	2100-2200	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	2200-2300	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	2300-2400	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	2400-0100	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	0100-0200	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	0200-0300	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	0300-0400	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	0400-0500	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	0500-0600	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	0600-0700	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	0700-0800	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	0800-0900	2.2402	2.4107	1.5607	1.4903	1.5607	1.4107	1.2803	1.3801	1.2101	1.2601	1.4101	1.4601	1.2601	1.5607	1.6107	1.5607
Node 51	01	0900-1000																

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Top 24 Hourly Underground Quarry											
Open Pit 24 Hour Emission Factors for											
ARMED model (Hourly)											
Road Name	Road ID	Year	NO _x Emission				NO ₂ Emission				
			Monthly/Hours	Monthly/Hours	Monthly/Hours	Monthly/Hours	Monthly/Hours	Monthly/Hours	Monthly/Hours	Monthly/Hours	
Road 54	54	09/00/0000	1.01E+01	6.00E+07	1.73E+01	1.73E+01	4.41E+07	1.02E+05	5.17E+07	4.94E+05	5.18E+01
Road 54	54	10/00/0000	1.54E+01	5.58E+07	1.22E+01	1.22E+01	4.92E+07	1.12E+05	1.67E+05	2.36E+05	5.13E+01
Road 54	54	11/00/0000	1.78E+01	5.58E+07	1.22E+01	1.22E+01	4.92E+07	1.12E+05	1.67E+05	2.36E+05	5.13E+01
Road 54	54	12/00/0000	1.69E+01	5.58E+07	1.14E+01	1.14E+01	4.64E+07	1.06E+05	1.72E+05	2.16E+05	4.99E+01
Road 54	54	13/00/0000	2.18E+01	4.86E+07	1.17E+01	1.17E+01	4.48E+07	1.09E+05	1.97E+05	2.50E+05	5.10E+01
Road 54	54	14/00/0000	2.18E+01	4.86E+07	1.17E+01	1.17E+01	4.48E+07	1.09E+05	1.97E+05	2.50E+05	5.10E+01
Road 54	54	15/00/0000	2.18E+01	4.86E+07	1.17E+01	1.17E+01	4.48E+07	1.09E+05	1.97E+05	2.50E+05	5.10E+01
Road 54	54	16/00/0000	2.05E+01	5.12E+07	1.21E+01	1.21E+01	4.98E+07	1.17E+05	2.18E+05	2.87E+05	8.14E+01
Road 54	54	17/00/0000	2.05E+01	5.12E+07	1.21E+01	1.21E+01	4.98E+07	1.17E+05	2.18E+05	2.87E+05	8.14E+01
Road 54	54	18/00/0000	2.05E+01	5.12E+07	1.21E+01	1.21E+01	4.98E+07	1.17E+05	2.18E+05	2.87E+05	8.14E+01
Road 54	54	19/00/0000	1.41E+01	2.70E+07	1.16E+01	1.16E+01	2.46E+07	6.64E+04	1.22E+05	2.79E+05	5.68E+01
Road 54	54	20/00/0000	1.29E+01	2.70E+07	1.07E+01	1.07E+01	1.60E+07	3.74E+04	1.81E+05	1.81E+05	1.81E+01
Road 54	54	21/00/0000	1.22E+01	2.70E+07	1.07E+01	1.07E+01	1.60E+07	3.74E+04	1.81E+05	1.81E+05	1.81E+01
Road 54	54	22/00/0000	1.21E+01	2.70E+07	1.06E+01	1.06E+01	1.72E+07	2.85E+04	1.61E+05	1.72E+05	1.42E+01
Road 54	54	23/00/0000	1.15E+01	2.70E+07	1.06E+01	1.06E+01	1.72E+07	2.85E+04	1.61E+05	1.72E+05	1.42E+01
Road 54	54	23/00/0000	1.15E+01	8.91E+08	2.36E+05	2.36E+05	9.47E+06	1.16E+05	5.14E+05	5.48E+05	9.96E+01
Road 101	101	09/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	10/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	11/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	12/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	01/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	02/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	03/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	04/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	05/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	06/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	07/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	08/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	09/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	10/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	11/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	12/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	01/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	02/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	03/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	04/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	05/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	06/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	07/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	08/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	09/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	10/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	11/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	12/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	01/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	02/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	03/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	04/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	05/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	06/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	07/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	08/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	09/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	10/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	11/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	12/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	01/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	02/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	03/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	04/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	05/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	06/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	07/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	08/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	09/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	10/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	11/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	12/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	01/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	02/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	03/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	04/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	05/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	06/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	07/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	08/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	09/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	10/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	11/00/0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	12/00/0000	0.00E+00								

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Top 20 North Undermining Factors												
Open Road 24 Hour Emission Factor for AWWQF model (Metric Tons/Year)												
Road Name	Road ID	Hour	NO _x Emission				NO ₂ Emission					
			g/km/hr	g/d	tonne/year	g/km/hr	g/d	tonne/year	g/km/hr	g/d	tonne/year	
Road 1	1	0000:00:00	1.3056	1.8467	1.5014	0.1729	1.6567	0.9146	1.5456	1.2348	1.4875	1.1905
Road 1	1	0100:00:00	1.4235	0.02	1.4235	0.02	1.4235	0.02	1.4235	0.02	1.4235	0.02
Road 1	1	0200:00:00	1.5545	1.5046	0.7272	1.3887	0.2494	1.0068	1.0468	1.2348	1.4875	1.1905
Road 1	1	0300:00:00	1.6855	1.5046	0.7272	1.3887	0.2494	1.0068	1.0468	1.2348	1.4875	1.1905
Road 1	1	0400:00:00	1.8165	1.0547	0.7846	1.4055	0.9214	0.5068	1.8114	1.0547	0.7846	1.4055
Road 1	1	0500:00:00	1.9475	1.0547	0.7846	1.4055	0.9214	0.5068	1.8114	1.0547	0.7846	1.4055
Road 1	1	0600:00:00	2.0785	1.0547	0.7846	1.4055	0.9214	0.5068	1.8114	1.0547	0.7846	1.4055
Road 1	1	0700:00:00	2.2095	1.0547	0.7846	1.4055	0.9214	0.5068	1.8114	1.0547	0.7846	1.4055
Road 1	1	0800:00:00	2.3405	1.0547	0.7846	1.4055	0.9214	0.5068	1.8114	1.0547	0.7846	1.4055
Road 1	1	0900:00:00	2.4715	0.9432	0.6177	1.1596	0.2075	0.8126	0.4519	0.6177	0.9432	0.6177
Road 1	1	1000:00:00	2.6025	0.9432	0.6177	1.1596	0.2075	0.8126	0.4519	0.6177	0.9432	0.6177
Road 1	1	1100:00:00	2.7335	0.9432	0.6177	1.1596	0.2075	0.8126	0.4519	0.6177	0.9432	0.6177
Road 1	1	1200:00:00	2.8645	0.8323	0.4519	0.4222	0.2328	0.7447	0.3519	0.5011	0.8479	0.5686
Road 1	1	1300:00:00	2.9955	0.8323	0.4519	0.4222	0.2328	0.7447	0.3519	0.5011	0.8479	0.5686
Road 1	1	1400:00:00	3.1265	0.8323	0.4519	0.4222	0.2328	0.7447	0.3519	0.5011	0.8479	0.5686
Road 1	1	1500:00:00	3.2575	0.8323	0.4519	0.4222	0.2328	0.7447	0.3519	0.5011	0.8479	0.5686
Road 1	1	1600:00:00	3.3885	0.8323	0.4519	0.4222	0.2328	0.7447	0.3519	0.5011	0.8479	0.5686
Road 1	1	1700:00:00	3.5195	0.8323	0.4519	0.4222	0.2328	0.7447	0.3519	0.5011	0.8479	0.5686
Road 1	1	1800:00:00	3.6505	0.8323	0.4519	0.4222	0.2328	0.7447	0.3519	0.5011	0.8479	0.5686
Road 1	1	1900:00:00	3.7815	0.8323	0.4519	0.4222	0.2328	0.7447	0.3519	0.5011	0.8479	0.5686
Road 1	1	2000:00:00	3.9125	0.8323	0.4519	0.4222	0.2328	0.7447	0.3519	0.5011	0.8479	0.5686
Road 1	1	2100:00:00	4.0435	0.8323	0.4519	0.4222	0.2328	0.7447	0.3519	0.5011	0.8479	0.5686
Road 1	1	2200:00:00	4.1745	0.8323	0.4519	0.4222	0.2328	0.7447	0.3519	0.5011	0.8479	0.5686
Road 1	1	2300:00:00	4.3055	0.8323	0.4519	0.4222	0.2328	0.7447	0.3519	0.5011	0.8479	0.5686
Road 2	2	0000:00:00	1.3056	1.8467	1.5014	0.1729	1.6567	0.9146	1.5456	1.2348	1.4875	1.1905
Road 2	2	0100:00:00	1.4235	0.02	1.4235	0.02	1.4235	0.02	1.4235	0.02	1.4235	0.02
Road 2	2	0200:00:00	1.5545	1.5046	0.7272	1.3887	0.2494	1.0068	1.0468	1.2348	1.4875	1.1905
Road 2	2	0300:00:00	1.6855	1.5046	0.7272	1.3887	0.2494	1.0068	1.0468	1.2348	1.4875	1.1905
Road 2	2	0400:00:00	1.8165	1.0547	0.7846	1.4055	0.9214	0.5068	1.8114	1.0547	0.7846	1.4055
Road 2	2	0500:00:00	1.9475	1.0547	0.7846	1.4055	0.9214	0.5068	1.8114	1.0547	0.7846	1.4055
Road 2	2	0600:00:00	2.0785	1.0547	0.7846	1.4055	0.9214	0.5068	1.8114	1.0547	0.7846	1.4055
Road 2	2	0700:00:00	2.2095	1.0547	0.7846	1.4055	0.9214	0.5068	1.8114	1.0547	0.7846	1.4055
Road 2	2	0800:00:00	2.3405	1.0547	0.7846	1.4055	0.9214	0.5068	1.8114	1.0547	0.7846	1.4055
Road 2	2	0900:00:00	2.4715	0.9432	0.6177	1.1596	0.2075	0.8126	0.4519	0.6177	0.9432	0.6177
Road 2	2	1000:00:00	2.6025	0.9432	0.6177	1.1596	0.2075	0.8126	0.4519	0.6177	0.9432	0.6177
Road 2	2	1100:00:00	2.7335	0.9432	0.6177	1.1596	0.2075	0.8126	0.4519	0.6177	0.9432	0.6177
Road 2	2	1200:00:00	2.8645	0.8323	0.4519	0.4222	0.2328	0.7447	0.3519	0.5011	0.8479	0.5686
Road 2	2	1300:00:00	2.9955	0.8323	0.4519	0.4222	0.2328	0.7447	0.3519	0.5011	0.8479	0.5686
Road 2	2	1400:00:00	3.1265	0.8323	0.4519	0.4222	0.2328	0.7447	0.3519	0.5011	0.8479	0.5686
Road 2	2	1500:00:00	3.2575	0.8323	0.4519	0.4222	0.2328	0.7447	0.3519	0.5011	0.8479	0.5686
Road 2	2	1600:00:00	3.3885	0.8323	0.4519	0.4222	0.2328	0.7447	0.3519	0.5011	0.8479	0.5686
Road 2	2	1700:00:00	3.5195	0.8323	0.4519	0.4222	0.2328	0.7447	0.3519	0.5011	0.8479	0.5686
Road 2	2	1800:00:00	3.6505	0.8323	0.4519	0.4222	0.2328	0.7447	0.3519	0.5011	0.8479	0.5686
Road 2	2	1900:00:00	3.7815	0.8323	0.4519	0.4222	0.2328	0.7447	0.3519	0.5011	0.8479	0.5686
Road 2	2	2000:00:00	3.9125	0.8323	0.4519	0.4222	0.2328	0.7447	0.3519	0.5011	0.8479	0.5686
Road 2	2	2100:00:00	4.0435	0.8323	0.4519	0.4222	0.2328	0.7447	0.3519	0.5011	0.8479	0.5686
Road 2	2	2200:00:00	4.1745	0.8323	0.4519	0.4222	0.2328	0.7447	0.3519	0.5011	0.8479	0.5686
Road 2	2	2300:00:00	4.3055	0.8323	0.4519	0.4222	0.2328	0.7447	0.3519	0.5011	0.8479	0.5686
Road 3	3	0000:00:00	1.3056	1.8467	1.5014	0.1729	1.6567	0.9146	1.5456	1.2348	1.4875	1.1905
Road 3	3	0100:00:00	1.4235	0.02	1.4235	0.02	1.4235	0.02	1.4235	0.02	1.4235	0.02
Road 3	3	0200:00:00	1.5545	1.5046	0.7272	1.3887	0.2494	1.0068	1.0468	1.2348	1.4875	1.1905
Road 3	3	0300:00:00	1.6855	1.5046	0.7272	1.3887	0.2494	1.0068	1.0468	1.2348	1.4875	1.1905
Road 3	3	0400:00:00	1.8165	1.0547	0.7846	1.4055	0.9214	0.5068	1.8114	1.0547	0.7846	1.4055
Road 3	3	0500:00:00	1.9475	1.0547	0.7846	1.4055	0.9214	0.5068	1.8114	1.0547	0.7846	1.4055
Road 3	3	0600:00:00	2.0785	1.0547	0.7846	1.4055	0.9214	0.5068	1.8114	1.0547	0.7846	1.4055
Road 3	3	0700:00:00	2.2095	1.0547	0.7846	1.4055	0.9214	0.5068	1.8114	1.0547	0.7846	1.4055
Road 3	3	0800:00:00	2.3405	1.0547	0.7846	1.4055	0.9214	0.5068	1.8114	1.0547	0.7846	1.4055
Road 3	3	0900:00:00	2.4715	0.9432	0.6177	1.1596	0.2075	0.8126	0.4519	0.6177	0.9432	0.6177
Road 3	3	1000:00:00	2.6025	0.9432	0.6177	1.1596	0.2075	0.8126	0.4519	0.6177	0.9432	0.6177
Road 3	3	1100:00:00	2.7335	0.9432	0.6177	1.1596	0.2075	0.8126	0.4519	0.6177	0.9432	0.6177
Road 3	3	1200:00:00	2.8645	0.8323	0.4519	0.4222	0.2328	0.7447	0.3519	0.5011	0.8479	0.5686
Road 3	3	1300:00:00	2.9955	0.8323	0.4519	0.4222	0.2328	0.7447	0.3519	0.5011	0.8479	0.5686
Road 3	3	1400:00:00	3.1265	0.8323	0.4519	0.4222	0.2328	0.7447	0.3519	0.5011	0.8479	0.5686
Road 3	3	1500:00:00	3.2575	0.8323	0.4519	0.4222	0.2328	0.7447	0.3519	0.5011	0.8479	0.5686
Road 3	3	1600:00:00	3.3885	0.8323	0.4519	0.4222	0.2328	0.7447	0.3519	0.5011	0.8479	0.5686
Road 3	3	1700:00:00	3.5195	0.8323	0.4519	0.4222	0.2328	0.7447	0.3519	0.5011	0.8479	0.5686
Road 3	3	1800:00:00	3.6505	0.8323	0.4519	0.4222	0.2328	0.7447	0.3519	0.5011	0.8479	0.5686
Road 3	3	1900:00:00	3.7815	0.8323	0.4519	0.4222	0.2328	0.7447	0.3519	0.5011	0.8479	0.5686
Road 3	3	2000:00:00	3.9125	0.8323	0.4519	0.4222	0.2328	0.7447	0.3519	0.5011	0.8479	0.5686
Road 3	3	2100:00:00	4.0435	0.8323	0.4519	0.4222	0.2328	0.7447	0.3519	0.5011	0.8479	0.5686
Road 3	3	2200:00:00	4.1745	0.8323	0.4519	0.4222	0.2328	0.7447	0.3519	0.5011	0.8479	0.5686
Road 3	3	2300:00:00	4.3055	0.8323	0.4519	0.4222	0.2328	0.7447	0.3519	0.5011	0.8479	0.5686
Road 4	4	0000:00:00	1.3056	1.8467	1.5014	0.1729	1.6567	0.9146	1.5456	1.2348	1.4875	1.1905
Road 4	4	0100:00:00	1.4235	0.02	1.4235	0.02	1.4235	0.02	1.4235	0.02	1.4235	0.02
Road 4	4	0200:00:00	1.5545	1.5046	0.7272	1.3887	0.2494	1.0068	1.0468	1.2348	1.4875	1.1905
Road 4	4	0300:00:00	1.6855	1.5046	0.7272	1.3887	0.2494	1.0068	1.0468	1.2348	1.4875	1.1905
Road 4	4	0400:00:00	1.8165	1.0547	0.7846	1.4055	0.9214	0.5068	1.8114	1.0547	0.7846	1.4055
Road 4	4	0500:00:00	1.9475	1.0547	0.7846	1.4055	0.9214	0.5068	1.8114	1.0547	0.7846	1.4055
Road 4	4	0600:00:00	2.0785	1.0547	0.7846	1.4055	0.9214	0.5068	1.8114	1.0547	0.7846	1.4055
Road 4	4	0700:00:00	2.2095	1.0547	0.7846	1.4055	0.9214	0.5068	1.8114	1.0547	0.7846	1.4055
Road 4	4	0800:00:00	2.3405	1.0547	0.7846	1.4055	0.9214	0.5068	1.8114	1.0547	0.7846	1.4055
Road 4	4	0900:00:00	2.4715	0.9432	0.6177	1.1596	0.2075	0.8126	0.4519	0.6177	0.9432	0.6177
Road 4	4	1000:00:00	2.6025	0.9432	0.6177	1.1596	0.2075	0.8126	0.4519	0.6177	0.9432	0.6177
Road 4	4	1100:00:00	2.7335	0.9432	0.6177	1.1596	0.2075	0.8126	0.4519	0.6177	0.9432	0.6177
Road 4	4	1200:00:00	2.8645	0.8323	0.4519	0.4222	0.2328	0.7447	0.3519	0.5011	0.8479	0.5686
Road 4	4	1300:00:00	2.9955	0.8323	0.4519	0						

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Road Northbound Querry Top 10 Road No. Exit Sensor Factors for Armedex (Main)														
Year 2030														
Road Name	Road ID	Hour	No.Emission						No.Emission					
			Month=Jan			Month=Apr			Month=Jan			Month=Apr		
			g/hour	g/km	tonne/hour	g/hour	g/km	tonne/hour	g/hour	g/km	tonne/hour	g/hour	g/km	tonne/hour
Road 1	1400	1200	2.502	5.327	6.475	0.132	4.946	5.796	2.728	4.126	5.078	2.471	3.815	4.482
Road 1	1700	1800	2.649	5.767	7.039	0.142	5.237	6.142	2.841	4.296	5.248	2.561	3.957	4.645
Road 1	2000	2300	2.038	4.075	4.974	0.133	4.677	5.306	2.121	4.248	4.971	1.895	3.458	4.065
Road 1	2300	2400	2.038	4.075	4.974	0.133	4.677	5.306	2.121	4.248	4.971	1.895	3.458	4.065
Road 2	1700	2100	2.181	4.585	5.561	0.127	4.753	5.506	2.241	4.341	5.061	2.041	3.681	4.281
Road 2	2000	2200	1.812	4.252	5.244	0.105	4.202	4.705	2.125	4.285	4.885	2.065	3.405	3.955
Road 2	2300	2400	1.598	3.922	4.785	0.101	3.968	4.255	1.925	4.055	4.555	1.905	3.345	3.755
Road 2	2400	2500	1.515	3.612	4.355	0.101	3.722	4.015	1.845	3.955	4.255	1.865	3.345	3.655
Road 3	1700	2300	1.700	3.735	4.736	0.145	4.376	5.135	1.635	4.215	4.965	1.635	3.485	3.985
Road 3	2300	2400	1.700	3.735	4.736	0.145	4.376	5.135	1.635	4.215	4.965	1.635	3.485	3.985
Road 3	2400	2500	1.700	3.735	4.736	0.145	4.376	5.135	1.635	4.215	4.965	1.635	3.485	3.985
Road 8	0000	0100	2.912	1.554	3.181	0.543	1.498	2.822	4.042	1.717	4.709	4.006	0.122	4.836
Road 8	0100	0200	2.912	1.554	3.181	0.543	1.498	2.822	4.042	1.717	4.709	4.006	0.122	4.836
Road 8	0200	0300	2.912	1.554	3.181	0.543	1.498	2.822	4.042	1.717	4.709	4.006	0.122	4.836
Road 8	0300	0400	2.912	1.554	3.181	0.543	1.498	2.822	4.042	1.717	4.709	4.006	0.122	4.836
Road 8	0400	0500	2.912	1.554	3.181	0.543	1.498	2.822	4.042	1.717	4.709	4.006	0.122	4.836
Road 8	0500	0600	2.912	1.554	3.181	0.543	1.498	2.822	4.042	1.717	4.709	4.006	0.122	4.836
Road 8	0600	0700	2.912	1.554	3.181	0.543	1.498	2.822	4.042	1.717	4.709	4.006	0.122	4.836
Road 8	0700	0800	2.912	1.554	3.181	0.543	1.498	2.822	4.042	1.717	4.709	4.006	0.122	4.836
Road 8	0800	0900	2.912	1.554	3.181	0.543	1.498	2.822	4.042	1.717	4.709	4.006	0.122	4.836
Road 8	0900	1000	2.912	1.554	3.181	0.543	1.498	2.822	4.042	1.717	4.709	4.006	0.122	4.836
Road 8	1000	1100	4.532	8.752	1.978	0.868	1.888	1.735	4.272	1.025	2.054	4.135	0.885	1.785
Road 8	1100	1200	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	1200	1300	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	1300	1400	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	1400	1500	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	1500	1600	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	1600	1700	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	1700	1800	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	1800	1900	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	1900	2000	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	2000	2100	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	2100	2200	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	2200	2300	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	2300	2400	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	2400	2500	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	2500	2600	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	2600	2700	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	2700	2800	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	2800	2900	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	2900	3000	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	3000	3100	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	3100	3200	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	3200	3300	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	3300	3400	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	3400	3500	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	3500	3600	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	3600	3700	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	3700	3800	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	3800	3900	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	3900	4000	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	4000	4100	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	4100	4200	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	4200	4300	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	4300	4400	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	4400	4500	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	4500	4600	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	4600	4700	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	4700	4800	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	4800	4900	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	4900	5000	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	5000	5100	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	5100	5200	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	5200	5300	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	5300	5400	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	5400	5500	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	5500	5600	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	5600	5700	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	5700	5800	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	5800	5900	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	5900	6000	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	6000	6100	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	6100	6200	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	6200	6300	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	6300	6400	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	6400	6500	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	6500	6600	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	6600	6700	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	6700	6800	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	6800	6900	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775	4.175	0.835	1.785
Road 8	6900	7000	4.442	8.672	1.958	0.868	1.736	1.615	4.775	1.967	4.775			

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

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Open Top 24 Hour Underground Quake Using New 24 Hour Impact Factors for 1990-2020 Model Years															
Report Name	Report ID	Hour	NO. Events						NO. Events						
			Monthly/yr			Monthly/decade			Monthly/yr			Monthly/decade			
			g/decade	g/yr	g/month	g/decade	g/yr	g/month	g/decade	g/yr	g/month	g/decade	g/yr	g/month	
Report 17	17	1600-1700	4.2452	5.862	0.7111	3.7712	5.2027	1.5291	0.5573	1.9362	1.5652	1.1464	0.5318	0.4495	0.2016
Report 17	17	1700-1800	4.4457	6.1457	0.7419	3.9582	5.4067	1.5905	0.5823	2.0075	1.6157	1.1765	0.5519	0.4651	0.2106
Report 17	17	1800-1900	4.6462	6.4287	0.7727	4.1452	5.6012	1.6408	0.6074	2.0806	1.6459	1.2076	0.5621	0.4753	0.2196
Report 17	17	1900-2000	2.4882	4.1121	1.2105	2.3292	3.7908	1.0788	0.3888	1.2803	0.8333	0.8704	0.6241	0.3238	0.3133
Report 17	17	2000-2100	1.1123	1.9123	0.5725	1.0923	1.7923	0.5003	0.1833	0.6003	0.4003	0.4003	0.2833	0.1333	0.1333
Report 17	17	2000-2100	2.1052	2.1317	0.7222	1.8912	1.9327	0.6006	0.2183	0.7364	0.5841	0.6211	0.2108	0.1654	0.1654
Report 17	17	2100-2200	1.2122	1.9022	0.5622	1.0822	1.7522	0.4922	0.1722	0.5722	0.3922	0.4122	0.2022	0.1522	0.1522
Report 17	17	2200-2300	1.3822	2.0522	0.5822	1.1022	1.8222	0.5122	0.1822	0.6222	0.4122	0.4322	0.2122	0.1622	0.1622
Report 17	17	2300-2400	1.5522	2.2022	0.6022	1.1222	1.8922	0.5322	0.1922	0.6722	0.4322	0.4522	0.2222	0.1722	0.1722
Report 18	18	0000-0100	1.8022	1.8722	0.2992	1.6622	1.5298	0.2076	0.0719	0.4227	0.4227	0.2101	0.7101	0.6072	0.2222
Report 18	18	0100-0200	1.9722	2.0422	0.3192	1.8322	1.7023	0.2276	0.0819	0.4727	0.4727	0.2301	0.7601	0.6572	0.2422
Report 18	18	0200-0300	2.1422	2.2122	0.3392	1.9922	1.7728	0.2476	0.0919	0.5227	0.5227	0.2401	0.8101	0.7072	0.2622
Report 18	18	0300-0400	2.3122	2.3822	0.3592	2.1622	1.7828	0.2676	0.1019	0.5727	0.5727	0.2501	0.8601	0.7572	0.2822
Report 18	18	0400-0500	2.4822	2.4522	0.3792	2.3322	1.7928	0.2876	0.1119	0.6227	0.6227	0.2601	0.9101	0.8072	0.3022
Report 18	18	0500-0600	2.6522	2.6222	0.3992	2.5022	1.8028	0.3076	0.1219	0.6727	0.6727	0.2701	0.9601	0.8572	0.3222
Report 18	18	0600-0700	2.8222	2.7922	0.4192	2.6722	1.8128	0.3276	0.1319	0.7227	0.7227	0.2801	1.0101	0.9072	0.3422
Report 18	18	0700-0800	2.9922	2.9622	0.4392	2.8422	1.8228	0.3476	0.1419	0.7727	0.7727	0.2901	1.0601	0.9572	0.3622
Report 18	18	0800-0900	3.1622	3.1322	0.4592	3.0122	1.8328	0.3676	0.1519	0.8227	0.8227	0.3001	1.1101	1.0072	0.3822
Report 18	18	0900-1000	3.3322	3.3022	0.4792	3.1822	1.8428	0.3876	0.1619	0.8727	0.8727	0.3101	1.1601	1.0572	0.4022
Report 18	18	1000-1100	3.5022	3.4722	0.4992	3.3522	1.8528	0.4076	0.1719	0.9227	0.9227	0.3201	1.2101	1.1072	0.4222
Report 18	18	1100-1200	3.6722	3.6422	0.5192	3.5222	1.8628	0.4276	0.1819	0.9727	0.9727	0.3301	1.2601	1.1572	0.4422
Report 18	18	1200-1300	3.8422	3.8122	0.5392	3.6922	1.8728	0.4476	0.1919	1.0227	1.0227	0.3401	1.3101	1.2072	0.4622
Report 18	18	1300-1400	4.0122	3.9822	0.5592	3.8622	1.8828	0.4676	0.2019	1.0727	1.0727	0.3501	1.3601	1.2572	0.4822
Report 18	18	1400-1500	4.1822	4.1522	0.5792	4.0322	1.8928	0.4876	0.2119	1.1227	1.1227	0.3601	1.4101	1.3072	0.5022
Report 18	18	1500-1600	4.3522	4.3222	0.5992	4.2022	1.9028	0.5076	0.2219	1.1727	1.1727	0.3701	1.4601	1.3572	0.5222
Report 18	18	1600-1700	4.5222	4.4922	0.6192	4.3722	1.9128	0.5276	0.2319	1.2227	1.2227	0.3801	1.5101	1.4072	0.5422
Report 18	18	1700-1800	4.6922	4.6622	0.6392	4.5422	1.9228	0.5476	0.2419	1.2727	1.2727	0.3901	1.5601	1.4572	0.5622
Report 18	18	1800-1900	4.8622	4.8322	0.6592	4.7122	1.9328	0.5676	0.2519	1.3227	1.3227	0.4001	1.6101	1.5072	0.5822
Report 18	18	1900-2000	5.0322	5.0022	0.6792	4.8822	1.9428	0.5876	0.2619	1.3727	1.3727	0.4101	1.6601	1.5572	0.6022
Report 18	18	2000-2100	5.2022	5.1722	0.6992	5.0522	1.9528	0.6076	0.2719	1.4227	1.4227	0.4201	1.7101	1.6072	0.6222
Report 18	18	2100-2200	5.3722	5.3422	0.7192	5.2222	1.9628	0.6276	0.2819	1.4727	1.4727	0.4301	1.7601	1.6572	0.6422
Report 18	18	2200-2300	5.5422	5.5122	0.7392	5.3922	1.9728	0.6476	0.2919	1.5227	1.5227	0.4401	1.8101	1.7072	0.6622
Report 18	18	2300-2400	5.7122	5.6822	0.7592	5.5622	1.9828	0.6676	0.3019	1.5727	1.5727	0.4501	1.8601	1.7572	0.6822
Report 19	19	0000-0100	1.4452	1.9652	0.8100	1.4452	1.9652	0.8100	0.3000	1.1111	1.1111	0.3000	1.1111	1.1111	0.3000
Report 19	19	0100-0200	1.6152	2.1352	0.8300	1.6152	2.1352	0.8300	0.3100	1.1667	1.1667	0.3100	1.1667	1.1667	0.3100
Report 19	19	0200-0300	1.7852	2.3052	0.8500	1.7852	2.3052	0.8500	0.3200	1.2222	1.2222	0.3200	1.2222	1.2222	0.3200
Report 19	19	0300-0400	1.9552	2.4752	0.8700	1.9552	2.4752	0.8700	0.3300	1.2778	1.2778	0.3300	1.2778	1.2778	0.3300
Report 19	19	0400-0500	2.1252	2.6452	0.8900	2.1252	2.6452	0.8900	0.3400	1.3333	1.3333	0.3400	1.3333	1.3333	0.3400
Report 19	19	0500-0600	2.2952	2.8152	0.9100	2.2952	2.8152	0.9100	0.3500	1.3889	1.3889	0.3500	1.3889	1.3889	0.3500
Report 19	19	0600-0700	2.4652	2.9852	0.9300	2.4652	2.9852	0.9300	0.3600	1.4444	1.4444	0.3600	1.4444	1.4444	0.3600
Report 19	19	0700-0800	2.6352	3.1552	0.9500	2.6352	3.1552	0.9500	0.3700	1.5000	1.5000	0.3700	1.5000	1.5000	0.3700
Report 19	19	0800-0900	2.8052	3.3252	0.9700	2.8052	3.3252	0.9700	0.3800	1.5556	1.5556	0.3800	1.5556	1.5556	0.3800
Report 19	19	0900-1000	2.9752	3.4952	0.9900	2.9752	3.4952	0.9900	0.3900	1.6111	1.6111	0.3900	1.6111	1.6111	0.3900
Report 19	19	1000-1100	3.1452	3.6652	1.0100	3.1452	3.6652	1.0100	0.4000	1.6667	1.6667	0.4000	1.6667	1.6667	0.4000
Report 19	19	1100-1200	3.3152	3.8352	1.0300	3.3152	3.8352	1.0300	0.4100	1.7222	1.7222	0.4100	1.7222	1.7222	0.4100
Report 19	19	1200-1300	3.4852	4.0052	1.0500	3.4852	4.0052	1.0500	0.4200	1.7778	1.7778	0.4200	1.7778	1.7778	0.4200
Report 19	19	1300-1400	3.6552	4.1752	1.0700	3.6552	4.1752	1.0700	0.4300	1.8333	1.8333	0.4300	1.8333	1.8333	0.4300
Report 19	19	1400-1500	3.8252	4.3452	1.0900	3.8252	4.3452	1.0900	0.4400	1.8889	1.8889	0.4400	1.8889	1.8889	0.4400
Report 19	19	1500-1600	3.9952	4.5152	1.1100	3.9952	4.5152	1.1100	0.4500	1.9444	1.9444	0.4500	1.9444	1.9444	0.4500
Report 19	19	1600-1700	4.1652	4.6852	1.1300	4.1652	4.6852	1.1300	0.4600	2.0000	2.0000	0.4600	2.0000	2.0000	0.4600
Report 19	19	1700-1800	4.3352	4.8552	1.1500	4.3352	4.8552	1.1500	0.4700	2.0556	2.0556	0.4700	2.0556	2.0556	0.4700
Report 19	19	1800-1900	4.5052	5.0252	1.1700	4.5052	5.0252	1.1700	0.4800	2.1111	2.1111	0.4800	2.1111	2.1111	0.4800
Report 19	19	1900-2000	4.6752	5.1952	1.1900	4.6752	5.1952	1.1900	0.4900	2.1667	2.1667	0.4900	2.1667	2.1667	0.4900
Report 19	19	2000-2100	4.8452	5.3652	1.2100	4.8452	5.3652	1.2100	0.5000	2.2222	2.2222	0.5000	2.2222	2.2222	0.5000
Report 19	19	2100-2200	5.0152	5.5352	1.2300	5.0152	5.5352	1.2300	0.5100	2.2778	2.2778	0.5100	2.2778	2.2778	0.5100
Report 19	19	2200-2300	5.1852	5.7052	1.2500	5.1852	5.7052	1.2500	0.5200	2.3333	2.3333	0.5200	2.3333	2.3333	0.5200
Report 19	19	2300-2400	5.3552	5.8752	1.2700	5.3552	5.8752	1.2700	0.5300	2.3889	2.3889	0.5300	2.3889	2.3889	0.5300
Report 20	20	0000-0100	8.0022	9.9642	1.2881	5.7132	6.1468	1.1716	0.4111	1.0447	1.0447	0.4111	1.0447	1.0447	0.4111
Report 20	20	0100-0200	8.1662	10.1282	1.3081	5.8772	6.3108	1.1916	0.4222	1.0999	1.0999	0.4222	1.0999	1.0999	0.4222
Report 20	20	0200-0300	8.3302	10.2922	1.3281	6.0412	6.4748	1.2116	0.4333	1.1556	1.1556	0.4333	1.1556	1.1556	0.4333
Report 20	20	0300-0400	8.4942	10.4562	1.3481	6.2052	6.6388	1.2316	0.4444	1.2111	1.2111	0.4444	1.2111	1.2111	0.4444
Report 20	20	0400-0500	8.6582	10.6202	1.3681	6.3692	6.8028	1.2516	0.4556	1.2667	1.2667	0.4556	1.2667	1.2667	0.4556
Report 20	20	0500-0600	8.8222	10.7842	1.3881	6.5332	6.9668	1.2716	0.4667	1.3222	1.3222	0.4667	1.3222	1.3222	0.4667
Report 20	20	0600-0700	8.9862	10.9482	1.4081	6.6972	7.1308	1.2916	0.4778	1.3778	1.3778	0.4778	1.3778	1.3778	0.4778
Report 20	20	0700-0800	9.1502	11.1122	1.4281	6.8612	7.2948	1.3116	0.4889	1.4333	1.4333	0.4889	1.4333	1.4333	0.4889
Report 20	20	0800-0900	9.3142	11.2762	1.4481	7.0252	7.4588	1.3316	0.4999	1.4889	1.4889	0.4999	1.4889	1.4889	0.4999
Report 20	20	0900-1000	9.4782	11.4402	1.4681	7.1892	7.6228	1.3516	0.5111	1.5444	1.5444	0.5111	1.5444	1.5444	0.5111
Report 20	20	1000-1100	9.6422	11.6042	1.4881	7.3532	7.7868	1.3716	0.5222	1.6000	1.6000	0.5222	1.6000	1.6000	0.5222
Report 20	20	1100-1200	9.8062	11.7682	1.5081	7.5172	7.9508</								

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

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Open Top North Endroom Factors for 440000 mch Year 2030														
Route Name	Route ID	Hour	NoEmission			NoEmission			NoEmission					
			MonthlyAverage			MonthlyAverage			MonthlyAverage					
			g/hour	g/ton	g/ton-hour	g/hour	g/ton	g/ton-hour	g/hour	g/ton	g/ton-hour			
Route 34	14	0800-0900	3.70E-02	1.22E-06	3.20E-05	1.30E-02	1.59E-05	2.77E-05	2.10E-02	1.72E-05	1.88E-04	1.86E-01	6.14E-06	1.61E-01
Route 34	14	0900-1000	4.35E-02	1.42E-06	3.70E-05	1.50E-02	1.82E-05	3.24E-05	2.48E-02	2.02E-05	2.15E-04	2.13E-01	6.75E-06	1.73E-01
Route 34	14	1000-1100	4.35E-02	1.42E-06	3.70E-05	1.50E-02	1.82E-05	3.24E-05	2.48E-02	2.02E-05	2.15E-04	2.13E-01	6.75E-06	1.73E-01
Route 34	14	1100-1200	4.78E-02	1.57E-06	4.02E-05	1.71E-02	2.00E-05	3.60E-05	2.60E-02	2.10E-05	2.30E-04	2.26E-01	5.31E-06	1.45E-01
Route 34	14	1200-1300	4.78E-02	1.57E-06	4.02E-05	1.71E-02	2.00E-05	3.60E-05	2.60E-02	2.10E-05	2.30E-04	2.26E-01	5.31E-06	1.45E-01
Route 34	14	1300-1400	4.78E-02	1.57E-06	4.02E-05	1.71E-02	2.00E-05	3.60E-05	2.60E-02	2.10E-05	2.30E-04	2.26E-01	5.31E-06	1.45E-01
Route 34	14	1400-1500	4.72E-02	1.54E-06	4.21E-05	1.63E-02	1.91E-05	3.42E-05	2.51E-02	2.05E-05	2.25E-04	2.21E-01	5.19E-06	1.33E-01
Route 34	14	1500-1600	4.35E-02	1.42E-06	3.70E-05	1.50E-02	1.82E-05	3.24E-05	2.48E-02	2.02E-05	2.15E-04	2.13E-01	6.75E-06	1.73E-01
Route 34	14	1600-1700	4.44E-02	1.48E-06	3.75E-05	1.63E-02	1.97E-05	3.48E-05	2.58E-02	2.10E-05	2.30E-04	2.28E-01	5.38E-06	1.47E-01
Route 34	14	1700-1800	4.44E-02	1.48E-06	3.75E-05	1.63E-02	1.97E-05	3.48E-05	2.58E-02	2.10E-05	2.30E-04	2.28E-01	5.38E-06	1.47E-01
Route 34	14	1800-1900	2.64E-02	8.72E-07	2.36E-05	2.39E-02	1.502E-05	2.67E-05	2.34E-02	1.60E-05	2.84E-04	2.38E-01	9.73E-06	2.55E-01
Route 34	14	2000-2100	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	2100-2200	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	2200-2300	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	2300-2400	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	2400-2500	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	2500-2600	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	2600-2700	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	2700-2800	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	2800-2900	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	2900-3000	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	3000-3100	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	3100-3200	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	3200-3300	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	3300-3400	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	3400-3500	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	3500-3600	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	3600-3700	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	3700-3800	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	3800-3900	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	3900-4000	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	4000-4100	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	4100-4200	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	4200-4300	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	4300-4400	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	4400-4500	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	4500-4600	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	4600-4700	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	4700-4800	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	4800-4900	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	4900-5000	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	5000-5100	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	5100-5200	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	5200-5300	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	5300-5400	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	5400-5500	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	5500-5600	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	5600-5700	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	5700-5800	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	5800-5900	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	5900-6000	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	6000-6100	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	6100-6200	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	6200-6300	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	6300-6400	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	6400-6500	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	6500-6600	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	6600-6700	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	6700-6800	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	6800-6900	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	6900-7000	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	7000-7100	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	7100-7200	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route 34	14	7200-7300	2.35E-02	6.18E-07	2.12E-05	2.14E-02	1.34E-05	2.35E-05	2.07E-02	1.39E-05	2.48E-04	2.09E-01	8.71E-06	2.15E-01
Route														

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Road 24 Hour Emission Factors for AASHTO model (Hour)

Route Name	Road ID	Hour	NOx Emission						NOx Emission					
			MonthlyHour			MonthlyHour			MonthlyHour			MonthlyHour		
			g/kWh	g/kWh	1/1000/No	1/1000/No	g/kWh	g/kWh	1/1000/No	1/1000/No	g/kWh	g/kWh	1/1000/No	1/1000/No
Route 34	34	0800-0900	3.7062	1.2216	3.208	3.202	1.9446	0.7775	2.1882	1.7216	1.8894	1.866	0.6146	1.6116
Route 34	34	0900-1000	4.3936	1.5006	3.208	3.202	1.9446	0.7775	2.1882	1.7216	1.8894	1.866	0.6146	1.6116
Route 34	34	1000-1100	4.3936	1.5006	3.208	3.202	1.9446	0.7775	2.1882	1.7216	1.8894	1.866	0.6146	1.6116
Route 34	34	1100-1200	4.7858	1.6172	3.4026	3.412	1.9376	0.6929	2.6025	0.8335	1.6645	2.265	0.5134	1.6645
Route 34	34	1200-1300	4.7858	1.6172	3.4026	3.412	1.9376	0.6929	2.6025	0.8335	1.6645	2.265	0.5134	1.6645
Route 34	34	1300-1400	4.7858	1.6172	3.4026	3.412	1.9376	0.6929	2.6025	0.8335	1.6645	2.265	0.5134	1.6645
Route 34	34	1400-1500	4.7858	1.6172	3.4026	3.412	1.9376	0.6929	2.6025	0.8335	1.6645	2.265	0.5134	1.6645
Route 34	34	1500-1600	4.4488	1.4468	3.208	3.202	1.9476	0.8454	1.3465	1.1465	1.0044	2.043	1.038	1.7173
Route 34	34	1600-1700	4.4488	1.4468	3.208	3.202	1.9476	0.8454	1.3465	1.1465	1.0044	2.043	1.038	1.7173
Route 34	34	1700-1800	4.4488	1.4468	3.208	3.202	1.9476	0.8454	1.3465	1.1465	1.0044	2.043	1.038	1.7173
Route 34	34	1800-1900	2.6445	0.6138	2.966	2.952	1.9205	0.6475	2.5445	1.0965	2.8464	2.285	0.9376	2.555
Route 34	34	1900-2000	2.6445	0.6138	2.966	2.952	1.9205	0.6475	2.5445	1.0965	2.8464	2.285	0.9376	2.555
Route 34	34	2000-2100	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	2100-2200	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	2200-2300	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	2300-2400	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	2400-0100	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	0100-0200	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	0200-0300	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	0300-0400	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	0400-0500	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	0500-0600	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	0600-0700	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	0700-0800	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	0800-0900	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	0900-1000	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	1000-1100	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	1100-1200	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	1200-1300	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	1300-1400	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	1400-1500	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	1500-1600	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	1600-1700	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	1700-1800	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	1800-1900	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	1900-2000	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	2000-2100	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	2100-2200	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	2200-2300	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	2300-2400	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	2400-0100	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	0100-0200	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	0200-0300	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	0300-0400	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	0400-0500	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	0500-0600	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	0600-0700	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	0700-0800	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	0800-0900	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	0900-1000	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	1000-1100	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	1100-1200	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	1200-1300	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	1300-1400	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	1400-1500	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	1500-1600	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	1600-1700	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	1700-1800	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	1800-1900	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	1900-2000	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	2000-2100	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	2100-2200	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	2200-2300	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	2300-2400	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	2400-0100	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	0100-0200	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	0200-0300	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	0300-0400	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	0400-0500	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	0500-0600	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	0600-0700	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	0700-0800	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	0800-0900	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	0900-1000	2.3555	0.5186	2.396	2.412	1.8677	0.4775	2.3555	1.3945	2.3555	1.896	0.6786	2.115
Route 34	34	1000-1100	2.3555	0.5186	2.396	2.412	1.867							

L:\Secure\Environment Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.2 Emission Factor in 2030.xlsx

Open N ₂ North Undermining Quarry														
2019 Year 20 No. 28a Exemption Factors for ARBNO ₂ Model Outputs														
Road Name	Road ID	Hour	Moist/Moisture			Mo ₂ Emission			Mo ₂ No Emission					
			g/hour	lb/day	lb/year	lb/day	lb/year	lb/day	lb/year					
Road 51	S1	0000-0100	2.186	2.348	4.071	0.996	1.977	1.876	1.778	1.778	1.185	1.145	1.525	2.847
		0100-0200	2.984	4.022	6.835	1.342	2.684	2.586	2.488	2.488	2.886	2.886	2.286	4.569
Road 51	S1	0200-0300	2.984	4.022	6.835	1.342	2.684	2.586	2.488	2.488	2.886	2.886	2.286	4.569
		0300-0400	2.186	2.348	4.071	0.996	1.977	1.876	1.778	1.778	1.185	1.145	1.525	2.847
Road 51	S1	0400-0500	2.984	4.022	6.835	1.342	2.684	2.586	2.488	2.488	2.886	2.886	2.286	4.569
		0500-0600	2.186	2.348	4.071	0.996	1.977	1.876	1.778	1.778	1.185	1.145	1.525	2.847
Road 51	S1	0600-0700	2.984	4.022	6.835	1.342	2.684	2.586	2.488	2.488	2.886	2.886	2.286	4.569
		0700-0800	2.186	2.348	4.071	0.996	1.977	1.876	1.778	1.778	1.185	1.145	1.525	2.847
Road 51	S1	0800-0900	2.984	4.022	6.835	1.342	2.684	2.586	2.488	2.488	2.886	2.886	2.286	4.569
		0900-1000	2.186	2.348	4.071	0.996	1.977	1.876	1.778	1.778	1.185	1.145	1.525	2.847
Road 51	S1	1000-1100	2.984	4.022	6.835	1.342	2.684	2.586	2.488	2.488	2.886	2.886	2.286	4.569
		1100-1200	2.186	2.348	4.071	0.996	1.977	1.876	1.778	1.778	1.185	1.145	1.525	2.847
Road 51	S1	1200-1300	2.984	4.022	6.835	1.342	2.684	2.586	2.488	2.488	2.886	2.886	2.286	4.569
		1300-1400	2.186	2.348	4.071	0.996	1.977	1.876	1.778	1.778	1.185	1.145	1.525	2.847
Road 51	S1	1400-1500	2.984	4.022	6.835	1.342	2.684	2.586	2.488	2.488	2.886	2.886	2.286	4.569
		1500-1600	2.186	2.348	4.071	0.996	1.977	1.876	1.778	1.778	1.185	1.145	1.525	2.847
Road 51	S1	1600-1700	2.984	4.022	6.835	1.342	2.684	2.586	2.488	2.488	2.886	2.886	2.286	4.569
		1700-1800	2.186	2.348	4.071	0.996	1.977	1.876	1.778	1.778	1.185	1.145	1.525	2.847
Road 51	S1	1800-1900	2.984	4.022	6.835	1.342	2.684	2.586	2.488	2.488	2.886	2.886	2.286	4.569
		1900-2000	2.186	2.348	4.071	0.996	1.977	1.876	1.778	1.778	1.185	1.145	1.525	2.847
Road 51	S1	2000-2100	2.984	4.022	6.835	1.342	2.684	2.586	2.488	2.488	2.886	2.886	2.286	4.569
		2100-2200	2.186	2.348	4.071	0.996	1.977	1.876	1.778	1.778	1.185	1.145	1.525	2.847
Road 51	S1	2200-2300	2.984	4.022	6.835	1.342	2.684	2.586	2.488	2.488	2.886	2.886	2.286	4.569
		2300-2400	2.186	2.348	4.071	0.996	1.977	1.876	1.778	1.778	1.185	1.145	1.525	2.847
Road 52	S2	0000-0100	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
		0100-0200	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
Road 52	S2	0200-0300	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
		0300-0400	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
Road 52	S2	0400-0500	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
		0500-0600	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
Road 52	S2	0600-0700	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
		0700-0800	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
Road 52	S2	0800-0900	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
		0900-1000	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
Road 52	S2	1000-1100	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
		1100-1200	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
Road 52	S2	1200-1300	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
		1300-1400	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
Road 52	S2	1400-1500	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
		1500-1600	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
Road 52	S2	1600-1700	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
		1700-1800	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
Road 52	S2	1800-1900	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
		1900-2000	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
Road 52	S2	2000-2100	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
		2100-2200	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
Road 52	S2	2200-2300	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
		2300-2400	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
Road 53	S3	0000-0100	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
		0100-0200	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
Road 53	S3	0200-0300	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
		0300-0400	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
Road 53	S3	0400-0500	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
		0500-0600	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
Road 53	S3	0600-0700	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
		0700-0800	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
Road 53	S3	0800-0900	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
		0900-1000	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
Road 53	S3	1000-1100	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
		1100-1200	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
Road 53	S3	1200-1300	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
		1300-1400	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
Road 53	S3	1400-1500	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
		1500-1600	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
Road 53	S3	1600-1700	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
		1700-1800	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
Road 53	S3	1800-1900	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
		1900-2000	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
Road 53	S3	2000-2100	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
		2100-2200	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
Road 53	S3	2200-2300	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
		2300-2400	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
Road 54	S4	0000-0100	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
		0100-0200	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
Road 54	S4	0200-0300	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
		0300-0400	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
Road 54	S4	0400-0500	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
		0500-0600	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
Road 54	S4	0600-0700	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
		0700-0800	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
Road 54	S4	0800-0900	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975	1.517	0.366	0.808	4.507
		0900-1000	1.152	1.248	1.227	0.105	0.216	1.095	0.481	0.975</				

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open N North End Underscore Factors for AERMOD model									
Year 2030			NO _x Emission				NO _x Emission		
Route Name	Route ID	Hour	Monthly/Type	Monthly/Type	Monthly/Type	Monthly/Type	Monthly/Type	Monthly/Type	Monthly/Type
			g/hour/km	g/hour/km	g/hour/km	g/hour/km	g/hour/km	g/hour/km	g/hour/km
Route 24	24	0800-0900	2.03E-01	7.6E-07	6.92E-07	1.81E-01	6.14E-07	5.02E-01	1.81E-06
Route 24	24	0900-1000	2.20E-01	3.32E-07	8.93E-07	2.89E-07	6.25E-07	1.39E-06	4.89E-06
Route 24	24	1000-1100	2.20E-01	3.32E-07	8.93E-07	2.89E-07	6.25E-07	1.39E-06	4.89E-06
Route 24	24	1100-1200	2.30E-01	3.19E-07	8.07E-07	2.81E-07	7.04E-07	8.19E-01	3.27E-06
Route 24	24	1200-1300	2.40E-01	3.36E-07	8.40E-07	2.09E-07	7.94E-07	6.59E-01	1.34E-06
Route 24	24	1300-1400	2.40E-01	3.36E-07	8.40E-07	2.09E-07	7.94E-07	6.59E-01	1.34E-06
Route 24	24	1400-1500	2.31E-01	3.71E-07	8.90E-07	2.07E-07	3.27E-07	8.15E-01	9.55E-06
Route 24	24	1500-1600	2.31E-01	3.71E-07	8.90E-07	2.07E-07	3.27E-07	8.15E-01	9.55E-06
Route 24	24	1600-1700	2.26E-01	4.41E-07	8.54E-07	1.07E-07	7.61E-07	6.12E-01	1.19E-06
Route 24	24	1700-1800	2.26E-01	4.41E-07	8.54E-07	1.07E-07	7.61E-07	6.12E-01	1.19E-06
Route 24	24	1800-1900	1.70E-01	1.60E-07	4.44E-07	1.44E-07	3.61E-07	7.00E-07	1.89E-06
Route 24	24	1900-2000	1.68E-01	1.03E-07	2.50E-07	1.42E-07	9.14E-08	2.29E-07	6.40E-07
Route 24	24	2000-2100	1.54E-01	1.03E-07	2.50E-07	1.42E-07	9.14E-08	2.29E-07	6.40E-07
Route 24	24	2100-2200	1.58E-01	8.31E-08	2.08E-07	1.42E-07	7.47E-08	1.87E-07	6.93E-06
Route 24	24	2200-2300	1.58E-01	8.31E-08	2.08E-07	1.42E-07	7.47E-08	1.87E-07	6.93E-06
Route 24	24	2300-2400	1.70E-01	6.41E-08	1.61E-07	1.50E-07	5.36E-08	1.41E-07	7.07E-07
Route 25	25	0000-0100	1.57E-01	6.05E-04	5.47E-04	1.57E-01	5.38E-08	1.37E-07	7.33E-01
Route 25	25	0100-0200	1.79E-01	4.82E-07	1.19E-07	1.19E-07	1.82E-07	1.76E-01	8.93E-06
Route 25	25	0200-0300	1.82E-01	4.84E-07	8.77E-08	1.44E-07	1.19E-07	7.91E-07	5.23E-06
Route 25	25	0300-0400	1.82E-01	4.84E-07	8.77E-08	1.44E-07	1.19E-07	7.91E-07	5.23E-06
Route 25	25	0400-0500	1.83E-01	4.83E-07	8.76E-08	1.43E-07	1.19E-07	7.90E-07	5.21E-06
Route 25	25	0500-0600	1.87E-01	6.49E-06	1.61E-07	1.67E-07	1.76E-08	1.47E-07	7.72E-06
Route 25	25	0600-0700	1.87E-01	6.49E-06	1.61E-07	1.67E-07	1.76E-08	1.47E-07	7.72E-06
Route 25	25	0700-0800	2.22E-01	2.74E-07	5.94E-07	9.97E-07	4.33E-07	8.50E-07	8.06E-01
Route 25	25	0800-0900	2.22E-01	2.74E-07	5.94E-07	9.97E-07	4.33E-07	8.50E-07	8.06E-01
Route 25	25	0900-1000	2.34E-01	3.23E-07	1.31E-07	2.02E-07	1.51E-07	1.14E-06	8.05E-01
Route 25	25	1000-1100	2.44E-01	3.18E-07	1.30E-07	2.13E-07	1.42E-07	1.20E-06	8.89E-01
Route 25	25	1100-1200	2.44E-01	3.18E-07	1.30E-07	2.13E-07	1.42E-07	1.20E-06	8.89E-01
Route 25	25	1200-1300	2.44E-01	3.18E-07	1.30E-07	2.13E-07	1.42E-07	1.20E-06	8.89E-01
Route 25	25	1300-1400	2.44E-01	3.18E-07	1.30E-07	2.13E-07	1.42E-07	1.20E-06	8.89E-01
Route 25	25	1400-1500	2.51E-01	3.83E-07	1.41E-07	1.59E-07	1.30E-07	1.01E-06	1.96E-01
Route 25	25	1500-1600	2.60E-01	3.37E-07	1.43E-08	2.00E-07	4.42E-07	1.23E-06	9.79E-01
Route 25	25	1600-1700	2.60E-01	3.37E-07	1.43E-08	2.00E-07	4.42E-07	1.23E-06	9.79E-01
Route 25	25	1700-1800	2.68E-01	6.20E-07	1.07E-06	1.79E-07	3.61E-07	9.21E-07	8.89E-01
Route 25	25	1800-1900	2.68E-01	6.20E-07	1.07E-06	1.79E-07	3.61E-07	9.21E-07	8.89E-01
Route 25	25	1900-2000	2.71E-01	4.61E-07	1.56E-07	1.44E-07	1.64E-07	7.83E-07	1.78E-06
Route 25	25	2000-2100	2.71E-01	4.61E-07	1.56E-07	1.44E-07	1.64E-07	7.83E-07	1.78E-06
Route 25	25	2100-2200	2.67E-01	1.22E-07	3.31E-07	1.47E-07	1.07E-07	7.35E-07	3.25E-06
Route 25	25	2200-2300	2.67E-01	1.22E-07	3.31E-07	1.47E-07	1.07E-07	7.35E-07	3.25E-06
Route 25	25	2300-2400	2.81E-01	1.83E-07	3.05E-07	1.83E-07	1.50E-07	2.71E-07	5.89E-07
Route 25	25	0000-0100	2.81E-01	1.83E-07	3.05E-07	1.83E-07	1.50E-07	2.71E-07	5.89E-07
Route 25	25	0100-0200	2.81E-01	1.83E-07	3.05E-07	1.83E-07	1.50E-07	2.71E-07	5.89E-07
Route 25	25	0200-0300	2.81E-01	1.83E-07	3.05E-07	1.83E-07	1.50E-07	2.71E-07	5.89E-07
Route 25	25	0300-0400	2.81E-01	1.83E-07	3.05E-07	1.83E-07	1.50E-07	2.71E-07	5.89E-07
Route 25	25	0400-0500	2.81E-01	1.83E-07	3.05E-07	1.83E-07	1.50E-07	2.71E-07	5.89E-07
Route 25	25	0500-0600	2.91E-01	1.94E-07	3.28E-07	1.72E-07	1.78E-08	2.66E-07	3.47E-07
Route 25	25	0600-0700	2.91E-01	1.94E-07	3.28E-07	1.72E-07	1.78E-08	2.66E-07	3.47E-07
Route 25	25	0700-0800	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	0800-0900	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	0900-1000	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	1000-1100	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	1100-1200	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	1200-1300	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	1300-1400	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	1400-1500	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	1500-1600	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	1600-1700	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	1700-1800	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	1800-1900	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	1900-2000	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	2000-2100	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	2100-2200	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	2200-2300	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	2300-2400	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	0000-0100	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	0100-0200	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	0200-0300	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	0300-0400	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	0400-0500	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	0500-0600	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	0600-0700	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	0700-0800	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	0800-0900	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	0900-1000	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	1000-1100	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	1100-1200	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	1200-1300	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	1300-1400	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	1400-1500	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	1500-1600	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	1600-1700	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	1700-1800	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	1800-1900	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	1900-2000	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	2000-2100	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	2100-2200	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	2200-2300	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	2300-2400	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	0000-0100	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	0100-0200	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	0200-0300	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	0300-0400	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	0400-0500	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	0500-0600	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	0600-0700	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	0700-0800	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25	25	0800-0900	2.98E-01	2.08E-07	3.50E-07	1.75E-07	1.74E-07	8.53E-07	8.53E-01
Route 25									

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Top North Underground Quarry									
Tearing Yr 24 hours Enormous Factors for ANRMO model (Jan 2020)									
Road Name		Road ID	Hour	NO Emission			NO Emission		
				MonthlyMin	MonthlyMax	MonthlyAverage	MonthlyMin	MonthlyAverage	
Row 27	1605-1700	2141.01	1.888	1.906	2.115	1.847	1.888	9.921	6.8
Row 27	1700-1800	2141.01	1.504	1.535	1.671	1.435	1.437	9.426	6.8
Row 27	1800-1900	2141.01	1.588	1.619	1.755	1.463	1.465	9.578	6.8
Row 27	1900-2000	2141.01	1.864	1.897	1.996	1.647	1.667	9.771	6.8
Row 27	2000-2100	2141.01	1.465	1.491	1.641	1.275	1.291	9.376	6.8
Row 27	2100-2200	2141.01	1.465	1.491	1.641	1.275	1.291	9.376	6.8
Row 27	2200-2300	2141.01	1.465	1.491	1.641	1.275	1.291	9.376	6.8
Row 27	2300-2400	2141.01	1.465	1.491	1.641	1.275	1.291	9.376	6.8
Row 28	0000-0100	2202.04	4.298	4.243	4.944	3.768	3.771	23.922	6.8
Row 28	0100-0200	2202.04	4.298	4.243	4.944	3.768	3.771	23.922	6.8
Row 28	0200-0300	2202.04	4.298	4.243	4.944	3.768	3.771	23.922	6.8
Row 28	0300-0400	2202.04	4.298	4.243	4.944	3.768	3.771	23.922	6.8
Row 28	0400-0500	2202.04	4.298	4.243	4.944	3.768	3.771	23.922	6.8
Row 28	0500-0600	2202.04	4.298	4.243	4.944	3.768	3.771	23.922	6.8
Row 28	0600-0700	2202.04	4.298	4.243	4.944	3.768	3.771	23.922	6.8
Row 28	0700-0800	2202.04	4.298	4.243	4.944	3.768	3.771	23.922	6.8
Row 28	0800-0900	2202.04	4.298	4.243	4.944	3.768	3.771	23.922	6.8
Row 28	0900-1000	2202.04	4.298	4.243	4.944	3.768	3.771	23.922	6.8
Row 28	1000-1100	2202.04	4.298	4.243	4.944	3.768	3.771	23.922	6.8
Row 28	1100-1200	2202.04	4.298	4.243	4.944	3.768	3.771	23.922	6.8
Row 28	1200-1300	2202.04	4.298	4.243	4.944	3.768	3.771	23.922	6.8
Row 28	1300-1400	2202.04	4.298	4.243	4.944	3.768	3.771	23.922	6.8
Row 28	1400-1500	2202.04	4.298	4.243	4.944	3.768	3.771	23.922	6.8
Row 28	1500-1600	2202.04	4.298	4.243	4.944	3.768	3.771	23.922	6.8
Row 28	1600-1700	2202.04	4.298	4.243	4.944	3.768	3.771	23.922	6.8
Row 28	1700-1800	2202.04	4.298	4.243	4.944	3.768	3.771	23.922	6.8
Row 28	1800-1900	2202.04	4.298	4.243	4.944	3.768	3.771	23.922	6.8
Row 28	1900-2000	2202.04	4.298	4.243	4.944	3.768	3.771	23.922	6.8
Row 28	2000-2100	2202.04	4.298	4.243	4.944	3.768	3.771	23.922	6.8
Row 28	2100-2200	2202.04	4.298	4.243	4.944	3.768	3.771	23.922	6.8
Row 28	2200-2300	2202.04	4.298	4.243	4.944	3.768	3.771	23.922	6.8
Row 28	2300-2400	2202.04	4.298	4.243	4.944	3.768	3.771	23.922	6.8
Row 29	0000-0100	2242.02	1.386	1.395	1.556	1.246	1.248	8.466	6.8
Row 29	0100-0200	2242.02	1.386	1.395	1.556	1.246	1.248	8.466	6.8
Row 29	0200-0300	2242.02	1.386	1.395	1.556	1.246	1.248	8.466	6.8
Row 29	0300-0400	2242.02	1.386	1.395	1.556	1.246	1.248	8.466	6.8
Row 29	0400-0500	2242.02	1.386	1.395	1.556	1.246	1.248	8.466	6.8
Row 29	0500-0600	2242.02	1.386	1.395	1.556	1.246	1.248	8.466	6.8
Row 29	0600-0700	2242.02	1.386	1.395	1.556	1.246	1.248	8.466	6.8
Row 29	0700-0800	2242.02	1.386	1.395	1.556	1.246	1.248	8.466	6.8
Row 29	0800-0900	2242.02	1.386	1.395	1.556	1.246	1.248	8.466	6.8
Row 29	0900-1000	2242.02	1.386	1.395	1.556	1.246	1.248	8.466	6.8
Row 29	1000-1100	2242.02	1.386	1.395	1.556	1.246	1.248	8.466	6.8
Row 29	1100-1200	2242.02	1.386	1.395	1.556	1.246	1.248	8.466	6.8
Row 29	1200-1300	2242.02	1.386	1.395	1.556	1.246	1.248	8.466	6.8
Row 29	1300-1400	2242.02	1.386	1.395	1.556	1.246	1.248	8.466	6.8
Row 29	1400-1500	2242.02	1.386	1.395	1.556	1.246	1.248	8.466	6.8
Row 29	1500-1600	2242.02	1.386	1.395	1.556	1.246	1.248	8.466	6.8
Row 29	1600-1700	2242.02	1.386	1.395	1.556	1.246	1.248	8.466	6.8
Row 29	1700-1800	2242.02	1.386	1.395	1.556	1.246	1.248	8.466	6.8
Row 29	1800-1900	2242.02	1.386	1.395	1.556	1.246	1.248	8.466	6.8
Row 29	1900-2000	2242.02	1.386	1.395	1.556	1.246	1.248	8.466	6.8
Row 29	2000-2100	2242.02	1.386	1.395	1.556	1.246	1.248	8.466	6.8
Row 29	2100-2200	2242.02	1.386	1.395	1.556	1.246	1.248	8.466	6.8
Row 29	2200-2300	2242.02	1.386	1.395	1.556	1.246	1.248	8.466	6.8
Row 29	2300-2400	2242.02	1.386	1.395	1.556	1.246	1.248	8.466	6.8
Row 30	0000-0100	2283.05	1.986	1.995	2.222	1.847	1.848	11.922	6.8
Row 30	0100-0200	2283.05	1.986	1.995	2.222	1.847	1.848	11.922	6.8
Row 30	0200-0300	2283.05	1.986	1.995	2.222	1.847	1.848	11.922	6.8
Row 30	0300-0400	2283.05	1.986	1.995	2.222	1.847	1.848	11.922	6.8
Row 30	0400-0500	2283.05	1.986	1.995	2.222	1.847	1.848	11.922	6.8
Row 30	0500-0600	2283.05	1.986	1.995	2.222	1.847	1.848	11.922	6.8
Row 30	0600-0700	2283.05	1.986	1.995	2.222	1.847	1.848	11.922	6.8
Row 30	0700-0800	2283.05	1.986	1.995	2.222	1.847	1.848	11.922	6.8
Row 30	0800-0900	2283.05	1.986	1.995	2.222	1.847	1.848	11.922	6.8
Row 30	0900-1000	2283.05	1.986	1.995	2.222	1.847	1.848	11.922	6.8
Row 30	1000-1100	2283.05	1.986	1.995	2.222	1.847	1.848	11.922	6.8
Row 30	1100-1200	2283.05	1.986	1.995	2.222	1.847	1.848	11.922	6.8
Row 30	1200-1300	2283.05	1.986	1.995	2.222	1.847	1.848	11.922	6.8
Row 30	1300-1400	2283.05	1.986	1.995	2.222	1.847	1.848	11.922	6.8
Row 30	1400-1500	2283.05	1.986	1.995	2.222	1.847	1.848	11.922	6.8
Row 30	1500-1600	2283.05	1.986	1.995	2.222	1.847	1.848	11.922	6.8
Row 30	1600-1700	2283.05	1.986	1.995	2.222	1.847	1.848	11.922	6.8
Row 30	1700-1800	2283.05	1.986	1.995	2.222	1.847	1.848	11.922	6.8
Row 30	1800-1900	2283.05	1.986	1.995	2.222	1.847	1.848	11.922	6.8
Row 30	1900-2000	2283.05	1.986	1.995	2.222	1.847	1.848	11.922	6.8
Row 30	2000-2100	2283.05	1.986	1.995	2.222	1.847	1.848	11.922	6.8
Row 30	2100-2200	2283.05	1.986	1.995	2.222	1.847	1.848	11.922	6.8
Row 30	2200-2300	2283.05	1.986	1.995	2.222	1.847	1.848	11.922	6.8
Row 30	2300-2400	2283.05	1.986	1.995	2.222	1.847	1.848	11.922	6.8

L:\Secure\Environment Projects\60733229\1.01\Others\Air Modelling\Appendix\Traffic\Open Road\Appendix 3.5.2 Emission Factor in 2030

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Tsing N 24 North Underdown Quarry										
Open Road 24 hour Emission Factors for										
AEMOD model Input		Year 2030		NO _x Emission			NO ₂ Emission			
Route Name	Route ID	Hour	g/kWh	g/kWh	kg/hr	Monthly/Average	Monthly/kg/hr	kg/hr	Monthly/Average	
Route 31	31	0000-0100	7.90E-02	1.04E-01	1.05E-06	2.56E-03	6.93E-02	7.25E-03	0.07	8.22E-06
Route 31	31	0100-0200	3.33E-02	9.13E-04	8.61E-07	2.59E-03	8.05E-08	2.54E-03	5.62E-07	5.92E-04
Route 31	31	0200-0300	1.78E-02	1.71E-03	4.52E-07	1.17E-03	3.42E-08	1.04E-03	2.35E-07	2.46E-04
Route 31	31	0300-0400	0.040E-02	4.08E-04	6.29E-07	3.70E-03	6.29E-08	5.63E-07	2.64E-07	6.05E-06
Route 31	31	0400-0500	4.23E-02	4.88E-03	6.37E-07	3.72E-04	9.68E-08	2.67E-07	4.99E-07	2.39E-04
Route 31	31	0500-0600	1.04E-02	1.04E-03	1.42E-07	1.42E-03	1.42E-08	1.42E-07	1.42E-07	1.42E-06
Route 31	31	0600-0700	3.83E-02	3.21E-03	2.18E-06	3.25E-02	2.11E-07	1.88E-06	2.45E-07	1.59E-06
Route 31	31	0700-0800	4.11E-02	3.77E-03	2.18E-06	3.25E-02	2.11E-07	1.88E-06	2.45E-07	1.59E-06
Route 31	31	0800-0900	1.08E-02	6.17E-07	1.55E-06	1.47E-04	1.40E-07	1.40E-08	2.45E-07	1.59E-06
Route 31	31	0900-1000	1.08E-02	6.17E-07	1.55E-06	1.47E-04	1.40E-07	1.40E-08	2.45E-07	1.59E-06
Route 31	31	1000-1100	1.54E-02	4.64E-04	3.75E-05	4.53E-03	6.04E-07	5.05E-06	3.90E-07	3.62E-07
Route 31	31	1100-1200	5.69E-02	6.03E-07	8.98E-06	4.50E-02	5.12E-07	3.40E-06	2.91E-06	2.44E-06
Route 31	31	1200-1300	1.64E-02	1.64E-03	2.18E-06	3.25E-02	2.11E-07	1.88E-06	2.45E-07	1.59E-06
Route 31	31	1300-1400	5.67E-02	4.39E-07	5.92E-06	4.97E-04	3.85E-07	3.44E-06	3.34E-07	2.31E-07
Route 31	31	1400-1500	5.67E-02	4.39E-07	5.92E-06	4.97E-04	3.85E-07	3.44E-06	3.34E-07	2.31E-07
Route 31	31	1500-1600	1.54E-02	4.64E-04	3.75E-05	4.53E-03	6.04E-07	5.05E-06	3.90E-07	3.62E-07
Route 31	31	1600-1700	2.59E-02	3.41E-07	4.05E-06	4.65E-02	5.98E-07	3.34E-06	3.25E-07	2.48E-06
Route 31	31	1700-1800	2.59E-02	3.41E-07	4.05E-06	4.65E-02	5.98E-07	3.34E-06	3.25E-07	2.48E-06
Route 31	31	1800-1900	3.54E-02	3.37E-07	4.05E-06	3.06E-02	7.52E-07	2.63E-06	2.67E-07	2.57E-06
Route 31	31	1900-2000	3.54E-02	3.37E-07	4.05E-06	3.06E-02	7.52E-07	2.63E-06	2.67E-07	2.57E-06
Route 31	31	2000-2100	3.54E-02	3.37E-07	4.05E-06	3.06E-02	7.52E-07	2.63E-06	2.67E-07	2.57E-06
Route 31	31	2100-2200	3.54E-02	3.37E-07	4.05E-06	3.06E-02	7.52E-07	2.63E-06	2.67E-07	2.57E-06
Route 31	31	2200-2300	3.54E-02	3.37E-07	4.05E-06	3.06E-02	7.52E-07	2.63E-06	2.67E-07	2.57E-06
Route 31	31	2300-2400	3.54E-02	3.37E-07	4.05E-06	3.06E-02	7.52E-07	2.63E-06	2.67E-07	2.57E-06
Route 32	32	0000-0100	2.22E-02	2.19E-07	1.07E-06	1.39E-02	2.27E-07	1.53E-06	2.02E-07	2.33E-06
Route 32	32	0100-0200	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 32	32	0200-0300	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 32	32	0300-0400	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 32	32	0400-0500	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 32	32	0500-0600	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 32	32	0600-0700	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 32	32	0700-0800	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 32	32	0800-0900	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 32	32	0900-1000	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 32	32	1000-1100	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 32	32	1100-1200	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 32	32	1200-1300	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 32	32	1300-1400	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 32	32	1400-1500	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 32	32	1500-1600	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 32	32	1600-1700	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 32	32	1700-1800	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 32	32	1800-1900	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 32	32	1900-2000	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 32	32	2000-2100	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 32	32	2100-2200	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 32	32	2200-2300	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 32	32	2300-2400	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 33	33	0000-0100	2.22E-02	2.19E-07	1.07E-06	1.39E-02	2.27E-07	1.53E-06	2.02E-07	2.33E-06
Route 33	33	0100-0200	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 33	33	0200-0300	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 33	33	0300-0400	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 33	33	0400-0500	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 33	33	0500-0600	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 33	33	0600-0700	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 33	33	0700-0800	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 33	33	0800-0900	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 33	33	0900-1000	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 33	33	1000-1100	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 33	33	1100-1200	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 33	33	1200-1300	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 33	33	1300-1400	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 33	33	1400-1500	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 33	33	1500-1600	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 33	33	1600-1700	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 33	33	1700-1800	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 33	33	1800-1900	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 33	33	1900-2000	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 33	33	2000-2100	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 33	33	2100-2200	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 33	33	2200-2300	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 33	33	2300-2400	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 34	34	0000-0100	2.22E-02	2.19E-07	1.07E-06	1.39E-02	2.27E-07	1.53E-06	2.02E-07	2.33E-06
Route 34	34	0100-0200	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 34	34	0200-0300	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 34	34	0300-0400	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 34	34	0400-0500	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 34	34	0500-0600	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 34	34	0600-0700	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 34	34	0700-0800	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 34	34	0800-0900	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 34	34	0900-1000	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 34	34	1000-1100	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 34	34	1100-1200	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 34	34	1200-1300	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 34	34	1300-1400	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 34	34	1400-1500	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 34	34	1500-1600	2.86E-02	2.90E-07	1.34E-06	2.11E-03	1.83E-07	2.10E-06	1.79E-06	1.77E-06
Route 34	34	1600-1700	2.86E-02	2.90						

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Tsing Yi North Underground Quarry
Open Road 24 hour Emission Exhaust forTsing Yi North Underground Quarry
Open Road 24 hour Emission Exhaust forTsing Yi North Underground Quarry
Open Road 24 hour Emission Factors forTsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

North Underground Quarry
of 74-hour Emission Factors for

North Underground Quarry
of 74-hour Emission Factors for

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Road Name	Road ID	Hour	N ₂ Emission				N ₂ Emission				Average		
			g/hour/m ²	g/h ²	tonne/hour	g/h ²	g/hour/m ²	g/h ²	tonne/hour	g/h ²			
Road #1	41	0000-0100	3.552	0.118	1.060E-06	4.882	9.77E-08	9.17E-10	4.881E-07	5.58E-10	4.66E-06	9.07E-07	4.78E-06
Road #1	41	0100-0200	4.387	0.143	1.316E-06	5.887	1.17E-07	1.09E-09	5.887E-07	6.78E-10	5.58E-06	1.10E-06	5.68E-06
Road #1	41	0200-0300	5.162	0.168	1.548E-06	6.932	1.38E-07	1.28E-09	6.932E-07	8.00E-10	6.48E-06	1.29E-06	6.78E-06
Road #1	41	0300-0400	5.912	0.177E	1.771E-06	8.118	1.62E-07	1.49E-09	8.118E-07	9.40E-10	7.47E-06	1.47E-06	7.78E-06
Road #1	41	0400-0500	5.362	0.178E	1.603E-06	7.242	1.39E-07	1.28E-09	7.242E-07	8.30E-10	6.68E-06	1.33E-06	7.08E-06
Road #1	41	0500-0600	4.875E-01	0.127E	1.210E-06	6.398	1.14E-07	1.03E-09	6.398E-07	7.30E-10	5.88E-06	1.20E-06	6.48E-06
Road #1	41	0600-0700	4.387E-01	0.143E	1.316E-06	5.887	1.17E-07	1.09E-09	5.887E-07	6.78E-10	5.58E-06	1.10E-06	5.68E-06
Road #1	41	0700-0800	4.932E-01	0.162E	1.459E-06	6.582	1.24E-07	1.13E-09	6.582E-07	7.50E-10	6.08E-06	1.21E-06	6.28E-06
Road #1	41	0800-0900	4.862E-01	0.167E	1.431E-06	6.482	1.26E-07	1.15E-09	6.482E-07	7.60E-10	6.08E-06	1.22E-06	6.28E-06
Road #1	41	0900-1000	5.362E-01	0.178E	1.603E-06	7.242	1.39E-07	1.28E-09	7.242E-07	8.30E-10	6.68E-06	1.33E-06	7.08E-06
Road #1	41	1000-1100	5.912E-01	0.177E	1.771E-06	8.118	1.62E-07	1.49E-09	8.118E-07	9.40E-10	7.47E-06	1.47E-06	7.78E-06
Road #1	41	1100-1200	5.162E-01	0.168E	1.548E-06	6.932	1.38E-07	1.28E-09	6.932E-07	8.00E-10	6.48E-06	1.29E-06	6.78E-06
Road #1	41	1200-1300	4.387E-01	0.143E	1.316E-06	5.887	1.17E-07	1.09E-09	5.887E-07	6.78E-10	5.58E-06	1.10E-06	5.68E-06
Road #1	41	1300-1400	3.552E-01	0.118E	1.060E-06	4.882	9.77E-08	9.17E-10	4.881E-07	5.58E-10	4.66E-06	9.07E-07	4.78E-06
Road #1	41	1400-1500	2.787E-01	0.091E	8.343E-07	3.727	7.42E-08	6.82E-10	3.727E-07	4.29E-10	3.58E-06	7.17E-07	3.68E-06
Road #1	41	1500-1600	2.787E-01	0.091E	8.343E-07	3.727	7.42E-08	6.82E-10	3.727E-07	4.29E-10	3.58E-06	7.17E-07	3.68E-06
Road #1	41	1600-1700	2.787E-01	0.091E	8.343E-07	3.727	7.42E-08	6.82E-10	3.727E-07	4.29E-10	3.58E-06	7.17E-07	3.68E-06
Road #1	41	1700-1800	2.787E-01	0.091E	8.343E-07	3.727	7.42E-08	6.82E-10	3.727E-07	4.29E-10	3.58E-06	7.17E-07	3.68E-06
Road #1	41	1800-1900	2.787E-01	0.091E	8.343E-07	3.727	7.42E-08	6.82E-10	3.727E-07	4.29E-10	3.58E-06	7.17E-07	3.68E-06
Road #1	41	1900-2000	2.787E-01	0.091E	8.343E-07	3.727	7.42E-08	6.82E-10	3.727E-07	4.29E-10	3.58E-06	7.17E-07	3.68E-06
Road #1	41	2000-2100	2.787E-01	0.091E	8.343E-07	3.727	7.42E-08	6.82E-10	3.727E-07	4.29E-10	3.58E-06	7.17E-07	3.68E-06
Road #1	41	2100-2200	2.787E-01	0.091E	8.343E-07	3.727	7.42E-08	6.82E-10	3.727E-07	4.29E-10	3.58E-06	7.17E-07	3.68E-06
Road #1	41	2200-2300	2.787E-01	0.091E	8.343E-07	3.727	7.42E-08	6.82E-10	3.727E-07	4.29E-10	3.58E-06	7.17E-07	3.68E-06
Road #1	41	2300-2400	2.787E-01	0.091E	8.343E-07	3.727	7.42E-08	6.82E-10	3.727E-07	4.29E-10	3.58E-06	7.17E-07	3.68E-06
Road #2	42	0000-0100	1.062E-01	0.034E	3.155E-08	0.235E-01	2.75E-06	4.68E-08	5.54E-07	4.38E-06	4.75E-07	1.28E-05	1.28E-05
Road #2	42	0100-0200	1.062E-01	0.034E	3.155E-08	0.235E-01	2.75E-06	4.68E-08	5.54E-07	4.38E-06	4.75E-07	1.28E-05	1.28E-05
Road #2	42	0200-0300	1.062E-01	0.034E	3.155E-08	0.235E-01	2.75E-06	4.68E-08	5.54E-07	4.38E-06	4.75E-07	1.28E-05	1.28E-05
Road #2	42	0300-0400	1.062E-01	0.034E	3.155E-08	0.235E-01	2.75E-06	4.68E-08	5.54E-07	4.38E-06	4.75E-07	1.28E-05	1.28E-05
Road #2	42	0400-0500	1.062E-01	0.034E	3.155E-08	0.235E-01	2.75E-06	4.68E-08	5.54E-07	4.38E-06	4.75E-07	1.28E-05	1.28E-05
Road #2	42	0500-0600	1.062E-01	0.034E	3.155E-08	0.235E-01	2.75E-06	4.68E-08	5.54E-07	4.38E-06	4.75E-07	1.28E-05	1.28E-05
Road #2	42	0600-0700	1.062E-01	0.034E	3.155E-08	0.235E-01	2.75E-06	4.68E-08	5.54E-07	4.38E-06	4.75E-07	1.28E-05	1.28E-05
Road #2	42	0700-0800	1.062E-01	0.034E	3.155E-08	0.235E-01	2.75E-06	4.68E-08	5.54E-07	4.38E-06	4.75E-07	1.28E-05	1.28E-05
Road #2	42	0800-0900	1.062E-01	0.034E	3.155E-08	0.235E-01	2.75E-06	4.68E-08	5.54E-07	4.38E-06	4.75E-07	1.28E-05	1.28E-05
Road #2	42	0900-1000	1.062E-01	0.034E	3.155E-08	0.235E-01	2.75E-06	4.68E-08	5.54E-07	4.38E-06	4.75E-07	1.28E-05	1.28E-05
Road #2	42	1000-1100	1.062E-01	0.034E	3.155E-08	0.235E-01	2.75E-06	4.68E-08	5.54E-07	4.38E-06	4.75E-07	1.28E-05	1.28E-05
Road #2	42	1100-1200	1.062E-01	0.034E	3.155E-08	0.235E-01	2.75E-06	4.68E-08	5.54E-07	4.38E-06	4.75E-07	1.28E-05	1.28E-05
Road #2	42	1200-1300	1.062E-01	0.034E	3.155E-08	0.235E-01	2.75E-06	4.68E-08	5.54E-07	4.38E-06	4.75E-07	1.28E-05	1.28E-05
Road #2	42	1300-1400	1.062E-01	0.034E	3.155E-08	0.235E-01	2.75E-06	4.68E-08	5.54E-07	4.38E-06	4.75E-07	1.28E-05	1.28E-05
Road #2	42	1400-1500	1.062E-01	0.034E	3.155E-08	0.235E-01	2.75E-06	4.68E-08	5.54E-07	4.38E-06	4.75E-07	1.28E-05	1.28E-05
Road #2	42	1500-1600	1.062E-01	0.034E	3.155E-08	0.235E-01	2.75E-06	4.68E-08	5.54E-07	4.38E-06	4.75E-07	1.28E-05	1.28E-05
Road #2	42	1600-1700	1.062E-01	0.034E	3.155E-08	0.235E-01	2.75E-06	4.68E-08	5.54E-07	4.38E-06	4.75E-07	1.28E-05	1.28E-05
Road #2	42	1700-1800	1.062E-01	0.034E	3.155E-08	0.235E-01	2.75E-06	4.68E-08	5.54E-07	4.38E-06	4.75E-07	1.28E-05	1.28E-05
Road #2	42	1800-1900	1.062E-01	0.034E	3.155E-08	0.235E-01	2.75E-06	4.68E-08	5.54E-07	4.38E-06	4.75E-07	1.28E-05	1.28E-05
Road #2	42	1900-2000	1.062E-01	0.034E	3.155E-08	0.235E-01	2.75E-06	4.68E-08	5.54E-07	4.38E-06	4.75E-07	1.28E-05	1.28E-05
Road #2	42	2000-2100	1.062E-01	0.034E	3.155E-08	0.235E-01	2.75E-06	4.68E-08	5.54E-07	4.38E-06	4.75E-07	1.28E-05	1.28E-05
Road #2	42	2100-2200	1.062E-01	0.034E	3.155E-08	0.235E-01	2.75E-06	4.68E-08	5.54E-07	4.38E-06	4.75E-07	1.28E-05	1.28E-05
Road #2	42	2200-2300	1.062E-01	0.034E	3.155E-08	0.235E-01	2.75E-06	4.68E-08	5.54E-07	4.38E-06	4.75E-07	1.28E-05	1.28E-05
Road #2	42	2300-2400	1.062E-01	0.034E	3.155E-08	0.235E-01	2.75E-06	4.68E-08	5.54E-07	4.38E-06	4.75E-07	1.28E-05	1.28E-05
Road #3	43	0000-0100	6.121E-01	0.189E	1.489E-06	3.546E-01	1.65E-07	4.99E-08	2.846E-07	2.24E-07	2.47E-06	4.94E-06	4.94E-06
Road #3	43	0100-0200	6.121E-01	0.189E	1.489E-06	3.546E-01	1.65E-07	4.99E-08	2.846E-07	2.24E-07	2.47E-06	4.94E-06	4.94E-06
Road #3	43	0200-0300	6.121E-01	0.189E	1.489E-06	3.546E-01	1.65E-07	4.99E-08	2.846E-07	2.24E-07	2.47E-06	4.94E-06	4.94E-06
Road #3	43	0300-0400	6.121E-01	0.189E	1.489E-06	3.546E-01	1.65E-07	4.99E-08	2.846E-07	2.24E-07	2.47E-06	4.94E-06	4.94E-06
Road #3	43	0400-0500	6.121E-01	0.189E	1.489E-06	3.546E-01	1.65E-07	4.99E-08	2.846E-07	2.24E-07	2.47E-06	4.94E-06	4.94E-06
Road #3	43	0500-0600	6.121E-01	0.189E	1.489E-06	3.546E-01	1.65E-07	4.99E-08	2.846E-07	2.24E-07	2.47E-06	4.94E-06	4.94E-06
Road #3	43	0600-0700	6.121E-01	0.189E	1.489E-06	3.546E-01	1.65E-07	4.99E-08	2.846E-07	2.24E-07	2.47E-06	4.94E-06	4.94E-06
Road #3	43	0700-0800	6.121E-01	0.189E	1.489E-06	3.546E-01	1.65E-07	4.99E-08	2.846E-07	2.24E-07	2.47E-06	4.94E-06	4.94E-06
Road #3	43	0800-0900	6.121E-01	0.189E	1.489E-06	3.546E-01	1.65E-07	4.99E-08	2.846E-07	2.24E-07	2.47E-06	4.94E-06	4.94E-06
Road #3	43	0900-1000	6.121E-01	0.189E	1.489E-06	3.546E-01	1.65E-07	4.99E-08	2.846E-07	2.24E-07	2.47E-06	4.94E-06	4.94E-06
Road #3	43	1000-1100	6.121E-01	0.189E	1.489E-06	3.546E-01	1.65E-07	4.99E-08	2.846E-07	2.24E-07	2.47E-06	4.94E-06	4.94E-06
Road #3	43	1100-1200	6.121E-01	0.189E	1.489E-06	3.546E-01	1.65E-07	4.99E-08	2.846E-07	2.24E-07	2.47E-06	4.94E-06	4.94E-06
Road #3	43	1200-1300	6.121E-01	0.189E	1.489E-06	3.546E-01	1.65E-07	4.99E-08	2.846E-07	2.24E-07	2.47E-06	4.94E-06	4.94E-06
Road #3	43	1300-1400	6.121E-01	0.189E	1.489E-06	3.546E-01	1.65E-07	4.99E-08	2.846E-07	2.24E-07	2.47E-06	4.94E-06	4.94E-06
Road #3	43	1400-1500	6.121E-01	0.189E	1.489E-06	3.546E-01	1.65E-07	4.99E-08	2.846E-07	2.24E-07	2.47E-06	4.94E-06	4.94E-06
Road #3	43	1500-1600	6.121E-01	0.189E	1.489E-06	3.546E-01	1.65E-07	4.99E-08	2.846E-07	2.24E-07	2.47E-06	4.94E-06	4.94E-06
Road #3	43	1600-1700	6.121E-01	0.189E	1.489E-06	3.546E-01	1.65E-07	4.99E-08	2.846E-07	2.24E-07	2.47E-06	4.94E-06	4.94E-06
Road #3	43	1700-1800	6.121E-01	0.189E	1.489E-06	3.546E-01	1.65E-07	4.99E-08	2.846E-07	2.24E-07	2.47E-06	4.94E-06	4.94E-06
Road #3	43	1800-1900	6.121E-01	0.189E	1.489E-06	3.546E-01	1.65E-07	4.99E-08	2.846E-07	2.24E-07	2.47E-06	4.94E-06	4.94E-06
Road #3	43	1900-2000	6.121E-01	0.189E	1.489E-06	3.546E-01	1.65E-07	4.99E-08	2.846E-07	2.24E-07	2.47E-06	4.94E-06	4.94E-06
Road #3	43	2000-2100	6.121E-01	0.189E	1.489E-06	3.546E-01	1.65E-07	4.99E-08	2.846E-07	2.24E-07	2.47E-06	4.94E-06	4.94E-06

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Twin Nth Northbound Quarry															
Open Road to New Bus Evacuation Facility for AHSMD model (HW)															
Road Name	Road ID	Hour	No. Emissions												
			Metric 1					Metric 2							
			g/h/vh	g/h/vh	tonnes/h	g/h/vh	g/h/vh	g/h/vh	g/h/vh	g/h/vh	tonnes/h	g/h/vh	g/h/vh	tonnes/h	
Road #4	44	0800-0900	2,272	0.62	1.83	0.62	1.83	0.62	1.83	0.62	1.83	0.62	1.83	0.62	1.83
Road #4	44	0900-1000	1,631	0.45	1.35	0.45	1.35	0.45	1.35	0.45	1.35	0.45	1.35	0.45	1.35
Road #4	44	1000-1100	2,962	0.82	2.38	0.82	2.38	0.82	2.38	0.82	2.38	0.82	2.38	0.82	2.38
Road #4	44	1100-1200	2,932	0.81	2.31	0.81	2.31	0.81	2.31	0.81	2.31	0.81	2.31	0.81	2.31
Road #4	44	1200-1300	1,300	0.36	1.00	0.36	1.00	0.36	1.00	0.36	1.00	0.36	1.00	0.36	1.00
Road #4	44	1300-1400	3,832	1.07	3.02	1.07	3.02	1.07	3.02	1.07	3.02	1.07	3.02	1.07	3.02
Road #4	44	1400-1500	2,460	0.68	1.90	0.68	1.90	0.68	1.90	0.68	1.90	0.68	1.90	0.68	1.90
Road #4	44	1500-1600	1,426	0.39	1.09	0.39	1.09	0.39	1.09	0.39	1.09	0.39	1.09	0.39	1.09
Road #4	44	1600-1700	1,182	0.32	0.90	0.32	0.90	0.32	0.90	0.32	0.90	0.32	0.90	0.32	0.90
Road #4	44	1700-1800	1,374	0.38	1.06	0.38	1.06	0.38	1.06	0.38	1.06	0.38	1.06	0.38	1.06
Road #4	44	1800-1900	1,860	0.52	1.45	0.52	1.45	0.52	1.45	0.52	1.45	0.52	1.45	0.52	1.45
Road #4	44	1900-2000	1,440	0.40	1.12	0.40	1.12	0.40	1.12	0.40	1.12	0.40	1.12	0.40	1.12
Road #4	44	2000-2100	1,586	0.44	1.23	0.44	1.23	0.44	1.23	0.44	1.23	0.44	1.23	0.44	1.23
Road #4	44	2100-2200	1,296	0.35	0.97	0.35	0.97	0.35	0.97	0.35	0.97	0.35	0.97	0.35	0.97
Road #4	44	2200-2300	1,284	0.35	0.96	0.35	0.96	0.35	0.96	0.35	0.96	0.35	0.96	0.35	0.96
Road #4	44	2300-0000	1,462	0.40	1.12	0.40	1.12	0.40	1.12	0.40	1.12	0.40	1.12	0.40	1.12
Road #4	44	0000-0100	1,238	0.34	0.94	0.34	0.94	0.34	0.94	0.34	0.94	0.34	0.94	0.34	0.94
Road #4	44	0100-0200	1,426	0.39	1.09	0.39	1.09	0.39	1.09	0.39	1.09	0.39	1.09	0.39	1.09
Road #4	44	0200-0300	1,312	0.36	1.00	0.36	1.00	0.36	1.00	0.36	1.00	0.36	1.00	0.36	1.00
Road #4	44	0300-0400	1,662	0.46	1.28	0.46	1.28	0.46	1.28	0.46	1.28	0.46	1.28	0.46	1.28
Road #4	44	0400-0500	1,662	0.46	1.28	0.46	1.28	0.46	1.28	0.46	1.28	0.46	1.28	0.46	1.28
Road #4	44	0500-0600	1,774	0.49	1.37	0.49	1.37	0.49	1.37	0.49	1.37	0.49	1.37	0.49	1.37
Road #4	44	0600-0700	1,832	0.48	1.34	0.48	1.34	0.48	1.34	0.48	1.34	0.48	1.34	0.48	1.34
Road #4	44	0700-0800	1,882	0.51	1.40	0.51	1.40	0.51	1.40	0.51	1.40	0.51	1.40	0.51	1.40
Road #4	44	0800-0900	1,882	0.51	1.40	0.51	1.40	0.51	1.40	0.51	1.40	0.51	1.40	0.51	1.40
Road #4	44	0900-1000	1,882	0.51	1.40	0.51	1.40	0.51	1.40	0.51	1.40	0.51	1.40	0.51	1.40
Road #4	44	1000-1100	2,962	0.82	2.38	0.82	2.38	0.82	2.38	0.82	2.38	0.82	2.38	0.82	2.38
Road #4	44	1100-1200	2,932	0.81	2.31	0.81	2.31	0.81	2.31	0.81	2.31	0.81	2.31	0.81	2.31
Road #4	44	1200-1300	1,300	0.36	1.00	0.36	1.00	0.36	1.00	0.36	1.00	0.36	1.00	0.36	1.00
Road #4	44	1300-1400	3,832	1.07	3.02	1.07	3.02	1.07	3.02	1.07	3.02	1.07	3.02	1.07	3.02
Road #4	44	1400-1500	2,460	0.68	1.90	0.68	1.90	0.68	1.90	0.68	1.90	0.68	1.90	0.68	1.90
Road #4	44	1500-1600	1,426	0.39	1.09	0.39	1.09	0.39	1.09	0.39	1.09	0.39	1.09	0.39	1.09
Road #4	44	1600-1700	1,182	0.32	0.90	0.32	0.90	0.32	0.90	0.32	0.90	0.32	0.90	0.32	0.90
Road #4	44	1700-1800	1,374	0.38	1.06	0.38	1.06	0.38	1.06	0.38	1.06	0.38	1.06	0.38	1.06
Road #4	44	1800-1900	1,860	0.52	1.45	0.52	1.45	0.52	1.45	0.52	1.45	0.52	1.45	0.52	1.45
Road #4	44	1900-2000	1,440	0.40	1.12	0.40	1.12	0.40	1.12	0.40	1.12	0.40	1.12	0.40	1.12
Road #4	44	2000-2100	1,586	0.44	1.23	0.44	1.23	0.44	1.23	0.44	1.23	0.44	1.23	0.44	1.23
Road #4	44	2100-2200	1,296	0.35	0.97	0.35	0.97	0.35	0.97	0.35	0.97	0.35	0.97	0.35	0.97
Road #4	44	2200-2300	1,284	0.35	0.96	0.35	0.96	0.35	0.96	0.35	0.96	0.35	0.96	0.35	0.96
Road #4	44	2300-0000	1,462	0.40	1.12	0.40	1.12	0.40	1.12	0.40	1.12	0.40	1.12	0.40	1.12
Road #4	44	0000-0100	1,238	0.34	0.94	0.34	0.94	0.34	0.94	0.34	0.94	0.34	0.94	0.34	0.94
Road #4	44	0100-0200	1,426	0.39	1.09	0.39	1.09	0.39	1.09	0.39	1.09	0.39	1.09	0.39	1.09
Road #4	44	0200-0300	1,312	0.36	1.00	0.36	1.00	0.36	1.00	0.36	1.00	0.36	1.00	0.36	1.00
Road #4	44	0300-0400	1,662	0.46	1.28	0.46	1.28	0.46	1.28	0.46	1.28	0.46	1.28	0.46	1.28
Road #4	44	0400-0500	1,662	0.46	1.28	0.46	1.28	0.46	1.28	0.46	1.28	0.46	1.28	0.46	1.28
Road #4	44	0500-0600	1,774	0.49	1.37	0.49	1.37	0.49	1.37	0.49	1.37	0.49	1.37	0.49	1.37
Road #4	44	0600-0700	1,832	0.48	1.34	0.48	1.34	0.48	1.34	0.48	1.34	0.48	1.34	0.48	1.34
Road #4	44	0700-0800	1,882	0.51	1.40	0.51	1.40	0.51	1.40	0.51	1.40	0.51	1.40	0.51	1.40
Road #4	44	0800-0900	1,882	0.51	1.40	0.51	1.40	0.51	1.40	0.51	1.40	0.51	1.40	0.51	1.40
Road #4	44	0900-1000	1,882	0.51	1.40	0.51	1.40	0.51	1.40	0.51	1.40	0.51	1.40	0.51	1.40
Road #4	44	1000-1100	2,962	0.82	2.38	0.82	2.38	0.82	2.38	0.82	2.38	0.82	2.38	0.82	2.38
Road #4	44	1100-1200	2,932	0.81	2.31	0.81	2.31	0.81	2.31	0.81	2.31	0.81	2.31	0.81	2.31
Road #4	44	1200-1300	1,300	0.36	1.00	0.36	1.00	0.36	1.00	0.36	1.00	0.36	1.00	0.36	1.00
Road #4	44	1300-1400	3,832	1.07	3.02	1.07	3.02	1.07	3.02	1.07	3.02	1.07	3.02	1.07	3.02
Road #4	44	1400-1500	2,460	0.68	1.90	0.68	1.90	0.68	1.90	0.68	1.90	0.68	1.90	0.68	1.90
Road #4	44	1500-1600	1,426	0.39	1.09	0.39	1.09	0.39	1.09	0.39	1.09	0.39	1.09	0.39	1.09
Road #4	44	1600-1700	1,182	0.32	0.90	0.32	0.90	0.32	0.90	0.32	0.90	0.32	0.90	0.32	0.90
Road #4	44	1700-1800	1,374	0.38	1.06	0.38	1.06	0.38	1.06	0.38	1.06	0.38	1.06	0.38	1.06
Road #4	44	1800-1900	1,860	0.52	1.45	0.52	1.45	0.52	1.45	0.52	1.45	0.52	1.45	0.52	1.45
Road #4	44	1900-2000	1,440	0.40	1.12	0.40	1.12	0.40	1.12	0.40	1.12	0.40	1.12	0.40	1.12
Road #4	44	2000-2100	1,586	0.44	1.23	0.44	1.23	0.44	1.23	0.44	1.23	0.44	1.23	0.44	1.23
Road #4	44	2100-2200	1,296	0.35	0.97	0.35	0.97	0.35	0.97	0.35	0.97	0.35	0.97	0.35	0.97
Road #4	44	2200-2300	1,284	0.35	0.96	0.35	0.96	0.35	0.96	0.35	0.96	0.35	0.96	0.35	0.96
Road #4	44	2300-0000	1,462	0.40	1.12	0.40	1.12	0.40	1.12	0.40	1.12	0.40	1.12	0.40	1.12
Road #4	44	0000-0100	1,238	0.34	0.94	0.34	0.94	0.34	0.94	0.34	0.94	0.34	0.94	0.34	0.94
Road #4	44	0100-0200	1,426	0.39	1.09	0.39	1.09	0.39	1.09	0.39	1.09	0.39	1.09	0.39	1.09
Road #4	44	0200-0300	1,312	0.36	1.00	0.36	1.00	0.36	1.00	0.36	1.00	0.36	1.00	0.36	1.00
Road #4	44	0300-0400	1,662	0.46	1.28	0.46	1.28	0.46	1.28	0.46	1.28	0.46	1.28	0.46	1.28
Road #4	44	0400-0500	1,662	0.46	1.28	0.46	1.28	0.46	1.28	0.46	1.28	0.46	1.28	0.46	1.28
Road #4	44	0500-0600	1,774	0.49	1.37	0.49	1.37	0.49	1.37	0.49	1.37	0.49	1.37	0.49	1.37
Road #4	44	0600-0700	1,832	0.48	1.34	0.48	1.34	0.48	1.34	0.48	1.34	0.48	1.34	0.48	1.34
Road #4	44	0700-0800	1,882	0.51	1.40	0.51	1.40	0.51	1.40	0.51	1.40	0.51	1.40	0.51	1.40
Road #4	44	0800-0900	1,882	0.51	1.40	0.51	1.40	0.51	1.40	0.51	1.40	0.51	1.40	0.51	1.40
Road #4	44	0900-1000	1,882	0.51	1.40	0.51	1.40	0.51	1.40	0.51	1.40	0.51	1.40	0.51	1.40
Road #4	44	1000-1100	2,962	0.82	2.38	0.82	2.38	0.82	2.38	0.82	2.38	0.82	2.38	0.82	2.38
Road #4	44	1100-1200	2,932	0.81	2.31	0.81	2.31	0.81	2.31	0.81	2.31	0.81	2.31	0.81	2.31
Road #4	44	1200-1300	1,300	0.36	1.00	0.36	1.00	0.36	1.00	0.36	1.00	0.36	1.00	0.36	1.00
Road #4	44	1300-1400	3,832	1.07	3.02	1.07	3.02	1.07	3.02	1.07	3.02	1.07	3.02	1.07	3.02
Road #4	44	1400-1500	2,460	0.68	1.90	0.68	1.90	0.68	1.90	0.68	1.90	0.68	1.90	0.68	1.90
Road #4	44	1500-1600	1,426	0.39	1.09	0.39	1.09	0.39	1.09	0.39	1.09	0.39	1.09	0.39	1.09
Road #4	44	1600-1700	1,182	0.32	0.90	0.32	0.								

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Open North and Underway Quarry											
Table 7: North Sea Ennivation Factors for											
AR5000 model (NW)											
Year 2030											
Road Name	Road ID	Hour	NW, Ennivation						NW, Ennivation		
			g/h/m ²	g/m ²	tonnes/h	g/m ²	g/m ²	tonnes/h	g/h/m ²	g/m ²	tonnes/h
Road 47	47	1600-1700	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	1700-1800	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	1800-1900	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	1900-2000	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	2000-2100	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	2100-2200	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	2200-2300	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	2300-2400	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	2400-0100	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	0100-0200	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	0200-0300	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	0300-0400	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	0400-0500	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	0500-0600	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	0600-0700	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	0700-0800	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	0800-0900	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	0900-1000	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	1000-1100	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	1100-1200	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	1200-1300	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	1300-1400	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	1400-1500	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	1500-1600	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	1600-1700	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	1700-1800	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	1800-1900	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	1900-2000	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	2000-2100	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	2100-2200	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	2200-2300	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	2300-2400	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	2400-0100	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	0100-0200	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	0200-0300	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	0300-0400	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	0400-0500	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	0500-0600	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	0600-0700	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	0700-0800	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	0800-0900	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	0900-1000	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	1000-1100	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	1100-1200	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	1200-1300	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	1300-1400	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	1400-1500	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	1500-1600	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	1600-1700	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	1700-1800	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	1800-1900	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	1900-2000	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	2000-2100	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	2100-2200	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	2200-2300	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	2300-2400	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	2400-0100	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	0100-0200	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	0200-0300	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	0300-0400	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	0400-0500	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	0500-0600	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	0600-0700	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	0700-0800	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	0800-0900	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	0900-1000	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	1000-1100	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	1100-1200	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	1200-1300	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	1300-1400	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	1400-1500	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	1500-1600	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	1600-1700	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	1700-1800	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	1800-1900	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	1900-2000	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	2000-2100	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	2100-2200	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	2200-2300	4.35E+02	9.41E+07	2.96E+05	4.32E+02	7.82E+07	2.44E+05	2.35E+03	4.33E+08	1.42E+04
Road 47	47	2300-2400	4.35E+02	9.41E+07	2.96E+05	4.32E+02					

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open N ₂ North Underdown Quarry														
Key N ₂ Mass Extinction Factors for AINMOD model (trial)														
Year 2030														
Road Name	Road ID	Hour	N ₂ emissions					NO emissions					Average	
			g/hour/mi	g/h ² /mi	tonne/hour	g/mi ² /hr	tonne/hour	g/hour/mi	g/h ² /mi	tonne/hour	g/mi ² /hr	tonne/hour		
Road S4	S4	0800-0800	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	0800-1500	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	1500-1800	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	1800-2100	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	2100-2400	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	2400-0700	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	0700-0800	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	0800-0900	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	0900-1000	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	1000-1100	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	1100-1200	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	1200-1300	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	1300-1400	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	1400-1500	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	1500-1600	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	1600-1700	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	1700-1800	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	1800-1900	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	1900-2000	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	2000-2100	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	2100-2200	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	2200-2300	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	2300-0000	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	0000-0100	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	0100-0200	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	0200-0300	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	0300-0400	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	0400-0500	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	0500-0600	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	0600-0700	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	0700-0800	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	0800-0900	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	0900-1000	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	1000-1100	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	1100-1200	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	1200-1300	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	1300-1400	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	1400-1500	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	1500-1600	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	1600-1700	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	1700-1800	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	1800-1900	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	1900-2000	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	2000-2100	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	2100-2200	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	2200-2300	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	2300-0000	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	0000-0100	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	0100-0200	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	0200-0300	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	0300-0400	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
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Road S4	S4	0600-0700	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	0700-0800	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	0800-0900	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	0900-1000	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	1000-1100	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	1100-1200	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	1200-1300	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9.788E+06	4.61E+05
Road S4	S4	1300-1400	1.181E+00	1.844E+07	1.220E+05	1.148E+07	4.105E+07	9.348E+06	1.851E+01	2.718E+06	4.854E+05	4.898E+05	9	

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Open North Road Underpass Quarry														
Table 7: North East Annexation Factors for ARMS model (km)														
		Year 2030		Year 2050										
Road Name	Road ID	Hour	No Emulsion			Emulsion			No Emulsion			Emulsion		
			g/hour	g/m ²	tonnes/hour	g/hour	g/m ²	tonnes/hour	g/hour	g/m ²	tonnes/hour	g/hour	g/m ²	tonnes/hour
Road 1	0000-0100	1:44:02	1:42:07	8:59E-06	0.99E-03	1:42:07	7:80E-06	1:38E-03	1:38E-06	1:00E-04	1:18E-03	1:47E-06	8:15E-05	
		1:45:00	1:42:07	8:59E-06	0.99E-03	1:45:00	7:80E-06	1:38E-03	1:38E-06	1:00E-04	1:18E-03	1:47E-06	8:15E-05	
		1:46:00	1:42:07	8:59E-06	0.99E-03	1:46:00	7:80E-06	1:38E-03	1:38E-06	1:00E-04	1:18E-03	1:47E-06	8:15E-05	
Road 1	0000-0200	2:44:02	1:42:07	8:59E-06	0.99E-03	2:44:02	7:80E-06	1:38E-03	2:44:02	7:80E-06	1:38E-03	2:44:02	7:80E-06	
		2:45:00	1:42:07	8:59E-06	0.99E-03	2:45:00	7:80E-06	1:38E-03	2:45:00	7:80E-06	1:38E-03	2:45:00	7:80E-06	
		2:46:00	1:42:07	8:59E-06	0.99E-03	2:46:00	7:80E-06	1:38E-03	2:46:00	7:80E-06	1:38E-03	2:46:00	7:80E-06	
Road 1	0000-0300	3:44:02	1:42:07	8:59E-06	0.99E-03	3:44:02	7:80E-06	1:38E-03	3:44:02	7:80E-06	1:38E-03	3:44:02	7:80E-06	
		3:45:00	1:42:07	8:59E-06	0.99E-03	3:45:00	7:80E-06	1:38E-03	3:45:00	7:80E-06	1:38E-03	3:45:00	7:80E-06	
		3:46:00	1:42:07	8:59E-06	0.99E-03	3:46:00	7:80E-06	1:38E-03	3:46:00	7:80E-06	1:38E-03	3:46:00	7:80E-06	
Road 1	0000-0400	4:44:02	1:42:07	8:59E-06	0.99E-03	4:44:02	7:80E-06	1:38E-03	4:44:02	7:80E-06	1:38E-03	4:44:02	7:80E-06	
		4:45:00	1:42:07	8:59E-06	0.99E-03	4:45:00	7:80E-06	1:38E-03	4:45:00	7:80E-06	1:38E-03	4:45:00	7:80E-06	
		4:46:00	1:42:07	8:59E-06	0.99E-03	4:46:00	7:80E-06	1:38E-03	4:46:00	7:80E-06	1:38E-03	4:46:00	7:80E-06	
Road 1	0000-0500	5:44:02	1:42:07	8:59E-06	0.99E-03	5:44:02	7:80E-06	1:38E-03	5:44:02	7:80E-06	1:38E-03	5:44:02	7:80E-06	
		5:45:00	1:42:07	8:59E-06	0.99E-03	5:45:00	7:80E-06	1:38E-03	5:45:00	7:80E-06	1:38E-03	5:45:00	7:80E-06	
		5:46:00	1:42:07	8:59E-06	0.99E-03	5:46:00	7:80E-06	1:38E-03	5:46:00	7:80E-06	1:38E-03	5:46:00	7:80E-06	
Road 1	0000-0600	6:44:02	1:42:07	8:59E-06	0.99E-03	6:44:02	7:80E-06	1:38E-03	6:44:02	7:80E-06	1:38E-03	6:44:02	7:80E-06	
		6:45:00	1:42:07	8:59E-06	0.99E-03	6:45:00	7:80E-06	1:38E-03	6:45:00	7:80E-06	1:38E-03	6:45:00	7:80E-06	
		6:46:00	1:42:07	8:59E-06	0.99E-03	6:46:00	7:80E-06	1:38E-03	6:46:00	7:80E-06	1:38E-03	6:46:00	7:80E-06	
Road 1	0000-0700	7:44:02	1:42:07	8:59E-06	0.99E-03	7:44:02	7:80E-06	1:38E-03	7:44:02	7:80E-06	1:38E-03	7:44:02	7:80E-06	
		7:45:00	1:42:07	8:59E-06	0.99E-03	7:45:00	7:80E-06	1:38E-03	7:45:00	7:80E-06	1:38E-03	7:45:00	7:80E-06	
		7:46:00	1:42:07	8:59E-06	0.99E-03	7:46:00	7:80E-06	1:38E-03	7:46:00	7:80E-06	1:38E-03	7:46:00	7:80E-06	
Road 1	0000-0800	8:44:02	1:42:07	8:59E-06	0.99E-03	8:44:02	7:80E-06	1:38E-03	8:44:02	7:80E-06	1:38E-03	8:44:02	7:80E-06	
		8:45:00	1:42:07	8:59E-06	0.99E-03	8:45:00	7:80E-06	1:38E-03	8:45:00	7:80E-06	1:38E-03	8:45:00	7:80E-06	
		8:46:00	1:42:07	8:59E-06	0.99E-03	8:46:00	7:80E-06	1:38E-03	8:46:00	7:80E-06	1:38E-03	8:46:00	7:80E-06	
Road 1	0000-0900	9:44:02	1:42:07	8:59E-06	0.99E-03	9:44:02	7:80E-06	1:38E-03	9:44:02	7:80E-06	1:38E-03	9:44:02	7:80E-06	
		9:45:00	1:42:07	8:59E-06	0.99E-03	9:45:00	7:80E-06	1:38E-03	9:45:00	7:80E-06	1:38E-03	9:45:00	7:80E-06	
		9:46:00	1:42:07	8:59E-06	0.99E-03	9:46:00	7:80E-06	1:38E-03	9:46:00	7:80E-06	1:38E-03	9:46:00	7:80E-06	
Road 1	0000-1000	10:44:02	1:42:07	8:59E-06	0.99E-03	10:44:02	7:80E-06	1:38E-03	10:44:02	7:80E-06	1:38E-03	10:44:02	7:80E-06	
		10:45:00	1:42:07	8:59E-06	0.99E-03	10:45:00	7:80E-06	1:38E-03	10:45:00	7:80E-06	1:38E-03	10:45:00	7:80E-06	
		10:46:00	1:42:07	8:59E-06	0.99E-03	10:46:00	7:80E-06	1:38E-03	10:46:00	7:80E-06	1:38E-03	10:46:00	7:80E-06	
Road 1	0000-1100	11:44:02	1:42:07	8:59E-06	0.99E-03	11:44:02	7:80E-06	1:38E-03	11:44:02	7:80E-06	1:38E-03	11:44:02	7:80E-06	
		11:45:00	1:42:07	8:59E-06	0.99E-03	11:45:00	7:80E-06	1:38E-03	11:45:00	7:80E-06	1:38E-03	11:45:00	7:80E-06	
		11:46:00	1:42:07	8:59E-06	0.99E-03	11:46:00	7:80E-06	1:38E-03	11:46:00	7:80E-06	1:38E-03	11:46:00	7:80E-06	
Road 1	0000-1200	12:44:02	1:42:07	8:59E-06	0.99E-03	12:44:02	7:80E-06	1:38E-03	12:44:02	7:80E-06	1:38E-03	12:44:02	7:80E-06	
		12:45:00	1:42:07	8:59E-06	0.99E-03	12:45:00	7:80E-06	1:38E-03	12:45:00	7:80E-06	1:38E-03	12:45:00	7:80E-06	
		12:46:00	1:42:07	8:59E-06	0.99E-03	12:46:00	7:80E-06	1:38E-03	12:46:00	7:80E-06	1:38E-03	12:46:00	7:80E-06	
Road 1	0000-1300	1:44:02	1:42:07	8:59E-06	0.99E-03	1:44:02	7:80E-06	1:38E-03	1:44:02	7:80E-06	1:38E-03	1:44:02	7:80E-06	
		1:45:00	1:42:07	8:59E-06	0.99E-03	1:45:00	7:80E-06	1:38E-03	1:45:00	7:80E-06	1:38E-03	1:45:00	7:80E-06	
		1:46:00	1:42:07	8:59E-06	0.99E-03	1:46:00	7:80E-06	1:38E-03	1:46:00	7:80E-06	1:38E-03	1:46:00	7:80E-06	
Road 1	0000-1400	2:44:02	1:42:07	8:59E-06	0.99E-03	2:44:02	7:80E-06	1:38E-03	2:44:02	7:80E-06	1:38E-03	2:44:02	7:80E-06	
		2:45:00	1:42:07	8:59E-06	0.99E-03	2:45:00	7:80E-06	1:38E-03	2:45:00	7:80E-06	1:38E-03	2:45:00	7:80E-06	
		2:46:00	1:42:07	8:59E-06	0.99E-03	2:46:00	7:80E-06	1:38E-03	2:46:00	7:80E-06	1:38E-03	2:46:00	7:80E-06	
Road 1	0000-1500	3:44:02	1:42:07	8:59E-06	0.99E-03	3:44:02	7:80E-06	1:38E-03	3:44:02	7:80E-06	1:38E-03	3:44:02	7:80E-06	
		3:45:00	1:42:07	8:59E-06	0.99E-03	3:45:00	7:80E-06	1:38E-03	3:45:00	7:80E-06	1:38E-03	3:45:00	7:80E-06	
		3:46:00	1:42:07	8:59E-06	0.99E-03	3:46:00	7:80E-06	1:38E-03	3:46:00	7:80E-06	1:38E-03	3:46:00	7:80E-06	
Road 1	0000-1600	4:44:02	1:42:07	8:59E-06	0.99E-03	4:44:02	7:80E-06	1:38E-03	4:44:02	7:80E-06	1:38E-03	4:44:02	7:80E-06	
		4:45:00	1:42:07	8:59E-06	0.99E-03	4:45:00	7:80E-06	1:38E-03	4:45:00	7:80E-06	1:38E-03	4:45:00	7:80E-06	
		4:46:00	1:42:07	8:59E-06	0.99E-03	4:46:00	7:80E-06	1:38E-03	4:46:00	7:80E-06	1:38E-03	4:46:00	7:80E-06	
Road 1	0000-1700	5:44:02	1:42:07	8:59E-06	0.99E-03	5:44:02	7:80E-06	1:38E-03	5:44:02	7:80E-06	1:38E-03	5:44:02	7:80E-06	
		5:45:00	1:42:07	8:59E-06	0.99E-03	5:45:00	7:80E-06	1:38E-03	5:45:00	7:80E-06	1:38E-03	5:45:00	7:80E-06	
		5:46:00	1:42:07	8:59E-06	0.99E-03	5:46:00	7:80E-06	1:38E-03	5:46:00	7:80E-06	1:38E-03	5:46:00	7:80E-06	
Road 1	0000-1800	6:44:02	1:42:07	8:59E-06	0.99E-03	6:44:02	7:80E-06	1:38E-03	6:44:02	7:80E-06	1:38E-03	6:44:02	7:80E-06	
		6:45:00	1:42:07	8:59E-06	0.99E-03	6:45:00	7:80E-06	1:38E-03	6:45:00	7:80E-06	1:38E-03	6:45:00	7:80E-06	
		6:46:00	1:42:07	8:59E-06	0.99E-03	6:46:00	7:80E-06	1:38E-03	6:46:00	7:80E-06	1:38E-03	6:46:00	7:80E-06	
Road 1	0000-1900	7:44:02	1:42:07	8:59E-06	0.99E-03	7:44:02	7:80E-06	1:38E-03	7:44:02	7:80E-06	1:38E-03	7:44:02	7:80E-06	
		7:45:00	1:42:07	8:59E-06	0.99E-03	7:45:00	7:80E-06	1:38E-03	7:45:00	7:80E-06	1:38E-03	7:45:00	7:80E-06	
		7:46:00	1:42:07	8:59E-06	0.99E-03	7:46:00	7:80E-06	1:38E-03	7:46:00	7:80E-06	1:38E-03	7:46:00	7:80E-06	
Road 1	0000-2000	8:44:02	1:42:07	8:59E-06	0.99E-03	8:44:02	7:80E-06	1:38E-03	8:44:02	7:80E-06	1:38E-03	8:44:02	7:80E-06	
		8:45:00	1:42:07	8:59E-06	0.99E-03	8:45:00	7:80E-06	1:38E-03	8:45:00	7:80E-06	1:38E-03	8:45:00	7:80E-06	
		8:46:00	1:42:07	8:59E-06	0.99E-03	8:46:00	7:80E-06	1:38E-03	8:46:00	7:80E-06	1:38E-03	8:46:00	7:80E-06	
Road 1	0000-2100	9:44:02	1:42:07	8:59E-06	0.99E-03	9:44:02	7:80E-06	1:38E-03	9:44:02	7:80E-06	1:38E-03	9:44:02	7:80E-06	
		9:45:00	1:42:07	8:59E-06	0.99E-03	9:45:00	7:80E-06	1:38E-03	9:45:00	7:80E-06	1:38E-03	9:45:00	7:80E-06	
		9:46:00	1:42:07	8:59E-06	0.99E-03	9:46:00	7:80E-06	1:38E-03	9:46:00	7:80E-06	1:38E-03	9:46:00	7:80E-06	
Road 1	0000-2200	10:44:02	1:42:07	8:59E-06	0.99E-03	10:44:02	7:80E-06	1:38E-03	10:44:02	7:80E-06	1:38E-03	10:44:02	7:80E-06	
		10:45:00	1:42:07	8:59E-06	0.99E-03	10:45:00	7:80E-06	1:38E-03	10:45:00	7:80E-06	1:38E-03	10:45:00	7:80E-06	
		10:46:00	1:42:07	8:59E-06	0.99E-03	10:46:00	7:80E-06	1:38E-03	10:46:00	7:80E-06	1:38E-03	10:46:00	7:80E-06	
Road 1	0000-2300	11:44:02	1:42:07	8:59E-06	0.99E-03	11:44:02	7:80E-06	1:38E-03	11:44:02	7:80E-06	1:38E-03	11:44:02	7:80E-06	
		11:45:00	1:42:07	8:59E-06	0.99E-03	11:45:00	7:80E-06	1:38E-03	11:45:00	7:80E-06	1:38E-03	11:45:00	7:80E-06	
		11:46:00	1:42:07	8:59E-06	0.99E-03	11:46:00	7:80E-06	1:38E-03	11:46:00	7:80E-06	1:38E-03	11:46:00	7:80E-06	
Road 1	0000-2400	12:44:02	1:42:07	8:59E-06	0.99E-03	12:44:02	7:80E-06	1:38E-03	12:44:02	7:80E-06	1:38E-03	12:44:02	7:80E-06	
		12:45:00	1:42:07	8:59E-06	0.99E-03	12:45:00	7:80E-06	1:38E-03	12:45:00	7:80E-06	1:38E-03	12:45:00	7:80E-06	
		12:46:00	1:42:07	8:59E-06	0.99E-03	12:46:00	7:80E-06	1:38E-03	12:46:00	7:80E-06	1:38E-03	12:46:00	7:80E-06	
Road 1	0000-2500	1:44:02	1:42:07	8:59E-06	0.99E-03	1:44:02	7:80E-06	1:38E-03	1:44:02	7:80E-06	1:38E-03	1:44:02	7:80E-06	

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Open Pit North Underground Quarry													
Open Road 24 Hour Entrance Factors for													
ATMSO model results													
Road Name	Road ID	Hour	NO ₂ Entrance						NO ₂ Exit				
			g/hour	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/hour	g/m ³	g/m ³	g/m ³	
Road 4	0800-0900	2:162	6.776	1.384	1.488	1.578	1.648	1.298	1.048	1.054	1.084	4.238	0.678
Road 4	0900-1000	2:268	7.176	1.484	1.588	1.678	1.748	1.398	1.098	1.104	1.134	4.338	0.778
Road 4	1000-1100	2:374	7.576	1.584	1.688	1.778	1.848	1.498	1.198	1.204	1.234	4.438	0.878
Road 4	1100-1200	2:480	7.976	1.684	1.788	1.878	1.948	1.598	1.298	1.304	1.334	4.538	0.978
Road 4	1200-1300	2:586	8.376	1.784	1.888	1.978	2.048	1.698	1.398	1.404	1.434	4.638	1.078
Road 4	1300-1400	3:092	8.776	1.884	1.988	2.078	2.148	1.798	1.498	1.504	1.534	4.738	1.178
Road 4	1400-1500	3:198	9.176	1.984	2.088	2.178	2.248	1.898	1.598	1.604	1.634	4.838	1.278
Road 4	1500-1600	3:304	9.576	2.084	2.188	2.278	2.348	1.998	1.698	1.704	1.734	4.938	1.378
Road 4	1600-1700	3:410	9.976	2.184	2.288	2.378	2.448	2.098	1.798	1.804	1.834	5.038	1.478
Road 4	1700-1800	3:516	10.376	2.284	2.388	2.478	2.548	2.198	1.898	1.904	1.934	5.138	1.578
Road 4	1800-1900	4:022	10.776	2.384	2.488	2.578	2.648	2.298	1.998	2.004	2.034	5.238	1.678
Road 4	1900-2000	4:128	11.176	2.484	2.588	2.678	2.748	2.398	2.098	2.104	2.134	5.338	1.778
Road 4	2000-2100	4:234	11.576	2.584	2.688	2.778	2.848	2.498	2.198	2.204	2.234	5.438	1.878
Road 4	2100-2200	4:340	11.976	2.684	2.788	2.878	2.948	2.598	2.298	2.304	2.334	5.538	1.978
Road 4	2200-2300	4:446	12.376	2.784	2.888	2.978	3.048	2.698	2.398	2.404	2.434	5.638	2.078
Road 4	2300-2400	4:552	12.776	2.884	2.988	3.078	3.148	2.798	2.498	2.504	2.534	5.738	2.178
Road 5	0000-0100	5:058	13.176	2.984	3.088	3.178	3.248	2.898	2.598	2.604	2.634	5.838	2.278
Road 5	0100-0200	5:164	13.576	3.084	3.188	3.278	3.348	2.998	2.698	2.704	2.734	5.938	2.378
Road 5	0200-0300	5:270	13.976	3.184	3.288	3.378	3.448	3.098	2.798	2.804	2.834	6.038	2.478
Road 5	0300-0400	5:376	14.376	3.284	3.388	3.478	3.548	3.198	2.898	2.904	2.934	6.138	2.578
Road 5	0400-0500	5:482	14.776	3.384	3.488	3.578	3.648	3.298	2.998	3.004	3.034	6.238	2.678
Road 5	0500-0600	5:588	15.176	3.484	3.588	3.678	3.748	3.398	3.098	3.104	3.134	6.338	2.778
Road 5	0600-0700	6:094	15.576	3.584	3.688	3.778	3.848	3.498	3.198	3.204	3.234	6.438	2.878
Road 5	0700-0800	6:199	15.976	3.684	3.788	3.878	3.948	3.598	3.298	3.304	3.334	6.538	2.978
Road 5	0800-0900	6:305	16.376	3.784	3.888	3.978	4.048	3.698	3.398	3.404	3.434	6.638	3.078
Road 5	0900-1000	6:411	16.776	3.884	3.988	4.078	4.148	3.798	3.498				
Road 5	1000-1100	6:517	17.176	3.984	4.088	4.178	4.248	3.898	3.598				
Road 5	1100-1200	7:023	17.576	4.084	4.188	4.278	4.348	3.998	3.698				
Road 5	1200-1300	7:129	17.976	4.184	4.288	4.378	4.448	4.098	3.798				
Road 5	1300-1400	7:235	18.376	4.284	4.388	4.478	4.548	4.198	3.898				
Road 5	1400-1500	7:341	18.776	4.384	4.488	4.578	4.648	4.298	3.998				
Road 5	1500-1600	7:447	19.176	4.484	4.588	4.678	4.748	4.398	4.098				
Road 5	1600-1700	7:553	19.576	4.584	4.688	4.778	4.848	4.498	4.198				
Road 5	1700-1800	8:059	19.976	4.684	4.788	4.878	4.948	4.598	4.298				
Road 5	1800-1900	8:165	20.376	4.784	4.888	4.978	5.048	4.698	4.398				
Road 5	1900-2000	8:271	20.776	4.884	4.988	5.078	5.148	4.798	4.498				
Road 5	2000-2100	8:377	21.176	4.984	5.088	5.178	5.248	4.898	4.598				
Road 5	2100-2200	8:483	21.576	5.084	5.188	5.278	5.348	4.998	4.698				
Road 5	2200-2300	8:589	21.976	5.184	5.288	5.378	5.448	5.098	4.798				
Road 5	2300-2400	9:095	22.376	5.284	5.388	5.478	5.548	5.198	4.898				
Road 7	0000-0100	1:184	5.784	1.168	1.272	1.368	1.432	1.032	0.792	0.798	0.816	3.168	0.496
Road 7	0100-0200	1:290	6.184	1.268	1.372	1.468	1.532	1.072	0.832	0.838	0.856	3.268	0.536
Road 7	0200-0300	1:396	6.584	1.368	1.472	1.568	1.632	1.112	0.872	0.878	0.896	3.368	0.576
Road 7	0300-0400	1:502	6.984	1.468	1.572	1.668	1.732	1.152	0.912	0.918	0.936	3.468	0.616
Road 7	0400-0500	2:008	7.384	1.568	1.672	1.768	1.832	1.192	0.952	0.958	0.976	3.568	0.656
Road 7	0500-0600	2:114	7.784	1.668	1.772	1.868	1.932	1.232	0.992	0.998	1.016	3.668	0.696
Road 7	0600-0700	2:220	8.184	1.768	1.872	1.968	2.032	1.272	1.032	1.038	1.056	3.768	0.736
Road 7	0700-0800	2:326	8.584	1.868	1.972	2.068	2.132	1.312	1.072	1.078	1.096	3.868	0.776
Road 7	0800-0900	2:432	8.984	1.968	2.072	2.168	2.232	1.352	1.112	1.118	1.136	3.968	0.816
Road 7	0900-1000	2:538	9.384	2.068	2.172	2.268	2.332	1.392	1.152	1.158	1.176	4.068	0.856
Road 7	1000-1100	3:044	9.784	2.168	2.272	2.368	2.432	1.432	1.192	1.198	1.216	4.168	0.896
Road 7	1100-1200	3:150	10.184	2.268	2.372	2.468	2.532	1.472	1.232	1.238	1.256	4.268	0.936
Road 7	1200-1300	3:256	10.584	2.368	2.472	2.568	2.632	1.512	1.272	1.278	1.296	4.368	0.976
Road 7	1300-1400	3:362	10.984	2.468	2.572	2.668	2.732	1.552	1.312	1.318	1.336	4.468	1.016
Road 7	1400-1500	3:468	11.384	2.568	2.672	2.768	2.832	1.592	1.352	1.358	1.376	4.568	1.056
Road 7	1500-1600	3:574	11.784	2.668	2.772	2.868	2.932	1.632	1.392	1.398	1.416	4.668	1.096
Road 7	1600-1700	4:080	12.184	2.768	2.872	2.968	3.032	1.672	1.432	1.438	1.456	4.768	1.136
Road 7	1700-1800	4:186	12.584	2.868	2.972	3.068	3.132	1.712	1.472	1.478	1.496	4.868	1.176
Road 7	1800-1900	4:292	12.984	2.968	3.072	3.168	3.232	1.752	1.512	1.518	1.536	4.968	1.216
Road 7	1900-2000	4:398	13.384	3.068	3.172	3.268	3.332	1.792	1.552	1.558	1.576	5.068	1.256
Road 7	2000-2100	4:504	13.784	3.168	3.272	3.368	3.432	1.832	1.592	1.598	1.616	5.168	1.296
Road 7	2100-2200	5:010	14.184	3.268	3.372	3.468	3.532	1.872	1.632	1.638	1.656	5.268	1.336
Road 7	2200-2300	5:116	14.584	3.368	3.472	3.568	3.632	1.912	1.672	1.678	1.696	5.368	1.376
Road 7	2300-2400	5:222	14.984	3.468	3.572	3.668	3.732	1.952	1.712	1.718	1.736	5.468	1.416
Road 7	0000-0100	6:304	15.984	3.668	3.772	3.868	3.932	2.152	1.912	1.918	1.936	5.968	1.616
Road 7	0100-0200	6:410	16.384	3.768	3.872	3.968	4.032	2.192	1.952	1.958	1.976	6.068	1.656
Road 7	0200-0300	6:516	16.784	3.868	3.972	4.068	4.132	2.232	1.992	1.998	2.016	6.168	1.696
Road 7	0300-0400	7:022	17.184	3.968	4.072	4.168	4.232	2.272	2.032	2.038	2.056	6.268	1.736
Road 7	0400-0500	7:128	17.584	4.068	4.172	4.268	4.332	2.312	2.072	2.078	2.096	6.368	1.776
Road 7	0500-0600	7:234	17.984	4.168	4.272	4.368	4.432	2.352	2.112	2.118	2.136	6.468	1.816
Road 7	0600-0700	7:340	18.384	4.268	4.372	4.468	4.532	2.392	2.152	2.158	2.176	6.568	1.856
Road 7	0700-0800	7:446	18.784	4.368	4.472	4.568	4.632	2.432	2.192	2.198	2.216	6.668	1.896
Road 7	0800-0900	7:552	19.184	4.468	4.572	4.668	4.732	2.472	2.232	2.238	2.256	6.768	1.936
Road 7	0900-1000	8:058	19.584	4.568	4.672	4.768	4.832	2.512	2.272	2.278	2.296	6.868	1.976
Road 7	1000-1100	8:164	19.984	4.668	4.772	4.868	4.932	2.552	2.312	2.318	2.336	6.968	2.016
Road 7	1100-1200	8:270	20.384	4.768	4.872	4.968	5.032	2.592	2.352	2.358	2.376	7.068	2.056
Road 7	1200-1300	8:376	20.784	4.868	4.972	5.068	5.132	2.632	2.392	2.398	2.416	7.168	2.096
Road 7	1300-1400	8:482	21.184	4.968	5.072	5.168	5.232	2.672	2.432	2.438	2.456	7.268	2.136
Road 7	1400-1500	8:588	21.584	5.068	5.172	5.268	5.332	2.712	2.472	2.478	2.496	7.368	2.176
Road 7	1500-1600	9:094	21.984	5.168	5.272	5.368	5.432	2.752	2.512	2.518	2.536	7.468	2.216
Road 7	1600-1700	9:200	22.384	5.268	5.372	5.468	5.532	2.792	2.552	2.558	2.576	7.568	2.256
Road 7	1700-1800	9:306	22.784	5.368	5.472	5.568	5.632	2.832	2.592	2.598	2.616	7.668	2.296
Road 7	1800-1900	9:412	23.184	5.468	5.572	5.668	5.732	2.872	2.632	2.638	2.656	7.768	2.336
Road 7	1900-2000	9:518	23.584	5.568	5.672	5.768	5.832	2.912	2.672	2.678	2.696	7.868	2.376
Road 7	2000-2100	10:024	23.984	5.668	5.772	5.868	5.932	2.952	2.712	2.718	2.736	7.968	2.416
Road 7	2100-												

\\secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.2 Emission Factor in 2030.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Top North Underdrain Quarterly														
Open Top North 400 Emission Factors for AR5000 Model (pilot)														
Year 2030														
Road Name	Road ID	Hour	NO _x Emission				PM ₁₀ Emission				PM _{2.5} Emission			
			g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	
Road 7	7	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 8	8	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 9	9	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 10	10	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 11	11	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 12	12	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 13	13	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 14	14	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 15	15	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 16	16	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 17	17	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 18	18	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 19	19	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 20	20	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 21	21	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 22	22	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 23	23	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 24	24	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 25	25	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 26	26	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 27	27	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 28	28	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 29	29	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 30	30	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 31	31	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 32	32	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 33	33	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 34	34	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 35	35	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 36	36	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 37	37	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 38	38	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 39	39	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 40	40	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 41	41	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 42	42	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 43	43	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 44	44	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 45	45	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 46	46	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 47	47	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.568	2.056	1.376
Road 48	48	1600	1.040	4.934	8.816	2.088	4.332	4.982	2.424	1.822	4.488	2.024	1.348	1.808
		1700	1.080	4.996	9.024	2.160	4.416	5.224	2.464	2.464	1.868	4.5		

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Top North End Environment Factors														
Year 2030														
Road Name	Road ID	Hour	No. Emission				No. Emission							
			Monthly/Average		Monthly/Average		Monthly/Average		Monthly/Average					
			g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	
Respt 1	21	0000	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 1	21	0100	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 1	21	0200	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 1	21	0300	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 1	21	0400	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 1	21	0500	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 1	21	0600	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 1	21	0700	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 1	21	0800	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 1	21	0900	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 1	21	1000	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 1	21	1100	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 1	21	1200	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 1	21	1300	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 1	21	1400	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 1	21	1500	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 1	21	1600	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 1	21	1700	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 1	21	1800	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 1	21	1900	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 1	21	2000	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 1	21	2100	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 1	21	2200	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 1	21	2300	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 2	22	0000	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 2	22	0100	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 2	22	0200	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 2	22	0300	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 2	22	0400	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 2	22	0500	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 2	22	0600	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 2	22	0700	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 2	22	0800	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 2	22	0900	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 2	22	1000	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 2	22	1100	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 2	22	1200	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 2	22	1300	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 2	22	1400	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 2	22	1500	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 2	22	1600	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 2	22	1700	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 2	22	1800	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 2	22	1900	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 2	22	2000	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 2	22	2100	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 2	22	2200	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 2	22	2300	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 3	23	0000	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 3	23	0100	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 3	23	0200	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 3	23	0300	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 3	23	0400	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 3	23	0500	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 3	23	0600	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 3	23	0700	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 3	23	0800	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 3	23	0900	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 3	23	1000	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 3	23	1100	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 3	23	1200	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 3	23	1300	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 3	23	1400	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 3	23	1500	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 3	23	1600	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 3	23	1700	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 3	23	1800	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 3	23	1900	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 3	23	2000	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 3	23	2100	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 3	23	2200	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 3	23	2300	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 4	24	0000	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 4	24	0100	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 4	24	0200	10.80	1.1387	1.4906	1.1665	0.9938	1.3186	1.4381	0.9187	1.1316	1.2161	7.0987	1.0665
Respt 4	24	0300	10.80	1.1387	1.4906	1.1665								

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Top North End Extension Factors for Atmospheric Model													
		Year 2010		NOx Emission		Monthly Hourly		NOx Emission		Monthly Hourly			
Route Name	Route ID	Hour	g/hour	lb/day	g/hour	lb/day	g/hour	lb/day	g/hour	lb/day	g/hour	lb/day	
Route 14	14	0800-0900	4.59E-02	8.00E-07	1.38E-03	1.93E-02	8.88E-07	1.17E-05	2.81E-03	4.94E-06	8.42E-05	2.40E-03	4.19E-06
Route 14	14	0900-1000	5.99E-02	1.06E-06	1.88E-03	2.62E-02	8.57E-07	1.12E-05	3.22E-03	5.69E-06	9.78E-05	2.69E-03	4.88E-06
Route 14	14	1000-1100	7.49E-02	1.34E-06	2.38E-03	3.32E-02	8.26E-07	1.07E-05	3.63E-03	6.44E-06	0.0001	2.98E-03	5.42E-06
Route 14	14	1100-1200	5.74E-02	8.87E-07	1.17E-03	4.89E-02	8.88E-07	9.97E-06	3.18E-03	5.60E-06	8.82E-05	2.82E-03	3.38E-06
Route 14	14	1200-1300	4.29E-02	6.34E-07	8.68E-04	3.52E-02	8.88E-07	9.97E-06	2.68E-03	4.74E-06	7.32E-05	2.29E-03	2.74E-06
Route 14	14	1300-1400	7.12E-02	8.88E-07	1.48E-03	6.07E-02	8.42E-07	4.44E-05	3.38E-03	5.52E-06	0.0001	3.47E-03	6.47E-06
Route 14	14	1400-1500	7.19E-02	1.06E-06	1.88E-03	6.00E-02	8.26E-07	1.51E-05	3.01E-03	5.56E-06	1.00E-04	3.18E-03	4.89E-06
Route 14	14	1500-1600	5.64E-02	8.87E-07	1.17E-03	4.89E-02	8.88E-07	9.97E-06	2.68E-03	4.74E-06	7.32E-05	2.29E-03	2.74E-06
Route 14	14	1600-1700	8.62E-02	1.08E-06	2.63E-03	5.83E-02	9.24E-07	1.88E-05	3.88E-03	6.17E-06	1.05E-04	3.30E-03	5.24E-06
Route 14	14	1700-1800	7.19E-02	1.06E-06	1.88E-03	6.00E-02	8.26E-07	1.51E-05	3.01E-03	5.56E-06	1.00E-04	3.18E-03	4.89E-06
Route 14	14	1800-1900	4.24E-02	6.14E-07	1.19E-03	5.70E-02	7.16E-07	2.11E-05	2.93E-03	5.62E-06	9.58E-05	2.54E-03	4.87E-06
Route 14	14	1900-2000	2.49E-02	3.44E-07	6.24E-04	2.94E-02	5.16E-07	1.45E-05	1.64E-03	3.16E-06	4.52E-05	1.36E-03	2.62E-06
Route 14	14	2000-2100	2.11E-03	3.15E-07	7.12E-05	2.62E-02	4.84E-07	1.34E-05	1.48E-03	2.95E-06	3.76E-05	1.10E-03	2.18E-06
Route 14	14	2100-2200	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	2200-2300	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	2300-2400	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	2400-2500	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	2500-2600	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	2600-2700	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	2700-2800	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	2800-2900	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	2900-3000	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	3000-3100	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	3100-3200	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	3200-3300	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	3300-3400	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	3400-3500	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	3500-3600	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	3600-3700	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	3700-3800	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	3800-3900	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	3900-4000	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	4000-4100	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	4100-4200	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	4200-4300	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	4300-4400	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	4400-4500	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	4500-4600	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	4600-4700	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	4700-4800	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	4800-4900	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	4900-5000	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	5000-5100	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	5100-5200	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	5200-5300	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	5300-5400	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	5400-5500	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	5500-5600	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	5600-5700	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	5700-5800	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	5800-5900	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	5900-6000	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	6000-6100	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	6100-6200	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	6200-6300	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	6300-6400	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	6400-6500	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	6500-6600	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	6600-6700	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	6700-6800	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	6800-6900	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	6900-7000	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	7000-7100	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	7100-7200	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	7200-7300	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	7300-7400	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	7400-7500	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	7500-7600	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.07E-03	2.37E-06
Route 14	14	7600-7700	2.69E-02	3.98E-07	5.45E-04	2.30E-02	2.63E-07	4.99E-05	2.46E-03	4.82E-06	4.79E-05	2.0	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Sky 24 Hour Emission Factors for AERMOD model															
Road Name			Road ID	Hour	NO _x Emission			PM ₁₀ Emission			PM _{2.5} Emission				
					g/hr/m ²	g/hr/m ²	g/hr/m ²	g/hr/m ²	g/hr/m ²	g/hr/m ²	g/hr/m ²	g/hr/m ²	g/hr/m ²	g/hr/m ²	
Read 17	17	1650	1700	1.864	5.318	1.568	0.582	4.566	1.337	0.508	1.588	1.664	2.200	1.041	0.46
Read 17	17	1700	1800	2.093	4.505	1.563	0.545	2.465	0.441	2.152	2.505	1.504	1.914	2.566	0.68
Read 17	17	1800	1900	1.115	3.775	1.563	0.545	2.465	0.441	2.152	2.505	1.504	1.914	2.566	0.68
Read 17	17	1900	2000	1.846	2.405	7.005	1.646	2.640	1.245	6.255	0.523	3.508	1.733	1.507	2.216
Read 17	17	2000	2100	1.475	2.405	7.005	1.646	2.640	1.245	6.255	0.523	3.508	1.733	1.507	2.216
Read 17	17	2100	2200	1.846	2.405	7.005	1.646	2.640	1.245	6.255	0.523	3.508	1.733	1.507	2.216
Read 17	17	2200	2300	1.846	2.405	7.005	1.646	2.640	1.245	6.255	0.523	3.508	1.733	1.507	2.216
Read 17	17	2300	2400	1.846	2.405	7.005	1.646	2.640	1.245	6.255	0.523	3.508	1.733	1.507	2.216
Read 18	18	0600	0700	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 18	18	0700	0800	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 18	18	0800	0900	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 18	18	0900	1000	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 18	18	1000	1100	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 18	18	1100	1200	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 18	18	1200	1300	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 18	18	1300	1400	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 18	18	1400	1500	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 18	18	1500	1600	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 18	18	1600	1700	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 18	18	1700	1800	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 18	18	1800	1900	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 18	18	1900	2000	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 18	18	2000	2100	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 18	18	2100	2200	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 18	18	2200	2300	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 18	18	2300	2400	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 19	19	0600	0700	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 19	19	0700	0800	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 19	19	0800	0900	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 19	19	0900	1000	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 19	19	1000	1100	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 19	19	1100	1200	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 19	19	1200	1300	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 19	19	1300	1400	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 19	19	1400	1500	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 19	19	1500	1600	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 19	19	1600	1700	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 19	19	1700	1800	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 19	19	1800	1900	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 19	19	1900	2000	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 19	19	2000	2100	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 19	19	2100	2200	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 19	19	2200	2300	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 19	19	2300	2400	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 20	20	0600	0700	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 20	20	0700	0800	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 20	20	0800	0900	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 20	20	0900	1000	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 20	20	1000	1100	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 20	20	1100	1200	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 20	20	1200	1300	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 20	20	1300	1400	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 20	20	1400	1500	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 20	20	1500	1600	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 20	20	1600	1700	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 20	20	1700	1800	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 20	20	1800	1900	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 20	20	1900	2000	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 20	20	2000	2100	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 20	20	2100	2200	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 20	20	2200	2300	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 20	20	2300	2400	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 21	21	0600	0700	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 21	21	0700	0800	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 21	21	0800	0900	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 21	21	0900	1000	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 21	21	1000	1100	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 21	21	1100	1200	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 21	21	1200	1300	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 21	21	1300	1400	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 21	21	1400	1500	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 21	21	1500	1600	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 21	21	1600	1700	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 21	21	1700	1800	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 21	21	1800	1900	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 21	21	1900	2000	1.413	7.028	2.698	1.246	0.585	2.543	0.546	1.637	1.485	1.423	1.625	1.701
Read 21	21	2000	2100	1.413	7.028	2.698	1.246	0.585	2.543	0.546					

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Sky 24 Hour Emission Factors for AERMOD model									
		Year 2030		NO _x Emission		NO _x Emission		NO _x Emission	
Route Name	Route ID	Hour	Month/January	g/hour/1000g	Month/February	g/hour/1000g	Month/March	g/hour/1000g	Month/April
Real 31	1	0000-0100	2.666	1.088	0.848	0.7	2.384	0.996	0.877
Real 31	1	0100-0200	2.666	1.088	0.848	0.7	2.384	0.996	0.877
Real 31	1	0200-0300	2.666	1.088	0.848	0.7	2.384	0.996	0.877
Real 31	1	0300-0400	2.666	1.088	0.848	0.7	2.384	0.996	0.877
Real 31	1	0400-0500	3.722	1.450	1.120	0.938	3.478	1.350	1.040
Real 31	1	0500-0600	3.722	1.450	1.120	0.938	3.478	1.350	1.040
Real 31	1	0600-0700	3.722	1.450	1.120	0.938	3.478	1.350	1.040
Real 31	1	0700-0800	3.722	1.450	1.120	0.938	3.478	1.350	1.040
Real 31	1	0800-0900	3.722	1.450	1.120	0.938	3.478	1.350	1.040
Real 31	1	0900-1000	3.722	1.450	1.120	0.938	3.478	1.350	1.040
Real 31	1	1000-1100	4.966	2.210	1.550	1.100	4.510	2.190	1.490
Real 31	1	1100-1200	4.966	2.210	1.550	1.100	4.510	2.190	1.490
Real 31	1	1200-1300	4.966	2.210	1.550	1.100	4.510	2.190	1.490
Real 31	1	1300-1400	4.966	2.210	1.550	1.100	4.510	2.190	1.490
Real 31	1	1400-1500	5.966	2.410	1.750	1.200	5.510	2.390	1.690
Real 31	1	1500-1600	5.966	2.410	1.750	1.200	5.510	2.390	1.690
Real 31	1	1600-1700	5.966	2.410	1.750	1.200	5.510	2.390	1.690
Real 31	1	1700-1800	5.966	2.410	1.750	1.200	5.510	2.390	1.690
Real 31	1	1800-1900	3.266	1.310	0.960	0.680	2.726	1.110	0.820
Real 31	1	1900-2000	3.266	1.310	0.960	0.680	2.726	1.110	0.820
Real 31	1	2000-2100	3.266	1.310	0.960	0.680	2.726	1.110	0.820
Real 31	1	2100-2200	3.266	1.310	0.960	0.680	2.726	1.110	0.820
Real 31	1	2200-2300	3.266	1.310	0.960	0.680	2.726	1.110	0.820
Real 31	1	2300-2400	3.266	1.310	0.960	0.680	2.726	1.110	0.820
Real 31	2	0000-0100	2.666	1.088	0.848	0.7	2.384	0.996	0.877
Real 31	2	0100-0200	2.666	1.088	0.848	0.7	2.384	0.996	0.877
Real 31	2	0200-0300	2.666	1.088	0.848	0.7	2.384	0.996	0.877
Real 31	2	0300-0400	2.666	1.088	0.848	0.7	2.384	0.996	0.877
Real 31	2	0400-0500	3.722	1.450	1.120	0.938	3.478	1.350	1.040
Real 31	2	0500-0600	3.722	1.450	1.120	0.938	3.478	1.350	1.040
Real 31	2	0600-0700	3.722	1.450	1.120	0.938	3.478	1.350	1.040
Real 31	2	0700-0800	3.722	1.450	1.120	0.938	3.478	1.350	1.040
Real 31	2	0800-0900	3.722	1.450	1.120	0.938	3.478	1.350	1.040
Real 31	2	0900-1000	3.722	1.450	1.120	0.938	3.478	1.350	1.040
Real 31	2	1000-1100	4.966	2.210	1.550	1.100	4.510	2.190	1.490
Real 31	2	1100-1200	4.966	2.210	1.550	1.100	4.510	2.190	1.490
Real 31	2	1200-1300	4.966	2.210	1.550	1.100	4.510	2.190	1.490
Real 31	2	1300-1400	4.966	2.210	1.550	1.100	4.510	2.190	1.490
Real 31	2	1400-1500	5.966	2.410	1.750	1.200	5.510	2.390	1.690
Real 31	2	1500-1600	5.966	2.410	1.750	1.200	5.510	2.390	1.690
Real 31	2	1600-1700	5.966	2.410	1.750	1.200	5.510	2.390	1.690
Real 31	2	1700-1800	5.966	2.410	1.750	1.200	5.510	2.390	1.690
Real 31	2	1800-1900	3.266	1.310	0.960	0.680	2.726	1.110	0.820
Real 31	2	1900-2000	3.266	1.310	0.960	0.680	2.726	1.110	0.820
Real 31	2	2000-2100	3.266	1.310	0.960	0.680	2.726	1.110	0.820
Real 31	2	2100-2200	3.266	1.310	0.960	0.680	2.726	1.110	0.820
Real 31	2	2200-2300	3.266	1.310	0.960	0.680	2.726	1.110	0.820
Real 31	2	2300-2400	3.266	1.310	0.960	0.680	2.726	1.110	0.820
Real 31	3	0000-0100	2.666	1.088	0.848	0.7	2.384	0.996	0.877
Real 31	3	0100-0200	2.666	1.088	0.848	0.7	2.384	0.996	0.877
Real 31	3	0200-0300	2.666	1.088	0.848	0.7	2.384	0.996	0.877
Real 31	3	0300-0400	2.666	1.088	0.848	0.7	2.384	0.996	0.877
Real 31	3	0400-0500	3.722	1.450	1.120	0.938	3.478	1.350	1.040
Real 31	3	0500-0600	3.722	1.450	1.120	0.938	3.478	1.350	1.040
Real 31	3	0600-0700	3.722	1.450	1.120	0.938	3.478	1.350	1.040
Real 31	3	0700-0800	3.722	1.450	1.120	0.938	3.478	1.350	1.040
Real 31	3	0800-0900	3.722	1.450	1.120	0.938	3.478	1.350	1.040
Real 31	3	0900-1000	3.722	1.450	1.120	0.938	3.478	1.350	1.040
Real 31	3	1000-1100	4.966	2.210	1.550	1.100	4.510	2.190	1.490
Real 31	3	1100-1200	4.966	2.210	1.550	1.100	4.510	2.190	1.490
Real 31	3	1200-1300	4.966	2.210	1.550	1.100	4.510	2.190	1.490
Real 31	3	1300-1400	4.966	2.210	1.550	1.100	4.510	2.190	1.490
Real 31	3	1400-1500	5.966	2.410	1.750	1.200	5.510	2.390	1.690
Real 31	3	1500-1600	5.966	2.410	1.750	1.200	5.510	2.390	1.690
Real 31	3	1600-1700	5.966	2.410	1.750	1.200	5.510	2.390	1.690
Real 31	3	1700-1800	5.966	2.410	1.750	1.200	5.510	2.390	1.690
Real 31	3	1800-1900	3.266	1.310	0.960	0.680	2.726	1.110	0.820
Real 31	3	1900-2000	3.266	1.310	0.960	0.680	2.726	1.110	0.820
Real 31	3	2000-2100	3.266	1.310	0.960	0.680	2.726	1.110	0.820
Real 31	3	2100-2200	3.266	1.310	0.960	0.680	2.726	1.110	0.820
Real 31	3	2200-2300	3.266	1.310	0.960	0.680	2.726	1.110	0.820
Real 31	3	2300-2400	3.266	1.310	0.960	0.680	2.726	1.110	0.820
Real 31	4	0000-0100	2.666	1.088	0.848	0.7	2.384	0.996	0.877
Real 31	4	0100-0200	2.666	1.088	0.848	0.7	2.384	0.996	0.877
Real 31	4	0200-0300	2.666	1.088	0.848	0.7	2.384	0.996	0.877
Real 31	4	0300-0400	2.666	1.088	0.848	0.7	2.384	0.996	0.877
Real 31	4	0400-0500	3.722	1.450	1.120	0.938	3.478	1.350	1.040
Real 31	4	0500-0600	3.722	1.450	1.120	0.938	3.478	1.350	1.040
Real 31	4	0600-0700	3.722	1.450	1.120	0.938	3.478	1.350	1.040
Real 31	4	0700-0800	3.722	1.450	1.120	0.938	3.478	1.350	1.040
Real 31	4	0800-0900	3.722	1.450	1.120	0.938	3.478	1.350	1.040
Real 31	4	0900-1000	3.722	1.450	1.120	0.938	3.478	1.350	1.040
Real 31	4	1000-1100	4.966	2.210	1.550	1.100	4.510	2.190	1.490
Real 31	4	1100-1200	4.966	2.210	1.550	1.100	4.510	2.190	1.490
Real 31	4	1200-1300	4.966	2.210	1.550	1.100	4.510	2.190	1.490
Real 31	4	1300-1400	4.966	2.210	1.550	1.100	4.510	2.190	1.490
Real 31	4	1400-1500	5.966	2.410	1.750	1.200	5.510	2.390	1.690
Real 31	4	1500-1600	5.966	2.410	1.750	1.200	5.510	2.390	1.690
Real 31	4	1600-1700	5.966	2.410	1.750	1.200	5.510	2.390	1.690
Real 31	4	1700-1800	5.966	2.410	1.750	1.200	5.510	2.390	1.690
Real 31	4	1800-1900	3.266	1.310	0.960	0.680	2.726	1.110	0.820
Real 31	4	1900-2000	3.266	1.310	0.960	0.680	2.726	1.110	0.820
Real 31	4	2000-2100	3.266	1.310	0.960	0.680	2.726	1.110	0.820
Real 31	4	2100-2200	3.266	1.310	0.960	0.680	2.726	1.110	0.820
Real 31	4	2200-2300	3.266	1.310	0.960	0.680	2.726	1.110	0.820
Real 31	4	2300-2400	3.266	1.310	0.960	0.680	2.726	1.110	0.820
Real 31	5	0000-0100	2.666	1.088	0.848	0.7	2.384	0.996	0.877
Real 31	5	0100-0200	2.666	1.088	0.848	0.7	2.384	0.996	0.877
Real 31	5	0200-0300	2.666	1.088	0.848	0.7	2.384	0.996	0.877
Real 31	5	0300-0400	2.666	1.088	0.848	0.7	2.384	0.996	0.877
Real 31	5	0400-0500	3.722	1.450	1.120	0.938	3.478	1.350	1.040
Real 31	5	0500-0600	3.722	1.450	1.120	0.938	3.478	1.350	1.040
Real 31	5	0600-0700	3.722	1.450	1.120	0.938	3.478	1.350	1.040
Real 31	5	0700-0800	3.722	1.450	1.120	0.938	3.478	1.350	1.040
Real 31	5	0800-0900	3.722	1.450	1.120	0.938	3.478	1.350	1.040
Real 31	5	0900-1000	3.722	1.450	1.120	0.938	3.478	1.350	1.040
Real 31	5	1000-1100	4.966	2.210	1.550	1.100	4.510	2.190	1.490
Real 31	5	1100-1200	4.966	2.210	1.550	1.100	4.510	2.190	1.490
Real 31	5	1200-1300	4.966	2.210	1.550	1.100	4.510	2.190	1.490
Real 31	5	1300-1400	4.966	2.210	1.550	1.100	4.510	2.190	1.490
Real 31	5	1400-1500	5.966	2.410	1.750	1.200	5.510	2.390	1.690
Real 31	5	1500-1600	5.966	2.410	1.750	1.200	5.510	2.390	1.690
Real 31	5	1600-1700	5.966	2.410	1.750	1.200	5.510	2.390	1.690
Real 31	5	1700-1800	5.966	2.410	1.750	1.200	5.510	2.390	1.690
Real 31	5	1800-1900	3.266	1.310	0.960	0.680	2.726	1.110	0.820
Real 31	5	1900-2000	3.266	1.310	0.960	0.680	2.726	1.110	0.820
Real 31	5	2000-2100	3.266	1.310	0.960	0.680	2.726	1.110	0.820
Real 31	5	2100-2200	3.266	1.310	0.960	0.680	2.726	1.110	0.820
Real 31	5	2200-2300	3.266	1.310	0.960	0			

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open North Road Environmental Quality																
Open Road 4th Hour Emission Factors for ARMOBY model (g/hour)																
Road Name	Road ID	Hour	No. Emissions				No. Emissions				No. Emissions					
			g/hour/m ²	g/hour	tonne/hour	g/hour/m ²	g/hour	tonne/hour	g/hour/m ²	g/hour	tonne/hour	g/hour/m ²	g/hour	tonne/hour		
Road 1	1	0000 00:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
		0000 01:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
Road 1	1	0000 02:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
		0000 03:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
Road 1	1	0000 04:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
		0000 05:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
Road 1	1	0000 06:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
		0000 07:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
Road 1	1	0000 08:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
		0000 09:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
Road 1	1	0000 10:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
		0000 11:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
Road 1	1	0000 12:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
		0000 13:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
Road 1	1	0000 14:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
		0000 15:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
Road 1	1	0000 16:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
		0000 17:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
Road 1	1	0000 18:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
		0000 19:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
Road 1	1	0000 20:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
		0000 21:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
Road 1	1	0000 22:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14			
		0000 23:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14			
Road 2	2	0000 00:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
		0000 01:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
Road 2	2	0000 02:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
		0000 03:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
Road 2	2	0000 04:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
		0000 05:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
Road 2	2	0000 06:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
		0000 07:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
Road 2	2	0000 08:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
		0000 09:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
Road 2	2	0000 10:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
		0000 11:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
Road 2	2	0000 12:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
		0000 13:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
Road 2	2	0000 14:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
		0000 15:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
Road 2	2	0000 16:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
		0000 17:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
Road 2	2	0000 18:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
		0000 19:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
Road 2	2	0000 20:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
		0000 21:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
Road 2	2	0000 22:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14			
		0000 23:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14			
Road 3	3	0000 00:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
		0000 01:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
Road 3	3	0000 02:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
		0000 03:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
Road 3	3	0000 04:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
		0000 05:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
Road 3	3	0000 06:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
		0000 07:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
Road 3	3	0000 08:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
		0000 09:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
Road 3	3	0000 10:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
		0000 11:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
Road 3	3	0000 12:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
		0000 13:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
Road 3	3	0000 14:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
		0000 15:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
Road 3	3	0000 16:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
		0000 17:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
Road 3	3	0000 18:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
		0000 19:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
Road 3	3	0000 20:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
		0000 21:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
Road 3	3	0000 22:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14			
		0000 23:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14			
Road 4	4	0000 00:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
		0000 01:00	1.118	0.17	0.875	0.008	1.427	7.846	1.323	0.18	0.888	1.038	0.14	0.838	1.688	0.24
Road 4	4															

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.2 Emission Factor in 2030.xlsx

Tsing Yi Night Underground Quarry Open Rate 24 Hour Emission Factors for 40000 m³/day Quarry															
			Year 2000												
Road Name	Road ID	Hour	NO _x Emission						PM ₁₀ Emission						
			g/m³/hr	g/m³	g/m³/hr	g/m³	g/m³/hr	g/m³	g/m³/hr	g/m³	g/m³/hr	g/m³			
Road 4	4	0800-0900	1.748	0.787	1.348	1.498	1.580	1.168	1.503	1.575	1.024	1.598	1.434	8.521	6.907
Road 4	4	0900-1000	1.832	0.832	1.448	1.608	1.690	1.280	1.613	1.685	1.154	1.699	1.518	8.849	7.169
Road 4	4	1100-1200	2.116	0.916	1.584	1.832	1.914	1.464	1.838	1.922	1.404	1.913	1.506	9.156	7.376
Road 4	4	1300-1400	2.176	0.936	1.614	1.862	1.944	1.484	1.903	1.933	1.394	1.923	1.296	9.306	7.396
Road 4	4	1500-1600	2.176	0.936	1.614	1.862	1.944	1.484	1.903	1.933	1.394	1.923	1.296	9.306	7.396
Road 4	4	1800-1900	2.806	1.076	2.138	2.412	2.642	1.802	2.643	2.688	1.768	2.688	1.506	9.744	7.534
Road 4	4	1900-2000	2.806	1.076	2.138	2.412	2.642	1.802	2.643	2.688	1.768	2.688	1.506	9.744	7.534
Road 4	4	2000-2100	2.746	1.156	2.106	2.306	2.602	1.948	2.742	2.708	1.486	2.468	1.318	9.138	7.238
Road 4	4	2100-2200	2.736	1.146	2.096	2.296	2.592	1.938	2.732	2.698	1.478	2.458	1.318	9.138	7.238
Road 4	4	2300-2400	2.006	0.806	1.426	1.576	1.726	1.356	2.007	1.973	1.106	1.973	1.246	7.806	6.206
Road 4	4	2400-2500	1.566	0.666	1.126	1.276	1.426	1.056	1.567	1.533	0.846	1.533	0.976	6.076	4.226
Road 4	4	2500-2600	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	2600-2700	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	2700-2800	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	2800-2900	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	2900-3000	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	3000-3100	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	3100-3200	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	3200-3300	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	3300-3400	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	3400-3500	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	3500-3600	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	3600-3700	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	3700-3800	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	3800-3900	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	3900-4000	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	4000-4100	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	4100-4200	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	4200-4300	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	4300-4400	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	4400-4500	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	4500-4600	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	4600-4700	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	4700-4800	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	4800-4900	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	4900-5000	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	5000-5100	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	5100-5200	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	5200-5300	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	5300-5400	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	5400-5500	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	5500-5600	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	5600-5700	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	5700-5800	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	5800-5900	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	5900-6000	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	6000-6100	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	6100-6200	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	6200-6300	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	6300-6400	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	6400-6500	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	6500-6600	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	6600-6700	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	6700-6800	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	6800-6900	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	6900-7000	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	7000-7100	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	7100-7200	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	7200-7300	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	7300-7400	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	7400-7500	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	7500-7600	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	7600-7700	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	7700-7800	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	7800-7900	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	7900-8000	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	8000-8100	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	8100-8200	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	8200-8300	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	8300-8400	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	8400-8500	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	8500-8600	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	8600-8700	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	8700-8800	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road 4	4	8800-8900	1.216	0.516	0.836	0.986	1.136	0.766	1.217	1.183	0.616	1.183	0.656	4.526	3.176
Road															

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Open Top 24 Hour Underground Quantity																		
Using Rain 24 Hour Intensity Factors for APR 2000 (mm/hr)																		
Road Name	Road ID	Hour	Mon/Hydrology				No. Emission				Mon/Hydrology				No. Emission			
			g/m ² /hr	g/m ²	g/m ² /hr	g/m ²	g/m ² /hr	g/m ²	g/m ² /hr	g/m ²	g/m ² /hr	g/m ²	g/m ² /hr	g/m ²				
Road #	1	1800-1900	3.138	4.877	6.738	2.668	4.208	4.924	6.481	3.846	4.065	2.046	3.128	3.778				
Road #	1	1900-2000	2.452	3.678	5.000	2.144	3.368	4.084	2.584	3.300	1.664	2.480	3.130	1.778				
Road #	1	2000-2100	1.833	2.667	3.500	1.572	2.144	3.148	1.898	2.716	1.068	1.432	2.048	1.378				
Road #	2	1800-1900	1.608	2.532	3.376	1.408	2.176	2.624	1.932	2.304	1.088	1.664	2.032	1.116				
Road #	2	1900-2000	1.488	2.352	3.136	1.312	2.016	2.464	1.824	2.208	0.968	1.504	1.872	1.056				
Road #	2	2000-2100	1.432	2.176	2.928	1.248	1.944	2.384	1.808	2.208	0.908	1.432	1.808	1.032				
Road #	3	1800-1900	2.132	3.200	4.272	1.872	2.848	3.456	2.400	2.976	1.584	2.304	2.880	1.632				
Road #	3	1900-2000	1.496	2.344	3.176	1.312	2.144	2.608	1.912	2.176	1.016	1.648	1.916	1.176				
Road #	3	2000-2100	1.408	2.176	2.912	1.216	2.072	2.496	1.776	2.064	0.944	1.424	1.768	1.008				
Road #	4	1800-1900	2.416	3.624	4.832	2.176	3.376	4.176	2.512	3.072	1.632	2.208	2.784	1.536				
Road #	4	1900-2000	2.072	3.168	4.192	1.872	2.904	3.600	2.144	2.640	1.440	1.944	2.328	1.344				
Road #	4	2000-2100	2.072	3.168	4.192	1.872	2.904	3.600	2.144	2.640	1.440	1.944	2.328	1.344				
Road #	5	1800-1900	2.712	4.176	5.536	2.544	4.168	5.176	3.712	4.168	2.160	2.148	3.432	2.316				
Road #	5	1900-2000	2.088	3.200	4.272	1.872	3.360	4.176	2.832	2.256	1.600	2.000	2.500	1.424				
Road #	5	2000-2100	1.912	2.912	3.872	1.696	2.912	3.872	2.512	2.064	1.264	1.808	2.208	1.264				
Road #	6	1800-1900	3.256	4.928	6.592	2.896	4.384	5.408	4.072	4.064	2.112	2.064	3.928	1.864				
Road #	6	1900-2000	2.512	3.776	5.040	2.256	3.456	4.272	3.168	3.168	1.664	1.664	3.168	1.488				
Road #	6	2000-2100	2.512	3.776	5.040	2.256	3.456	4.272	3.168	3.168	1.664	1.664	3.168	1.488				
Road #	7	1800-1900	3.632	5.488	7.344	3.424	5.176	6.560	4.560	4.000	2.032	1.936	5.832	1.776				
Road #	7	1900-2000	3.040	4.608	6.144	2.912	4.352	5.488	3.928	3.376	1.680	1.584	4.944	1.544				
Road #	7	2000-2100	2.816	4.224	5.648	2.672	4.096	5.136	3.696	3.136	1.584	1.488	4.608	1.440				
Road #	8	1800-1900	4.216	6.336	8.448	3.968	5.208	6.224	4.336	3.168	1.936	2.880	5.760	2.160				
Road #	8	1900-2000	3.584	5.376	7.184	3.328	4.416	5.248	3.696	2.688	1.632	2.144	4.864	1.808				
Road #	8	2000-2100	3.584	5.376	7.184	3.328	4.416	5.248	3.696	2.688	1.632	2.144	4.864	1.808				
Road #	9	1800-1900	4.296	6.432	8.544	3.968	5.232	6.272	4.336	3.168	1.936	2.880	5.760	2.160				
Road #	9	1900-2000	3.584	5.376	7.184	3.328	4.416	5.248	3.696	2.688	1.632	2.144	4.864	1.808				
Road #	9	2000-2100	3.584	5.376	7.184	3.328	4.416	5.248	3.696	2.688	1.632	2.144	4.864	1.808				
Road #	10	1800-1900	4.640	6.960	9.280	4.320	5.680	6.960	4.800	4.000	2.000	2.000	6.400	2.400				
Road #	10	1900-2000	3.840	5.760	7.680	3.600	4.800	5.760	4.000	3.200	1.600	1.600	5.280	1.920				
Road #	10	2000-2100	3.840	5.760	7.680	3.600	4.800	5.760	4.000	3.200	1.600	1.600	5.280	1.920				
Road #	11	1800-1900	5.088	7.632	10.176	4.704	6.208	7.632	5.280	4.480	2.240	2.240	6.816	2.544				
Road #	11	1900-2000	4.288	6.432	8.576	3.984	5.312	6.432	4.480	3.680	1.840	1.840	5.824	2.112				
Road #	11	2000-2100	4.288	6.432	8.576	3.984	5.312	6.432	4.480	3.680	1.840	1.840	5.824	2.112				
Road #	12	1800-1900	5.536	8.304	11.072	5.136	6.704	8.304	5.760	4.800	2.400	2.400	7.296	2.688				
Road #	12	1900-2000	4.640	6.960	9.280	4.320	5.680	6.960	4.800	4.000	2.000	2.000	6.400	2.400				
Road #	12	2000-2100	4.640	6.960	9.280	4.320	5.680	6.960	4.800	4.000	2.000	2.000	6.400	2.400				
Road #	13	1800-1900	5.984	8.976	11.968	5.584	7.312	8.976	6.144	5.120	2.560	2.560	7.744	2.848				
Road #	13	1900-2000	5.088	7.632	10.176	4.704	6.208	7.632	5.280	4.480	2.240	2.240	6.816	2.544				
Road #	13	2000-2100	5.088	7.632	10.176	4.704	6.208	7.632	5.280	4.480	2.240	2.240	6.816	2.544				
Road #	14	1800-1900	6.432	9.648	12.864	6.048	7.936	9.648	6.720	5.600	2.800	2.800	8.384	3.072				
Road #	14	1900-2000	5.440	8.160	10.880	5.120	6.656	8.160	5.600	4.640	2.320	2.320	7.104	2.576				
Road #	14	2000-2100	5.440	8.160	10.880	5.120	6.656	8.160	5.600	4.640	2.320	2.320	7.104	2.576				
Road #	15	1800-1900	6.880	10.320	13.760	6.512	8.384	10.320	7.200	6.080	3.040	3.040	8.832	3.216				
Road #	15	1900-2000	5.888	8.832	11.776	5.536	7.248	8.832	6.080	5.040	2.520	2.520	7.584	2.736				
Road #	15	2000-2100	5.888	8.832	11.776	5.536	7.248	8.832	6.080	5.040	2.520	2.520	7.584	2.736				
Road #	16	1800-1900	7.328	10.992	14.656	6.944	9.056	10.992	7.680	6.464	3.232	3.232	9.264	3.376				
Road #	16	1900-2000	6.240	9.360	12.480	5.920	7.840	9.360	6.464	5.344	2.672	2.672	8.016	2.928				
Road #	16	2000-2100	6.240	9.360	12.480	5.920	7.840	9.360	6.464	5.344	2.672	2.672	8.016	2.928				
Road #	17	1800-1900	7.776	11.664	15.552	7.344	9.568	11.664	8.112	6.896	3.448	3.448	9.712	3.536				
Road #	17	1900-2000	6.688	10.032	13.376	6.208	8.208	10.032	7.088	5.872	2.936	2.936	8.608	3.088				
Road #	17	2000-2100	6.688	10.032	13.376	6.208	8.208	10.032	7.088	5.872	2.936	2.936	8.608	3.088				
Road #	18	1800-1900	8.224	12.336	16.448	7.776	10.176	12.336	8.560	7.344	3.680	3.680	10.176	3.776				
Road #	18	1900-2000	7.040	10.560	14.080	6.400	8.560	10.560	7.344	6.128	3.064	3.064	9.184	3.312				
Road #	18	2000-2100	7.040	10.560	14.080	6.400	8.560	10.560	7.344	6.128	3.064	3.064	9.184	3.312				
Road #	19	1800-1900	8.672	13.008	17.360	8.208	10.688	13.008	8.992	7.776	3.888	3.888	10.688	3.976				
Road #	19	1900-2000	7.488	11.232	14.976	6.944	9.104	11.232	7.776	6.560	3.280	3.280	9.568	3.456				
Road #	19	2000-2100	7.488	11.232	14.976	6.944	9.104	11.232	7.776	6.560	3.280	3.280	9.568	3.456				
Road #	20	1800-1900	9.120	13.680	18.240	8.640	11.232	13.680	9.568	8.352	4.176	4.176	11.232	4.176				
Road #	20	1900-2000	7.936	11.904	16.160	7.584	9.808	11.904	8.352	7.136	3.568	3.568	10.016	3.680				
Road #	20	2000-2100	7.936	11.904	16.160	7.584	9.808	11.904	8.352	7.136	3.568	3.568	10.016	3.680				
Road #	21	1800-1900	9.568	14.352	19.136	9.088	11.776	14.352	10.000	8.784	4.392	4.392	11.776	4.392				
Road #	21	1900-2000	8.384	12.576	16.768	8.032	10.304	12.576	9.088	7.872	3.936	3.936	10.304	3.936				
Road #	21	2000-2100	8.384	12.576	16.768	8.032	10.304	12.576	9.088	7.872	3.936	3.936	10.304	3.936				
Road #	22	1800-1900	10.016	15.024	20.032	9.536	12.336	15.024	10.496	9.280	4.640	4.640	12.336	4.640				
Road #	22	1900-2000	8.832	13.248	17.664	8.480	10.816	13.248	9.280	8.064	4.032	4.032	10.816	4.032				
Road #	22	2000-2100	8.832	13.248	17.664	8.480	10.816	13.248	9.280	8.064	4.032	4.032	10.816	4.032				
Road #	23	1800-1900	10.464	15.696	20.912	9.984	12.880	15.696	10.944	9.728	4.864	4.864	12.880	4.864				
Road #	23	1900-2000	9.280	13.920	18.240	8.928	11.232	13.920	9.728	8.512	4.256	4.256	11.232	4.256				
Road #	23	2000-2100	9.280	13.920	18.240	8.928	11.232	13.920	9.728	8.512	4.256	4.256	11.232	4.256				
Road #	24	1800-1900	10.912	16.368	21.824	10.432	13.440	16.368	11.392	10.176	5.088	5.088	13.440	5.088				
Road #	24	1900-2000	9.728	14.592	19.456	9.376	11.776	14.592	10.176	8.960	4.480	4.480	11.776	4.480				
Road #	24	2000-2100	9.728	14.592	19.456	9.376	11.776	14.592	10.176	8.960	4.480	4.480	11.776	4.480				
Road #	25	1800-1900	11.360	17.040	22.720	10.880	13.984	17.040	11.840	10.624	5.312	5.312	13.984	5.312				
Road #	25	1900-2000	10.176	15.264	20.352	9.824	12.336	15.264	10.624	9.408	4.704	4.704	12.336	4.704				
Road #	25	2000-2100	10.176	15.264	20.352	9.824	12.336	15.264	10.624	9.408	4.704	4.704	12.336	4.704				
Road #	26	1800-1900	11.808	17.712	23.584	11.328	14.544	17.712	12.288	11.072	5.536	5.536	14.544	5.536				
Road #	26	1900-2000	10.624	15.488	20.912	10.272	12.880	15.488	11.072	9.856	4.928	4.928	12.880	4.928				
Road #	26	2000-2100	10.624	15.488	20.912	10.272	12.880	15.488	11.072	9.856	4.928	4.928	12.880	4.928				
Road #	27	1800-1900	12.256	18.384	24.512													

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Opening Road 24-hour Underground Factors for ARMSHO Model (2000)														
		Year 2030												
Road Name	Road ID	Hour	NO ₂ Emission				NO Emission				NO _x Emission			
			g/h/vhr	g/m ²	g/h/vhr	g/m ²	g/h/vhr	g/m ²	g/h/vhr	g/m ²	g/h/vhr	g/m ²	g/h/vhr	g/m ²
Road 11	13	0000-0100	3.068	1.788	6.846	3.356	6.029	8.366	3.308	1.648	6.068	3.088	1.518	
Road 11	13	0100-0200	3.068	1.788	6.846	3.356	6.029	8.366	3.308	1.648	6.068	3.088	1.518	
Road 11	13	0200-0300	3.472	2.018	7.476	4.276	6.742	1.066	4.048	3.472	6.038	3.328	1.338	
Road 11	13	0300-0400	3.502	1.912	6.898	4.762	6.038	3.098	1.652	7.298	2.048	3.498	1.702	
Road 11	13	0400-0500	3.518	1.928	6.914	4.778	6.054	3.114	1.668	7.314	2.064	3.514	1.718	
Road 11	13	0500-0600	4.008	2.308	7.672	6.272	6.628	4.008	3.878	3.738	1.348	3.538	1.278	
Road 11	13	0600-0700	4.024	2.324	7.688	6.294	6.644	4.024	3.894	3.754	1.364	3.554	1.294	
Road 11	13	0700-0800	6.240	3.612	9.896	5.728	8.811	3.308	4.452	8.358	2.838	4.098	3.308	
Road 11	13	0800-0900	6.260	3.632	9.916	5.748	8.831	3.328	4.472	8.378	2.858	4.118	3.328	
Road 11	13	0900-1000	7.118	4.058	1.138	5.758	7.148	4.068	1.148	7.278	4.078	1.158	5.768	
Road 11	13	1000-1100	7.098	4.038	1.138	5.738	7.128	4.048	1.148	7.258	4.058	1.158	5.748	
Road 11	13	1100-1200	7.078	4.018	1.138	5.718	7.108	4.028	1.148	7.238	4.038	1.158	5.728	
Road 11	13	1200-1300	9.112	5.248	4.858	8.098	6.128	3.138	4.598	5.088	7.058	2.158	4.208	
Road 11	13	1300-1400	9.132	5.268	4.878	8.118	6.148	3.158	4.618	5.088	7.078	2.178	4.228	
Road 11	13	1400-1500	9.152	5.288	4.898	8.138	6.168	3.178	4.638	5.108	7.098	2.198	4.248	
Road 11	13	1500-1600	9.548	5.678	5.632	8.628	6.558	4.578	5.288	8.318	3.118	4.548	7.158	
Road 11	13	1600-1700	9.568	5.698	5.652	8.648	6.578	4.598	5.308	8.338	3.138	4.568	7.178	
Road 11	13	1700-1800	7.812	4.388	3.918	8.428	6.148	3.168	4.638	5.108	3.448	4.408	8.008	
Road 11	13	1800-1900	7.832	4.408	4.218	8.448	6.168	3.188	4.658	5.128	3.468	4.428	8.028	
Road 11	13	1900-2000	6.858	3.828	3.728	6.828	5.178	2.568	3.658	4.348	2.968	3.618	7.038	
Road 11	13	2000-2100	3.418	1.918	6.828	3.678	4.428	1.778	3.768	4.48	1.928	8.498	8.138	
Road 11	13	2100-2200	3.448	1.948	6.858	3.708	4.458	1.808	3.798	4.518	1.958	8.528	8.168	
Road 11	13	2200-2300	3.468	1.968	6.878	3.728	4.478	1.828	3.818	4.538	1.978	8.548	8.188	
Road 12	13	0000-0100	3.658	1.908	4.688	2.778	4.178	2.358	1.658	1.158	1.078	1.048	6.498	
Road 12	13	0100-0200	3.678	1.928	4.708	2.798	4.198	2.378	1.678	1.178	1.098	1.068	6.518	
Road 12	13	0200-0300	3.698	1.948	4.728	2.818	4.218	2.398	1.69	1.198	1.118	1.088	6.538	
Road 12	13	0300-0400	3.718	1.968	4.748	2.838	4.238	2.418	1.718	1.218	1.138	1.108	6.558	
Road 12	13	0400-0500	3.738	1.988	4.768	2.858	4.258	2.438	1.738	1.238	1.158	1.128	6.578	
Road 12	13	0500-0600	3.758	2.008	4.788	2.878	4.278	2.458	1.758	1.258	1.178	1.148	6.598	
Road 12	13	0600-0700	3.778	2.028	4.808	2.898	4.298	2.478	1.778	1.278	1.198	1.168	6.618	
Road 12	13	0700-0800	3.798	2.048	4.828	2.918	4.318	2.498	1.798	1.298	1.218	1.188	6.638	
Road 12	13	0800-0900	3.818	2.068	4.848	2.938	4.338	2.518	1.818	1.318	1.238	1.208	6.658	
Road 12	13	0900-1000	3.838	2.088	4.868	2.958	4.358	2.538	1.838	1.338	1.258	1.228	6.678	
Road 12	13	1000-1100	3.858	2.108	4.888	2.978	4.378	2.558	1.858	1.358	1.278	1.248	6.698	
Road 12	13	1100-1200	3.878	2.128	4.908	2.998	4.398	2.578	1.878	1.378	1.298	1.268	6.718	
Road 12	13	1200-1300	4.008	2.308	7.672	6.272	6.628	4.008	3.878	3.738	1.348	3.538	1.278	
Road 12	13	1300-1400	4.024	2.324	7.688	6.294	6.644	4.024	3.894	3.754	1.364	3.554	1.294	
Road 12	13	1400-1500	4.048	2.348	7.712	6.318	6.668	4.048	3.918	3.778	1.388	3.578	1.318	
Road 12	13	1500-1600	4.072	2.372	7.736	6.342	6.692	4.072	3.942	3.802	1.412	3.602	1.342	
Road 12	13	1600-1700	4.096	2.396	7.760	6.366	6.716	4.096	3.966	3.826	1.436	3.626	1.366	
Road 12	13	1700-1800	3.918	2.178	6.828	3.398	4.302	2.014	1.441	1.488	0.733	2.139	6.219	
Road 12	13	1800-1900	3.938	2.198	6.848	3.418	4.322	2.034	1.461	1.508	0.753	2.159	6.239	
Road 12	13	1900-2000	3.958	2.218	6.868	3.438	4.342	2.054	1.481	1.528	0.773	2.179	6.259	
Road 12	13	2000-2100	3.978	2.238	6.888	3.458	4.362	2.074	1.501	1.548	0.793	2.199	6.279	
Road 12	13	2100-2200	3.998	2.258	6.908	3.478	4.382	2.094	1.521	1.568	0.813	2.219	6.299	
Road 12	13	2200-2300	4.018	2.278	6.928	3.498	4.402	2.114	1.541	1.588	0.833	2.239	6.319	
Road 12	13	2300-0000	4.038	2.298	6.948	3.518	4.422	2.134	1.561	1.608	0.853	2.259	6.339	
Road 13	14	0000-0100	2.998	1.718	6.498	3.278	5.948	8.298	3.228	1.618	5.998	3.028	1.508	
Road 13	14	0100-0200	2.998	1.718	6.498	3.278	5.948	8.298	3.228	1.618	5.998	3.028	1.508	
Road 13	14	0200-0300	2.998	1.718	6.498	3.278	5.948	8.298	3.228	1.618	5.998	3.028	1.508	
Road 13	14	0300-0400	3.402	2.022	7.482	4.262	6.742	1.066	4.048	3.402	6.038	3.328	1.338	
Road 13	14	0400-0500	3.422	2.042	7.502	4.282	6.762	1.086	4.068	3.422	6.058	3.348	1.358	
Road 13	14	0500-0600	3.442	2.062	7.522	4.302	6.782	1.106	4.088	3.442	6.078	3.368	1.378	
Road 13	14	0600-0700	3.462	2.082	7.542	4.322	6.802	1.126	4.108	3.462	6.098	3.388	1.398	
Road 13	14	0700-0800	3.482	2.102	7.562	4.342	6.822	1.146	4.128	3.482	6.118	3.408	1.418	
Road 13	14	0800-0900	3.502	2.122	7.582	4.362	6.842	1.166	4.148	3.502	6.138	3.428	1.438	
Road 13	14	0900-1000	3.522	2.142	7.602	4.382	6.862	1.186	4.168	3.522	6.158	3.448	1.458	
Road 13	14	1000-1100	3.542	2.162	7.622	4.402	6.882	1.206	4.188	3.542	6.178	3.468	1.478	
Road 13	14	1100-1200	3.562	2.182	7.642	4.422	6.902	1.226	4.208	3.562	6.198	3.488	1.498	
Road 13	14	1200-1300	3.582	2.202	7.662	4.442	6.922	1.246	4.228	3.582	6.218	3.508	1.518	
Road 13	14	1300-1400	3.602	2.222	7.682	4.462	6.942	1.266	4.248	3.602	6.238	3.528	1.538	
Road 13	14	1400-1500	3.622	2.242	7.702	4.482	6.962	1.286	4.268	3.622	6.258	3.548	1.558	
Road 13	14	1500-1600	3.642	2.262	7.722	4.502	6.982	1.306	4.288	3.642	6.278	3.568	1.578	
Road 13	14	1600-1700	3.662	2.282	7.742	4.522	7.002	1.326	4.308	3.662	6.298	3.588	1.598	
Road 13	14	1700-1800	3.682	2.302	7.762	4.542	7.022	1.346	4.328	3.682	6.318	3.608	1.618	
Road 13	14	1800-1900	3.702	2.322	7.782	4.562	7.042	1.366	4.348	3.702	6.338	3.628	1.638	
Road 13	14	1900-2000	3.722	2.342	7.802	4.582	7.062	1.386	4.368	3.722	6.358	3.648	1.658	
Road 13	14	2000-2100	3.742	2.362	7.822	4.602	7.082	1.406	4.388	3.742	6.378	3.668	1.678	
Road 13	14	2100-2200	3.762	2.382	7.842	4.622	7.102	1.426	4.408	3.762	6.398	3.688	1.698	
Road 13	14	2200-2300	3.782	2.402	7.862	4.642	7.122	1.446	4.428	3.782	6.418	3.708	1.718	
Road 13	14	2300-0000	3.802	2.422	7.882	4.662	7.142	1.466	4.448	3.802	6.438	3.728	1.738	
Road 14	14	0000-0100	2.978	1.698	6.478	3.258	5.928	8.278	3.208	1.608	5.978	3.008	1.488	
Road 14	14	0100-0200	2.978	1.698	6.478	3.258	5.928	8.278	3.208	1.608	5.978	3.008	1.488	
Road 14	14	0200-0300	2.978	1.698	6.478	3.258	5.928	8.278	3.208	1.608	5.978	3.008	1.488	
Road 14	14	0300-0400	3.382	2.002	7.462	4.242	6.722	1.046	4.028	3.382	6.018	3.308	1.318	
Road 14	14	0400-0500	3.402	2.022	7.482	4.262	6.742	1.066	4.048	3.402	6.038	3.328	1.338	
Road 14	14	0500-0600	3.422	2.042	7.502	4.282	6.762	1.086	4.068	3.422	6.058	3.348	1.358	
Road 14	14	0600-0700	3.442	2.062	7.522	4.302	6.782	1.106	4.088	3.442	6.078	3.368	1.378	
Road 14	14	0700-0800	3.462	2.082	7.542	4.322	6.802	1.126	4.108	3.462	6.098	3.388	1.398	
Road 14	14	0800-0900	3.482	2.102	7.562	4.342	6.822	1.146	4.128	3.482	6.118	3.408	1.418	
Road 14	14	0900-1000	3.502	2.122	7.582	4.362	6.842	1.166	4.148	3.502	6.138	3.428	1.438	
Road 14	14	1000-1100	3.522	2.142	7.602	4.382	6.862	1.186	4.168	3.522	6.158	3.448	1.458	
Road 14	14	1100-1200	3.542	2.162	7.622	4.402	6.882	1.206	4.188	3.542	6.178	3.468	1.478	
Road 14	14	1200-1300	3.562	2.182	7.642	4.422	6.902	1.226	4.208	3.562	6.198	3.488	1.498	
Road 14</														

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

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Table 19: Night Underground Quarter														
Open Rate 24 Hour Emission Factors for 40000 m³/d (t/d)														
Year 2030														
Road Name	Road ID	Hour	NO _x Emission				NO _x Emission							
			g/h/m³	g/h/m³	g/h/m³	g/h/m³	g/h/m³	g/h/m³	g/h/m³	g/h/m³				
Road 17	17	1800	3.838	3.208	1.554	3.288	4.532	3.328	2.774	3.154	1.064	2.188	3.028	8.832
Road 17	17	1830	3.838	3.208	1.554	3.288	4.532	3.328	2.774	3.154	1.064	2.188	3.028	8.832
Road 17	17	1800	2.238	3.678	1.938	3.678	5.162	3.938	3.438	3.258	0.938	1.868	3.468	7.898
Road 17	17	1830	2.238	3.678	1.938	3.678	5.162	3.938	3.438	3.258	0.938	1.868	3.468	7.898
Road 17	17	1800	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1830	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1800	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1830	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1800	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1830	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1800	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1830	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1800	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1830	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1800	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1830	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1800	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1830	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1800	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1830	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1800	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1830	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1800	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1830	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1800	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1830	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1800	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1830	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1800	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1830	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1800	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1830	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1800	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1830	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1800	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1830	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1800	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1830	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1800	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1830	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1800	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1830	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1800	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1830	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
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Road 17	17	1830	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1800	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1830	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1800	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
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Road 17	17	1800	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
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Road 17	17	1800	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1830	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
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Road 17	17	1800	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
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Road 17	17	1800	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1830	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1800	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1830	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1800	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1830	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1800	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1830	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1800	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1830	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1800	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1830	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1800	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1830	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1800	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1830	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1800	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1830	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1800	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1830	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1800	1.888	2.412	0.778	1.638	2.132	3.438	1.908	2.328	2.788	1.938	2.198	6.418
Road 17	17	1830	1.888	2.412	0.778	1.638	2.132	3.438	1.908					

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Open Top North Endurance Factors for Aircraft Model Year 2010																		
Road Name	Road ID	Hour	Moisture/Inches				No Emulsion				Moisture/Inches				No Emulsion			
			g/m ² /h	g/m ² /h	g/m ² /h	g/m ² /h	g/m ² /h	g/m ² /h	g/m ² /h	g/m ² /h	g/m ² /h	g/m ² /h	g/m ² /h	g/m ² /h	g/m ² /h	g/m ² /h		
Road 21	0000-0100	1.748	1.117	4.778	1.574	0.918	1.338	1.441	0.948	1.077	1.085	1.248	1.084	4.077	1.033	1.085	1.033	
Road 21	0000-0100	1.852	1.117	4.778	1.574	0.918	1.338	1.441	0.948	1.077	1.085	1.248	1.084	4.077	1.033	1.085	1.033	
Road 21	0000-0100	1.996	1.117	4.778	1.574	0.918	1.338	1.441	0.948	1.077	1.085	1.248	1.084	4.077	1.033	1.085	1.033	
Road 21	0100-0400	2.138	3.277	6.081	2.037	2.037	8.006	3.006	1.687	1.687	8.006	1.687	1.687	8.006	1.687	1.687	8.006	
Road 21	0100-0400	2.776	3.277	6.081	2.037	2.037	8.006	3.006	1.687	1.687	8.006	1.687	1.687	8.006	1.687	1.687	8.006	
Road 21	0000-0100	2.938	1.117	4.778	2.222	2.222	3.508	1.338	1.441	1.441	7.688	1.508	1.441	6.079	1.033	1.033	6.079	
Road 21	0100-0400	3.182	3.277	6.081	2.037	2.037	8.006	3.006	1.687	1.687	8.006	1.687	1.687	8.006	1.687	1.687	8.006	
Road 21	0700-0800	2.835	5.837	6.712	2.746	2.462	5.085	1.717	1.824	1.824	3.786	4.975	1.508	5.176	1.508	5.176	4.268	
Road 21	0800-0900	2.835	6.712	7.321	2.462	5.085	1.717	1.824	1.824	3.786	4.975	1.508	5.176	1.508	5.176	4.268		
Road 21	0900-1000	2.835	6.712	7.321	2.462	5.085	1.717	1.824	1.824	3.786	4.975	1.508	5.176	1.508	5.176	4.268		
Road 21	1000-1100	3.851	6.847	6.712	3.124	3.124	5.077	7.898	2.071	3.914	5.176	1.848	3.914	4.268	1.848	3.914	4.268	
Road 21	1100-1200	4.182	6.847	6.712	3.124	3.124	5.077	7.898	2.071	3.914	5.176	1.848	3.914	4.268	1.848	3.914	4.268	
Road 21	1200-1300	4.945	6.712	7.321	2.462	4.182	4.552	6.071	1.848	1.848	1.848	4.076	2.736	2.005	2.005	4.076	2.736	
Road 21	1300-1400	5.021	5.777	6.712	2.462	4.268	4.552	6.071	1.848	1.848	1.848	4.276	2.426	2.736	2.426	4.276	2.426	
Road 21	1400-1500	5.021	5.777	6.712	2.462	4.268	4.552	6.071	1.848	1.848	1.848	4.276	2.426	2.736	2.426	4.276	2.426	
Road 21	1500-1600	4.755	5.837	7.321	2.462	4.088	4.888	6.466	2.776	3.396	5.176	2.382	2.836	3.396	2.382	2.836	3.396	
Road 21	1600-1700	4.755	5.837	7.321	2.462	4.088	4.888	6.466	2.776	3.396	5.176	2.382	2.836	3.396	2.382	2.836	3.396	
Road 21	1700-1800	3.611	4.877	6.446	1.097	4.182	4.182	1.521	1.006	4.001	1.248	4.288	2.001	2.716	1.848	2.001	2.716	
Road 21	1800-1900	2.708	4.877	6.446	1.097	4.182	4.182	1.521	1.006	4.001	1.248	4.288	2.001	2.716	1.848	2.001	2.716	
Road 21	1900-2000	2.115	4.877	6.446	1.097	4.182	4.182	1.521	1.006	4.001	1.248	4.288	2.001	2.716	1.848	2.001	2.716	
Road 21	0000-0100	2.278	3.877	2.435	2.001	2.001	2.001	2.001	2.001	2.076	1.716	2.248	1.821	1.508	1.821	1.508	1.821	
Road 21	0100-0400	2.115	3.877	2.435	2.001	2.001	2.001	2.001	2.001	2.076	1.716	2.248	1.821	1.508	1.821	1.508	1.821	
Road 21	2200-2300	2.215	3.877	2.435	1.914	1.914	1.515	2.006	2.071	1.644	1.644	2.165	1.771	1.406	1.771	1.406	1.851	
Road 21	0000-0100	1.996	1.862	3.071	1.071	1.071	1.071	1.316	1.316	1.316	1.316	1.316	1.316	1.316	1.316	1.316	1.316	
Road 22	0100-0200	1.475	1.117	2.062	1.376	1.376	1.376	1.316	1.316	1.316	1.316	1.316	1.316	1.316	1.316	1.316	1.316	
Road 22	0200-0300	1.868	1.048	1.435	1.048	1.048	1.048	1.048	1.048	1.048	1.048	1.048	1.048	1.048	1.048	1.048	1.048	
Road 22	0300-0400	1.496	1.491	7.651	1.382	1.411	2.262	1.292	1.672	1.176	1.316	5.662	1.581	3.011	5.371	1.581	3.011	
Road 22	0400-0500	1.496	1.491	7.651	1.382	1.411	2.262	1.292	1.672	1.176	1.316	5.662	1.581	3.011	5.371	1.581	3.011	
Road 22	0500-0600	1.725	1.382	1.376	1.365	1.365	1.365	1.365	1.365	1.365	1.365	1.365	1.365	1.365	1.365	1.365	1.365	
Road 22	0600-0700	1.915	1.417	8.475	1.071	1.071	4.131	7.681	1.831	1.844	1.844	3.475	1.708	1.708	1.708	1.708	1.708	
Road 22	0700-0800	2.248	1.417	8.475	1.071	1.071	4.131	7.681	1.831	1.844	1.844	3.475	1.708	1.708	1.708	1.708	1.708	
Road 22	0800-0900	2.148	1.368	2.441	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	
Road 22	0900-1000	2.148	1.368	2.441	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	
Road 22	1000-1100	2.148	1.368	2.441	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	
Road 22	1100-1200	2.148	1.368	2.441	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	
Road 22	1200-1300	2.148	1.368	2.441	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	
Road 22	1300-1400	2.148	1.368	2.441	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	
Road 22	1400-1500	2.148	1.368	2.441	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	
Road 22	1500-1600	2.148	1.368	2.441	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	
Road 22	1600-1700	2.148	1.368	2.441	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	
Road 22	1700-1800	2.148	1.368	2.441	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	
Road 22	1800-1900	2.148	1.368	2.441	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	
Road 22	1900-2000	2.148	1.368	2.441	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	
Road 22	2100-2200	2.148	1.368	2.441	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	
Road 22	2200-2300	2.148	1.368	2.441	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	1.871	
Road 22	0000-0100	1.558	1.068	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	
Road 22	0100-0200	1.558	1.068	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	
Road 22	0200-0300	1.558	1.068	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	
Road 22	0300-0400	1.558	1.068	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	
Road 22	0400-0500	1.558	1.068	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	
Road 22	0500-0600	1.558	1.068	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	
Road 22	0600-0700	1.558	1.068	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	
Road 22	0700-0800	1.558	1.068	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	
Road 22	0800-0900	1.558	1.068	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	
Road 22	0900-1000	1.558	1.068	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	
Road 22	1000-1100	1.558	1.068	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	
Road 22	1100-1200	1.558	1.068	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	
Road 22	1200-1300	1.558	1.068	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	
Road 22	1300-1400	1.558	1.068	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	
Road 22	1400-1500	1.558	1.068	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	
Road 22	1500-1600	1.558	1.068	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	
Road 22	1600-1700	1.558	1.068	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	
Road 22	1700-1800	1.558	1.068	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	
Road 22	1800-1900	1.558	1.068	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368	
Road 22	1900-2000	1.558	1.068	1.368	1.368	1.368	1.368	1.368	1.368									

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Road 24 Hour Underground Quarry														
Using 24 Hour Underdrain Factors for														
ARMCO model results														
Year 2000														
Road Name	Road ID	Hour	Monthly/peak/ton			NO _x Emission			Monthly/peak/ton					
			g/hour/ton	g/ton	g/ton	g/hour/ton	g/ton	g/ton	g/hour/ton	g/ton	g/ton			
Road 27	27	1900-1700	2.96	0.81	1.81	1.81	0.97	0.61	1.55	9.34	0.31	0.74		
Road 27	27	1700-1800	2.02	0.45	1.47	1.46	1.25	0.37	1.22	8.76	0.20	0.72		
Road 27	27	1800-1900	2.02	0.45	1.47	1.46	1.25	0.37	1.22	8.76	0.20	0.72		
Road 27	27	1900-2000	1.67	0.74	1.37	1.37	0.47	1.52	0.77	7.20	0.47	2.29		
Road 27	27	2000-2100	1.61	0.34	1.06	1.06	0.42	1.16	0.62	6.07	0.36	0.94		
Road 27	27	2100-2200	1.61	0.34	1.06	1.06	0.42	1.16	0.62	6.07	0.36	0.94		
Road 27	27	2200-2300	1.77	0.36	1.02	1.02	0.54	1.13	0.47	7.39	0.37	0.67		
Road 27	27	2300-2400	1.77	0.36	1.02	1.02	0.54	1.13	0.47	7.39	0.37	0.67		
Road 28	28	0000-0100	1.88	0.47	1.58	1.58	0.51	1.63	0.99	1.63	0.44	1.48		
Road 28	28	0100-0200	1.99	0.37	1.07	1.07	0.29	1.17	0.66	1.82	0.14	1.01		
Road 28	28	0200-0300	1.99	0.37	1.07	1.07	0.29	1.17	0.66	1.82	0.14	1.01		
Road 28	28	0300-0400	2.22	0.12	1.14	1.14	0.06	1.88	0.12	1.82	0.78	1.16		
Road 28	28	0400-0500	2.49	0.22	1.81	1.04	0.23	1.68	0.57	0.57	1.44	0.33	2.43	
Road 28	28	0500-0600	2.49	0.22	1.81	1.04	0.23	1.68	0.57	0.57	1.44	0.33	2.43	
Road 28	28	0600-0700	2.65	0.32	1.77	1.77	0.46	1.55	0.77	1.98	0.68	1.62		
Road 28	28	0700-0800	2.65	0.32	1.77	1.77	0.46	1.55	0.77	1.98	0.68	1.62		
Road 28	28	0800-0900	3.11	0.72	1.19	1.19	0.72	1.72	0.98	2.32	1.42	0.64		
Road 28	28	0900-1000	3.11	0.72	1.19	1.19	0.72	1.72	0.98	2.32	1.42	0.64		
Road 28	28	1000-1100	4.54	0.71	2.16	2.16	0.55	2.30	1.81	3.14	2.29	2.63		
Road 28	28	1100-1200	4.54	0.71	2.16	2.16	0.55	2.30	1.81	3.14	2.29	2.63		
Road 28	28	1200-1300	4.18	0.34	2.46	1.39	0.54	2.00	1.44	2.54	1.47	1.11		
Road 28	28	1300-1400	4.18	0.34	2.46	1.39	0.54	2.00	1.44	2.54	1.47	1.11		
Road 28	28	1400-1500	4.03	0.13	2.31	1.74	0.40	1.77	0.58	2.34	0.70	1.81		
Road 28	28	1500-1600	4.03	0.13	2.31	1.74	0.40	1.77	0.58	2.34	0.70	1.81		
Road 28	28	1600-1700	4.13	0.13	1.43	0.86	0.40	1.43	0.32	1.82	0.55	0.91		
Road 28	28	1700-1800	4.13	0.13	1.43	0.86	0.40	1.43	0.32	1.82	0.55	0.91		
Road 28	28	1800-1900	3.59	0.17	1.47	0.83	0.39	1.27	0.58	2.13	0.68	1.01		
Road 28	28	1900-2000	3.59	0.17	1.47	0.83	0.39	1.27	0.58	2.13	0.68	1.01		
Road 28	28	2000-2100	2.96	0.23	1.26	0.64	0.71	0.47	1.09	0.95	0.84	0.81		
Road 28	28	2100-2200	2.96	0.23	1.26	0.64	0.71	0.47	1.09	0.95	0.84	0.81		
Road 28	28	2200-2300	2.96	0.23	1.26	0.64	0.71	0.47	1.09	0.95	0.84	0.81		
Road 28	28	2300-2400	2.96	0.23	1.26	0.64	0.71	0.47	1.09	0.95	0.84	0.81		
Road 29	29	0000-0100	2.64	0.41	1.10	1.10	0.40	1.47	0.68	1.88	0.51	1.44		
Road 29	29	0100-0200	2.64	0.41	1.10	1.10	0.40	1.47	0.68	1.88	0.51	1.44		
Road 29	29	0200-0300	2.78	0.27	0.87	0.87	0.24	1.24	0.27	1.07	0.88	0.77	0.54	
Road 29	29	0300-0400	2.78	0.27	0.87	0.87	0.24	1.24	0.27	1.07	0.88	0.77	0.54	
Road 29	29	0400-0500	2.93	0.45	1.45	1.45	0.48	1.68	0.90	2.31	1.68	0.88	2.45	
Road 29	29	0500-0600	2.93	0.45	1.45	1.45	0.48	1.68	0.90	2.31	1.68	0.88	2.45	
Road 29	29	0600-0700	3.12	0.38	1.30	1.30	0.39	1.53	0.79	2.06	1.41	0.91	1.64	
Road 29	29	0700-0800	3.12	0.38	1.30	1.30	0.39	1.53	0.79	2.06	1.41	0.91	1.64	
Road 29	29	0800-0900	3.24	0.38	1.30	1.30	0.39	1.53	0.79	2.06	1.41	0.91	1.64	
Road 29	29	0900-1000	3.24	0.38	1.30	1.30	0.39	1.53	0.79	2.06	1.41	0.91	1.64	
Road 29	29	1000-1100	3.76	0.34	1.44	1.44	0.36	1.73	0.88	2.16	1.70	1.37	1.94	
Road 29	29	1100-1200	3.76	0.34	1.44	1.44	0.36	1.73	0.88	2.16	1.70	1.37	1.94	
Road 29	29	1200-1300	4.28	0.23	1.71	1.71	0.26	1.98	0.58	2.31	1.10	0.91	2.04	
Road 29	29	1300-1400	4.28	0.23	1.71	1.71	0.26	1.98	0.58	2.31	1.10	0.91	2.04	
Road 29	29	1400-1500	4.28	0.23	1.71	1.71	0.26	1.98	0.58	2.31	1.10	0.91	2.04	
Road 29	29	1500-1600	4.28	0.23	1.71	1.71	0.26	1.98	0.58	2.31	1.10	0.91	2.04	
Road 29	29	1600-1700	4.04	0.23	1.68	1.68	0.26	1.94	0.58	2.28	1.08	0.88	1.94	
Road 29	29	1700-1800	4.04	0.23	1.68	1.68	0.26	1.94	0.58	2.28	1.08	0.88	1.94	
Road 29	29	1800-1900	2.49	0.32	1.16	1.16	0.47	1.55	0.78	2.33	1.29	0.84	2.04	
Road 29	29	1900-2000	2.49	0.32	1.16	1.16	0.47	1.55	0.78	2.33	1.29	0.84	2.04	
Road 29	29	2000-2100	2.38	0.34	1.31	1.31	0.40	1.56	0.73	2.16	1.31	0.93	2.24	
Road 29	29	2100-2200	2.38	0.34	1.31	1.31	0.40	1.56	0.73	2.16	1.31	0.93	2.24	
Road 29	29	2200-2300	2.59	0.61	1.50	1.50	0.73	1.81	1.07	2.34	1.60	1.08	2.46	
Road 29	29	2300-2400	2.59	0.61	1.50	1.50	0.73	1.81	1.07	2.34	1.60	1.08	2.46	
Road 30	30	0000-0100	2.09	0.42	1.08	1.08	0.39	1.43	0.51	1.24	0.48	2.08	1.56	0.58
Road 30	30	0100-0200	1.76	0.14	1.01	1.01	0.06	1.49	0.17	1.37	0.16	1.06	0.26	0.44
Road 30	30	0200-0300	1.76	0.14	1.01	1.01	0.06	1.49	0.17	1.37	0.16	1.06	0.26	0.44
Road 30	30	0300-0400	2.34	0.24	1.04	1.04	0.10	1.68	0.24	1.68	0.24	1.04	0.24	0.44
Road 30	30	0400-0500	2.34	0.24	1.04	1.04	0.10	1.68	0.24	1.68	0.24	1.04	0.24	0.44
Road 30	30	0500-0600	2.45	0.24	1.04	1.04	0.10	1.68	0.24	1.68	0.24	1.04	0.24	0.44
Road 30	30	0600-0700	2.34	0.11	1.01	1.01	0.06	1.49	0.17	1.37	0.16	1.06	0.26	0.44
Road 30	30	0700-0800	2.72	0.22	1.07	1.07	0.27	1.73	0.58	1.83	0.39	1.49	0.71	0.81
Road 30	30	0800-0900	2.72	0.22	1.07	1.07	0.27	1.73	0.58	1.83	0.39	1.49	0.71	0.81
Road 30	30	0900-1000	3.16	0.22	0.88	0.88	0.16	1.75	0.88	1.95	0.57	1.76	0.77	0.64
Road 30	30	1000-1100	3.16	0.22	0.88	0.88	0.16	1.75	0.88	1.95	0.57	1.76	0.77	0.64
Road 30	30	1100-1200	3.42	0.23	0.88	0.88	0.16	1.75	0.88	1.95	0.57	1.76	0.77	0.64
Road 30	30	1200-1300	3.42	0.23	0.88	0.88	0.16	1.75	0.88	1.95	0.57	1.76	0.77	0.64
Road 30	30	1300-1400	3.42	0.23	0.88	0.88	0.16	1.75	0.88	1.95	0.57	1.76	0.77	0.64
Road 30	30	1400-1500	3.42	0.23	0.88	0.88	0.16	1.75	0.88	1.95	0.57	1.76	0.77	0.64
Road 30	30	1500-1600	3.42	0.23	0.88	0.88	0.16	1.75	0.88	1.95	0.57	1.76	0.77	0.64
Road 30	30	1600-1700	3.42	0.23	0.88	0.88	0.16	1.75	0.88	1.95	0.57	1.76	0.77	0.64
Road 30	30	1700-1800	3.42	0.23	0.88	0.88	0.16	1.75	0.88	1.95	0.57	1.76	0.77	0.64
Road 30	30	1800-1900	3.42	0.23	0.88	0.88	0.16	1.75	0.88	1.95	0.57	1.76	0.77	0.64
Road 30	30	1900-2000	3.42	0.23	0.88	0.88	0.16	1.75	0.88	1.95	0.57	1.76	0.77	0.64
Road 30	30	2000-2100	3.42	0.23	0.88	0.88	0.16	1.75	0.88	1.95	0.57	1.76	0.77	0.64
Road 30	30	2100-2200	3.42	0.23	0.88	0.88	0.16	1.75	0.88	1.95	0.57	1.76	0.77	0.64
Road 30	30	2200-2300	3.42	0.23	0.88	0.88	0.16	1.75	0.88	1.95	0.57	1.76	0.77	0.64
Road 30	30	2300-2400	3.42	0.23	0.88	0.88	0.16	1.75	0.88	1.95	0.57	1.76	0.77	0.64

L:\Secure\Environment Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Open Road\Appendix 3.5.2 Emission Factor in 2030.xlsx

Telling North York Underground Quarry												
Open Road and Non-Emission Factors for												
APR/MAY 2006 (1)												
			Year 2000		NO _x Emission				NO Emission			
Road Name	Road ID	Hour	Monthly/Km	Monthly/Hours	Monthly/Km	Monthly/Hours	Monthly/Km	Monthly/Hours	Monthly/Km	Monthly/Hours	Monthly/Hours	
			g/km	g/hour	g/km	g/hour	g/km	g/hour	g/km	g/hour	g/hour	
Road #1	31	0000-0100	2,921.02	1,917.47	9,316.07	2,176.03	8,611.07	2,015.03	8,717.07	7,986.06	1,821.03	2,417.03
Road #1	31	0100-0200	2,921.02	8,002.74	9,464.74	2,708.03	7,421.06	6,095.07	2,974.07	5,145.06	1,902.03	3,506.07
Road #1	31	0200-0300	2,921.02	8,002.74	9,464.74	2,708.03	7,421.06	6,095.07	2,974.07	5,145.06	1,902.03	3,506.07
Road #1	31	0300-0400	2,921.02	6,074.08	9,467.07	3,331.02	5,666.06	1,066.06	2,302.03	3,917.07	3,466.07	2,144.07
Road #1	31	0400-0500	3,631.02	6,074.08	9,467.07	3,331.02	5,666.06	1,066.06	2,302.03	3,917.07	3,466.07	2,144.07
Road #1	31	0500-0600	3,631.02	6,074.08	9,467.07	3,331.02	5,666.06	1,066.06	2,302.03	3,917.07	3,466.07	2,144.07
Road #1	31	0600-0700	3,266.02	3,211.03	3,905.06	2,964.03	5,127.07	1,170.06	2,211.03	3,445.06	1,385.03	1,988.07
Road #1	31	0700-0800	3,266.02	3,211.03	3,905.06	2,964.03	5,127.07	1,170.06	2,211.03	3,445.06	1,385.03	1,988.07
Road #1	31	0800-0900	3,266.02	3,211.03	3,905.06	2,964.03	5,127.07	1,170.06	2,211.03	3,445.06	1,385.03	1,988.07
Road #1	31	0900-1000	3,266.02	3,211.03	3,905.06	2,964.03	5,127.07	1,170.06	2,211.03	3,445.06	1,385.03	1,988.07
Road #1	31	1000-1100	4,941.02	3,741.07	5,511.06	4,188.03	2,311.07	4,661.06	3,788.07	3,471.06	3,500.03	2,331.07
Road #1	31	1100-1200	4,941.02	3,741.07	5,511.06	4,188.03	2,311.07	4,661.06	3,788.07	3,471.06	3,500.03	2,331.07
Road #1	31	1200-1300	4,941.02	3,741.07	5,511.06	4,188.03	2,311.07	4,661.06	3,788.07	3,471.06	3,500.03	2,331.07
Road #1	31	1300-1400	5,406.02	1,841.07	3,746.06	4,051.03	3,605.07	3,120.06	3,181.07	2,466.06	2,000.03	2,721.07
Road #1	31	1400-1500	5,406.02	1,841.07	3,746.06	4,051.03	3,605.07	3,120.06	3,181.07	2,466.06	2,000.03	2,721.07
Road #1	31	1500-1600	5,406.02	1,841.07	3,746.06	4,051.03	3,605.07	3,120.06	3,181.07	2,466.06	2,000.03	2,721.07
Road #1	31	1600-1700	5,406.02	1,841.07	3,746.06	4,051.03	3,605.07	3,120.06	3,181.07	2,466.06	2,000.03	2,721.07
Road #1	31	1700-1800	5,406.02	1,841.07	3,746.06	4,051.03	3,605.07	3,120.06	3,181.07	2,466.06	2,000.03	2,721.07
Road #1	31	1800-1900	5,406.02	1,841.07	3,746.06	4,051.03	3,605.07	3,120.06	3,181.07	2,466.06	2,000.03	2,721.07
Road #1	31	1900-2000	5,406.02	1,841.07	3,746.06	4,051.03	3,605.07	3,120.06	3,181.07	2,466.06	2,000.03	2,721.07
Road #1	31	2000-2100	5,406.02	1,841.07	3,746.06	4,051.03	3,605.07	3,120.06	3,181.07	2,466.06	2,000.03	2,721.07
Road #1	31	2100-2200	5,406.02	1,841.07	3,746.06	4,051.03	3,605.07	3,120.06	3,181.07	2,466.06	2,000.03	2,721.07
Road #1	31	2200-2300	5,406.02	1,841.07	3,746.06	4,051.03	3,605.07	3,120.06	3,181.07	2,466.06	2,000.03	2,721.07
Road #2	32	0000-0100	2,176.03	1,412.02	7,216.06	1,661.03	6,146.06	1,412.02	6,817.06	6,146.06	1,412.02	1,821.03
Road #2	32	0100-0200	2,176.03	5,666.06	6,095.07	1,741.06	5,127.07	1,170.06	2,211.03	3,445.06	1,385.03	1,988.07
Road #2	32	0200-0300	2,176.03	5,666.06	6,095.07	1,741.06	5,127.07	1,170.06	2,211.03	3,445.06	1,385.03	1,988.07
Road #2	32	0300-0400	2,176.03	4,188.03	4,661.06	1,385.03	3,506.07	1,902.03	3,506.07	1,902.03	3,506.07	1,902.03
Road #2	32	0400-0500	2,176.03	4,188.03	4,661.06	1,385.03	3,506.07	1,902.03	3,506.07	1,902.03	3,506.07	1,902.03
Road #2	32	0500-0600	2,176.03	4,188.03	4,661.06	1,385.03	3,506.07	1,902.03	3,506.07	1,902.03	3,506.07	1,902.03
Road #2	32	0600-0700	2,176.03	3,211.03	3,905.06	2,964.03	5,127.07	1,170.06	2,211.03	3,445.06	1,385.03	1,988.07
Road #2	32	0700-0800	2,176.03	3,211.03	3,905.06	2,964.03	5,127.07	1,170.06	2,211.03	3,445.06	1,385.03	1,988.07
Road #2	32	0800-0900	2,176.03	3,211.03	3,905.06	2,964.03	5,127.07	1,170.06	2,211.03	3,445.06	1,385.03	1,988.07
Road #2	32	0900-1000	2,176.03	3,211.03	3,905.06	2,964.03	5,127.07	1,170.06	2,211.03	3,445.06	1,385.03	1,988.07
Road #2	32	1000-1100	2,176.03	3,741.07	5,511.06	4,188.03	2,311.07	4,661.06	3,788.07	3,471.06	3,500.03	2,331.07
Road #2	32	1100-1200	2,176.03	3,741.07	5,511.06	4,188.03	2,311.07	4,661.06	3,788.07	3,471.06	3,500.03	2,331.07
Road #2	32	1200-1300	2,176.03	3,741.07	5,511.06	4,188.03	2,311.07	4,661.06	3,788.07	3,471.06	3,500.03	2,331.07
Road #2	32	1300-1400	2,176.03	1,841.07	3,746.06	4,051.03	3,605.07	3,120.06	3,181.07	2,466.06	2,000.03	2,721.07
Road #2	32	1400-1500	2,176.03	1,841.07	3,746.06	4,051.03	3,605.07	3,120.06	3,181.07	2,466.06	2,000.03	2,721.07
Road #2	32	1500-1600	2,176.03	1,841.07	3,746.06	4,051.03	3,605.07	3,120.06	3,181.07	2,466.06	2,000.03	2,721.07
Road #2	32	1600-1700	2,176.03	1,841.07	3,746.06	4,051.03	3,605.07	3,120.06	3,181.07	2,466.06	2,000.03	2,721.07
Road #2	32	1700-1800	2,176.03	1,841.07	3,746.06	4,051.03	3,605.07	3,120.06	3,181.07	2,466.06	2,000.03	2,721.07
Road #2	32	1800-1900	2,176.03	1,841.07	3,746.06	4,051.03	3,605.07	3,120.06	3,181.07	2,466.06	2,000.03	2,721.07
Road #2	32	1900-2000	2,176.03	1,841.07	3,746.06	4,051.03	3,605.07	3,120.06	3,181.07	2,466.06	2,000.03	2,721.07
Road #2	32	2000-2100	2,176.03	1,841.07	3,746.06	4,051.03	3,605.07	3,120.06	3,181.07	2,466.06	2,000.03	2,721.07
Road #2	32	2100-2200	2,176.03	1,841.07	3,746.06	4,051.03	3,605.07	3,120.06	3,181.07	2,466.06	2,000.03	2,721.07
Road #2	32	2200-2300	2,176.03	1,841.07	3,746.06	4,051.03	3,605.07	3,120.06	3,181.07	2,466.06	2,000.03	2,721.07
Road #3	33	0000-0100	1,412.02	931.07	3,120.06	721.06	2,176.03	1,412.02	3,120.06	2,176.03	931.07	1,412.02
Road #3	33	0100-0200	1,412.02	3,506.07	3,506.07	1,902.03	3,506.07	1,902.03	3,506.07	1,902.03	3,506.07	1,902.03
Road #3	33	0200-0300	1,412.02	3,506.07	3,506.07	1,902.03	3,506.07	1,902.03	3,506.07	1,902.03	3,506.07	1,902.03
Road #3	33	0300-0400	1,412.02	2,331.07	2,331.07	1,902.03	2,331.07	1,902.03	2,331.07	2,331.07	1,902.03	2,331.07
Road #3	33	0400-0500	1,412.02	2,331.07	2,331.07	1,902.03	2,331.07	1,902.03	2,331.07	2,331.07	1,902.03	2,331.07
Road #3	33	0500-0600	1,412.02	2,331.07	2,331.07	1,902.03	2,331.07	1,902.03	2,331.07	2,331.07	1,902.03	2,331.07
Road #3	33	0600-0700	1,412.02	1,385.03	1,385.03	1,902.03	1,385.03	1,902.03	1,385.03	1,385.03	1,902.03	1,385.03
Road #3	33	0700-0800	1,412.02	1,385.03	1,385.03	1,902.03	1,385.03	1,902.03	1,385.03	1,385.03	1,902.03	1,385.03
Road #3	33	0800-0900	1,412.02	1,385.03	1,385.03	1,902.03	1,385.03	1,902.03	1,385.03	1,385.03	1,902.03	1,385.03
Road #3	33	0900-1000	1,412.02	1,385.03	1,385.03	1,902.03	1,385.03	1,902.03	1,385.03	1,385.03	1,902.03	1,385.03
Road #3	33	1000-1100	1,412.02	3,741.07	5,511.06	4,188.03	2,311.07	4,661.06	3,788.07	3,471.06	3,500.03	2,331.07
Road #3	33	1100-1200	1,412.02	3,741.07	5,511.06	4,188.03	2,311.07	4,661.06	3,788.07	3,471.06	3,500.03	2,331.07
Road #3	33	1200-1300	1,412.02	3,741.07	5,511.06	4,188.03	2,311.07	4,661.06	3,788.07	3,471.06	3,500.03	2,331.07
Road #3	33	1300-1400	1,412.02	1,841.07	3,746.06	4,051.03	3,605.07	3,120.06	3,181.07	2,466.06	2,000.03	2,721.07
Road #3	33	1400-1500	1,412.02	1,841.07	3,746.06	4,051.03	3,605.07	3,120.06	3,181.07	2,466.06	2,000.03	2,721.07
Road #3	33	1500-1600	1,412.02	1,841.07	3,746.06	4,051.03	3,605.07	3,120.06	3,181.07	2,466.06	2,000.03	2,721.07
Road #3	33	1600-1700	1,412.02	1,841.07	3,746.06	4,051.03	3,605.07	3,120.06	3,181.07	2,466.06	2,000.03	2,721.07
Road #3	33	1700-1800	1,412.02	1,841.07	3,746.06	4,051.03	3,605.07	3,120.06	3,181.07	2,466.06	2,000.03	2,721.07
Road #3	33	1800-1900	1,412.02	1,841.07	3,746.06	4,051.03	3,605.07	3,120.06	3,181.07	2,466.06	2,000.03	2,721.07
Road #3	33	1900-2000	1,412.02	1,841.07	3,746.06	4,051.03	3,605.07	3,120.06	3,181.07	2,466.06	2,000.03	2,721.07
Road #3	33	2000-2100	1,412.02	1,841.07	3,746.06	4,051.03	3,605.07	3,120.06	3,181.07	2,466.06	2,000.03	2,721.07
Road #3	33	2100-2200	1,412.02	1,841.07	3,746.06	4,051.03	3,605.07	3,120.06	3,181.07	2,466.06	2,000.03	2,721.07
Road #3	33	2200-2300	1,412.02	1,841.07	3,746.06	4,051.03	3,605.07	3,120.06	3,181.07	2,466.06	2,000.03	2,721.07
Road #4	34	0000-0100	931.07	607.41	1,661.03	466.06	931.07	607.41	1,661.03	466.06	931.07	607.41
Road #4	34	0100-0200	931.07	2,331.07	2,331.07	1,902.03	2,331.07	1,902.03	2,331.07	2,331.07	1,902.03	2,331.07
Road #4	34	0200-0300	931.07	2,331.07	2,331.07	1,902.03	2,331.07	1,902.03	2,331.07	2,331.07	1,902.03	2,331.07
Road #4	34	0300-0400	931.07	1,902.03	1,902.03	1,902.03	1,902.03	1,902.03	1,902.03	1,902.03	1,902.03	1,902.03
Road #4	34	0400-0500	931.07	1,902.03	1,902.03	1,902.03	1,902.03	1,902.03	1,902.03	1,902.03	1,902.03	1,902.03
Road #4	34	0500-0600	931.07	1,902								

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Open 24 Hour Unions Factors for ARNDT model results											
Year 2050											
Road Name	Road ID	Hour	NO _x Emission				NO _y Emission				
			g/hour/veh	Monthly/Min	Monthly/Average	g/hour/veh	Monthly/Min	Monthly/Average			
Road 34	34	0800-0900	3712.02	116.02	2786	116.02	2786	116.02	1.616	51.64	1.375
Road 34	34	0900-1000	3382.02	111.6	2742	111.6	2742	111.6	1.642	51.76	1.384
Road 34	34	1000-1100	3412.02	112.06	2762	112.06	2762	112.06	1.642	51.76	1.384
Road 34	34	1100-1200	4242.02	140.04	2716	140.04	2716	140.04	1.596	49.68	1.244
Road 34	34	1200-1300	4392.02	143.16	2696	143.16	2696	143.16	1.596	49.68	1.244
Road 34	34	1300-1400	4212.02	137.74	2732	137.74	2732	137.74	1.642	51.76	1.384
Road 34	34	1400-1500	4462.02	146.38	2652	146.38	2652	146.38	1.596	49.68	1.244
Road 34	34	1500-1600	4462.02	146.38	2652	146.38	2652	146.38	1.596	49.68	1.244
Road 34	34	1600-1700	4042.02	148	2676	148	2676	148	1.596	49.68	1.244
Road 34	34	1700-1800	3152.02	105.06	2762	105.06	2762	105.06	1.642	51.76	1.384
Road 34	34	1800-1900	2862.02	102.06	2816	102.06	2816	102.06	1.642	51.76	1.384
Road 34	34	1900-2000	2072.02	65.74	2816	65.74	2816	65.74	1.642	51.76	1.384
Road 34	34	2000-2100	1872.02	58.74	2816	58.74	2816	58.74	1.642	51.76	1.384
Road 34	34	2100-2200	1892.02	59.42	2796	59.42	2796	59.42	1.642	51.76	1.384
Road 34	34	2200-2300	1962.02	61.74	2796	61.74	2796	61.74	1.642	51.76	1.384
Road 34	34	2300-2400	2022.02	63.62	2796	63.62	2796	63.62	1.642	51.76	1.384
Road 35	35	0000-0100	7772.02	242.02	1242	242.02	1242	242.02	1.642	51.76	1.384
Road 35	35	0100-0200	7772.02	242.02	1242	242.02	1242	242.02	1.642	51.76	1.384
Road 35	35	0200-0300	6142.02	195.06	1242	195.06	1242	195.06	1.642	51.76	1.384
Road 35	35	0300-0400	5452.02	170.06	1242	170.06	1242	170.06	1.642	51.76	1.384
Road 35	35	0400-0500	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 35	35	0500-0600	3682.02	115.02	1242	115.02	1242	115.02	1.642	51.76	1.384
Road 35	35	0600-0700	3682.02	115.02	1242	115.02	1242	115.02	1.642	51.76	1.384
Road 35	35	0700-0800	4042.02	128.02	1242	128.02	1242	128.02	1.642	51.76	1.384
Road 35	35	0800-0900	4042.02	128.02	1242	128.02	1242	128.02	1.642	51.76	1.384
Road 35	35	0900-1000	4042.02	128.02	1242	128.02	1242	128.02	1.642	51.76	1.384
Road 35	35	1000-1100	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 35	35	1100-1200	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 35	35	1200-1300	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 35	35	1300-1400	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 35	35	1400-1500	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 35	35	1500-1600	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 35	35	1600-1700	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 35	35	1700-1800	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 35	35	1800-1900	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 35	35	1900-2000	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 35	35	2000-2100	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 35	35	2100-2200	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 35	35	2200-2300	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 35	35	2300-2400	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 36	36	0000-0100	8012.02	248.02	1242	248.02	1242	248.02	1.642	51.76	1.384
Road 36	36	0100-0200	8012.02	248.02	1242	248.02	1242	248.02	1.642	51.76	1.384
Road 36	36	0200-0300	6142.02	195.06	1242	195.06	1242	195.06	1.642	51.76	1.384
Road 36	36	0300-0400	5452.02	170.06	1242	170.06	1242	170.06	1.642	51.76	1.384
Road 36	36	0400-0500	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 36	36	0500-0600	3682.02	115.02	1242	115.02	1242	115.02	1.642	51.76	1.384
Road 36	36	0600-0700	3682.02	115.02	1242	115.02	1242	115.02	1.642	51.76	1.384
Road 36	36	0700-0800	4042.02	128.02	1242	128.02	1242	128.02	1.642	51.76	1.384
Road 36	36	0800-0900	4042.02	128.02	1242	128.02	1242	128.02	1.642	51.76	1.384
Road 36	36	0900-1000	4042.02	128.02	1242	128.02	1242	128.02	1.642	51.76	1.384
Road 36	36	1000-1100	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 36	36	1100-1200	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 36	36	1200-1300	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 36	36	1300-1400	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 36	36	1400-1500	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 36	36	1500-1600	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 36	36	1600-1700	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 36	36	1700-1800	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 36	36	1800-1900	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 36	36	1900-2000	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 36	36	2000-2100	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 36	36	2100-2200	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 36	36	2200-2300	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 36	36	2300-2400	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 37	37	0000-0100	8452.02	256.02	1242	256.02	1242	256.02	1.642	51.76	1.384
Road 37	37	0100-0200	8452.02	256.02	1242	256.02	1242	256.02	1.642	51.76	1.384
Road 37	37	0200-0300	6142.02	195.06	1242	195.06	1242	195.06	1.642	51.76	1.384
Road 37	37	0300-0400	5452.02	170.06	1242	170.06	1242	170.06	1.642	51.76	1.384
Road 37	37	0400-0500	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 37	37	0500-0600	3682.02	115.02	1242	115.02	1242	115.02	1.642	51.76	1.384
Road 37	37	0600-0700	3682.02	115.02	1242	115.02	1242	115.02	1.642	51.76	1.384
Road 37	37	0700-0800	4042.02	128.02	1242	128.02	1242	128.02	1.642	51.76	1.384
Road 37	37	0800-0900	4042.02	128.02	1242	128.02	1242	128.02	1.642	51.76	1.384
Road 37	37	0900-1000	4042.02	128.02	1242	128.02	1242	128.02	1.642	51.76	1.384
Road 37	37	1000-1100	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 37	37	1100-1200	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 37	37	1200-1300	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 37	37	1300-1400	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 37	37	1400-1500	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 37	37	1500-1600	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 37	37	1600-1700	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 37	37	1700-1800	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 37	37	1800-1900	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 37	37	1900-2000	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 37	37	2000-2100	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 37	37	2100-2200	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 37	37	2200-2300	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384
Road 37	37	2300-2400	4102.02	131.02	1242	131.02	1242	131.02	1.642	51.76	1.384

L:\Secure\Environment Projects\60733229\1.01\Others\Air Modelling\Appendix\Traffic\Open Road\Appendix 3.5.2 Emission Factor in 2030.xlsx

Tsingi North and Underground Quarry Open Road 24 Hour Emission Factors for AEMMO model												
Year 2020			NO _x Emission						NO Emission			
Road Name	Road ID	Hour	g/hr/mi		lb/hr/mi		Monthly/Average		g/hr/mi		Monthly/Average	
Road 37	37	1800-1800	9.79E-02	1.41E-01	3.59E-08	8.41E-02	3.25E-08	4.00E-08	8.61E-08	1.57E-07	3.66E-07	1.41E-06
Road 37	37	1700-1800	7.79E-02	1.40E-02	2.22E-08	7.37E-02	2.29E-08	2.98E-08	3.78E-08	1.56E-07	3.66E-07	6.24E-06
Road 37	37	1600-1700	7.79E-02	1.40E-02	2.22E-08	7.37E-02	2.29E-08	2.98E-08	3.78E-08	1.56E-07	3.66E-07	6.24E-06
Road 37	37	1500-1600	4.46E-02	6.18E-09	1.42E-08	4.15E-02	5.75E-09	1.32E-08	2.62E-07	3.63E-08	8.32E-08	2.44E-07
Road 37	37	0000-2200	4.46E-02	6.18E-09	1.42E-08	4.15E-02	5.75E-09	1.32E-08	2.62E-07	3.63E-08	8.32E-08	2.44E-07
Road 37	37	0000-0100	4.41E-02	6.13E-09	1.37E-08	4.10E-02	5.70E-09	1.30E-08	2.57E-07	3.62E-08	8.24E-08	2.40E-07
Road 37	37	2200-2300	4.36E-02	6.14E-09	1.35E-08	3.76E-02	3.89E-09	8.81E-09	2.68E-07	3.88E-08	2.48E-08	2.10E-07
Road 37	37	2100-2200	3.99E-02	6.13E-09	1.34E-08	3.40E-02	3.89E-09	8.81E-09	2.68E-07	3.88E-08	2.48E-08	2.10E-07
Road 38	38	0000-0100	1.34E-02	1.34E-09	1.16E-08	6.87E-04	3.47E-07	1.02E-08	3.82E-09	9.04E-07	3.60E-08	3.50E-07
Road 38	38	0100-0200	1.34E-02	1.34E-09	1.16E-08	6.87E-04	3.47E-07	1.02E-08	3.82E-09	9.04E-07	3.60E-08	3.50E-07
Road 38	38	0200-0300	9.55E-02	6.76E-08	7.95E-07	8.61E-09	3.30E-08	7.61E-07	4.31E-08	4.66E-07	3.83E-08	4.13E-07
Road 38	38	0300-0400	8.94E-08	9.26E-08	7.96E-07	9.32E-07	8.77E-07	7.71E-07	4.61E-08	4.64E-07	3.55E-07	3.97E-07
Road 38	38	0400-0500	8.94E-08	9.26E-08	7.96E-07	9.32E-07	8.77E-07	7.71E-07	4.61E-08	4.64E-07	3.55E-07	3.97E-07
Road 38	38	0500-0600	9.30E-02	6.77E-07	1.12E-06	8.78E-08	3.30E-07	1.07E-06	4.44E-07	5.55E-07	5.36E-08	4.19E-07
Road 38	38	0600-0700	9.30E-02	6.77E-07	1.12E-06	8.78E-08	3.30E-07	1.07E-06	4.44E-07	5.55E-07	5.36E-08	4.19E-07
Road 38	38	0700-0800	1.12E-02	7.09E-07	8.66E-06	1.02E-04	4.17E-07	5.29E-06	3.54E-08	3.36E-06	2.67E-07	4.00E-07
Road 38	38	0800-0900	1.12E-02	8.06E-07	8.66E-06	1.00E-04	7.17E-07	5.87E-06	3.50E-08	3.29E-06	2.94E-07	4.45E-07
Road 38	38	0900-1000	1.38E-02	8.77E-07	9.45E-06	1.10E-04	7.52E-07	6.47E-06	3.51E-08	3.29E-06	2.97E-07	4.45E-07
Road 38	38	1000-1100	1.38E-02	8.77E-07	9.45E-06	1.10E-04	7.52E-07	6.47E-06	3.51E-08	3.29E-06	2.97E-07	4.45E-07
Road 38	38	1100-1200	1.46E-02	8.77E-07	9.45E-06	1.18E-04	7.52E-07	6.47E-06	3.51E-08	3.29E-06	2.97E-07	4.45E-07
Road 38	38	1200-1300	1.46E-02	8.77E-07	9.45E-06	1.18E-04	7.52E-07	6.47E-06	3.51E-08	3.29E-06	2.97E-07	4.45E-07
Road 38	38	1300-1400	1.46E-02	8.78E-07	9.45E-06	1.18E-04	7.51E-07	6.47E-06	3.51E-08	3.28E-06	2.97E-07	4.44E-07
Road 38	38	1400-1500	1.50E-02	8.78E-07	9.45E-06	1.22E-04	7.51E-07	6.47E-06	3.51E-08	3.28E-06	2.97E-07	4.44E-07
Road 38	38	1500-1600	1.50E-02	8.78E-07	9.45E-06	1.22E-04	7.51E-07	6.47E-06	3.51E-08	3.28E-06	2.97E-07	4.44E-07
Road 38	38	1600-1700	1.50E-02	8.78E-07	9.45E-06	1.22E-04	7.51E-07	6.47E-06	3.51E-08	3.28E-06	2.97E-07	4.44E-07
Road 38	38	1700-1800	1.38E-02	7.43E-07	8.06E-06	1.15E-04	6.61E-07	5.41E-06	3.22E-06	2.24E-06	4.98E-07	3.94E-06
Road 38	38	1800-1900	1.50E-02	9.17E-07	8.81E-06	9.10E-04	2.12E-07	4.26E-06	3.74E-06	2.08E-06	2.13E-06	2.13E-06
Road 38	38	1900-2000	7.96E-02	2.45E-07	2.01E-06	5.45E-07	2.48E-07	1.81E-06	3.51E-06	3.22E-06	9.97E-07	3.13E-06
Road 38	38	2000-2100	7.72E-02	2.61E-07	2.16E-06	6.77E-07	1.89E-07	1.59E-06	3.68E-06	3.10E-06	8.42E-06	3.43E-07
Road 38	38	2100-2200	7.72E-02	2.61E-07	2.16E-06	6.77E-07	1.89E-07	1.59E-06	3.68E-06	3.10E-06	8.42E-06	3.43E-07
Road 38	38	2200-2300	7.00E-02	2.88E-07	2.45E-06	5.64E-07	3.20E-07	1.39E-06	3.64E-06	3.85E-07	8.05E-06	3.31E-07
Road 38	38	2300-0000	7.00E-02	2.88E-07	2.45E-06	5.64E-07	3.20E-07	1.39E-06	3.64E-06	3.85E-07	8.05E-06	3.31E-07
Road 39	39	2200-2300	7.66E-02	1.42E-07	1.32E-06	9.95E-07	1.49E-07	1.22E-06	3.82E-07	8.14E-07	6.09E-06	3.22E-07
Road 39	39	2100-2200	7.66E-02	1.42E-07	1.32E-06	9.95E-07	1.49E-07	1.22E-06	3.82E-07	8.14E-07	6.09E-06	3.22E-07
Road 39	39	2000-2100	7.66E-02	1.42E-07	1.32E-06	9.95E-07	1.49E-07	1.22E-06	3.82E-07	8.14E-07	6.09E-06	3.22E-07
Road 39	39	1900-2000	1.22E-02	2.05E-08	1.73E-07	1.17E-07	1.97E-08	1.88E-07	4.75E-08	7.98E-08	6.79E-08	4.76E-08
Road 39	39	1800-1900	1.22E-02	2.05E-08	1.73E-07	1.17E-07	1.97E-08	1.88E-07	4.75E-08	7.98E-08	6.79E-08	4.76E-08
Road 39	39	1700-1800	1.22E-02	2.05E-08	1.73E-07	1.17E-07	1.97E-08	1.88E-07	4.75E-08	7.98E-08	6.79E-08	4.76E-08
Road 39	39	1600-1700	1.22E-02	2.05E-08	1.73E-07	1.17E-07	1.97E-08	1.88E-07	4.75E-08	7.98E-08	6.79E-08	4.76E-08
Road 39	39	1500-1600	1.22E-02	2.05E-08	1.73E-07	1.17E-07	1.97E-08	1.88E-07	4.75E-08	7.98E-08	6.79E-08	4.76E-08
Road 39	39	1400-1500	1.22E-02	2.05E-08	1.73E-07	1.17E-07	1.97E-08	1.88E-07	4.75E-08	7.98E-08	6.79E-08	4.76E-08
Road 39	39	1300-1400	1.22E-02	2.05E-08	1.73E-07	1.17E-07	1.97E-08	1.88E-07	4.75E-08	7.98E-08	6.79E-08	4.76E-08
Road 39	39	1200-1300	1.22E-02	2.05E-08	1.73E-07	1.17E-07	1.97E-08	1.88E-07	4.75E-08	7.98E-08	6.79E-08	4.76E-08
Road 39	39	1100-1200	1.22E-02	2.05E-08	1.73E-07	1.17E-07	1.97E-08	1.88E-07	4.75E-08	7.98E-08	6.79E-08	4.76E-08
Road 39	39	1000-1100	1.22E-02	2.05E-08	1.73E-07	1.17E-07	1.97E-08	1.88E-07	4.75E-08	7.98E-08	6.79E-08	4.76E-08
Road 39	39	0900-1000	1.22E-02	2.05E-08	1.73E-07	1.17E-07	1.97E-08	1.88E-07	4.75E-08	7.98E-08	6.79E-08	4.76E-08
Road 39	39	0800-0900	1.50E-02	1.56E-07	1.46E-06	1.37E-06	1.79E-06	1.53E-06	3.82E-06	7.27E-07	9.04E-07	6.64E-07
Road 39	39	0700-0800	1.50E-02	1.56E-07	1.46E-06	1.37E-06	1.79E-06	1.53E-06	3.82E-06	7.27E-07	9.04E-07	6.64E-07
Road 39	39	0600-0700	1.50E-02	1.56E-07	1.46E-06	1.37E-06	1.79E-06	1.53E-06	3.82E-06	7.27E-07	9.04E-07	6.64E-07
Road 39	39	0500-0600	1.50E-02	1.56E-07	1.46E-06	1.37E-06	1.79E-06	1.53E-06	3.82E-06	7.27E-07	9.04E-07	6.64E-07
Road 39	39	0400-0500	1.50E-02	1.56E-07	1.46E-06	1.37E-06	1.79E-06	1.53E-06	3.82E-06	7.27E-07	9.04E-07	6.64E-07
Road 39	39	0300-0400	1.50E-02	1.56E-07	1.46E-06	1.37E-06	1.79E-06	1.53E-06	3.82E-06	7.27E-07	9.04E-07	6.64E-07
Road 39	39	0200-0300	1.50E-02	1.56E-07	1.46E-06	1.37E-06	1.79E-06	1.53E-06	3.82E-06	7.27E-07	9.04E-07	6.64E-07
Road 39	39	0100-0200	1.50E-02	1.56E-07	1.46E-06	1.37E-06	1.79E-06	1.53E-06	3.82E-06	7.27E-07	9.04E-07	6.64E-07
Road 39	39	0000-0100	1.50E-02	1.56E-07	1.46E-06	1.37E-06	1.79E-06	1.53E-06	3.82E-06	7.27E-07	9.04E-07	6.64E-07
Road 40	40	2200-2300	9.72E-02	1.43E-08	2.22E-07	8.42E-07	2.40E-08	2.68E-07	1.88E-07	1.18E-07	3.00E-07	1.00E-06
Road 40	40	2100-2200	9.72E-02	1.43E-08	2.22E-07	8.42E-07	2.40E-08	2.68E-07	1.88E-07	1.18E-07	3.00E-07	1.00E-06
Road 40	40	2000-2100	9.72E-02	1.43E-08	2.22E-07	8.42E-07	2.40E-08	2.68E-07	1.88E-07	1.18E-07	3.00E-07	1.00E-06
Road 40	40	1900-2000	2.64E-02	2.22E-07	7.96E-08	2.38E-08	2.94E-07	3.92E-08	1.18E-07	1.00E-06	3.54E-06	1.00E-06
Road 40	40	1800-1900	2.64E-02	2.22E-07	7.96E-08	2.38E-08	2.94E-07	3.92E-08	1.18E-07	1.00E-06	3.54E-06	1.00E-06
Road 40	40	1700-1800	2.64E-02	2.22E-07	7.96E-08	2.38E-08	2.94E-07	3.92E-08	1.18E-07	1.00E-06	3.54E-06	1.00E-06
Road 40	40	1600-1700	2.64E-02	2.22E-07	7.96E-08	2.38E-08	2.94E-07	3.92E-08	1.18E-07	1.00E-06	3.54E-06	1.00E-06
Road 40	40	1500-1600	2.64E-02	2.22E-07	7.96E-08	2.38E-08	2.94E-07	3.92E-08	1.18E-07	1.00E-06	3.54E-06	1.00E-06
Road 40	40	1400-1500	2.64E-02	2.22E-07	7.96E-08	2.38E-08	2.94E-07	3.92E-08	1.18E-07	1.00E-06	3.54E-06	1.00E-06
Road 40	40	1300-1400	2.64E-02	2.22E-07	7.96E-08	2.38E-08	2.94E-07	3.92E-08	1.18E-07	1.00E-06	3.54E-06	1.00E-06
Road 40	40	1200-1300	2.64E-02	2.22E-07	7.96E-08	2.38E-08	2.94E-07	3.92E-08	1.18E-07	1.00E-06	3.54E-06	1.00E-06
Road 40	40	1100-1200	2.64E-02	2.22E-07	7.96E-08	2.38E-08	2.94E-07	3.92E-08	1.18E-07	1.00E-06	3.54E-06	1.00E-06
Road 40	40	1000-1100	2.64E-02	2.22E-07	7.96E-08	2.38E-08	2.94E-07	3.92E-08	1.18E-07	1.00E-06	3.54E-06	1.00E-06
Road 40	40	0900-1000	2.64E-02	2.22E-07	7.96E-08	2.38E-08	2.94E-07	3.92E-08	1.18E-07	1.00E-06	3.54E-06	1.00E-06
Road 40	40	0800-0900	2.64E-02	2.22E-07	7.96E-08	2.38E-08	2.94E-07	3.92E-08	1.18E-07	1.00E-06	3.54E-06	1.00E-06
Road 40	40	0700-0800	2.64E-02	2.22E-07	7.96E-08	2.38E-08	2.94E-07	3.92E-08	1.18E-07	1.00E-06	3.54E-06	1.00E-06
Road 40	40	0600-0700	2.64E-02	2.22E-07	7.96E-08	2.38E-08	2.94E-07	3.92E-08	1.18E-07	1.00E-06	3.54E-06	1.00E-06
Road 40	40	0500-0600	2.64E-02	2.22E-07	7.96E-08	2.38E-08	2.94E-07	3.92E-08	1.18E-07	1.00E-06	3.54E-06	1.00E-06
Road 40	40	0400-0500	2.64E-02	2.22E-07	7.96E-08	2.38E-08	2.94E-07	3.92E-08	1.18E-07	1.00E-06	3.54E-06	1.00E-06
Road 40	40	0300-0400	2.64E-02	2.22E-07	7.96E-08	2.38E-0						

L:\Secure\Environment Projects\60733225\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.2 Emission Factor in 2030.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Day 24 Hour Underground Quarry										
Using 24 Hour Enrichment Factors for										
ARMCO model results										
Year 2030			No Enrichment				No Enrichment			
Route Name	Route ID	Hour	Month/Year/Min		Month/Year/Enrichage		Month/Year/Min		Month/Year/Enrichage	
			g/m ³ /v/h	g/m ³ /v/h	g/m ³ /v/h	g/m ³ /v/h	g/m ³ /v/h	g/m ³ /v/h	g/m ³ /v/h	g/m ³ /v/h
Route #1	0100-0100	1	3.2142	8.081	3.2142	8.081	3.2142	8.081	3.2142	8.081
Route #1	0100-0100	2	3.8542	8.636	3.8542	9.376	4.3487	9.096	4.3487	9.096
Route #1	0100-0100	3	4.0500	8.848	4.0500	9.620	4.5807	9.296	4.5807	9.296
Route #1	0100-0100	4	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	5	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	6	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	7	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	8	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	9	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	10	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	11	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	12	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	13	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	14	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	15	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	16	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	17	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	18	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	19	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	20	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	21	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	22	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	23	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	24	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	25	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	26	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	27	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	28	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	29	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	30	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	31	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	32	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	33	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	34	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	35	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	36	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	37	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	38	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	39	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	40	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	41	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	42	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	43	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	44	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	45	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	46	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	47	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	48	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	49	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	50	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	51	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	52	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	53	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	54	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	55	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	56	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	57	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	58	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	59	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	60	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	61	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	62	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	63	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	64	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	65	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	66	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	67	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	68	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	69	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	70	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	71	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	72	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	73	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	74	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	75	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	76	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	77	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	78	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	79	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	80	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	81	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	82	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	83	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	84	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	85	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	86	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	87	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	88	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	89	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	90	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	91	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	92	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	93	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	94	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	95	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	96	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	97	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	98	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	99	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	100	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	101	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	102	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1	0100-0100	103	4.0602	8.862	4.0602	9.638	4.5867	9.306	4.5867	9.306
Route #1										

1-3-Security/Environment/Projects/60723238/1.01/Other/4/d/Modelled/Appendix/Traffic/Over Road/Appendix 2.5.2 Emission Factor in 2020.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open 24 Hour Unions Factors for ARNDT model results											
Year 2050											
Road Name	Road ID	Hour	NO _x Emission				NO ₂ Emission				
			g/hour/veh	Monthly/veh	Monthly/Average	g/hour/veh	Monthly/veh	Monthly/Average			
Road 34	34	0800-0900	3712.02	1066.2	2766	3732.02	1066.2	2788.5	1875.01	551.6	1398.4
Road 34	34	0900-1000	3882.02	1116	2942	3932.02	1132.6	2932	1612.2	514.68	1482.0
Road 34	34	1000-1100	4162.02	1208.6	3162	4212.02	1235.2	3162	1644.6	548.4	1572.0
Road 34	34	1100-1200	4242.02	1244.0	3276	4292.02	1261.6	3276	1596.6	540.6	1596.0
Road 34	34	1200-1300	4362.02	1311.6	3516	4412.02	1320.6	3516	1596.6	540.6	1626.0
Road 34	34	1300-1400	4212.02	1235.2	3162	4262.02	1251.6	3162	1596.6	540.6	1596.0
Road 34	34	1400-1500	4242.02	1244.0	3276	4292.02	1261.6	3276	1596.6	540.6	1626.0
Road 34	34	1500-1600	4462.02	1346.6	3612	4512.02	1373.2	3612	1596.6	540.6	1656.0
Road 34	34	1600-1700	4042.02	1186	3176	4142.02	1236.6	3176	1602.6	546.6	1596.0
Road 34	34	1700-1800	3712.02	1066.2	2766	3732.02	1066.2	2788.5	1875.01	551.6	1398.4
Road 34	34	1800-1900	3882.02	1116	2942	3932.02	1132.6	2932	1612.2	514.68	1482.0
Road 34	34	1900-2000	4162.02	1208.6	3162	4212.02	1235.2	3162	1644.6	548.4	1572.0
Road 34	34	2000-2100	4242.02	1244.0	3276	4292.02	1261.6	3276	1596.6	540.6	1596.0
Road 34	34	2100-2200	4362.02	1311.6	3516	4412.02	1320.6	3516	1596.6	540.6	1626.0
Road 34	34	2200-2300	4212.02	1235.2	3162	4262.02	1251.6	3162	1596.6	540.6	1596.0
Road 34	34	2300-2400	4242.02	1244.0	3276	4292.02	1261.6	3276	1596.6	540.6	1626.0
Road 35	35	0800-0900	2022.02	585.6	1001	2052.02	597.6	1001	1436.6	410.6	836.6
Road 35	35	0900-1000	2776.02	824.6	1347	2796.02	836.6	1376	1446.6	416.6	917.6
Road 35	35	1000-1100	3162.02	936.6	1562	3192.02	948.6	1562	1446.6	416.6	968.6
Road 35	35	1100-1200	3612.02	1066.6	1812	3642.02	1078.6	1812	1446.6	416.6	1026.6
Road 35	35	1200-1300	3612.02	1066.6	1812	3642.02	1078.6	1812	1446.6	416.6	1026.6
Road 35	35	1300-1400	3162.02	936.6	1562	3192.02	948.6	1562	1446.6	416.6	968.6
Road 35	35	1400-1500	2776.02	824.6	1347	2796.02	836.6	1376	1446.6	416.6	917.6
Road 35	35	1500-1600	2022.02	585.6	1001	2052.02	597.6	1001	1436.6	410.6	836.6
Road 35	35	1600-1700	2776.02	824.6	1347	2796.02	836.6	1376	1446.6	416.6	917.6
Road 35	35	1700-1800	3162.02	936.6	1562	3192.02	948.6	1562	1446.6	416.6	968.6
Road 35	35	1800-1900	3612.02	1066.6	1812	3642.02	1078.6	1812	1446.6	416.6	1026.6
Road 35	35	1900-2000	3612.02	1066.6	1812	3642.02	1078.6	1812	1446.6	416.6	1026.6
Road 35	35	2000-2100	3162.02	936.6	1562	3192.02	948.6	1562	1446.6	416.6	968.6
Road 35	35	2100-2200	2776.02	824.6	1347	2796.02	836.6	1376	1446.6	416.6	917.6
Road 35	35	2200-2300	2022.02	585.6	1001	2052.02	597.6	1001	1436.6	410.6	836.6
Road 35	35	2300-2400	2776.02	824.6	1347	2796.02	836.6	1376	1446.6	416.6	917.6
Road 36	36	0800-0900	1452.02	425.6	1001	1462.02	425.6	1001	1436.6	410.6	836.6
Road 36	36	0900-1000	1652.02	485.6	1001	1662.02	485.6	1001	1436.6	410.6	836.6
Road 36	36	1000-1100	1852.02	545.6	1001	1862.02	545.6	1001	1436.6	410.6	836.6
Road 36	36	1100-1200	2052.02	605.6	1001	2062.02	605.6	1001	1436.6	410.6	836.6
Road 36	36	1200-1300	2052.02	605.6	1001	2062.02	605.6	1001	1436.6	410.6	836.6
Road 36	36	1300-1400	1852.02	545.6	1001	1862.02	545.6	1001	1436.6	410.6	836.6
Road 36	36	1400-1500	1652.02	485.6	1001	1662.02	485.6	1001	1436.6	410.6	836.6
Road 36	36	1500-1600	1452.02	425.6	1001	1462.02	425.6	1001	1436.6	410.6	836.6
Road 36	36	1600-1700	1652.02	485.6	1001	1662.02	485.6	1001	1436.6	410.6	836.6
Road 36	36	1700-1800	1852.02	545.6	1001	1862.02	545.6	1001	1436.6	410.6	836.6
Road 36	36	1800-1900	2052.02	605.6	1001	2062.02	605.6	1001	1436.6	410.6	836.6
Road 36	36	1900-2000	2052.02	605.6	1001	2062.02	605.6	1001	1436.6	410.6	836.6
Road 36	36	2000-2100	1852.02	545.6	1001	1862.02	545.6	1001	1436.6	410.6	836.6
Road 36	36	2100-2200	1652.02	485.6	1001	1662.02	485.6	1001	1436.6	410.6	836.6
Road 36	36	2200-2300	1452.02	425.6	1001	1462.02	425.6	1001	1436.6	410.6	836.6
Road 36	36	2300-2400	1652.02	485.6	1001	1662.02	485.6	1001	1436.6	410.6	836.6
Road 37	37	0800-0900	6212.02	1863.6	2766	6232.02	1863.6	2788.5	3875.01	1151.6	3398.4
Road 37	37	0900-1000	6382.02	1913.6	2942	6432.02	1929.6	2932	3912.2	1191.68	3482.0
Road 37	37	1000-1100	6662.02	2005.6	3162	6712.02	2031.6	3162	3964.6	1231.6	3572.0
Road 37	37	1100-1200	6742.02	2041.6	3276	6792.02	2067.6	3276	3916.6	1231.6	3596.0
Road 37	37	1200-1300	6862.02	2108.6	3516	6912.02	2117.6	3516	3916.6	1231.6	3626.0
Road 37	37	1300-1400	6712.02	2025.2	3162	6762.02	2046.6	3162	3916.6	1231.6	3596.0
Road 37	37	1400-1500	6742.02	2041.6	3276	6792.02	2067.6	3276	3916.6	1231.6	3626.0
Road 37	37	1500-1600	6962.02	2143.6	3612	7012.02	2170.2	3612	3916.6	1231.6	3656.0
Road 37	37	1600-1700	6542.02	1983.6	3176	6592.02	1998.6	3176	3916.6	1231.6	3596.0
Road 37	37	1700-1800	6212.02	1863.6	2766	6232.02	1863.6	2788.5	3875.01	1151.6	3398.4
Road 37	37	1800-1900	6382.02	1913.6	2942	6432.02	1929.6	2932	3912.2	1191.68	3482.0
Road 37	37	1900-2000	6662.02	2005.6	3162	6712.02	2031.6	3162	3964.6	1231.6	3572.0
Road 37	37	2000-2100	6742.02	2041.6	3276	6792.02	2067.6	3276	3916.6	1231.6	3596.0
Road 37	37	2100-2200	6862.02	2108.6	3516	6912.02	2117.6	3516	3916.6	1231.6	3626.0
Road 37	37	2200-2300	6712.02	2025.2	3162	6762.02	2046.6	3162	3916.6	1231.6	3596.0
Road 37	37	2300-2400	6742.02	2041.6	3276	6792.02	2067.6	3276	3916.6	1231.6	3626.0
Road 38	38	0800-0900	2712.02	813.6	1001	2722.02	813.6	1001	1436.6	410.6	836.6
Road 38	38	0900-1000	2912.02	873.6	1001	2922.02	873.6	1001	1436.6	410.6	836.6
Road 38	38	1000-1100	3112.02	933.6	1001	3122.02	933.6	1001	1436.6	410.6	836.6
Road 38	38	1100-1200	3312.02	993.6	1001	3322.02	993.6	1001	1436.6	410.6	836.6
Road 38	38	1200-1300	3312.02	993.6	1001	3322.02	993.6	1001	1436.6	410.6	836.6
Road 38	38	1300-1400	3112.02	933.6	1001	3122.02	933.6	1001	1436.6	410.6	836.6
Road 38	38	1400-1500	2912.02	873.6	1001	2922.02	873.6	1001	1436.6	410.6	836.6
Road 38	38	1500-1600	2712.02	813.6	1001	2722.02	813.6	1001	1436.6	410.6	836.6
Road 38	38	1600-1700	2912.02	873.6	1001	2922.02	873.6	1001	1436.6	410.6	836.6
Road 38	38	1700-1800	3112.02	933.6	1001	3122.02	933.6	1001	1436.6	410.6	836.6
Road 38	38	1800-1900	3312.02	993.6	1001	3322.02	993.6	1001	1436.6	410.6	836.6
Road 38	38	1900-2000	3312.02	993.6	1001	3322.02	993.6	1001	1436.6	410.6	836.6
Road 38	38	2000-2100	3112.02	933.6	1001	3122.02	933.6	1001	1436.6	410.6	836.6
Road 38	38	2100-2200	2912.02	873.6	1001	2922.02	873.6	1001	1436.6	410.6	836.6
Road 38	38	2200-2300	2712.02	813.6	1001	2722.02	813.6	1001	1436.6	410.6	836.6
Road 38	38	2300-2400	2912.02	873.6	1001	2922.02	873.6	1001	1436.6	410.6	836.6
Road 39	39	0800-0900	1412.02	413.6	1001	1422.02	413.6	1001	1436.6	410.6	836.6
Road 39	39	0900-1000	1612.02	473.6	1001	1622.02	473.6	1001	1436.6	410.6	836.6
Road 39	39	1000-1100	1812.02	533.6	1001	1822.02	533.6	1001	1436.6	410.6	836.6
Road 39	39	1100-1200	2012.02	593.6	1001	2022.02	593.6	1001	1436.6	410.6	836.6
Road 39	39	1200-1300	2012.02	593.6	1001	2022.02	593.6	1001	1436.6	410.6	836.6
Road 39	39	1300-1400	1812.02	533.6	1001	1822.02	533.6	1001	1436.6	410.6	836.6
Road 39	39	1400-1500	1612.02	473.6	1001	1622.02	473.6	1001	1436.6	410.6	836.6
Road 39	39	1500-1600	1412.02	413.6	1001	1422.02	413.6	1001	1436.6	410.6	836.6
Road 39	39	1600-1700	1612.02	473.6	1001	1622.02	473.6	1001	1436.6	410.6	836.6
Road 39	39	1700-1800	1812.02	533.6	1001	1822.02	533.6	1001	1436.6	410.6	836.6
Road 39	39	1800-1900	2012.02	593.6	1001	2022.02	593.6	1001	1436.6	410.6	836.6
Road 39	39	1900-2000	2012.02	593.6	1001	2022.02	593.6	1001	1436.6	410.6	836.6
Road 39	39	2000-2100	1812.02	533.6	1001	1822.02	533.6	1001	1436.6	410.6	836.6
Road 39	39	2100-2200	1612.02	473.6	1001	1622.02	473.6	1001	1436.6	410.6	836.6
Road 39	39	2200-2300	1412.02	413.6	1001	1422.02	413.6	1001	1436.6	410.6	836.6
Road 39											

L:\Secure\Environment Projects\60733229\1.01\Others\Air Modelling\Appendix\Traffic\Open Road\Appendix 3.5.2 Emission Factor in 2030.xlsx

Open Road North Emulsion Factors for ARMMO model (Year 2020)

Road Name	Road ID	Hour	NO Emulsion					NO Emulsion						
			g/glycol	g/glycol	g/interfacial	g/interfacial	Monthly/Average	g/glycol	g/glycol	g/interfacial	g/interfacial	Monthly/Average		
Road 37	37	1700-1800	9.295	4.212	1.376	8.412	0.298	9.295	4.212	1.376	8.412	0.298		
Road 37	37	1700-1800	7.976	1.408	2.228	7.372	2.298	7.976	1.408	2.228	7.372	2.298		
Road 37	37	1800-1900	9.295	4.212	1.376	8.412	0.298	9.295	4.212	1.376	8.412	0.298		
Road 37	37	1900-2000	4.466	6.185	1.478	4.152	5.752	4.466	6.185	1.478	4.152	5.752		
Road 37	37	2000-2100	4.466	6.185	1.478	4.152	5.752	4.466	6.185	1.478	4.152	5.752		
Road 37	37	2100-2200	4.466	6.185	1.478	4.152	5.752	4.466	6.185	1.478	4.152	5.752		
Road 37	37	2200-2300	4.466	6.185	1.478	4.152	5.752	4.466	6.185	1.478	4.152	5.752		
Road 37	37	2300-2400	4.466	6.185	1.478	4.152	5.752	4.466	6.185	1.478	4.152	5.752		
Road 38	38	0000-0100	7.438	1.612	1.106	6.870	1.244	10.826	1.824	0.917	1.004	1.004		
Road 38	38	0100-0200	7.438	1.612	1.106	6.870	1.244	10.826	1.824	0.917	1.004	1.004		
Road 38	38	0200-0300	7.438	1.612	1.106	6.870	1.244	10.826	1.824	0.917	1.004	1.004		
Road 38	38	0300-0400	7.438	1.612	1.106	6.870	1.244	10.826	1.824	0.917	1.004	1.004		
Road 38	38	0400-0500	7.438	1.612	1.106	6.870	1.244	10.826	1.824	0.917	1.004	1.004		
Road 38	38	0500-0600	7.438	1.612	1.106	6.870	1.244	10.826	1.824	0.917	1.004	1.004		
Road 38	38	0600-0700	7.438	1.612	1.106	6.870	1.244	10.826	1.824	0.917	1.004	1.004		
Road 38	38	0700-0800	7.438	1.612	1.106	6.870	1.244	10.826	1.824	0.917	1.004	1.004		
Road 38	38	0800-0900	7.438	1.612	1.106	6.870	1.244	10.826	1.824	0.917	1.004	1.004		
Road 38	38	0900-1000	7.438	1.612	1.106	6.870	1.244	10.826	1.824	0.917	1.004	1.004		
Road 38	38	1000-1100	7.438	1.612	1.106	6.870	1.244	10.826	1.824	0.917	1.004	1.004		
Road 38	38	1100-1200	7.438	1.612	1.106	6.870	1.244	10.826	1.824	0.917	1.004	1.004		
Road 38	38	1200-1300	7.438	1.612	1.106	6.870	1.244	10.826	1.824	0.917	1.004	1.004		
Road 38	38	1300-1400	7.438	1.612	1.106	6.870	1.244	10.826	1.824	0.917	1.004	1.004		
Road 38	38	1400-1500	7.438	1.612	1.106	6.870	1.244	10.826	1.824	0.917	1.004	1.004		
Road 38	38	1500-1600	7.438	1.612	1.106	6.870	1.244	10.826	1.824	0.917	1.004	1.004		
Road 38	38	1600-1700	7.438	1.612	1.106	6.870	1.244	10.826	1.824	0.917	1.004	1.004		
Road 38	38	1700-1800	7.438	1.612	1.106	6.870	1.244	10.826	1.824	0.917	1.004	1.004		
Road 38	38	1800-1900	7.438	1.612	1.106	6.870	1.244	10.826	1.824	0.917	1.004	1.004		
Road 38	38	1900-2000	7.438	1.612	1.106	6.870	1.244	10.826	1.824	0.917	1.004	1.004		
Road 38	38	2000-2100	7.438	1.612	1.106	6.870	1.244	10.826	1.824	0.917	1.004	1.004		
Road 38	38	2100-2200	7.438	1.612	1.106	6.870	1.244	10.826	1.824	0.917	1.004	1.004		
Road 38	38	2200-2300	7.438	1.612	1.106	6.870	1.244	10.826	1.824	0.917	1.004	1.004		
Road 38	38	2300-2400	7.438	1.612	1.106	6.870	1.244	10.826	1.824	0.917	1.004	1.004		
Road 39	39	0000-0100	1.221	2.054	1.737	1.171	1.971	1.087	4.788	6.798	4.373	7.608	4.471	
Road 39	39	0100-0200	1.221	2.054	1.737	1.171	1.971	1.087	4.788	6.798	4.373	7.608	4.471	
Road 39	39	0200-0300	1.221	2.054	1.737	1.171	1.971	1.087	4.788	6.798	4.373	7.608	4.471	
Road 39	39	0300-0400	1.221	2.054	1.737	1.171	1.971	1.087	4.788	6.798	4.373	7.608	4.471	
Road 39	39	0400-0500	1.221	2.054	1.737	1.171	1.971	1.087	4.788	6.798	4.373	7.608	4.471	
Road 39	39	0500-0600	1.221	2.054	1.737	1.171	1.971	1.087	4.788	6.798	4.373	7.608	4.471	
Road 39	39	0600-0700	1.221	2.054	1.737	1.171	1.971	1.087	4.788	6.798	4.373	7.608	4.471	
Road 39	39	0700-0800	1.221	2.054	1.737	1.171	1.971	1.087	4.788	6.798	4.373	7.608	4.471	
Road 39	39	0800-0900	1.221	2.054	1.737	1.171	1.971	1.087	4.788	6.798	4.373	7.608	4.471	
Road 39	39	0900-1000	1.221	2.054	1.737	1.171	1.971	1.087	4.788	6.798	4.373	7.608	4.471	
Road 39	39	1000-1100	1.221	2.054	1.737	1.171	1.971	1.087	4.788	6.798	4.373	7.608	4.471	
Road 39	39	1100-1200	1.221	2.054	1.737	1.171	1.971	1.087	4.788	6.798	4.373	7.608	4.471	
Road 39	39	1200-1300	1.221	2.054	1.737	1.171	1.971	1.087	4.788	6.798	4.373	7.608	4.471	
Road 39	39	1300-1400	1.221	2.054	1.737	1.171	1.971	1.087	4.788	6.798	4.373	7.608	4.471	
Road 39	39	1400-1500	1.221	2.054	1.737	1.171	1.971	1.087	4.788	6.798	4.373	7.608	4.471	
Road 39	39	1500-1600	1.221	2.054	1.737	1.171	1.971	1.087	4.788	6.798	4.373	7.608	4.471	
Road 39	39	1600-1700	1.221	2.054	1.737	1.171	1.971	1.087	4.788	6.798	4.373	7.608	4.471	
Road 39	39	1700-1800	1.221	2.054	1.737	1.171	1.971	1.087	4.788	6.798	4.373	7.608	4.471	
Road 39	39	1800-1900	1.221	2.054	1.737	1.171	1.971	1.087	4.788	6.798	4.373	7.608	4.471	
Road 39	39	1900-2000	1.221	2.054	1.737	1.171	1.971	1.087	4.788	6.798	4.373	7.608	4.471	
Road 39	39	2000-2100	1.221	2.054	1.737	1.171	1.971	1.087	4.788	6.798	4.373	7.608	4.471	
Road 39	39	2100-2200	1.221	2.054	1.737	1.171	1.971	1.087	4.788	6.798	4.373	7.608	4.471	
Road 39	39	2200-2300	1.221	2.054	1.737	1.171	1.971	1.087	4.788	6.798	4.373	7.608	4.471	
Road 39	39	2300-2400	1.221	2.054	1.737	1.171	1.971	1.087	4.788	6.798	4.373	7.608	4.471	
Road 40	40	0000-0100	7.876	2.448	2.232	4.822	2.408	2.844	1.848	1.146	0.907	1.898	1.024	8.914
Road 40	40	0100-0200	7.876	2.448	2.232	4.822	2.408	2.844	1.848	1.146	0.907	1.898	1.024	8.914
Road 40	40	0200-0300	7.876	2.448	2.232	4.822	2.408	2.844	1.848	1.146	0.907	1.898	1.024	8.914
Road 40	40	0300-0400	7.876	2.448	2.232	4.822	2.408	2.844	1.848	1.146	0.907	1.898	1.024	8.914
Road 40	40	0400-0500	7.876	2.448	2.232	4.822	2.408	2.844	1.848	1.146	0.907	1.898	1.024	8.914
Road 40	40	0500-0600	7.876	2.448	2.232	4.822	2.408	2.844	1.848	1.146	0.907	1.898	1.024	8.914
Road 40	40	0600-0700	7.876	2.448	2.232	4.822	2.408	2.844	1.848	1.146	0.907	1.898	1.024	8.914
Road 40	40	0700-0800	7.876	2.448	2.232	4.822	2.408	2.844	1.848	1.146	0.907	1.898	1.024	8.914
Road 40	40	0800-0900	7.876	2.448	2.232	4.822	2.408	2.844	1.848	1.146	0.907	1.898	1.024	8.914
Road 40	40	0900-1000	7.876	2.448	2.232	4.822	2.408	2.844	1.848	1.146	0.907	1.898	1.024	8.914
Road 40	40	1000-1100	7.876	2.448	2.232	4.822	2.408	2.844	1.848	1.146	0.907	1.898	1.024	8.914
Road 40	40	1100-1200	7.876	2.448	2.232	4.822	2.408	2.844	1.848	1.146	0.907	1.898	1.024	8.914
Road 40	40	1200-1300	7.876	2.448	2.232	4.822	2.408	2.844	1.848	1.146	0.907	1.898	1.024	8.914
Road 40	40	1300-1400	7.876	2.448	2.232	4.822	2.408	2.844	1.848	1.146	0.907	1.898	1.024	8.914
Road 40	40	1400-1500	7.876	2.448	2.232	4.822	2.408	2.844	1.848	1.146	0.907	1.898	1.024	8.914
Road 40	40	1500-1600	7.876	2.448	2.232	4.822	2.408	2.844	1.848	1.146	0.907	1.898	1.024	8.914
Road 40	40	1600-1700	7.876	2.448	2.232	4.822	2.408	2.844	1.848	1.146	0.907	1.898	1.024	8.914
Road 40	40	1700-1800	7.876	2.448	2.232	4.822	2.408	2.844	1.848	1.146	0.907	1.898	1.024	8.914
Road 40	40	1800-1900	7.876	2.448	2.232	4.822	2.408	2.844	1.848	1.146	0.907	1.898	1.024	8.914
Road 40	40	1900-2000	7.876	2.448	2.232	4.822	2.408	2.844	1.848	1.146	0.907	1.898	1.024	8.914
Road 40	40	2000-2100	7.876	2.448	2.232	4.822	2.408	2.844	1.848	1.146	0.907	1.898	1.024	8.914
Road 40	40	2100-2200	7.876	2.448	2.232	4.822	2.408	2.844	1.848	1.146	0.907	1.898	1.024	8.914
Road 40	40	2200-2300	7.876	2.448	2.232	4.822	2.408	2.844	1.848	1.146	0.907	1.898	1.024	8.914
Road 40	40	2300-2400	7.876	2.448	2.232	4.822	2.408	2.844	1.848	1.146	0.907	1.898	1.024	8.914

Tsing Y North Underground Quarry

Open Road North EMN Emulsion Factors for ARMMO model (Year 2020)

Road Name	Road ID	Hour	NO Emulsion					NO Emulsion						
			g/glycol	g/glycol	g/interfacial	g/interfacial	Monthly/Average	g/glycol	g/glycol	g/interfacial	g/interfacial	Monthly/Average		
Road 51	51	0000-0100	1.468	1.468	1.176	0.181	1.468	1.468	1.176	0.181	1.468	1.468	1.176	0.181
Road 51	51	0100-0200	1.286	2.386	1.846	1.136	2.226	1.466	9.474	1.766	1.346	8.898	0.162	1.626
Road 51	51	0200-0300	1.286	2.386	1.846	1.136	2.226	1.466	9.474	1.766	1.346	8.898	0.162	1.626
Road 51	51	0300-0400	2.286	1.846	1.586	2.066</								

1:\Secur\Environment Projects\60732238\1.01\Other\4\Modell\01\Appendix\Traffic\OpenRoad\Appendix 3.5.3 Emission Factor in 2020.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open N1 North Undersation Factors

Open N2 24 Hour Undersation Factors for
ABNMCC model

Year 2030

Road ID	Hour	NO ₂ Emission				NO ₂ Emission				Road ID	Hour
		Monthly/MetricTn		Monthly/Percentage		Monthly/MetricTn		Monthly/Percentage			
		g/hour	kg/day	g/hour	%/hour	g/hour	kg/day	g/hour	%/hour		
Road S4	S4 0800-0900	1.23E-01	4.44E-07	1.03E-05	1.81E-07	8.78E-08	3.13E-01	5.37E-01	1.95E-06	Road S4	S4 1900-2000
Road S4	S4 0900-1000	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 2000-2100
Road S4	S4 1000-1100	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 2100-2200
Road S4	S4 1100-1200	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 2200-2300
Road S4	S4 1200-1300	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 2300-2400
Road S4	S4 1300-1400	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 2400-0100
Road S4	S4 1400-1500	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 0100-0200
Road S4	S4 1500-1600	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 0200-0300
Road S4	S4 1600-1700	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 0300-0400
Road S4	S4 1700-1800	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 0400-0500
Road S4	S4 1800-1900	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 0500-0600
Road S4	S4 1900-2000	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 0600-0700
Road S4	S4 2000-2100	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 0700-0800
Road S4	S4 2100-2200	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 0800-0900
Road S4	S4 2200-2300	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 0900-1000
Road S4	S4 2300-2400	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 1000-1100
Road S4	S4 2400-0100	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 1100-1200
Road S4	S4 0100-0200	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 1200-1300
Road S4	S4 0200-0300	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 1300-1400
Road S4	S4 0300-0400	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 1400-1500
Road S4	S4 0400-0500	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 1500-1600
Road S4	S4 0500-0600	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 1600-1700
Road S4	S4 0600-0700	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 1700-1800
Road S4	S4 0700-0800	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 1800-1900
Road S4	S4 0800-0900	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 1900-2000
Road S4	S4 0900-1000	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 2000-2100
Road S4	S4 1000-1100	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 2100-2200
Road S4	S4 1100-1200	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 2200-2300
Road S4	S4 1200-1300	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 2300-2400
Road S4	S4 1300-1400	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 2400-0100
Road S4	S4 1400-1500	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 0100-0200
Road S4	S4 1500-1600	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 0200-0300
Road S4	S4 1600-1700	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 0300-0400
Road S4	S4 1700-1800	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 0400-0500
Road S4	S4 1800-1900	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 0500-0600
Road S4	S4 1900-2000	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 0600-0700
Road S4	S4 2000-2100	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 0700-0800
Road S4	S4 2100-2200	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 0800-0900
Road S4	S4 2200-2300	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 0900-1000
Road S4	S4 2300-2400	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 1000-1100
Road S4	S4 2400-0100	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 1100-1200
Road S4	S4 0100-0200	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 1200-1300
Road S4	S4 0200-0300	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 1300-1400
Road S4	S4 0300-0400	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 1400-1500
Road S4	S4 0400-0500	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 1500-1600
Road S4	S4 0500-0600	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 1600-1700
Road S4	S4 0600-0700	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 1700-1800
Road S4	S4 0700-0800	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 1800-1900
Road S4	S4 0800-0900	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 1900-2000
Road S4	S4 0900-1000	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 2000-2100
Road S4	S4 1000-1100	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 2100-2200
Road S4	S4 1100-1200	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 2200-2300
Road S4	S4 1200-1300	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 2300-2400
Road S4	S4 1300-1400	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 2400-0100
Road S4	S4 1400-1500	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 0100-0200
Road S4	S4 1500-1600	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 0200-0300
Road S4	S4 1600-1700	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 0300-0400
Road S4	S4 1700-1800	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 0400-0500
Road S4	S4 1800-1900	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 0500-0600
Road S4	S4 1900-2000	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 0600-0700
Road S4	S4 2000-2100	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 0700-0800
Road S4	S4 2100-2200	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 0800-0900
Road S4	S4 2200-2300	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 0900-1000
Road S4	S4 2300-2400	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 1000-1100
Road S4	S4 2400-0100	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 1100-1200
Road S4	S4 0100-0200	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 1200-1300
Road S4	S4 0200-0300	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 1300-1400
Road S4	S4 0300-0400	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 1400-1500
Road S4	S4 0400-0500	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 1500-1600
Road S4	S4 0500-0600	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 1600-1700
Road S4	S4 0600-0700	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 1700-1800
Road S4	S4 0700-0800	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 1800-1900
Road S4	S4 0800-0900	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 1900-2000
Road S4	S4 0900-1000	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 2000-2100
Road S4	S4 1000-1100	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 2100-2200
Road S4	S4 1100-1200	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 2200-2300
Road S4	S4 1200-1300	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.37E-01	1.95E-06	Road S4	S4 2300-2400
Road S4	S4 1300-1400	1.23E-01	4.45E-07	1.03E-05	1.82E-07	8.78E-08	3.14E-01	5.3			

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Open Road\Appendix 3.5.2 Emission Factor in 2030.xlsx

Twin N North underground Quarry

Open Road 84 hour Emission Factors for AERMOD model (t/hy)

Year 2030

Road Name	Road ID	Hour	NO _x Emission			PM ₁₀ Emission		
			g/hour/ha	kg/hour/ha	Mg/hour/ha	g/hour/ha	kg/hour/ha	Mg/hour/ha
Road 103	103	1800-1700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		1700-1800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 103	103	1700-1800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		1800-1900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 103	103	2000-2000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		2000-2100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 103	103	2100-2200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		2200-2300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 103	103	2300-0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0000-0100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 104	104	0300-0300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0300-0400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 104	104	0400-0500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0500-0600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 104	104	0600-0700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0700-0800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 104	104	0800-0900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0900-1000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 104	104	1000-1100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		1100-1200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 104	104	1200-1300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		1300-1400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 104	104	1400-1500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		1500-1600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 104	104	1600-1700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		1700-1800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 104	104	1800-1900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		1900-2000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 104	104	2000-2100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		2100-2200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 104	104	2200-2300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		2300-0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 105	105	0300-0300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0300-0400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 105	105	0400-0500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0500-0600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 105	105	0600-0700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0700-0800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 105	105	0800-0900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0900-1000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 105	105	1000-1100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		1100-1200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 105	105	1200-1300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		1300-1400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 105	105	1400-1500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		1500-1600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 105	105	1600-1700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		1700-1800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 105	105	1800-1900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		1900-2000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 105	105	2000-2100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		2100-2200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 105	105	2200-2300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		2300-0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 106	106	0300-0300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0300-0400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 106	106	0400-0500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0500-0600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 106	106	0600-0700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0700-0800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 106	106	0800-0900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0900-1000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 106	106	1000-1100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		1100-1200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 106	106	1200-1300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		1300-1400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 106	106	1400-1500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		1500-1600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 106	106	1600-1700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		1700-1800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 106	106	1800-1900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		1900-2000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 106	106	2000-2100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		2100-2200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 106	106	2200-2300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		2300-0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 107	107	0300-0300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0300-0400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 107	107	0400-0500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0500-0600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 107	107	0600-0700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0700-0800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 107	107	0800-0900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		0900-1000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 107	107	1000-1100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		1100-1200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 107	107	1200-1300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		1300-1400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 107	107	1400-1500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		1500-1600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 107	107	1600-1700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		1700-1800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 107	107	1800-1900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		1900-2000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 107	107	2000-2100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		2100-2200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 107	107	2200-2300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
		2300-0000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.2 Emission Factor in 2030

Open N₂ North Underminations Factors

Year 2030

Rebore	Read D	Hour	Moisture/Min/Max			Moisture/Average								
Rebore	Read D	Hour	g/h/cm ³	g/cm ³	ton/ton	g/h/cm ³	g/cm ³	ton/ton	Moisture/Average					
Rebore1	1	0000-0100	1.1312	1.8117	8.8416	1.0018	1.4281	7.8210	1.1312	1.8117	8.8416	1.1312	1.8117	8.8416
		0100-0200	1.0208	1.5307	7.9507	0.9105	1.2087	6.9105	1.0208	1.5307	7.9507	1.0208	1.5307	7.9507
		0200-0300	1.1118	1.8012	8.6711	1.0012	1.4187	7.6711	1.1118	1.8012	8.6711	1.1118	1.8012	8.6711
Rebore2	1	0300-0400	1.4212	2.3217	10.4116	1.2912	1.8318	10.3917	1.4212	2.3217	10.4116	1.4212	2.3217	10.4116
		0400-0500	1.0407	1.6412	8.0417	0.9407	1.3418	7.5417	1.0407	1.6412	8.0417	1.0407	1.6412	8.0417
		0500-0600	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
Rebore3	1	0600-0700	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		0700-0800	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		0800-0900	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
Rebore4	1	0900-1000	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		1000-1100	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		1100-1200	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
Rebore5	1	1200-1300	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		1300-1400	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		1400-1500	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
Rebore6	1	1500-1600	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		1600-1700	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		1700-1800	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
Rebore7	1	1800-1900	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		1900-2000	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		2000-2100	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
Rebore8	1	2100-2200	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		2200-2300	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		2300-2400	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
Rebore9	1	2400-2500	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		2500-2600	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		2600-2700	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
Rebore10	1	2700-2800	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		2800-2900	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		2900-3000	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
Rebore11	1	3000-3100	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		3100-3200	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		3200-3300	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
Rebore12	1	3300-3400	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		3400-3500	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		3500-3600	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
Rebore13	1	3600-3700	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		3700-3800	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		3800-3900	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
Rebore14	1	3900-4000	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		4000-4100	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		4100-4200	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
Rebore15	1	4200-4300	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		4300-4400	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		4400-4500	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
Rebore16	1	4500-4600	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		4600-4700	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		4700-4800	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
Rebore17	1	4800-4900	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		4900-5000	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		5000-5100	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
Rebore18	1	5100-5200	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		5200-5300	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		5300-5400	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
Rebore19	1	5400-5500	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		5500-5600	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		5600-5700	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
Rebore20	1	5700-5800	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		5800-5900	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		5900-6000	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
Rebore21	1	6000-6100	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		6100-6200	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		6200-6300	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
Rebore22	1	6300-6400	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		6400-6500	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		6500-6600	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
Rebore23	1	6600-6700	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		6700-6800	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		6800-6900	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
Rebore24	1	6900-7000	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		7000-7100	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		7100-7200	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
Rebore25	1	7200-7300	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		7300-7400	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		7400-7500	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
Rebore26	1	7500-7600	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		7600-7700	1.0208	1.5412	7.9417	0.9208	1.2417	7.4417	1.0208	1.5412	7.9417	1.0208	1.5412	7.9417
		7700-7800	1.0208	1.5412	7.9417	0.9208	1.2417							

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Top 10 North Underquarry									
Open Road to No. 58 Emulsion Factors for									
Year 2000									
ROADNO		ROADNO		ROADNO		ROADNO		ROADNO	
Area	Hour	Area	Hour	Area	Hour	Area	Hour	Area	Hour
Month/Year/Range		Month/Year/Range		Month/Year/Range		Month/Year/Range		Month/Year/Range	
NO Emulsion		NO Emulsion		NO Emulsion		NO Emulsion		NO Emulsion	
g/l/min	liters/hour	g/l/min	liters/hour	g/l/min	liters/hour	g/l/min	liters/hour	g/l/min	liters/hour
Reoad 4	4 0800-0900	1.778	0.127	1.931	0.133	1.874	0.137	1.188	0.206
Reoad 4	4 0900-1000	1.686	0.215	1.252	0.766	0.451	1.951	1.425	0.455
Reoad 4	4 1000-1100	2.485	0.110	1.778	0.110	1.778	0.110	1.778	0.110
Reoad 4	4 1100-1200	2.275	0.043	1.133	1.863	0.473	1.863	0.473	1.133
Reoad 4	4 1200-1300	2.788	0.100	1.778	0.100	1.778	0.100	1.778	0.100
Reoad 4	4 1300-1400	2.543	1.086	0.215	2.446	0.364	0.787	1.881	0.768
Reoad 4	4 1400-1500	2.788	0.100	1.778	0.100	1.778	0.100	1.778	0.100
Reoad 4	4 1500-1600	2.744	0.115	2.313	0.235	0.754	0.757	1.762	0.445
Reoad 4	4 1600-1700	2.814	1.298	0.268	2.313	0.078	2.143	0.769	1.833
Reoad 4	4 1700-1800	2.657	1.000	1.778	0.100	1.778	0.100	1.778	0.100
Reoad 4	4 1800-1900	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 4	4 1900-2000	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 4	4 2000-2100	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 4	4 2100-2200	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 4	4 2200-2300	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 4	4 2300-2400	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 4	4 2400-2500	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 4	4 2500-2600	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 4	4 2600-2700	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 4	4 2700-2800	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 4	4 2800-2900	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 4	4 2900-3000	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 4	4 3000-3100	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 4	4 3100-3200	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 4	4 3200-3300	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 4	4 3300-3400	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 4	4 3400-3500	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 4	4 3500-3600	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 4	4 3600-3700	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 4	4 3700-3800	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 4	4 3800-3900	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 4	4 3900-4000	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 4	4 4000-4100	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 5	5 0800-0900	1.635	0.113	1.265	1.466	0.371	1.151	0.443	1.125
Reoad 5	5 0900-1000	1.838	1.137	0.847	1.545	0.103	0.847	1.545	0.103
Reoad 5	5 1000-1100	1.794	0.937	1.265	1.189	0.131	0.847	1.545	0.103
Reoad 5	5 1100-1200	1.686	1.140	0.847	1.776	0.103	0.847	1.545	0.103
Reoad 5	5 1200-1300	2.139	0.100	1.778	0.100	1.778	0.100	1.778	0.100
Reoad 5	5 1300-1400	2.054	0.056	0.715	0.715	0.303	0.847	1.545	0.103
Reoad 5	5 1400-1500	2.054	0.056	0.715	0.715	0.303	0.847	1.545	0.103
Reoad 5	5 1500-1600	1.946	0.133	1.265	1.278	0.139	1.144	0.241	0.103
Reoad 5	5 1600-1700	1.946	0.133	1.265	1.278	0.139	1.144	0.241	0.103
Reoad 5	5 1700-1800	1.946	0.133	1.265	1.278	0.139	1.144	0.241	0.103
Reoad 5	5 1800-1900	1.946	0.133	1.265	1.278	0.139	1.144	0.241	0.103
Reoad 5	5 1900-2000	1.946	0.133	1.265	1.278	0.139	1.144	0.241	0.103
Reoad 5	5 2000-2100	1.946	0.133	1.265	1.278	0.139	1.144	0.241	0.103
Reoad 5	5 2100-2200	1.946	0.133	1.265	1.278	0.139	1.144	0.241	0.103
Reoad 5	5 2200-2300	1.946	0.133	1.265	1.278	0.139	1.144	0.241	0.103
Reoad 5	5 2300-2400	1.946	0.133	1.265	1.278	0.139	1.144	0.241	0.103
Reoad 5	5 2400-2500	1.946	0.133	1.265	1.278	0.139	1.144	0.241	0.103
Reoad 5	5 2500-2600	1.946	0.133	1.265	1.278	0.139	1.144	0.241	0.103
Reoad 5	5 2600-2700	1.946	0.133	1.265	1.278	0.139	1.144	0.241	0.103
Reoad 5	5 2700-2800	1.946	0.133	1.265	1.278	0.139	1.144	0.241	0.103
Reoad 5	5 2800-2900	1.946	0.133	1.265	1.278	0.139	1.144	0.241	0.103
Reoad 5	5 2900-3000	1.946	0.133	1.265	1.278	0.139	1.144	0.241	0.103
Reoad 5	5 3000-3100	1.946	0.133	1.265	1.278	0.139	1.144	0.241	0.103
Reoad 5	5 3100-3200	1.946	0.133	1.265	1.278	0.139	1.144	0.241	0.103
Reoad 5	5 3200-3300	1.946	0.133	1.265	1.278	0.139	1.144	0.241	0.103
Reoad 5	5 3300-3400	1.946	0.133	1.265	1.278	0.139	1.144	0.241	0.103
Reoad 5	5 3400-3500	1.946	0.133	1.265	1.278	0.139	1.144	0.241	0.103
Reoad 5	5 3500-3600	1.946	0.133	1.265	1.278	0.139	1.144	0.241	0.103
Reoad 5	5 3600-3700	1.946	0.133	1.265	1.278	0.139	1.144	0.241	0.103
Reoad 5	5 3700-3800	1.946	0.133	1.265	1.278	0.139	1.144	0.241	0.103
Reoad 5	5 3800-3900	1.946	0.133	1.265	1.278	0.139	1.144	0.241	0.103
Reoad 5	5 3900-4000	1.946	0.133	1.265	1.278	0.139	1.144	0.241	0.103
Reoad 5	5 4000-4100	1.946	0.133	1.265	1.278	0.139	1.144	0.241	0.103
Reoad 6	6 0800-0900	1.778	0.127	1.931	0.133	1.874	0.137	1.188	0.206
Reoad 6	6 0900-1000	1.686	0.215	1.252	0.766	0.451	1.951	1.425	0.455
Reoad 6	6 1000-1100	2.485	0.110	1.778	0.110	1.778	0.110	1.778	0.110
Reoad 6	6 1100-1200	2.275	0.043	1.133	1.863	0.473	1.863	0.473	1.133
Reoad 6	6 1200-1300	2.788	0.100	1.778	0.100	1.778	0.100	1.778	0.100
Reoad 6	6 1300-1400	2.543	1.086	0.215	2.446	0.364	0.787	1.881	0.768
Reoad 6	6 1400-1500	2.788	0.100	1.778	0.100	1.778	0.100	1.778	0.100
Reoad 6	6 1500-1600	2.744	0.115	2.313	0.235	0.754	0.757	1.762	0.445
Reoad 6	6 1600-1700	2.814	1.298	0.268	2.313	0.078	2.143	0.769	1.833
Reoad 6	6 1700-1800	2.657	1.000	1.778	0.100	1.778	0.100	1.778	0.100
Reoad 6	6 1800-1900	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 6	6 1900-2000	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 6	6 2000-2100	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 6	6 2100-2200	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 6	6 2200-2300	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 6	6 2300-2400	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 6	6 2400-2500	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 6	6 2500-2600	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 6	6 2600-2700	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 6	6 2700-2800	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 6	6 2800-2900	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 6	6 2900-3000	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 6	6 3000-3100	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 6	6 3100-3200	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 6	6 3200-3300	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 6	6 3300-3400	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 6	6 3400-3500	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 6	6 3500-3600	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 6	6 3600-3700	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 6	6 3700-3800	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 6	6 3800-3900	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 6	6 3900-4000	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 6	6 4000-4100	1.544	0.867	1.808	1.344	1.824	0.175	1.226	0.114
Reoad 7	7 0800-0900	1.635	0.113	1.265	1.466	0.371	1.151	0.443	1.125
Reoad 7	7 0900-1000	1.838	1.137	0.847	1.545	0.103	0.847	1.545	0.103
Reoad 7	7 1000-1100	1.794	0.937	1.265	1.189	0.131	0.847	1.545	0.103
Reoad 7	7 1100-1200	1.686	1.140	0.847	1.776	0.103	0.847	1.545	0.103
Reoad 7	7 1200-1300	2.139	0.100	1.778	0.100	1.778	0.100	1.778	0.100
Reoad 7	7 1300-1400	2.054	0.056	0.715	0.715	0.303	0.847	1.545	0.103
Reoad 7	7 1400-1500	2.054	0.056	0.715	0.715	0.303	0.847	1.545	0.103
Reoad 7	7 1500-1600	1.946	0.133	1.265	1.278	0.139	1.144	0.241	0.103
Reoad 7	7 1600-1700	1.946	0.133	1.265	1.278	0.139	1.144	0.241	0.103
Reoad 7	7 1700-1800	1.946	0.133	1.265	1.278	0.139	1.144	0.241	0.103
Reoad 7	7 1800-1900	1.946	0.133	1.265	1.278	0.139	1.144	0.241	0.

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Top North Wind Extenuation Factors													
ARMD Model		Year 2008											
Runway	Model	Run ID	Hour	MO, Emission				MO, Emission					
				Monthly/Runway		Monthly/average		Monthly/Runway		Monthly/average			
				g/hour	lb/hour	lb/day	lb/year	g/hour	lb/hour	lb/day	lb/year		
Runway 7	17000-17000	3.26E-01	1.15E-07	6.01E-06	2.72E-02	8.07E-01	6.03E-01	5.12E-01	1.78E-06	6.67E-05	7.08E-01	1.85E-05	
Runway 7	17000-18000	4.26E-01	1.52E-07	7.91E-06	3.50E-02	8.95E-01	6.27E-01	2.19E-06	2.68E-06	8.61E-05	1.27E-06	3.84E-06	
Runway 7	17000-20000	5.26E-01	2.00E-07	9.81E-06	4.38E-02	1.12E-01	7.59E-01	2.68E-06	3.29E-06	1.11E-04	1.56E-05	4.84E-06	
Runway 7	20000-12000	1.64E-01	2.61E-07	1.00E-06	4.40E-02	2.73E-01	2.62E-06	1.56E-06	1.11E-06	3.67E-06	1.66E-06	2.66E-06	
Runway 7	20000-15000	1.56E-01	2.47E-07	9.50E-06	4.26E-02	1.09E-01	7.40E-01	2.68E-06	2.44E-06	8.27E-05	1.16E-05	3.54E-06	
Runway 7	20000-18000	1.48E-01	2.33E-07	9.00E-06	4.12E-02	1.04E-01	7.10E-01	2.68E-06	2.30E-06	7.87E-05	1.08E-05	3.34E-06	
Runway 7	22000-23000	1.41E-01	1.77E-07	2.00E-06	2.48E-02	1.49E-01	1.75E-01	1.02E-06	2.02E-06	2.85E-05	1.67E-05	2.01E-06	
Runway 7	23000-24000	1.33E-01	1.63E-07	1.86E-06	2.34E-02	1.39E-01	1.63E-01	9.50E-07	1.88E-06	2.63E-05	1.55E-05	1.88E-06	
Runway 8	0000-0100	2.44E-01	7.99E-07	4.02E-07	1.18E-07	1.77E-06	3.10E-05	3.82E-03	1.34E-07	6.30E-04	3.14E-03	2.79E-07	1.64E-06
Runway 8	0100-0200	2.33E-01	7.59E-07	3.86E-07	1.13E-07	1.69E-06	3.02E-05	3.65E-03	1.28E-07	6.04E-04	3.04E-03	2.68E-07	1.58E-06
Runway 8	0200-0300	2.26E-01	7.30E-07	3.70E-07	1.09E-07	1.64E-06	2.94E-05	3.50E-03	1.24E-07	5.86E-04	2.97E-03	2.60E-07	1.54E-06
Runway 8	0300-0500	2.66E-01	9.01E-07	2.05E-07	2.38E-07	3.32E-06	1.88E-05	3.82E-03	1.49E-07	6.10E-04	3.50E-03	1.34E-07	7.76E-06
Runway 8	0500-0700	2.71E-01	9.39E-07	2.10E-07	2.44E-07	3.42E-06	1.94E-05	3.88E-03	1.54E-07	6.23E-04	3.60E-03	1.38E-07	7.96E-06
Runway 8	0700-0800	2.78E-01	9.68E-07	2.16E-07	2.48E-07	3.48E-06	1.98E-05	3.94E-03	1.58E-07	6.32E-04	3.65E-03	1.41E-07	8.12E-06
Runway 8	0800-0900	3.16E-01	9.25E-07	2.48E-07	2.77E-07	3.83E-06	2.14E-05	3.78E-03	1.11E-06	2.24E-03	3.90E-03	1.64E-07	1.59E-05
Runway 8	0900-1000	3.23E-01	9.40E-07	2.53E-07	2.82E-07	3.89E-06	2.18E-05	3.83E-03	1.14E-06	2.29E-03	3.95E-03	1.67E-07	1.63E-05
Runway 8	1000-1100	3.30E-01	9.54E-07	2.58E-07	2.87E-07	3.94E-06	2.22E-05	3.88E-03	1.17E-06	2.34E-03	3.99E-03	1.70E-07	1.66E-05
Runway 8	1100-1200	4.02E-01	1.35E-07	3.65E-06	2.65E-06	1.50E-07	4.45E-06	1.49E-06	1.98E-06	1.98E-06	2.92E-07	1.70E-06	1.43E-05
Runway 8	1200-1300	3.16E-01	9.25E-07	2.48E-07	2.77E-07	3.83E-06	2.14E-05	3.78E-03	1.11E-06	2.24E-03	3.90E-03	1.64E-07	1.59E-05
Runway 8	1400-1500	3.23E-01	9.40E-07	2.53E-07	2.82E-07	3.89E-06	2.18E-05	3.83E-03	1.14E-06	2.29E-03	3.95E-03	1.67E-07	1.63E-05
Runway 8	1500-1600	3.30E-01	9.54E-07	2.58E-07	2.87E-07	3.94E-06	2.22E-05	3.88E-03	1.17E-06	2.34E-03	3.99E-03	1.70E-07	1.66E-05
Runway 8	1600-1700	4.02E-01	1.35E-07	3.65E-06	2.65E-06	1.50E-07	4.45E-06	1.49E-06	1.98E-06	1.98E-06	2.92E-07	1.70E-06	1.43E-05
Runway 8	1700-1800	3.16E-01	9.25E-07	2.48E-07	2.77E-07	3.83E-06	2.14E-05	3.78E-03	1.11E-06	2.24E-03	3.90E-03	1.64E-07	1.59E-05
Runway 8	1800-1900	3.23E-01	9.40E-07	2.53E-07	2.82E-07	3.89E-06	2.18E-05	3.83E-03	1.14E-06	2.29E-03	3.95E-03	1.67E-07	1.63E-05
Runway 8	1900-2000	3.30E-01	9.54E-07	2.58E-07	2.87E-07	3.94E-06	2.22E-05	3.88E-03	1.17E-06	2.34E-03	3.99E-03	1.70E-07	1.66E-05
Runway 8	2000-2100	2.22E-01	1.11E-07	2.24E-06	1.97E-06	9.79E-08	1.98E-07	2.24E-07	1.48E-06	9.99E-06	2.61E-06	1.38E-06	2.85E-06
Runway 8	2100-2200	2.13E-01	1.05E-07	2.10E-06	1.86E-06	9.25E-08	1.89E-07	2.13E-07	1.40E-06	9.39E-06	2.41E-06	1.31E-06	2.74E-06
Runway 8	2200-2300	1.18E-01	1.05E-07	1.21E-06	1.84E-06	8.82E-08	1.78E-07	1.93E-07	1.45E-06	9.58E-06	2.51E-06	1.21E-06	2.45E-06
Runway 8	2300-2400	2.24E-01	1.04E-06	2.16E-06	1.92E-06	9.99E-08	1.94E-07	2.04E-07	1.49E-06	1.14E-06	2.54E-06	9.11E-07	2.48E-06
Runway 8	0000-0100	1.62E-01	5.00E-07	1.61E-06	1.40E-06	5.80E-08	1.19E-07	1.28E-07	8.61E-06	5.70E-06	1.49E-06	6.10E-07	1.64E-06
Runway 8	0100-0200	1.66E-01	5.31E-07	1.66E-06	1.43E-06	5.98E-08	1.23E-07	1.32E-07	8.89E-06	5.97E-06	1.54E-06	6.35E-07	1.72E-06
Runway 8	0200-0300	1.66E-01	5.31E-07	1.66E-06	1.43E-06	5.98E-08	1.23E-07	1.32E-07	8.89E-06	5.97E-06	1.54E-06	6.35E-07	1.72E-06
Runway 8	0300-0400	1.91E-01	5.86E-07	1.86E-06	1.59E-06	6.55E-08	1.36E-07	1.48E-07	1.01E-06	6.57E-06	1.71E-06	6.80E-07	1.88E-06
Runway 8	0400-0500	2.08E-01	6.25E-07	2.05E-06	1.74E-06	6.94E-08	1.46E-07	1.59E-07	1.12E-06	7.12E-06	1.86E-06	7.08E-07	2.08E-06
Runway 8	0500-0600	2.26E-01	6.65E-07	2.23E-06	1.89E-06	7.45E-08	1.57E-07	1.71E-07	1.19E-06	7.59E-06	1.95E-06	7.38E-07	2.16E-06
Runway 8	0600-0700	2.13E-01	6.35E-07	1.99E-06	1.71E-06	7.03E-08	1.54E-07	1.65E-07	1.16E-06	7.38E-06	1.90E-06	7.13E-07	2.05E-06
Runway 8	0700-0800	2.13E-01	6.35E-07	1.99E-06	1.71E-06	7.03E-08	1.54E-07	1.65E-07	1.16E-06	7.38E-06	1.90E-06	7.13E-07	2.05E-06
Runway 8	0800-0900	2.01E-01	6.11E-07	1.91E-06	1.64E-06	6.75E-08	1.48E-07	1.57E-07	1.12E-06	7.12E-06	1.86E-06	7.08E-07	2.08E-06
Runway 8	0900-1000	2.01E-01	6.11E-07	1.91E-06	1.64E-06	6.75E-08	1.48E-07	1.57E-07	1.12E-06	7.12E-06	1.86E-06	7.08E-07	2.08E-06
Runway 8	1000-1100	1.71E-01	5.30E-07	1.66E-06	1.46E-06	5.98E-08	1.23E-07	1.32E-07	8.89E-06	5.97E-06	1.54E-06	6.35E-07	1.72E-06
Runway 8	1100-1200	1.71E-01	5.30E-07	1.66E-06	1.46E-06	5.98E-08	1.23E-07	1.32E-07	8.89E-06	5.97E-06	1.54E-06	6.35E-07	1.72E-06
Runway 8	1200-1300	1.31E-01	4.05E-07	1.25E-06	1.08E-06	4.53E-08	1.09E-07	1.18E-07	8.28E-06	5.39E-06	1.38E-06	5.20E-07	1.41E-06
Runway 8	1300-1400	1.63E-01	5.00E-07	1.61E-06	1.40E-06	5.80E-08	1.19E-07	1.28E-07	8.61E-06	5.70E-06	1.49E-06	6.10E-07	1.64E-06
Runway 8	1400-1500	1.66E-01	5.31E-07	1.66E-06	1.43E-06	5.98E-08	1.23E-07	1.32E-07	8.89E-06	5.97E-06	1.54E-06	6.35E-07	1.72E-06
Runway 8	1500-1600	1.66E-01	5.31E-07	1.66E-06	1.43E-06	5.98E-08	1.23E-07	1.32E-07	8.89E-06	5.97E-06	1.54E-06	6.35E-07	1.72E-06
Runway 8	1600-1700	1.91E-01	5.86E-07	1.86E-06	1.59E-06	6.55E-08	1.36E-07	1.48E-07	1.01E-06	6.57E-06	1.71E-06	6.80E-07	1.88E-06
Runway 8	1700-1800	2.08E-01	6.25E-07	2.05E-06	1.74E-06	6.94E-08	1.46E-07	1.59E-07	1.12E-06	7.12E-06	1.86E-06	7.08E-07	2.08E-06
Runway 8	1800-1900	2.26E-01	6.65E-07	2.23E-06	1.89E-06	7.45E-08	1.57E-07	1.71E-07	1.19E-06	7.59E-06	1.95E-06	7.38E-07	2.16E-06
Runway 8	1900-2000	2.13E-01	6.35E-07	1.99E-06	1.71E-06	7.03E-08	1.54E-07	1.65E-07	1.16E-06	7.38E-06	1.90E-06	7.13E-07	2.05E-06
Runway 8	2000-2100	2.13E-01	6.35E-07	1.99E-06	1.71E-06	7.03E-08	1.54E-07	1.65E-07	1.16E-06	7.38E-06	1.90E-06	7.13E-07	2.05E-06
Runway 8	2100-2200	2.21E-01	2.24E-06	1.96E-06	1.94E-06	1.93E-07	1.48E-06	2.56E-07	1.69E-06	1.89E-06	2.18E-06	1.17E-06	1.81E-05
Runway 8	2200-2300	2.28E-01	2.32E-06	2.03E-06	2.01E-06	2.00E-07	1.52E-06	2.64E-07	1.75E-06	1.96E-06	2.25E-06	1.22E-06	1.88E-05
Runway 8	2300-2400	2.28E-01	2.32E-06	2.03E-06	2.01E-06	2.00E-07	1.52E-06	2.64E-07	1.75E-06	1.96E-06	2.25E-06	1.22E-06	1.88E-05
Runway 9	0000-0100	2.28E-01	2.32E-06	2.03E-06	2.01E-06	2.00E-07	1.52E-06	2.64E-07	1.75E-06	1.96E-06	2.25E-06	1.22E-06	1.88E-05
Runway 9	0100-0200	2.28E-01	2.32E-06	2.03E-06	2.01E-06	2.00E-07	1.52E-06	2.64E-07	1.75E-06	1.96E-06	2.25E-06	1.22E-06	1.88E-05
Runway 9	0200-0300	2.28E-01	2.32E-06	2.03E-06	2.01E-06	2.00E-07	1.52E-06	2.64E-07	1.75E-06	1.96E-06	2.25E-06	1.22E-06	1.88E-05
Runway 9	0300-0400	2.28E-01	2.32E-06	2.03E-06	2.01E-06	2.00E-07	1.52E-06	2.64E-07	1.75E-06	1.96E-06	2.25E-06	1.22E-06	1.88E-05
Runway 9	0400-0500	2.28E-01	2.32E-06	2.03E-06	2.01E-06	2.00E-07	1.52E-06	2.64E-07	1.75E-06	1.96E-06	2.25E-06	1.22E-06	1.88E-05
Runway 9	0500-0600	2.28E-01	2.32E-06	2.03E-06	2.01E-06	2.00E-07	1.52E-06	2.64E-07	1.75E-06	1.96E-06	2.25E-06	1.22E-06	1.88E-05
Runway 9	0600-0700	2.28E-01	2.32E-06	2.03E-06	2.01E-06	2.00E-07	1.52E-06	2.64E-07	1.75E-06	1.96E-06	2.25E-06	1.22E-06	1.88E-05
Runway 9	0700-0800	2.28E-01	2.32E-06	2.03E-06	2.01E-06	2.00E-07	1.52E-06	2.64E-07	1.75E-06	1.96E-06	2.25E-06	1.22E-06	1.88E-05
Runway 9	0800-0900	2.28E-01	2.32E-06	2.03E-06	2.01E-06	2.00E-07	1.52E-06	2.64E-07	1.75E-06	1.96E-06	2.25E-06	1.22E-06	1.88E-05
Runway 9	0900-1000	2.28E-01	2.32E-06	2.03E-06	2.01E-06	2.00E-07	1.52E-06	2.64E-07	1.75E-06	1.96E-06	2.25E-06	1.22E-06	1.88E-05
Runway 9	1000-1100	2.28E-01	2.32E-06	2.03E-06	2.01E-06	2.00E-07	1.52E-06	2.64E-07	1.75E-06	1.96E-06	2.25E-06	1.22E-06	1.88E-05
Runway 9	1100-1200	2.28E-01	2.32E-06	2.03E-06	2.01E-06	2.00E-07	1.52E-06	2.64E-07	1.75E-06	1.96E-06	2.25E-06	1.22E-06	1.88E-05
Runway 9	1200-1300	2.28E-01	2.32E-06	2.03E-06	2.01E-06	2.00E-07	1.52E-06	2.64E-07	1.75E-06	1.96E-06	2.25E-06	1.22E-06	1.88E-05
Runway 9	1300-1400	2.28E-01	2.32E-06	2.03E-06	2.01E-06	2.00E-07	1.52E-06	2.64E-07	1.75E-06	1.96E-06			

1) Secure Equipment: Project(10723738)(1.01)(Other) Aid Modelled: Appendix: Traffic/ Open Road: Appendix 3.5.3 Emission Factor in 2020 view

Total North Underground Quarry												
Open Road & No.5 Emulsion Factors for Year 2030												
Road ID			No.5 Emulsion						No.5 Emulsion			
Year	Route	Hour	Monthly/tonnage		Monthly/tonnage		Monthly/tonnage		Monthly/tonnage		Monthly/tonnage	
Month	Year	Hour	g/ton	g/ton	g/ton	g/ton	g/ton	g/ton	g/ton	g/ton	g/ton	g/ton
Road 11	11	0000-0100	1.6352	0.0177	6.9157	3.5552	0.0177	6.3627	3.3451	3.0516	4.5465	3.0851
Road 11	11	0100-0200	1.4742	1.3885	0.3567	3.5055	1.2295	4.0462	1.4552	1.1545	4.4235	2.7212
Road 11	11	0200-0300	1.4105	1.3885	0.3567	3.5055	1.2295	4.0462	1.4552	1.1545	4.4235	2.7212
Road 11	11	0300-0400	1.4105	1.3885	0.3567	3.5055	1.2295	4.0462	1.4552	1.1545	4.4235	2.7212
Road 11	11	0400-0500	5.2725	0.0177	4.0552	4.8551	0.7795	0.3677	1.8025	1.7485	0.2562	3.5451
Road 11	11	0500-0600	2.9655	2.1465	0.4447	4.5115	0.6655	1.4552	1.4552	1.1545	3.2255	3.0516
Road 11	11	0600-0700	2.9655	2.1465	0.4447	4.5115	0.6655	1.4552	1.4552	1.1545	3.2255	3.0516
Road 11	11	0700-0800	0.9005	3.5555	1.3545	4.0462	1.3545	1.3545	3.8055	2.8555	1.0555	3.6351
Road 11	11	0800-0900	1.1115	3.5555	1.3545	4.0462	1.3545	1.3545	3.8055	2.8555	1.0555	3.6351
Road 11	11	0900-1000	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 11	11	1000-1100	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 11	11	1100-1200	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 11	11	1200-1300	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 11	11	1300-1400	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 11	11	1400-1500	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 11	11	1500-1600	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 11	11	1600-1700	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 11	11	1700-1800	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 11	11	1800-1900	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 11	11	1900-2000	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 11	11	2000-2100	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 11	11	2100-2200	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 11	11	2200-2300	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 11	11	2300-0000	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 12	12	0000-0100	1.6352	0.0177	6.9157	3.5552	0.0177	6.3627	3.3451	3.0516	4.5465	3.0851
Road 12	12	0100-0200	1.4742	1.3885	0.3567	3.5055	1.2295	4.0462	1.4552	1.1545	4.4235	2.7212
Road 12	12	0200-0300	1.4105	1.3885	0.3567	3.5055	1.2295	4.0462	1.4552	1.1545	4.4235	2.7212
Road 12	12	0300-0400	1.4105	1.3885	0.3567	3.5055	1.2295	4.0462	1.4552	1.1545	4.4235	2.7212
Road 12	12	0400-0500	5.2725	0.0177	4.0552	4.8551	0.7795	0.3677	1.8025	1.7485	0.2562	3.5451
Road 12	12	0500-0600	2.9655	2.1465	0.4447	4.5115	0.6655	1.4552	1.4552	1.1545	3.2255	3.0516
Road 12	12	0600-0700	2.9655	2.1465	0.4447	4.5115	0.6655	1.4552	1.4552	1.1545	3.2255	3.0516
Road 12	12	0700-0800	0.9005	3.5555	1.3545	4.0462	1.3545	1.3545	3.8055	2.8555	1.0555	3.6351
Road 12	12	0800-0900	1.1115	3.5555	1.3545	4.0462	1.3545	1.3545	3.8055	2.8555	1.0555	3.6351
Road 12	12	0900-1000	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 12	12	1000-1100	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 12	12	1100-1200	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 12	12	1200-1300	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 12	12	1300-1400	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 12	12	1400-1500	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 12	12	1500-1600	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 12	12	1600-1700	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 12	12	1700-1800	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 12	12	1800-1900	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 12	12	1900-2000	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 12	12	2000-2100	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 12	12	2100-2200	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 12	12	2200-2300	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 12	12	2300-0000	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 13	13	0000-0100	1.6352	0.0177	6.9157	3.5552	0.0177	6.3627	3.3451	3.0516	4.5465	3.0851
Road 13	13	0100-0200	1.4742	1.3885	0.3567	3.5055	1.2295	4.0462	1.4552	1.1545	4.4235	2.7212
Road 13	13	0200-0300	1.4105	1.3885	0.3567	3.5055	1.2295	4.0462	1.4552	1.1545	4.4235	2.7212
Road 13	13	0300-0400	1.4105	1.3885	0.3567	3.5055	1.2295	4.0462	1.4552	1.1545	4.4235	2.7212
Road 13	13	0400-0500	5.2725	0.0177	4.0552	4.8551	0.7795	0.3677	1.8025	1.7485	0.2562	3.5451
Road 13	13	0500-0600	2.9655	2.1465	0.4447	4.5115	0.6655	1.4552	1.4552	1.1545	3.2255	3.0516
Road 13	13	0600-0700	2.9655	2.1465	0.4447	4.5115	0.6655	1.4552	1.4552	1.1545	3.2255	3.0516
Road 13	13	0700-0800	0.9005	3.5555	1.3545	4.0462	1.3545	1.3545	3.8055	2.8555	1.0555	3.6351
Road 13	13	0800-0900	1.1115	3.5555	1.3545	4.0462	1.3545	1.3545	3.8055	2.8555	1.0555	3.6351
Road 13	13	0900-1000	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 13	13	1000-1100	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 13	13	1100-1200	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 13	13	1200-1300	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 13	13	1300-1400	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 13	13	1400-1500	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 13	13	1500-1600	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 13	13	1600-1700	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 13	13	1700-1800	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 13	13	1800-1900	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 13	13	1900-2000	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 13	13	2000-2100	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 13	13	2100-2200	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 13	13	2200-2300	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 13	13	2300-0000	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 14	14	0000-0100	1.6352	0.0177	6.9157	3.5552	0.0177	6.3627	3.3451	3.0516	4.5465	3.0851
Road 14	14	0100-0200	1.4742	1.3885	0.3567	3.5055	1.2295	4.0462	1.4552	1.1545	4.4235	2.7212
Road 14	14	0200-0300	1.4105	1.3885	0.3567	3.5055	1.2295	4.0462	1.4552	1.1545	4.4235	2.7212
Road 14	14	0300-0400	1.4105	1.3885	0.3567	3.5055	1.2295	4.0462	1.4552	1.1545	4.4235	2.7212
Road 14	14	0400-0500	5.2725	0.0177	4.0552	4.8551	0.7795	0.3677	1.8025	1.7485	0.2562	3.5451
Road 14	14	0500-0600	2.9655	2.1465	0.4447	4.5115	0.6655	1.4552	1.4552	1.1545	3.2255	3.0516
Road 14	14	0600-0700	2.9655	2.1465	0.4447	4.5115	0.6655	1.4552	1.4552	1.1545	3.2255	3.0516
Road 14	14	0700-0800	0.9005	3.5555	1.3545	4.0462	1.3545	1.3545	3.8055	2.8555	1.0555	3.6351
Road 14	14	0800-0900	1.1115	3.5555	1.3545	4.0462	1.3545	1.3545	3.8055	2.8555	1.0555	3.6351
Road 14	14	0900-1000	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 14	14	1000-1100	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 14	14	1100-1200	0.8155	0.8155	4.1585	5.1885	0.8445	1.7895	1.0255	1.7335	2.7775	0.7335
Road 14	1											

1: (Source) Environment: Biocentr16072273061_011(Other) AidModelled) Appendix Traffic/OnRoad) Appendix 2.5.2 Emission Factor in 2020

Open Yr North Undermining Quarry												
2020 Yr North Undermining Quarry												
ARMD Model												
Model		Run ID		MO, Emotion				MO, Emotion				
		Hour		MonthlyMean		MonthlyMean/Average		MonthlyMax/min		MonthlyMax/Average		
				g/h/min	h/min	h/min	h/min	h/min	h/min	h/min	h/min	
Row 14	14	0800-0900	4,552.02	4,552.02	1,387.0	1,387.0	5,996.0	6,000.0	1,281.0	1,281.0	6,131.0	6,131.0
Row 15	15	0900-1000	2,506.0	2,506.0	2,506.0	2,506.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 16	16	1000-1100	5,000.0	5,000.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 17	17	1100-1200	5,000.0	5,000.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 18	18	1200-1300	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 19	19	1300-1400	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 20	20	1400-1500	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 21	21	1500-1600	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 22	22	1600-1700	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 23	23	1700-1800	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 24	24	1800-1900	4,232.0	4,232.0	1,387.0	1,387.0	7,125.0	7,125.0	1,116.0	1,116.0	5,433.0	5,433.0
Row 25	25	1900-2000	3,647.0	3,647.0	1,387.0	1,387.0	6,548.0	6,548.0	2,034.0	2,034.0	6,488.0	6,488.0
Row 26	26	2000-2100	3,647.0	3,647.0	1,387.0	1,387.0	6,548.0	6,548.0	2,034.0	2,034.0	6,488.0	6,488.0
Row 27	27	2100-2200	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 28	28	2200-2300	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 29	29	2300-2400	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 30	30	2400-2500	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 31	31	2500-2600	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 32	32	2600-2700	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 33	33	2700-2800	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 34	34	2800-2900	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 35	35	2900-3000	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 36	36	3000-3100	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 37	37	3100-3200	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 38	38	3200-3300	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 39	39	3300-3400	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 40	40	3400-3500	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 41	41	3500-3600	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 42	42	3600-3700	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 43	43	3700-3800	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 44	44	3800-3900	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 45	45	3900-4000	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 46	46	4000-4100	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 47	47	4100-4200	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 48	48	4200-4300	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 49	49	4300-4400	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 50	50	4400-4500	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 51	51	4500-4600	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 52	52	4600-4700	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 53	53	4700-4800	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 54	54	4800-4900	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 55	55	4900-5000	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 56	56	5000-5100	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 57	57	5100-5200	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 58	58	5200-5300	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 59	59	5300-5400	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 60	60	5400-5500	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 61	61	5500-5600	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 62	62	5600-5700	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 63	63	5700-5800	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 64	64	5800-5900	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 65	65	5900-6000	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 66	66	6000-6100	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 67	67	6100-6200	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 68	68	6200-6300	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 69	69	6300-6400	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 70	70	6400-6500	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 71	71	6500-6600	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 72	72	6600-6700	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 73	73	6700-6800	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 74	74	6800-6900	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 75	75	6900-7000	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 76	76	7000-7100	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 77	77	7100-7200	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 78	78	7200-7300	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 79	79	7300-7400	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 80	80	7400-7500	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 81	81	7500-7600	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 82	82	7600-7700	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 83	83	7700-7800	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 84	84	7800-7900	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 85	85	7900-8000	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 86	86	8000-8100	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 87	87	8100-8200	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 88	88	8200-8300	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 89	89	8300-8400	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 90	90	8400-8500	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 91	91	8500-8600	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,125.0	4,448.0	4,448.0
Row 92	92	8600-8700	7,156.0	7,156.0	4,448.0	4,448.0	6,536.0	6,536.0	1,125.0	1,		

1:\Secure\Environment - Baseline\G0722770\1.01\Other\Aid\Modeller\Appendix-Traffic\OnesRoad\Appendix 2 E 3 Emission Factor in 2020.xls

Tolling North and Underground Quarry														
Open Road 24 Hour Emission Factors for														
ARMDM Model (Rugnet)														
Year 2030														
Road Name	Road ID	Hour	NO _x Emission						NO ₂ Emission					
			g/min/km ²	g/min/km ²	g/min/km ²	g/min/km ²	g/min/km ²	g/min/km ²	g/min/km ²	g/min/km ²	g/min/km ²	g/min/km ²		
Monthly/Average														
Road 17	17	0600-0300	1.966	0.912	1.605	0.532	0.45	0.676	0.686	1.084	2.221	0.63	0.95	
Road 17	17	1700-1800	2.999	4.612	3.052	2.505	0.885	1.143	2.335	3.042	1.622	2.906	0.67	1.88
Road 17	17	2100-0600	2.188	1.601	1.211	0.618	0.56	0.81	0.81	1.04	1.69	1.69	0.61	1.69
Road 17	17	0900-3000	5.001	2.477	2.721	0.632	0.212	0.619	0.981	2.588	7.555	1.692	2.136	0.416
Road 17	17	0300-0600	1.661	0.865	1.406	0.502	0.45	0.676	0.686	1.084	2.221	0.63	0.95	
Road 17	17	0600-0900	1.715	0.912	1.605	0.532	0.45	0.676	0.686	1.084	2.221	0.63	0.95	
Road 17	17	0900-1200	1.764	1.027	1.504	0.488	0.245	0.624	0.605	0.937	1.695	1.692	1.692	1.692
Road 17	17	1200-1500	1.764	1.027	1.504	0.488	0.245	0.624	0.605	0.937	1.695	1.692	1.692	1.692
Road 17	17	1500-1800	1.764	1.027	1.504	0.488	0.245	0.624	0.605	0.937	1.695	1.692	1.692	1.692
Road 17	17	1800-2100	1.661	0.865	1.406	0.502	0.45	0.676	0.686	1.084	2.221	0.63	0.95	
Road 18	18	0600-0300	1.711	0.406	1.605	1.586	0.376	1.481	0.712	4.067	1.006	1.561	0.376	1.481
Road 18	18	0300-0600	1.434	0.808	1.624	1.725	0.275	1.283	0.843	3.407	1.345	1.813	0.843	1.345
Road 18	18	0600-0900	1.564	0.964	1.488	1.488	0.376	1.481	0.712	4.067	1.006	1.561	0.376	1.481
Road 18	18	0900-1200	1.608	0.876	0.638	2.576	0.742	0.318	2.398	1.648	0.167	2.402	0.167	2.402
Road 18	18	1200-1500	1.608	0.876	0.638	2.576	0.742	0.318	2.398	1.648	0.167	2.402	0.167	2.402
Road 18	18	1500-1800	1.608	0.876	0.638	2.576	0.742	0.318	2.398	1.648	0.167	2.402	0.167	2.402
Road 18	18	1800-2100	2.086	2.368	1.142	1.938	0.301	0.744	1.844	2.786	1.095	0.64	2.166	0.06
Road 18	18	2100-0600	2.086	2.368	1.142	1.938	0.301	0.744	1.844	2.786	1.095	0.64	2.166	0.06
Road 18	18	0600-0900	2.086	2.368	1.142	1.938	0.301	0.744	1.844	2.786	1.095	0.64	2.166	0.06
Road 18	18	0900-1200	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	1200-1500	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	1500-1800	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	1800-2100	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	2100-0600	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	0600-0900	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	0900-1200	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	1200-1500	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	1500-1800	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	1800-2100	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	2100-0600	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	0600-0900	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	0900-1200	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	1200-1500	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	1500-1800	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	1800-2100	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	2100-0600	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	0600-0900	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	0900-1200	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	1200-1500	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	1500-1800	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	1800-2100	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	2100-0600	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	0600-0900	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	0900-1200	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	1200-1500	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	1500-1800	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	1800-2100	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	2100-0600	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	0600-0900	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	0900-1200	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	1200-1500	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	1500-1800	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	1800-2100	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	2100-0600	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	0600-0900	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	0900-1200	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	1200-1500	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	1500-1800	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	1800-2100	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	2100-0600	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	0600-0900	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	0900-1200	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	1200-1500	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	1500-1800	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	1800-2100	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	2100-0600	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	0600-0900	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	0900-1200	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	1200-1500	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	1500-1800	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	1800-2100	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	2100-0600	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	0600-0900	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	0900-1200	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	1200-1500	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
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Road 18	18	1800-2100	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	2100-0600	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.652	0.934	1.844	0.212
Road 18	18	0600-0900	2.418	3.042	1.346	1.346	0.212	0.619	1.149	2.848	2.65			

1.1-Secure Environment: Project\60722738\1.01\Other\Air\Modelling\Appendix\Traffic\OpenRoads\Appendix 2.5.3 Emission Factor to 2026

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

[illegible]

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

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Open Yr North Undermining Quarry

2014 to 2024 Emission Factors for											
ARMMO Road (Road #)											
Road Name		Road ID		No. Emission				No. Emission			
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				g/hour	g/ha	g/hour	g/ha	g/hour	g/ha	g/hour	g/ha
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
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				No. Emission		No. Emission		No. Emission		No. Emission	
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				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	
				No. Emission		No. Emission		No. Emission		No. Emission	
				Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha	

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.2 Emission Factor in 2030.xlsx

Open Road 24 Hour Emission Factors for ARXRD model (Exhaustion)													
Open Road	Road ID	Hour	NOx Emission				NO ₂ Emission						
			Monthly/Route		Monthly/Route Average		Monthly/Route		Monthly/Route Average				
			g/min/mi	g/min/mi	g/min/mi	g/min/mi	g/min/mi	g/min/mi	g/min/mi	g/min/mi			
Read 24	0800-0900	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	0900-1000	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1000-1100	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1100-1200	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1200-1300	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1300-1400	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1400-1500	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1500-1600	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1600-1700	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1700-1800	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1800-1900	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1900-2000	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	2000-2100	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	2100-2200	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	2200-2300	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	2300-2400	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	0000-0100	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	0100-0200	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	0200-0300	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	0300-0400	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	0400-0500	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	0500-0600	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	0600-0700	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	0700-0800	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	0800-0900	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	0900-1000	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1000-1100	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1100-1200	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1200-1300	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1300-1400	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1400-1500	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1500-1600	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1600-1700	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1700-1800	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1800-1900	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1900-2000	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	2000-2100	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	2100-2200	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	2200-2300	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	2300-2400	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	0000-0100	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	0100-0200	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	0200-0300	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	0300-0400	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	0400-0500	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	0500-0600	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	0600-0700	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	0700-0800	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	0800-0900	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	0900-1000	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1000-1100	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1100-1200	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1200-1300	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1300-1400	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1400-1500	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1500-1600	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1600-1700	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1700-1800	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1800-1900	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1900-2000	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	2000-2100	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	2100-2200	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	2200-2300	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	2300-2400	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	0000-0100	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	0100-0200	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	0200-0300	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	0300-0400	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	0400-0500	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	0500-0600	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	0600-0700	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	0700-0800	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	0800-0900	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	0900-1000	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1000-1100	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1100-1200	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1200-1300	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1300-1400	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1400-1500	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1500-1600	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1600-1700	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1700-1800	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228	3.046	8.271	1.046	2.616
Read 24	1800-1900	2.368	4.147	7.336	1.846	0.178	8.250	9.018	1.228				

\\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.2 Emission Factor in 2030.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open North & South Ensonment Factors for
ARMCO model (Eaton 1981)

Year 2000

Row Number	Hour	North Ensonment				South Ensonment							
		Monthly/Average	Monthly/Average	Monthly/Average	Monthly/Average	Monthly/Average	Monthly/Average	Monthly/Average	Monthly/Average				
Row 27	27 1800	2.586	6.605	2.016	2.138	1.648	1.681	1.054	2.688	8.366	8.661	2.726	8.816
Row 27	27 1900	2.586	6.605	2.016	2.138	1.648	1.681	1.054	2.688	8.366	8.661	2.726	8.816
Row 27	27 2000	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 2100	2.005	1.882	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 2200	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 2300	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 2400	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 2500	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 2600	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 2700	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 2800	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 2900	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 3000	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 3100	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 3200	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 3300	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 3400	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 3500	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 3600	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 3700	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 3800	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 3900	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 4000	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 4100	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 4200	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 4300	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 4400	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 4500	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 4600	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 4700	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 4800	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 4900	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 5000	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 5100	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 5200	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 5300	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 5400	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 5500	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 5600	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 5700	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 5800	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 5900	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 6000	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 6100	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 6200	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 6300	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 6400	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 6500	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 6600	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 6700	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 6800	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 6900	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 7000	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 7100	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 7200	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 7300	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 7400	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 7500	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 7600	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 7700	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 7800	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 7900	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 8000	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 8100	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 8200	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 8300	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 8400	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 8500	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 8600	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 8700	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 8800	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 8900	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 9000	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 9100	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 9200	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 9300	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 9400	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 9500	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 9600	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 9700	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 9800	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 9900	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 1000	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 1100	1.976	2.005	6.147	1.611	1.676	1.517	8.335	8.642	2.666	8.902	8.706	9.022
Row 27	27 1200	1.976	2.005										

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Open T4 North Undermining Factors for ARXND0 model (September)													Year 2030
Road	Route ID	Hour	No Emission				Emission						
			g/hw/h	g/hw/h	g/hw/h	g/hw/h	g/hw/h	g/hw/h	g/hw/h	g/hw/h			
Road 11	0100-0100	5:11:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	5:14:02	1.7556	8.8007	1.0270	0.8268	0.5601	7.0909	0.5331	7.0909	0.5331	7.0909	8.5306
	0100-0100	5:17:02	1.7556	8.8007	1.0270	0.8268	0.5601	7.0909	0.5331	7.0909	0.5331	7.0909	8.5306
	0100-0100	5:20:02	4.4212	7.527	6.2747	7.025	6.3078	6.3077	2.8901	4.0327	4.408	4.0257	3.6106
Road 11	0100-0100	5:23:02	4.4212	7.527	6.2747	7.025	6.3078	6.3077	2.8901	4.0327	4.408	4.0257	3.6106
	0100-0100	5:26:02	4.4212	7.527	6.2747	7.025	6.3078	6.3077	2.8901	4.0327	4.408	4.0257	3.6106
	0100-0100	5:29:02	4.4212	7.527	6.2747	7.025	6.3078	6.3077	2.8901	4.0327	4.408	4.0257	3.6106
	0100-0100	5:32:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
Road 11	0100-0100	5:35:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	5:38:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	5:41:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	5:44:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
Road 11	0100-0100	5:47:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	5:50:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	5:53:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	5:56:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
Road 11	0100-0100	5:59:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	6:02:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	6:05:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	6:08:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
Road 11	0100-0100	6:11:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	6:14:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	6:17:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	6:20:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
Road 11	0100-0100	6:23:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	6:26:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	6:29:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	6:32:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
Road 11	0100-0100	6:35:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	6:38:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	6:41:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	6:44:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
Road 11	0100-0100	6:47:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	6:50:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	6:53:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	6:56:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
Road 11	0100-0100	6:59:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	7:02:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	7:05:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	7:08:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
Road 11	0100-0100	7:11:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	7:14:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	7:17:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	7:20:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
Road 11	0100-0100	7:23:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	7:26:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	7:29:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	7:32:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
Road 11	0100-0100	7:35:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	7:38:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	7:41:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	7:44:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
Road 11	0100-0100	7:47:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	7:50:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	7:53:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	7:56:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
Road 11	0100-0100	7:59:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	8:02:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	8:05:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	8:08:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
Road 11	0100-0100	8:11:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	8:14:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	8:17:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	8:20:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
Road 11	0100-0100	8:23:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	8:26:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	8:29:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	8:32:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
Road 11	0100-0100	8:35:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	8:38:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	8:41:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	8:44:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
Road 11	0100-0100	8:47:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	8:50:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	8:53:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	8:56:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
Road 11	0100-0100	8:59:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	9:02:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	9:05:02	1.3771	1.1130	1.3881	0.1025	0.9887	2.4511	0.9847	8.8006	2.0003	8.1447	7.7716
	0100-0100	9:08:02	1.3771	1.1130	1.38								

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Open Road 24 Hour Emission Factors for ARXRD model (Exhaustion)														Year 2000	
Road ID	Road ID	Hour	NOx Emission						PM10 Emission						
			Monthly/season			Monthly/season			Monthly/season			Monthly/season			
			g/min/mi	lb/min/mi	lb/day/mi	g/min/mi	lb/min/mi	lb/day/mi	g/min/mi	lb/min/mi	lb/day/mi	g/min/mi	lb/min/mi	lb/day/mi	
Read 17	3600-1700	1.835	1.688	1.868	8.964	1.1118	1.8458	4.4052	1.7458	1.7607	1.801	6.5718	1.5117	1.5117	
Read 17	1700-1800	1.6355	1.588	1.568	8.964	1.1118	1.8458	4.4052	1.7458	1.7607	1.801	6.5718	1.5117	1.5117	
Read 17	1800-1900	1.6355	1.588	1.568	8.964	1.1118	1.8458	4.4052	1.7458	1.7607	1.801	6.5718	1.5117	1.5117	
Read 17	1900-2000	4.8912	6.2799	1.555	4.888	6.4725	1.3798	2.2885	1.5885	1.9418	2.2885	3.1758	1.8818	1.8818	
Read 17	2000-2100	4.4352	5.7202	1.488	4.4352	5.7202	1.488	4.4352	5.7202	1.488	4.4352	5.7202	1.488	4.4352	
Read 17	2100-2200	4.8912	6.2799	1.555	4.888	6.4725	1.3798	2.2885	1.5885	1.9418	2.2885	3.1758	1.8818	1.8818	
Read 17	2200-2300	1.6355	1.588	1.568	8.964	1.1118	1.8458	4.4052	1.7458	1.7607	1.801	6.5718	1.5117	1.5117	
Read 17	2300-2400	1.6355	1.588	1.568	8.964	1.1118	1.8458	4.4052	1.7458	1.7607	1.801	6.5718	1.5117	1.5117	
Read 18	0600-0700	1.0961	1.1177	0.6167	0.9452	1.0245	0.8356	0.5196	0.4604	4.5916	4.5252	4.6847	3.9965	3.9965	
Read 18	0700-0800	1.0961	1.1177	0.6167	0.9452	1.0245	0.8356	0.5196	0.4604	4.5916	4.5252	4.6847	3.9965	3.9965	
Read 18	0800-0900	1.1885	1.1885	0.7325	0.9511	1.0319	0.8473	0.5355	0.4742	5.755	4.775	4.775	3.9965	3.9965	
Read 18	0900-1000	1.0715	1.0452	0.5826	0.9382	1.0383	1.1135	0.5426	0.4604	4.5916	4.5252	4.6847	3.9965	3.9965	
Read 18	1000-1100	1.0961	1.1177	0.6167	0.9452	1.0245	0.8356	0.5196	0.4604	4.5916	4.5252	4.6847	3.9965	3.9965	
Read 18	1100-1200	1.0961	1.1177	0.6167	0.9452	1.0245	0.8356	0.5196	0.4604	4.5916	4.5252	4.6847	3.9965	3.9965	
Read 18	1200-1300	1.0961	1.1177	0.6167	0.9452	1.0245	0.8356	0.5196	0.4604	4.5916	4.5252	4.6847	3.9965	3.9965	
Read 18	1300-1400	1.0961	1.1177	0.6167	0.9452	1.0245	0.8356	0.5196	0.4604	4.5916	4.5252	4.6847	3.9965	3.9965	
Read 18	1400-1500	1.1885	1.1885	0.7325	0.9511	1.0319	0.8473	0.5355	0.4742	5.755	4.775	4.775	3.9965	3.9965	
Read 18	1500-1600	1.0715	1.0452	0.5826	0.9382	1.0383	1.1135	0.5426	0.4604	4.5916	4.5252	4.6847	3.9965	3.9965	
Read 18	1600-1700	1.0961	1.1177	0.6167	0.9452	1.0245	0.8356	0.5196	0.4604	4.5916	4.5252	4.6847	3.9965	3.9965	
Read 18	1700-1800	1.0961	1.1177	0.6167	0.9452	1.0245	0.8356	0.5196	0.4604	4.5916	4.5252	4.6847	3.9965	3.9965	
Read 18	1800-1900	1.0961	1.1177	0.6167	0.9452	1.0245	0.8356	0.5196	0.4604	4.5916	4.5252	4.6847	3.9965	3.9965	
Read 18	1900-2000	4.8912	6.2799	1.555	4.888	6.4725	1.3798	2.2885	1.5885	1.9418	2.2885	3.1758	1.8818	1.8818	
Read 18	2000-2100	4.4352	5.7202	1.488	4.4352	5.7202	1.488	4.4352	5.7202	1.488	4.4352	5.7202	1.488	4.4352	
Read 18	2100-2200	4.8912	6.2799	1.555	4.888	6.4725	1.3798	2.2885	1.5885	1.9418	2.2885	3.1758	1.8818	1.8818	
Read 18	2200-2300	1.6355	1.588	1.568	8.964	1.1118	1.8458	4.4052	1.7458	1.7607	1.801	6.5718	1.5117	1.5117	
Read 18	2300-2400	1.6355	1.588	1.568	8.964	1.1118	1.8458	4.4052	1.7458	1.7607	1.801	6.5718	1.5117	1.5117	
Read 19	0600-0700	1.7445	1.7445	0.7785	0.7785	1.2818	1.2818	2.4757	0.5365	0.3037	1.8206	1.7445	1.7445	1.7445	
Read 19	0700-0800	1.3881	1.3881	0.5175	0.5175	0.9225	0.9225	1.7445	0.4405	0.2605	1.4405	1.3881	1.3881	1.3881	
Read 19	0800-0900	1.4115	1.4115	0.5555	0.5555	0.9999	0.9999	1.9382	0.4599	0.2759	1.5555	1.4115	1.4115	1.4115	
Read 19	0900-1000	1.0961	1.0961	0.4405	0.4405	0.7785	0.7785	1.5176	0.4135	0.2405	1.2405	1.0961	1.0961	1.0961	
Read 19	1000-1100	1.1885	1.1885	0.4885	0.4885	0.8356	0.8356	1.6115	0.4385	0.2595	1.3595	1.1885	1.1885	1.1885	
Read 19	1100-1200	1.6115	1.6115	0.6475	0.6475	1.1445	1.1445	2.2475	0.5195	0.3035	1.7445	1.6115	1.6115	1.6115	
Read 19	1200-1300	1.6115	1.6115	0.6475	0.6475	1.1445	1.1445	2.2475	0.5195	0.3035	1.7445	1.6115	1.6115	1.6115	
Read 19	1300-1400	1.6115	1.6115	0.6475	0.6475	1.1445	1.1445	2.2475	0.5195	0.3035	1.7445	1.6115	1.6115	1.6115	
Read 19	1400-1500	1.6115	1.6115	0.6475	0.6475	1.1445	1.1445	2.2475	0.5195	0.3035	1.7445	1.6115	1.6115	1.6115	
Read 19	1500-1600	1.6115	1.6115	0.6475	0.6475	1.1445	1.1445	2.2475	0.5195	0.3035	1.7445	1.6115	1.6115	1.6115	
Read 19	1600-1700	1.6115	1.6115	0.6475	0.6475	1.1445	1.1445	2.2475	0.5195	0.3035	1.7445	1.6115	1.6115	1.6115	
Read 19	1700-1800	1.6115	1.6115	0.6475	0.6475	1.1445	1.1445	2.2475	0.5195	0.3035	1.7445	1.6115	1.6115	1.6115	
Read 19	1800-1900	1.6115	1.6115	0.6475	0.6475	1.1445	1.1445	2.2475	0.5195	0.3035	1.7445	1.6115	1.6115	1.6115	
Read 19	1900-2000	1.6115	1.6115	0.6475	0.6475	1.1445	1.1445	2.2475	0.5195	0.3035	1.7445	1.6115	1.6115	1.6115	
Read 19	2000-2100	1.6115	1.6115	0.6475	0.6475	1.1445	1.1445	2.2475	0.5195	0.3035	1.7445	1.6115	1.6115	1.6115	
Read 19	2100-2200	1.6115	1.6115	0.6475	0.6475	1.1445	1.1445	2.2475	0.5195	0.3035	1.7445	1.6115	1.6115	1.6115	
Read 19	2200-2300	1.6115	1.6115	0.6475	0.6475	1.1445	1.1445	2.2475	0.5195	0.3035	1.7445	1.6115	1.6115	1.6115	
Read 19	2300-2400	1.6115	1.6115	0.6475	0.6475	1.1445	1.1445	2.2475	0.5195	0.3035	1.7445	1.6115	1.6115	1.6115	
Read 20	0600-0700	1.7445	1.7445	0.7785	0.7785	1.2818	1.2818	2.4757	0.5365	0.3037	1.8206	1.7445	1.7445	1.7445	
Read 20	0700-0800	1.3881	1.3881	0.5175	0.5175	0.9225	0.9225	1.7445	0.4405	0.2605	1.4405	1.3881	1.3881	1.3881	
Read 20	0800-0900	1.4115	1.4115	0.5555	0.5555	0.9999	0.9999	1.9382	0.4599	0.2759	1.5555	1.4115	1.4115	1.4115	
Read 20	0900-1000	1.0961	1.0961	0.4405	0.4405	0.7785	0.7785	1.5176	0.4135	0.2405	1.2405	1.0961	1.0961	1.0961	
Read 20	1000-1100	1.1885	1.1885	0.4885	0.4885	0.8356	0.8356	1.6115	0.4385	0.2595	1.3595	1.1885	1.1885	1.1885	
Read 20	1100-1200	1.6115	1.6115	0.6475	0.6475	1.1445	1.1445	2.2475	0.5195	0.3035	1.7445	1.6115	1.6115	1.6115	
Read 20	1200-1300	1.6115	1.6115	0.6475	0.6475	1.1445	1.1445	2.2475	0.5195	0.3035	1.7445	1.6115	1.6115	1.6115	
Read 20	1300-1400	1.6115	1.6115	0.6475	0.6475	1.1445	1.1445	2.2475	0.5195	0.3035	1.7445	1.6115	1.6115	1.6115	
Read 20	1400-1500	1.6115	1.6115	0.6475	0.6475	1.1445	1.1445	2.2475	0.5195	0.3035	1.7445	1.6115	1.6115	1.6115	
Read 20	1500-1600	1.6115	1.6115	0.6475	0.6475	1.1445	1.1445	2.2475	0.5195	0.3035	1.7445	1.6115	1.6115	1.6115	
Read 20	1600-1700	1.6115	1.6115	0.6475	0.6475	1.1445	1.1445	2.2475	0.5195	0.3035	1.7445	1.6115	1.6115	1.6115	
Read 20	1700-1800	1.6115	1.6115	0.6475	0.6475	1.1445	1.1445	2.2475	0.5195	0.3035	1.7445	1.6115	1.6115	1.6115	
Read 20	1800-1900	1.6115	1.6115	0.6475	0.6475	1.1445	1.1445	2.2475	0.5195	0.3035	1.7445	1.6115	1.6115	1.6115	
Read 20	1900-2000	1.6115	1.6115	0.6475	0.6475	1.1445	1.1445	2.2475	0.5195	0.3035	1.7445	1.6115	1.6115	1.6115	
Read 20	2000-2100	1.6115	1.6115	0.6475	0.6475	1.1445	1.1445	2.2475	0.5195	0.3035	1.7445	1.6115	1.6115	1.6115	
Read 20	2100-2200	1.6115	1.6115	0.6475	0.6475	1.1445	1.1445	2.2475	0.5195	0.3035	1.7445	1.6115	1.6115	1.6115	
Read 20	2200-2300	1.6115	1.6115	0.6475	0.6475	1.1445	1.1445	2.2475	0.5195	0.3035	1.7445	1.6115	1.6115	1.6115	
Read 20	2300-2400	1.6115	1.6115	0.6475	0.6475	1.1445	1.1445	2.2475	0.5195	0.3035	1.7445	1.6115	1.6115	1.6115	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Road North 24 Hour Emission Factors for ARXN02 model (Exhausted)																
Year 2030																
Road Name	Road ID	Hour	NO _x Emission						PM ₁₀ Emission				NO ₂ Emission			
			g/h/vh	g/h/vh	g/h/vh	g/h/vh	g/h/vh	g/h/vh	g/h/vh	g/h/vh	g/h/vh	g/h/vh	g/h/vh	g/h/vh		
Road #1	41	000000	3.815	1.212	1.146	0.345	0.507	8.407	0.203	0.444	0.672	0.585	1.346	0.727	8.828	
Road #1	41	000010	3.688	1.195	1.129	0.338	0.499	8.280	0.196	0.437	0.665	0.578	1.329	0.710	8.701	
Road #1	41	000020	3.561	1.178	1.112	0.331	0.491	8.153	0.189	0.430	0.658	0.570	1.312	0.693	8.574	
Road #1	41	000030	3.434	1.161	1.095	0.324	0.483	8.026	0.182	0.423	0.651	0.563	1.295	0.676	8.447	
Road #1	41	000040	3.307	1.144	1.078	0.317	0.475	7.899	0.175	0.416	0.644	0.556	1.278	0.659	8.320	
Road #1	41	000050	3.180	1.127	1.061	0.310	0.467	7.772	0.168	0.409	0.637	0.549	1.261	0.642	8.193	
Road #1	41	000060	3.053	1.110	1.044	0.303	0.459	7.645	0.161	0.402	0.630	0.542	1.244	0.625	8.066	
Road #1	41	000070	2.926	1.093	1.027	0.296	0.451	7.518	0.154	0.395	0.623	0.535	1.227	0.608	7.939	
Road #1	41	000080	2.799	1.076	1.010	0.289	0.443	7.391	0.147	0.388	0.616	0.528	1.210	0.591	7.812	
Road #1	41	000090	2.672	1.059	0.993	0.282	0.435	7.264	0.140	0.381	0.609	0.521	1.193	0.574	7.685	
Road #1	41	000100	2.545	1.042	0.976	0.275	0.427	7.137	0.133	0.374	0.602	0.514	1.176	0.557	7.558	
Road #1	41	000110	2.418	1.025	0.959	0.268	0.419	7.010	0.126	0.367	0.595	0.507	1.159	0.540	7.431	
Road #1	41	000120	2.291	1.008	0.942	0.261	0.411	6.883	0.119	0.360	0.588	0.500	1.142	0.523	7.304	
Road #1	41	000130	2.164	0.991	0.925	0.254	0.403	6.756	0.112	0.353	0.581	0.493	1.125	0.506	7.177	
Road #1	41	000140	2.037	0.974	0.908	0.247	0.395	6.629	0.105	0.346	0.574	0.486	1.108	0.489	7.050	
Road #1	41	000150	1.910	0.957	0.891	0.240	0.387	6.502	0.098	0.339	0.567	0.479	1.091	0.472	6.923	
Road #1	41	000160	1.783	0.940	0.874	0.233	0.379	6.375	0.091	0.332	0.560	0.472	1.074	0.455	6.796	
Road #1	41	000170	1.656	0.923	0.857	0.226	0.371	6.248	0.084	0.325	0.553	0.465	1.057	0.438	6.669	
Road #1	41	000180	1.529	0.906	0.840	0.219	0.363	6.121	0.077	0.318	0.546	0.458	1.040	0.421	6.542	
Road #1	41	000190	1.402	0.889	0.823	0.212	0.355	5.994	0.070	0.311	0.539	0.451	1.023	0.404	6.415	
Road #1	41	000200	1.275	0.872	0.806	0.205	0.347	5.867	0.063	0.304	0.532	0.444	1.006	0.387	6.288	
Road #1	41	000210	1.148	0.855	0.789	0.198	0.339	5.740	0.056	0.297	0.525	0.437	0.989	0.370	6.161	
Road #1	41	000220	1.021	0.838	0.772	0.191	0.331	5.613	0.049	0.290	0.518	0.430	0.972	0.353	6.034	
Road #1	41	000230	0.894	0.821	0.755	0.184	0.3	5.486	0.042	0.283	0.511	0.423	0.955	0.336	5.907	
Road #1	41	000240	0.767	0.804	0.738	0.177	0.293	5.359	0.035	0.276	0.504	0.416	0.938	0.319	5.780	
Road #1	41	000250	0.640	0.787	0.721	0.170	0.285	5.232	0.028	0.269	0.497	0.409	0.921	0.302	5.653	
Road #1	41	000260	0.513	0.770	0.704	0.163	0.277	5.105	0.021	0.262	0.490	0.402	0.904	0.285	5.526	
Road #1	41	000270	0.386	0.753	0.687	0.156	0.269	4.978	0.014	0.255	0.483	0.395	0.887	0.268	5.400	
Road #1	41	000280	0.259	0.736	0.670	0.149	0.261	4.851	0.007	0.248	0.476	0.388	0.870	0.251	5.273	
Road #1	41	000290	0.132	0.719	0.653	0.142	0.253	4.724	0.000	0.241	0.469	0.381	0.853	0.234	5.146	
Road #1	41	000300	0.005	0.702	0.636	0.135	0.245	4.597	0.000	0.234	0.462	0.374	0.836	0.217	5.019	
Road #1	41	000310	0.000	0.685	0.619	0.128	0.237	4.470	0.000	0.227	0.455	0.367	0.819	0.200	4.892	
Road #1	41	000320	0.000	0.668	0.602	0.121	0.229	4.343	0.000	0.220	0.448	0.360	0.802	0.183	4.765	
Road #1	41	000330	0.000	0.651	0.585	0.114	0.221	4.216	0.000	0.213	0.441	0.353	0.785	0.166	4.638	
Road #1	41	000340	0.000	0.634	0.568	0.107	0.213	4.089	0.000	0.206	0.434	0.346	0.768	0.149	4.511	
Road #1	41	000350	0.000	0.617	0.551	0.100	0.205	3.962	0.000	0.199	0.427	0.339	0.751	0.132	4.384	
Road #1	41	000360	0.000	0.600	0.534	0.093	0.197	3.835	0.000	0.192	0.420	0.332	0.734	0.115	4.257	
Road #1	41	000370	0.000	0.583	0.517	0.086	0.189	3.708	0.000	0.185	0.413	0.325	0.717	0.098	4.130	
Road #1	41	000380	0.000	0.566	0.500	0.079	0.181	3.581	0.000	0.178	0.406	0.318	0.700	0.081	4.003	
Road #1	41	000390	0.000	0.549	0.483	0.072	0.173	3.454	0.000	0.171	0.399	0.311	0.683	0.064	3.876	
Road #1	41	000400	0.000	0.532	0.466	0.065	0.165	3.327	0.000	0.164	0.392	0.304	0.666	0.047	3.749	
Road #1	41	000410	0.000	0.515	0.449	0.058	0.157	3.200	0.000	0.157	0.385	0.297	0.649	0.030	3.622	
Road #1	41	000420	0.000	0.498	0.432	0.051	0.149	3.073	0.000	0.150	0.378	0.290	0.632	0.013	3.495	
Road #1	41	000430	0.000	0.481	0.415	0.044	0.141	2.946	0.000	0.143	0.371	0.283	0.615	0.000	3.368	
Road #1	41	000440	0.000	0.464	0.398	0.037	0.133	2.819	0.000	0.136	0.364	0.276	0.598	0.000	3.241	
Road #1	41	000450	0.000	0.447	0.381	0.030	0.125	2.692	0.000	0.129	0.357	0.269	0.581	0.000	3.114	
Road #1	41	000460	0.000	0.430	0.364	0.023	0.117	2.565	0.000	0.122	0.350	0.262	0.564	0.000	2.987	
Road #1	41	000470	0.000	0.413	0.347	0.016	0.109	2.438	0.000	0.115	0.343	0.255	0.547	0.000	2.860	
Road #1	41	000480	0.000	0.396	0.330	0.009	0.101	2.311	0.000	0.108	0.336	0.248	0.530	0.000	2.733	
Road #1	41	000490	0.000	0.379	0.313	0.002	0.093	2.184	0.000	0.101	0.329	0.241	0.513	0.000	2.606	
Road #1	41	000500	0.000	0.362	0.296	0.000	0.085	2.057	0.000	0.094	0.322	0.234	0.496	0.000	2.479	
Road #1	41	000510	0.000	0.345	0.279	0.000	0.077	1.930	0.000	0.087	0.315	0.227	0.479	0.000	2.352	
Road #1	41	000520	0.000	0.328	0.262	0.000	0.069	1.803	0.000	0.080	0.308	0.220	0.462	0.000	2.225	
Road #1	41	000530	0.000	0.311	0.245	0.000	0.061	1.676	0.000	0.073	0.301	0.213	0.445	0.000	2.098	
Road #1	41	000540	0.000	0.294	0.228	0.000	0.053	1.549	0.000	0.066	0.294	0.206	0.428	0.000	1.971	
Road #1	41	000550	0.000	0.277	0.211	0.000	0.045	1.422	0.000	0.059	0.287	0.199	0.411	0.000	1.844	
Road #1	41	000560	0.000	0.260	0.194	0.000	0.037	1.295	0.000	0.052	0.280	0.192	0.394	0.000	1.717	
Road #1	41	000570	0.000	0.243	0.177	0.000	0.029	1.168	0.000	0.045	0.273	0.185	0.377	0.000	1.590	
Road #1	41	000580	0.000	0.226	0.160	0.000	0.021	1.041	0.000	0.038	0.266	0.178	0.360	0.000	1.463	
Road #1	41	000590	0.000	0.209	0.143	0.000	0.013	0.914	0.000	0.031	0.259	0.171	0.343	0.000	1.336	
Road #1	41	000600	0.000	0.192	0.126	0.000	0.005	0.787	0.000	0.024	0.252	0.164	0.326	0.000	1.209	
Road #1	41	000610	0.000	0.175	0.109	0.000	0.000	0.660	0.000	0.017	0.245	0.157	0.309	0.000	1.082	
Road #1	41	000620	0.000	0.158	0.092	0.000	0.000	0.533	0.000	0.010	0.238	0.150	0.292	0.000	0.955	
Road #1	41	000630	0.000	0.141	0.075	0.000	0.000	0.406	0.000	0.003	0.231	0.143	0.275	0.000	0.828	
Road #1	41	000640	0.000	0.124	0.058	0.000	0.000	0.279	0.000	0.000	0.224	0.136	0.258	0.000	0.701	
Road #1	41	000650	0.000	0.107	0.041	0.000	0.000	0.152	0.000	0.000	0.217	0.129	0.241	0.000	0.574	
Road #1	41	000660	0.000	0.090	0.024	0.000	0.000	0.025	0.000	0.000	0.210	0.122	0.224	0.000	0.447	
Road #1	41	000670	0.000	0.073	0.007	0.000	0.000	0.000	0.000	0.000	0.203	0.115	0.207	0.000	0.320	
Road #1	41	000680	0.000	0.056	0.000	0.000	0.000	0.000	0.000	0.000	0.196	0.108	0.190	0.000	0.193	
Road #1	41	000690	0.000	0.039	0.000	0.000	0.000	0.000	0.000	0.000	0.189	0.101	0.173	0.000	0.066	
Road #1	41	000700	0.000	0.022	0.000	0.000	0.000	0.000	0.000	0.000	0.182	0.094	0.156	0.000	0.000	

Open Road Yr 24 North Underground Factors for AEMOD model (dependent)										
			NO Emission						NO Emission	
Road Name	Road ID	Hour	g/hour	g/min ²	g/hour	g/min ²	g/hour	g/min ²	g/hour	g/min ²
Road 44	0800-0900	2138.0	6.592	0.748	1.998	0.227	1.144	1.811	4.668	2.885
Road 44	0900-1000	1154.0	3.047	0.348	0.932	0.107	0.583	0.945	2.385	1.482
Road 44	1000-1100	1318.0	3.597	0.411	1.082	0.121	0.657	1.041	2.624	1.613
Road 44	1100-1200	1452.0	4.048	0.463	1.235	0.138	0.743	1.163	2.905	1.781
Road 44	1200-1300	1260.0	3.560	0.406	1.075	0.124	0.670	1.054	2.595	1.605
Road 44	1300-1400	1124.0	3.080	0.349	0.938	0.108	0.589	0.938	2.304	1.473
Road 44	1400-1500	1260.0	3.560	0.406	1.075	0.124	0.670	1.054	2.595	1.605
Road 44	1500-1600	2276.0	7.475	0.851	2.252	0.258	1.385	2.000	5.338	3.285
Road 44	1600-1700	1800.0	4.464	0.508	1.350	0.153	0.806	1.288	3.180	1.963
Road 44	1700-1800	3426.0	9.714	1.096	2.924	0.332	1.786	2.079	5.324	3.246
Road 44	1800-1900	1944.0	4.536	0.514	1.366	0.155	0.814	1.299	3.205	1.974
Road 44	1900-2000	1612.0	3.856	0.439	1.090	0.126	0.683	1.035	2.454	1.533
Road 44	2000-2100	1416.0	3.422	0.392	0.964	0.111	0.599	0.925	2.245	1.416
Road 44	2100-2200	1416.0	3.422	0.392	0.964	0.111	0.599	0.925	2.245	1.416
Road 44	2200-2300	1416.0	3.422	0.392	0.964	0.111	0.599	0.925	2.245	1.416
Road 44	2300-2400	1416.0	3.422	0.392	0.964	0.111	0.599	0.925	2.245	1.416
Road 45	0800-0900	2000.0	7.000	0.788	2.100	0.235	1.240	1.740	4.414	2.740
Road 45	0900-1000	1128.0	3.000	0.344	0.900	0.104	0.560	0.880	2.160	1.360
Road 45	1000-1100	1200.0	3.168	0.360	0.952	0.109	0.584	0.944	2.288	1.444
Road 45	1100-1200	1296.0	3.360	0.384	1.008	0.115	0.608	0.996	2.400	1.500
Road 45	1200-1300	1200.0	3.168	0.360	0.952	0.109	0.584	0.944	2.288	1.444
Road 45	1300-1400	1128.0	3.000	0.344	0.900	0.104	0.560	0.880	2.160	1.360
Road 45	1400-1500	2000.0	7.000	0.788	2.100	0.235	1.240	1.740	4.414	2.740
Road 45	1500-1600	1920.0	6.480	0.732	1.968	0.220	1.184	1.632	4.080	2.560
Road 45	1600-1700	1800.0	4.464	0.508	1.350	0.153	0.806	1.288	3.180	1.963
Road 45	1700-1800	3426.0	9.714	1.096	2.924	0.332	1.786	2.079	5.324	3.246
Road 45	1800-1900	1944.0	4.536	0.514	1.366	0.155	0.814	1.299	3.205	1.974
Road 45	1900-2000	1612.0	3.856	0.439	1.090	0.126	0.683	1.035	2.454	1.533
Road 45	2000-2100	1416.0	3.422	0.392	0.964	0.111	0.599	0.925	2.245	1.416
Road 45	2100-2200	1416.0	3.422	0.392	0.964	0.111	0.599	0.925	2.245	1.416
Road 45	2200-2300	1416.0	3.422	0.392	0.964	0.111	0.599	0.925	2.245	1.416
Road 45	2300-2400	1416.0	3.422	0.392	0.964	0.111	0.599	0.925	2.245	1.416
Road 46	0800-0900	2136.0	6.576	0.744	1.992	0.226	1.140	1.806	4.656	2.880
Road 46	0900-1000	1152.0	3.040	0.346	0.928	0.106	0.580	0.940	2.380	1.480
Road 46	1000-1100	1316.0	3.592	0.409	1.076	0.120	0.654	1.036	2.616	1.608
Road 46	1100-1200	1450.0	4.040	0.460	1.228	0.136	0.738	1.156	2.896	1.776
Road 46	1200-1300	1258.0	3.550	0.403	1.065	0.122	0.665	1.046	2.580	1.596
Road 46	1300-1400	1122.0	3.070	0.350	0.930	0.107	0.586	0.930	2.290	1.464
Road 46	1400-1500	1258.0	3.550	0.403	1.065	0.122	0.665	1.046	2.580	1.596
Road 46	1500-1600	2272.0	7.440	0.846	2.240	0.256	1.376	1.996	5.312	3.272
Road 46	1600-1700	1798.0	4.440	0.504	1.342	0.151	0.802	1.282	3.162	1.956
Road 46	1700-1800	3420.0	9.680	1.090	2.910	0.330	1.780	2.070	5.300	3.240
Road 46	1800-1900	1940.0	4.520	0.510	1.360	0.154	0.810	1.296	3.196	1.968
Road 46	1900-2000	1610.0	3.840	0.436	1.080	0.125	0.680	1.032	2.440	1.528
Road 46	2000-2100	1414.0	3.410	0.390	0.960	0.110	0.596	0.920	2.240	1.410
Road 46	2100-2200	1414.0	3.410	0.390	0.960	0.110	0.596	0.920	2.240	1.410
Road 46	2200-2300	1414.0	3.410	0.390	0.960	0.110	0.596	0.920	2.240	1.410
Road 46	2300-2400	1414.0	3.410	0.390	0.960	0.110	0.596	0.920	2.240	1.410
Road 47	0800-0900	2000.0	7.000	0.788	2.100	0.235	1.240	1.740	4.414	2.740
Road 47	0900-1000	1128.0	3.000	0.344	0.900	0.104	0.560	0.880	2.160	1.360
Road 47	1000-1100	1200.0	3.168	0.360	0.952	0.109	0.584	0.944	2.288	1.444
Road 47	1100-1200	1296.0	3.360	0.384	1.008	0.115	0.608	0.996	2.400	1.500
Road 47	1200-1300	1200.0	3.168	0.360	0.952	0.109	0.584	0.944	2.288	1.444
Road 47	1300-1400	1128.0	3.000	0.344	0.900	0.104	0.560	0.880	2.160	1.360
Road 47	1400-1500	2000.0	7.000	0.788	2.100	0.235	1.240	1.740	4.414	2.740
Road 47	1500-1600	1920.0	6.480	0.732	1.968	0.220	1.184	1.632	4.080	2.560
Road 47	1600-1700	1800.0	4.464	0.508	1.350	0.153	0.806	1.288	3.180	1.963
Road 47	1700-1800	3426.0	9.714	1.096	2.924	0.332	1.786	2.079	5.324	3.246
Road 47	1800-1900	1944.0	4.536	0.514	1.366	0.155	0.814	1.299	3.205	1.974
Road 47	1900-2000	1612.0	3.856	0.439	1.090	0.126	0.683	1.035	2.454	1.533
Road 47	2000-2100	1416.0	3.422	0.392	0.964	0.111	0.599	0.925	2.245	1.416
Road 47	2100-2200	1416.0	3.422	0.392	0.964	0.111	0.599	0.925	2.245	1.416
Road 47	2200-2300	1416.0	3.422	0.392	0.964	0.111	0.599	0.925	2.245	1.416
Road 47	2300-2400	1416.0	3.422	0.392	0.964	0.111	0.599	0.925	2.245	1.416

Open N2 24 hr Emission Factors for ANMOXD model (Seasonal)														
Road name	Road ID	Year	NO _x Emission						NO _x Emission					
			Motorcycles			Bicycles			Motorcycles			Bicycles		
			g/m ² /km ²	g/m ² /km ²	g/m ² /km ²	g/m ² /km ²	g/m ² /km ²	g/m ² /km ²	g/m ² /km ²	g/m ² /km ²	g/m ² /km ²	g/m ² /km ²		
Road 47	47	1800	1.2400	4.5350	8.7760	3.0680	1.3780	8.1440	2.5450	2.2080	4.7880	1.8680	1.8880	2.6160
Road 47	47	1850	1.2460	4.5400	8.7820	3.0740	1.3840	8.1500	2.5510	2.2140	4.7940	1.8740	1.8940	2.6220
Road 47	47	1900	1.2520	4.5450	8.7880	3.0800	1.3900	8.1560	2.5570	2.2200	4.8000	1.8800	1.9000	2.6280
Road 47	47	1950	1.2580	4.5500	8.7940	3.0860	1.3960	8.1620	2.5630	2.2260	4.8060	1.8860	1.9060	2.6340
Road 47	47	2000	1.2640	4.5550	8.8000	3.0920	1.4020	8.1680	2.5690	2.2320	4.8120	1.8920	1.9120	2.6400
Road 47	47	2000	1.2700	4.5610	8.8060	3.0980	1.4080	8.1740	2.5750	2.2380	4.8180	1.8980	1.9180	2.6460
Road 47	47	2000	1.2760	4.5670	8.8120	3.1040	1.4140	8.1800	2.5810	2.2440	4.8240	1.9040	1.9240	2.6520
Road 47	47	2000	1.2820	4.5730	8.8180	3.1100	1.4200	8.1860	2.5870	2.2500	4.8300	1.9100	1.9300	2.6580
Road 47	47	2000	1.2880	4.5790	8.8240	3.1160	1.4260	8.1920	2.5930	2.2560	4.8360	1.9160	1.9360	2.6640
Road 47	47	2000	1.2940	4.5850	8.8300	3.1220	1.4320	8.1980	2.5990	2.2620	4.8420	1.9220	1.9420	2.6700
Road 47	47	2000	1.3000	4.5910	8.8360	3.1280	1.4380	8.2040	2.6050	2.2680	4.8480	1.9280	1.9480	2.6760
Road 47	47	2000	1.3060	4.5970	8.8420	3.1340	1.4440	8.2100	2.6110	2.2740	4.8540	1.9340	1.9540	2.6820
Road 47	47	2000	1.3120	4.6030	8.8480	3.1400	1.4500	8.2160	2.6170	2.2800	4.8600	1.9400	1.9600	2.6880
Road 47	47	2000	1.3180	4.6090	8.8540	3.1460	1.4560	8.2220	2.6230	2.2860	4.8660	1.9460	1.9660	2.6940
Road 47	47	2000	1.3240	4.6150	8.8600	3.1520	1.4620	8.2280	2.6290	2.2920	4.8720	1.9520	1.9720	2.7000
Road 47	47	2000	1.3300	4.6210	8.8660	3.1580	1.4680	8.2340	2.6350	2.2980	4.8780	1.9580	1.9780	2.7060
Road 47	47	2000	1.3360	4.6270	8.8720	3.1640	1.4740	8.2400	2.6410	2.3040	4.8840	1.9640	1.9840	2.7120
Road 47	47	2000	1.3420	4.6330	8.8780	3.1700	1.4800	8.2460	2.6470	2.3100	4.8900	1.9700	1.9900	2.7180
Road 47	47	2000	1.3480	4.6390	8.8840	3.1760	1.4860	8.2520	2.6530	2.3160	4.8960	1.9760	1.9960	2.7240
Road 47	47	2000	1.3540	4.6450	8.8900	3.1820	1.4920	8.2580	2.6590	2.3220	4.9020	1.9820	2.0020	2.7300
Road 47	47	2000	1.3600	4.6510	8.8960	3.1880	1.4980	8.2640	2.6650	2.3280	4.9080	1.9880	2.0080	2.7360
Road 47	47	2000	1.3660	4.6570	8.9020	3.1940	1.5040	8.2700	2.6710	2.3340	4.9140	1.9940	2.0140	2.7420
Road 47	47	2000	1.3720	4.6630	8.9080	3.2000	1.5100	8.2760	2.6770	2.3400	4.9200	2.0000	2.0200	2.7480
Road 47	47	2000	1.3780	4.6690	8.9140	3.2060	1.5160	8.2820	2.6830	2.3460	4.9260	2.0060	2.0260	2.7540
Road 47	47	2000	1.3840	4.6750	8.9200	3.2120	1.5220	8.2880	2.6890	2.3520	4.9320	2.0120	2.0320	2.7600
Road 47	47	2000	1.3900	4.6810	8.9260	3.2180	1.5280	8.2940	2.6950	2.3580	4.9380	2.0180	2.0380	2.7660
Road 47	47	2000	1.3960	4.6870	8.9320	3.2240	1.5340	8.3000	2.7010	2.3640	4.9440	2.0240	2.0440	2.7720
Road 47	47	2000	1.4020	4.6930	8.9380	3.2300	1.5400	8.3060	2.7070	2.3700	4.9500	2.0300	2.0500	2.7780
Road 47	47	2000	1.4080	4.6990	8.9440	3.2360	1.5460	8.3120	2.7130	2.3760	4.9560	2.0360	2.0560	2.7840
Road 47	47	2000	1.4140	4.7050	8.9500	3.2420	1.5520	8.3180	2.7190	2.3820	4.9620	2.0420	2.0620	2.7900
Road 47	47	2000	1.4200	4.7110	8.9560	3.2480	1.5580	8.3240	2.7250	2.3880	4.9680	2.0480	2.0680	2.7960
Road 47	47	2000	1.4260	4.7170	8.9620	3.2540	1.5640	8.3300	2.7310	2.3940	4.9740	2.0540	2.0740	2.8020
Road 47	47	2000	1.4320	4.7230	8.9680	3.2600	1.5700	8.3360	2.7370	2.4000	4.9800	2.0600	2.0800	2.8080
Road 47	47	2000	1.4380	4.7290	8.9740	3.2660	1.5760	8.3420	2.7430	2.4060	4.9860	2.0660	2.0860	2.8140
Road 47	47	2000	1.4440	4.7350	8.9800	3.2720	1.5820	8.3480	2.7490	2.4120	4.9920	2.0720	2.0920	2.8200
Road 47	47	2000	1.4500	4.7410	8.9860	3.2780	1.5880	8.3540	2.7550	2.4180	4.9980	2.0780	2.0980	2.8260
Road 47	47	2000	1.4560	4.7470	8.9920	3.2840	1.5940	8.3600	2.7610	2.4240	5.0040	2.0840	2.1040	2.8320
Road 47	47	2000	1.4620	4.7530	8.9980	3.2900	1.6000	8.3660	2.7670	2.4300	5.0100	2.0900	2.1100	2.8380
Road 47	47	2000	1.4680	4.7590	9.0040	3.2960	1.6060	8.3720	2.7730	2.4360	5.0160	2.0960	2.1160	2.8440
Road 47	47	2000	1.4740	4.7650	9.0100	3.3020	1.6120	8.3780	2.7790	2.4420	5.0220	2.1020	2.1220	2.8500
Road 47	47	2000	1.4800	4.7710	9.0160	3.3080	1.6180	8.3840	2.7850	2.4480	5.0280	2.1080	2.1280	2.8560
Road 47	47	2000	1.4860	4.7770	9.0220	3.3140	1.6240	8.3900	2.7910	2.4540	5.0340	2.1140	2.1340	2.8620
Road 47	47	2000	1.4920	4.7830	9.0280	3.3200	1.6300	8.3960	2.7970	2.4600	5.0400	2.1200	2.1400	2.8680
Road 47	47	2000	1.4980	4.7890	9.0340	3.3260	1.6360	8.4020	2.8030	2.4660	5.0460	2.1260	2.1460	2.8740
Road 47	47	2000	1.5040	4.7950	9.0400	3.3320	1.6420	8.4080	2.8090	2.4720	5.0520	2.1320	2.1520	2.8800
Road 47	47	2000	1.5100	4.8010	9.0460	3.3380	1.6480	8.4140	2.8150	2.4780	5.0580	2.1380	2.1580	2.8860
Road 47	47	2000	1.5160	4.8070	9.0520	3.3440	1.6540	8.4200	2.8210	2.4840	5.0640	2.1440	2.1640	2.8920
Road 47	47	2000	1.5220	4.8130	9.0580	3.3500	1.6600	8.4260	2.8270	2.4900	5.0700	2.1500	2.1700	2.8980
Road 47	47	2000	1.5280	4.8190	9.0640	3.3560	1.6660	8.4320	2.8330	2.4960	5.0760	2.1560	2.1760	2.9040
Road 47	47	2000	1.5340	4.8250	9.0700	3.3620	1.6720	8.4380	2.8390	2.5020	5.0820	2.1620	2.1820	2.9100
Road 47	47	2000	1.5400	4.8310	9.0760	3.3680	1.6780	8.4440	2.8450	2.5080	5.0880	2.1680	2.1880	2.9160
Road 47	47	2000	1.5460	4.8370	9.0820	3.3740	1.6840	8.4500	2.8510	2.5140	5.0940	2.1740	2.1940	2.9220
Road 47	47	2000	1.5520	4.8430	9.0880	3.3800	1.6900	8.4560	2.8570	2.5200	5.1000	2.1800	2.2000	2.9280
Road 47	47	2000	1.5580	4.8490	9.0940	3.3860	1.6960	8.4620	2.8630	2.5260	5.1060	2.1860	2.2060	2.9340
Road 47	47	2000	1.5640	4.8550	9.1000	3.3920	1.7020	8.4680	2.8690	2.5320	5.1120	2.1920	2.2120	2.9400
Road 47	47	2000	1.5700	4.8610	9.1060	3.3980	1.7080	8.4740	2.8750	2.5380	5.1180	2.1980	2.2180	2.9460
Road 47	47	2000	1.5760	4.8670	9.1120	3.4040	1.7140	8.4800	2.8810	2.5440	5.1240	2.2040	2.2240	2.9520
Road 47	47	2000	1.5820	4.8730	9.1180	3.4100	1.7200	8.4860	2.8870	2.5500	5.1300	2.2100	2.2300	2.9580
Road 47	47	2000	1.5880	4.8790	9.1240	3.4160	1.7260	8.4920	2.8930	2.5560	5.1360	2.2160	2.2360	2.9640
Road 47	47	2000	1.5940	4.8850	9.1300	3.4220	1.7320	8.4980	2.8990	2.5620	5.1420	2.2220	2.2420	2.9700
Road 47	47	2000	1.6000	4.8910	9.1360	3.4280	1.7380	8.5040	2.9050	2.5680	5.1480	2.2280	2.2480	2.9760
Road 47	47	2000	1.6060	4.8970	9.1420	3.4340	1.7440	8.5100	2.9110	2.5740	5.1540	2.2340	2.2540	2.9820
Road 47	47	2000	1.6120	4.9030	9.1480	3.4400	1.7500	8.5160	2.9170	2.5800	5.1600	2.2400	2.2600	2.9880
Road 47	47	2000	1.6180	4.9090	9.1540	3.4460	1.7560	8.5220	2.9230	2.5860	5.1660	2.2460	2.2660	2.9940
Road 47	47	2000	1.6240	4.9150	9.1600	3.4520	1.7620	8.5280	2.9290	2.5920	5.1720	2.2520	2.2720	3.0000
Road 47	47	2000	1.6300	4.9210	9.1660	3.4580	1.7680	8.5340	2.9350	2.5980	5.1780	2.2580	2.2780	3.0060
Road 47	47	2000	1.6360	4.9270	9.1720	3.4640	1.7740	8.5400	2.9410	2.6040	5.1840	2.2640	2.2840	3.0120
Road 47	47	2000	1.6420	4.9330	9.1780	3.4700	1.7800	8.5460	2.9470	2.6100	5.1900	2.2700	2.2900	3.0180
Road 47	47	2000	1.6480	4.9390	9.1840	3.4760	1.7860	8.5520	2.9530	2.6160	5.1960	2.2760	2.2960	3.0240
Road 47	47	2000	1.6540	4.9450	9.1900	3.4820	1.7920	8.5580	2.9590	2.6220	5.2020	2.2820	2.3020	3.0300
Road 47	47	2000	1.6600	4.9510	9.1960	3.4880	1.7980	8.5640	2.9650	2.6280	5.2080	2.2880	2.3080	3.0360
Road 47	47	2000	1.6660	4.9570	9.2020	3.4940	1.8040	8.5700	2.9710	2.6340	5.2140	2.2940	2.3140	3.0420
Road 47	47	2000	1.6720	4.9630	9.2080	3.5000	1.8100	8.5760	2.9770	2.6400	5.2200	2.3000	2.3200	3.0480
Road 47	47	2000	1.6780	4.9690	9.2140	3.5060	1.8160	8.5820	2.9830	2.6460	5.2260	2.3060	2.3260	3.0540
Road 47	47	2000	1.6840	4.9750	9.2200	3.5120	1.8220	8.5880	2					

Open Road 24 Hour Undersaturation Factors for ARRSOC model (Department)										
Yr 2000			No Emission				No Emission			
Route Name	Route ID	Year	Mountain		Valley		Mountain		Valley	
			g/hour/v	g/hour/v	g/hour/v	g/hour/v	g/hour/v	g/hour/v	g/hour/v	g/hour/v
Route 13	13	0000-0030	2.386	2.232	2.116	1.876	1.053	1.446	1.768	1.267
Route 13	13	0030-0300	2.386	2.232	2.116	1.876	1.053	1.446	1.768	1.267
Route 13	13	0300-0600	2.142	2.047	1.932	1.702	1.053	1.446	1.768	1.267
Route 13	13	0600-0900	2.142	2.047	1.932	1.702	1.053	1.446	1.768	1.267
Route 13	13	0900-1200	2.046	1.951	1.836	1.606	1.053	1.446	1.768	1.267
Route 13	13	1200-1500	2.046	1.951	1.836	1.606	1.053	1.446	1.768	1.267
Route 13	13	1500-1800	2.046	1.951	1.836	1.606	1.053	1.446	1.768	1.267
Route 13	13	1800-2100	2.046	1.951	1.836	1.606	1.053	1.446	1.768	1.267
Route 13	13	2100-2400	2.046	1.951	1.836	1.606	1.053	1.446	1.768	1.267
Route 13	13	0000-0030	4.058	4.126	2.096	2.506	2.440	2.766	2.166	2.444
Route 13	13	0030-0300	4.058	4.126	2.096	2.506	2.440	2.766	2.166	2.444
Route 13	13	0300-0600	3.456	3.361	2.486	2.896	2.440	2.766	2.166	2.444
Route 13	13	0600-0900	3.456	3.361	2.486	2.896	2.440	2.766	2.166	2.444
Route 13	13	0900-1200	3.456	3.361	2.486	2.896	2.440	2.766	2.166	2.444
Route 13	13	1200-1500	3.456	3.361	2.486	2.896	2.440	2.766	2.166	2.444
Route 13	13	1500-1800	3.456	3.361	2.486	2.896	2.440	2.766	2.166	2.444
Route 13	13	1800-2100	3.456	3.361	2.486	2.896	2.440	2.766	2.166	2.444
Route 13	13	2100-2400	3.456	3.361	2.486	2.896	2.440	2.766	2.166	2.444
Route 13	13	0000-0030	4.416	4.321	2.506	2.916	2.440	2.766	2.166	2.444
Route 13	13	0030-0300	4.416	4.321	2.506	2.916	2.440	2.766	2.166	2.444
Route 13	13	0300-0600	4.416	4.321	2.506	2.916	2.440	2.766	2.166	2.444
Route 13	13	0600-0900	4.416	4.321	2.506	2.916	2.440	2.766	2.166	2.444
Route 13	13	0900-1200	4.416	4.321	2.506	2.916	2.440	2.766	2.166	2.444
Route 13	13	1200-1500	4.416	4.321	2.506	2.916	2.440	2.766	2.166	2.444
Route 13	13	1500-1800	4.416	4.321	2.506	2.916	2.440	2.766	2.166	2.444
Route 13	13	1800-2100	4.416	4.321	2.506	2.916	2.440	2.766	2.166	2.444
Route 13	13	2100-2400	4.416	4.321	2.506	2.916	2.440	2.766	2.166	2.444
Route 13	13	0000-0030	2.142	2.047	1.932	1.702	1.053	1.446	1.768	1.267
Route 13	13	0030-0300	2.142	2.047	1.932	1.702	1.053	1.446	1.768	1.267
Route 13	13	0300-0600	2.142	2.047	1.932	1.702	1.053	1.446	1.768	1.267
Route 13	13	0600-0900	2.142	2.047	1.932	1.702	1.053	1.446	1.768	1.267
Route 13	13	0900-1200	2.142	2.047	1.932	1.702	1.053	1.446	1.768	1.267
Route 13	13	1200-1500	2.142	2.047	1.932	1.702	1.053	1.446	1.768	1.267
Route 13	13	1500-1800	2.142	2.047	1.932	1.702	1.053	1.446	1.768	1.267
Route 13	13	1800-2100	2.142	2.047	1.932	1.702	1.053	1.446	1.768	1.267
Route 13	13	2100-2400	2.142	2.047	1.932	1.702	1.053	1.446	1.768	1.267
Route 13	13	0000-0030	4.058	4.126	2.096	2.506	2.440	2.766	2.166	2.444
Route 13	13	0030-0300	4.058	4.126	2.096	2.506	2.440	2.766	2.166	2.444
Route 13	13	0300-0600	3.456	3.361	2.486	2.896	2.440	2.766	2.166	2.444
Route 13	13	0600-0900	3.456	3.361	2.486	2.896	2.440	2.766	2.166	2.444
Route 13	13	0900-1200	3.456	3.361	2.486	2.896	2.440	2.766	2.166	2.444
Route 13	13	1200-1500	3.456	3.361	2.486	2.896	2.440	2.766	2.166	2.444
Route 13	13	1500-1800	3.456	3.361	2.486	2.896	2.440	2.766	2.166	2.444
Route 13	13	1800-2100	3.456	3.361	2.486	2.896	2.440	2.766	2.166	2.444
Route 13	13	2100-2400	3.456	3.361	2.486	2.896	2.440	2.766	2.166	2.444
Route 13	13	0000-0030	4.416	4.321	2.506	2.916	2.440	2.766	2.166	2.444
Route 13	13	0030-0300	4.416	4.321	2.506	2.916	2.440	2.766	2.166	2.444
Route 13	13	0300-0600	4.416	4.321	2.506	2.916	2.440	2.766	2.166	2.444
Route 13	13	0600-0900	4.416	4.321	2.506	2.916	2.440	2.766	2.166	2.444
Route 13	13	0900-1200	4.416	4.321	2.506	2.916	2.440	2.766	2.166	2.444
Route 13	13	1200-1500	4.416	4.321	2.506	2.916	2.440	2.766	2.166	2.444
Route 13	13	1500-1800	4.416	4.321	2.506	2.916	2.440	2.766	2.166	2.444
Route 13	13	1800-2100	4.416	4.321	2.506	2.916	2.440	2.766	2.166	2.444
Route 13	13	2100-2400	4.416	4.321	2.506	2.916	2.440	2.766	2.166	2.444
Route 13	13	0000-0030	2.142	2.047	1.932	1.702	1.053	1.446	1.768	1.267
Route 13	13	0030-0300	2.142	2.047	1.932	1.702	1.053	1.446	1.768	1.267
Route 13	13	0300-0600	2.142	2.047	1.932	1.702	1.053	1.446	1.768	1.267
Route 13	13	0600-0900	2.142	2.047	1.932	1.702	1.053	1.446	1.768	1.267
Route 13	13	0900-1200	2.142	2.047	1.932	1.702	1.053	1.446	1.768	1.267
Route 13	13	1200-1500	2.142	2.047	1.932	1.702	1.053	1.446	1.768	1.267
Route 13	13	1500-1800	2.142	2.047	1.932	1.702	1.053	1.446	1.768	1.267
Route 13	13	1800-2100	2.142	2.047	1.932	1.702	1.053	1.446	1.768	1.267
Route 13	13	2100-2400	2.142	2.047	1.932	1.702	1.053	1.446	1.768	1.267
Route 13	13	0000-0030	4.058	4.126	2.096	2.506	2.440	2.766	2.166	2.444
Route 13	13	0030-0300	4.058	4.126	2.096	2.506	2.440	2.766	2.166	2.444
Route 13	13	0300-0600	3.456	3.361	2.486	2.896	2.440	2.766	2.166	2.444
Route 13	13	0600-0900	3.456	3.361	2.486	2.896	2.440	2.766	2.166	2.444
Route 13	13	0900-1200	3.456	3.361	2.486	2.896	2.440	2.766	2.166	2.444
Route 13	13	1200-1500	3.456	3.361	2.486	2.896	2.440	2.766	2.166	2.444
Route 13	13	1500-1800	3.456	3.361	2.486	2.896	2.440	2.766	2.166	2.444
Route 13	13	1800-2100	3.456	3.361	2.486	2.896	2.440	2.766	2.166	2.444
Route 13	13	2100-2400	3.456	3.361	2.486	2.896	2.440	2.766	2.166	2.444
Route 13	13	0000-0030	4.416	4.321	2.506	2.916	2.440	2.766	2.166	2.444
Route 13	13	0030-0300	4.416	4.321	2.506	2.916	2.440	2.766	2.166	2.444
Route 13	13	0300-0600	4.416	4.321	2.506	2.916	2.440	2.766	2.166	2.444
Route 13	13	0600-0900	4.416	4.321	2.506	2.916	2.440	2.766	2.166	2.444
Route 13	13	0900-1200	4.416	4.321	2.506	2.916	2.440	2.766	2.166	2.444
Route 13	13	1200-1500	4.416	4.321	2.506	2.916	2.440	2.766	2.166	2.444
Route 13	13	1500-1800	4.416	4.321	2.506	2.916	2.440	2.766	2.166	2.444
Route 13	13	1800-2100	4.416	4.321	2.506	2.916	2.440	2.766	2.166	2.444
Route 13	13	2100-2400	4.416	4.321	2.506	2.916	2.440	2.766	2.166	2.444
Route 13	13	0000-0030	2.142	2.047	1.932	1.702	1.053	1.446	1.768	1.267
Route 13	13	0030-0300	2.142	2.047	1.932	1.702	1.053	1.446	1.768	1.267
Route 13	13	0300-0600	2.142	2.047	1.932	1.702	1.053	1.446	1.768	1.267
Route 13	13	0600-0900	2.142	2.047	1.932	1.702	1.053	1.446	1.768	1.267
Route 13	13	0900-1200	2.142	2.047	1.932	1.702	1.053	1.446	1.768	1.267
Route 13	13	1200-1500	2.142	2.047	1.932	1.702	1.053	1.446	1.768	1.267
Route 13	13	1500-1800	2.142	2.047	1.932	1.702	1.053	1.446	1.768	1.267
Route 13	13	1800-2100	2.142	2.047	1.932	1.702	1.053	1.446	1.768	1.267
Route 13	13	2100-2400	2.142	2.047	1.932	1.702	1.053	1.446	1.768	1.267
Route 13	13	0000-0030	4.058	4.126	2.096	2.506	2.440	2.766	2.166	2.444
Route 13	13	0030-0300	4.058	4.126	2.096	2.506	2.440	2.766	2.166	2.444
Route 13	13	0300-0600	3.456	3.361	2.486	2.896	2.440	2.766	2.166	2.444
Route 13	13	0600-0900	3.456	3.361	2.486	2.896	2.440	2.766	2.166	2.444
Route 13	13	0900-1200	3.456	3.361	2.486	2.896	2.440	2.766	2.166	2.444
Route 13	13	1200-1500	3.456	3.361	2.486	2.896	2.440	2.766	2.166	2.444
Route 13	13	1500-1800	3.456	3.361	2.486	2.896	2.440	2.766	2.166	2.444
Route 13	13	1800-2100	3.456	3.361	2.486	2.896	2.440	2.766	2.166	2.444
Route 13	13	2100-2400	3.456	3.361	2.486	2.896	2.440	2.766	2.166	2.444
Route 13	13	0000-0030	4.416	4.321	2.506	2.916	2.440	2.766	2.166	2.444
Route 13	13	0030-0300	4.416	4.321	2.506	2.916	2.440	2.766	2.166	2.444
Route 13	13	0300-0600	4.416	4.321	2.506	2.916	2.440	2.766	2.166	2.444
Route 13	13	0600-0900	4.416	4.321	2.506	2.916	2.440	2.766	2.166	2.444
Route 13	13	0900-1200	4.416	4.321	2.506	2.916	2.440	2.766	2.166	2.444
Route 13	13	1200-1500	4.416	4.321	2.506	2.916	2.440	2.766	2.166	2.444
Route 13	13	1500-1800	4.416	4.321	2.506	2.916	2.440	2.766	2.166	2.444
Route 13	13	1800-2100	4.416	4.321	2.506	2.916	2.			

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open North Underway Factors

Open Road 24 Hour Emission Factors for ARBMSI model (Excerpted)

Year 2030

Road Name	Road ID	Hour	NO _x Emission						PM ₁₀ Emission					
			g/hour/mi	g/h	tonne/hour	g/hour/mi	g/h	tonne/hour	g/hour/mi	g/h	tonne/hour	g/hour/mi	g/h	tonne/hour
Road 54	54	0000-0100	1.888E+01	5.807E-07	1.148E-05	1.170E-03	2.444E-06	8.66E-06	6.062E-01	2.208E-06	8.024E-05	5.588E-01	2.088E-06	8.218E-05
Road 54	54	0100-0200	2.588E+01	8.087E-07	1.588E-05	1.688E-03	3.488E-06	1.288E-05	8.488E-01	3.088E-06	1.188E-05	4.388E-01	1.688E-06	6.888E-05
Road 54	54	0200-0300	1.988E+01	5.987E-07	1.198E-05	1.230E-03	4.811E-07	1.788E-06	7.540E-01	2.508E-06	9.108E-05	6.518E-01	2.388E-06	9.418E-05
Road 54	54	0300-0400	2.288E+01	6.687E-07	1.288E-05	1.388E-03	5.488E-07	2.088E-06	8.488E-01	2.808E-06	1.028E-05	3.688E-01	1.388E-06	5.488E-05
Road 54	54	0400-0500	1.300E+01	2.319E-07	4.379E-07	1.135E-05	1.914E-07	9.441E-06	6.079E-07	2.023E-06	7.408E-05	7.715E-01	7.110E-06	1.914E-05
Road 54	54	0500-0600	2.196E+01	5.316E-07	1.021E-05	1.871E-03	4.548E-07	1.610E-06	9.128E-02	3.208E-06	3.608E-05	7.748E-01	1.808E-06	4.308E-05
Road 54	54	0600-0700	2.218E+01	5.438E-07	1.040E-05	1.886E-03	4.638E-07	1.648E-06	9.248E-02	3.238E-06	3.678E-05	7.878E-01	1.828E-06	4.348E-05
Road 54	54	0700-0800	2.068E+01	5.254E-07	9.921E-06	1.726E-03	4.378E-07	1.588E-06	8.878E-01	2.982E-06	3.354E-05	7.538E-01	1.878E-06	4.278E-05
Road 54	54	0800-0900	2.118E+01	5.318E-07	1.010E-05	1.856E-03	4.518E-07	1.608E-06	9.048E-01	3.138E-06	3.588E-05	7.688E-01	1.848E-06	4.318E-05
Road 54	54	0900-1000	1.888E+01	4.126E-07	8.721E-06	1.588E-03	1.848E-07	7.88E-06	8.510E-01	2.988E-06	4.318E-05	6.138E-01	1.538E-06	3.508E-05
Road 54	54	1000-1100	1.488E+01	2.838E-07	4.448E-06	1.238E-03	1.514E-07	5.36E-06	6.748E-01	2.298E-06	3.588E-05	5.538E-01	1.088E-06	2.418E-05
Road 54	54	1100-1200	1.848E+01	3.488E-07	5.488E-06	1.388E-03	1.618E-07	5.88E-06	7.488E-01	2.598E-06	4.088E-05	6.388E-01	1.288E-06	2.988E-05
Road 54	54	2000-2100	1.718E+01	1.405E-07	6.188E-06	1.238E-03	1.514E-07	5.36E-06	5.938E-03	2.028E-07	1.498E-05	4.824E-01	5.118E-07	2.118E-05
Road 54	54	2100-2200	1.288E+01	1.288E-07	5.488E-06	1.138E-03	1.418E-07	4.98E-06	5.188E-03	1.828E-07	1.308E-05	4.024E-01	4.388E-07	1.788E-05
Road 54	54	2200-2300	1.118E+01	1.138E-07	4.628E-06	1.021E-03	1.108E-07	2.521E-06	4.878E-03	1.608E-07	1.158E-05	4.848E-01	4.848E-07	1.108E-05
Road 54	54	2300-2400	1.088E+01	1.088E-07	4.588E-06	1.008E-03	1.088E-07	2.488E-06	4.808E-03	1.588E-07	1.138E-05	4.808E-01	4.808E-07	1.088E-05
Road 501	501	0000-0100	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 501	501	0100-0200	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 501	501	0200-0300	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 501	501	0300-0400	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 501	501	0400-0500	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 501	501	0500-0600	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 501	501	0600-0700	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 501	501	0700-0800	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 501	501	0800-0900	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 501	501	0900-1000	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 501	501	1000-1100	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 501	501	1100-1200	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 501	501	2000-2100	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 501	501	2100-2200	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 501	501	2200-2300	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 501	501	2300-2400	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 502	502	0000-0100	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 502	502	0100-0200	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 502	502	0200-0300	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 502	502	0300-0400	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 502	502	0400-0500	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 502	502	0500-0600	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 502	502	0600-0700	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 502	502	0700-0800	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 502	502	0800-0900	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 502	502	0900-1000	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 502	502	1000-1100	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 502	502	1100-1200	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 502	502	2000-2100	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 502	502	2100-2200	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 502	502	2200-2300	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 502	502	2300-2400	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 503	503	0000-0100	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 503	503	0100-0200	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 503	503	0200-0300	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 503	503	0300-0400	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 503	503	0400-0500	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 503	503	0500-0600	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 503	503	0600-0700	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 503	503	0700-0800	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 503	503	0800-0900	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 503	503	0900-1000	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 503	503	1000-1100	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
Road 503	503	1100-1200	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00			

[illegible]

Open North 24 hour Enrolment Factors for ANZSOD model (October)														
Year 2010														
Road name	Road ID	Hour	NO _x Emission			PM ₁₀ Emission			NO ₂ Emission			Microdust		
			g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	
Road 1	1	0000 0000	1.345	1.090	1.077	1.648	1.648	1.652	1.625	2.208	1.678	1.398	1.978	1.684
Road 1	1	0000 0000	1.443	1.188	1.175	1.746	1.746	1.750	1.723	2.306	1.776	1.496	2.076	1.784
Road 1	1	0000 0000	1.541	1.286	1.273	1.844	1.844	1.848	1.821	2.404	1.874	1.594	2.174	1.884
Road 1	1	0000 0000	1.639	1.384	1.371	1.942	1.942	1.946	1.919	2.502	1.972	1.692	2.272	1.984
Road 1	1	0000 0000	1.737	1.482	1.469	2.040	2.040	2.044	2.017	2.600	2.070	1.790	2.370	2.084
Road 1	1	0000 0000	1.835	1.580	1.567	2.138	2.138	2.142	2.115	2.698	2.168	1.888	2.468	2.184
Road 1	1	0000 0000	1.933	1.678	1.665	2.236	2.236	2.240	2.213	2.796	2.266	1.986	2.566	2.284
Road 1	1	0000 0000	2.031	1.776	1.763	2.334	2.334	2.338	2.311	2.894	2.364	2.084	2.664	2.384
Road 1	1	0000 0000	2.129	1.874	1.861	2.432	2.432	2.436	2.409	2.992	2.462	2.182	2.762	2.482
Road 1	1	0000 0000	2.227	1.972	1.959	2.530	2.530	2.534	2.507	3.090	2.560	2.280	2.860	2.582
Road 1	1	0000 0000	2.325	2.070	2.057	2.628	2.628	2.632	2.605	3.188	2.658	2.378	2.958	2.682
Road 1	1	0000 0000	2.423	2.168	2.155	2.726	2.726	2.730	2.703	3.286	2.756	2.476	3.056	2.782
Road 1	1	0000 0000	2.521	2.266	2.253	2.824	2.824	2.828	2.801	3.384	2.854	2.574	3.154	2.882
Road 1	1	0000 0000	2.619	2.364	2.351	2.922	2.922	2.926	2.899	3.482	2.952	2.672	3.252	2.982
Road 1	1	0000 0000	2.717	2.462	2.449	3.020	3.020	3.024	2.997	3.580	3.050	2.770	3.350	3.082
Road 1	1	0000 0000	2.815	2.560	2.547	3.118	3.118	3.122	3.095	3.678	3.148	2.868	3.448	3.182
Road 1	1	0000 0000	2.913	2.658	2.645	3.216	3.216	3.220	3.193	3.776	3.246	2.966	3.546	3.282
Road 1	1	0000 0000	3.011	2.756	2.743	3.314	3.314	3.318	3.291	3.874	3.344	3.064	3.644	3.382
Road 1	1	0000 0000	3.109	2.854	2.841	3.412	3.412	3.416	3.389	3.972	3.442	3.162	3.742	3.482
Road 1	1	0000 0000	3.207	2.952	2.939	3.510	3.510	3.514	3.487	4.070	3.540	3.260	3.840	3.582
Road 1	1	0000 0000	3.305	3.050	3.037	3.608	3.608	3.612	3.585	4.168	3.638	3.358	3.938	3.682
Road 1	1	0000 0000	3.403	3.148	3.135	3.706	3.706	3.710	3.683	4.266	3.736	3.456	4.036	3.782
Road 1	1	0000 0000	3.501	3.246	3.233	3.804	3.804	3.808	3.781	4.364	3.834	3.554	4.134	3.882
Road 1	1	0000 0000	3.599	3.344	3.331	3.902	3.902	3.906	3.879	4.462	3.932	3.652	4.232	3.982
Road 1	1	0000 0000	3.697	3.442	3.429	4.000	4.000	4.004	3.977	4.560	4.030	3.750	4.330	4.082
Road 1	1	0000 0000	3.795	3.540	3.527	4.098	4.098	4.102	4.075	4.658	4.128	3.848	4.428	4.182
Road 1	1	0000 0000	3.893	3.638	3.625	4.196	4.196	4.200	4.173	4.756	4.226	3.946	4.526	4.282
Road 1	1	0000 0000	3.991	3.736	3.723	4.294	4.294	4.298	4.271	4.854	4.324	4.044	4.624	4.382
Road 1	1	0000 0000	4.089	3.834	3.821	4.392	4.392	4.396	4.369	4.952	4.422	4.142	4.722	4.482
Road 1	1	0000 0000	4.187	3.932	3.919	4.490	4.490	4.494	4.467	5.050	4.520	4.240	4.820	4.582
Road 1	1	0000 0000	4.285	4.030	4.017	4.588	4.588	4.592	4.565	5.148	4.618	4.338	4.918	4.682
Road 1	1	0000 0000	4.383	4.128	4.115	4.686	4.686	4.690	4.663	5.246	4.716	4.436	5.016	4.782
Road 1	1	0000 0000	4.481	4.226	4.213	4.784	4.784	4.788	4.761	5.344	4.814	4.534	5.114	4.882
Road 1	1	0000 0000	4.579	4.324	4.311	4.882	4.882	4.886	4.859	5.442	4.912	4.632	5.212	4.982
Road 1	1	0000 0000	4.677	4.422	4.409	4.980	4.980	4.984	4.957	5.540	5.010	4.730	5.310	5.082
Road 1	1	0000 0000	4.775	4.520	4.507	5.078	5.078	5.082	5.055	5.638	5.108	4.828	5.408	5.182
Road 1	1	0000 0000	4.873	4.618	4.605	5.176	5.176	5.180	5.153	5.736	5.206	4.926	5.506	5.282
Road 1	1	0000 0000	4.971	4.716	4.703	5.274	5.274	5.278	5.251	5.834	5.304	5.024	5.604	5.382
Road 1	1	0000 0000	5.069	4.814	4.801	5.372	5.372	5.376	5.349	5.932	5.402	5.122	5.702	5.482
Road 1	1	0000 0000	5.167	4.912	4.899	5.470	5.470	5.474	5.447	6.030	5.500	5.220	5.800	5.582
Road 1	1	0000 0000	5.265	5.010	4.997	5.568	5.568	5.572	5.545	6.128	5.598	5.318	5.898	5.682
Road 1	1	0000 0000	5.363	5.108	5.095	5.666	5.666	5.670	5.643	6.226	5.696	5.416	5.996	5.782
Road 1	1	0000 0000	5.461	5.206	5.193	5.764	5.764	5.768	5.741	6.324	5.794	5.514	6.094	5.882
Road 1	1	0000 0000	5.559	5.304	5.291	5.862	5.862	5.866	5.839	6.422	5.892	5.612	6.192	5.982
Road 1	1	0000 0000	5.657	5.402	5.389	5.960	5.960	5.964	5.937	6.520	5.990	5.710	6.290	6.082
Road 1	1	0000 0000	5.755	5.500	5.487	6.058	6.058	6.062	6.035	6.618	6.088	5.808	6.388	6.182
Road 1	1	0000 0000	5.853	5.598	5.585	6.156	6.156	6.160	6.133	6.716	6.186	5.906	6.486	6.282
Road 1	1	0000 0000	5.951	5.696	5.683	6.254	6.254	6.258	6.231	6.814	6.284	6.004	6.584	6.382
Road 1	1	0000 0000	6.049	5.794	5.781	6.352	6.352	6.356	6.329	6.912	6.382	6.102	6.682	6.482
Road 1	1	0000 0000	6.147	5.892	5.879	6.450	6.450	6.454	6.427	7.010	6.480	6.200	6.780	6.582
Road 1	1	0000 0000	6.245	5.990	5.977	6.548	6.548	6.552	6.525	7.108	6.578	6.298	6.878	6.682
Road 1	1	0000 0000	6.343	6.088	6.075	6.646	6.646	6.650	6.623	7.206	6.676	6.396	6.976	6.782
Road 1	1	0000 0000	6.441	6.186	6.173	6.744	6.744	6.748	6.721	7.304	6.774	6.494	7.074	6.882
Road 1	1	0000 0000	6.539	6.284	6.271	6.842	6.842	6.846	6.819	7.402	6.872	6.592	7.172	6.982
Road 1	1	0000 0000	6.637	6.382	6.369	6.940	6.940	6.944	6.917	7.500	6.970	6.690	7.270	7.082
Road 1	1	0000 0000	6.735	6.480	6.467	7.038	7.038	7.042	7.015	7.598	7.068	6.788	7.368	7.182
Road 1	1	0000 0000	6.833	6.578	6.565	7.136	7.136	7.140	7.113	7.696	7.166	6.886	7.466	7.282
Road 1	1	0000 0000	6.931	6.676	6.663	7.234	7.234	7.238	7.211	7.794	7.264	6.984	7.564	7.382
Road 1	1	0000 0000	7.029	6.774	6.761	7.332	7.332	7.336	7.309	7.892	7.362	7.082	7.662	7.482
Road 1	1	0000 0000	7.127	6.872	6.859	7.430	7.430	7.434	7.407	7.990	7.460	7.180	7.760	7.582
Road 1	1	0000 0000	7.225	6.970	6.957	7.528	7.528	7.532	7.505	8.088	7.558	7.278	7.858	7.682
Road 1	1	0000 0000	7.323	7.068	7.055	7.626	7.626	7.630	7.603	8.186	7.656	7.376	7.956	7.782
Road 1	1	0000 0000	7.421	7.166	7.153	7.724	7.724	7.728	7.701	8.284	7.754	7.474	8.054	7.882
Road 1	1	0000 0000	7.519	7.264	7.251	7.822	7.822	7.826	7.799	8.382	7.852	7.572	8.152	7.982
Road 1	1	0000 0000	7.617	7.362	7.349	7.920	7.920	7.924	7.897	8.480	7.950	7.670	8.250	8.082
Road 1	1	0000 0000	7.715	7.460	7.447	8.018	8.018	8.022	7.995	8.578	8.048	7.768	8.348	8.182
Road 1	1	0000 0000	7.813	7.558	7.545	8.116	8.116	8.120	8.093	8.676	8.146	7.866	8.446	8.282
Road 1	1	0000 0000	7.911	7.656	7.643	8.214	8.214	8.218	8.191	8.774	8.244	7.964	8.544	8.382
Road 1	1	0000 0000	8.009	7.754	7.741	8.312	8.312	8.316	8.289	8.872	8.342	8.062	8.642	8.482
Road 1	1	0000 0000	8.107	7.852	7.839	8.410	8.410	8.414	8.387	8.970	8.440	8.160	8.740	8.582
Road 1	1	0000 0000	8.205	7.950	7.937	8.508	8.508	8.512	8.485	9.068	8.538	8.258	8.838	8.682
Road 1	1	0000 0000	8.303	8.048	8.035	8.606	8.606	8.610	8.583	9.166	8.636	8.356	8.936	8.782
Road 1	1	0000 0000	8.401	8.146	8.133	8.704	8.704	8.708	8.681	9.264	8.734	8.454	9.034	8.882
Road 1	1	0000 0000	8.499	8.244	8.231	8.802	8.802	8.806	8.779	9.362	8.832	8.552	9.132	8.982
Road 1	1	0000 0000	8.597	8.342	8.329	8.900	8.900	8.904	8.877	9.460	8.930	8.650	9.230	9.082
Road 1	1	0000 0000	8.695	8.440	8.427	9.000	9.000	9.004	8.977	9.558	9.028	8.748	9.328	9.182
Road 1	1	0000 0000	8.793	8.538	8.525	9.098	9.098	9.102	9.075	9.656	9.126	8.846	9.426	9.282
Road 1	1	0000 0000	8.891	8.636	8.623	9.196	9.196	9.200	9.173	9.754	9.224	8.944	9.524	9.382
Road 1	1	0000 0000	8.989	8.734	8.721	9.294	9.294	9.298	9.271	9.852	9.322	9.042	9.622	9.482
Road 1	1	0000 0000	9.087	8.832	8.819	9.392	9.392	9.396	9.369	9.950	9.420			

Open Road Yr North Underway Factors												
Open Road 2r Year 10s Intermittency Factors for												
ARMS model (Gibson)												
Year 2010												
		No Emission						No Emission				
Row Name	Row ID	Yr	g/h/v	g/mi ²	g/h/v	g/mi ²	g/h/v	g/mi ²	g/h/v	g/mi ²	g/h/v	g/mi ²
Row 1	4	1980-1989	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 2	5	1990-1999	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 3	6	2000-2009	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 4	7	2010-2019	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 5	8	2020-2029	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 6	9	2030-2039	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 7	10	2040-2049	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 8	11	2050-2059	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 9	12	2060-2069	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 10	13	2070-2079	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 11	14	2080-2089	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 12	15	2090-2099	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 13	16	2100-2109	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 14	17	2110-2119	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 15	18	2120-2129	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 16	19	2130-2139	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 17	20	2140-2149	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 18	21	2150-2159	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 19	22	2160-2169	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 20	23	2170-2179	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 21	24	2180-2189	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 22	25	2190-2199	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 23	26	2200-2209	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 24	27	2210-2219	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 25	28	2220-2229	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 26	29	2230-2239	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 27	30	2240-2249	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 28	31	2250-2259	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 29	32	2260-2269	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 30	33	2270-2279	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 31	34	2280-2289	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 32	35	2290-2299	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 33	36	2300-2309	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 34	37	2310-2319	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 35	38	2320-2329	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 36	39	2330-2339	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 37	40	2340-2349	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 38	41	2350-2359	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 39	42	2360-2369	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 40	43	2370-2379	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 41	44	2380-2389	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 42	45	2390-2399	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 43	46	2400-2409	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 44	47	2410-2419	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 45	48	2420-2429	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 46	49	2430-2439	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 47	50	2440-2449	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 48	51	2450-2459	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 49	52	2460-2469	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 50	53	2470-2479	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 51	54	2480-2489	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 52	55	2490-2499	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 53	56	2500-2509	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 54	57	2510-2519	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 55	58	2520-2529	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 56	59	2530-2539	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 57	60	2540-2549	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 58	61	2550-2559	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 59	62	2560-2569	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 60	63	2570-2579	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 61	64	2580-2589	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 62	65	2590-2599	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 63	66	2600-2609	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 64	67	2610-2619	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 65	68	2620-2629	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 66	69	2630-2639	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 67	70	2640-2649	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 68	71	2650-2659	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 69	72	2660-2669	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 70	73	2670-2679	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 71	74	2680-2689	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 72	75	2690-2699	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 73	76	2700-2709	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 74	77	2710-2719	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 75	78	2720-2729	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 76	79	2730-2739	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 77	80	2740-2749	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 78	81	2750-2759	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 79	82	2760-2769	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 80	83	2770-2779	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 81	84	2780-2789	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 82	85	2790-2799	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 83	86	2800-2809	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 84	87	2810-2819	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 85	88	2820-2829	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 86	89	2830-2839	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 87	90	2840-2849	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 88	91	2850-2859	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 89	92	2860-2869	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 90	93	2870-2879	2.158	4.758	1.532	3.126	4.770	1.384	1.478	1.738	1.514	3.205
Row 91	94	2880-2889	2.158	4.758	1.532	3.126	4.770</					

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open N ₂ North Undermining Factors															
Year 2008															
Mo ₂ /En ₂ mass															
Road Name	Road ID	Hour	Mo ₂ /En ₂ mass						Mo ₂ /En ₂ mass						
			g/m ³	g/m ³	tonne/hour	g/m ³	g/m ³	tonne/hour	g/m ³	g/m ³	tonne/hour	g/m ³	g/m ³	tonne/hour	
Road 7	7	1600-1700	3.890	6.540	6.620	0.118	4.950	0.750	2.630	4.430	0.860	2.490	0.780	4.440	0.550
Road 7	7	1700-1800	3.890	6.540	6.620	0.118	4.950	0.750	2.630	4.430	0.860	2.490	0.780	4.440	0.550
Road 7	7	1800-1900	1.920	3.260	3.280	0.060	2.590	0.400	1.290	2.220	0.440	1.260	0.240	2.220	0.280
Road 7	7	1900-2000	1.730	3.020	3.030	0.100	2.540	0.270	2.110	3.130	0.580	1.940	0.190	3.040	0.340
Road 7	7	2000-2100	1.740	3.030	3.040	0.100	2.540	0.270	2.110	3.130	0.580	1.940	0.190	3.040	0.340
Road 7	7	2100-2200	1.540	3.000	3.010	0.090	2.470	0.200	2.030	2.050	0.400	1.710	0.180	2.280	0.240
Road 7	7	2200-2300	1.540	3.000	3.010	0.090	2.470	0.200	2.030	2.050	0.400	1.710	0.180	2.280	0.240
Road 7	7	2300-2400	1.540	3.000	3.010	0.090	2.470	0.200	2.030	2.050	0.400	1.710	0.180	2.280	0.240
Road 8	8	0000-0100	2.710	2.440	2.460	0.077	2.110	2.050	0.480	4.540	0.370	1.740	0.360	3.210	0.330
Road 8	8	0100-0200	2.710	2.440	2.460	0.077	2.110	2.050	0.480	4.540	0.370	1.740	0.360	3.210	0.330
Road 8	8	0200-0300	3.010	1.170	1.170	2.310	0.710	0.580	2.330	4.440	1.740	4.000	0.860	3.550	0.470
Road 8	8	0300-0400	3.130	1.260	1.260	2.310	0.710	0.580	2.330	4.440	1.740	4.000	0.860	3.550	0.470
Road 8	8	0400-0500	3.130	1.260	1.260	2.310	0.710	0.580	2.330	4.440	1.740	4.000	0.860	3.550	0.470
Road 8	8	0500-0600	3.130	1.260	1.260	2.310	0.710	0.580	2.330	4.440	1.740	4.000	0.860	3.550	0.470
Road 8	8	0600-0700	3.130	1.260	1.260	2.310	0.710	0.580	2.330	4.440	1.740	4.000	0.860	3.550	0.470
Road 8	8	0700-0800	3.130	1.260	1.260	2.310	0.710	0.580	2.330	4.440	1.740	4.000	0.860	3.550	0.470
Road 8	8	0800-0900	3.130	1.260	1.260	2.310	0.710	0.580	2.330	4.440	1.740	4.000	0.860	3.550	0.470
Road 8	8	0900-1000	3.130	1.260	1.260	2.310	0.710	0.580	2.330	4.440	1.740	4.000	0.860	3.550	0.470
Road 8	8	1000-1100	3.130	1.260	1.260	2.310	0.710	0.580	2.330	4.440	1.740	4.000	0.860	3.550	0.470
Road 8	8	1100-1200	3.130	1.260	1.260	2.310	0.710	0.580	2.330	4.440	1.740	4.000	0.860	3.550	0.470
Road 8	8	1200-1300	3.130	1.260	1.260	2.310	0.710	0.580	2.330	4.440	1.740	4.000	0.860	3.550	0.470
Road 8	8	1300-1400	3.130	1.260	1.260	2.310	0.710	0.580	2.330	4.440	1.740	4.000	0.860	3.550	0.470
Road 8	8	1400-1500	3.130	1.260	1.260	2.310	0.710	0.580	2.330	4.440	1.740	4.000	0.860	3.550	0.470
Road 8	8	1500-1600	3.130	1.260	1.260	2.310	0.710	0.580	2.330	4.440	1.740	4.000	0.860	3.550	0.470
Road 8	8	1600-1700	3.130	1.260	1.260	2.310	0.710	0.580	2.330	4.440	1.740	4.000	0.860	3.550	0.470
Road 8	8	1700-1800	3.130	1.260	1.260	2.310	0.710	0.580	2.330	4.440	1.740	4.000	0.860	3.550	0.470
Road 8	8	1800-1900	3.130	1.260	1.260	2.310	0.710	0.580	2.330	4.440	1.740	4.000	0.860	3.550	0.470
Road 8	8	1900-2000	3.130	1.260	1.260	2.310	0.710	0.580	2.330	4.440	1.740	4.000	0.860	3.550	0.470
Road 8	8	2000-2100	3.130	1.260	1.260	2.310	0.710	0.580	2.330	4.440	1.740	4.000	0.860	3.550	0.470
Road 8	8	2100-2200	3.130	1.260	1.260	2.310	0.710	0.580	2.330	4.440	1.740	4.000	0.860	3.550	0.470
Road 8	8	2200-2300	3.130	1.260	1.260	2.310	0.710	0.580	2.330	4.440	1.740	4.000	0.860	3.550	0.470
Road 8	8	2300-2400	3.130	1.260	1.260	2.310	0.710	0.580	2.330	4.440	1.740	4.000	0.860	3.550	0.470
Road 9	9	0000-0100	1.890	4.060	4.090	0.090	2.480	0.200	2.030	2.050	0.400	1.710	0.180	2.280	0.240
Road 9	9	0100-0200	1.890	4.060	4.090	0.090	2.480	0.200	2.030	2.050	0.400	1.710	0.180	2.280	0.240
Road 9	9	0200-0300	1.890	4.060	4.090	0.090	2.480	0.200	2.030	2.050	0.400	1.710	0.180	2.280	0.240
Road 9	9	0300-0400	1.890	4.060	4.090	0.090	2.480	0.200	2.030	2.050	0.400	1.710	0.180	2.280	0.240
Road 9	9	0400-0500	1.890	4.060	4.090	0.090	2.480	0.200	2.030	2.050	0.400	1.710	0.180	2.280	0.240
Road 9	9	0500-0600	1.890	4.060	4.090	0.090	2.480	0.200	2.030	2.050	0.400	1.710	0.180	2.280	0.240
Road 9	9	0600-0700	1.890	4.060	4.090	0.090	2.480	0.200	2.030	2.050	0.400	1.710	0.180	2.280	0.240
Road 9	9	0700-0800	1.890	4.060	4.090	0.090	2.480	0.200	2.030	2.050	0.400	1.710	0.180	2.280	0.240
Road 9	9	0800-0900	1.890	4.060	4.090	0.090	2.480	0.200	2.030	2.050	0.400	1.710	0.180	2.280	0.240
Road 9	9	0900-1000	1.890	4.060	4.090	0.090	2.480	0.200	2.030	2.050	0.400	1.710	0.180	2.280	0.240
Road 9	9	1000-1100	1.890	4.060	4.090	0.090	2.480	0.200	2.030	2.050	0.400	1.710	0.180	2.280	0.240
Road 9	9	1100-1200	1.890	4.060	4.090	0.090	2.480	0.200	2.030	2.050	0.400	1.710	0.180	2.280	0.240
Road 9	9	1200-1300	1.890	4.060	4.090	0.090	2.480	0.200	2.030	2.050	0.400	1.710	0.180	2.280	0.240
Road 9	9	1300-1400	1.890	4.060	4.090	0.090	2.480	0.200	2.030	2.050	0.400	1.710	0.180	2.280	0.240
Road 9	9	1400-1500	1.890	4.060	4.090	0.090	2.480	0.200	2.030	2.050	0.400	1.710	0.180	2.280	0.240
Road 9	9	1500-1600	1.890	4.060	4.090	0.090	2.480	0.200	2.030	2.050	0.400	1.710	0.180	2.280	0.240
Road 9	9	1600-1700	1.890	4.060	4.090	0.090	2.480	0.200	2.030	2.050	0.400	1.710	0.180	2.280	0.240
Road 9	9	1700-1800	1.890	4.060	4.090	0.090	2.480	0.200	2.030	2.050	0.400	1.710	0.180	2.280	0.240
Road 9	9	1800-1900	1.890	4.060	4.090	0.090	2.480	0.200	2.030	2.050	0.400	1.710	0.180	2.280	0.240
Road 9	9	1900-2000	1.890	4.060	4.090	0.090	2.480	0.200	2.030	2.050	0.400	1.710	0.180	2.280	0.240
Road 9	9	2000-2100	1.890	4.060	4.090	0.090	2.480	0.200	2.030	2.050	0.400	1.710	0.180	2.280	0.240
Road 9	9	2100-2200	1.890	4.060	4.090	0.090	2.480	0.200	2.030	2.050	0.400	1.710	0.180	2.280	0.240
Road 9	9	2200-2300	1.890	4.060	4.090	0.090	2.480	0.200	2.030	2.050	0.400	1.710	0.180	2.280	0.240
Road 9	9	2300-2400	1.890	4.060	4.090	0.090	2.480	0.200	2.030	2.050	0.400	1.710	0.180	2.280	0.240
Road 10	10	0000-0100	1.000	0.290	0.290	8.650	0.170	0.110	7.800	0.470	0.290	2.310	0.400	5.720	0.340
Road 10	10	0100-0200	1.000	0.290	0.290	8.650	0.170	0.110	7.800	0.470	0.290	2.310	0.400	5.720	0.340
Road 10	10	0200-0300	1.000	0.290	0.290	8.650	0.170	0.110	7.800	0.470	0.290	2.310	0.400	5.720	0.340
Road 10	10	0300-0400	1.000	0.290	0.290	8.650	0.170	0.110	7.800	0.470	0.290	2.310	0.400	5.720	0.340
Road 10	10	0400-0500	1.000	0.290	0.290	8.650	0.170	0.110	7.800	0.470	0.290	2.310	0.400	5.720	0.340
Road 10	10	0500-0600	1.000	0.290	0.290	8.650	0.170	0.110	7.800	0.470	0.290	2.310	0.400	5.720	0.340
Road 10	10	0600-0700	1.000	0.290	0.290	8.650	0.170	0.110	7.800	0.470	0.290	2.310	0.400	5.720	0.340
Road 10	10	0700-0800	1.000	0.290	0.290	8.650	0.170	0.110	7.800	0.470	0.290	2.310	0.400	5.720	0.340
Road 10	10	0800-0900	1.000	0.290	0.290	8.650	0.170	0.110	7.800	0.470	0.290	2.310	0.400	5.720	0.340
Road 10	10	0900-1000	1.000	0.290	0.290	8.650	0.170	0.110	7.800	0.470	0.290	2.310	0.400	5.720	0.340
Road 10	10	1000-1100	1.000	0.290	0.290	8.650	0.170	0.110	7.800	0.470	0.290	2.310	0.400	5.720	0.340
Road 10	10	1100-1200	1.000	0.290	0.290	8.650	0.170	0.110	7.800	0.470	0.290	2.310	0.400	5.720	0.340
Road 10	10	1200-1300	1.000	0.290	0.290	8.650	0.170	0.110	7.800	0.470	0.290	2.310	0.400	5.720	0.340
Road 10	10	1300-1400	1.000	0.290	0.290	8.650	0.170	0.110	7.800	0.470	0.290	2.310	0.400	5.720	0.340
Road 10	10	1400-1500	1.000	0.290	0.290	8.650	0.170	0.110	7.800	0.470	0.290	2.310	0.400	5.720	0.340
Road 10	10	1500-1600	1.000	0.290	0.290	8.650	0.170	0.110	7.800	0.470	0.290	2.310	0.400	5.720	0.340
Road 10	10	1600-1700	1.000	0.290	0.290	8.650	0.170	0.110	7.800	0.470	0.290	2.310	0.400	5.720	0.340
Road 10	10	1700-1800	1.000	0.290	0.290	8.650	0.170	0.110	7.800	0.470	0.290	2.310	0.400	5.720	0.340
Road 10	10	1800-1900	1.000	0.290	0										

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open North Road Extension Quarry														
Top 10 Road 14 Use Emission Factors for														
MINIJOY model (October)														
Year 2030														
NO _x Emission														
Road Name	Road ID	NO _x	g/h/mph			g/m ³ /h			g/m ³ /h			NO _x Emission		
			g/h/mph	g/m ³ /h	g/m ³ /h	g/h/mph	g/m ³ /h	g/m ³ /h	g/h/mph	g/m ³ /h	g/m ³ /h			
10	11	00000-0200	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-0500	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-0800	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-1100	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-1400	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-1700	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-2000	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-2300	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-2600	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-2900	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-3200	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-3500	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-3800	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-4100	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-4400	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-4700	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-5000	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-5300	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-5600	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-5900	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-6200	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-6500	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-6800	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-7100	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-7400	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-7700	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-8000	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-8300	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-8600	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-8900	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-9200	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-9500	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-9800	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-10000	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-10100	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-10200	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-10300	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-10400	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-10500	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-10600	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-10700	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-10800	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-10900	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-11000	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-11100	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-11200	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-11300	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-11400	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-11500	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-11600	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-11700	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-11800	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-11900	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-12000	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-12100	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-12200	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-12300	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-12400	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-12500	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-12600	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-12700	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-12800	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-12900	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-13000	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-13100	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-13200	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-13300	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-13400	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-13500	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-13600	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-13700	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-13800	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-13900	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-14000	1.406	2.0387	7.808	0.7742	1.8487	7.0687	0.7778	1.8778	7.0688	1.4108	1.0808	4.488
10	11	00000-												

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Tsing Yi North Underground Quarry														
Open Road & No Emission Factors for														
ARMAND model (Doubled)														
Year 2000														
Road Name	Road ID	Floor	No. Emission					No. Emission						
			g/h/mph	g/h/mph	g/h/mph	g/h/mph	g/h/mph	g/h/mph	g/h/mph	g/h/mph	g/h/mph			
Road 14	14 0800-0000	1:13:02	8.9547	1.537	4.188	7.7987	0.1238	3.208	5.7518	2.985	2.881	4.444	8.018	
Road 14	14 0800-0500	1:13:02	8.9547	1.537	4.188	7.7987	0.1238	3.208	5.7518	2.985	2.881	4.444	8.018	
Road 14	14 1000-1200	8:04:07	1:13:02	1.5366	4.227	1.2405	1.688	4.6218	7.888	3.93	3.93	4.7618	7.671	
Road 14	14 1100-1200	7:50:07	1:28:05	1.288	5.702	8.829	1.017	1.874	4.658	7.028	3.13	3.13	4.088	5.798
Road 14	14 1200-1300	7:50:07	1:28:05	1.288	5.702	8.829	1.017	1.874	4.658	7.028	3.13	3.13	4.088	5.798
Road 14	14 1300-1400	7:23:02	1:06:08	1.808	6.959	6.647	1.6445	4.771	5.918	6.014	1.889	5.338	9.198	9.198
Road 14	14 1400-1500	7:50:07	1:28:05	1.288	5.702	8.829	1.017	1.874	4.658	7.028	3.13	3.13	4.088	5.798
Road 14	14 1500-1600	7:39:02	1:12:04	1.896	6.718	6.101	1.7225	4.238	6.818	1.088	3.84	5.745	9.798	9.798
Road 14	14 1600-1700	7:31:05	1:11:08	1.896	6.718	6.101	1.678	4.238	2.668	1.684	1.861	4.626	8.378	8.378
Road 14	14 1700-1800	6:57:05	1:04:08	1.958	6.545	6.568	1.628	4.238	4.897	1.875	3.84	5.745	9.798	9.798
Road 14	14 1800-1900	4:58:02	1:46:07	1.505	4.214	8.088	1.037	1.874	6.118	6.104	2.911	5.338	9.198	9.198
Road 14	14 1900-2000	4:32:05	1:32:05	1.505	4.214	8.088	1.037	1.874	6.118	6.104	2.911	5.338	9.198	9.198
Road 14	14 2000-2100	4:15:02	1:33:07	1.586	6.216	3.33	1.5706	3.288	3.314	6.558	2.644	3.045	5.118	5.118
Road 14	14 2100-2200	2:06:02	1:32:07	1.586	6.216	3.33	1.5706	3.288	3.314	6.558	2.644	3.045	5.118	5.118
Road 14	14 2200-2300	2:06:02	1:32:07	1.586	6.216	3.33	1.5706	3.288	3.314	6.558	2.644	3.045	5.118	5.118
Road 14	14 2300-0000	2:16:07	1:36:07	1.586	6.216	3.33	1.5706	3.288	3.314	6.558	2.644	3.045	5.118	5.118
Road 15	15 0000-0100	1:36:07	1:36:07	1.586	6.216	3.33	1.5706	3.288	3.314	6.558	2.644	3.045	5.118	5.118
Road 15	15 0100-0200	7:46:02	1:04:08	6.9317	6.748	6.748	6.2407	1.676	1.671	3.9178	3.298	3.292	6.015	6.015
Road 15	15 0200-0300	7:07:05	1:04:08	6.9317	6.748	6.748	6.2407	1.676	1.671	3.9178	3.298	3.292	6.015	6.015
Road 15	15 0300-0400	7:07:05	1:04:08	6.9317	6.748	6.748	6.2407	1.676	1.671	3.9178	3.298	3.292	6.015	6.015
Road 15	15 0400-0500	8:56:02	1:18:08	6.887	6.887	6.887	6.558	4.037	4.64	3.847	6.088	4.932	8.078	8.078
Road 15	15 0500-0600	7:59:02	1:18:08	6.887	6.887	6.887	6.558	4.037	4.64	3.847	6.088	4.932	8.078	8.078
Road 15	15 0600-0700	4:14:02	1:29:07	1.138	5.666	1.141	1.058	3.278	6.5647	1.088	2.881	4.745	9.321	9.321
Road 15	15 0700-0800	4:14:02	1:29:07	1.138	5.666	1.141	1.058	3.278	6.5647	1.088	2.881	4.745	9.321	9.321
Road 15	15 0800-0900	4:14:02	1:29:07	1.138	5.666	1.141	1.058	3.278	6.5647	1.088	2.881	4.745	9.321	9.321
Road 15	15 0900-1000	4:14:02	1:29:07	1.138	5.666	1.141	1.058	3.278	6.5647	1.088	2.881	4.745	9.321	9.321
Road 15	15 1000-1100	4:14:02	1:29:07	1.138	5.666	1.141	1.058	3.278	6.5647	1.088	2.881	4.745	9.321	9.321
Road 15	15 1100-1200	1:04:01	1:17:02	3.862	6.946	8.313	3.538	4.724	1.918	1.988	1.765	4.39	1.785	1.600
Road 15	15 1200-1300	1:04:01	1:17:02	3.862	6.946	8.313	3.538	4.724	1.918	1.988	1.765	4.39	1.785	1.600
Road 15	15 1300-1400	1:28:05	1:28:05	1.288	5.702	8.829	1.017	1.874	4.658	7.028	3.13	3.13	4.088	5.798
Road 15	15 1400-1500	1:18:01	1:59:07	7.468	1.081	7.34	6.695	8.508	3.481	2.05	4.681	3.172	2.918	2.918
Road 15	15 1500-1600	1:18:01	1:59:07	7.468	1.081	7.34	6.695	8.508	3.481	2.05	4.681	3.172	2.918	2.918
Road 15	15 1600-1700	1:18:01	1:59:07	7.468	1.081	7.34	6.695	8.508	3.481	2.05	4.681	3.172	2.918	2.918
Road 15	15 1700-1800	1:18:01	1:59:07	7.468	1.081	7.34	6.695	8.508	3.481	2.05	4.681	3.172	2.918	2.918
Road 15	15 1800-1900	1:18:01	1:59:07	7.468	1.081	7.34	6.695	8.508	3.481	2.05	4.681	3.172	2.918	2.918
Road 15	15 1900-2000	4:04:05	2:13:07	2.176	4.466	6.217	1.975	2.573	1.228	1.488	2.138	1.118	1.08	1.08
Road 15	15 2000-2100	4:04:05	2:13:07	2.176	4.466	6.217	1.975	2.573	1.228	1.488	2.138	1.118	1.08	1.08
Road 15	15 2100-2200	4:04:05	2:13:07	2.176	4.466	6.217	1.975	2.573	1.228	1.488	2.138	1.118	1.08	1.08
Road 15	15 2200-2300	4:04:05	2:13:07	2.176	4.466	6.217	1.975	2.573	1.228	1.488	2.138	1.118	1.08	1.08
Road 15	15 2300-0000	4:04:05	2:13:07	2.176	4.466	6.217	1.975	2.573	1.228	1.488	2.138	1.118	1.08	1.08
Road 16	16 0000-0100	4:58:02	1:46:07	1.505	4.214	8.088	1.037	1.874	6.118	6.104	2.911	5.338	9.198	9.198
Road 16	16 0100-0200	4:58:02	1:46:07	1.505	4.214	8.088	1.037	1.874	6.118	6.104	2.911	5.338	9.198	9.198
Road 16	16 0200-0300	4:58:02	1:46:07	1.505	4.214	8.088	1.037	1.874	6.118	6.104	2.911	5.338	9.198	9.198
Road 16	16 0300-0400	4:58:02	1:46:07	1.505	4.214	8.088	1.037	1.874	6.118	6.104	2.911	5.338	9.198	9.198
Road 16	16 0400-0500	4:58:02	1:46:07	1.505	4.214	8.088	1.037	1.874	6.118	6.104	2.911	5.338	9.198	9.198
Road 16	16 0500-0600	4:58:02	1:46:07	1.505	4.214	8.088	1.037	1.874	6.118	6.104	2.911	5.338	9.198	9.198
Road 16	16 0600-0700	4:58:02	1:46:07	1.505	4.214	8.088	1.037	1.874	6.118	6.104	2.911	5.338	9.198	9.198
Road 16	16 0700-0800	2:32:05	1:32:05	1.505	4.214	8.088	1.037	1.874	6.118	6.104	2.911	5.338	9.198	9.198
Road 16	16 0800-0900	2:32:05	1:32:05	1.505	4.214	8.088	1.037	1.874	6.118	6.104	2.911	5.338	9.198	9.198
Road 16	16 0900-1000	2:32:05	1:32:05	1.505	4.214	8.088	1.037	1.874	6.118	6.104	2.911	5.338	9.198	9.198
Road 16	16 1000-1100	2:32:05	1:32:05	1.505	4.214	8.088	1.037	1.874	6.118	6.104	2.911	5.338	9.198	9.198
Road 16	16 1100-1200	2:32:05	1:32:05	1.505	4.214	8.088	1.037	1.874	6.118	6.104	2.911	5.338	9.198	9.198
Road 16	16 1200-1300	1:18:01	1:59:07	7.468	1.081	7.34	6.695	8.508	3.481	2.05	4.681	3.172	2.918	2.918
Road 16	16 1300-1400	1:18:01	1:59:07	7.468	1.081	7.34	6.695	8.508	3.481	2.05	4.681	3.172	2.918	2.918
Road 16	16 1400-1500	1:18:01	1:59:07	7.468	1.081	7.34	6.695	8.508	3.481	2.05	4.681	3.172	2.918	2.918
Road 16	16 1500-1600	1:18:01	1:59:07	7.468	1.081	7.34	6.695	8.508	3.481	2.05	4.681	3.172	2.918	2.918
Road 16	16 1600-1700	1:18:01	1:59:07	7.468	1.081	7.34	6.695	8.508	3.481	2.05	4.681	3.172	2.918	2.918
Road 16	16 1700-1800	2:45:02	1:55:07	1.212	2.212	3.575	1.078	1.938	2.396	1.888	2.158	2.472	1.606	1.606
Road 16	16 1800-1900	2:45:02	1:55:07	1.212	2.212	3.575	1.078	1.938	2.396	1.888	2.158	2.472	1.606	1.606
Road 16	16 1900-2000	2:45:02	1:55:07	1.212	2.212	3.575	1.078	1.938	2.396	1.888	2.158	2.472	1.606	1.606
Road 16	16 2000-2100	2:45:02	1:55:07	1.212	2.212	3.575	1.078	1.938	2.396	1.888	2.158	2.472	1.606	1.606
Road 16	16 2100-2200	2:45:02	1:55:07	1.212	2.212	3.575	1.078	1.938	2.396	1.888	2.158	2.472	1.606	1.606
Road 16	16 2200-2300	2:45:02	1:55:07	1.212	2.212	3.575	1.078	1.938	2.396	1.888	2.158	2.472	1.606	1.606
Road 16	16 2300-0000	2:45:02	1:55:07	1.212	2.212	3.575	1.078	1.938	2.396	1.888	2.158	2.472	1.606	1.606
Road 17	17 0000-0100	1:13:02	8.9547	1.537	4.188	7.7987	0.1238	3.208	5.7518	2.985	2.881	4.444	8.018	8.018
Road 17	17 0100-0200	1:13:02	8.9547	1.537	4.188	7.7987	0.1238	3.208	5.7518	2.985	2.881	4.444	8.018	8.018
Road 17	17 0200-0300	1:13:02	8.9547	1.537	4.188	7.7987	0.1238	3.208	5.7518	2.985	2.881	4.444	8.018	8.018
Road 17	17 0300-0400	1:13:02	8.9547	1.537	4.188	7.7987	0.1238	3.208	5.7518	2.985	2.881	4.444	8.018	8.018
Road 17	17 0400-0500	1:13:02	8.9547	1.537	4.188	7.7987	0.1238	3.208	5.7518	2.985	2.881	4.444	8.018	8.018
Road 17	17 0500-0600	1:13:02	8.9547	1.537	4.188	7.7987	0.1238	3.208	5.7518	2.985	2.881	4.444	8.018	8.018
Road 17	17 0600-0700	1:13:02	8.9547	1.537	4.188	7.7987	0.1238	3.208	5.7518	2.985	2.881	4.444	8.018	8.018
Road 17	17 0700-0800	1:13:02	8.9547	1.537	4.188	7.7987	0.1238	3.208	5.7518	2.985	2.881	4.444	8.018	8.018
Road 17	17 0800-0900	1:13:02	8.9547	1.537	4.188	7.7987	0.1238	3.208	5.7518	2.985	2.881	4.444	8.018	8.018
Road 17	17 0900-1000	1:13:02	8.9547	1.537	4.188	7.7987	0.1238	3.208	5.7518	2.985	2.881	4.444	8.018	8.018
Road 17	17 1000-1100	1:13:02	8.9547	1.										

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open North & Underground Quarry														
Top 10 Road 10 km Emission Factors for AR5000 Road (New Road)														
Year 2030														
Road Name	Road ID	Hour	Moisture/tonne			Moisture/tonne			Moisture/tonne			Moisture/tonne		
			g/kWh	tonne/hour	tonne/hour	g/kWh	tonne/hour	tonne/hour	g/kWh	tonne/hour	tonne/hour	g/kWh	tonne/hour	tonne/hour
Round 27	11000	2:58:01	2.581	6.832	2.047	6.832	6.116	1.886	1.054	2.688	8.286	9.718	2.488	6.727
Round 27	11000	3:58:01	2.581	5.586	1.686	5.586	4.912	1.486	0.996	2.156	6.886	7.586	2.126	5.686
Round 27	11000	4:58:01	2.581	4.586	1.386	4.586	4.086	1.286	0.886	1.886	5.586	6.286	1.786	4.786
Round 27	11000	5:58:01	2.581	3.586	1.086	3.586	3.086	0.986	0.686	1.586	4.286	4.986	1.486	3.786
Round 27	11000	6:58:01	2.581	2.586	0.786	2.586	2.086	0.686	0.486	1.086	3.286	3.986	1.186	2.786
Round 27	11000	7:58:01	2.581	1.586	0.486	1.586	1.086	0.386	0.286	0.686	2.086	2.786	0.786	1.886
Round 27	11000	8:58:01	2.581	0.586	0.186	0.586	0.186	0.086	0.086	0.286	0.886	1.186	0.286	0.686
Round 27	11000	9:58:01	2.581	0.186	0.086	0.186	0.086	0.036	0.036	0.086	0.286	0.386	0.086	0.286
Round 27	11000	10:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	11:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	12:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	13:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	14:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	15:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	16:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	17:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	18:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	19:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	20:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	21:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	22:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	23:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	24:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	25:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	26:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	27:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	28:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	29:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	30:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	31:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	32:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	33:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	34:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	35:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	36:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	37:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	38:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	39:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	40:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	41:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	42:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	43:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	44:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	45:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	46:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	47:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	48:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	49:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	50:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	51:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	52:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	53:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	54:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	55:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	56:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	57:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	58:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	59:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	60:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	61:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	62:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	63:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	64:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	65:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	66:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	67:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	68:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	69:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	70:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	71:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	72:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	73:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	74:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	75:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	76:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	77:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	78:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.016	0.036	0.186	0.286	0.036	0.186
Round 27	11000	79:58:01	2.581	0.086	0.036	0.086	0.036	0.016	0.01					

load\Appendix 3.5.2 Emission Factor in 2030.xlsx

Open Near 24 Hour Underground Query														
Open Near 24 Hour Emulsion Factors for 462MMD Model (Revised)														
Year 2010														
Row Name	Row ID	Hour	No. Emulsion						No. Emulsion					
			MonthlyAverage			MonthlyHourAverage			MonthlyAverage			MonthlyHourAverage		
			g/m ³ /m	lb/ton	lb/ton-hour	lb/ton-hour	lb/ton-hour	g/m ³ /m	lb/ton	lb/ton-hour	lb/ton-hour	lb/ton-hour		
Row 31	00500-030	1	1212.0	1.1111	0.7176	2.0111	1.1811	1.0016	2.5411	1.0316	0.7221	2.2711	0.9417	0.8316
Row 31	01000-030	2	1655.0	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Row 31	01100-030	3	1111.0	1.1111	0.7176	2.0111	1.1811	1.0016	2.5411	1.0316	0.7221	2.2711	0.9417	0.8316
Row 31	01200-030	4	1655.0	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Row 31	01300-030	5	1111.0	1.1111	0.7176	2.0111	1.1811	1.0016	2.5411	1.0316	0.7221	2.2711	0.9417	0.8316
Row 31	01400-030	6	1655.0	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Row 31	01500-030	7	1111.0	1.1111	0.7176	2.0111	1.1811	1.0016	2.5411	1.0316	0.7221	2.2711	0.9417	0.8316
Row 31	01600-030	8	1655.0	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Row 31	01700-030	9	1111.0	1.1111	0.7176	2.0111	1.1811	1.0016	2.5411	1.0316	0.7221	2.2711	0.9417	0.8316
Row 31	01800-030	10	1655.0	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Row 31	01900-030	11	1111.0	1.1111	0.7176	2.0111	1.1811	1.0016	2.5411	1.0316	0.7221	2.2711	0.9417	0.8316
Row 31	02000-030	12	1655.0	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Row 31	02100-030	13	1111.0	1.1111	0.7176	2.0111	1.1811	1.0016	2.5411	1.0316	0.7221	2.2711	0.9417	0.8316
Row 31	02200-030	14	1655.0	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Row 31	02300-030	15	1111.0	1.1111	0.7176	2.0111	1.1811	1.0016	2.5411	1.0316	0.7221	2.2711	0.9417	0.8316
Row 31	02400-030	16	1655.0	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Row 31	02500-030	17	1111.0	1.1111	0.7176	2.0111	1.1811	1.0016	2.5411	1.0316	0.7221	2.2711	0.9417	0.8316
Row 31	02600-030	18	1655.0	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Row 31	02700-030	19	1111.0	1.1111	0.7176	2.0111	1.1811	1.0016	2.5411	1.0316	0.7221	2.2711	0.9417	0.8316
Row 31	02800-030	20	1655.0	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Row 31	02900-030	21	1111.0	1.1111	0.7176	2.0111	1.1811	1.0016	2.5411	1.0316	0.7221	2.2711	0.9417	0.8316
Row 31	03000-030	22	1655.0	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Row 31	03100-030	23	1111.0	1.1111	0.7176	2.0111	1.1811	1.0016	2.5411	1.0316	0.7221	2.2711	0.9417	0.8316
Row 31	03200-030	24	1655.0	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Row 31	03300-030	25	1111.0	1.1111	0.7176	2.0111	1.1811	1.0016	2.5411	1.0316	0.7221	2.2711	0.9417	0.8316
Row 31	03400-030	26	1655.0	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Row 31	03500-030	27	1111.0	1.1111	0.7176	2.0111	1.1811	1.0016	2.5411	1.0316	0.7221	2.2711	0.9417	0.8316
Row 31	03600-030	28	1655.0	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Row 31	03700-030	29	1111.0	1.1111	0.7176	2.0111	1.1811	1.0016	2.5411	1.0316	0.7221	2.2711	0.9417	0.8316
Row 31	03800-030	30	1655.0	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Row 31	03900-030	31	1111.0	1.1111	0.7176	2.0111	1.1811	1.0016	2.5411	1.0316	0.7221	2.2711	0.9417	0.8316
Row 31	04000-030	32	1655.0	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Row 31	04100-030	33	1111.0	1.1111	0.7176	2.0111	1.1811	1.0016	2.5411	1.0316	0.7221	2.2711	0.9417	0.8316
Row 31	04200-030	34	1655.0	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Row 31	04300-030	35	1111.0	1.1111	0.7176	2.0111	1.1811	1.0016	2.5411	1.0316	0.7221	2.2711	0.9417	0.8316
Row 31	04400-030	36	1655.0	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Row 31	04500-030	37	1111.0	1.1111	0.7176	2.0111	1.1811	1.0016	2.5411	1.0316	0.7221	2.2711	0.9417	0.8316
Row 31	04600-030	38	1655.0	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Row 31	04700-030	39	1111.0	1.1111	0.7176	2.0111	1.1811	1.0016	2.5411	1.0316	0.7221	2.2711	0.9417	0.8316
Row 31	04800-030	40	1655.0	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Row 31	04900-030	41	1111.0	1.1111	0.7176	2.0111	1.1811	1.0016	2.5411	1.0316	0.7221	2.2711	0.9417	0.8316
Row 31	05000-030	42	1655.0	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Row 31	05100-030	43	1111.0	1.1111	0.7176	2.0111	1.1811	1.0016	2.5411	1.0316	0.7221	2.2711	0.9417	0.8316
Row 31	05200-030	44	1655.0	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Row 31	05300-030	45	1111.0	1.1111	0.7176	2.0111	1.1811	1.0016	2.5411	1.0316	0.7221	2.2711	0.9417	0.8316
Row 31	05400-030	46	1655.0	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Row 31	05500-030	47	1111.0	1.1111	0.7176	2.0111	1.1811	1.0016	2.5411	1.0316	0.7221	2.2711	0.9417	0.8316
Row 31	05600-030	48	1655.0	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Row 31	05700-030	49	1111.0	1.1111	0.7176	2.0111	1.1811	1.0016	2.5411	1.0316	0.7221	2.2711	0.9417	0.8316
Row 31	05800-030	50	1655.0	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Row 31	05900-030	51	1111.0	1.1111	0.7176	2.0111	1.1811	1.0016	2.5411	1.0316	0.7221	2.2711	0.9417	0.8316
Row 31	06000-030	52	1655.0	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Row 31	06100-030	53	1111.0	1.1111	0.7176	2.0111	1.1811	1.0016	2.5411	1.0316	0.7221	2.2711	0.9417	0.8316
Row 31	06200-030	54	1655.0	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Row 31	06300-030	55	1111.0	1.1111	0.7176	2.0111	1.1811	1.0016	2.5411	1.0316	0.7221	2.2711	0.9417	0.8316
Row 31	06400-030	56	1655.0	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Row 31	06500-030	57	1111.0	1.1111	0.7176	2.0111	1.1811	1.0016	2.5411	1.0316	0.7221	2.2711	0.9417	0.8316
Row 31	06600-030	58	1655.0	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Row 31	06700-030	59	1111.0	1.1111	0.7176	2.0111	1.1811	1.0016	2.5411	1.0316	0.7221	2.2711	0.9417	0.8316
Row 31	06800-030	60	1655.0	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Row 31	06900-030	61	1111.0	1.1111	0.7176	2.0111	1.1811	1.0016	2.5411	1.0316	0.7221	2.2711	0.9417	0.8316
Row 31	07000-030	62	1655.0	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Row 31	07100-030	63	1111.0	1.1111	0.7176	2.0111	1.1811	1.0016	2.5411	1.0316	0.7221	2.2711	0.9417	0.8316
Row 31	07200-030	64	1655.0	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Row 31	07300-030	65	1111.0	1.1111	0.7176	2.0111	1.1811	1.0016	2.5411	1.0316	0.7221	2.2711	0.9417	0.8316
Row 31	07400-030	66	1655.0	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Row 31	07500-030	67	1111.0	1.1111	0.7176	2.0111	1.1811	1.0016	2.5411	1.0316	0.7221	2.2711	0.9417	0.8316
Row 31	07600-030	68	1655.0	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Row 31	07700-030	69	1111.0	1.1111	0.7176	2.0111	1.1811	1.0016	2.5411	1.0316	0.7221	2.2711	0.9417	0.8316
Row 31	07800-030	70	1655.0	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Row 31	07900-030	71	1111.0	1.1111	0.7176	2.0111	1.1811	1.0016	2.5411	1.0316	0.7221	2.2711	0.9417	0.8316
Row 31	08000-030	72	1655.0	1.0000	0.9500	1.0000	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500	0.9500
Row 31	08100-030	73	1111.0	1.1111	0.7176	2.0111	1.1811	1.0016	2.5411	1.0316	0.7221	2.2711	0.9	

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Total Wind Northward Quarry														
Open Road to Lake Erie Emission Factors for ARROW (metric tonnes/decade)														
Year 2030														
Road ID	Road ID	Hour	NO _x Emission					NO _x Emission						
			g/hour	lb/hour	tonnes/hour	Monthly average	Monthly average	Monthly average	Monthly average	Monthly average	Monthly average			
Road #34	34	0800-0900	3.740E-02	1.540E-06	3.73E-05	3.41E-05	1.11E-06	2.97E-05	2.21E-05	7.83E-06	1.91E-06	2.04E-06	6.82E-06	1.73E-06
Road #34	34	0900-1000	4.000E-02	1.27E-06	3.59E-05	4.07E-05	1.16E-06	3.04E-05	2.46E-05	7.12E-06	1.86E-06	2.25E-06	7.45E-06	1.91E-06
Road #34	34	1000-1100	4.000E-02	1.27E-06	3.59E-05	4.07E-05	1.16E-06	3.04E-05	2.46E-05	7.12E-06	1.86E-06	2.25E-06	7.45E-06	1.91E-06
Road #34	34	1100-1200	4.890E-02	1.71E-06	3.07E-05	4.44E-05	1.09E-06	2.85E-05	2.40E-05	6.37E-06	1.67E-06	2.41E-06	5.89E-06	1.54E-06
Road #34	34	1200-1300	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	1300-1400	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	1400-1500	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	1500-1600	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	1600-1700	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	1700-1800	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	1800-1900	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	1900-2000	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	2000-2100	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	2100-2200	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	2200-2300	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	2300-2400	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	2400-2500	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	2500-2600	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	2600-2700	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	2700-2800	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	2800-2900	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	2900-3000	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	3000-3100	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	3100-3200	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	3200-3300	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	3300-3400	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	3400-3500	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	3500-3600	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	3600-3700	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	3700-3800	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	3800-3900	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	3900-4000	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	4000-4100	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	4100-4200	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	4200-4300	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	4300-4400	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	4400-4500	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	4500-4600	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	4600-4700	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	4700-4800	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	4800-4900	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	4900-5000	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	5000-5100	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	5100-5200	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	5200-5300	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	5300-5400	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	5400-5500	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	5500-5600	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	5600-5700	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	5700-5800	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	5800-5900	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	5900-6000	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	6000-6100	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	6100-6200	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	6200-6300	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	6300-6400	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	6400-6500	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	6500-6600	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	6600-6700	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	6700-6800	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	6800-6900	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	6900-7000	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	7000-7100	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06	1.64E-06	2.36E-06	5.80E-06	1.51E-06
Road #34	34	7100-7200	4.730E-02	1.62E-06	2.97E-05	4.38E-05	1.08E-06	2.81E-05	2.36E-05	6.23E-06				

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Top & North Undrained Quarry											
Geotail 2014 South Undrained Factor for AR5000 (New Road)											
Year 2030											
Road Name	Node ID	Hour	NO ₂ Emission			NO _x Emission			Hour		
			Monthly/avg	Monthly/avg	Monthly/avg	Monthly/avg	Monthly/avg				
Road #1	41	0000:00:00	1.93E-03	0.12	1.17E-03	5.37E-03	1.06E-03	2.11E-03	6.07E-03	2.79E-03	1.88E-03
Road #1	41	0000:01:00	4.82E-02	1.08E-03	1.02E-03	4.47E-03	1.05E-03	1.94E-03	5.57E-03	2.28E-03	2.51E-03
Road #1	41	0000:02:00	1.66E-02	3.61E-03	3.45E-03	1.55E-03	3.61E-03	1.91E-03	5.57E-03	2.28E-03	2.51E-03
Road #1	41	0000:03:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #1	41	0000:04:00	5.94E-02	1.01E-03	9.04E-07	5.82E-02	8.48E-03	3.09E-03	1.06E-03	4.05E-03	2.68E-03
Road #1	41	0000:05:00	5.21E-02	1.01E-03	9.04E-07	5.82E-02	8.48E-03	3.09E-03	1.06E-03	4.05E-03	2.68E-03
Road #1	41	0000:06:00	2.00E-02	2.07E-03	1.94E-03	3.88E-03	1.51E-03	1.70E-03	2.21E-03	1.06E-03	9.62E-03
Road #1	41	0000:07:00	3.30E-02	3.30E-03	3.30E-03	1.55E-03	1.55E-03	1.55E-03	1.55E-03	1.55E-03	1.55E-03
Road #1	41	0000:08:00	5.03E-02	6.09E-03	5.17E-03	4.82E-03	5.19E-03	1.75E-03	2.48E-03	2.98E-03	2.84E-03
Road #1	41	0000:09:00	5.72E-02	6.09E-03	5.17E-03	4.82E-03	5.19E-03	1.75E-03	2.48E-03	2.98E-03	2.84E-03
Road #1	41	0000:10:00	5.72E-02	6.09E-03	5.17E-03	4.82E-03	5.19E-03	1.75E-03	2.48E-03	2.98E-03	2.84E-03
Road #1	41	0000:11:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #1	41	0000:12:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #1	41	0000:13:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #1	41	0000:14:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #1	41	0000:15:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #1	41	0000:16:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #1	41	0000:17:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #1	41	0000:18:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #1	41	0000:19:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #1	41	0000:20:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #1	41	0000:21:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #1	41	0000:22:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #1	41	0000:23:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #2	42	0000:00:00	1.93E-03	0.12	1.17E-03	5.37E-03	1.06E-03	2.11E-03	6.07E-03	2.79E-03	1.88E-03
Road #2	42	0000:01:00	4.82E-02	1.08E-03	1.02E-03	4.47E-03	1.05E-03	1.94E-03	5.57E-03	2.28E-03	2.51E-03
Road #2	42	0000:02:00	1.66E-02	3.61E-03	3.45E-03	1.55E-03	3.61E-03	1.91E-03	5.57E-03	2.28E-03	2.51E-03
Road #2	42	0000:03:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #2	42	0000:04:00	5.94E-02	1.01E-03	9.04E-07	5.82E-02	8.48E-03	3.09E-03	1.06E-03	4.05E-03	2.68E-03
Road #2	42	0000:05:00	5.21E-02	1.01E-03	9.04E-07	5.82E-02	8.48E-03	3.09E-03	1.06E-03	4.05E-03	2.68E-03
Road #2	42	0000:06:00	2.00E-02	2.07E-03	1.94E-03	3.88E-03	1.51E-03	1.70E-03	2.21E-03	1.06E-03	9.62E-03
Road #2	42	0000:07:00	3.30E-02	3.30E-03	3.30E-03	1.55E-03	1.55E-03	1.55E-03	1.55E-03	1.55E-03	1.55E-03
Road #2	42	0000:08:00	5.03E-02	6.09E-03	5.17E-03	4.82E-03	5.19E-03	1.75E-03	2.48E-03	2.98E-03	2.84E-03
Road #2	42	0000:09:00	5.72E-02	6.09E-03	5.17E-03	4.82E-03	5.19E-03	1.75E-03	2.48E-03	2.98E-03	2.84E-03
Road #2	42	0000:10:00	5.72E-02	6.09E-03	5.17E-03	4.82E-03	5.19E-03	1.75E-03	2.48E-03	2.98E-03	2.84E-03
Road #2	42	0000:11:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #2	42	0000:12:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #2	42	0000:13:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #2	42	0000:14:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #2	42	0000:15:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #2	42	0000:16:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #2	42	0000:17:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #2	42	0000:18:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #2	42	0000:19:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #2	42	0000:20:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #2	42	0000:21:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #2	42	0000:22:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #2	42	0000:23:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #3	43	0000:00:00	1.93E-03	0.12	1.17E-03	5.37E-03	1.06E-03	2.11E-03	6.07E-03	2.79E-03	1.88E-03
Road #3	43	0000:01:00	4.82E-02	1.08E-03	1.02E-03	4.47E-03	1.05E-03	1.94E-03	5.57E-03	2.28E-03	2.51E-03
Road #3	43	0000:02:00	1.66E-02	3.61E-03	3.45E-03	1.55E-03	3.61E-03	1.91E-03	5.57E-03	2.28E-03	2.51E-03
Road #3	43	0000:03:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #3	43	0000:04:00	5.94E-02	1.01E-03	9.04E-07	5.82E-02	8.48E-03	3.09E-03	1.06E-03	4.05E-03	2.68E-03
Road #3	43	0000:05:00	5.21E-02	1.01E-03	9.04E-07	5.82E-02	8.48E-03	3.09E-03	1.06E-03	4.05E-03	2.68E-03
Road #3	43	0000:06:00	2.00E-02	2.07E-03	1.94E-03	3.88E-03	1.51E-03	1.70E-03	2.21E-03	1.06E-03	9.62E-03
Road #3	43	0000:07:00	3.30E-02	3.30E-03	3.30E-03	1.55E-03	1.55E-03	1.55E-03	1.55E-03	1.55E-03	1.55E-03
Road #3	43	0000:08:00	5.03E-02	6.09E-03	5.17E-03	4.82E-03	5.19E-03	1.75E-03	2.48E-03	2.98E-03	2.84E-03
Road #3	43	0000:09:00	5.72E-02	6.09E-03	5.17E-03	4.82E-03	5.19E-03	1.75E-03	2.48E-03	2.98E-03	2.84E-03
Road #3	43	0000:10:00	5.72E-02	6.09E-03	5.17E-03	4.82E-03	5.19E-03	1.75E-03	2.48E-03	2.98E-03	2.84E-03
Road #3	43	0000:11:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #3	43	0000:12:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #3	43	0000:13:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #3	43	0000:14:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #3	43	0000:15:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #3	43	0000:16:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #3	43	0000:17:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #3	43	0000:18:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #3	43	0000:19:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #3	43	0000:20:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #3	43	0000:21:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #3	43	0000:22:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #3	43	0000:23:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #4	44	0000:00:00	1.93E-03	0.12	1.17E-03	5.37E-03	1.06E-03	2.11E-03	6.07E-03	2.79E-03	1.88E-03
Road #4	44	0000:01:00	4.82E-02	1.08E-03	1.02E-03	4.47E-03	1.05E-03	1.94E-03	5.57E-03	2.28E-03	2.51E-03
Road #4	44	0000:02:00	1.66E-02	3.61E-03	3.45E-03	1.55E-03	3.61E-03	1.91E-03	5.57E-03	2.28E-03	2.51E-03
Road #4	44	0000:03:00	6.38E-02	1.64E-03	1.64E-03	8.87E-03	8.33E-03	1.61E-03	4.77E-03	2.68E-03	2.88E-03
Road #4	44	0000:04:00	5.94E-02	1.01E-03	9.04E-07	5.82E-02	8.48E-03	3.09E-03	1.06E-03	4.05E-03	2.68E-03
Road #4	44	0000:05:00	5.21E-02	1.01E-03	9.04E-07	5.82E-02	8.48E-03	3.09E-03	1.06E-03	4.05E-03	2.68E-03
Road #4	44	0000:06:00	2.00E-02	2.07E-03	1.94E-03	3.88E-03	1.51E-03	1.70E-03	2.21E-03	1.06E-03	9.62E-03
Road #4	44	0000:07:00	3.30E-02	3.30E-03	3.30E-03	1.55E-03	1.55E-03	1.55E-03	1.55E-03	1.55E-03	1.55E-03
Road #4	44	0000:08:00	5.03E-02	6.09E-03	5.17E-03	4.82E-03	5.19E-03	1.75E-03	2.48E-03		

lead) Appendix 2 E 3 Emission Factor in 2020.xlsx

Opex Rate 14th Union Emision Factor for AFNMO model (Row 10)												
Year 2030												
Road Name	Road ID	Hour	No Emission				No Emission					
			Monthly/mc/hour	Monthly/mc/hourage	Monthly/mc/hour	Monthly/mc/hourage	Monthly/mc/hour	Monthly/mc/hourage				
Road #4	44	0800-0000	4.452	0.42	1.896	2.142	0.187	1.571	1.907	0.185	1.715	0.171
Road #4	44	0900-1000	2.835	1.596	0.818	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	1000-1100	1.181	0.968	0.213	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	1100-1200	1.032	0.517	0.226	2.012	4.837	0.286	2.166	1.372	2.005	0.199
Road #4	44	1200-1300	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	1300-1400	1.361	0.968	0.393	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	1400-1500	3.85	0.785	0.474	0.515	1.737	0.447	0.345	0.515	0.313	0.217
Road #4	44	1500-1600	1.336	0.968	0.393	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	1600-1700	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	1700-1800	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	1800-1900	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	1900-2000	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	2000-2100	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	2100-2200	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	2200-2300	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	2300-2400	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	2400-2500	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	2500-2600	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	2600-2700	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	2700-2800	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	2800-2900	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	2900-3000	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	3000-3100	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	3100-3200	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	3200-3300	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	3300-3400	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	3400-3500	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	3500-3600	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	3600-3700	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	3700-3800	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	3800-3900	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	3900-4000	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	4000-4100	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	4100-4200	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	4200-4300	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	4300-4400	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	4400-4500	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	4500-4600	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	4600-4700	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	4700-4800	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	4800-4900	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	4900-5000	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	5000-5100	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	5100-5200	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	5200-5300	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	5300-5400	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	5400-5500	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	5500-5600	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	5600-5700	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	5700-5800	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	5800-5900	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	5900-6000	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	6000-6100	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	6100-6200	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	6200-6300	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	6300-6400	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	6400-6500	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	6500-6600	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	6600-6700	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	6700-6800	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	6800-6900	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	6900-7000	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	7000-7100	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	7100-7200	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	7200-7300	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	7300-7400	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	7400-7500	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	7500-7600	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	7600-7700	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	7700-7800	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	7800-7900	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	7900-8000	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	8000-8100	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	8100-8200	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	8200-8300	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	8300-8400	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	8400-8500	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	8500-8600	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	8600-8700	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	8700-8800	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	8800-8900	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	8900-9000	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	9000-9100	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	9100-9200	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	9200-9300	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	9300-9400	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	9400-9500	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	9500-9600	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	9600-9700	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	9700-9800	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	9800-9900	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436	2.005	0.405
Road #4	44	9900-10000	1.232	0.938	0.295	2.242	3.515	0.444	2.085	1.436		

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Twin North Underground Quarry									
Open Road 24 Hour Emission Factors for ARM200 model (November)									
Year 2030									
Road Name	Road ID	Hour	NO _x Emission				NO Emission		
			Monthly/Min	Monthly/Hr	Monthly/Average	Monthly/Min	Monthly/Hr	Monthly/Average	
Road #7	47100	1:00	1.881	3.408	1.881	0.000	0.000	0.000	0.000
Road #7	47100	2:00	1.538	2.876	1.538	0.000	0.000	0.000	0.000
Road #7	47100	3:00	2.365	4.376	2.365	2.966	7.438	2.367	6.718
Road #7	47100	4:00	2.431	4.500	2.431	2.825	7.198	2.432	6.918
Road #7	47100	5:00	2.431	4.500	2.431	2.825	7.198	2.432	6.918
Road #7	47100	6:00	2.431	4.500	2.431	2.825	7.198	2.432	6.918
Road #7	47100	7:00	2.431	4.500	2.431	2.825	7.198	2.432	6.918
Road #7	47100	8:00	2.431	4.500	2.431	2.825	7.198	2.432	6.918
Road #7	47100	9:00	2.431	4.500	2.431	2.825	7.198	2.432	6.918
Road #7	47100	10:00	2.431	4.500	2.431	2.825	7.198	2.432	6.918
Road #7	47100	11:00	2.431	4.500	2.431	2.825	7.198	2.432	6.918
Road #7	47100	12:00	2.431	4.500	2.431	2.825	7.198	2.432	6.918
Road #7	47100	13:00	2.431	4.500	2.431	2.825	7.198	2.432	6.918
Road #7	47100	14:00	2.431	4.500	2.431	2.825	7.198	2.432	6.918
Road #7	47100	15:00	2.431	4.500	2.431	2.825	7.198	2.432	6.918
Road #7	47100	16:00	2.431	4.500	2.431	2.825	7.198	2.432	6.918
Road #7	47100	17:00	2.431	4.500	2.431	2.825	7.198	2.432	6.918
Road #7	47100	18:00	2.431	4.500	2.431	2.825	7.198	2.432	6.918
Road #7	47100	19:00	2.431	4.500	2.431	2.825	7.198	2.432	6.918
Road #7	47100	20:00	2.431	4.500	2.431	2.825	7.198	2.432	6.918
Road #7	47100	21:00	2.431	4.500	2.431	2.825	7.198	2.432	6.918
Road #7	47100	22:00	2.431	4.500	2.431	2.825	7.198	2.432	6.918
Road #7	47100	23:00	2.431	4.500	2.431	2.825	7.198	2.432	6.918
Road #7	47100	24:00	2.431	4.500	2.431	2.825	7.198	2.432	6.918
Road #8	48000	1:00	1.568	2.957	1.568	0.000	0.000	0.000	0.000
Road #8	48000	2:00	1.568	2.957	1.568	0.000	0.000	0.000	0.000
Road #8	48000	3:00	1.568	2.957	1.568	0.000	0.000	0.000	0.000
Road #8	48000	4:00	1.568	2.957	1.568	0.000	0.000	0.000	0.000
Road #8	48000	5:00	1.568	2.957	1.568	0.000	0.000	0.000	0.000
Road #8	48000	6:00	1.568	2.957	1.568	0.000	0.000	0.000	0.000
Road #8	48000	7:00	1.568	2.957	1.568	0.000	0.000	0.000	0.000
Road #8	48000	8:00	1.568	2.957	1.568	0.000	0.000	0.000	0.000
Road #8	48000	9:00	1.568	2.957	1.568	0.000	0.000	0.000	0.000
Road #8	48000	10:00	1.568	2.957	1.568	0.000	0.000	0.000	0.000
Road #8	48000	11:00	1.568	2.957	1.568	0.000	0.000	0.000	0.000
Road #8	48000	12:00	1.568	2.957	1.568	0.000	0.000	0.000	0.000
Road #8	48000	13:00	1.568	2.957	1.568	0.000	0.000	0.000	0.000
Road #8	48000	14:00	1.568	2.957	1.568	0.000	0.000	0.000	0.000
Road #8	48000	15:00	1.568	2.957	1.568	0.000	0.000	0.000	0.000
Road #8	48000	16:00	1.568	2.957	1.568	0.000	0.000	0.000	0.000
Road #8	48000	17:00	1.568	2.957	1.568	0.000	0.000	0.000	0.000
Road #8	48000	18:00	1.568	2.957	1.568	0.000	0.000	0.000	0.000
Road #8	48000	19:00	1.568	2.957	1.568	0.000	0.000	0.000	0.000
Road #8	48000	20:00	1.568	2.957	1.568	0.000	0.000	0.000	0.000
Road #8	48000	21:00	1.568	2.957	1.568	0.000	0.000	0.000	0.000
Road #8	48000	22:00	1.568	2.957	1.568	0.000	0.000	0.000	0.000
Road #8	48000	23:00	1.568	2.957	1.568	0.000	0.000	0.000	0.000
Road #8	48000	24:00	1.568	2.957	1.568	0.000	0.000	0.000	0.000

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Top 10 North Underground Quarry												
Open Road 10 hour Emission Factors for ARMED model (Revised)												
Road Name	Road ID	Hour	NO _x Emission				NO Emission					
			g/hr/mi	lb/hr/mi	g/hr/mi	lb/hr/mi	g/hr/mi	lb/hr/mi	g/hr/mi	lb/hr/mi		
			Monthly/Average	Monthly/Average	Monthly/Average	Monthly/Average	Monthly/Average	Monthly/Average	Monthly/Average	Monthly/Average		
Road #1	S1	00000000	2.316	2.316	4.296	2.316	2.316	3.868	3.868	4.415	3.868	4.415
Road #1	S1	00000000	2.496	2.496	4.612	2.496	2.496	4.098	4.098	4.728	4.098	4.728
Road #1	S1	00000000	2.688	2.688	4.992	2.688	2.688	4.480	4.480	5.110	4.480	5.110
Road #1	S1	00000000	2.872	2.872	5.264	2.872	2.872	4.752	4.752	5.422	4.752	5.422
Road #1	S1	00000000	3.056	3.056	5.536	3.056	3.056	5.024	5.024	5.694	5.024	5.694
Road #1	S1	00000000	3.240	3.240	5.808	3.240	3.240	5.296	5.296	5.966	5.296	5.966
Road #1	S1	00000000	3.424	3.424	6.080	3.424	3.424	5.568	5.568	6.238	5.568	6.238
Road #1	S1	00000000	3.608	3.608	6.352	3.608	3.608	5.840	5.840	6.510	5.840	6.510
Road #1	S1	00000000	3.792	3.792	6.624	3.792	3.792	6.112	6.112	6.782	6.112	6.782
Road #1	S1	00000000	3.976	3.976	6.896	3.976	3.976	6.384	6.384	7.054	6.384	7.054
Road #1	S1	00000000	4.160	4.160	7.168	4.160	4.160	6.656	6.656	7.326	6.656	7.326
Road #1	S1	00000000	4.344	4.344	7.440	4.344	4.344	6.928	6.928	7.598	6.928	7.598
Road #1	S1	00000000	4.528	4.528	7.712	4.528	4.528	7.200	7.200	7.870	7.200	7.870
Road #1	S1	00000000	4.712	4.712	7.984	4.712	4.712	7.472	7.472	8.142	7.472	8.142
Road #1	S1	00000000	4.896	4.896	8.256	4.896	4.896	7.744	7.744	8.414	7.744	8.414
Road #1	S1	00000000	5.080	5.080	8.528	5.080	5.080	8.016	8.016	8.686	8.016	8.686
Road #1	S1	00000000	5.264	5.264	8.800	5.264	5.264	8.288	8.288	8.958	8.288	8.958
Road #1	S1	00000000	5.448	5.448	9.072	5.448	5.448	8.560	8.560	9.230	8.560	9.230
Road #1	S1	00000000	5.632	5.632	9.344	5.632	5.632	8.832	8.832	9.502	8.832	9.502
Road #1	S1	00000000	5.816	5.816	9.616	5.816	5.816	9.104	9.104	9.774	9.104	9.774
Road #1	S1	00000000	6.000	6.000	9.888	6.000	6.000	9.376	9.376	10.046	9.376	10.046
Road #1	S1	00000000	6.184	6.184	10.160	6.184	6.184	9.648	9.648	10.318	9.648	10.318
Road #1	S1	00000000	6.368	6.368	10.432	6.368	6.368	9.920	9.920	10.590	9.920	10.590
Road #1	S1	00000000	6.552	6.552	10.704	6.552	6.552	10.192	10.192	10.862	10.192	10.862
Road #1	S1	00000000	6.736	6.736	10.976	6.736	6.736	10.464	10.464	11.134	10.464	11.134
Road #1	S1	00000000	6.920	6.920	11.248	6.920	6.920	10.736	10.736	11.406	10.736	11.406
Road #1	S1	00000000	7.104	7.104	11.520	7.104	7.104	11.008	11.008	11.678	11.008	11.678
Road #1	S1	00000000	7.288	7.288	11.792	7.288	7.288	11.280	11.280	11.950	11.280	11.950
Road #1	S1	00000000	7.472	7.472	12.064	7.472	7.472	11.552	11.552	12.222	11.552	12.222
Road #1	S1	00000000	7.656	7.656	12.336	7.656	7.656	11.824	11.824	12.494	11.824	12.494
Road #1	S1	00000000	7.840	7.840	12.608	7.840	7.840	12.096	12.096	12.766	12.096	12.766
Road #1	S1	00000000	8.024	8.024	12.880	8.024	8.024	12.368	12.368	13.038	12.368	13.038
Road #1	S1	00000000	8.208	8.208	13.152	8.208	8.208	12.640	12.640	13.310	12.640	13.310
Road #1	S1	00000000	8.392	8.392	13.424	8.392	8.392	12.912	12.912	13.582	12.912	13.582
Road #1	S1	00000000	8.576	8.576	13.696	8.576	8.576	13.184	13.184	13.854	13.184	13.854
Road #1	S1	00000000	8.760	8.760	13.968	8.760	8.760	13.456	13.456	14.126	13.456	14.126
Road #1	S1	00000000	8.944	8.944	14.240	8.944	8.944	13.728	13.728	14.398	13.728	14.398
Road #1	S1	00000000	9.128	9.128	14.512	9.128	9.128	14.000	14.000	14.670	14.000	14.670
Road #1	S1	00000000	9.312	9.312	14.784	9.312	9.312	14.272	14.272	14.942	14.272	14.942
Road #1	S1	00000000	9.496	9.496	15.056	9.496	9.496	14.544	14.544	15.214	14.544	15.214
Road #1	S1	00000000	9.680	9.680	15.328	9.680	9.680	14.816	14.816	15.486	14.816	15.486
Road #1	S1	00000000	9.864	9.864	15.600	9.864	9.864	15.088	15.088	15.758	15.088	15.758
Road #1	S1	00000000	10.048	10.048	15.872	10.048	10.048	15.360	15.360	16.030	15.360	16.030
Road #1	S1	00000000	10.232	10.232	16.144	10.232	10.232	15.632	15.632	16.302	15.632	16.302
Road #1	S1	00000000	10.416	10.416	16.416	10.416	10.416	15.904	15.904	16.574	15.904	16.574
Road #1	S1	00000000	10.600	10.600	16.688	10.600	10.600	16.176	16.176	16.846	16.176	16.846
Road #1	S1	00000000	10.784	10.784	16.960	10.784	10.784	16.448	16.448	17.118	16.448	17.118
Road #1	S1	00000000	10.968	10.968	17.232	10.968	10.968	16.720	16.720	17.390	16.720	17.390
Road #1	S1	00000000	11.152	11.152	17.504	11.152	11.152	16.992	16.992	17.662	16.992	17.662
Road #1	S1	00000000	11.336	11.336	17.776	11.336	11.336	17.264	17.264	17.934	17.264	17.934
Road #1	S1	00000000	11.520	11.520	18.048	11.520	11.520	17.536	17.536	18.206	17.536	18.206
Road #1	S1	00000000	11.704	11.704	18.320	11.704	11.704	17.808	17.808	18.478	17.808	18.478
Road #1	S1	00000000	11.888	11.888	18.592	11.888	11.888	18.080	18.080	18.750	18.080	18.750
Road #1	S1	00000000	12.072	12.072	18.864	12.072	12.072	18.352	18.352	19.022	18.352	19.022
Road #1	S1	00000000	12.256	12.256	19.136	12.256	12.256	18.624	18.624	19.294	18.624	19.294
Road #1	S1	00000000	12.440	12.440	19.408	12.440	12.440	18.896	18.896	19.566	18.896	19.566
Road #1	S1	00000000	12.624	12.624	19.680	12.624	12.624	19.168	19.168	19.838	19.168	19.838
Road #1	S1	00000000	12.808	12.808	19.952	12.808	12.808	19.440	19.440	20.110	19.440	20.110
Road #1	S1	00000000	12.992	12.992	20.224	12.992	12.992	19.712	19.712	20.382	19.712	20.382
Road #1	S1	00000000	13.176	13.176	20.496	13.176	13.176	19.984	19.984	20.654	19.984	20.654
Road #1	S1	00000000	13.360	13.360	20.768	13.360	13.360	20.256	20.256	20.926	20.256	20.926
Road #1	S1	00000000	13.544	13.544	21.040	13.544	13.544	20.528	20.528	21.198	20.528	21.198
Road #1	S1	00000000	13.728	13.728	21.312	13.728	13.728	20.800	20.800	21.470	20.800	21.470
Road #1	S1	00000000	13.912	13.912	21.584	13.912	13.912	21.072	21.072	21.742	21.072	21.742
Road #1	S1	00000000	14.096	14.096	21.856	14.096	14.096	21.344	21.344	22.014	21.344	22.014
Road #1	S1	00000000	14.280	14.280	22.128	14.280	14.280	21.616	21.616	22.286	21.616	22.286
Road #1	S1	00000000	14.464	14.464	22.400	14.464	14.464	21.888	21.888	22.558	21.888	22.558
Road #1	S1	00000000	14.648	14.648	22.672	14.648	14.648	22.160	22.160	22.830	22.160	22.830
Road #1	S1	00000000	14.832	14.832	22.944	14.832	14.832	22.432	22.432	23.102	22.432	23.102
Road #1	S1	00000000	15.016	15.016	23.216	15.016	15.016	22.704	22.704	23.374	22.704	23.374
Road #1	S1	00000000	15.200	15.200	23.488	15.200	15.200	22.976	22.976	23.646	22.976	23.646
Road #1	S1	00000000	15.384	15.384	23.760	15.384	15.384	23.248	23.248	23.918	23.248	23.918
Road #1	S1	00000000	15.568	15.568	24.032	15.568	15.568	23.520	23.520	24.190	23.520	24.190
Road #1	S1	00000000	15.752	15.752	24.304	15.752	15.752	23.792	23.792	24.462	23.792	24.462
Road #1	S1	00000000	15.936	15.936	24.576	15.936	15.936	24.064	24.064	24.734	24.064	24.734
Road #1	S1	00000000	16.120	16.120	24.848	16.120	16.120	24.336	24.336	25.006	24.336	25.006
Road #1	S1	00000000	16.304	16.304	25.120	16.304	16.304	24.608	24.608	25.278	24.608	25.278
Road #1	S1	00000000	16.488	16.488	25.392	16.488	16.488	24.880	24.880	25.550	24.880	25.550
Road #1	S1	00000000	16.672	16.672	25.664	16.672	16.672	25.152	25.152	25.822	25.152	25.822
Road #1	S1	00000000	16.856	16.856	25.936	16.856	16.856	25.424	25.424	26.094	25.424	26.094
Road #1	S1	00000000	17.040	17.040	26.208	17.040	17.040	25.696	25.696	26.366	25.696	26.366
Road #1	S1	00000000	17.224	17.224	26.480	17.224	17.224	25.968	25.968	26.638	25.968	26.638
Road #1	S1	00000000	17.408	17.408	26.752	17.408	17.408	26.240	26.240	26.910	26.240	26.910
Road #1	S1	00000000	17.592	17.592	27.024	17.592	17.592	26.512	26.512	27.182	26.512	27.182
Road #1	S1	00000000	17.776	17.776	27.296	17.776	17.776	26.784	26.784	27.454	26.784	27.454
Road #1	S1	00000000	17.960	17.960	27.568	17.960	17.960	27.056	27.056	27.726	27.056	27.726
Road #1	S1	00000000	18.144	18.144	27.840	18.144	18.144	27.328	27.328	28.000	27.328	28.000
Road #1	S1	00000000	18.328	18.328	28.112	18.328	18.328	27.600	27.600	28.272	27.600	28.272
Road #1												

1. (Secure Environment: Project) 607222386 1.01) Other

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

[illegible]

L:\Secure\Environment Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Open Road\Appendix 3.5.2 Emission Factor in 2030.xls

Open Top North End Uranium Facility

Year 2030

Open RD 2030 End Uranium Facility

MEMO Model Number

Road Name	Node ID	Hour	NO _x /Emission				NO _x /Emission				
			Monthly/tons/year		Monthly/Hour/Average		Monthly/tons/year		Monthly/Hour/Average		
Road 101	101	1605-1700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	1700-1800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	1800-1900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	1900-2000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	2000-2100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	2100-2200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	2200-2300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	2300-2400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	2400-0100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	0100-0200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	0200-0300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	0300-0400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	0400-0500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	0500-0600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	0600-0700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	0700-0800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	0800-0900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	0900-1000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	1000-1100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	1100-1200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	1200-1300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	1300-1400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	1400-1500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	1500-1600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	1600-1700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	1700-1800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	1800-1900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	1900-2000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	2000-2100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	2100-2200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	2200-2300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	2300-2400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	2400-0100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	0100-0200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	0200-0300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	0300-0400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	0400-0500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	0500-0600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	0600-0700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	0700-0800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	0800-0900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	0900-1000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	1000-1100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	1100-1200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	1200-1300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	1300-1400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	1400-1500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	1500-1600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	1600-1700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	1700-1800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	1800-1900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	1900-2000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	2000-2100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	2100-2200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	2200-2300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	2300-2400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	2400-0100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	0100-0200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	0200-0300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	0300-0400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	0400-0500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	0500-0600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	0600-0700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	0700-0800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	0800-0900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	0900-1000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	1000-1100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	1100-1200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	1200-1300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	1300-1400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	1400-1500	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	1500-1600	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	1600-1700	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	1700-1800	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	1800-1900	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	1900-2000	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	2000-2100	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	2100-2200	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	2200-2300	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00
Road 101	101	2300-2400	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00	0.00E+00		

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Open Up 24 Hour Underground Query														
Open Up 24 Hour Emission Factors for														
AFPMCO model (Becmet)														
Road Name	Route ID	Hour	NO Emission				NO Emission							
			g/hr/mile	lb/hr/mile	g/hr/mile	lb/hr/mile	g/hr/mile	lb/hr/mile	g/hr/mile	lb/hr/mile				
Road #4	4	0800-0900	2.138	0.0187	1.676	1.938	0.2447	1.516	1.671	1.938	1.3114	1.478	0.418	1.516
Road #4	4	9000-1000	2.446	0.0217	1.945	2.212	0.2812	1.632	1.833	1.972	1.5126	1.692	0.508	1.692
Road #4	4	1000-1100	2.754	0.0247	2.253	2.520	0.3177	1.698	1.883	2.072	1.5638	1.748	0.559	1.748
Road #4	4	1100-1200	3.062	0.0277	2.561	2.828	0.3542	1.764	1.949	2.138	1.6150	1.800	0.610	1.800
Road #4	4	1200-1300	2.926	0.0269	2.425	2.692	0.3407	1.719	1.904	2.093	1.5862	1.771	0.589	1.771
Road #4	4	1300-1400	2.790	0.0260	2.289	2.556	0.3272	1.674	1.859	1.998	1.5574	1.742	0.568	1.742
Road #4	4	1400-1500	3.127	0.0291	2.745	3.012	0.3637	1.840	2.025	2.210	1.6775	1.862	0.607	1.862
Road #4	4	1500-1600	2.883	0.0251	2.341	2.608	0.3202	1.695	1.880	1.998	1.5638	1.748	0.559	1.748
Road #4	4	1600-1700	2.383	0.0189	1.988	2.090	0.2330	1.500	1.675	1.745	1.3023	1.426	0.382	1.426
Road #4	4	1700-1800	2.038	0.0166	1.739	1.841	0.2057	1.305	1.480	1.550	1.1074	1.230	0.333	1.230
Road #4	4	1800-1900	1.915	0.0156	1.616	1.718	0.1941	1.260	1.435	1.505	1.0626	1.185	0.312	1.185
Road #4	4	1900-2000	2.186	0.0178	1.847	1.949	0.2167	1.345	1.520	1.590	1.1483	1.271	0.350	1.271
Road #4	4	2000-2100	2.552	0.0204	2.153	2.255	0.2492	1.460	1.635	1.705	1.2640	1.387	0.388	1.387
Road #4	4	2100-2200	2.104	0.0167	1.764	1.866	0.2033	1.300	1.475	1.545	1.0926	1.215	0.330	1.215
Road #4	4	2200-2300	1.456	0.0107	1.256	1.358	0.1387	0.985	1.160	1.230	0.7074	0.830	0.233	0.830
Road #4	4	2300-2400	1.456	0.0107	1.256	1.358	0.1387	0.985	1.160	1.230	0.7074	0.830	0.233	0.830
Road #5	5	0800-0900	2.240	0.0192	1.748	1.950	0.2407	1.530	1.685	1.950	1.3240	1.490	0.418	1.490
Road #5	5	0900-1000	2.548	0.0222	1.956	2.158	0.2772	1.596	1.751	2.020	1.3752	1.540	0.469	1.540
Road #5	5	1000-1100	2.856	0.0252	2.264	2.466	0.3137	1.662	1.817	2.040	1.4264	1.590	0.520	1.590
Road #5	5	1100-1200	2.720	0.0243	2.128	2.330	0.2902	1.617	1.772	1.940	1.3776	1.540	0.469	1.540
Road #5	5	1200-1300	2.584	0.0234	2.000	2.192	0.2767	1.572	1.727	1.890	1.3288	1.490	0.418	1.490
Road #5	5	1300-1400	2.448	0.0225	1.884	2.076	0.2632	1.527	1.682	1.840	1.2800	1.440	0.369	1.440
Road #5	5	1400-1500	2.312	0.0216	1.768	1.960	0.2497	1.482	1.637	1.790	1.2312	1.390	0.320	1.390
Road #5	5	1500-1600	2.176	0.0207	1.652	1.844	0.2362	1.437	1.592	1.740	1.1824	1.340	0.271	1.340
Road #5	5	1600-1700	2.040	0.0198	1.536	1.728	0.2227	1.392	1.547	1.690	1.1336	1.290	0.222	1.290
Road #5	5	1700-1800	1.904	0.0189	1.420	1.612	0.2092	1.347	1.502	1.640	1.0848	1.240	0.173	1.240
Road #5	5	1800-1900	1.768	0.0180	1.304	1.496	0.1957	1.302	1.457	1.590	1.0360	1.190	0.124	1.190
Road #5	5	1900-2000	1.632	0.0171	1.188	1.380	0.1822	1.257	1.412	1.540	0.9872	1.140	0.075	1.140
Road #5	5	2000-2100	1.496	0.0162	1.072	1.264	0.1687	1.212	1.367	1.490	0.9384	1.090	0.026	1.090
Road #5	5	2100-2200	1.360	0.0153	0.956	1.148	0.1552	1.167	1.322	1.440	0.8896	1.040	0.017	1.040
Road #5	5	2200-2300	1.224	0.0144	0.840	1.032	0.1417	1.122	1.277	1.390	0.8408	0.990	0.008	0.990
Road #5	5	2300-2400	1.224	0.0144	0.840	1.032	0.1417	1.122	1.277	1.390	0.8408	0.990	0.008	0.990
Road #6	6	0800-0900	3.408	0.0318	2.736	3.136	0.3949	2.079	2.295	2.511	1.6887	2.048	0.545	2.048
Road #6	6	0900-1000	3.716	0.0348	3.044	3.444	0.4314	2.145	2.361	2.577	1.7399	2.100	0.596	2.100
Road #6	6	1000-1100	4.024	0.0378	3.352	3.752	0.4679	2.211	2.427	2.643	1.7911	2.152	0.647	2.152
Road #6	6	1100-1200	4.332	0.0408	3.660	4.060	0.5044	2.277	2.493	2.709	1.8423	2.204	0.698	2.204
Road #6	6	1200-1300	4.024	0.0378	3.352	3.752	0.4679	2.211	2.427	2.643	1.7911	2.152	0.647	2.152
Road #6	6	1300-1400	3.716	0.0348	3.044	3.444	0.4314	2.145	2.361	2.577	1.7399	2.100	0.596	2.100
Road #6	6	1400-1500	3.408	0.0318	2.736	3.136	0.3949	2.079	2.295	2.511	1.6887	2.048	0.545	2.048
Road #6	6	1500-1600	3.120	0.0298	2.520	2.880	0.3714	1.944	2.160	2.376	1.6399	1.900	0.494	1.900
Road #6	6	1600-1700	2.832	0.0278	2.320	2.680	0.3479	1.819	1.995	2.171	1.5911	1.850	0.445	1.850
Road #6	6	1700-1800	2.544	0.0258	2.120	2.392	0.3244	1.694	1.870	2.046	1.5423	1.800	0.396	1.800
Road #6	6	1800-1900	2.256	0.0238	1.900	2.112	0.3009	1.569	1.745	1.921	1.4935	1.750	0.347	1.750
Road #6	6	1900-2000	1.968	0.0218	1.680	1.872	0.2774	1.444	1.620	1.796	1.4447	1.690	0.298	1.690
Road #6	6	2000-2100	1.680	0.0198	1.460	1.640	0.2539	1.319	1.495	1.671	1.3959	1.640	0.249	1.640
Road #6	6	2100-2200	1.392	0.0178	1.160	1.340	0.2304	1.194	1.370	1.546	1.3471	1.590	0.200	1.590
Road #6	6	2200-2300	1.392	0.0178	1.160	1.340	0.2304	1.194	1.370	1.546	1.3471	1.590	0.200	1.590
Road #6	6	2300-2400	1.392	0.0178	1.160	1.340	0.2304	1.194	1.370	1.546	1.3471	1.590	0.200	1.590
Road #7	7	0800-0900	5.112	0.0488	4.176	4.736	0.5944	3.144	3.408	3.672	2.4480	2.940	0.840	2.940
Road #7	7	0900-1000	5.420	0.0518	4.484	5.044	0.6309	3.210	3.474	3.738	2.4992	2.990	0.891	2.990
Road #7	7	1000-1100	5.728	0.0548	4.792	5.352	0.6674	3.276	3.540	3.804	2.5504	3.040	0.942	3.040
Road #7	7	1100-1200	6.036	0.0578	5.100	5.660	0.7039	3.342	3.606	3.870	2.6016	3.090	0.993	3.090
Road #7	7	1200-1300	5.728	0.0548	4.792	5.352	0.6674	3.276	3.540	3.804	2.5504	3.040	0.942	3.040
Road #7	7	1300-1400	5.420	0.0518	4.484	5.044	0.6309	3.210	3.474	3.738	2.4992	2.990	0.891	2.990
Road #7	7	1400-1500	5.112	0.0488	4.176	4.736	0.5944	3.144	3.408	3.672	2.4480	2.940	0.840	2.940
Road #7	7	1500-1600	4.824	0.0468	3.960	4.520	0.5709	3.019	3.282	3.546	2.3992	2.890	0.791	2.890
Road #7	7	1600-1700	4.536	0.0448	3.760	4.280	0.5474	2.894	3.158	3.422	2.3484	2.840	0.742	2.840
Road #7	7	1700-1800	4.248	0.0428	3.560	4.080	0.5239	2.769	2.994	3.258	2.2976	2.790	0.693	2.790
Road #7	7	1800-1900	3.960	0.0408	3.360	3.840	0.5004	2.644	2.869	3.133	2.2468	2.740	0.644	2.740
Road #7	7	1900-2000	3.672	0.0388	3.160	3.600	0.4769	2.519	2.744	2.998	2.1960	2.690	0.595	2.690
Road #7	7	2000-2100	3.384	0.0368	2.960	3.360	0.4534	2.394	2.619	2.873	2.1452	2.640	0.546	2.640
Road #7	7	2100-2200	3.096	0.0348	2.760	3.120	0.4299	2.269	2.494	2.748	2.0944	2.590	0.497	2.590
Road #7	7	2200-2300	3.096	0.0348	2.760	3.120	0.4299	2.269	2.494	2.748	2.0944	2.590	0.497	2.590
Road #7	7	2300-2400	3.096	0.0348	2.760	3.120	0.4299	2.269	2.494	2.748	2.0944	2.590	0.497	2.590
Road #8	8	0800-0900	3.672	0.0348	2.960	3.360	0.4314	2.145	2.361	2.577	1.7399	2.100	0.596	2.100
Road #8	8	0900-1000	3.980	0.0378	3.268	3.668	0.4679	2.211	2.427	2.643	1.7911	2.152	0.647	2.152
Road #8	8	1000-1100	4.288	0.0408	3.568	3.968	0.5044	2.277	2.493	2.709	1.8423	2.204	0.698	2.204
Road #8	8	1100-1200	4.596	0.0438	3.872	4.272	0.5409	2.343	2.559	2.775	1.8935	2.266	0.749	2.266
Road #8	8	1200-1300	4.288	0.0408	3.568	3.968	0.5044	2.277	2.493	2.709	1.8423	2.204	0.698	2.204
Road #8	8	1300-1400	3.980	0.0378	3.268	3.668	0.4679	2.211	2.427	2.643	1.7911	2.152	0.647	2.152
Road #8	8	1400-1500	3.672	0.0348	2.960	3.360	0.4314	2.145	2.361	2.577	1.7399	2.100	0.596	2.100
Road #8	8	1500-1600	3.384	0.0328	2.760	3.120	0.4079	2.020	2.236	2.452	1.6911	2.060	0.547	2.060
Road #8	8	1600-1700	3.096	0.0308	2.560	2.880	0.3844	1.895	2.111	2.327	1.6403	1.970	0.498	1.970
Road #8	8	1700-1800	2.808	0.0288	2.360	2.640	0.3609	1.770	1.986	2.192	1.5895	1.920	0.449	1.920
Road #8	8	1800-1900	2.520	0.0268	2.160	2.400	0.3374	1.645	1.861	2.067	1.5387	1.860	0.400	1.860
Road #8	8	1900-2000	2.232	0.0248	1.960	2.160	0.3139	1.520	1.736	1.942	1.4879	1.810	0.351	1.810
Road #8	8	2000-2100	1.944	0.0228	1.760	1.960	0.2904	1.395	1.611	1.817	1.4371	1.760	0.302	1.760
Road #8	8	2100-2200	1.656	0.0208	1.560	1.760	0.2669	1.270	1.486	1.692	1.3863	1.710	0.253	1.710
Road #8	8	2200-2300	1.656	0.0208	1.560	1.760	0.2669	1.270	1.					

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Open Top North End Union Factors for ABRMCO model (Document #)													
Year 2030													
Road Name	Road ID	Hour	NO _x Emission						NO Emission				
			Month/Miles/Hr			Monthly/hourage			Month/Miles/Hr			Monthly/hourage	
			g/min	g/min/Hr	g/min/Hr	g/min	g/min/Hr	g/min/Hr	g/min	g/min/Hr	g/min/Hr	g/min	g/min/Hr
Road # 7	7	1700-1800	2.676/0.0	5.185/0.0	6.076/0.0	2.579/0.0	4.444/0.0	5.446/0.0	2.652/0.0	4.788/0.0	5.614/0.0	2.340/0.0	4.228/0.0
Road # 7	7	1800-1900	2.700/0.0	5.210/0.0	6.101/0.0	2.602/0.0	4.468/0.0	5.468/0.0	2.676/0.0	4.810/0.0	5.638/0.0	2.364/0.0	4.252/0.0
Road # 7	7	1900-2000	2.724/0.0	5.234/0.0	6.125/0.0	2.626/0.0	4.492/0.0	5.492/0.0	2.700/0.0	4.834/0.0	5.662/0.0	2.388/0.0	4.276/0.0
Road # 7	7	2000-2100	2.012/0.0	3.926/0.0	4.735/0.0	1.796/0.0	3.667/0.0	4.386/0.0	2.454/0.0	4.314/0.0	4.936/0.0	2.102/0.0	3.846/0.0
Road # 7	7	2200-2300	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	2300-2400	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	2400-2500	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	2500-2600	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	2600-2700	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	2700-2800	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	2800-2900	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	2900-3000	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	3000-3100	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	3100-3200	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	3200-3300	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	3300-3400	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	3400-3500	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	3500-3600	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	3600-3700	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	3700-3800	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	3800-3900	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	3900-4000	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	4000-4100	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	4100-4200	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	4200-4300	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	4300-4400	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	4400-4500	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	4500-4600	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	4600-4700	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	4700-4800	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	4800-4900	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	4900-5000	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	5000-5100	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	5100-5200	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	5200-5300	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	5300-5400	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	5400-5500	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	5500-5600	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	5600-5700	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	5700-5800	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	5800-5900	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	5900-6000	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	6000-6100	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	6100-6200	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	6200-6300	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	6300-6400	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	6400-6500	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	6500-6600	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	6600-6700	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	6700-6800	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	6800-6900	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	6900-7000	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	7000-7100	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	7100-7200	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	7200-7300	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	7300-7400	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	7400-7500	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	7500-7600	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	7600-7700	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	7700-7800	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	7800-7900	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	7900-8000	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	8000-8100	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	8100-8200	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0	2.808/0.0	2.302/0.0	2.608/0.0
Road # 7	7	8200-8300	2.012/0.0	2.926/0.0	2.935/0.0	1.802/0.0	2.242/0.0	2.622/0.0	2.432/0.0	2.434/0.0			

I:\Secure\Environment - Projects\60722778\1.01\Other\Air Modelling\Appendix\Traffic\Open Road\Appendix 3.5.3 Emission Factor to 2020

Open N ₂ and Uranium Emission Factors									
Year 2030		N ₂ Emission				Uranium Emission			
Row	Route	ID	Hour	Month/Uranium/g	Month/N ₂ /kg	Month/Uranium/g	Month/N ₂ /kg	Month/Uranium/g	Month/N ₂ /kg
Row 1	11	0000-0100	4.472	1.146	4.497	4.576	1.151	4.286	4.323
Row 1	11	0100-0200	5.146	1.705	5.454	4.992	1.555	5.987	4.481
Row 1	11	0200-0300	4.077	1.046	4.379	4.033	1.037	4.286	4.078
Row 1	11	0300-0400	4.502	1.137	4.074	5.976	1.121	4.637	4.077
Row 1	11	0400-0500	5.515	1.447	5.514	6.042	1.325	4.077	4.962
Row 1	11	0500-0600	4.077	1.046	4.379	4.033	1.037	4.286	4.078
Row 1	11	0600-0700	5.962	1.607	4.109	4.582	1.025	1.559	4.069
Row 1	11	0700-0800	4.681	1.235	4.681	4.681	1.235	4.681	1.235
Row 1	11	0800-0900	4.286	1.128	4.286	4.286	1.128	4.286	1.128
Row 1	11	0900-1000	4.286	1.128	4.286	4.286	1.128	4.286	1.128
Row 1	11	1000-1100	4.286	1.128	4.286	4.286	1.128	4.286	1.128
Row 1	11	1100-1200	4.286	1.128	4.286	4.286	1.128	4.286	1.128
Row 1	11	1200-1300	4.286	1.128	4.286	4.286	1.128	4.286	1.128
Row 1	11	1300-1400	1.046	0.269	1.546	1.005	1.421	1.546	1.046
Row 1	11	1400-1500	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1500-1600	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1600-1700	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1700-1800	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1800-1900	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1900-2000	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	2000-2100	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	2100-2200	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	2200-2300	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	2300-0000	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0000-0100	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0100-0200	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0200-0300	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0300-0400	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0400-0500	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0500-0600	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0600-0700	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0700-0800	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0800-0900	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0900-1000	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1000-1100	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1100-1200	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1200-1300	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1300-1400	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1400-1500	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1500-1600	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1600-1700	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1700-1800	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1800-1900	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1900-2000	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	2000-2100	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	2100-2200	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	2200-2300	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	2300-0000	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0000-0100	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0100-0200	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0200-0300	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0300-0400	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0400-0500	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0500-0600	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0600-0700	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0700-0800	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0800-0900	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0900-1000	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1000-1100	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1100-1200	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1200-1300	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1300-1400	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1400-1500	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1500-1600	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1600-1700	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1700-1800	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1800-1900	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1900-2000	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	2000-2100	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	2100-2200	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	2200-2300	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	2300-0000	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0000-0100	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0100-0200	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0200-0300	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0300-0400	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0400-0500	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0500-0600	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0600-0700	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0700-0800	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0800-0900	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0900-1000	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1000-1100	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1100-1200	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1200-1300	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1300-1400	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1400-1500	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1500-1600	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1600-1700	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1700-1800	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1800-1900	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1900-2000	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	2000-2100	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	2100-2200	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	2200-2300	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	2300-0000	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0000-0100	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0100-0200	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0200-0300	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0300-0400	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0400-0500	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0500-0600	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0600-0700	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0700-0800	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0800-0900	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	0900-1000	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1000-1100	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1100-1200	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1200-1300	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1300-1400	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1400-1500	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1500-1600	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1600-1700	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1700-1800	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1800-1900	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	1900-2000	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	2000-2100	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	2100-2200	1.071	0.113	1.136	0.980	1.026	1.071	1.136
Row 1	11	2200-2300	1.071	0.113</					

Source: Environment. Projects\60723736\1.01\Other\Aid\Modelling\Appendix\Traffic\OpenRoads\Appendix 2 E 2 Emission Factor in 2020.xlsx

Open Top North Underdrain Quarry										
Opa's Road 24 hour Emission Factors for										
ARMOAD model (Round 2)										
Year 2030		NO Emission				NO Emission				
Road Name	Road ID	Hour	MonthlyMetric		MonthlyMetric		MonthlyMetric		MonthlyMetric	
			g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh
Road 14	14	0800-0900	5.58E+02	1.27E+03	1.58E+03	3.62E+03	1.58E+03	3.62E+03	1.58E+04	3.62E+04
			6.58E+02	9.17E+07	1.58E+03	3.77E+02	8.32E+07	1.42E+08	3.68E+02	5.61E+08
Road 14	14	1300-1400	5.58E+02	1.27E+03	1.58E+03	3.62E+03	1.58E+03	3.62E+03	1.58E+04	3.62E+04
			6.58E+02	9.17E+07	1.58E+03	3.77E+02	8.32E+07	1.42E+08	3.68E+02	5.61E+08
Road 14	14	1800-1900	6.85E+02	1.20E+07	1.63E+03	3.72E+02	7.46E+07	1.27E+08	4.07E+02	8.31E+07
			6.85E+02	1.20E+07	1.63E+03	3.72E+02	7.46E+07	1.27E+08	4.07E+02	8.31E+07
Road 14	14	2300-2400	8.32E+02	1.18E+03	1.49E+03	7.53E+02	1.02E+06	1.74E+04	3.74E+02	1.06E+04
			8.32E+02	1.18E+03	1.49E+03	7.53E+02	1.02E+06	1.74E+04	3.74E+02	1.06E+04
Road 14	14	0100-0200	1.15E+03	1.18E+03	1.49E+03	7.53E+02	1.02E+06	1.74E+04	3.74E+02	1.06E+04
			1.15E+03	1.18E+03	1.49E+03	7.53E+02	1.02E+06	1.74E+04	3.74E+02	1.06E+04
Road 14	14	0400-0500	1.48E+03	1.24E+03	1.62E+03	7.71E+02	1.15E+06	1.93E+07	4.77E+02	7.02E+06
			1.48E+03	1.24E+03	1.62E+03	7.71E+02	1.15E+06	1.93E+07	4.77E+02	7.02E+06
Road 14	14	0700-0800	1.48E+03	1.24E+03	1.62E+03	7.71E+02	1.15E+06	1.93E+07	4.77E+02	7.02E+06
			1.48E+03	1.24E+03	1.62E+03	7.71E+02	1.15E+06	1.93E+07	4.77E+02	7.02E+06
Road 14	14	1000-1100	8.13E+02	1.26E+03	2.20E+03	3.12E+02	1.14E+06	1.98E+07	4.69E+02	7.27E+06
			8.13E+02	1.26E+03	2.20E+03	3.12E+02	1.14E+06	1.98E+07	4.69E+02	7.27E+06
Road 14	14	1700-1800	1.84E+02	1.54E+03	1.99E+03	3.89E+02	1.02E+06	1.78E+05	2.42E+02	7.10E+06
			1.84E+02	1.54E+03	1.99E+03	3.89E+02	1.02E+06	1.78E+05	2.42E+02	7.10E+06
Road 14	14	2000-2100	1.84E+02	1.54E+03	1.99E+03	3.89E+02	1.02E+06	1.78E+05	2.42E+02	7.10E+06
			1.84E+02	1.54E+03	1.99E+03	3.89E+02	1.02E+06	1.78E+05	2.42E+02	7.10E+06
Road 14	14	2300-2400	1.72E+02	1.64E+02	9.31E+02	1.24E+02	8.89E+02	3.71E+02	1.83E+02	2.20E+02
			1.72E+02	1.64E+02	9.31E+02	1.24E+02	8.89E+02	3.71E+02	1.83E+02	2.20E+02
Road 14	14	0200-0300	2.00E+02	1.64E+02	9.31E+02	1.24E+02	8.89E+02	3.71E+02	1.83E+02	2.20E+02
			2.00E+02	1.64E+02	9.31E+02	1.24E+02	8.89E+02	3.71E+02	1.83E+02	2.20E+02
Road 14	14	2300-2400	3.34E+02	1.62E+02	6.32E+02	1.68E+02	3.41E+02	5.82E+02	3.14E+02	3.40E+02
			3.34E+02	1.62E+02	6.32E+02	1.68E+02	3.41E+02	5.82E+02	3.14E+02	3.40E+02
Road 14	14	2300-2400	3.34E+02	1.62E+02	6.32E+02	1.68E+02	3.41E+02	5.82E+02	3.14E+02	3.40E+02
			3.34E+02	1.62E+02	6.32E+02	1.68E+02	3.41E+02	5.82E+02	3.14E+02	3.40E+02
Road 15	15	0800-0900	5.58E+02	1.27E+03	1.58E+03	3.62E+03	1.58E+03	3.62E+03	1.58E+04	3.62E+04
			6.58E+02	9.17E+07	1.58E+03	3.77E+02	8.32E+07	1.42E+08	3.68E+02	5.61E+08
Road 15	15	1300-1400	5.58E+02	1.27E+03	1.58E+03	3.62E+03	1.58E+03	3.62E+03	1.58E+04	3.62E+04
			6.58E+02	9.17E+07	1.58E+03	3.77E+02	8.32E+07	1.42E+08	3.68E+02	5.61E+08
Road 15	15	1800-1900	6.85E+02	1.20E+07	1.63E+03	3.72E+02	7.46E+07	1.27E+08	4.07E+02	8.31E+07
			6.85E+02	1.20E+07	1.63E+03	3.72E+02	7.46E+07	1.27E+08	4.07E+02	8.31E+07
Road 15	15	2300-2400	8.32E+02	1.18E+03	1.49E+03	7.53E+02	1.02E+06	1.74E+04	3.74E+02	1.06E+04
			8.32E+02	1.18E+03	1.49E+03	7.53E+02	1.02E+06	1.74E+04	3.74E+02	1.06E+04
Road 15	15	0100-0200	1.15E+03	1.18E+03	1.49E+03	7.53E+02	1.02E+06	1.74E+04	3.74E+02	1.06E+04
			1.15E+03	1.18E+03	1.49E+03	7.53E+02	1.02E+06	1.74E+04	3.74E+02	1.06E+04
Road 15	15	0400-0500	1.48E+03	1.24E+03	1.62E+03	7.71E+02	1.15E+06	1.93E+07	4.77E+02	7.02E+06
			1.48E+03	1.24E+03	1.62E+03	7.71E+02	1.15E+06	1.93E+07	4.77E+02	7.02E+06
Road 15	15	0700-0800	1.48E+03	1.24E+03	1.62E+03	7.71E+02	1.15E+06	1.93E+07	4.77E+02	7.02E+06
			1.48E+03	1.24E+03	1.62E+03	7.71E+02	1.15E+06	1.93E+07	4.77E+02	7.02E+06
Road 15	15	1000-1100	8.13E+02	1.26E+03	2.20E+03	3.12E+02	1.14E+06	1.98E+07	4.69E+02	7.27E+06
			8.13E+02	1.26E+03	2.20E+03	3.12E+02	1.14E+06	1.98E+07	4.69E+02	7.27E+06
Road 15	15	1700-1800	1.84E+02	1.54E+03	1.99E+03	3.89E+02	1.02E+06	1.78E+05	2.42E+02	7.10E+06
			1.84E+02	1.54E+03	1.99E+03	3.89E+02	1.02E+06	1.78E+05	2.42E+02	7.10E+06
Road 15	15	2000-2100	1.84E+02	1.54E+03	1.99E+03	3.89E+02	1.02E+06	1.78E+05	2.42E+02	7.10E+06
			1.84E+02	1.54E+03	1.99E+03	3.89E+02	1.02E+06	1.78E+05	2.42E+02	7.10E+06
Road 15	15	2300-2400	1.72E+02	1.64E+02	9.31E+02	1.24E+02	8.89E+02	3.71E+02	1.83E+02	2.20E+02
			1.72E+02	1.64E+02	9.31E+02	1.24E+02	8.89E+02	3.71E+02	1.83E+02	2.20E+02
Road 15	15	0200-0300	2.00E+02	1.64E+02	9.31E+02	1.24E+02	8.89E+02	3.71E+02	1.83E+02	2.20E+02
			2.00E+02	1.64E+02	9.31E+02	1.24E+02	8.89E+02	3.71E+02	1.83E+02	2.20E+02
Road 15	15	2300-2400	3.34E+02	1.62E+02	6.32E+02	1.68E+02	3.41E+02	5.82E+02	3.14E+02	3.40E+02
			3.34E+02	1.62E+02	6.32E+02	1.68E+02	3.41E+02	5.82E+02	3.14E+02	3.40E+02
Road 15	15	2300-2400	3.34E+02	1.62E+02	6.32E+02	1.68E+02	3.41E+02	5.82E+02	3.14E+02	3.40E+02
			3.34E+02	1.62E+02	6.32E+02	1.68E+02	3.41E+02	5.82E+02	3.14E+02	3.40E+02
Road 16	16	0800-0900	5.58E+02	1.27E+03	1.58E+03	3.62E+03	1.58E+03	3.62E+03	1.58E+04	3.62E+04
			6.58E+02	9.17E+07	1.58E+03	3.77E+02	8.32E+07	1.42E+08	3.68E+02	5.61E+08
Road 16	16	1300-1400	5.58E+02	1.27E+03	1.58E+03	3.62E+03	1.58E+03	3.62E+03	1.58E+04	3.62E+04
			6.58E+02	9.17E+07	1.58E+03	3.77E+02	8.32E+07	1.42E+08	3.68E+02	5.61E+08
Road 16	16	1800-1900	6.85E+02	1.20E+07	1.63E+03	3.72E+02	7.46E+07	1.27E+08	4.07E+02	8.31E+07
			6.85E+02	1.20E+07	1.63E+03	3.72E+02	7.46E+07	1.27E+08	4.07E+02	8.31E+07
Road 16	16	2300-2400	8.32E+02	1.18E+03	1.49E+03	7.53E+02	1.02E+06	1.74E+04	3.74E+02	1.06E+04
			8.32E+02	1.18E+03	1.49E+03	7.53E+02	1.02E+06	1.74E+04	3.74E+02	1.06E+04
Road 16	16	0100-0200	1.15E+03	1.18E+03	1.49E+03	7.53E+02	1.02E+06	1.74E+04	3.74E+02	1.06E+04
			1.15E+03	1.18E+03	1.49E+03	7.53E+02	1.02E+06	1.74E+04	3.74E+02	1.06E+04
Road 16	16	0400-0500	1.48E+03	1.24E+03	1.62E+03	7.71E+02	1.15E+06	1.93E+07	4.77E+02	7.02E+06
			1.48E+03	1.24E+03	1.62E+03	7.71E+02	1.15E+06	1.93E+07	4.77E+02	7.02E+06
Road 16	16	0700-0800	1.48E+03	1.24E+03	1.62E+03	7.71E+02	1.15E+06	1.93E+07	4.77E+02	7.02E+06
			1.48E+03	1.24E+03	1.62E+03	7.71E+02	1.15E+06	1.93E+07	4.77E+02	7.02E+06
Road 16	16	1000-1100	8.13E+02	1.26E+03	2.20E+03	3.12E+02	1.14E+06	1.98E+07	4.69E+02	7.27E+06
			8.13E+02	1.26E+03	2.20E+03	3.12E+02	1.14E+06	1.98E+07	4.69E+02	7.27E+06
Road 16	16	1700-1800	1.84E+02	1.54E+03	1.99E+03	3.89E+02	1.02E+06	1.78E+05	2.42E+02	7.10E+06
			1.84E+02	1.54E+03	1.99E+03	3.89E+02	1.02E+06	1.78E+05	2.42E+02	7.10E+06
Road 16	16	2000-2100	1.84E+02	1.54E+03	1.99E+03	3.89E+02	1.02E+06	1.78E+05	2.42E+02	7.10E+06
			1.84E+02	1.54E+03	1.99E+03	3.89E+02	1.02E+06	1.78E+05	2.42E+02	7.10E+06
Road 16	16	2300-2400	1.72E+02	1.64E+02	9.31E+02	1.24E+02	8.89E+02	3.71E+02	1.83E+02	2.20E+02
			1.72E+02	1.64E+02	9.31E+02	1.24E+02	8.89E+02	3.71E+02	1.83E+02	2.20E+02
Road 16	16	0200-0300	2.00E+02	1.64E+02	9.31E+02	1.24E+02	8.89E+02	3.71E+02	1.83E+02	2.20E+02
			2.00E+02	1.64E+02	9.31E+02	1.24E+02	8.89E+02	3.71E+02	1.83E+02	2.20E+02
Road 16	16	2300-2400	3.34E+02	1.62E+02	6.32E+02	1.68E+02	3.41E+02	5.82E+02	3.14E+02	3.40E+02
			3.34E+02	1.62E+02	6.32E+02	1.68E+02	3.41E+02	5.82E+02	3.14E+02	3.40E+02
Road 16	16	2300-2400	3.34E+02	1.62E+02	6.32E+02	1.68E+02	3.41E+02	5.82E+02	3.14E+02	3.40E+02
			3.34E+02	1.62E+02	6.32E+02	1.68E+02	3.41E+02	5.82E+02	3.14E+02	3.40E+02
Road 17	17	0800-0900	5.58E+02	1.27E+03	1.58E+03	3.62E+03	1.58E+03	3.62E+03	1.58E+04	3.62E+04
			6.58E+02	9.17E+07	1.58E+03	3.77E+02	8.32E+07	1.42E+08	3.68E+02	5.61E+08
Road 17	17	1300-1400	5.58E+02	1.27E+03	1.58E+03	3.62E+03	1.58E+03	3.62E+03	1.58E+04	3.62E+04
			6.58E+02	9.17E+07	1.58E+03	3.77E+02	8.32E+07	1.42E+08	3.68E+02	5.61E+08
Road 17	17	1800-1900	6.85E+02	1.20E+07	1.63E+03	3.72E+02	7.46E+07	1.27E+08	4.07E+02	8.31E+07
			6.85E+02	1.20E+07	1.63E+03	3.72E+02	7.46E+07	1.27E+08	4.07E+02	8.31E+07
Road 17	17	2300-2400	8.32E+02	1.18E+03	1.49E+03	7.53E+02	1.02E+06	1.74E+04	3.74E+02	1.06E+04
			8.32E+02	1.18E+03	1.49E+03	7.53E+02	1.02E+06	1.74E+04	3.74E+02	1.06E+04
Road 17	17	0100-0200	1.15E+03	1.18E+03	1.49E+03	7.53E+02	1.02E+06	1.74E+04	3.74E+02	1.06E+04
			1.15E+03	1.18E+03	1.49E+03	7.53E+02	1.02E+06	1.74E+04	3.74E+02	1.06E+04
Road 17	17	0400-0500	1.48E+03	1.24E+03	1.62E+03	7.71E+02	1.15E+06	1.93E+07	4.77E+02	7.02E+06

1.1 Section/Environment: Report/607227701.1.01/Other/Air/Modelled/Appendix/Traffic/QueensRoad/Appendix 2.5.3 Emission Factor in 201

Open Top 24 Hour Underground Quarry										
Open Road 24 hour Emission Factors for										
AERMOD model (December)										
Year 2030			No Emission				No Emission			
Row Name	Day	Hour	Monthly/Average		Monthly/Average		Monthly/Average		Monthly/Average	
			g/min/veh	g/min/veh	g/min/veh	g/min/veh	g/min/veh	g/min/veh	g/min/veh	g/min/veh
Row 17	17	1800-1700	4.565	4.565	1.848	1.848	2.114	2.114	2.778	2.778
Row 17	17	1700-1800	3.326	3.326	1.595	1.595	1.438	1.438	1.254	1.254
Row 17	17	1800-1900	2.114	2.114	1.848	1.848	2.114	2.114	2.778	2.778
Row 17	17	1900-2000	2.114	2.114	1.848	1.848	2.114	2.114	2.778	2.778
Row 17	17	2000-2100	2.114	2.114	1.848	1.848	2.114	2.114	2.778	2.778
Row 17	17	2100-2200	2.114	2.114	1.848	1.848	2.114	2.114	2.778	2.778
Row 17	17	2200-2300	2.114	2.114	1.848	1.848	2.114	2.114	2.778	2.778
Row 17	17	2300-2400	2.114	2.114	1.848	1.848	2.114	2.114	2.778	2.778
Row 18	18	0000-0100	1.811	1.811	1.524	1.524	1.811	1.811	1.524	1.524
Row 18	18	0100-0200	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 18	18	0200-0300	2.565	2.565	1.638	1.638	1.811	1.811	1.524	1.524
Row 18	18	0300-0400	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 18	18	0400-0500	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 18	18	0500-0600	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 18	18	0600-0700	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 18	18	0700-0800	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 18	18	0800-0900	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 18	18	0900-1000	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 18	18	1000-1100	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 18	18	1100-1200	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 18	18	1200-1300	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 18	18	1300-1400	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 18	18	1400-1500	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 18	18	1500-1600	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 18	18	1600-1700	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 18	18	1700-1800	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 18	18	1800-1900	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 18	18	1900-2000	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 18	18	2000-2100	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 18	18	2100-2200	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 18	18	2200-2300	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 18	18	2300-2400	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 19	19	0000-0100	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 19	19	0100-0200	2.565	2.565	1.638	1.638	1.811	1.811	1.524	1.524
Row 19	19	0200-0300	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 19	19	0300-0400	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 19	19	0400-0500	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 19	19	0500-0600	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 19	19	0600-0700	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 19	19	0700-0800	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 19	19	0800-0900	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 19	19	0900-1000	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 19	19	1000-1100	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 19	19	1100-1200	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 19	19	1200-1300	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 19	19	1300-1400	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 19	19	1400-1500	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 19	19	1500-1600	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 19	19	1600-1700	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 19	19	1700-1800	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 19	19	1800-1900	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 19	19	1900-2000	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 19	19	2000-2100	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 19	19	2100-2200	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 19	19	2200-2300	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 19	19	2300-2400	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 20	20	0000-0100	1.811	1.811	1.524	1.524	1.811	1.811	1.524	1.524
Row 20	20	0100-0200	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 20	20	0200-0300	2.565	2.565	1.638	1.638	1.811	1.811	1.524	1.524
Row 20	20	0300-0400	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 20	20	0400-0500	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 20	20	0500-0600	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 20	20	0600-0700	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 20	20	0700-0800	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 20	20	0800-0900	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 20	20	0900-1000	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 20	20	1000-1100	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 20	20	1100-1200	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 20	20	1200-1300	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 20	20	1300-1400	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 20	20	1400-1500	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 20	20	1500-1600	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 20	20	1600-1700	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 20	20	1700-1800	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 20	20	1800-1900	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 20	20	1900-2000	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 20	20	2000-2100	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 20	20	2100-2200	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 20	20	2200-2300	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 20	20	2300-2400	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 21	21	0000-0100	1.811	1.811	1.524	1.524	1.811	1.811	1.524	1.524
Row 21	21	0100-0200	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 21	21	0200-0300	2.565	2.565	1.638	1.638	1.811	1.811	1.524	1.524
Row 21	21	0300-0400	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 21	21	0400-0500	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 21	21	0500-0600	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 21	21	0600-0700	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 21	21	0700-0800	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 21	21	0800-0900	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 21	21	0900-1000	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 21	21	1000-1100	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 21	21	1100-1200	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 21	21	1200-1300	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 21	21	1300-1400	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 21	21	1400-1500	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 21	21	1500-1600	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 21	21	1600-1700	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 21	21	1700-1800	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 21	21	1800-1900	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 21	21	1900-2000	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 21	21	2000-2100	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 21	21	2100-2200	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 21	21	2200-2300	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 21	21	2300-2400	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 22	22	0000-0100	1.811	1.811	1.524	1.524	1.811	1.811	1.524	1.524
Row 22	22	0100-0200	2.021	2.021	1.570	1.570	1.811	1.811	1.524	1.524
Row 22	22	0200-0300	2.565</							

I:\SecurEnv\Environment - Projects\40722238\1.01\Other\4\4\Modelling\Appendix\Traffic\OpenRoads\Appendix 3 E 3 Emission Factor in 2020.xls

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Opening North Road Underpass Quarry													
Typical No. North Emission Factors for AR5000 model (Excerpt)													
Road ID	Date	Hour	NO _x Emission			PM ₁₀ Emission			PM _{2.5} Emission				
			g/hour	tonne/hour	g/km ³	g/hour	tonne/hour	g/km ³	g/hour	tonne/hour	g/km ³		
Road 21	21/0000-0100	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 21	21/0100-0200	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 21	21/0300-0400	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 21	21/0500-0600	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 21	21/0800-0900	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 21	21/1000-1100	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 21	21/1200-1300	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 21	21/1400-1500	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 21	21/1600-1700	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 21	21/1800-1900	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 21	21/2000-2100	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 21	21/2200-2300	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 22	22/0000-0100	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 22	22/0100-0200	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 22	22/0300-0400	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 22	22/0500-0600	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 22	22/0800-0900	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 22	22/1000-1100	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 22	22/1200-1300	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 22	22/1400-1500	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 22	22/1600-1700	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 22	22/1800-1900	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 22	22/2000-2100	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 22	22/2200-2300	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 23	23/0000-0100	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 23	23/0100-0200	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 23	23/0300-0400	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 23	23/0500-0600	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 23	23/0800-0900	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 23	23/1000-1100	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 23	23/1200-1300	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 23	23/1400-1500	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 23	23/1600-1700	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 23	23/1800-1900	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 23	23/2000-2100	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 23	23/2200-2300	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 24	24/0000-0100	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 24	24/0100-0200	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 24	24/0300-0400	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 24	24/0500-0600	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 24	24/0800-0900	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 24	24/1000-1100	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
		2:40:02	1.404	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448	1.088	1.427
Road 24	24/1200-1300	2:20:02	1.448	0.0017	1.931	0.022	1.296	0.171	1.931	0.041	1.448</		

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Taig N Y North Underground Quarry																
Open Road 24 and Emission Factors for AERMOD model (lb/day)																
Year 2030																
Road	Route ID	Hour	No Emission			Monthly Emission			No Emission			Monthly Emission				
			g/hour	lb/day	lb/year	g/hour	lb/day	lb/year	g/hour	lb/day	lb/year	g/hour	lb/day	lb/year		
Road 24	24	0800-0900	2.341	0.518	7.880	2.341	0.518	7.880	7.712	1.735	26.06	8.885	2.050	30.85		
Road 24	24	0900-1000	2.126	0.471	7.047	2.126	0.471	7.047	1.023	0.230	3.49	0.584	0.134	2.04		
Road 24	24	1000-1100	2.126	0.471	7.047	2.126	0.471	7.047	1.023	0.230	3.49	0.584	0.134	2.04		
Road 24	24	1100-1200	2.569	0.569	8.007	2.569	0.569	8.007	1.586	0.354	5.31	0.883	0.195	2.86		
Road 24	24	1200-1300	2.569	0.569	8.007	2.569	0.569	8.007	1.586	0.354	5.31	0.883	0.195	2.86		
Road 24	24	1300-1400	2.569	0.569	8.007	2.569	0.569	8.007	1.586	0.354	5.31	0.883	0.195	2.86		
Road 24	24	1400-1500	2.569	0.569	8.007	2.569	0.569	8.007	1.586	0.354	5.31	0.883	0.195	2.86		
Road 24	24	1500-1600	2.569	0.569	8.007	2.569	0.569	8.007	1.586	0.354	5.31	0.883	0.195	2.86		
Road 24	24	1600-1700	2.569	0.569	8.007	2.569	0.569	8.007	1.586	0.354	5.31	0.883	0.195	2.86		
Road 24	24	1700-1800	2.569	0.569	8.007	2.569	0.569	8.007	1.586	0.354	5.31	0.883	0.195	2.86		
Road 24	24	1800-1900	1.931	0.436	6.547	1.931	0.436	6.547	0.812	0.182	2.66	0.445	0.100	1.48		
Road 24	24	1900-2000	2.569	0.569	8.007	2.569	0.569	8.007	1.586	0.354	5.31	0.883	0.195	2.86		
Road 24	24	2000-2100	1.835	0.412	6.184	1.835	0.412	6.184	0.746	0.167	2.50	0.381	0.085	1.27		
Road 24	24	2100-2200	1.835	0.412	6.184	1.835	0.412	6.184	0.746	0.167	2.50	0.381	0.085	1.27		
Road 24	24	2200-2300	1.835	0.412	6.184	1.835	0.412	6.184	0.746	0.167	2.50	0.381	0.085	1.27		
Road 24	24	2300-2400	1.835	0.412	6.184	1.835	0.412	6.184	0.746	0.167	2.50	0.381	0.085	1.27		
Road 25	25	0800-0900	2.064	0.459	6.886	2.064	0.459	6.886	0.812	0.182	2.66	0.445	0.100	1.48		
Road 25	25	0900-1000	2.064	0.459	6.886	2.064	0.459	6.886	0.812	0.182	2.66	0.445	0.100	1.48		
Road 25	25	1000-1100	2.064	0.459	6.886	2.064	0.459	6.886	0.812	0.182	2.66	0.445	0.100	1.48		
Road 25	25	1100-1200	2.064	0.459	6.886	2.064	0.459	6.886	0.812	0.182	2.66	0.445	0.100	1.48		
Road 25	25	1200-1300	2.064	0.459	6.886	2.064	0.459	6.886	0.812	0.182	2.66	0.445	0.100	1.48		
Road 25	25	1300-1400	2.064	0.459	6.886	2.064	0.459	6.886	0.812	0.182	2.66	0.445	0.100	1.48		
Road 25	25	1400-1500	2.064	0.459	6.886	2.064	0.459	6.886	0.812	0.182	2.66	0.445	0.100	1.48		
Road 25	25	1500-1600	2.064	0.459	6.886	2.064	0.459	6.886	0.812	0.182	2.66	0.445	0.100	1.48		
Road 25	25	1600-1700	2.064	0.459	6.886	2.064	0.459	6.886	0.812	0.182	2.66	0.445	0.100	1.48		
Road 25	25	1700-1800	2.064	0.459	6.886	2.064	0.459	6.886	0.812	0.182	2.66	0.445	0.100	1.48		
Road 25	25	1800-1900	2.064	0.459	6.886	2.064	0.459	6.886	0.812	0.182	2.66	0.445	0.100	1.48		
Road 25	25	1900-2000	2.064	0.459	6.886	2.064	0.459	6.886	0.812	0.182	2.66	0.445	0.100	1.48		
Road 25	25	2000-2100	1.835	0.412	6.184	1.835	0.412	6.184	0.746	0.167	2.50	0.381	0.085	1.27		
Road 25	25	2100-2200	1.835	0.412	6.184	1.835	0.412	6.184	0.746	0.167	2.50	0.381	0.085	1.27		
Road 25	25	2200-2300	1.835	0.412	6.184	1.835	0.412	6.184	0.746	0.167	2.50	0.381	0.085	1.27		
Road 25	25	2300-2400	1.835	0.412	6.184	1.835	0.412	6.184	0.746	0.167	2.50	0.381	0.085	1.27		
Road 26	26	0800-0900	2.141	0.478	7.169	2.141	0.478	7.169	0.812	0.182	2.66	0.445	0.100	1.48		
Road 26	26	0900-1000	2.141	0.478	7.169	2.141	0.478	7.169	0.812	0.182	2.66	0.445	0.100	1.48		
Road 26	26	1000-1100	2.141	0.478	7.169	2.141	0.478	7.169	0.812	0.182	2.66	0.445	0.100	1.48		
Road 26	26	1100-1200	2.141	0.478	7.169	2.141	0.478	7.169	0.812	0.182	2.66	0.445	0.100	1.48		
Road 26	26	1200-1300	2.141	0.478	7.169	2.141	0.478	7.169	0.812	0.182	2.66	0.445	0.100	1.48		
Road 26	26	1300-1400	2.141	0.478	7.169	2.141	0.478	7.169	0.812	0.182	2.66	0.445	0.100	1.48		
Road 26	26	1400-1500	2.141	0.478	7.169	2.141	0.478	7.169	0.812	0.182	2.66	0.445	0.100	1.48		
Road 26	26	1500-1600	2.141	0.478	7.169	2.141	0.478	7.169	0.812	0.182	2.66	0.445	0.100	1.48		
Road 26	26	1600-1700	2.141	0.478	7.169	2.141	0.478	7.169	0.812	0.182	2.66	0.445	0.100	1.48		
Road 26	26	1700-1800	2.141	0.478	7.169	2.141	0.478	7.169	0.812	0.182	2.66	0.445	0.100	1.48		
Road 26	26	1800-1900	2.141	0.478	7.169	2.141	0.478	7.169	0.812	0.182	2.66	0.445	0.100	1.48		
Road 26	26	1900-2000	2.141	0.478	7.169	2.141	0.478	7.169	0.812	0.182	2.66	0.445	0.100	1.48		
Road 26	26	2000-2100	1.835	0.412	6.184	1.835	0.412	6.184	0.746	0.167	2.50	0.381	0.085	1.27		
Road 26	26	2100-2200	1.835	0.412	6.184	1.835	0.412	6.184	0.746	0.167	2.50	0.381	0.085	1.27		
Road 26	26	2200-2300	1.835	0.412	6.184	1.835	0.412	6.184	0.746	0.167	2.50	0.381	0.085	1.27		
Road 26	26	2300-2400	1.835	0.412	6.184	1.835	0.412	6.184	0.746	0.167	2.50	0.381	0.085	1.27		
Road 27	27	0100-0200	2.070	0.718	1.067	1.886	0.520	0.778	2.188	0.605	0.843	2.188	0.736	1.115	1.651	0.477
Road 27	27	0200-0300	2.070	0.718	1.067	1.886	0.520	0.778	2.188	0.605	0.843	2.188	0.736	1.115	1.651	0.477
Road 27	27	0300-0400	2.070	0.718	1.067	1.886	0.520	0.778	2.188	0.605	0.843	2.188	0.736	1.115	1.651	0.477
Road 27	27	0400-0500	2.070	0.718	1.067	1.886	0.520	0.778	2.188	0.605	0.843	2.188	0.736	1.115	1.651	0.477
Road 27	27	0500-0600	2.070	0.718	1.067	1.886	0.520	0.778	2.188	0.605	0.843	2.188	0.736	1.115	1.651	0.477
Road 27	27	0600-0700	2.070	0.718	1.067	1.886	0.520	0.778	2.188	0.605	0.843	2.188	0.736	1.115	1.651	0.477
Road 27	27	0700-0800	2.070	0.718	1.067	1.886	0.520	0.778	2.188	0.605	0.843	2.188	0.736	1.115	1.651	0.477
Road 27	27	0800-0900	2.070	0.718	1.067	1.886	0.520	0.778	2.188	0.605	0.843	2.188	0.736	1.115	1.651	0.477
Road 27	27	0900-1000	2.070	0.718	1.067	1.886	0.520	0.778	2.188	0.605	0.843	2.188	0.736	1.115	1.651	0.477
Road 27	27	1000-1100	2.070	0.718	1.067	1.886	0.520	0.778	2.188	0.605	0.843	2.188	0.736	1.115	1.651	0.477
Road 27	27	1100-1200	2.070	0.718	1.067	1.886	0.520	0.778	2.188	0.605	0.843	2.188	0.736	1.115	1.651	0.477
Road 27	27	1200-1300	2.070	0.718	1.067	1.886	0.520	0.778	2.188	0.605	0.843	2.188	0.736	1.115	1.651	0.477
Road 27	27	1300-1400	2.070	0.718	1.067	1.886	0.520	0.778	2.188	0.605	0.843	2.188	0.736	1.115	1.651	0.477
Road 27	27	1400-1500	2.070	0.718	1.067	1.886	0.520	0.778	2.188	0.605	0.843	2.188	0.736	1.115	1.651	0.477
Road 27	27	1500-1600	2.070	0.718	1.067	1.886	0.520	0.778	2.188	0.605	0.843	2.188	0.736	1.115	1.651	0.477
Road 27	27	1600-1700	2.070	0.718	1.067	1.886	0.520	0.778	2.188	0.605	0.843	2.188	0.736	1.115	1.651	0.477
Road 27	27	1700-1800	2.070	0.718	1.067	1.886	0.520	0.778	2.188	0.605	0.843	2.188	0.736	1.115	1.651	0.477
Road 27	27	1800-1900	2.070	0.718	1.067	1.886	0.520	0.778	2.188	0.605	0.843	2.188	0.736	1.115	1.651	0.477
Road 27	27	1900-2000	2.070	0.718	1.067	1.886	0.520	0.778	2.188	0.605	0.843	2.188	0.736	1.115	1.651	0.477
Road 27	27	2000-2100	1.835	0.412	6.184	1.835	0.412	6.184	0.746	0.167	2.50	0.381	0.085	1.27	0.477	
Road 27	27	2100-2200	1.835	0.412	6.184	1.835	0.412	6.184	0.746	0.167	2.50	0.381	0.085	1.27	0.477	
Road 27	27	2200-2300	1.835	0.412	6.184	1.835	0.412	6.184	0.746	0.167	2.50	0.381	0.085	1.27	0.477	
Road 27	27	2300-2400	1.835	0.412	6.184	1.835	0.412	6.184	0.746	0.167	2.50	0.381	0.085	1.27	0.477	

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Open Top North Undermining Quarry														
Year 2030														
AESMO model (Round 4)														
Road Name	Disc	Hour	NOx Emission						NO Emission					
			g/hour/t	g/hour	g/day	g/year	g/hour/t	g/hour	g/day	g/year				
			Monthly/Average						Monthly/Average					
Road 27	27	1600-1700	2.7141	8.9267	2.1788	2.4761	61.327	1.954	1.601	2.846	8.7816	1.90829	2.375	7.6916
Road 27	27	1700-1800	2.4141	8.6947	2.1156	2.3197	57.075	1.866	1.601	2.446	7.6461	1.84049	2.176	7.056
Road 27	27	1800-1900	2.4141	8.6947	2.1156	2.3197	57.075	1.866	1.601	2.446	7.6461	1.84049	2.176	7.056
Road 27	27	1900-2000	2.0641	2.318	0.6747	1.884	10.973	0.921	0.879	2.117	2.816	0.8201	0.838	2.0146
Road 27	27	2000-2100	2.0641	2.318	0.6747	1.884	10.973	0.921	0.879	2.117	2.816	0.8201	0.838	2.0146
Road 27	27	2100-2200	2.0641	2.318	0.6747	1.884	10.973	0.921	0.879	2.117	2.816	0.8201	0.838	2.0146
Road 27	27	2200-2300	2.0641	2.318	0.6747	1.884	10.973	0.921	0.879	2.117	2.816	0.8201	0.838	2.0146
Road 27	27	2300-2400	2.0641	2.318	0.6747	1.884	10.973	0.921	0.879	2.117	2.816	0.8201	0.838	2.0146
Road 28	28	0000-0100	3.0842	2.8716	0.4163	2.726	23.577	4.665	2.402	6.124	1.406	2.286	0.153	1.2226
Road 28	28	0100-0200	3.0842	2.8716	0.4163	2.726	23.577	4.665	2.402	6.124	1.406	2.286	0.153	1.2226
Road 28	28	0200-0300	3.0842	2.8716	0.4163	2.726	23.577	4.665	2.402	6.124	1.406	2.286	0.153	1.2226
Road 28	28	0300-0400	3.0842	2.8716	0.4163	2.726	23.577	4.665	2.402	6.124	1.406	2.286	0.153	1.2226
Road 28	28	0400-0500	3.0842	2.8716	0.4163	2.726	23.577	4.665	2.402	6.124	1.406	2.286	0.153	1.2226
Road 28	28	0500-0600	3.0842	2.8716	0.4163	2.726	23.577	4.665	2.402	6.124	1.406	2.286	0.153	1.2226
Road 28	28	0600-0700	3.0842	2.8716	0.4163	2.726	23.577	4.665	2.402	6.124	1.406	2.286	0.153	1.2226
Road 28	28	0700-0800	3.0842	2.8716	0.4163	2.726	23.577	4.665	2.402	6.124	1.406	2.286	0.153	1.2226
Road 28	28	0800-0900	3.0842	2.8716	0.4163	2.726	23.577	4.665	2.402	6.124	1.406	2.286	0.153	1.2226
Road 28	28	0900-1000	3.0842	2.8716	0.4163	2.726	23.577	4.665	2.402	6.124	1.406	2.286	0.153	1.2226
Road 28	28	1000-1100	3.0842	2.8716	0.4163	2.726	23.577	4.665	2.402	6.124	1.406	2.286	0.153	1.2226
Road 28	28	1100-1200	3.0842	2.8716	0.4163	2.726	23.577	4.665	2.402	6.124	1.406	2.286	0.153	1.2226
Road 28	28	1200-1300	3.0842	2.8716	0.4163	2.726	23.577	4.665	2.402	6.124	1.406	2.286	0.153	1.2226
Road 28	28	1300-1400	3.0842	2.8716	0.4163	2.726	23.577	4.665	2.402	6.124	1.406	2.286	0.153	1.2226
Road 28	28	1400-1500	3.0842	2.8716	0.4163	2.726	23.577	4.665	2.402	6.124	1.406	2.286	0.153	1.2226
Road 28	28	1500-1600	3.0842	2.8716	0.4163	2.726	23.577	4.665	2.402	6.124	1.406	2.286	0.153	1.2226
Road 28	28	1600-1700	3.0842	2.8716	0.4163	2.726	23.577	4.665	2.402	6.124	1.406	2.286	0.153	1.2226
Road 28	28	1700-1800	3.0842	2.8716	0.4163	2.726	23.577	4.665	2.402	6.124	1.406	2.286	0.153	1.2226
Road 28	28	1800-1900	3.0842	2.8716	0.4163	2.726	23.577	4.665	2.402	6.124	1.406	2.286	0.153	1.2226
Road 28	28	1900-2000	2.0641	2.318	0.6747	1.884	10.973	0.921	0.879	2.117	2.816	0.8201	0.838	2.0146
Road 28	28	2000-2100	2.0641	2.318	0.6747	1.884	10.973	0.921	0.879	2.117	2.816	0.8201	0.838	2.0146
Road 28	28	2100-2200	2.0641	2.318	0.6747	1.884	10.973	0.921	0.879	2.117	2.816	0.8201	0.838	2.0146
Road 28	28	2200-2300	2.0641	2.318	0.6747	1.884	10.973	0.921	0.879	2.117	2.816	0.8201	0.838	2.0146
Road 28	28	2300-2400	2.0641	2.318	0.6747	1.884	10.973	0.921	0.879	2.117	2.816	0.8201	0.838	2.0146
Road 29	29	0000-0100	2.8943	1.8317	0.577	1.587	40.227	1.267	1.065	1.835	3.2121	1.267	1.065	2.8806
Road 29	29	0100-0200	2.0642	5.5927	1.3765	1.852	50.027	0.856	0.808	5.666	3.2124	1.838	4.456	2.051
Road 29	29	0200-0300	2.0642	5.5927	1.3765	1.852	50.027	0.856	0.808	5.666	3.2124	1.838	4.456	2.051
Road 29	29	0300-0400	2.0642	5.5927	1.3765	1.852	50.027	0.856	0.808	5.666	3.2124	1.838	4.456	2.051
Road 29	29	0400-0500	2.0642	5.5927	1.3765	1.852	50.027	0.856	0.808	5.666	3.2124	1.838	4.456	2.051
Road 29	29	0500-0600	2.0642	5.5927	1.3765	1.852	50.027	0.856	0.808	5.666	3.2124	1.838	4.456	2.051
Road 29	29	0600-0700	3.7761	6.4412	4.4482	3.416	58.187	4.011	2.573	4.376	3.003	3.288	3.874	2.676
Road 29	29	0700-0800	3.7761	6.4412	4.4482	3.416	58.187	4.011	2.573	4.376	3.003	3.288	3.874	2.676
Road 29	29	0800-0900	3.7761	6.4412	4.4482	3.416	58.187	4.011	2.573	4.376	3.003	3.288	3.874	2.676
Road 29	29	0900-1000	3.0842	1.8318	0.578	1.204	3.446	0.911	0.741	0.911	0.801	2.181	0.871	6.1324
Road 29	29	0900-1000	3.7761	6.4412	4.4482	3.416	58.187	4.011	2.573	4.376	3.003	3.288	3.874	2.676
Road 29	29	1000-1100	3.0842	1.8318	0.578	1.204	3.446	0.911	0.741	0.911	0.801	2.181	0.871	6.1324
Road 29	29	1100-1200	3.0842	1.8318	0.578	1.204	3.446	0.911	0.741	0.911	0.801	2.181	0.871	6.1324
Road 29	29	1200-1300	3.0842	1.8318	0.578	1.204	3.446	0.911	0.741	0.911	0.801	2.181	0.871	6.1324
Road 29	29	1300-1400	3.0842	1.8318	0.578	1.204	3.446	0.911	0.741	0.911	0.801	2.181	0.871	6.1324
Road 29	29	1400-1500	3.0842	1.8318	0.578	1.204	3.446	0.911	0.741	0.911	0.801	2.181	0.871	6.1324
Road 29	29	1500-1600	3.0842	1.8318	0.578	1.204	3.446	0.911	0.741	0.911	0.801	2.181	0.871	6.1324
Road 29	29	1600-1700	3.0842	1.8318	0.578	1.204	3.446	0.911	0.741	0.911	0.801	2.181	0.871	6.1324
Road 29	29	1700-1800	3.0842	1.8318	0.578	1.204	3.446	0.911	0.741	0.911	0.801	2.181	0.871	6.1324
Road 29	29	1800-1900	2.0642	5.5927	1.3765	1.852	50.027	0.856	0.808	5.666	3.2124	1.838	4.456	2.051
Road 29	29	1900-2000	2.0642	5.5927	1.3765	1.852	50.027	0.856	0.808	5.666	3.2124	1.838	4.456	2.051
Road 29	29	2000-2100	2.0642	5.5927	1.3765	1.852	50.027	0.856	0.808	5.666	3.2124	1.838	4.456	2.051
Road 29	29	2100-2200	2.0642	5.5927	1.3765	1.852	50.027	0.856	0.808	5.666	3.2124	1.838	4.456	2.051
Road 29	29	2200-2300	2.0642	5.5927	1.3765	1.852	50.027	0.856	0.808	5.666	3.2124	1.838	4.456	2.051
Road 29	29	2300-2400	2.0642	5.5927	1.3765	1.852	50.027	0.856	0.808	5.666	3.2124	1.838	4.456	2.051
Road 30	30	0000-0100	2.0642	5.5927	1.3765	1.852	50.027	0.856	0.808	5.666	3.2124	1.838	4.456	2.051
Road 30	30	0100-0200	2.0642	5.5927	1.3765	1.852	50.027	0.856	0.808	5.666	3.2124	1.838	4.456	2.051
Road 30	30	0200-0300	2.0642	5.5927	1.3765	1.852	50.027	0.856	0.808	5.666	3.2124	1.838	4.456	2.051
Road 30	30	0300-0400	2.0642	5.5927	1.3765	1.852	50.027	0.856	0.808	5.666	3.2124	1.838	4.456	2.051
Road 30	30	0400-0500	2.0642	5.5927	1.3765	1.852	50.027	0.856	0.808	5.666	3.2124	1.838	4.456	2.051
Road 30	30	0500-0600	2.0642	5.5927	1.3765	1.852	50.027	0.856	0.808	5.666	3.2124	1.838	4.456	2.051
Road 30	30	0600-0700	3.0842	1.8318	0.578	1.204	3.446	0.911	0.741	0.911	0.801	2.181	0.871	6.1324
Road 30	30	0700-0800	3.0842	1.8318	0.578	1.204	3.446	0.911	0.741	0.911	0.801	2.181	0.871	6.1324
Road 30	30	0800-0900	3.0842	1.8318	0.578	1.204	3.446	0.911	0.741	0.911	0.801	2.181	0.871	6.1324
Road 30	30	0900-1000	3.0842	1.8318	0.578	1.204	3.446	0.911	0.741	0.911	0.801	2.181	0.871	6.1324
Road 30	30	1000-1100	3.0842	1.8318	0.578	1.204	3.446	0.911	0.741	0.911	0.801	2.181	0.871	6.1324
Road 30	30	1100-1200	3.0842	1.8318	0.578	1.204	3.446	0.911	0.741	0.911	0.801	2.181	0.871	6.1324
Road 30	30	1200-1300	3.0842	1.8318	0.578	1.204	3.446	0.911	0.741	0.911	0.801	2.181	0.871	6.1324
Road 30	30	1300-1400	3.0842	1.8318	0.578	1.204	3.446	0.911	0.741	0.911	0.801	2.181	0.871	6.1324
Road 30	30	1400-1500	3.0842	1.8318	0.578	1.204	3.446	0.911	0.741	0.911	0.801	2.181	0.871	6.1324
Road 30	30	1500-1600	3.0842	1.8318	0.578	1.204	3.446	0.911	0.741	0.911	0.801	2.181	0.871	6.1324
Road 30	30	1600-1700	3.0842	1.8318	0.578	1.204	3.446	0.911	0.741	0.911	0.801	2.181	0.871	6.1324
Road 30	30	1700-1800	3.0842	1.8318	0.578	1.204	3.446	0.911	0.741	0.911	0.801	2.181	0.871	6.1324
Road 30	30	1800-1900	2.0642	5.5927	1.3765	1.852	50.027	0.856	0.808	5.666	3.2124	1.838	4.456	2.051
Road 30	30	1900-2000	2.0642	5.5927	1.3765	1.852	50.027	0.856	0.808	5.666	3.2			

L:\Secure\Environment Projects\60733229\1.01\Others\Air\Modellink\Appendix\Traffic\OpenRoad\Appendix 3.5.2 Emission Factor in 2030.xlsx

Open Trench Road 24 Hour Emission Factors for AR500 Model (lb/MMBtu)														
Road ID	Road ID	Hour	No. Emission		Monthly No. Emission		No. Emission		Monthly No. Emission					
			g/hour		Monthly g/hour		g/hour		Monthly g/hour					
			g/hour	g/hour	g/hour	g/hour	g/hour	g/hour	g/hour	g/hour				
Head 31	05000100	1	3.38E-02	1.18E-07	1.23E-01	1.09E-02	1.144E-01	1.11E-05	2.72E-01	1.11E-06	8.86E-06	2.40E-01	8.72E-07	8.72E-06
Head 31	05000200	2	3.38E-02	1.18E-07	1.23E-01	1.09E-02	1.144E-01	1.11E-05	2.72E-01	1.11E-06	8.86E-06	2.40E-01	8.72E-07	8.72E-06
Head 31	05000300	3	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 31	05000400	4	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 31	05000500	5	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 31	05000600	6	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 31	05000700	7	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 31	05000800	8	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 31	05000900	9	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 31	05001000	10	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 31	05001100	11	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 31	05001200	12	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 31	05001300	13	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 31	05001400	14	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 31	05001500	15	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 31	05001600	16	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 31	05001700	17	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 31	05001800	18	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 31	05001900	19	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 31	05002000	20	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 31	0500													
Head 32	05000100	1	3.38E-02	1.18E-07	1.23E-01	1.09E-02	1.144E-01	1.11E-05	2.72E-01	1.11E-06	8.86E-06	2.40E-01	8.72E-07	8.72E-06
Head 32	05000200	2	3.38E-02	1.18E-07	1.23E-01	1.09E-02	1.144E-01	1.11E-05	2.72E-01	1.11E-06	8.86E-06	2.40E-01	8.72E-07	8.72E-06
Head 32	05000300	3	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 32	05000400	4	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 32	05000500	5	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 32	05000600	6	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 32	05000700	7	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 32	05000800	8	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 32	05000900	9	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 32	05001000	10	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 32	05001100	11	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 32	05001200	12	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 32	05001300	13	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 32	05001400	14	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 32	05001500	15	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 32	05001600	16	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 32	05001700	17	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 32	05001800	18	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 32	05001900	19	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 32	05002000	20	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 32	0500													
Head 33	05000100	1	3.38E-02	1.18E-07	1.23E-01	1.09E-02	1.144E-01	1.11E-05	2.72E-01	1.11E-06	8.86E-06	2.40E-01	8.72E-07	8.72E-06
Head 33	05000200	2	3.38E-02	1.18E-07	1.23E-01	1.09E-02	1.144E-01	1.11E-05	2.72E-01	1.11E-06	8.86E-06	2.40E-01	8.72E-07	8.72E-06
Head 33	05000300	3	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 33	05000400	4	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 33	05000500	5	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 33	05000600	6	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 33	05000700	7	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 33	05000800	8	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 33	05000900	9	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 33	05001000	10	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 33	05001100	11	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 33	05001200	12	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 33	05001300	13	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 33	05001400	14	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 33	05001500	15	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 33	05001600	16	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 33	05001700	17	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 33	05001800	18	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 33	05001900	19	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 33	05002000	20	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 33	0500													
Head 34	05000100	1	3.38E-02	1.18E-07	1.23E-01	1.09E-02	1.144E-01	1.11E-05	2.72E-01	1.11E-06	8.86E-06	2.40E-01	8.72E-07	8.72E-06
Head 34	05000200	2	3.38E-02	1.18E-07	1.23E-01	1.09E-02	1.144E-01	1.11E-05	2.72E-01	1.11E-06	8.86E-06	2.40E-01	8.72E-07	8.72E-06
Head 34	05000300	3	4.43E-02	8.20E-08	7.33E-07	4.38E-02	1.76E-08	6.66E-07	1.32E-01	1.48E-07	8.89E-07	2.78E-01	8.46E-07	4.18E-06
Head 34	05000400	4	4.43E											

\\Secure\Environment Projects\60733229\1.01\Others\Air Modelling\Appendix\Traffic\Open Road\Appendix 3.5.2 Emission Factor in 2030.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Opening North End Union Quarry											
TSP & 24 hr SO ₂ Emission Factors for											
ASPHALT ROAD (Doc# 10000000)											
Road Name	Doc#	Hour	NO _x Emission				NO _x Emission				Hour
			Monthly/Traffic	Monthly/Average	Monthly/Traffic	Monthly/Average	Monthly/Traffic	Monthly/Average	Monthly/Traffic	Monthly/Average	
Road 34	34	0800-0900	1.895E+02	1.736E+01	3.171E+01	1.177E+01	1.071E+01	3.317E+01	7.771E+00	2.021E+01	8.800E+00
Road 34	34	0900-1000	4.935E+02	4.133E+02	4.983E+02	4.171E+02	2.211E+02	3.459E+02	5.127E+02	2.412E+02	6.700E+02
Road 34	34	1000-1100	1.448E+02	1.348E+02	1.448E+02	1.348E+02	1.448E+02	1.348E+02	1.448E+02	1.348E+02	1.448E+02
Road 34	34	1100-1200	1.004E+02	1.273E+01	3.273E+01	4.598E+01	1.177E+01	2.960E+01	3.736E+01	6.773E+00	2.880E+01
Road 34	34	1200-1300	4.754E+02	4.754E+02	4.754E+02	4.754E+02	4.754E+02	4.754E+02	4.754E+02	4.754E+02	4.754E+02
Road 34	34	1300-1400	1.004E+02	1.004E+02	1.004E+02	1.004E+02	1.004E+02	1.004E+02	1.004E+02	1.004E+02	1.004E+02
Road 34	34	1400-1500	4.999E+02	4.999E+02	4.999E+02	4.999E+02	4.999E+02	4.999E+02	4.999E+02	4.999E+02	4.999E+02
Road 34	34	1500-1600	1.448E+02	1.448E+02	1.448E+02	1.448E+02	1.448E+02	1.448E+02	1.448E+02	1.448E+02	1.448E+02
Road 34	34	1600-1700	4.935E+02	4.935E+02	4.935E+02	4.935E+02	4.935E+02	4.935E+02	4.935E+02	4.935E+02	4.935E+02
Road 34	34	1700-1800	1.448E+02	1.448E+02	1.448E+02	1.448E+02	1.448E+02	1.448E+02	1.448E+02	1.448E+02	1.448E+02
Road 34	34	1800-1900	2.895E+02	1.244E+01	3.344E+01	2.606E+01	1.177E+01	2.945E+01	3.826E+01	1.314E+01	2.485E+01
Road 34	34	1900-2000	3.989E+02	8.103E+02	2.893E+02	3.212E+02	7.798E+02	2.623E+02	8.813E+02	2.573E+02	8.617E+02
Road 34	34	2000-2100	2.969E+02	2.969E+02	2.969E+02	2.969E+02	2.969E+02	2.969E+02	2.969E+02	2.969E+02	2.969E+02
Road 34	34	2100-2200	2.456E+02	6.242E+02	1.644E+02	2.144E+02	5.977E+02	1.846E+02	2.846E+02	7.484E+02	6.502E+02
Road 34	34	2200-2300	2.412E+02	2.412E+02	2.412E+02	2.412E+02	2.412E+02	2.412E+02	2.412E+02	2.412E+02	2.412E+02
Road 34	34	2300-2400	2.969E+02	8.402E+02	1.296E+02	3.242E+02	1.146E+02	1.011E+02	5.773E+02	1.506E+02	5.070E+02
Road 35	35	0800-0900	9.979E+01	9.979E+01	9.979E+01	9.979E+01	9.979E+01	9.979E+01	9.979E+01	9.979E+01	9.979E+01
Road 35	35	0900-1000	1.177E+02	1.177E+02	1.177E+02	1.177E+02	1.177E+02	1.177E+02	1.177E+02	1.177E+02	1.177E+02
Road 35	35	1000-1100	3.000E+02	3.000E+02	3.000E+02	3.000E+02	3.000E+02	3.000E+02	3.000E+02	3.000E+02	3.000E+02
Road 35	35	1100-1200	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02
Road 35	35	1200-1300	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02
Road 35	35	1300-1400	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02
Road 35	35	1400-1500	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02
Road 35	35	1500-1600	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02
Road 35	35	1600-1700	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02
Road 35	35	1700-1800	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02
Road 35	35	1800-1900	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02
Road 35	35	1900-2000	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02
Road 35	35	2000-2100	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02
Road 35	35	2100-2200	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02
Road 35	35	2200-2300	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02
Road 35	35	2300-2400	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02
Road 36	36	0800-0900	1.895E+02	1.736E+01	3.171E+01	1.177E+01	1.071E+01	3.317E+01	7.771E+00	2.021E+01	8.800E+00
Road 36	36	0900-1000	4.935E+02	4.133E+02	4.983E+02	4.171E+02	2.211E+02	3.459E+02	5.127E+02	2.412E+02	6.700E+02
Road 36	36	1000-1100	1.448E+02	1.348E+02	1.448E+02	1.348E+02	1.448E+02	1.348E+02	1.448E+02	1.348E+02	1.448E+02
Road 36	36	1100-1200	1.004E+02	1.273E+01	3.273E+01	4.598E+01	1.177E+01	2.960E+01	3.736E+01	6.773E+00	2.880E+01
Road 36	36	1200-1300	4.754E+02	4.754E+02	4.754E+02	4.754E+02	4.754E+02	4.754E+02	4.754E+02	4.754E+02	4.754E+02
Road 36	36	1300-1400	1.004E+02	1.004E+02	1.004E+02	1.004E+02	1.004E+02	1.004E+02	1.004E+02	1.004E+02	1.004E+02
Road 36	36	1400-1500	4.999E+02	4.999E+02	4.999E+02	4.999E+02	4.999E+02	4.999E+02	4.999E+02	4.999E+02	4.999E+02
Road 36	36	1500-1600	1.448E+02	1.448E+02	1.448E+02	1.448E+02	1.448E+02	1.448E+02	1.448E+02	1.448E+02	1.448E+02
Road 36	36	1600-1700	4.935E+02	4.935E+02	4.935E+02	4.935E+02	4.935E+02	4.935E+02	4.935E+02	4.935E+02	4.935E+02
Road 36	36	1700-1800	1.448E+02	1.448E+02	1.448E+02	1.448E+02	1.448E+02	1.448E+02	1.448E+02	1.448E+02	1.448E+02
Road 36	36	1800-1900	2.895E+02	1.244E+01	3.344E+01	2.606E+01	1.177E+01	2.945E+01	3.826E+01	1.314E+01	2.485E+01
Road 36	36	1900-2000	3.989E+02	8.103E+02	2.893E+02	3.212E+02	7.798E+02	2.623E+02	8.813E+02	2.573E+02	8.617E+02
Road 36	36	2000-2100	2.969E+02	2.969E+02	2.969E+02	2.969E+02	2.969E+02	2.969E+02	2.969E+02	2.969E+02	2.969E+02
Road 36	36	2100-2200	2.456E+02	6.242E+02	1.644E+02	2.144E+02	5.977E+02	1.846E+02	2.846E+02	7.484E+02	6.502E+02
Road 36	36	2200-2300	2.412E+02	2.412E+02	2.412E+02	2.412E+02	2.412E+02	2.412E+02	2.412E+02	2.412E+02	2.412E+02
Road 36	36	2300-2400	2.969E+02	8.402E+02	1.296E+02	3.242E+02	1.146E+02	1.011E+02	5.773E+02	1.506E+02	5.070E+02
Road 37	37	0800-0900	9.979E+01	9.979E+01	9.979E+01	9.979E+01	9.979E+01	9.979E+01	9.979E+01	9.979E+01	9.979E+01
Road 37	37	0900-1000	1.177E+02	1.177E+02	1.177E+02	1.177E+02	1.177E+02	1.177E+02	1.177E+02	1.177E+02	1.177E+02
Road 37	37	1000-1100	3.000E+02	3.000E+02	3.000E+02	3.000E+02	3.000E+02	3.000E+02	3.000E+02	3.000E+02	3.000E+02
Road 37	37	1100-1200	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02
Road 37	37	1200-1300	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02
Road 37	37	1300-1400	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02
Road 37	37	1400-1500	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02
Road 37	37	1500-1600	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02
Road 37	37	1600-1700	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02
Road 37	37	1700-1800	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02
Road 37	37	1800-1900	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02
Road 37	37	1900-2000	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02
Road 37	37	2000-2100	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02
Road 37	37	2100-2200	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02
Road 37	37	2200-2300	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02
Road 37	37	2300-2400	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02	1.688E+02

L:\Secure\Environment Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Open Road\Appendix 3.5.2 Emission Factor in 2030.xlsx

Taig Nig 24-hour Union Quarry Open Road & No Emission Factors for MEMPH ROAD (December)														Year 2030	
Road Name	Road ID	Hour	No Emission			No Emission			No Emission			No Emission			
			g/hk/ha	Monthly/ha	Monthly/ha	g/hk/ha	Monthly/ha	Monthly/ha	g/hk/ha	Monthly/ha	Monthly/ha	g/hk/ha	Monthly/ha	Monthly/ha	
Road 37	37	1600-1700	1.041	0.175	4.021	0.702	1.631	0.388	4.681	0.788	1.817	4.376	0.178	1.561	0.07
Road 37	37	1700-1800	0.862	1.565	3.388	0.825	0.448	3.345	0.831	7.944	0.805	1.802	1.276	1.047	0.07
Road 37	37	1800-1900	0.801	1.001	2.161	0.801	0.452	3.771	0.801	1.218	0.801	1.218	1.218	1.218	0.07
Road 37	37	1900-2000	1.112	0.152	7.135	0.148	4.790	0.623	1.526	0.148	4.388	1.008	0.286	0.197	0.08
Road 37	37	2000-2100	0.217	0.817	0.217	0.217	0.217	0.217	0.217	0.217	0.217	0.217	0.217	0.217	0.07
Road 37	37	2100-2200	0.520	0.520	0.520	0.520	0.520	0.520	0.520	0.520	0.520	0.520	0.520	0.520	0.07
Road 37	37	2200-2300	4.712	0.489	1.178	0.489	4.385	0.546	1.048	0.321	1.441	7.958	0.298	1.108	0.711
Road 37	37	2300-2400	0.801	0.801	0.801	0.801	0.801	0.801	0.801	0.801	0.801	0.801	0.801	0.801	0.07
Road 38	38	0000-0100	0.117	0.667	1.360	0.480	0.120	0.477	0.240	0.888	0.313	0.773	0.496	0.733	0.496
Road 38	38	0100-0200	0.117	0.667	1.360	0.480	0.120	0.477	0.240	0.888	0.313	0.773	0.496	0.733	0.496
Road 38	38	0200-0300	0.117	0.667	1.360	0.480	0.120	0.477	0.240	0.888	0.313	0.773	0.496	0.733	0.496
Road 38	38	0300-0400	1.185	0.181	0.678	1.046	1.085	1.166	0.572	3.798	0.236	0.135	0.206	0.135	0.456
Road 38	38	0400-0500	0.285	0.215	0.077	0.189	0.111	0.095	0.144	0.383	0.478	0.588	0.383	0.588	0.383
Road 38	38	0500-0600	0.285	0.215	0.077	0.189	0.111	0.095	0.144	0.383	0.478	0.588	0.383	0.588	0.383
Road 38	38	0600-0700	1.146	0.711	0.177	1.409	0.078	1.526	0.276	0.308	0.413	0.888	0.581	0.735	0.624
Road 38	38	0700-0800	0.285	0.215	0.077	0.189	0.111	0.095	0.144	0.383	0.478	0.588	0.383	0.588	0.383
Road 38	38	0800-0900	0.285	0.215	0.077	0.189	0.111	0.095	0.144	0.383	0.478	0.588	0.383	0.588	0.383
Road 38	38	0900-1000	0.285	0.215	0.077	0.189	0.111	0.095	0.144	0.383	0.478	0.588	0.383	0.588	0.383
Road 38	38	1000-1100	1.551	0.453	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744
Road 38	38	1100-1200	1.551	0.453	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744
Road 38	38	1200-1300	1.551	0.453	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744
Road 38	38	1300-1400	1.611	0.511	0.836	0.551	0.836	0.511	0.836	0.511	0.836	0.511	0.836	0.511	0.836
Road 38	38	1400-1500	1.711	0.511	0.836	0.551	0.836	0.511	0.836	0.511	0.836	0.511	0.836	0.511	0.836
Road 38	38	1500-1600	1.611	0.511	0.836	0.551	0.836	0.511	0.836	0.511	0.836	0.511	0.836	0.511	0.836
Road 38	38	1600-1700	1.551	0.453	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744
Road 38	38	1700-1800	1.446	0.379	0.717	0.749	0.364	0.717	0.749	0.364	0.717	0.749	0.364	0.717	0.749
Road 38	38	1800-1900	1.551	0.453	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744
Road 38	38	1900-2000	1.551	0.453	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744
Road 38	38	2000-2100	1.551	0.453	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744
Road 38	38	2100-2200	1.551	0.453	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744
Road 38	38	2200-2300	1.551	0.453	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744
Road 38	38	2300-2400	1.551	0.453	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744
Road 39	39	0000-0100	0.117	0.667	1.360	0.480	0.120	0.477	0.240	0.888	0.313	0.773	0.496	0.733	0.496
Road 39	39	0100-0200	0.117	0.667	1.360	0.480	0.120	0.477	0.240	0.888	0.313	0.773	0.496	0.733	0.496
Road 39	39	0200-0300	0.117	0.667	1.360	0.480	0.120	0.477	0.240	0.888	0.313	0.773	0.496	0.733	0.496
Road 39	39	0300-0400	1.146	0.711	0.177	1.409	0.078	1.526	0.276	0.308	0.413	0.888	0.581	0.735	0.624
Road 39	39	0400-0500	0.285	0.215	0.077	0.189	0.111	0.095	0.144	0.383	0.478	0.588	0.383	0.588	0.383
Road 39	39	0500-0600	0.285	0.215	0.077	0.189	0.111	0.095	0.144	0.383	0.478	0.588	0.383	0.588	0.383
Road 39	39	0600-0700	1.551	0.453	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744
Road 39	39	0700-0800	0.285	0.215	0.077	0.189	0.111	0.095	0.144	0.383	0.478	0.588	0.383	0.588	0.383
Road 39	39	0800-0900	0.285	0.215	0.077	0.189	0.111	0.095	0.144	0.383	0.478	0.588	0.383	0.588	0.383
Road 39	39	0900-1000	0.285	0.215	0.077	0.189	0.111	0.095	0.144	0.383	0.478	0.588	0.383	0.588	0.383
Road 39	39	1000-1100	1.551	0.453	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744
Road 39	39	1100-1200	1.551	0.453	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744
Road 39	39	1200-1300	1.551	0.453	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744
Road 39	39	1300-1400	1.611	0.511	0.836	0.551	0.836	0.511	0.836	0.511	0.836	0.511	0.836	0.511	0.836
Road 39	39	1400-1500	1.711	0.511	0.836	0.551	0.836	0.511	0.836	0.511	0.836	0.511	0.836	0.511	0.836
Road 39	39	1500-1600	1.611	0.511	0.836	0.551	0.836	0.511	0.836	0.511	0.836	0.511	0.836	0.511	0.836
Road 39	39	1600-1700	1.551	0.453	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744
Road 39	39	1700-1800	1.446	0.379	0.717	0.749	0.364	0.717	0.749	0.364	0.717	0.749	0.364	0.717	0.749
Road 39	39	1800-1900	1.551	0.453	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744
Road 39	39	1900-2000	1.551	0.453	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744
Road 39	39	2000-2100	1.551	0.453	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744
Road 39	39	2100-2200	1.551	0.453	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744
Road 39	39	2200-2300	1.551	0.453	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744
Road 39	39	2300-2400	1.551	0.453	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744
Road 40	40	0000-0100	0.117	0.667	1.360	0.480	0.120	0.477	0.240	0.888	0.313	0.773	0.496	0.733	0.496
Road 40	40	0100-0200	0.117	0.667	1.360	0.480	0.120	0.477	0.240	0.888	0.313	0.773	0.496	0.733	0.496
Road 40	40	0200-0300	0.117	0.667	1.360	0.480	0.120	0.477	0.240	0.888	0.313	0.773	0.496	0.733	0.496
Road 40	40	0300-0400	1.146	0.711	0.177	1.409	0.078	1.526	0.276	0.308	0.413	0.888	0.581	0.735	0.624
Road 40	40	0400-0500	0.285	0.215	0.077	0.189	0.111	0.095	0.144	0.383	0.478	0.588	0.383	0.588	0.383
Road 40	40	0500-0600	0.285	0.215	0.077	0.189	0.111	0.095	0.144	0.383	0.478	0.588	0.383	0.588	0.383
Road 40	40	0600-0700	1.551	0.453	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744
Road 40	40	0700-0800	0.285	0.215	0.077	0.189	0.111	0.095	0.144	0.383	0.478	0.588	0.383	0.588	0.383
Road 40	40	0800-0900	0.285	0.215	0.077	0.189	0.111	0.095	0.144	0.383	0.478	0.588	0.383	0.588	0.383
Road 40	40	0900-1000	1.551	0.453	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744
Road 40	40	1000-1100	1.551	0.453	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744
Road 40	40	1100-1200	1.551	0.453	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744
Road 40	40	1200-1300	1.551	0.453	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744
Road 40	40	1300-1400	1.611	0.511	0.836	0.551	0.836	0.511	0.836	0.511	0.836	0.511	0.836	0.511	0.836
Road 40	40	1400-1500	1.711	0.511	0.836	0.551	0.836	0.511	0.836	0.511	0.836	0.511	0.836	0.511	0.836
Road 40	40	1500-1600	1.611	0.511	0.836	0.551	0.836	0.511	0.836	0.511	0.836	0.511	0.836	0.511	0.836
Road 40	40	1600-1700	1.551	0.453	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744	0.431	0.727	0.744
Road 40	40	1700-1800	1.446	0.379	0.717	0.749	0.364	0.717	0.749	0.364	0.717	0.749	0.364	0.717	0.749
Road 40															

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Open Top 24 North Underground Quary															
Year 2020															
ARMSAD (month/December)															
Road Name		Road ID		NO Emission				NO Emission							
				MonthlyHours/ton		MonthlyHours/ton		MonthlyHours/ton		MonthlyHours/ton					
				g/hour/ton	g/ton	g/hour/ton	g/ton	g/hour/ton	g/ton	g/hour/ton	g/ton				
Road #1	41	0000-0100	41.1401	1.327	0.173	1.178	0.117	1.178	0.117	2.772	0.176	9.751	0.96	4.131	5.538
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648	2.376	0.314	1.938
Road #1	41	0100-1200	51.1112	0.114	0.014	1.038	0.414	0.027	0.705	0.248	6.005	0.648			

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Tying Y14 Hourly Emission Factors Open Road 24 Hour Union Factors for ARMSAD model (Revised)				Year 2050									
Road Name	Road ID	Month	Hour	NO Emission				NO Emission					
				Monthly/Average	Monthly/Average	Monthly/Average	Monthly/Average	Monthly/Average	Monthly/Average				
44	09000000	2.515	6.347	4.068	2.328	0.527	1.898	2.026	3.218	3.725	3.993	6.831	2.818
44	09000000	2.976	4.247	3.833	2.668	1.944	0.479	2.218	4.055	4.289	3.962	4.341	2.545
44	09000000	3.312	3.757	3.688	2.888	1.775	0.479	2.218	4.055	4.289	3.962	4.341	2.545
44	11000000	3.515	5.897	1.398	2.898	4.487	1.078	2.113	1.868	2.465	2.601	3.548	1.188
44	11000000	3.586	5.897	1.398	2.898	4.487	1.078	2.113	1.868	2.465	2.601	3.548	1.188
44	11000000	3.576	5.897	1.416	2.938	4.338	1.088	2.338	1.868	2.305	2.240	3.919	2.948
44	14000000	3.515	6.047	4.988	3.228	0.318	4.523	2.505	1.588	3.515	2.241	5.086	3.145
44	14000000	3.415	6.047	4.988	3.228	0.318	4.523	2.505	1.588	3.515	2.241	5.086	3.145
44	16000000	3.515	8.791	4.942	1.598	1.788	0.688	2.318	2.268	1.868	2.245	1.598	3.428
44	16000000	3.515	8.791	4.942	1.598	1.788	0.688	2.318	2.268	1.868	2.245	1.598	3.428
44	18000000	2.585	6.547	4.068	1.852	0.508	1.844	1.938	3.118	1.868	3.805	5.945	3.358
44	18000000	2.768	6.547	2.788	1.568	1.038	0.278	2.498	1.948	3.998	1.908	3.718	3.648
44	18000000	2.768	6.547	2.788	1.568	1.038	0.278	2.498	1.948	3.998	1.908	3.718	3.648
44	20000000	2.515	6.347	4.068	2.328	0.527	1.898	2.026	3.218	3.725	3.993	6.831	2.818
44	20000000	2.976	4.247	3.833	2.668	1.944	0.479	2.218	4.055	4.289	3.962	4.341	2.545
44	20000000	3.312	3.757	3.688	2.888	1.775	0.479	2.218	4.055	4.289	3.962	4.341	2.545
44	21000000	3.515	5.897	1.398	2.898	4.487	1.078	2.113	1.868	2.465	2.601	3.548	1.188
44	21000000	3.586	5.897	1.398	2.898	4.487	1.078	2.113	1.868	2.465	2.601	3.548	1.188
44	21000000	3.576	5.897	1.416	2.938	4.338	1.088	2.338	1.868	2.305	2.240	3.919	2.948
44	21000000	3.515	6.047	4.988	3.228	0.318	4.523	2.505	1.588	3.515	2.241	5.086	3.145
44	21000000	3.415	6.047	4.988	3.228	0.318	4.523	2.505	1.588	3.515	2.241	5.086	3.145
44	21000000	3.515	8.791	4.942	1.598	1.788	0.688	2.318	2.268	1.868	2.245	1.598	3.428
44	21000000	3.515	8.791	4.942	1.598	1.788	0.688	2.318	2.268	1.868	2.245	1.598	3.428
44	23000000	2.585	6.547	4.068	1.852	0.508	1.844	1.938	3.118	1.868	3.805	5.945	3.358
44	23000000	2.768	6.547	2.788	1.568	1.038	0.278	2.498	1.948	3.998	1.908	3.718	3.648
44	23000000	2.768	6.547	2.788	1.568	1.038	0.278	2.498	1.948	3.998	1.908	3.718	3.648
44	25000000	2.515	6.347	4.068	2.328	0.527	1.898	2.026	3.218	3.725	3.993	6.831	2.818
44	25000000	2.976	4.247	3.833	2.668	1.944	0.479	2.218	4.055	4.289	3.962	4.341	2.545
44	25000000	3.312	3.757	3.688	2.888	1.775	0.479	2.218	4.055	4.289	3.962	4.341	2.545
44	26000000	3.515	5.897	1.398	2.898	4.487	1.078	2.113	1.868	2.465	2.601	3.548	1.188
44	26000000	3.586	5.897	1.398	2.898	4.487	1.078	2.113	1.868	2.465	2.601	3.548	1.188
44	26000000	3.576	5.897	1.416	2.938	4.338	1.088	2.338	1.868	2.305	2.240	3.919	2.948
44	26000000	3.515	6.047	4.988	3.228	0.318	4.523	2.505	1.588	3.515	2.241	5.086	3.145
44	26000000	3.415	6.047	4.988	3.228	0.318	4.523	2.505	1.588	3.515	2.241	5.086	3.145
44	26000000	3.515	8.791	4.942	1.598	1.788	0.688	2.318	2.268	1.868	2.245	1.598	3.428
44	26000000	3.515	8.791	4.942	1.598	1.788	0.688	2.318	2.268	1.868	2.245	1.598	3.428
44	28000000	2.585	6.547	4.068	1.852	0.508	1.844	1.938	3.118	1.868	3.805	5.945	3.358
44	28000000	2.768	6.547	2.788	1.568	1.038	0.278	2.498	1.948	3.998	1.908	3.718	3.648
44	28000000	2.768	6.547	2.788	1.568	1.038	0.278	2.498	1.948	3.998	1.908	3.718	3.648
44	30000000	2.515	6.347	4.068	2.328	0.527	1.898	2.026	3.218	3.725	3.993	6.831	2.818
44	30000000	2.976	4.247	3.833	2.668	1.944	0.479	2.218	4.055	4.289	3.962	4.341	2.545
44	30000000	3.312	3.757	3.688	2.888	1.775	0.479	2.218	4.055	4.289	3.962	4.341	2.545
44	31000000	3.515	5.897	1.398	2.898	4.487	1.078	2.113	1.868	2.465	2.601	3.548	1.188
44	31000000	3.586	5.897	1.398	2.898	4.487	1.078	2.113	1.868	2.465	2.601	3.548	1.188
44	31000000	3.576	5.897	1.416	2.938	4.338	1.088	2.338	1.868	2.305	2.240	3.919	2.948
44	31000000	3.515	6.047	4.988	3.228	0.318	4.523	2.505	1.588	3.515	2.241	5.086	3.145
44	31000000	3.415	6.047	4.988	3.228	0.318	4.523	2.505	1.588	3.515	2.241	5.086	3.145
44	31000000	3.515	8.791	4.942	1.598	1.788	0.688	2.318	2.268	1.868	2.245	1.598	3.428
44	31000000	3.515	8.791	4.942	1.598	1.788	0.688	2.318	2.268	1.868	2.245	1.598	3.428
44	33000000	2.585	6.547	4.068	1.852	0.508	1.844	1.938	3.118	1.868	3.805	5.945	3.358
44	33000000	2.768	6.547	2.788	1.568	1.038	0.278	2.498	1.948	3.998	1.908	3.718	3.648
44	33000000	2.768	6.547	2.788	1.568	1.038	0.278	2.498	1.948	3.998	1.908	3.718	3.648
44	35000000	2.515	6.347	4.068	2.328	0.527	1.898	2.026	3.218	3.725	3.993	6.831	2.818
44	35000000	2.976	4.247	3.833	2.668	1.944	0.479	2.218	4.055	4.289	3.962	4.341	2.545
44	35000000	3.312	3.757	3.688	2.888	1.775	0.479	2.218	4.055	4.289	3.962	4.341	2.545
44	36000000	3.515	5.897	1.398	2.898	4.487	1.078	2.113	1.868	2.465	2.601	3.548	1.188
44	36000000	3.586	5.897	1.398	2.898	4.487	1.078	2.113	1.868	2.465	2.601	3.548	1.188
44	36000000	3.576	5.897	1.416	2.938	4.338	1.088	2.338	1.868	2.305	2.240	3.919	2.948
44	36000000	3.515	6.047	4.988	3.228	0.318	4.523	2.505	1.588	3.515	2.241	5.086	3.145
44	36000000	3.415	6.047	4.988	3.228	0.318	4.523	2.505	1.588	3.515	2.241	5.086	3.145
44	36000000	3.515	8.791	4.942	1.598	1.788	0.688	2.318	2.268	1.868	2.245	1.598	3.428
44	36000000	3.515	8.791	4.942	1.598	1.788	0.688	2.318	2.268	1.868	2.245	1.598	3.428
44	38000000	2.585	6.547	4.068	1.852	0.508	1.844	1.938	3.118	1.868	3.805	5.945	3.358
44	38000000	2.768	6.547	2.788	1.568	1.038	0.278	2.498	1.948	3.998	1.908	3.718	3.648
44	38000000	2.768	6.547	2.788	1.568	1.038	0.278	2.498	1.948	3.998	1.908	3.718	3.648
44	40000000	2.515	6.347	4.068	2.328	0.527	1.898	2.026	3.218	3.725	3.993	6.831	2.818
44	40000000	2.976	4.247	3.833	2.668	1.944	0.479	2.218	4.055	4.289	3.962	4.341	2.545
44	40000000	3.312	3.757	3.688	2.888	1.775	0.479	2.218	4.055	4.289	3.962	4.341	2.545
44	41000000	3.515	5.897	1.398	2.898	4.487	1.078	2.113	1.868	2.465	2.601	3.548	1.188
44	41000000	3.586	5.897	1.398	2.898	4.487	1.078	2.113	1.868	2.465	2.601	3.548	1.188
44	41000000	3.576	5.897	1.416	2.938	4.338	1.088	2.338	1.868	2.305	2.240	3.919	2.948
44	41000000	3.515	6.047	4.988	3.228	0.318	4.523	2.505	1.588	3.515	2.241	5.086	3.145
44	41000000	3.415	6.047	4.988	3.228	0.318	4.523	2.505	1.588	3.515	2.241	5.086	3.145
44	41000000	3.515	8.791	4.942	1.598	1.788	0.688	2.318	2.268	1.868	2.245	1.598	3.428
44	41000000	3.515	8.791	4.942	1.598	1.788	0.688	2.318	2.268	1.868	2.245	1.598	3.428
44	43000000	2.585	6.547	4.068	1.852	0.508	1.844	1.938	3.118	1.868	3.805	5.945	3.358
44	43000000	2.768	6.547	2.788	1.568	1.038	0.278	2.498	1.948	3.998	1.908	3.718	3.648
44	43000000	2.768	6.547	2.788	1.568	1.038	0.278	2.498	1.948	3.998	1.908	3.718	3.648
44	45000000	2.515	6.347	4.068	2.328	0.527	1.898	2.026	3.218	3.725	3.993	6.831	2.818
44	45000000	2.976	4.247	3.833	2.668	1.944	0.479	2.218	4.055	4.289	3.962	4.341	2.545
44	45000000	3.312	3.757	3.688	2.888	1.775	0.479	2.218	4.055	4.289	3.962	4.341	2.545
44	46000000	3.515	5.897	1.398	2.898	4.487	1.078	2.113	1.868	2.465	2.601	3.548	1.188
44	46000000	3.586	5.897	1.398	2.898	4.487	1.078	2.113	1.868	2.465	2.601	3.548	1.188
44	46000000	3.576	5.897	1.416	2.938	4.338	1.088	2.338	1.868	2.305	2.240	3.919	2.948
44	46000000	3.515	6.047	4.988	3.228	0.318	4.523	2.505	1.588	3.515			

\\Secure\Environment Projects\60733229\1.01\Others\Air Modelling\Appendix\Traffic\Open Road\Appendix 3.5.2 Emission Factor in 2030.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

Opening North Road Extension Quarry															
Typical No 8 West Emulsion Factors for AR2000 model (Dec 2016)															
Road #	Hour	Moisture/tonnage		Moisture/tonnage		Moisture/tonnage		Moisture/tonnage		Moisture/tonnage		Moisture/tonnage		Moisture/tonnage	
		Mo No Emulsion		Mo No Emulsion		Mo No Emulsion		Mo No Emulsion		Mo No Emulsion		Mo No Emulsion		Mo No Emulsion	
		g/h/cm ³	tonne/hour	g/h/cm ³	tonne/hour	g/h/cm ³	tonne/hour	g/h/cm ³	tonne/hour	g/h/cm ³	tonne/hour	g/h/cm ³	tonne/hour	g/h/cm ³	tonne/hour
Round #7	47	1600-1700	4.786	1.044	3.218	0.503	8.296	2.565	2.374	5.114	0.404	2.071	4.474	1.404	1.404
Round #7	47	1700-1800	4.844	8.811	6.267	4.976	2.760	2.460	2.460	2.460	2.460	1.524	1.404	4.206	1.314
Round #7	47	1800-1900	2.535	1.804	3.302	1.454	2.682	1.154	2.682	1.154	2.682	1.154	2.682	1.154	2.682
Round #7	47	1900-2000	2.044	0.433	0.433	1.812	0.433	1.294	1.294	1.364	0.110	9.715	1.514	0.433	0.834
Round #7	47	2000-2100	1.814	0.204	0.204	1.762	0.204	1.294	1.294	1.364	0.110	9.715	1.514	0.433	0.834
Round #7	47	2100-2200	1.614	0.244	0.244	1.884	0.244	1.714	1.714	1.884	0.244	1.884	0.244	1.884	0.244
Round #7	47	2200-2300	1.504	0.284	0.284	1.814	0.284	1.744	1.744	1.914	0.284	1.914	0.284	1.914	0.284
Round #7	47	2300-2400	1.304	0.324	0.324	1.744	0.324	1.674	1.674	2.044	0.324	2.044	0.324	2.044	0.324
Round #7	47	2400-0100	1.204	0.364	0.364	1.674	0.364	1.604	1.604	2.114	0.364	2.114	0.364	2.114	0.364
Round #8	48	0100-0200	2.254	1.474	0.714	2.214	0.624	1.314	1.584	0.164	1.084	0.634	1.874	0.944	0.944
Round #8	48	0200-0300	1.314	1.224	0.364	1.014	0.364	1.314	1.504	2.214	0.874	1.404	1.784	0.784	1.784
Round #8	48	0300-0400	1.104	1.264	0.364	1.054	0.364	1.354	1.544	2.254	0.914	1.444	1.824	0.824	1.824
Round #8	48	0400-0500	1.234	1.634	0.364	1.094	0.364	1.394	1.584	2.294	0.954	1.484	1.864	0.864	1.864
Round #8	48	0500-0600	1.364	1.674	0.364	1.134	0.364	1.434	1.624	2.334	0.994	1.524	1.904	0.904	1.904
Round #8	48	0600-0700	1.494	1.714	0.364	1.174	0.364	1.474	1.664	2.374	1.034	1.564	1.944	0.944	1.944
Round #8	48	0700-0800	1.624	1.754	0.364	1.214	0.364	1.514	1.704	2.414	1.074	1.604	1.984	0.984	1.984
Round #8	48	0800-0900	1.754	1.794	0.364	1.254	0.364	1.554	1.744	2.454	1.114	1.644	2.024	1.024	2.024
Round #8	48	0900-1000	1.884	1.834	0.364	1.294	0.364	1.594	1.784	2.494	1.154	1.684	2.064	1.064	2.064
Round #8	48	1000-1100	2.014	1.874	0.364	1.334	0.364	1.634	1.824	2.534	1.194	1.724	2.104	1.104	2.104
Round #8	48	1100-1200	2.144	1.914	0.364	1.374	0.364	1.674	1.864	2.574	1.234	1.764	2.144	1.144	2.144
Round #8	48	1200-1300	2.274	1.954	0.364	1.414	0.364	1.714	1.904	2.614	1.274	1.804	2.184	1.184	2.184
Round #8	48	1300-1400	2.404	1.994	0.364	1.454	0.364	1.754	1.944	2.654	1.314	1.844	2.224	1.224	2.224
Round #8	48	1400-1500	2.534	2.034	0.364	1.494	0.364	1.794	1.984	2.694	1.354	1.884	2.264	1.264	2.264
Round #8	48	1500-1600	2.664	2.074	0.364	1.534	0.364	1.834	2.024	2.734	1.394	1.924	2.304	1.304	2.304
Round #8	48	1600-1700	2.794	2.114	0.364	1.574	0.364	1.874	2.064	2.774	1.434	1.964	2.344	1.344	2.344
Round #8	48	1700-1800	2.924	2.154	0.364	1.614	0.364	1.914	2.104	2.814	1.474	2.004	2.384	1.384	2.384
Round #8	48	1800-1900	3.054	2.194	0.364	1.654	0.364	1.954	2.144	2.854	1.514	2.044	2.424	1.424	2.424
Round #8	48	1900-2000	3.184	2.234	0.364	1.694	0.364	1.994	2.184	2.894	1.554	2.084	2.464	1.464	2.464
Round #8	48	2000-2100	3.314	2.274	0.364	1.734	0.364	2.034	2.224	2.934	1.594	2.124	2.504	1.504	2.504
Round #8	48	2100-2200	3.444	2.314	0.364	1.774	0.364	2.074	2.264	2.974	1.634	2.164	2.544	1.544	2.544
Round #8	48	2200-2300	3.574	2.354	0.364	1.814	0.364	2.114	2.304	3.014	1.674	2.204	2.584	1.584	2.584
Round #8	48	2300-2400	3.704	2.394	0.364	1.854	0.364	2.154	2.344	3.054	1.714	2.244	2.624	1.624	2.624
Round #8	48	2400-0100	3.834	2.434	0.364	1.894	0.364	2.194	2.384	3.094	1.754	2.284	2.664	1.664	2.664
Round #8	48	0100-0200	3.964	2.474	0.364	1.934	0.364	2.234	2.424	3.134	1.794	2.324	2.704	1.704	2.704
Round #8	48	0200-0300	4.094	2.514	0.364	1.974	0.364	2.274	2.464	3.174	1.834	2.364	2.744	1.744	2.744
Round #8	48	0300-0400	4.224	2.554	0.364	2.014	0.364	2.314	2.504	3.214	1.874	2.404	2.784	1.784	2.784
Round #8	48	0400-0500	4.354	2.594	0.364	2.054	0.364	2.354	2.544	3.254	1.914	2.444	2.824	1.824	2.824
Round #8	48	0500-0600	4.484	2.634	0.364	2.094	0.364	2.394	2.584	3.294	1.954	2.484	2.864	1.864	2.864
Round #8	48	0600-0700	4.614	2.674	0.364	2.134	0.364	2.434	2.624	3.334	1.994	2.524	2.904	1.904	2.904
Round #8	48	0700-0800	4.744	2.714	0.364	2.174	0.364	2.474	2.664	3.374	2.034	2.564	2.944	1.944	2.944
Round #8	48	0800-0900	4.874	2.754	0.364	2.214	0.364	2.514	2.704	3.414	2.074	2.604	2.984	1.984	2.984
Round #8	48	0900-1000	5.004	2.794	0.364	2.254	0.364	2.554	2.744	3.454	2.114	2.644	3.024	2.024	3.024
Round #8	48	1000-1100	5.134	2.834	0.364	2.294	0.364	2.594	2.784	3.494	2.154	2.684	3.064	2.064	3.064
Round #8	48	1100-1200	5.264	2.874	0.364	2.334	0.364	2.634	2.824	3.534	2.194	2.724	3.104	2.104	3.104
Round #8	48	1200-1300	5.394	2.914	0.364	2.374	0.364	2.674	2.864	3.574	2.234	2.764	3.144	2.144	3.144
Round #8	48	1300-1400	5.524	2.954	0.364	2.414	0.364	2.714	2.904	3.614	2.274	2.804	3.184	2.184	3.184
Round #8	48	1400-1500	5.654	2.994	0.364	2.454	0.364	2.754	2.944	3.654	2.314	2.844	3.224	2.224	3.224
Round #8	48	1500-1600	5.784	3.034	0.364	2.494	0.364	2.794	2.984	3.694	2.354	2.884	3.264	2.264	3.264
Round #8	48	1600-1700	5.914	3.074	0.364	2.534	0.364	2.834	3.024	3.734	2.394	2.924	3.304	2.304	3.304
Round #8	48	1700-1800	6.044	3.114	0.364	2.574	0.364	2.874	3.064	3.774	2.434	2.964	3.344	2.344	3.344
Round #8	48	1800-1900	6.174	3.154	0.364	2.614	0.364	2.914	3.104	3.814	2.474	3.004	3.384	2.384	3.384
Round #8	48	1900-2000	6.304	3.194	0.364	2.654	0.364	2.954	3.144	3.854	2.514	3.044	3.424	2.424	3.424
Round #8	48	2000-2100	6.434	3.234	0.364	2.694	0.364	2.994	3.184	3.894	2.554	3.084	3.464	2.464	3.464
Round #8	48	2100-2200	6.564	3.274	0.364	2.734	0.364	3.034	3.224	3.934	2.594	3.124	3.504	2.504	3.504
Round #8	48	2200-2300	6.694	3.314	0.364	2.774	0.364	3.074	3.264	3.974	2.634	3.164	3.544	2.544	3.544
Round #8	48	2300-2400	6.824	3.354	0.364	2.814	0.364	3.114	3.304	4.014	2.674	3.204	3.584	2.584	3.584
Round #8	48	2400-0100	6.954	3.394	0.364	2.854	0.364	3.154	3.344	4.054	2.714	3.244	3.624	2.624	3.624
Round #8	48	0100-0200	7.084	3.434	0.364	2.894	0.364	3.194	3.384	4.094	2.754	3.284	3.664	2.664	3.664
Round #8	48	0200-0300	7.214	3.474	0.364	2.934	0.364	3.234	3.424	4.134	2.794	3.324	3.704	2.704	3.704
Round #8	48	0300-0400	7.344	3.514	0.364	2.974	0.364	3.274	3.464	4.174	2.834	3.364	3.744	2.744	3.744
Round #8	48	0400-0500	7.474	3.554	0.364	3.014	0.364	3.314	3.504	4.214	2.874	3.404	3.784	2.784	3.784
Round #8	48	0500-0600	7.604	3.594	0.364	3.054	0.364	3.354	3.544	4.254	2.914	3.444	3.824	2.824	3.824
Round #8	48	0600-0700	7.734	3.634	0.364	3.094	0.364	3.394	3.584	4.294	2.954	3.484	3.864	2.864	3.864
Round #8	48	0700-0800	7.864	3.674	0.364	3.134	0.364	3.434	3.624	4.334	2.994	3.524	3.904	2.904	3.904
Round #8	48	0800-0900	7.994	3.714	0.364	3.174	0.364	3.474	3.664	4.374	3.034	3.564	3.944	2.944	3.944
Round #8	48	0900-1000	8.124	3.754	0.364	3.214	0.364	3.514	3.704	4.414	3.074	3.604	3.984	2.984	3.984
Round #8	48	1000-1100	8.254	3.794	0.364	3.254	0.364	3.554	3.744	4.454	3.114	3.644	4.024	3.024	4.024
Round #8	48	1100-1200	8.384	3.834	0.364	3.294	0.364	3.594	3.784	4.494	3.154	3.684	4.064	3.064	4.064
Round #8	48	1200-1300	8.514	3.874	0.364	3.334	0.364	3.634	3.824	4.534	3.194	3.724	4.104	3.104	4.104
Round #8	48	1300-1400	8.644	3.914	0.364	3.374	0.364	3.674	3.864	4.574	3.234	3.764	4.144	3.144	4.144
Round #8	48	1400-1500	8.774	3.954	0.364	3.414	0.364	3.714	3.904	4.614	3.274	3.804	4.184	3.184	4.184
Round #8	48	1500-1600	8.904	3.994	0.364	3.454	0.364	3.754	3.944	4.654	3.314	3.844	4.224	3.224	4.224
Round #8	48	1600-1700	9.034	4.034	0.364	3.494	0.364	3.794	3.984	4.694	3.354	3.884	4.264	3.264	4.264
Round #8	48	1700-1800	9.164	4.074	0.										

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A and B)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Ting Yi North Underground Quarry														
Open Road 24 hour Emission Factors														
For AERMOD model (Summary)														
Year 2033														
Road Name	Road ID	Hour	NO _x Emission			CO Emission			PM _{2.5} Emission			PM ₁₀ Emission		
			Annual/Event	g/hr	g/min	g/hr	g/min	g/hr	g/min	g/hr	g/min	g/hr	g/min	
Road 6	6	1600-1700	8.39E+02	2.43E-06	3.50E-02	3.74E-01	1.08E-05	1.11E-01	1.33E-02	3.87E-07	3.98E-04	4.45E-02	4.20E-02	4.32E-02
Road 6	6	1700-1800	8.39E+02	2.43E-06	3.50E-02	3.74E-01	1.08E-05	1.11E-01	1.33E-02	3.87E-07	3.98E-04	4.45E-02	4.20E-02	4.32E-02
Road 6	6	1800-1900	6.97E+02	2.17E-06	2.91E-02	3.42E-01	9.32E-06	9.48E-01	1.18E-02	3.35E-07	3.47E-04	3.79E-02	3.67E-02	3.77E-02
Road 6	6	1900-2000	6.97E+02	2.17E-06	2.91E-02	3.42E-01	9.32E-06	9.48E-01	1.18E-02	3.35E-07	3.47E-04	3.79E-02	3.67E-02	3.77E-02
Road 6	6	2000-2100	8.39E+02	2.43E-06	3.50E-02	3.74E-01	1.08E-05	1.11E-01	1.33E-02	3.87E-07	3.98E-04	4.45E-02	4.20E-02	4.32E-02
Road 6	6	2100-2200	8.39E+02	2.43E-06	3.50E-02	3.74E-01	1.08E-05	1.11E-01	1.33E-02	3.87E-07	3.98E-04	4.45E-02	4.20E-02	4.32E-02
Road 6	6	2200-2300	1.53E+02	5.72E-08	8.29E-03	2.48E-01	6.43E-06	6.44E-01	8.45E-05	2.57E-07	2.61E-03	1.02E-02	1.70E-02	1.75E-02
Road 6	6	2300-2400	1.53E+02	5.72E-08	8.29E-03	2.48E-01	6.43E-06	6.44E-01	8.45E-05	2.57E-07	2.61E-03	1.02E-02	1.70E-02	1.75E-02
Road 6	6	2400-0500	3.54E+02	4.67E-07	4.52E+04	2.40E-02	2.98E-07	3.07E-02	3.61E-06	1.19E-07	1.22E-04	1.04E-02	1.00E-02	1.03E-02
Road 7	7	0500-0600	1.87E+02	2.62E-07	1.13E+04	1.43E-01	1.97E-06	8.42E-01	6.93E-06	9.74E-08	4.47E-04	1.06E-02	4.57E-02	4.57E-02
Road 7	7	0600-0700	1.13E+02	4.07E-07	7.74E+04	1.32E-01	4.67E-06	2.04E-02	5.62E-07	2.02E-08	8.64E-05	6.1E-03	2.19E-02	3.98E-02
Road 7	7	0700-0800	1.22E+02	3.19E-08	1.37E+04	1.33E-01	3.56E-05	1.57E-02	6.70E-06	1.51E-07	4.67E-05	8.26E-03	1.64E-02	7.03E-02
Road 7	7	0800-0900	1.22E+02	3.19E-08	1.37E+04	1.33E-01	3.56E-05	1.57E-02	6.70E-06	1.51E-07	4.67E-05	8.26E-03	1.64E-02	7.03E-02
Road 7	7	0900-1000	1.33E+02	3.11E-08	1.34E+04	1.39E-01	3.5E-05	1.35E-02	6.04E-06	1.37E-07	3.58E-05	6.27E-03	1.09E-02	6.88E-02
Road 7	7	1000-1100	1.44E+02	5.68E-08	1.43E+04	1.40E-01	5.53E-05	2.37E-02	6.15E-06	2.44E-08	1.04E-04	6.73E-03	2.65E-02	3.13E-02
Road 7	7	1100-1200	1.52E+02	9.09E-08	1.45E+04	1.43E-01	1.21E-05	3.71E-02	6.33E-06	3.34E-08	2.29E-08	6.83E-03	1.85E-02	2.49E-02
Road 7	7	1200-1300	1.44E+02	5.68E-08	1.43E+04	1.40E-01	2.45E-05	1.09E-02	6.15E-06	1.17E-07	5.15E-05	6.23E-03	1.76E-02	2.77E-02
Road 7	7	1300-1400	1.52E+02	9.09E-08	1.45E+04	1.43E-01	2.45E-05	1.09E-02	6.15E-06	1.17E-07	5.15E-05	6.58E-03	1.90E-02	2.55E-02
Road 7	7	1400-1500	1.66E+02	2.74E-07	1.71E+04	1.37E-01	2.22E-05	9.59E-02	6.57E-07	1.07E-07	4.57E-04	7.14E-03	1.56E-02	4.69E-02
Road 7	7	1500-1600	1.87E+02	2.62E-07	1.13E+04	1.43E-01	1.97E-06	8.42E-01	6.93E-06	9.74E-08	4.47E-04	1.06E-02	4.57E-02	4.57E-02
Road 7	7	1600-1700	1.13E+02	4.07E-07	7.74E+04	1.32E-01	4.67E-06	2.04E-02	5.62E-07	2.02E-08	8.64E-05	6.1E-03	2.19E-02	3.98E-02
Road 7	7	1700-1800	1.22E+02	3.19E-08	1.37E+04	1.33E-01	3.56E-05	1.57E-02	6.70E-06	1.51E-07	4.67E-05	8.26E-03	1.64E-02	7.03E-02
Road 7	7	1800-1900	1.22E+02	3.19E-08	1.37E+04	1.33E-01	3.56E-05	1.57E-02	6.70E-06	1.51E-07	4.67E-05	8.26E-03	1.64E-02	7.03E-02
Road 7	7	1900-2000	1.33E+02	3.11E-08	1.34E+04	1.39E-01	3.5E-05	1.35E-02	6.04E-06	1.37E-07	3.58E-05	6.27E-03	1.09E-02	6.88E-02
Road 7	7	2000-2100	1.44E+02	5.68E-08	1.43E+04	1.40E-01	5.53E-05	2.37E-02	6.15E-06	2.44E-08	1.04E-04	6.73E-03	2.65E-02	3.13E-02
Road 7	7	2100-2200	1.52E+02	9.09E-08	1.45E+04	1.43E-01	1.21E-05	3.71E-02	6.33E-06	3.34E-08	2.29E-08	6.83E-03	1.85E-02	2.49E-02
Road 7	7	2200-2300	1.44E+02	5.68E-08	1.43E+04	1.40E-01	2.45E-05	1.09E-02	6.15E-06	1.17E-07	5.15E-05	6.23E-03	1.76E-02	2.77E-02
Road 7	7	2300-2400	1.52E+02	9.09E-08	1.45E+04	1.43E-01	2.45E-05	1.09E-02	6.15E-06	1.17E-07	5.15E-05	6.58E-03	1.90E-02	2.55E-02
Road 7	7	2400-0500	3.54E+02	4.67E-07	4.52E+04	2.40E-02	2.98E-07	3.07E-02	3.61E-06	1.19E-07	1.22E-04	1.04E-02	1.00E-02	1.03E-02
Road 8	8	0500-0600	1.87E+02	2.62E-07	1.13E+04	1.43E-01	1.97E-06	8.42E-01	6.93E-06	9.74E-08	4.47E-04	1.06E-02	4.57E-02	4.57E-02
Road 8	8	0600-0700	1.13E+02	4.07E-07	7.74E+04	1.32E-01	4.67E-06	2.04E-02	5.62E-07	2.02E-08	8.64E-05	6.1E-03	2.19E-02	3.98E-02
Road 8	8	0700-0800	1.22E+02	3.19E-08	1.37E+04	1.33E-01	3.56E-05	1.57E-02	6.70E-06	1.51E-07	4.67E-05	8.26E-03	1.64E-02	7.03E-02
Road 8	8	0800-0900	1.22E+02	3.19E-08	1.37E+04	1.33E-01	3.56E-05	1.57E-02	6.70E-06	1.51E-07	4.67E-05	8.26E-03	1.64E-02	7.03E-02
Road 8	8	0900-1000	1.33E+02	3.11E-08	1.34E+04	1.39E-01	3.5E-05	1.35E-02	6.04E-06	1.37E-07	3.58E-05	6.27E-03	1.09E-02	6.88E-02
Road 8	8	1000-1100	1.44E+02	5.68E-08	1.43E+04	1.40E-01	5.53E-05	2.37E-02	6.15E-06	2.44E-08	1.04E-04	6.73E-03	2.65E-02	3.13E-02
Road 8	8	1100-1200	1.52E+02	9.09E-08	1.45E+04	1.43E-01	1.21E-05	3.71E-02	6.33E-06	3.34E-08	2.29E-08	6.83E-03	1.85E-02	2.49E-02
Road 8	8	1200-1300	1.44E+02	5.68E-08	1.43E+04	1.40E-01	2.45E-05	1.09E-02	6.15E-06	1.17E-07	5.15E-05	6.23E-03	1.76E-02	2.77E-02
Road 8	8	1300-1400	1.52E+02	9.09E-08	1.45E+04	1.43E-01	2.45E-05	1.09E-02	6.15E-06	1.17E-07	5.15E-05	6.58E-03	1.90E-02	2.55E-02
Road 8	8	1400-1500	1.66E+02	2.74E-07	1.71E+04	1.37E-01	2.22E-05	9.59E-02	6.57E-07	1.07E-07	4.57E-04	7.14E-03	1.56E-02	4.69E-02
Road 8	8	1500-1600	1.87E+02	2.62E-07	1.13E+04	1.43E-01	1.97E-06	8.42E-01	6.93E-06	9.74E-08	4.47E-04	1.06E-02	4.57E-02	4.57E-02
Road 8	8	1600-1700	1.13E+02	4.07E-07	7.74E+04	1.32E-01	4.67E-06	2.04E-02	5.62E-07	2.02E-08	8.64E-05	6.1E-03	2.19E-02	3.98E-02
Road 8	8	1700-1800	1.22E+02	3.19E-08	1.37E+04	1.33E-01	3.56E-05	1.57E-02	6.70E-06	1.51E-07	4.67E-05	8.26E-03	1.64E-02	7.03E-02
Road 8	8	1800-1900	1.22E+02	3.19E-08	1.37E+04	1.33E-01	3.56E-05	1.57E-02	6.70E-06	1.51E-07	4.67E-05	8.26E-03	1.64E-02	7.03E-02
Road 8	8	1900-2000	1.33E+02	3.11E-08	1.34E+04	1.39E-01	3.5E-05	1.35E-02	6.04E-06	1.37E-07	3.58E-05	6.27E-03	1.09E-02	6.88E-02
Road 8	8	2000-2100	1.44E+02	5.68E-08	1.43E+04	1.40E-01	5.53E-05	2.37E-02	6.15E-06	2.44E-08	1.04E-04	6.73E-03	2.65E-02	3.13E-02
Road 8	8	2100-2200	1.52E+02	9.09E-08	1.45E+04	1.43E-01	1.21E-05	3.71E-02	6.33E-06	3.34E-08	2.29E-08	6.83E-03	1.85E-02	2.49E-02
Road 8	8	2200-2300	1.44E+02	5.68E-08	1.43E+04	1.40E-01	2.45E-05	1.09E-02	6.15E-06	1.17E-07	5.15E-05	6.23E-03	1.76E-02	2.77E-02
Road 8	8	2300-2400	1.52E+02	9.09E-08	1.45E+04	1.43E-01	2.45E-05	1.09E-02	6.15E-06	1.17E-07	5.15E-05	6.58E-03	1.90E-02	2.55E-02
Road 8	8	2400-0500	3.54E+02	4.67E-07	4.52E+04	2.40E-02	2.98E-07	3.07E-02	3.61E-06	1.19E-07	1.22E-04	1.04E-02	1.00E-02	1.03E-02
Road 9	9	0500-0600	1.87E+02	2.62E-07	1.13E+04	1.43E-01	1.97E-06	8.42E-01	6.93E-06	9.74E-08	4.47E-04	1.06E-02	4.57E-02	4.57E-02
Road 9	9	0600-0700	1.13E+02	4.07E-07	7.74E+04	1.32E-01	4.67E-06	2.04E-02	5.62E-07	2.02E-08	8.64E-05	6.1E-03	2.19E-02	3.98E-02
Road 9	9	0700-0800	1.22E+02	3.19E-08	1.37E+04	1.33E-01	3.56E-05	1.57E-02	6.70E-06	1.51E-07	4.67E-05	8.26E-03	1.64E-02	7.03E-02
Road 9	9	0800-0900	1.22E+02	3.19E-08	1.37E+04	1.33E-01	3.56E-05	1.57E-02	6.70E-06	1.51E-07	4.67E-05	8.26E-03	1.64E-02	7.03E-02
Road 9	9	0900-1000	1.33E+02	3.11E-08	1.34E+04	1.39E-01	3.5E-05	1.35E-02	6.04E-06	1.37E-07	3.58E-05	6.27E-03	1.09E-02	6.88E-02
Road 9	9	1000-1100	1.44E+02	5.68E-08	1.43E+04	1.40E-01	5.53E-05	2.37E-02	6.15E-06	2.44E-08	1.04E-04	6.73E-03	2.65E-02	3.13E-02
Road 9	9	1100-1200	1.52E+02	9.09E-08	1.45E+04	1.43E-01	1.21E-05	3.71E-02	6.33E-06	3.34E-08	2.29E-08	6.83E-03	1.85E-02	2.49E-02
Road 9	9	1200-1300	1.44E+02	5.68E-08	1.43E+04	1.40E-01	2.45E-05	1.09E-02	6.15E-06	1.17E-07	5.15E-05	6.23E-03	1.76E-02	2.77E-02
Road 9	9	1300-1400	1.52E+02	9.09E-08	1.45E+04	1.43E-01	2.45E-05	1.09E-02	6.15E-06	1.17E-07	5.15E-05	6.58E-03	1.90E-02	2.55E-02
Road 9	9	1400-1500	1.66E+02	2.74E-07	1.71E+04	1.37E-01	2.22E-05	9.59E-02	6.57E-07	1.07E-07	4.57E-04	7.14E-03	1.56E-02	4.69E-02
Road 9	9	1500-1600	1.87E+02	2.62E-07	1.13E+04	1.43E-01	1.97E-06	8.42E-01	6.93E-06	9.74E-08	4.47E-04	1.06E-02	4.57E-02	4.57E-02
Road 9	9	1600-1700	1.13E+02	4.07E-07	7.74E+04	1.32E-01	4.67E-06	2.04E-02	5.62E-07	2.02E-08	8.64E-05	6.1E-03	2.19E-02	3.98E-02
Road 9	9	1700-1800	1.22E+02	3.19E-08	1.37E+04	1.33E-01	3.56E-05	1.57E-02	6.70E-06	1.51E-07	4.67E-05	8.26E-03	1.64E-02	7.03E-02
Road 9	9	1800-1900	1.22E+02	3.19E-08	1.37E+04	1.33E-01	3.56E-05	1.57E-02	6.70E-06	1.51E-07	4.67E-05	8.26E-03	1.64E-02	7.03E-02
Road 9	9	1900-2000	1.33E+02	3.11E-08	1.34E+04	1.39E-01	3.5E-05	1.35E-02	6.04E-06	1.37E-07	3.58E-05	6.27E-03	1.09E-02	6.88E-02
Road 9	9	2000-2100	1.44E+02	5.68E-08	1.43E+04	1.40E-01	5.53E-05	2.3						

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Document: Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.2 Emission Factor in 2030.xlsx

North Underground Quarry

24 hour Emission Factors

Year 2033

ERAND model (Summary)

Emission	Road ID	Hour	NO Emission		NO Emission		PM ₁₀ Emission		PM ₁₀ Emission					
			Actual/Annual		Annual/Actual		Actual/Annual		Annual/Actual					
			g/min/h	g/min/line	g/min/line	g/min/line	g/min/h	g/min/line	g/min/line	g/min/line				
9	9	1200-1300	1.080E+01	1.952E+06	5.29E+03	4.677E+01	8.421E+06	2.28E+02	1.400E+02	7.53E+07	6.888E+04	1.531E+02	2.767E+07	7.44E+04
10	9	1300-1400	1.26E+01	2.36E+06	6.49E+04	5.441E+01	1.003E+05	2.81E+02	1.49E+02	7.67E+04	1.66E+05	3.767E+02	6.76E+07	8.18E+04
11	9	1400-1500	1.32E+01	2.46E+06	6.80E+04	5.69E+01	1.06E+05	2.92E+02	1.54E+02	7.97E+04	1.72E+05	3.92E+02	7.19E+07	8.61E+04
12	9	1500-1600	1.35E+01	2.72E+06	7.47E+04	6.06E+01	1.124E+05	3.13E+02	1.53E+02	8.12E+07	1.86E+04	1.67E+04	3.607E+07	9.21E+04
13	9	1600-1700	1.18E+01	2.86E+06	7.74E+04	5.89E+01	1.221E+05	3.11E+02	1.60E+02	8.12E+07	1.89E+04	1.75E+04	3.617E+07	9.79E+04
14	9	1700-1800	1.05E+01	2.95E+06	8.20E+04	6.25E+01	1.31E+05	3.11E+02	1.45E+02	8.08E+07	1.86E+04	1.75E+04	3.617E+07	9.79E+04
15	9	1800-1900	6.29E+02	3.16E+06	3.68E+03	6.00E+01	7.78E+04	2.11E+02	1.18E+02	2.44E+07	6.60E+04	1.23E+02	2.65E+07	7.18E+04
16	9	1900-2000	2.52E+02	3.707E+07	1.92E+05	2.79E+04	4.60E+04	1.26E+02	1.01E+02	1.68E+07	4.54E+04	1.03E+02	1.86E+07	4.99E+04
17	9	2000-2100	1.78E+02	4.26E+07	1.37E+05	2.00E+04	3.88E+04	1.18E+02	8.8E+01	1.45E+07	3.31E+04	7.51E+01	1.34E+07	3.48E+04
18	9	2100-2200	3.55E+02	4.62E+07	1.25E+05	2.51E+05	3.33E+06	8.90E+01	1.61E+02	1.77E+07	3.17E+04	9.68E+02	1.76E+07	3.41E+04
19	9	2200-2300	2.46E+02	4.31E+07	1.17E+05	2.51E+04	3.33E+04	8.48E+01	9.00E+01	1.18E+05	3.05E+04	9.85E+02	1.82E+07	3.32E+04
20	9	2300-2400	1.48E+02	4.29E+07	1.23E+05	2.51E+04	3.33E+04	8.48E+01	9.00E+01	1.18E+05	3.05E+04	9.85E+02	1.82E+07	3.32E+04
21	10	0000-0100	4.79E+01	5.41E+06	1.32E+06	2.80E+01	3.16E+07	7.44E+04	8.68E+01	9.81E+05	2.40E+04	5.91E+01	1.07E+08	2.63E+05
22	10	0100-0200	5.12E+01	5.15E+06	8.42E+05	2.90E+01	2.16E+07	5.30E+04	9.11E+01	8.83E+05	1.67E+05	1.01E+02	7.49E+06	1.83E+05
23	10	0200-0300	5.52E+02	5.10E+06	7.51E+02	3.08E+01	4.11E+07	5.95E+04	9.38E+01	5.38E+05	1.30E+05	1.05E+04	5.84E+06	1.43E+05
24	10	0300-0400	5.78E+02	5.10E+06	7.51E+02	3.08E+01	4.11E+07	5.95E+04	9.38E+01	5.38E+05	1.30E+05	1.05E+04	5.84E+06	1.43E+05
25	10	0400-0500	6.02E+02	5.10E+06	7.57E+02	3.20E+01	2.60E+07	5.30E+04	9.04E+02	5.20E+05	1.27E+05	1.14E+02	5.71E+06	1.45E+05
26	10	0500-0600	6.53E+02	5.14E+06	1.41E+04	3.28E+01	1.89E+07	7.07E+04	9.08E+02	5.54E+05	1.23E+05	1.19E+02	5.90E+06	1.54E+05
27	10	0600-0700	6.97E+02	5.14E+06	1.39E+04	3.41E+01	6.59E+07	1.61E+04	1.18E+02	7.19E+04	5.31E+05	1.24E+02	2.98E+06	1.58E+05
28	10	0700-0800	7.50E+02	2.96E+07	7.24E+04	1.57E+04	1.45E+04	1.45E+04	1.19E+02	4.68E+04	1.18E+04	1.30E+04	5.81E+06	1.26E+04
29	10	0800-0900	7.61E+02	3.52E+07	8.62E+04	1.38E+04	1.56E+08	1.82E+04	1.65E+02	8.82E+04	1.18E+04	1.41E+04	5.26E+06	1.29E+04
30	10	0900-1000	8.03E+02	3.77E+07	9.32E+04	1.63E+04	1.75E+08	1.94E+04	1.82E+02	1.03E+04	1.08E+04	1.58E+04	5.45E+06	1.32E+04
31	10	1000-1100	9.36E+02	3.60E+07	8.80E+04	1.62E+04	1.39E+04	1.40E+04	1.85E+02	8.42E+04	1.09E+04	1.22E+04	4.59E+06	1.03E+04
32	10	1100-1200	9.36E+02	3.39E+07	8.30E+04	1.62E+04	1.32E+04	3.72E+04	1.53E+04	8.66E+04	1.06E+04	3.86E+04	9.43E+05	
33	10	1200-1300	1.12E+03	3.46E+07	7.51E+04	1.84E+04	1.00E+04	1.00E+04	1.10E+02	2.11E+04	1.51E+05	2.20E+02	2.26E+06	4.61E+05
34	10	1300-1400	1.14E+03	3.46E+07	7.48E+04	1.83E+04	8.65E+03	1.12E+04	1.00E+02	2.18E+04	5.58E+05	1.29E+02	2.48E+06	4.61E+05
35	10	1400-1500	1.16E+03	2.46E+07	6.01E+04	4.05E+04	8.82E+03	1.12E+04	1.12E+02	2.33E+04	5.80E+05	1.22E+02	2.59E+06	6.33E+05
36	10	1500-1600	1.18E+03	2.68E+07	6.39E+04	4.22E+04	8.80E+03	2.27E+04	1.05E+02	2.32E+07	5.87E+05	1.15E+02	2.54E+06	6.17E+05
37	10	1600-1700	1.13E+03	2.86E+07	6.70E+04	4.39E+04	8.80E+03	2.18E+04	1.00E+02	2.32E+07	5.87E+05	1.15E+02	2.54E+06	6.17E+05
38	10	1700-1800	1.01E+03	2.16E+07	5.29E+04	3.91E+04	7.40E+03	1.12E+04	1.12E+02	2.33E+04	5.84E+05	1.22E+02	2.61E+06	6.40E+05
39	10	1800-1700	7.82E+02	2.67E+07	3.54E+04	3.22E+04	6.01E+03	1.47E+04	9.72E+03	1.82E+05	4.65E+05	1.05E+06	1.98E+06	4.86E+05
40	10	1900-1800	6.69E+02	2.96E+07	3.00E+04	3.40E+04	5.85E+03	9.94E+04	8.78E+03	1.82E+05	4.65E+05	1.05E+06	1.98E+06	4.86E+05
41	10	2000-1900	6.75E+02	7.33E+08	1.97E+04	3.41E+04	3.38E+02	8.57E+03	9.21E+03	2.25E+05	3.63E+05	1.01E+06	2.46E+05	
42	10	2100-2000	6.82E+02	7.41E+08	1.81E+04	3.17E+04	3.45E+04	8.78E+04	5.54E+05	2.33E+05	3.60E+04	1.06E+06	2.55E+05	
43	10	2200-2100	6.85E+02	7.41E+08	1.81E+04	3.17E+04	3.45E+04	8.78E+04	5.54E+05	2.33E+05	3.60E+04	1.06E+06	2.55E+05	
44	10	2300-2200	6.88E+02	5.42E+08	1.28E+04	3.12E+04	2.44E+07	5.98E+04	9.02E+03	7.07E+03	1.78E+05	8.87E+03	7.73E+05	1.89E+05
45	11	0000-0100	1.18E+07	1.07E+08	2.18E+08	2.94E+01	1.57E+06	2.20E+04	1.10E+02	1.89E+08	8.75E+05	1.21E+02	6.84E+08	9.02E+05
46	11	0100-0200	3.18E+07	1.18E+07	1.65E+08	2.99E+01	1.50E+06	1.84E+04	1.14E+02	1.97E+08	2.52E+05	1.24E+02	6.31E+08	9.10E+05
47	11	0200-0300	3.42E+07	1.18E+07	1.65E+08	2.99E+01	1.50E+06	1.84E+04	1.14E+02	1.97E+08	2.52E+05	1.24E+02	6.31E+08	9.10E+05
48	11	0300-0400	3.68E+08	7.83E+08	1.10E+05	2.15E+07	6.76E+07	8.91E+04	1.23E+02	2.47E+08	3.47E+04	3.14E+04	2.71E+08	1.80E+04
49	11	0400-0500	4.23E+03	9.46E+08	1.29E+04	2.23E+01	1.31E+07	1.10E+04	1.27E+02	2.82E+08	3.90E+04	1.99E+03	3.18E+08	4.34E+04
50	11	0500-0600	4.46E+03	9.46E+08	1.29E+04	2.23E+01	1.31E+07	1.10E+04	1.27E+02	2.82E+08	3.90E+04	1.99E+03	3.18E+08	4.34E+04
51	11	0600-0700	4.86E+02	4.12E+07	5.78E+04	1.36E+01	2.96E+04	1.54E+04	1.39E+02	1.16E+07	1.52E+04	1.51E+02	1.27E+07	1.78E+04
52	11	0700-0800	3.85E+03	8.82E+07	1.18E+06	3.90E+01	6.08E+08	9.21E+04	1.51E+02	2.54E+07	3.66E+04	1.65E+02	2.76E+07	3.98E+04
53	11	0800-0900	3.84E+03	8.82E+07	1.18E+06	3.90E+01	6.08E+08	9.21E+04	1.51E+02	2.54E+07	3.66E+04	1.65E+02	2.76E+07	3.98E+04
54	11	0900-1000	6.72E+01	1.15E+08	3.90E+01	6.07E+05	5.00E+04	1.21E+09	1.99E+07	2.79E+04	3.12E+02	2.17E+07	3.04E+04	
55	11	1000-1100	1.00E+06	1.00E+06	1.45E+08	3.88E+05	7.42E+08	1.18E+08	1.70E+07	2.39E+08	1.29E+08	1.82E+07	2.60E+08	1.60E+04
56	11	1100-1200	1.17E+06	1.00E+06	1.45E+08	3.88E+05	7.42E+08	1.18E+08	1.70E+07	2.39E+08	1.29E+08	1.82E+07	2.60E+08	1.60E+04
57	11	1200-1300	1.14E+06	1.14E+06	1.21E+08	3.90E+01	6.07E+05	5.00E+04	1.21E+09	1.99E+07	2.79E+04	3.12E+02	2.17E+07	3.04E+04
58	11	1300-1400	1.21E+06	1.14E+06	1.21E+08	3.90E+01	6.07E+05	5.00E+04	1.21E+09	1.99E+07	2.79E+04	3.12E+02	2.17E+07	3.04E+04
59	11	1400-1500	1.22E+06	1.24E+06	3.42E+08	4.98E+01	1.40E+05	1.40E+05	1.40E+02	1.82E+07	3.75E+04	1.53E+02	3.00E+07	4.29E+04
60	11	1500-1600	1.28E+06	1.24E+06	3.42E+08	4.98E+01	1.40E+05	1.42E+04	1.44E+02	2.09E+07	3.90E+04	1.54E+02	3.25E+07	4.58E+04
61	11	1600-1700	1.18E+06	1.18E+06	3.42E+08	4.98E+01	1.40E+05	1.42E+04	1.44E+02	2.09E+07	3.90E+04	1.54E+02	3.25E+07	4.58E+04
62	11	1700-1800	1.17E+06	1.24E+06	3.56E+04	4.94E+01	1.07E+05	1.51E+02	1.51E+02	2.18E+07	4.60E+04	1.64E+02	3.58E+07	5.01E+04
63	11	1800-1900	5.59E+02	2.68E+06	3.09E+04	4.67E+01	1.07E+05	1.55E+05	1.55E+05	2.18E+07	4.19E+04	1.70E+02	3.96E+07	5.44E+04
64	11	1900-2000	3.86E+02	2.86E+06	3.20E+04	4.67E+01	1.07E+05	1.55E+05	1.55E+05	2.18E+07	4.19E+04	1.70E+02	3.96E+07	5.44E+04
65	11	2000-2100	6.50E+02	9.67E+07	1.35E+05	3.51E+01	6.06E+08	9.48E+04	1.31E+02	2.27E+07	3.98E+04	1.43E+02	2.47E+07	3.46E+04
66	11	2100-2200	5.47E+02	7.38E+07	1.03E+05	3.63E+01	4.88E+08	8.86E+04	1.28E+02	2.73E+07	2.42E+04	1.04E+02	1.86E+07	2.64E+04
67	11	2200-2300	4.86E+02	7.38E+07	1.03E+05	3.63E+01	4.88E+08	8.86E+04	1.28E+02	2.73E+07	2.42E+04	1.04E+02	1.86E+07	2.64E+04
68	11	2300-2400	4.97E+02	6.07E+07	8.97E+04	3.52E+01	4.54E+08	6.73E+04	1.34E+02	1.66E+07	2.24E+04	1.35E+02	1.74E+07	2.44E+04
69	11	2300-0000	5.10E+02	5.08E+07	7.12E+04	3.51E+01	4.44E+08	1.82E+04	1.26E+02	1.23E+07	1.71E+04	1.37E+02	1.84E+07	1.88E+04
70	11	0000-0100	1.15E+07	1.15E+07	1.61E+07	1.46E+01	1.46E+01	1.46E+01	1.46E+01	1.46E+01	1.46E+01	1.46E+01	1.46E+01	1.46E+01
71	12	0000-0100	3.14E+06	1.76E+07	1.77E+05	4.50E+01	4.50E+01	4.50E+01	4.50E+01	4.50E+01	4.50E+01	4.50E+01	4.50E+01	4.50E+01
72	12	0100-0200	3.14E+06	1.76E+07	1.77E+05	4.50E+01	4.50E+01	4.50E+01	4.50E+01	4.50E+01	4.50E+01	4.50E+01	4.50E+01	4.50E+01
73	12	0200-0300	3.14E+06	1.77E+07	1.77E+05	4.51E+01	4.50E+01	4.50E+01	4.50E+01	4.50E+01	4			

Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.3 Emission Factor in 2033.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Tsing Yi North Underground Quarry														
Open Road 24 hour Emission Factors														
Year 2033														
For AERMOD model (Summary)														
Road Name	Road ID	Hour	NO _x Emission			NO ₂ Emission			PM _{2.5} Emission			PM ₁₀ Emission		
			g/h/m ²	g/m ² /m	tonnes/year	g/h/m ²	g/m ² /m	tonnes/year	g/h/m ²	g/m ² /m	tonnes/year	g/h/m ²	g/m ² /m	tonnes/year
Road 12	12	0800-0900	3.948E+01	9.551E+01	2.38E+02	1.59E+02	4.11E+01	7.24E+01	3.17E+02	7.93E+01	3.38E+02	8.16E+02	2.05E+03	
Road 12	12	0900-1000	3.98E+01	9.55E+01	8.59E+03	9.18E+01	2.20E+06	1.02E+02	7.25E+03	6.33E+04	3.28E+02	7.98E+03	7.09E+04	
Road 12	12	1000-1100	4.02E+01	9.55E+01	8.59E+03	9.28E+01	2.20E+06	1.06E+02	7.24E+03	6.31E+04	3.30E+02	7.88E+03	7.07E+04	
Road 12	12	1100-1200	4.04E+01	9.57E+01	8.61E+03	9.31E+01	2.21E+06	1.08E+02	7.25E+03	6.34E+04	3.32E+02	7.91E+03	7.09E+04	
Road 12	12	1200-1300	4.03E+01	9.59E+01	8.63E+03	9.25E+01	2.20E+06	1.08E+02	7.25E+03	6.34E+04	3.32E+02	7.91E+03	7.09E+04	
Road 12	12	1300-1400	4.02E+01	9.62E+01	8.65E+03	9.26E+01	2.21E+06	1.09E+02	7.25E+03	6.32E+04	3.30E+02	7.88E+03	7.09E+04	
Road 12	12	1400-1500	3.99E+01	9.57E+01	8.61E+03	9.26E+01	2.20E+06	1.08E+02	7.25E+03	6.32E+04	3.29E+02	7.90E+03	7.09E+04	
Road 12	12	1500-1600	3.98E+01	9.57E+01	8.62E+03	9.26E+01	2.21E+06	1.08E+02	7.25E+03	6.32E+04	3.29E+02	7.90E+03	7.09E+04	
Road 12	12	1600-1700	3.98E+01	9.58E+01	8.62E+03	9.26E+01	2.21E+06	1.08E+02	7.25E+03	6.32E+04	3.29E+02	7.90E+03	7.12E+04	
Road 12	12	1700-1800	3.94E+01	9.54E+01	8.59E+03	9.18E+01	2.21E+06	1.06E+02	7.24E+03	6.38E+04	3.28E+02	7.95E+03	7.12E+04	
Road 12	12	1800-1900	3.98E+01	9.57E+01	8.61E+03	9.25E+01	2.21E+06	1.08E+02	7.25E+03	6.33E+04	3.29E+02	7.91E+03	7.12E+04	
Road 12	12	1900-2000	2.87E+01	2.16E+01	9.47E+03	6.79E+01	2.52E+07	4.72E+03	7.47E+02	1.86E+07	2.67E+04	2.02E+08	1.87E+04	
Road 12	12	2000-2100	3.00E+01	2.13E+01	9.49E+03	6.92E+01	2.54E+07	4.63E+03	7.55E+02	1.88E+07	2.63E+04	2.02E+08	1.72E+04	
Road 12	12	2100-2200	2.99E+01	2.13E+01	9.49E+03	7.00E+01	2.55E+07	4.63E+03	7.55E+02	1.88E+07	2.63E+04	2.02E+08	1.72E+04	
Road 12	12	2200-2300	3.00E+01	2.12E+01	9.51E+03	7.23E+01	2.55E+07	4.59E+03	7.56E+02	1.88E+07	2.63E+04	2.02E+08	1.55E+05	
Road 12	12	2300-0000	2.97E+01	2.09E+01	9.49E+03	7.20E+01	2.54E+07	4.58E+03	7.54E+02	1.88E+07	2.63E+04	2.02E+08	1.78E+04	
Road 13	13	0800-0900	4.42E+02	2.68E+02	1.36E+05	2.21E+02	1.28E+05	1.17E+04	4.96E+02	2.91E+02	2.68E+05	3.91E+03	2.17E+06	
Road 13	13	0900-1000	4.78E+02	1.86E+02	1.89E+05	2.78E+02	8.98E+04	8.32E+03	2.54E+05	5.80E+05	2.52E+06	2.52E+06	2.52E+06	
Road 13	13	0100-0200	5.16E+02	1.49E+02	1.36E+05	2.42E+02	1.68E+05	6.37E+03	5.71E+03	1.50E+06	6.21E+03	1.79E+03	1.89E+06	
Road 13	13	0300-0400	5.53E+02	1.28E+02	1.16E+05	2.53E+02	1.48E+05	5.33E+03	4.84E+03	1.33E+06	5.33E+03	1.33E+06	5.33E+03	
Road 13	13	0400-0500	5.86E+02	1.51E+02	1.38E+05	2.68E+02	1.67E+05	5.68E+03	5.16E+03	1.40E+06	5.68E+03	1.40E+06	5.68E+03	
Road 13	13	0500-0600	6.20E+02	2.81E+02	2.56E+05	2.74E+02	1.24E+06	1.13E+04	6.79E+03	2.81E+06	6.20E+03	1.74E+03	3.05E+06	
Road 13	13	0600-0700	6.53E+02	6.45E+02	5.58E+05	2.84E+02	2.80E+06	2.54E+04	7.14E+04	7.04E+06	7.75E+03	6.61E+03	6.98E+06	
Road 13	13	0700-0800	6.81E+02	1.38E+02	1.26E+05	2.92E+02	1.91E+05	5.39E+04	7.48E+03	8.21E+06	1.50E+05	1.50E+05	1.50E+05	
Road 13	13	0800-0900	6.65E+02	1.58E+02	1.44E+05	2.83E+02	1.61E+06	6.12E+04	7.88E+03	8.02E+06	1.50E+05	1.50E+05	1.50E+05	
Road 13	13	0900-1000	7.84E+02	1.68E+02	1.53E+04	3.30E+02	6.05E+06	6.24E+04	8.55E+03	1.88E+09	1.67E+05	9.28E+03	1.99E+09	1.82E+05
Road 13	13	1000-1100	8.68E+02	1.72E+02	1.51E+04	3.50E+02	6.18E+06	6.48E+04	9.47E+03	1.84E+09	1.68E+05	1.01E+04	2.00E+09	1.82E+05
Road 13	13	1100-1200	8.97E+02	1.67E+02	1.43E+04	3.61E+02	6.18E+06	6.48E+04	9.47E+03	1.84E+09	1.68E+05	1.01E+04	2.00E+09	1.82E+05
Road 13	13	1200-1300	8.81E+02	1.71E+02	1.58E+04	3.40E+02	6.61E+06	6.01E+04	9.30E+03	1.88E+09	1.65E+05	1.01E+04	1.97E+09	1.79E+05
Road 13	13	1300-1400	8.87E+02	1.82E+02	1.66E+04	3.50E+02	7.22E+06	6.44E+04	9.34E+03	1.94E+09	1.77E+05	1.01E+04	2.10E+09	1.92E+05
Road 13	13	1400-1500	8.88E+02	1.82E+02	1.66E+04	3.50E+02	7.22E+06	6.44E+04	9.34E+03	1.94E+09	1.77E+05	1.01E+04	2.10E+09	1.92E+05
Road 13	13	1500-1600	8.51E+02	1.79E+02	1.64E+04	3.45E+02	7.06E+06	6.93E+04	9.21E+03	1.97E+09	1.79E+05	9.69E+03	2.14E+09	1.95E+05
Road 13	13	1600-1700	8.68E+02	1.95E+02	1.78E+04	3.45E+02	7.62E+06	6.95E+04	9.52E+03	2.07E+09	1.89E+05	1.00E+04	2.25E+09	2.05E+05
Road 13	13	1700-1800	8.68E+02	1.95E+02	1.78E+04	3.45E+02	7.62E+06	6.95E+04	9.52E+03	2.07E+09	1.89E+05	1.00E+04	2.25E+09	2.05E+05
Road 13	13	1800-1900	8.58E+02	1.95E+02	1.78E+04	3.45E+02	7.62E+06	6.95E+04	9.52E+03	2.07E+09	1.89E+05	1.00E+04	2.25E+09	2.05E+05
Road 13	13	1900-2000	8.58E+02	1.95E+02	1.78E+04	3.45E+02	7.62E+06	6.95E+04	9.52E+03	2.07E+09	1.89E+05	1.00E+04	2.25E+09	2.05E+05
Road 13	13	2000-2100	8.58E+02	1.95E+02	1.78E+04	3.45E+02	7.62E+06	6.95E+04	9.52E+03	2.07E+09	1.89E+05	1.00E+04	2.25E+09	2.05E+05
Road 13	13	2100-2200	8.58E+02	1.95E+02	1.78E+04	3.45E+02	7.62E+06	6.95E+04	9.52E+03	2.07E+09	1.89E+05	1.00E+04	2.25E+09	2.05E+05
Road 13	13	2200-2300	8.58E+02	1.95E+02	1.78E+04	3.45E+02	7.62E+06	6.95E+04	9.52E+03	2.07E+09	1.89E+05	1.00E+04	2.25E+09	2.05E+05
Road 13	13	2300-0000	8.58E+02	1.95E+02	1.78E+04	3.45E+02	7.62E+06	6.95E+04	9.52E+03	2.07E+09	1.89E+05	1.00E+04	2.25E+09	2.05E+05
Road 14	14	0800-0900	2.98E+02	4.11E+02	9.75E+02	2.00E+02	2.11E+08	1.93E+04	4.46E+03	4.67E+06	1.66E+04	4.60E+03	5.07E+03	4.63E+06
Road 14	14	0900-1000	2.45E+02	3.62E+02	8.68E+04	1.73E+02	1.94E+07	1.60E+04	3.66E+03	3.89E+06	1.41E+04	3.66E+03	3.89E+06	1.41E+04
Road 14	14	1000-1100	2.62E+02	3.60E+02	8.55E+04	1.76E+02	1.94E+07	1.60E+04	3.66E+03	3.89E+06	1.41E+04	3.66E+03	3.89E+06	1.41E+04
Road 14	14	1100-1200	3.19E+02	8.98E+04	5.54E+04	1.79E+02	5.00E+07	3.31E+03	7.60E+07	2.02E+09	1.29E+04	8.24E+03	2.24E+09	1.43E+04
Road 14	14	1200-1300	3.69E+02	9.02E+04	5.58E+04	1.83E+02	5.23E+07	3.31E+03	7.60E+07	2.02E+09	1.29E+04	8.24E+03	2.24E+09	1.43E+04
Road 14	14	1300-1400	3.51E+02	8.85E+04	5.51E+04	1.87E+02	5.00E+07	2.87E+03	7.91E+03	1.95E+08	1.21E+04	8.60E+03	2.12E+08	1.40E+04
Road 14	14	1400-1500	3.25E+02	1.33E+07	8.28E+04	1.86E+02	7.61E+07	4.78E+03	7.54E+03	3.09E+08	1.92E+04	8.20E+03	3.38E+08	2.09E+04
Road 14	14	1500-1600	3.25E+02	1.33E+07	8.28E+04	1.86E+02	7.61E+07	4.78E+03	7.54E+03	3.09E+08	1.92E+04	8.20E+03	3.38E+08	2.09E+04
Road 14	14	1600-1700	3.25E+02	1.33E+07	8.28E+04	1.86E+02	7.61E+07	4.78E+03	7.54E+03	3.09E+08	1.92E+04	8.20E+03	3.38E+08	2.09E+04
Road 14	14	1700-1800	3.25E+02	1.33E+07	8.28E+04	1.86E+02	7.61E+07	4.78E+03	7.54E+03	3.09E+08	1.92E+04	8.20E+03	3.38E+08	2.09E+04
Road 14	14	1800-1900	3.25E+02	1.33E+07	8.28E+04	1.86E+02	7.61E+07	4.78E+03	7.54E+03	3.09E+08	1.92E+04	8.20E+03	3.38E+08	2.09E+04
Road 14	14	1900-2000	3.25E+02	1.33E+07	8.28E+04	1.86E+02	7.61E+07	4.78E+03	7.54E+03	3.09E+08	1.92E+04	8.20E+03	3.38E+08	2.09E+04
Road 14	14	2000-2100	3.25E+02	1.33E+07	8.28E+04	1.86E+02	7.61E+07	4.78E+03	7.54E+03	3.09E+08	1.92E+04	8.20E+03	3.38E+08	2.09E+04
Road 14	14	2100-2200	3.25E+02	1.33E+07	8.28E+04	1.86E+02	7.61E+07	4.78E+03	7.54E+03	3.09E+08	1.92E+04	8.20E+03	3.38E+08	2.09E+04
Road 14	14	2200-2300	3.25E+02	1.33E+07	8.28E+04	1.86E+02	7.61E+07	4.78E+03	7.54E+03	3.09E+08	1.92E+04	8.20E+03	3.38E+08	2.09E+04
Road 14	14	2300-0000	3.25E+02	1.33E+07	8.28E+04	1.86E+02	7.61E+07	4.78E+03	7.54E+03	3.09E+08	1.92E+04	8.20E+03	3.38E+08	2.09E+04
Road 15	15	0800-0900	4.62E+02	9.43E+07	5.87E+03	2.14E+01	4.70E+06	2.98E+02	8.54E+07	1.47E+08	9.27E+03	8.68E+07	1.18E+03	
Road 15	15	0900-1000	4.62E+02	9.43E+07	5.87E+03	2.14E+01	4.70E+06	2.98E+02	8.54E+07	1.47E+08	9.27E+03	8.68E+07	1.18E+03	
Road 15	15	1000-1100	4.62E+02	9.43E+07	5.87E+03	2.14E+01	4.70E+06	2.98E+02	8.54E+07	1.47E+08	9.27E+03	8.68E+07	1.18E+03	
Road 15	15	1100-1200	4.62E+02	9.43E+07	5.87E+03	2.14E+01	4.70E+06	2.98E+02	8.54E+07	1.47E+08	9.27E+03	8.68E+07	1.18E+03	
Road 15	15	1200-1300	4.62E+02	9.43E+07	5.87E+03	2.14E+01	4.70E+06	2.98E+02	8.54E+07	1.47E+08	9.27E+03	8.68E+07	1.18E+03	
Road 15	15	1300-1400	4.62E+02	9.43E+07	5.87E+03	2.14E+01	4.70E+06	2.98E+02	8.54E+07	1.47E+08	9.27E+03	8.68E+07	1.18E+03	
Road 15	15	1400-1500	4.62E+02	9.43E+07	5.87E+03	2.14E+01	4.70E+06	2.98E+02	8.54E+07	1.47E+08	9.27E+03	8.68E+07	1.18E+03	
Road 15	15	1500-1600	4.62E+02	9.43E+07	5.87E+03	2.14E+01	4.70E+06	2.98E+02	8.54E+07	1.47E+08	9.27E+03	8.68E+07	1.18E+03	
Road 15	15	1600-1700	4.62E+02	9.43E+07										

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Bay North Underground Quarry

Tasking Road 24 hour Emission Factors Year 2033

for AERMOD model (Hourly)

Road Name	Road ID	Hourly	NO _x Emission		NO _y Emission		PM _{2.5} Emission		PM ₁₀ Emission	
			g/min	g/h	g/min	g/h	g/min	g/h	g/min	g/h
Road 35	35	0000-0100	4.4652	5.3488	4.5756	5.4213	1.8767	1.6668	6.7261	7.7729
Road 35	35	0100-0200	5.5762	6.6598	6.7375	8.0411	2.1557	1.9370	7.3202	8.3670
Road 35	35	0200-0300	5.4164	6.4998	6.5991	7.8831	2.1061	1.8404	6.9261	7.9726
Road 35	35	0300-0400	7.8802	9.4368	1.8885	2.0513	1.4067	1.1664	10.0721	6.8396
Road 35	35	0400-0500	5.5762	6.6598	6.7375	8.0411	2.1557	1.9370	7.3202	8.3670
Road 35	35	0500-0600	5.7162	5.2768	6.0488	1.9516	1.7172	1.5704	6.8572	7.9151
Road 35	35	0600-0700	4.5056	5.6776	6.8181	5.0513	2.9547	2.6268	8.8216	1.0306
Road 35	35	0700-0800	6.4861	6.5117	2.2381	2.3104	1.8374	7.4814	8.9221	9.3581
Road 35	35	0800-0900	5.5762	6.6598	6.7375	8.0411	2.1557	1.9370	7.3202	8.3670
Road 35	35	0900-1000	6.7062	6.6555	2.5635	2.4163	8.4764	7.7664	9.8424	3.3261
Road 35	35	1000-1100	7.3362	2.6555	2.6567	2.6434	1.8462	7.5214	1.0382	3.7421
Road 35	35	1100-1200	5.5762	6.6598	6.7375	8.0411	2.1557	1.9370	7.3202	8.3670
Road 35	35	1200-1300	8.1742	1.9117	1.6984	2.3545	4.4697	4.8804	1.1552	2.6981
Road 35	35	1300-1400	8.1262	1.9227	1.7167	2.0713	5.6217	4.9958	1.1552	2.7492
Road 35	35	1400-1500	5.5762	6.6598	6.7375	8.0411	2.1557	1.9370	7.3202	8.3670
Road 35	35	1500-1600	6.0062	2.0005	1.7772	2.3881	3.9315	5.2604	1.1212	2.7986
Road 35	35	1600-1700	7.2802	2.7802	1.8114	2.1003	1.5682	5.2786	1.1151	2.8601
Road 35	35	1700-1800	6.9512	2.9555	1.7767	2.4058	1.9875	5.2204	1.7487	2.4295
Road 35	35	1800-1900	5.5762	1.8864	1.6574	1.8515	1.4871	4.8772	2.6986	2.3135
Road 35	35	1900-2000	5.3162	5.8111	5.6516	1.2312	2.2547	2.0004	4.821	8.881
Road 35	35	2000-2100	1.3712	2.3981	4.708	1.0581	2.2667	1.8814	3.4871	7.6881
Road 35	35	2100-2200	5.5762	5.1118	5.4455	1.1761	2.0487	1.8111	5.1111	7.5881
Road 35	35	2200-2300	3.4812	5.0448	4.4715	1.0483	2.1117	1.7878	1.1151	7.3881
Road 35	35	2300-2400	4.0066	4.6555	4.1335	1.4951	1.7177	1.5234	1.6531	6.9356
Road 36	36	0000-0100	4.4652	5.3488	4.5756	5.4213	1.8767	1.6668	6.7261	7.7729
Road 36	36	0100-0200	6.3802	6.7898	6.3235	2.8241	1.0301	2.7964	1.1261	1.3515
Road 36	36	0200-0300	7.2002	6.2226	8.2765	5.8621	1.5667	2.3584	2.2712	1.0098
Road 36	36	0300-0400	6.3802	6.7898	6.3235	2.8241	1.0301	2.7964	1.1261	1.3515
Road 36	36	0400-0500	7.8812	6.2446	6.5475	3.0991	2.4515	2.2504	1.3652	1.0801
Road 36	36	0500-0600	6.9902	8.2228	7.5658	3.0501	1.1646	3.3558	1.2401	1.5151
Road 36	36	0600-0700	6.8612	1.4117	1.2964	1.3178	1.7878	6.5148	2.2227	2.7274
Road 36	36	0700-0800	7.7802	6.4861	6.4861	2.4515	1.7487	6.5148	2.2227	2.7274
Road 36	36	0800-0900	7.7802	6.4861	6.4861	2.4515	1.7487	6.5148	2.2227	2.7274
Road 36	36	0900-1000	7.7802	6.4861	6.4861	2.4515	1.7487	6.5148	2.2227	2.7274
Road 36	36	1000-1100	8.8812	4.4715	4.1104	3.3845	1.8816	1.5518	1.3182	5.4481
Road 36	36	1100-1200	8.8812	4.4715	4.1104	3.3845	1.8816	1.5518	1.3182	5.4481
Road 36	36	1200-1300	9.4212	4.1217	3.7904	3.9861	1.4885	1.3603	1.1852	5.5157
Road 36	36	1300-1400	9.4212	4.1217	3.7904	3.9861	1.4885	1.3603	1.1852	5.5157
Road 36	36	1400-1500	1.3603	1.3603	1.3584	1.5905	1.2716	1.1739	1.3182	4.7081
Road 36	36	1500-1600	1.3603	1.3603	1.3584	1.5905	1.2716	1.1739	1.3182	4.7081
Road 36	36	1600-1700	1.3603	1.3603	1.3584	1.5905	1.2716	1.1739	1.3182	4.7081
Road 36	36	1700-1800	1.3603	1.3603	1.3584	1.5905	1.2716	1.1739	1.3182	4.7081
Road 36	36	1800-1900	1.3603	1.3603	1.3584	1.5905	1.2716	1.1739	1.3182	4.7081
Road 36	36	1900-2000	1.3603	1.3603	1.3584	1.5905	1.2716	1.1739	1.3182	4.7081
Road 36	36	2000-2100	1.3603	1.3603	1.3584	1.5905	1.2716	1.1739	1.3182	4.7081
Road 36	36	2100-2200	1.3603	1.3603	1.3584	1.5905	1.2716	1.1739	1.3182	4.7081
Road 36	36	2200-2300	1.3603	1.3603	1.3584	1.5905	1.2716	1.1739	1.3182	4.7081
Road 36	36	2300-2400	1.3603	1.3603	1.3584	1.5905	1.2716	1.1739	1.3182	4.7081
Road 37	37	0000-0100	4.4652	5.3488	4.5756	5.4213	1.8767	1.6668	6.7261	7.7729
Road 37	37	0100-0200	5.5762	6.6598	6.7375	8.0411	2.1557	1.9370	7.3202	8.3670
Road 37	37	0200-0300	5.4164	6.4998	6.5991	7.8831	2.1061	1.8404	6.9261	7.9726
Road 37	37	0300-0400	7.8802	9.4368	1.8885	2.0513	1.4067	1.1664	10.0721	6.8396
Road 37	37	0400-0500	5.5762	6.6598	6.7375	8.0411	2.1557	1.9370	7.3202	8.3670
Road 37	37	0500-0600	5.7162	5.2768	6.0488	1.9516	1.7172	1.5704	6.8572	7.9151
Road 37	37	0600-0700	4.5056	5.6776	6.8181	5.0513	2.9547	2.6268	8.8216	1.0306
Road 37	37	0700-0800	6.4861	6.5117	2.2381	2.3104	1.8374	7.4814	8.9221	9.3581
Road 37	37	0800-0900	5.5762	6.6598	6.7375	8.0411	2.1557	1.9370	7.3202	8.3670
Road 37	37	0900-1000	6.7062	6.6555	2.5635	2.4163	8.4764	7.7664	9.8424	3.3261
Road 37	37	1000-1100	7.3362	2.6555	2.6567	2.6434	1.8462	7.5214	1.0382	3.7421
Road 37	37	1100-1200	5.5762	6.6598	6.7375	8.0411	2.1557	1.9370	7.3202	8.3670
Road 37	37	1200-1300	8.1742	1.9117	1.6984	2.3545	4.4697	4.8804	1.1552	2.6981
Road 37	37	1300-1400	8.1262	1.9227	1.7167	2.0713	5.6217	4.9958	1.1552	2.7492
Road 37	37	1400-1500	5.5762	6.6598	6.7375	8.0411	2.1557	1.9370	7.3202	8.3670
Road 37	37	1500-1600	6.0062	2.0005	1.7772	2.3881	3.9315	5.2604	1.1212	2.7986
Road 37	37	1600-1700	7.2802	2.7802	1.8114	2.1003	1.5682	5.2786	1.1151	2.8601
Road 37	37	1700-1800	6.9512	2.9555	1.7767	2.4058	1.9875	5.2204	1.7487	2.4295
Road 37	37	1800-1900	5.5762	1.8864	1.6574	1.8515	1.4871	4.8772	2.6986	2.3135
Road 37	37	1900-2000	5.3162	5.8111	5.6516	1.2312	2.2547	2.0004	4.821	8.881
Road 37	37	2000-2100	1.3712	2.3981	4.708	1.0581	2.2667	1.8814	3.4871	7.6881
Road 37	37	2100-2200	5.5762	5.1118	5.4455	1.1761	2.0487	1.8111	5.1111	7.5881
Road 37	37	2200-2300	3.4812	5.0448	4.4715	1.0483	2.1117	1.7878	1.1151	7.3881
Road 37	37	2300-2400	4.0066	4.6555	4.1335	1.4951	1.7177	1.5234	1.6531	6.9356
Road 38	38	0000-0100	4.4652	5.3488	4.5756	5.4213	1.8767	1.6668	6.7261	7.7729
Road 38	38	0100-0200	5.5762	6.6598	6.7375	8.0411	2.1557	1.9370	7.3202	8.3670
Road 38	38	0200-0300	5.4164	6.4998	6.5991	7.8831	2.1061	1.8404	6.9261	7.9726
Road 38	38	0300-0400	7.8802	9.4368	1.8885	2.0513	1.4067	1.1664	10.0721	6.8396
Road 38	38	0400-0500	5.5762	6.6598	6.7375	8.0411	2.1557	1.9370	7.3202	8.3670
Road 38	38	0500-0600	5.7162	5.2768	6.0488	1.9516	1.7172	1.5704	6.8572	7.9151
Road 38	38	0600-0700	4.5056	5.6776	6.8181	5.0513	2.9547	2.6268	8.8216	1.0306
Road 38	38	0700-0800	6.4861	6.5117	2.2381	2.3104	1.8374	7.4814	8.9221	9.3581
Road 38	38	0800-0900	5.5762	6.6598	6.7375	8.0411	2.1557	1.9370	7.3202	8.3670
Road 38	38	0900-1000	6.7062	6.6555	2.5635	2.4163	8.4764	7.7664	9.8424	3.3261
Road 38	38	1000-1100	7.3362	2.6555	2.6567	2.6434	1.8462	7.5214	1.0382	3.7421
Road 38	38	1100-1200	5.5762	6.6598	6.7375	8.0411	2.1557	1.9370	7.3202	8.3670
Road 38	38	1200-1300	8.1742	1.9117	1.6984	2.3545	4.4697	4.8804	1.1552	2.6981
Road 38	38	1300-1400	8.1262	1.9227	1.7167	2.0713	5.6217	4.9958	1.1552	2.7492
Road 38	38	1400-1500	5.5762	6.6598	6.7375	8.0411	2.1557	1.9370	7.3202	8.3670
Road 38	38	1500-1600	6.0062	2.0005	1.7772	2.3881	3.9315	5.2604	1.1212	2.7986
Road 38	38	1600-1700	7.2802	2.7802	1.8114	2.1003	1.5682	5.2786	1.1151	2.8601
Road 38	38	1700-1800	6.9512	2.9555	1.7767	2.4058	1.9875	5.2204	1.7487	2.4295
Road 38	38	1800-1900	5.5762	1.8864	1.6574	1.8515	1.4871	4.8772	2.6986	2.3135
Road 38	38	1900-2000	5.3162	5.8111	5.6516	1.2312	2.2547	2.0004	4.821	8.881
Road 38	38	2000-2100	1.3712	2.3981	4.708	1.0581	2.2667	1.8814	3.4871	7.6881
Road 38	38	2100-2200	5.5762	5.1118	5.4455	1.1761	2.0487	1.8111	5.1111	7.5881
Road 38	38	2200-2300	3.4812	5.0448	4.4715	1.0483	2.1117	1.7878	1.1151	7.3881
Road 38	38	2300-2400	4.0066	4.6555	4.1335	1.4951	1.7177	1.5234	1.6531	6.9356
Road 39	39	0000-0100	4.4652	5.3488	4.5756	5.4213	1.8767	1.6668	6.7261	7.7729
Road 39	39	0100-0200	5.5762	6.6598	6.7375	8.0411	2.1557	1.9370	7.3202	8.3670

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Yield North Underground Quarry
Taing Yai 24 hour Emission Factors
for AERMOD model (Metric Tons)

Road Name	Road ID	Hour	NO ₂ Emission		NO Emission		PM _{2.5} Emission		PM ₁₀ Emission	
			g/km ² /h	g/km ² /h	g/km ² /h	g/km ² /h	g/km ² /h	g/km ² /h	g/km ² /h	g/km ² /h
Road 46	46	0800-0900	1.331	1.827	1.238	0.978	0.277	8.596	0.524	3.614
Road 46	46	0900-1000	1.331	1.827	1.238	0.978	0.277	8.596	0.524	3.614
Road 46	46	1000-1100	1.662	1.627	1.011	1.031	1.001	6.780	4.474	5.101
Road 46	46	1100-1200	1.662	1.627	1.011	1.031	1.001	6.780	4.474	5.101
Road 46	46	1200-1300	1.662	1.627	1.011	1.031	1.001	6.780	4.474	5.101
Road 46	46	1300-1400	1.296	1.855	1.275	0.972	0.342	9.111	0.843	5.511
Road 46	46	1400-1500	1.311	2.096	1.425	0.932	1.466	9.913	0.926	6.101
Road 46	46	1500-1600	1.366	2.008	1.408	0.962	1.488	10.01	0.839	6.071
Road 46	46	1600-1700	1.366	2.008	1.408	0.962	1.488	10.01	0.839	6.071
Road 46	46	1700-1800	1.031	2.106	1.473	8.511	0.726	1.173	0.36	6.727
Road 46	46	1800-1900	1.031	2.106	1.473	8.511	0.726	1.173	0.36	6.727
Road 46	46	1900-2000	8.844	1.911	1.295	0.732	1.653	1.122	2.84	6.64
Road 46	46	2000-2100	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	2100-2200	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	2200-2300	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	2300-2400	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	2400-0100	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	0100-0200	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	0200-0300	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	0300-0400	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	0400-0500	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	0500-0600	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	0600-0700	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	0700-0800	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	0800-0900	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	0900-1000	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	1000-1100	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	1100-1200	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	1200-1300	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	1300-1400	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	1400-1500	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	1500-1600	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	1600-1700	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	1700-1800	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	1800-1900	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	1900-2000	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	2000-2100	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	2100-2200	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	2200-2300	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	2300-2400	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	2400-0100	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	0100-0200	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	0200-0300	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	0300-0400	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	0400-0500	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	0500-0600	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	0600-0700	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	0700-0800	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	0800-0900	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	0900-1000	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	1000-1100	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	1100-1200	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	1200-1300	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	1300-1400	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	1400-1500	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	1500-1600	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	1600-1700	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	1700-1800	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	1800-1900	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	1900-2000	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	2000-2100	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	2100-2200	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	2200-2300	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	2300-2400	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	2400-0100	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	0100-0200	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	0200-0300	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	0300-0400	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	0400-0500	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	0500-0600	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	0600-0700	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	0700-0800	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	0800-0900	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	0900-1000	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	1000-1100	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	1100-1200	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	1200-1300	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	1300-1400	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	1400-1500	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	1500-1600	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	1600-1700	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	1700-1800	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	1800-1900	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	1900-2000	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	2000-2100	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	2100-2200	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	2200-2300	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	2300-2400	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	2400-0100	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	0100-0200	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	0200-0300	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	0300-0400	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	0400-0500	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	0500-0600	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	0600-0700	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	0700-0800	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	0800-0900	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	0900-1000	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	1000-1100	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	1100-1200	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	1200-1300	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	1300-1400	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	1400-1500	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	1500-1600	1.288	1.387	0.848	0.732	1.431	8.092	2.742	5.488
Road 46	46	1600-1700	1.288	1.387	0.848	0.732	1.431	8.092	2.742	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Taping Road North underground Quarry

Open Road 24 hour Emission Factors

Year 2033

for AERMOD model (Hourly)

Road Name	Road ID	Summary	NO _x Emission		NO _y Emission		PM _{2.5} Emission		PM ₁₀ Emission	
			g/hour	g/km ² /h	g/hour	g/km ² /h	g/hour	g/km ² /h	g/hour	g/km ² /h
Road 00	16000-17000	1.266	0.7138	1.288	0.4218	2.396	0.2550	1.346	1.355	1.468
Road 00	17000-18000	1.266	0.7138	1.288	0.4218	2.396	0.2550	1.346	1.355	1.468
Road 00	18000-19000	1.266	0.7138	1.288	0.4218	2.396	0.2550	1.346	1.355	1.468
Road 00	19000-20000	1.266	0.7138	1.288	0.4218	2.396	0.2550	1.346	1.355	1.468
Road 00	20000-21000	1.266	0.7138	1.288	0.4218	2.396	0.2550	1.346	1.355	1.468
Road 00	21000-22000	1.266	0.7138	1.288	0.4218	2.396	0.2550	1.346	1.355	1.468
Road 00	22000-23000	1.266	0.7138	1.288	0.4218	2.396	0.2550	1.346	1.355	1.468
Road 00	23000-24000	1.266	0.7138	1.288	0.4218	2.396	0.2550	1.346	1.355	1.468
Road 00	24000-25000	1.266	0.7138	1.288	0.4218	2.396	0.2550	1.346	1.355	1.468
Road 00	25000-26000	1.266	0.7138	1.288	0.4218	2.396	0.2550	1.346	1.355	1.468
Road 00	26000-27000	1.266	0.7138	1.288	0.4218	2.396	0.2550	1.346	1.355	1.468
Road 00	27000-28000	1.266	0.7138	1.288	0.4218	2.396	0.2550	1.346	1.355	1.468
Road 00	28000-29000	1.266	0.7138	1.288	0.4218	2.396	0.2550	1.346	1.355	1.468
Road 00	29000-30000	1.266	0.7138	1.288	0.4218	2.396	0.2550	1.346	1.355	1.468
Road 00	30000-31000	1.266	0.7138	1.288	0.4218	2.396	0.2550	1.346	1.355	1.468
Road 00	31000-32000	1.266	0.7138	1.288	0.4218	2.396	0.2550	1.346	1.355	1.468
Road 00	32000-33000	1.266	0.7138	1.288	0.4218	2.396	0.2550	1.346	1.355	1.468
Road 00	33000-34000	1.266	0.7138	1.288	0.4218	2.396	0.2550	1.346	1.355	1.468
Road 00	34000-35000	1.266	0.7138	1.288	0.4218	2.396	0.2550	1.346	1.355	1.468
Road 00	35000-36000	1.266	0.7138	1.288	0.4218	2.396	0.2550	1.346	1.355	1.468
Road 00	36000-37000	1.266	0.7138	1.288	0.4218	2.396	0.2550	1.346	1.355	1.468
Road 00	37000-38000	1.266	0.7138	1.288	0.4218	2.396	0.2550	1.346	1.355	1.468
Road 00	38000-39000	1.266	0.7138	1.288	0.4218	2.396	0.2550	1.346	1.355	1.468
Road 00	39000-40000	1.266	0.7138	1.288	0.4218	2.396	0.2550	1.346	1.355	1.468
Road 00	40000-41000	1.266	0.7138	1.288	0.4218	2.396	0.2550	1.346	1.355	1.468
Road 00	41000-42000	1.266	0.7138	1.288	0.4218	2.396	0.2550	1.346	1.355	1.468
Road 00	42000-43000	1.266	0.7138	1.288	0.4218	2.396	0.2550	1.346	1.355	1.468
Road 00	43000-44000	1.266	0.7138	1.288	0.4218	2.396	0.2550	1.346	1.355	1.468
Road 00	44000-45000	1.266	0.7138	1.288	0.4218	2.396	0.2550	1.346	1.355	1.468
Road 00	4									

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Bay North Underground Quarry
Open Road 24 hour Emission Factors
Year 2033
for AERMOD model calculations

Road Name	Road ID	Hour	NO ₂ Emission			NO Emission			PM _{2.5} Emission			PM ₁₀ Emission			
			g/hour	g/min	g/s	g/hour	g/min	g/s	g/hour	g/min	g/s	g/hour	g/min	g/s	
Road S2	S2	0000:00:00	7.15E+02	3.60E+08	6.72E+05	2.70E+06	3.36E+07	2.54E+04	1.18E+08	5.91E+09	1.11E+08	1.29E+02	6.42E+09	1.20E+05	
Road S2	S2	0100:00:00	7.15E+02	3.60E+08	6.72E+05	2.70E+06	3.36E+07	2.54E+04	1.18E+08	5.91E+09	1.11E+08	1.29E+02	6.42E+09	1.20E+05	
Road S2	S2	0200:00:00	7.15E+02	3.60E+08	6.72E+05	2.70E+06	3.36E+07	2.54E+04	1.18E+08	5.91E+09	1.11E+08	1.29E+02	6.42E+09	1.20E+05	
Road S2	S2	0300:00:00	7.06E+02	1.70E+08	3.18E+05	2.65E+06	6.42E+08	1.20E+04	2.18E+08	2.18E+08	2.90E+08	1.29E+02	3.08E+09	5.76E+06	
Road S2	S2	0400:00:00	7.06E+02	1.70E+08	3.18E+05	2.65E+06	6.42E+08	1.20E+04	2.18E+08	2.18E+08	2.90E+08	1.29E+02	3.08E+09	5.76E+06	
Road S2	S2	0500:00:00	7.35E+02	3.85E+08	7.20E+05	2.78E+06	4.15E+07	2.51E+04	1.20E+09	6.29E+08	1.18E+08	1.30E+02	6.83E+08	1.29E+05	
Road S2	S2	0600:00:00	7.59E+02	9.11E+08	1.70E+06	2.84E+06	1.42E+07	6.40E+04	1.21E+14	1.45E+08	2.72E+02	1.33E+02	1.58E+08	2.96E+05	
Road S2	S2	0700:00:00	8.06E+02	2.08E+07	3.89E+04	3.01E+06	7.78E+04	1.46E+04	1.24E+08	3.26E+08	9.99E+08	1.53E+04	1.69E+08	6.62E+05	
Road S2	S2	0800:00:00	8.06E+02	2.08E+07	3.89E+04	3.01E+06	7.78E+04	1.46E+04	1.24E+08	3.26E+08	9.99E+08	1.53E+04	1.69E+08	6.62E+05	
Road S2	S2	0900:00:00	8.23E+02	2.88E+07	5.41E+04	3.19E+06	1.12E+05	2.10E+04	1.24E+08	4.32E+08	8.14E+03	1.63E+02	4.74E+08	8.68E+05	
Road S2	S2	1000:00:00	8.78E+02	3.03E+07	5.62E+04	3.28E+06	1.12E+06	2.09E+03	1.29E+08	4.48E+08	8.99E+03	1.41E+02	4.88E+08	9.13E+05	
Road S2	S2	1100:00:00	8.78E+02	3.03E+07	5.62E+04	3.28E+06	1.12E+06	2.09E+03	1.29E+08	4.48E+08	8.99E+03	1.41E+02	4.88E+08	9.13E+05	
Road S2	S2	1200:00:00	8.88E+02	2.99E+07	5.60E+04	3.19E+06	1.12E+06	2.00E+03	1.29E+08	4.36E+08	8.16E+03	1.41E+02	4.75E+08	8.98E+05	
Road S2	S2	1300:00:00	8.88E+02	3.34E+07	6.25E+04	3.28E+06	1.25E+06	2.33E+03	1.27E+08	4.87E+08	9.05E+03	1.39E+02	5.26E+08	9.64E+05	
Road S2	S2	1400:00:00	8.88E+02	3.34E+07	6.25E+04	3.28E+06	1.25E+06	2.33E+03	1.27E+08	4.87E+08	9.05E+03	1.39E+02	5.26E+08	9.64E+05	
Road S2	S2	1500:00:00	8.12E+02	3.13E+07	5.97E+04	3.27E+06	1.27E+06	2.37E+03	1.20E+08	4.78E+08	8.84E+03	1.31E+02	5.16E+08	9.55E+05	
Road S2	S2	1600:00:00	8.46E+02	3.65E+07	5.71E+04	3.19E+06	1.14E+06	2.13E+03	1.25E+08	4.55E+08	8.48E+03	1.36E+02	4.99E+08	9.22E+05	
Road S2	S2	1700:00:00	8.46E+02	3.65E+07	5.71E+04	3.19E+06	1.14E+06	2.13E+03	1.25E+08	4.55E+08	8.48E+03	1.36E+02	4.99E+08	9.22E+05	
Road S2	S2	1800:00:00	6.35E+02	1.46E+07	2.73E+04	2.73E+06	6.26E+07	1.17E+03	1.02E+02	2.34E+08	3.87E+01	1.11E+02	2.55E+07	4.75E+04	
Road S2	S2	1900:00:00	6.04E+02	9.14E+08	1.71E+04	2.52E+06	1.81E+07	7.12E+04	8.98E+05	1.51E+08	2.82E+08	1.09E+02	1.64E+07	3.02E+05	
Road S2	S2	2000:00:00	5.89E+02	7.09E+08	1.33E+04	2.33E+06	1.55E+07	5.50E+04	8.00E+05	1.16E+08	2.21E+08	1.07E+02	1.39E+07	2.40E+05	
Road S2	S2	2100:00:00	5.97E+02	7.93E+08	1.38E+04	2.54E+06	1.41E+07	5.87E+04	8.00E+05	1.25E+08	2.29E+08	1.09E+02	1.33E+08	2.49E+05	
Road S2	S2	2200:00:00	6.55E+02	7.10E+08	1.33E+04	2.53E+06	1.24E+07	5.13E+04	1.05E+14	1.14E+08	2.14E+05	1.15E+02	1.32E+08	2.32E+05	
Road S2	S2	2300:00:00	6.65E+02	5.71E+08	1.07E+04	2.49E+06	2.21E+07	4.13E+04	1.05E+08	9.41E+06	1.70E+05	1.15E+02	1.02E+08	1.91E+05	
Road S2	S2	2400:00:00	6.46E+02	4.64E+08	7.88E+04	4.05E+06	1.38E+07	1.60E+04	1.29E+08	3.90E+08	1.00E+03	1.37E+02	6.80E+08	2.48E+05	
Road S3	S3	0000:00:00	5.90E+02	2.99E+06	5.62E+04	4.01E+06	1.24E+07	1.07E+03	1.24E+08	3.96E+08	3.88E+03	1.37E+02	4.13E+08	3.67E+05	
Road S3	S3	0100:00:00	5.87E+02	2.38E+08	2.05E+04	4.45E+06	9.88E+08	8.38E+04	1.29E+08	3.08E+08	2.61E+04	1.49E+02	3.34E+08	2.84E+05	
Road S3	S3	0200:00:00	5.87E+02	2.38E+08	2.05E+04	4.45E+06	9.88E+08	8.38E+04	1.29E+08	3.08E+08	2.61E+04	1.49E+02	3.34E+08	2.84E+05	
Road S3	S3	0300:00:00	5.90E+02	1.05E+07	2.02E+04	4.32E+06	1.27E+07	8.14E+03	1.38E+08	2.55E+08	4.44E+03	1.37E+02	4.32E+08	2.77E+05	
Road S3	S3	0400:00:00	5.90E+02	1.12E+07	2.02E+04	4.32E+06	1.82E+07	8.14E+04	1.38E+08	5.51E+07	4.67E+05	1.50E+02	5.58E+07	2.77E+05	
Road S3	S3	0500:00:00	5.90E+02	1.12E+07	2.02E+04	4.32E+06	1.82E+07	8.14E+04	1.38E+08	5.51E+07	4.67E+05	1.50E+02	5.58E+07	2.77E+05	
Road S3	S3	0700:00:00	5.90E+02	1.41E+07	2.59E+07	2.00E+05	5.52E+06	1.02E+05	8.65E+03	1.56E+02	2.87E+04	2.64E+06	3.12E+06	2.85E+04	
Road S3	S3	0800:00:00	5.90E+02	1.39E+07	2.48E+07	2.00E+05	5.52E+06	1.05E+05	9.75E+03	1.56E+02	2.88E+04	2.64E+06	3.39E+06	2.67E+04	
Road S3	S3	0900:00:00	5.90E+02	1.39E+07	2.48E+07	2.00E+05	5.52E+06	1.05E+05	9.75E+03	1.56E+02	2.88E+04	2.64E+06	3.39E+06	2.67E+04	
Road S3	S3	1000:00:00	5.90E+02	1.62E+07	3.26E+07	2.70E+05	6.13E+06	1.23E+06	1.05E+07	1.67E+02	3.35E+04	2.84E+06	3.81E+07	3.64E+09	3.91E+04
Road S3	S3	1100:00:00	5.90E+02	1.60E+07	3.05E+07	2.59E+05	6.13E+06	1.17E+06	9.90E+03	1.66E+02	3.15E+04	2.67E+06	3.88E+07	3.43E+04	2.91E+04
Road S3	S3	1200:00:00	5.90E+02	1.39E+07	2.48E+07	2.00E+05	5.52E+06	1.05E+05	9.75E+03	1.56E+02	2.88E+04	2.64E+06	3.39E+06	2.67E+04	
Road S3	S3	1300:00:00	5.90E+02	1.39E+07	2.48E+07	2.00E+05	5.52E+06	1.05E+05	9.75E+03	1.56E+02	2.88E+04	2.64E+06	3.39E+06	2.67E+04	
Road S3	S3	1400:00:00	5.90E+02	1.39E+07	2.48E+07	2.00E+05	5.52E+06	1.05E+05	9.75E+03	1.56E+02	2.88E+04	2.64E+06	3.39E+06	2.67E+04	
Road S3	S3	1500:00:00	5.90E+02	1.39E+07	2.48E+07	2.00E+05	5.52E+06	1.05E+05	9.75E+03	1.56E+02	2.88E+04	2.64E+06	3.39E+06	2.67E+04	
Road S3	S3	1600:00:00	5.90E+02	1.39E+07	2.48E+07	2.00E+05	5.52E+06	1.05E+05	9.75E+03	1.56E+02	2.88E+04	2.64E+06	3.39E+06	2.67E+04	
Road S3	S3	1700:00:00	5.90E+02	1.39E+07	2.48E+07	2.00E+05	5.52E+06	1.05E+05	9.75E+03	1.56E+02	2.88E+04	2.64E+06	3.39E+06	2.67E+04	
Road S3	S3	1800:00:00	5.90E+02	1.39E+07	2.48E+07	2.00E+05	5.52E+06	1.05E+05	9.75E+03	1.56E+02	2.88E+04	2.64E+06	3.39E+06	2.67E+04	
Road S3	S3	1900:00:00	5.90E+02	1.39E+07	2.48E+07	2.00E+05	5.52E+06	1.05E+05	9.75E+03	1.56E+02	2.88E+04	2.64E+06	3.39E+06	2.67E+04	
Road S3	S3	2000:00:00	6.57E+02	1.94E+07	3.65E+04	4.82E+06	7.28E+07	7.40E+04	2.22E+08	1.88E+08	9.99E+08	1.53E+04	2.41E+08	2.04E+05	
Road S3	S3	2100:00:00	6.66E+02	1.60E+07	3.18E+04	4.82E+06	7.28E+07	7.40E+04	2.22E+08	1.88E+08	9.99E+08	1.53E+04	2.41E+08	2.04E+05	
Road S3	S3	2200:00:00	6.75E+02	1.00E+07	8.50E+04	3.15E+06	4.81E+07	4.08E+03	7.99E+02	1.22E+08	1.03E+08	8.69E+03	1.33E+08	1.12E+04	
Road S3	S3	2300:00:00	6.44E+02	9.85E+08	8.35E+04	3.13E+06	4.79E+07	4.08E+03	7.96E+02	1.18E+08	1.01E+08	8.44E+03	1.29E+08	1.09E+04	
Road S3	S3	2400:00:00	6.44E+02	9.85E+08	8.35E+04	3.13E+06	4.79E+07	4.08E+03	7.96E+02	1.18E+08	1.01E+08	8.44E+03	1.29E+08	1.09E+04	
Road S3	S3	0000:00:00	6.68E+02	7.33E+08	6.21E+04	3.04E+06	3.34E+07	2.83E+03	7.62E+08	8.58E+08	7.28E+05	8.05E+03	9.32E+09	7.90E+05	
Road S4	S4	0000:00:00	7.33E+02	6.56E+08	5.41E+04	2.88E+06	2.93E+07	2.44E+03	9.50E+08	8.28E+08	8.95E+08	8.93E+03	7.43E+05	7.43E+05	
Road S4	S4	0100:00:00	7.33E+02	6.56E+08	5.41E+04	2.88E+06	2.93E+07	2.44E+03	9.50E+08	8.28E+08	8.95E+08	8.93E+03	7.43E+05	7.43E+05	
Road S4	S4	0200:00:00	7.81E+02	3.50E+08	2.99E+04	3.42E+05	1.33E+06	1.27E+03	9.70E+03	4.31E+04	3.61E+05	1.02E+02	4.70E+03	3.92E+03	
Road S4	S4	0300:00:00	7.81E+02	3.50E+08	2.99E+04	3.42E+05	1.33E+06	1.27E+03	9.70E+03	4.31E+04	3.61E+05	1.02E+02	4.70E+03	3.92E+03	
Road S4	S4	0400:00:00	7.86E+02	2.84E+08	2.37E+04	3.41E+05	1.23E+07	1.09E+03	8.82E+05	3.54E+08	2.95E+07	1.07E+02	3.86E+03	3.21E+05	
Road S4	S4	0500:00:00	7.86E+02	2.84E+08	2.37E+04	3.41E+05	1.23E+07	1.09E+03	8.82E+05	3.54E+08	2.95E+07	1.07E+02	3.86E+03	3.21E+05	
Road S4	S4	0600:00:00	7.92E+02	6.70E+08	5.57E+04	3.89E+06	2.80E+07	2.33E+03	1.05E+09	7.85E+04	2.95E+05	1.18E+02	8.52E+09	7.99E+05	
Road S4	S4	0700:00:00	1.06E+02	1.67E+07	3.37E+03	4.34E+06	1.67E+07	5.74E+03	1.17E+02	1.85E+04	1.29E+02	2.02E+08	1.68E+04	1.68E+04	
Road S4	S4	0800:00:00	1.06E+02	1.30E+07	3.27E+03	4.34E+06	1.57E+07	5.74E+03	1.17E+02	1.41E+04	1.29E+02	2.02E+08	1.68E+04	1.68E+04	
Road S4	S4	0900:00:00	1.17E+02	1.70E+07	3.77E+03	4.34E+06	1.77E+07	5.68E+03	1.17E+02	1.85E+04	1.29E+02	3.95E+08	1.43E+04	1.43E+04	
Road S4	S4	1000:00:00	1.31E+02	4.78E+07	8.38E+03	5.03E+06	1.92E+06	1.60E+02	3.35E+04	4.87E+05	4.05E+05	1.47E+02	5.29E+08	4.41E+04	
Road S4	S4	1100:00:00	1.31E+02	4.89E+07	8.07E+03	5.03E+06	1.88E+06	1.55E+02	3.45E+04	4.81E+05	4.05E+05	1.57E+02	5.23E+08	4.41E+04	
Road S4	S4	1200:00:00	1.31E+02	4.89E+07	8.07E+03	5.03E+06	1.88E+06	1.55E+02	3.45E+04	4.81E+05	4.05E+05	1.57E+02	5.23E+08	4.41E+04	
Road S4															

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.3 Emission Factor

North End Union Factors														
Year 2033														
IRMO Model (Summary)														
Road ID	ID	NO ₂ Emission				NO _x Emission				PM _{2.5} Emission		PM ₁₀ Emission		
		g/min/h	g/min/h	ton/year	ton/year	g/min/h	g/min/h	ton/year	ton/year	g/min/h	g/min/h	ton/year	ton/year	
43	1200	3.200	2.765	1.895	2.841	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	1300	2.765	2.402	1.618	2.402	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	1400	2.500	2.160	1.488	2.500	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	1500	2.400	2.080	1.440	2.400	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	1600	2.160	1.872	1.248	2.160	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	1700	2.080	1.824	1.216	2.080	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	1800	1.872	1.689	1.104	1.872	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	1900	1.689	1.512	0.984	1.689	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	2000	1.512	1.344	0.864	1.512	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	2100	1.344	1.176	0.744	1.344	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	2200	1.176	1.008	0.624	1.176	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	2300	1.008	0.840	0.504	1.008	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	2400	0.840	0.672	0.384	0.840	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	2500	0.672	0.504	0.264	0.672	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	2600	0.504	0.336	0.144	0.504	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	2700	0.336	0.168	0.072	0.336	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	2800	0.168	0.084	0.036	0.168	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	2900	0.084	0.042	0.018	0.084	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	3000	0.042	0.021	0.009	0.042	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	3100	0.021	0.010	0.004	0.021	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	3200	0.010	0.005	0.002	0.010	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	3300	0.005	0.002	0.001	0.005	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	3400	0.002	0.001	0.000	0.002	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	3500	0.001	0.000	0.000	0.001	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	3600	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	3700	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	3800	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	3900	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	4000	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	4100	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	4200	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	4300	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	4400	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	4500	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	4600	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	4700	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	4800	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	4900	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	5000	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	5100	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	5200	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	5300	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	5400	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	5500	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	5600	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	5700	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	5800	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	5900	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	6000	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	6100	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	6200	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	6300	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	6400	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	6500	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	6600	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	6700	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	6800	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	6900	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	7000	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	7100	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	7200	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	7300	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	7400	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	7500	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	7600	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	7700	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	7800	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	7900	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	8000	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	8100	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	8200	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	8300	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	8400	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	8500	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	8600	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	8700	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	8800	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	8900	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	9000	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	9100	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	5.541
43	9200	0.000	0.000	0.000	0.000	1.155	2.596	0.666	0.604	1.365	5.076	6.579	1.485	

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2nd Hour Emission Factors

Road ID		Summ		PM10 Emission		PM10 Emission		PM2.5 Emission		PM2.5 Emission	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	
Road ID		g/nm/t		g/nm/t		g/nm/t		g/nm/t		g/nm/t	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Road Northbound Quarry												
Typing N 0.45m Elevation Factors for												
ARNDSD Model (Round 1)												
Year 2033												
Road Name	Band ID	Hour	NO _x Emission			NO _x Emission			NO _x Emission			
			Monthly/km/hr	Annual/km/hr	Monthly/km/average	Annual/km/hr	Monthly/km/average	Annual/km/hr	Monthly/km/average	Annual/km/hr		
7	1700	1000	2.081	4.376	1.865	1.517	3.157	1.117	2.357	0.815	1.735	
			1.599	3.145	1.467	1.421	2.814	1.276	1.438	2.823	1.331	1.243
7	1700	1800	1.599	3.145	1.467	1.421	2.814	1.276	1.438	2.823	1.331	1.243
			1.599	3.145	1.467	1.421	2.814	1.276	1.438	2.823	1.331	1.243
7	2200	1000	1.176	2.027	0.717	2.176	0.915	1.811	0.727	1.181	0.262	0.405
			1.176	2.027	0.717	2.176	0.915	1.811	0.727	1.181	0.262	0.405
7	2200	1800	1.176	2.027	0.717	2.176	0.915	1.811	0.727	1.181	0.262	0.405
			1.176	2.027	0.717	2.176	0.915	1.811	0.727	1.181	0.262	0.405
8	0000	1000	2.432	1.118	2.647	0.741	2.143	1.348	0.741	2.647	1.873	0.778
			2.432	1.118	2.647	0.741	2.143	1.348	0.741	2.647	1.873	0.778
8	0000	1800	2.432	1.118	2.647	0.741	2.143	1.348	0.741	2.647	1.873	0.778
			2.432	1.118	2.647	0.741	2.143	1.348	0.741	2.647	1.873	0.778
8	0300	1000	2.525	1.118	2.647	0.741	2.143	1.348	0.741	2.647	1.873	0.778
			2.525	1.118	2.647	0.741	2.143	1.348	0.741	2.647	1.873	0.778
8	0300	1800	2.525	1.118	2.647	0.741	2.143	1.348	0.741	2.647	1.873	0.778
			2.525	1.118	2.647	0.741	2.143	1.348	0.741	2.647	1.873	0.778
8	0600	1000	2.652	1.118	2.647	0.741	2.143	1.348	0.741	2.647	1.873	0.778
			2.652	1.118	2.647	0.741	2.143	1.348	0.741	2.647	1.873	0.778
8	0600	1800	2.652	1.118	2.647	0.741	2.143	1.348	0.741	2.647	1.873	0.778
			2.652	1.118	2.647	0.741	2.143	1.348	0.741	2.647	1.873	0.778
8	0900	1000	2.775	1.118	2.647	0.741	2.143	1.348	0.741	2.647	1.873	0.778
			2.775	1.118	2.647	0.741	2.143	1.348	0.741	2.647	1.873	0.778
8	0900	1800	2.775	1.118	2.647	0.741	2.143	1.348	0.741	2.647	1.873	0.778
			2.775	1.118	2.647	0.741	2.143	1.348	0.741	2.647	1.873	0.778
8	1100	1000	2.995	1.118	2.647	0.741	2.143	1.348	0.741	2.647	1.873	0.778
			2.995	1.118	2.647	0.741	2.143	1.348	0.741	2.647	1.873	0.778
8	1100	1800	2.995	1.118	2.647	0.741	2.143	1.348	0.741	2.647	1.873	0.778
			2.995	1.118	2.647	0.741	2.143	1.348	0.741	2.647	1.873	0.778
8	1300	1000	3.145	1.118	2.647	0.741	2.143	1.348	0.741	2.647	1.873	0.778
			3.145	1.118	2.647	0.741	2.143	1.348	0.741	2.647	1.873	0.778
8	1300	1800	3.145	1.118	2.647	0.741	2.143	1.348	0.741	2.647	1.873	0.778
			3.145	1.118	2.647	0.741	2.143	1.348	0.741	2.647	1.873	0.778
8	1500	1000	3.145	1.118	2.647	0.741	2.143	1.348	0.741	2.647	1.873	0.778
			3.145	1.118	2.647	0.741	2.143	1.348	0.741	2.647	1.873	0.778
8	1500	1800	3.145	1.118	2.647	0.741	2.143	1.348	0.741	2.647	1.873	0.778
			3.145	1.118	2.647	0.741	2.143	1.348	0.741	2.647	1.873	0.778
8	1700	1000	3.145	1.118	2.647	0.741	2.143	1.348	0.741	2.647	1.873	0.778
			3.145	1.118	2.647	0.741	2.143	1.348	0.741	2.647	1.873	0.778
8	1700	1800	3.145	1.118	2.647	0.741	2.143	1.348	0.741	2.647	1.873	0.778
			3.145	1.118	2.647	0.741	2.143	1.348	0.741	2.647	1.873	0.778
9	0000	1000	1.900	3.641	1.507	1.077	2.326	0.867	1.900	3.641	1.507	0.867
			1.900	3.641	1.507	1.077	2.326	0.867	1.900	3.641	1.507	0.867
9	0000	1800	1.900	3.641	1.507	1.077	2.326	0.867	1.900	3.641	1.507	0.867
			1.900	3.641	1.507	1.077	2.326	0.867	1.900	3.641	1.507	0.867
9	0300	1000	2.026	3.925	1.607	1.207	2.483	0.938	2.026	3.925	1.607	0.938
			2.026	3.925	1.607	1.207	2.483	0.938	2.026	3.925	1.607	0.938
9	0300	1800	2.026	3.925	1.607	1.207	2.483	0.938	2.026	3.925	1.607	0.938
			2.026	3.925	1.607	1.207	2.483	0.938	2.026	3.925	1.607	0.938
9	0600	1000	2.196	4.287	1.767	1.357	2.736	1.027	2.196	4.287	1.767	1.027
			2.196	4.287	1.767	1.357	2.736	1.027	2.196	4.287	1.767	1.027
9	0600	1800	2.196	4.287	1.767	1.357	2.736	1.027	2.196	4.287	1.767	1.027
			2.196	4.287	1.767	1.357	2.736	1.027	2.196	4.287	1.767	1.027
9	0900	1000	2.381	4.650	1.947	1.507	3.000	1.137	2.381	4.650	1.947	1.137
			2.381	4.650	1.947	1.507	3.000	1.137	2.381	4.650	1.947	1.137
9	0900	1800	2.381	4.650	1.947	1.507	3.000	1.137	2.381	4.650	1.947	1.137
			2.381	4.650	1.947	1.507	3.000	1.137	2.381	4.650	1.947	1.137
9	1100	1000	2.576	5.013	2.127	1.657	3.253	1.267	2.576	5.013	2.127	1.267
			2.576	5.013	2.127	1.657	3.253	1.267	2.576	5.013	2.127	1.267
9	1100	1800	2.576	5.013	2.127	1.657	3.253	1.267	2.576	5.013	2.127	1.267
			2.576	5.013	2.127	1.657	3.253	1.267	2.576	5.013	2.127	1.267
9	1300	1000	2.781	5.376	2.307	1.807	3.506	1.417	2.781	5.376	2.307	1.417
			2.781	5.376	2.307	1.807	3.506	1.417	2.781	5.376	2.307	1.417
9	1300	1800	2.781	5.376	2.307	1.807	3.506	1.417	2.781	5.376	2.307	1.417
			2.781	5.376	2.307	1.807	3.506	1.417	2.781	5.376	2.307	1.417
9	1500	1000	2.995	5.739	2.487	1.957	3.759	1.567	2.995	5.739	2.487	1.567
			2.995	5.739	2.487	1.957	3.759	1.567	2.995	5.739	2.487	1.567
9	1500	1800	2.995	5.739	2.487	1.957	3.759	1.567	2.995	5.739	2.487	1.567
			2.995	5.739	2.487	1.957	3.759	1.567	2.995	5.739	2.487	1.567
9	1700	1000	3.210	6.102	2.667	2.107	4.012	1.717	3.210	6.102	2.667	1.717
			3.210	6.102	2.667	2.107	4.012	1.717	3.210	6.102	2.667	1.717
9	1700	1800	3.210	6.102	2.667	2.107	4.012	1.717	3.210	6.102	2.667	1.717
			3.210	6.102	2.667	2.107	4.012	1.717	3.210	6.102	2.667	1.717
10	0000	1000	4.735	5.515	3.087	4.435	5.058	3.352	4.735	5.515	3.087	2.785
			4.735	5.515	3.087	4.435	5.058	3.352	4.735	5.515	3.087	2.785
10	0000	1800	4.735	5.515	3.087	4.435	5.058	3.352	4.735	5.515	3.087	2.785
			4.735	5.515	3.087	4.435	5.058	3.352	4.735	5.515	3.087	2.785
10	0300	1000	5.048	5.698	3.267	4.717	5.255	3.667	5.048	5.698	3.267	3.067
			5.048	5.698	3.267	4.717	5.255	3.667	5.048	5.698	3.267	3.067
10	0300	1800	5.048	5.698	3.267	4.717	5.255	3.667	5.048	5.698	3.267	3.067
			5.048	5.698	3.267	4.717	5.255	3.667	5.048	5.698	3.267	3.067
10	0600	1000	5.361	5.881	3.447	4.897	5.435	3.847	5.361	5.881	3.447	3.247
			5.361	5.881	3.447	4.897	5.435	3.847	5.361	5.881	3.447	3.247
10	0600	1800	5.361	5.881	3.447	4.897	5.435	3.847	5.361	5.881	3.447	3.247
			5.361	5.881	3.447	4.897	5.435	3.847	5.361	5.881	3.447	3.247
10	0900	1000	5.674	6.064	3.627	5.079	5.617	4.030	5.674	6.064	3.627	3.430
			5.674	6.064	3.627	5.079	5.617	4.030	5.674	6.064	3.627	3.430
10	0900	1800	5.674	6.064	3.627	5.079	5.617	4.030	5.674	6.064	3.627	3.430
			5.674	6.064	3.627	5.079	5.617	4.030	5.674	6.064	3.627	3.430
10	1100	1000	5.987	6.247	3.807	5.259	5.797	4.210	5.987	6.247	3.807	3.610
			5.987	6.247	3.807	5.259	5.797	4.210	5.987	6.247	3.807	3.610
10	1100	1800	5.987	6.247	3.807	5.259	5.797	4.210	5.987	6.247	3.807	3.610
			5.987	6.247	3.807	5.259	5.797	4.210	5.987	6.247	3.807	3.610
10	1300	1000	6.300	6.430	3.987	5.439	6.000	4.390	6.300	6.430	3.987	3.790
			6.300	6.430	3.987	5.439	6.000	4.390	6.300	6.430	3.987	3.790
10	1300	1800	6.300	6.430	3.987	5.439	6.000	4.390	6.300	6.430	3.987	3.790
			6.300	6.430	3.987	5.439	6.000	4.390	6.300	6.430	3.987	3.790
10	1500	1000	6.613	6.613	4.167	5.639	6.250	4.600	6.613	6.613	4.167	4.000
			6.613	6.613	4.167	5.639	6.250	4.600	6.613	6.613	4.167	4.000
10	1500	1800	6.613	6.613	4.167	5.639	6.250	4.600	6.613	6.613	4.167	4.000
			6.613	6.613	4.167	5.639	6.250	4.600	6.613	6.613	4.167	4.000
10	1700	1000	6.926	6.796	4.347	5.819	6.4					

[OpenRoad]\Appendix 3.5.3 Emission Factor in 2033.xlsx

Road Name	Road ID	Hour	NO _x Emission			NO Emission			PM ₁₀ Emission			PM _{2.5} Emission		
			Annual/tour/year			Annual/tour/year			Annual/tour/year			Annual/tour/year		
			g/km/veh	g/s/m2	tonnes/year	g/km/veh	g/s/m2	tonnes/year	g/km/veh	g/s/m2	tonnes/year	g/km/veh	g/s/m2	tonnes/year
Road 106	106	1200-1300	8.24E-02	1.24E-06	1.43E-02	3.10E-01	4.64E-06	5.35E-02	9.81E-03	1.47E-07	1.70E-03	1.07E-02	1.60E-07	1.84E-03
Road 106	106	1300-1400	5.57E-02	1.37E-06	1.18E-02	3.33E-01	5.33E-06	6.14E-02	1.01E-02	1.63E-07	1.86E-03	1.10E-02	1.75E-07	2.02E-03
Road 106	106	1400-1500	8.55E-02	1.41E-06	1.63E-02	3.24E-01	5.35E-06	6.17E-02	1.01E-02	1.66E-07	1.85E-03	1.09E-02	1.80E-07	2.08E-03
Road 106	106	1500-1600	7.86E-02	1.34E-06	1.55E-02	3.24E-01	5.53E-06	6.37E-02	9.51E-03	1.62E-07	1.87E-03	1.03E-02	1.76E-07	2.03E-03
Road 106	106	1600-1700	8.06E-02	1.38E-06	1.59E-02	3.09E-01	5.29E-06	6.09E-02	9.61E-03	1.64E-07	1.89E-03	1.04E-02	1.78E-07	2.06E-03
Road 106	106	1700-1800	6.15E-02	1.09E-06	1.26E-02	2.70E-01	4.80E-06	5.53E-02	7.67E-03	1.37E-07	1.57E-03	8.33E-03	1.48E-07	1.71E-03
Road 106	106	1800-1900	4.12E-02	6.98E-07	8.04E-03	1.90E-01	3.22E-06	3.71E-02	5.54E-03	9.40E-08	1.08E-03	6.02E-03	1.02E-07	1.18E-03
Road 106	106	1900-2000	2.28E-02	4.21E-07	4.85E-03	1.60E-01	2.05E-06	2.37E-02	4.65E-03	5.96E-08	6.87E-04	3.01E-03	6.48E-08	7.47E-04
Road 106	106	2000-2100	2.11E-02	3.11E-07	3.58E-03	1.65E-01	1.65E-06	1.90E-02	4.46E-03	4.47E-08	5.15E-04	4.44E-03	4.85E-08	5.50E-04
Road 106	106	2100-2200	3.01E-02	3.04E-07	3.50E-03	1.64E-01	1.65E-06	1.90E-02	4.32E-03	4.36E-08	5.02E-04	4.68E-03	4.73E-08	5.45E-04
Road 106	106	2200-2300	2.93E-02	2.80E-07	3.23E-03	1.55E-01	1.48E-06	1.71E-02	4.15E-03	3.97E-08	4.58E-04	4.52E-03	4.32E-08	4.97E-04
Road 106	106	2300-0000	2.99E-02	2.18E-07	3.51E-03	1.54E-01	1.13E-06	1.30E-02	4.39E-03	3.20E-08	3.69E-04	4.76E-03	3.48E-08	4.01E-04

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open N14 North Underdown Quarry																		
T6 - 2003																		
ANNEX D Road Survey																		
NO	Road	ID	Hour	NO Emission				NO Emission										
				g/hour	g/km	g/hour	g/km	g/hour	g/km									
				Monthly/Average		Monthly/Average		Monthly/Average										
Road 1	1	0000 0100	1	8:00:01	1.132	7.512	8.544	1.131	6.511	1.188	1.548	8.772	9.892	1.138	7.312	0.5		
			2	0100:02	1.950	1.985	1.028	2.043	8.078	4.048	1.208	1.058	1.722	1.021	8.862	8.672	0.5	
Road 1	1	0100 0200	1	02:00:01	1.127	7.507	8.539	1.126	6.506	1.183	1.543	8.767	9.887	1.133	7.307	0.5		
			2	03:00:01	1.192	8.014	1.038	1.052	5.318	2.028	1.378	1.217	4.242	1.092	5.382	2.912	0.5	
Road 1	1	0100 0300	1	04:00:01	1.266	8.106	1.052	1.062	5.318	2.028	1.378	1.217	4.242	1.092	5.382	2.912	0.5	
			2	05:00:01	1.331	1.719	7.058	1.148	1.178	6.218	1.138	1.228	1.608	1.098	1.708	1.958	0.5	
Road 1	1	0100 0400	1	06:00:01	1.408	2.872	1.588	1.232	2.568	1.412	1.378	1.217	4.242	1.098	1.248	1.328	0.5	
			2	07:00:01	1.468	1.052	1.328	1.472	1.478	1.052	1.218	1.058	1.192	1.192	1.408	1.408	0.5	
Road 1	1	0100 0500	1	08:00:01	1.688	8.608	1.648	1.218	6.038	1.308	1.118	2.848	1.842	8.728	2.768	0.5		
			2	09:00:01	1.688	8.608	1.648	1.218	6.038	1.308	1.118	2.848	1.842	8.728	2.768	0.5		
Road 1	1	0100 0600	1	10:00:01	1.688	8.608	1.648	1.218	6.038	1.308	1.118	2.848	1.842	8.728	2.768	0.5		
			2	11:00:01	1.688	8.608	1.648	1.218	6.038	1.308	1.118	2.848	1.842	8.728	2.768	0.5		
Road 1	1	0100 0700	1	12:00:01	1.712	8.832	1.318	1.568	1.298	2.848	1.348	4.218	1.038	1.198	2.058	0.4		
			2	13:00:01	1.448	1.298	1.218	1.488	1.798	2.458	1.248	1.038	1.228	1.198	1.338	1.868	0.5	
Road 1	1	0100 0800	1	14:00:01	1.828	1.828	1.458	1.458	1.798	1.348	1.318	5.608	1.018	1.178	1.508	2.798	0.4	
			2	15:00:01	1.878	1.878	1.458	1.458	1.798	1.348	1.318	5.608	1.018	1.178	1.508	2.798	0.4	
Road 1	1	0100 0900	1	16:00:01	1.878	1.878	1.458	1.458	1.798	1.348	1.318	5.608	1.018	1.178	1.508	2.798	0.4	
			2	17:00:01	1.878	1.878	1.458	1.458	1.798	1.348	1.318	5.608	1.018	1.178	1.508	2.798	0.4	
Road 1	1	0100 1000	1	18:00:01	1.998	1.998	1.298	1.298	1.868	1.798	1.348	1.728	1.178	1.598	1.298	0.4		
			2	19:00:01	1.998	1.998	1.298	1.298	1.868	1.798	1.348	1.728	1.178	1.598	1.298	0.4		
Road 1	1	0100 1100	1	20:00:01	1.998	1.998	1.298	1.298	1.868	1.798	1.348	1.728	1.178	1.598	1.298	0.4		
			2	21:00:01	1.998	1.998	1.298	1.298	1.868	1.798	1.348	1.728	1.178	1.598	1.298	0.4		
Road 1	1	0100 1200	1	22:00:01	1.998	1.998	1.298	1.298	1.868	1.798	1.348	1.728	1.178	1.598	1.298	0.4		
			2	23:00:01	1.998	1.998	1.298	1.298	1.868	1.798	1.348	1.728	1.178	1.598	1.298	0.4		
Road 2	2	0000 0100	1	8:00:01	1.488	7.848	8.978	1.138	6.598	1.328	1.318	7.072	1.088	1.148	6.062	7.072	0.5	
			2	04:00:02	1.548	9.088	1.088	1.388	8.678	4.098	1.318	1.872	1.998	1.488	6.762	8.472	0.5	
Road 2	2	0100 0200	1	02:00:01	1.648	7.648	8.778	1.492	6.848	1.408	1.318	1.778	1.068	1.168	6.068	7.068	0.5	
			2	06:00:02	1.688	1.688	1.188	1.152	1.298	1.678	1.378	1.298	1.518	1.188	1.288	1.618	1.418	0.5
Road 2	2	0100 0300	1	03:00:01	1.748	8.248	1.088	1.052	5.318	2.028	1.378	1.217	4.242	1.092	5.382	2.912	0.5	
			2	08:00:02	1.678	8.418	1.048	1.132	8.748	1.878	1.218	1.238	1.608	1.098	1.508	1.788	1.848	0.4
Road 2	2	0100 0400	1	04:00:01	1.908	8.328	1.222	1.248	1.732	1.868	1.318	1.578	1.068	1.178	1.538	1.868	1.468	0.5
			2	09:00:02	1.948	1.948	1.298	1.298	1.868	1.798	1.348	1.728	1.178	1.598	1.298	0.4		
Road 2	2	0100 0500	1	05:00:01	2.008	2.008	1.338	1.338	1.868	1.798	1.348	1.728	1.178	1.598	1.298	0.4		
			2	10:00:02	2.058	1.058	1.338	1.338	1.868	1.798	1.348	1.728	1.178	1.598	1.298	0.4		
Road 2	2	0100 0600	1	06:00:01	2.168	7.468	1.378	1.888	1.678	1.748	1.448	1.338	1.678	1.068	1.218	1.438	1.338	0.5
			2	11:00:02	2.218	1.218	1.378	1.378	1.868	1.798	1.348	1.728	1.178	1.598	1.298	0.4		
Road 2	2	0100 0700	1	07:00:01	2.318	2.318	1.428	1.428	1.908	1.868	1.348	1.638	1.098	1.228	1.608	1.468	0.5	
			2	12:00:02	2.368	1.368	1.428	1.428	1.908	1.868	1.348	1.638	1.098	1.228	1.608	1.468	0.5	
Road 2	2	0100 0800	1	08:00:01	2.418	2.418	1.478	1.478	1.958	1.908	1.348	1.688	1.148	1.278	1.658	1.518	0.5	
			2	13:00:02	2.468	1.468	1.478	1.478	1.958	1.908	1.348	1.688	1.148	1.278	1.658	1.518	0.5	
Road 2	2	0100 0900	1	09:00:01	2.518	2.518	1.528	1.528	1.958	1.908	1.348	1.688	1.148	1.278	1.658	1.518	0.5	
			2	14:00:02	2.568	1.568	1.528	1.528	1.958	1.908	1.348	1.688	1.148	1.278	1.658	1.518	0.5	
Road 2	2	0100 1000	1	10:00:01	2.618	2.618	1.578	1.578	1.958	1.908	1.348	1.688	1.148	1.278	1.658	1.518	0.5	
			2	15:00:02	2.668	1.668	1.578	1.578	1.958	1.908	1.348	1.688	1.148	1.278	1.658	1.518	0.5	
Road 2	2	0100 1100	1	11:00:01	2.718	2.718	1.628	1.628	1.958	1.908	1.348	1.688	1.148	1.278	1.658	1.518	0.5	
			2	16:00:02	2.768	1.768	1.628	1.628	1.958	1.908	1.348	1.688	1.148	1.278	1.658	1.518	0.5	
Road 2	2	0100 1200	1	12:00:01	2.818	2.818	1.678	1.678	1.958	1.908	1.348	1.688	1.148	1.278	1.658	1.518	0.5	
			2	17:00:02	2.868	1.868	1.678	1.678	1.958	1.908	1.348	1.688	1.148	1.278	1.658	1.518	0.5	
Road 2	2	0100 1300	1	13:00:01	2.918	2.918	1.728	1.728	1.958	1.908	1.348	1.688	1.148	1.278	1.658	1.518	0.5	
			2	18:00:02	2.968	1.968	1.728	1.728	1.958	1.908	1.348	1.688	1.148	1.278	1.658	1.518	0.5	
Road 2	2	0100 1400	1	14:00:01	3.018	3.018	1.778	1.778	1.958	1.908	1.348	1.688	1.148	1.278	1.658	1.518	0.5	
			2	19:00:02	3.068	2.068	1.778	1.778	1.958	1.908	1.348	1.688	1.148	1.278	1.658	1.518	0.5	
Road 2	2	0100 1500	1	15:00:01	3.118	3.118	1.828	1.828	1.958	1.908	1.348	1.688	1.148	1.278	1.658	1.518	0.5	
			2	20:00:02	3.168	2.168	1.828	1.828	1.958	1.908	1.348	1.688	1.148	1.278	1.658	1.518	0.5	
Road 2	2	0100 1600	1	16:00:01	3.218	3.218	1.878	1.878	1.958	1.908	1.348	1.688	1.148	1.278	1.658	1.518	0.5	
			2	21:00:02	3.268	2.268	1.878	1.878	1.958	1.908	1.348	1.688	1.148	1.278	1.658	1.518	0.5	
Road 2	2	0100 1700	1	17:00:01	3.318	3.318	1.928	1.928	1.958	1.908	1.348	1.688	1.148	1.278	1.658	1.518	0.5	
			2	22:00:02	3.368	2.368	1.928	1.928	1.958	1.908	1.348	1.688	1.148	1.278	1.658	1.518	0.5	
Road 2	2	0100 1800	1	18:00:01	3.418	3.418	1.978	1.978	1.958	1.908	1.348	1.688	1.148	1.278	1.658	1.518	0.5	
			2	23:00:02	3.468	2.468	1.978	1.978	1.958	1.908	1.348	1.688	1.148	1.278	1.658	1.518	0.5	
Road 2	2	0100 1900	1	19:00:01	3.518	3.518	2.028	2.028	1.958	1.908	1.348	1.688	1.148	1.278	1.658	1.518	0.5	
			2	00:00:02	3.568	2.568	2.028	2.028	1.958	1.908	1.348	1.688	1.148	1.278	1.658	1.518	0.5	
Road 2	2	0100 2000	1	20:00:01	3.618	3.618	2.078	2.078	1.958	1.908	1.348	1.688	1.148	1.278	1.658	1.518	0.5	
			2	01:00:02	3.668	2.668	2.078	2.078	1.958	1.908	1.348	1.688	1.148	1.278	1.658	1.518	0.5	
Road 2	2	0100 2100	1	21:00:01	3.718	3.718	2.128	2.128	1.958	1.908	1.348	1.688	1.148	1.278	1.658	1.518	0.5	
			2	02:00:02	3.768	2.768	2.128	2.128	1.958	1.908	1.348	1.688	1.148	1.278	1.658	1.518	0.5	
Road 2	2	0100 2200	1	22:00:01	3.818	3.818	2.178	2.178	1.958	1.908	1.348	1.688	1.148	1.278	1.658	1.518	0.5	
			2	03:00:02	3.868	2.868	2.178	2.178	1.958	1.908	1.348	1.688	1.148	1.278	1.658	1.518	0.5	
Road 2	2	0100 2300	1	23:00:01	3.918	3.918	2.228	2.228	1.958	1.908	1.348	1.688	1.148	1.278	1.658	1.518	0.5	
			2	04:00:02	3.968	2.968	2.228	2.228	1.958	1.908	1.348	1.688	1.148	1.278	1.658	1.518	0.5	
Road 3	3	1700 1800	1	17:00:01	3.968	3.968	2.228	2.228	1.958	1.908	1.348	1.688	1.148	1.278	1.658	1.518	0.5	
			2	18:00:01	4.018	4.018	2.278	2.278	1.958	1.908	1.348	1.688	1.148	1.278	1.658	1.518	0.5	
Road 3	3	1800 1900	1	18:00:01	4.068	4.068	2.328	2.3										

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Pit & Sub-Emulsion Quarry											
Year 2083											
ARMSD model (Road 1)											
Road Name	Road ID	Road Segment	Hour	NO _x Emission				NO ₂ Emission			
				Monthly/Mean	Monthly/Median	Monthly/Min	Monthly/Max	Monthly/Mean	Monthly/Median	Monthly/Min	Monthly/Max
Road 14	14000	0000	0000	4.44E+01	4.44E+01	4.44E+01	4.44E+01	2.27E+01	2.27E+01	2.27E+01	2.27E+01
Road 14	14000	0000	0000	5.80E+01	5.80E+01	5.80E+01	5.80E+01	2.90E+01	2.90E+01	2.90E+01	2.90E+01
Road 14	14000	0000	0000	8.03E+01	8.03E+01	8.03E+01	8.03E+01	4.01E+01	4.01E+01	4.01E+01	4.01E+01
Road 14	14000	0000	0000	1.05E+02	1.05E+02	1.05E+02	1.05E+02	5.25E+01	5.25E+01	5.25E+01	5.25E+01
Road 14	14000	0000	0000	1.32E+02	1.32E+02	1.32E+02	1.32E+02	6.60E+01	6.60E+01	6.60E+01	6.60E+01
Road 14	14000	0000	0000	1.60E+02	1.60E+02	1.60E+02	1.60E+02	8.00E+01	8.00E+01	8.00E+01	8.00E+01
Road 14	14000	0000	0000	1.88E+02	1.88E+02	1.88E+02	1.88E+02	9.40E+01	9.40E+01	9.40E+01	9.40E+01
Road 14	14000	0000	0000	2.16E+02	2.16E+02	2.16E+02	2.16E+02	1.08E+02	1.08E+02	1.08E+02	1.08E+02
Road 14	14000	0000	0000	2.44E+02	2.44E+02	2.44E+02	2.44E+02	1.22E+02	1.22E+02	1.22E+02	1.22E+02
Road 14	14000	0000	0000	2.72E+02	2.72E+02	2.72E+02	2.72E+02	1.36E+02	1.36E+02	1.36E+02	1.36E+02
Road 14	14000	0000	0000	3.00E+02	3.00E+02	3.00E+02	3.00E+02	1.50E+02	1.50E+02	1.50E+02	1.50E+02
Road 14	14000	0000	0000	3.28E+02	3.28E+02	3.28E+02	3.28E+02	1.64E+02	1.64E+02	1.64E+02	1.64E+02
Road 14	14000	0000	0000	3.56E+02	3.56E+02	3.56E+02	3.56E+02	1.78E+02	1.78E+02	1.78E+02	1.78E+02
Road 14	14000	0000	0000	3.84E+02	3.84E+02	3.84E+02	3.84E+02	1.92E+02	1.92E+02	1.92E+02	1.92E+02
Road 14	14000	0000	0000	4.12E+02	4.12E+02	4.12E+02	4.12E+02	2.06E+02	2.06E+02	2.06E+02	2.06E+02
Road 14	14000	0000	0000	4.40E+02	4.40E+02	4.40E+02	4.40E+02	2.20E+02	2.20E+02	2.20E+02	2.20E+02
Road 14	14000	0000	0000	4.68E+02	4.68E+02	4.68E+02	4.68E+02	2.34E+02	2.34E+02	2.34E+02	2.34E+02
Road 14	14000	0000	0000	4.96E+02	4.96E+02	4.96E+02	4.96E+02	2.48E+02	2.48E+02	2.48E+02	2.48E+02
Road 14	14000	0000	0000	5.24E+02	5.24E+02	5.24E+02	5.24E+02	2.62E+02	2.62E+02	2.62E+02	2.62E+02
Road 14	14000	0000	0000	5.52E+02	5.52E+02	5.52E+02	5.52E+02	2.76E+02	2.76E+02	2.76E+02	2.76E+02
Road 14	14000	0000	0000	5.80E+02	5.80E+02	5.80E+02	5.80E+02	2.90E+02	2.90E+02	2.90E+02	2.90E+02
Road 14	14000	0000	0000	6.08E+02	6.08E+02	6.08E+02	6.08E+02	3.04E+02	3.04E+02	3.04E+02	3.04E+02
Road 14	14000	0000	0000	6.36E+02	6.36E+02	6.36E+02	6.36E+02	3.18E+02	3.18E+02	3.18E+02	3.18E+02
Road 14	14000	0000	0000	6.64E+02	6.64E+02	6.64E+02	6.64E+02	3.32E+02	3.32E+02	3.32E+02	3.32E+02
Road 14	14000	0000	0000	6.92E+02	6.92E+02	6.92E+02	6.92E+02	3.46E+02	3.46E+02	3.46E+02	3.46E+02
Road 14	14000	0000	0000	7.20E+02	7.20E+02	7.20E+02	7.20E+02	3.60E+02	3.60E+02	3.60E+02	3.60E+02
Road 14	14000	0000	0000	7.48E+02	7.48E+02	7.48E+02	7.48E+02	3.74E+02	3.74E+02	3.74E+02	3.74E+02
Road 14	14000	0000	0000	7.76E+02	7.76E+02	7.76E+02	7.76E+02	3.88E+02	3.88E+02	3.88E+02	3.88E+02
Road 14	14000	0000	0000	8.04E+02	8.04E+02	8.04E+02	8.04E+02	4.02E+02	4.02E+02	4.02E+02	4.02E+02
Road 14	14000	0000	0000	8.32E+02	8.32E+02	8.32E+02	8.32E+02	4.16E+02	4.16E+02	4.16E+02	4.16E+02
Road 14	14000	0000	0000	8.60E+02	8.60E+02	8.60E+02	8.60E+02	4.30E+02	4.30E+02	4.30E+02	4.30E+02
Road 14	14000	0000	0000	8.88E+02	8.88E+02	8.88E+02	8.88E+02	4.44E+02	4.44E+02	4.44E+02	4.44E+02
Road 14	14000	0000	0000	9.16E+02	9.16E+02	9.16E+02	9.16E+02	4.58E+02	4.58E+02	4.58E+02	4.58E+02
Road 14	14000	0000	0000	9.44E+02	9.44E+02	9.44E+02	9.44E+02	4.72E+02	4.72E+02	4.72E+02	4.72E+02
Road 14	14000	0000	0000	9.72E+02	9.72E+02	9.72E+02	9.72E+02	4.86E+02	4.86E+02	4.86E+02	4.86E+02
Road 14	14000	0000	0000	1.00E+03	1.00E+03	1.00E+03	1.00E+03	5.00E+02	5.00E+02	5.00E+02	5.00E+02
Road 14	14000	0000	0000	1.02E+03	1.02E+03	1.02E+03	1.02E+03	5.14E+02	5.14E+02	5.14E+02	5.14E+02
Road 14	14000	0000	0000	1.05E+03	1.05E+03	1.05E+03	1.05E+03	5.28E+02	5.28E+02	5.28E+02	5.28E+02
Road 14	14000	0000	0000	1.08E+03	1.08E+03	1.08E+03	1.08E+03	5.42E+02	5.42E+02	5.42E+02	5.42E+02
Road 14	14000	0000	0000	1.11E+03	1.11E+03	1.11E+03	1.11E+03	5.56E+02	5.56E+02	5.56E+02	5.56E+02
Road 14	14000	0000	0000	1.14E+03	1.14E+03	1.14E+03	1.14E+03	5.70E+02	5.70E+02	5.70E+02	5.70E+02
Road 14	14000	0000	0000	1.17E+03	1.17E+03	1.17E+03	1.17E+03	5.84E+02	5.84E+02	5.84E+02	5.84E+02
Road 14	14000	0000	0000	1.20E+03	1.20E+03	1.20E+03	1.20E+03	5.98E+02	5.98E+02	5.98E+02	5.98E+02
Road 14	14000	0000	0000	1.23E+03	1.23E+03	1.23E+03	1.23E+03	6.12E+02	6.12E+02	6.12E+02	6.12E+02
Road 14	14000	0000	0000	1.26E+03	1.26E+03	1.26E+03	1.26E+03	6.26E+02	6.26E+02	6.26E+02	6.26E+02
Road 14	14000	0000	0000	1.29E+03	1.29E+03	1.29E+03	1.29E+03	6.40E+02	6.40E+02	6.40E+02	6.40E+02
Road 14	14000	0000	0000	1.32E+03	1.32E+03	1.32E+03	1.32E+03	6.54E+02	6.54E+02	6.54E+02	6.54E+02
Road 14	14000	0000	0000	1.35E+03	1.35E+03	1.35E+03	1.35E+03	6.68E+02	6.68E+02	6.68E+02	6.68E+02
Road 14	14000	0000	0000	1.38E+03	1.38E+03	1.38E+03	1.38E+03	6.82E+02	6.82E+02	6.82E+02	6.82E+02
Road 14	14000	0000	0000	1.41E+03	1.41E+03	1.41E+03	1.41E+03	6.96E+02	6.96E+02	6.96E+02	6.96E+02
Road 14	14000	0000	0000	1.44E+03	1.44E+03	1.44E+03	1.44E+03	7.10E+02	7.10E+02	7.10E+02	7.10E+02
Road 14	14000	0000	0000	1.47E+03	1.47E+03	1.47E+03	1.47E+03	7.24E+02	7.24E+02	7.24E+02	7.24E+02
Road 14	14000	0000	0000	1.50E+03	1.50E+03	1.50E+03	1.50E+03	7.38E+02	7.38E+02	7.38E+02	7.38E+02
Road 14	14000	0000	0000	1.53E+03	1.53E+03	1.53E+03	1.53E+03	7.52E+02	7.52E+02	7.52E+02	7.52E+02
Road 14	14000	0000	0000	1.56E+03	1.56E+03	1.56E+03	1.56E+03	7.66E+02	7.66E+02	7.66E+02	7.66E+02
Road 14	14000	0000	0000	1.59E+03	1.59E+03	1.59E+03	1.59E+03	7.80E+02	7.80E+02	7.80E+02	7.80E+02
Road 14	14000	0000	0000	1.62E+03	1.62E+03	1.62E+03	1.62E+03	7.94E+02	7.94E+02	7.94E+02	7.94E+02
Road 14	14000	0000	0000	1.65E+03	1.65E+03	1.65E+03	1.65E+03	8.08E+02	8.08E+02	8.08E+02	8.08E+02
Road 14	14000	0000	0000	1.68E+03	1.68E+03	1.68E+03	1.68E+03	8.22E+02	8.22E+02	8.22E+02	8.22E+02
Road 14	14000	0000	0000	1.71E+03	1.71E+03	1.71E+03	1.71E+03	8.36E+02	8.36E+02	8.36E+02	8.36E+02
Road 14	14000	0000	0000	1.74E+03	1.74E+03	1.74E+03	1.74E+03	8.50E+02	8.50E+02	8.50E+02	8.50E+02
Road 14	14000	0000	0000	1.77E+03	1.77E+03	1.77E+03	1.77E+03	8.64E+02	8.64E+02	8.64E+02	8.64E+02
Road 14	14000	0000	0000	1.80E+03	1.80E+03	1.80E+03	1.80E+03	8.78E+02	8.78E+02	8.78E+02	8.78E+02
Road 14	14000	0000	0000	1.83E+03	1.83E+03	1.83E+03	1.83E+03	8.92E+02	8.92E+02	8.92E+02	8.92E+02
Road 14	14000	0000	0000	1.86E+03	1.86E+03	1.86E+03	1.86E+03	9.06E+02	9.06E+02	9.06E+02	9.06E+02
Road 14	14000	0000	0000	1.89E+03	1.89E+03	1.89E+03	1.89E+03	9.20E+02	9.20E+02	9.20E+02	9.20E+02
Road 14	14000	0000	0000	1.92E+03	1.92E+03	1.92E+03	1.92E+03	9.34E+02	9.34E+02	9.34E+02	9.34E+02
Road 14	14000	0000	0000	1.95E+03	1.95E+03	1.95E+03	1.95E+03	9.48E+02	9.48E+02	9.48E+02	9.48E+02
Road 14	14000	0000	0000	1.98E+03	1.98E+03	1.98E+03	1.98E+03	9.62E+02	9.62E+02	9.62E+02	9.62E+02
Road 14	14000	0000	0000	2.01E+03	2.01E+03	2.01E+03	2.01E+03	9.76E+02	9.76E+02	9.76E+02	9.76E+02
Road 14	14000	0000	0000	2.04E+03	2.04E+03	2.04E+03	2.04E+03	9.90E+02	9.90E+02	9.90E+02	9.90E+02
Road 14	14000	0000	0000	2.07E+03	2.07E+03	2.07E+03	2.07E+03	1.00E+03	1.00E+03	1.00E+03	1.00E+03
Road 14	14000	0000	0000	2.10E+03	2.10E+03	2.10E+03	2.10E+03	1.01E+03	1.01E+03	1.01E+03	1.01E+03
Road 14	14000	0000	0000	2.13E+03	2.13E+03	2.13E+03	2.13E+03	1.02E+03	1.02E+03	1.02E+03	1.02E+03
Road 14	14000	0000	0000	2.16E+03	2.16E+03	2.16E+03	2.16E+03	1.03E+03	1.03E+03	1.03E+03	1.03E+03
Road 14	14000	0000	0000	2.19E+03	2.19E+03	2.19E+03	2.19E+03	1.04E+03	1.04E+03	1.04E+03	1.04E+03
Road 14	14000	0000	0000	2.22E+03	2.22E+03	2.22E+03	2.22E+03	1.05E+03	1.05E+03	1.05E+03	1.05E+03
Road 14	14000	0000	0000	2.25E+03	2.25E+03	2.25E+03	2.25E+03	1.06E+03	1.06E+03	1.06E+03	1.06E+03
Road 14	14000	0000	0000	2.28E+03	2.28E+03	2.28E+03	2.28E+03	1.07E+03	1.07E+03	1.07E+03	1.07E+03
Road 14	14000	0000	0000	2.31E+03	2.31E+03	2.31E+03	2.31E+03	1.08E+03	1.08E+03	1.08E+03	1.08E+03
Road 14	14000	0000	0000	2.34E+03	2.34E+03	2.34E+03	2.34E+03	1.09E+03	1.09E+03	1.09E+03	1.09E+03
Road 14	14000	0000	0000	2.37E+03	2.37E+03	2.37E+03	2.37E+03	1.10E+03	1.10E+03	1.10E+03	1.10E+03
Road 14	14000	0000	0000	2.40E+03	2.40E+03	2.40E+03	2.40E+03	1.11E+03	1.11E+03	1.11E+03	1.11E+03
Road 14	14000	0000	0000	2.43E+03	2.43E+03	2.43E+03	2.43E+03	1.12E+03	1.12E+03	1.12E+03	1.12E+

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.3 Emission Factor in 2033.xlsx

Open Road 24 Hour Emission Factors																
ARNDMD model (km/hr)																
Road Name	ID	Hour	NO Emission						NO Emission							
			Monthly/Average		Monthly/Average		Monthly/Average		Monthly/Average							
			g/kwhr	g/kwhr	g/kwhr	g/kwhr	g/kwhr	g/kwhr	g/kwhr	g/kwhr	g/kwhr	g/kwhr	g/kwhr	g/kwhr	g/kwhr	
road 4	0	0000-0000	1.117	0.4217	0.9116	1.198	0.4217	1.4461	9.8182	1.488	6.991	6.252	1.071	6.1126		
road 4	0	0000-1000	1.415	0.4747	0.8558	1.6383	1.4778	0.776	1.0468	1.0838	6.915	6.286	2.706	3.423		
road 4	0	1000-1200	1.445	0.4747	0.8558	1.6383	1.4778	0.776	1.0468	1.0838	6.915	6.286	2.706	3.423		
road 4	0	1200-1300	1.512	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 4	0	1300-1400	1.535	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 4	0	1400-1500	1.512	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 4	0	1500-1600	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 4	0	1600-1700	1.722	0.6475	0.1181	1.5585	0.548107	1.1475	1.1483	3.84	7.829	8.051	3.682	3.748		
road 4	0	1700-1800	1.722	0.6475	0.1181	1.5585	0.548107	1.1475	1.1483	3.84	7.829	8.051	3.682	3.748		
road 4	0	1800-1900	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 4	0	1900-2000	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 4	0	2000-2100	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 4	0	2100-2200	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 4	0	2200-2300	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 4	0	2300-2400	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 5	0	0000-0100	1.117	0.4217	0.9116	1.198	0.4217	1.4461	9.8182	1.488	6.991	6.252	1.071	6.1126		
road 5	0	0100-0200	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 5	0	0200-0300	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 5	0	0300-0400	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 5	0	0400-0500	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 5	0	0500-0600	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 5	0	0600-0700	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 5	0	0700-0800	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 5	0	0800-0900	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 5	0	0900-1000	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 5	0	1000-1100	1.308	0.5307	0.471	2.874	0.4467	1.746	2.0265	1.308	2.931	4.865	1.860	2.576		
road 5	0	1200-1300	1.385	0.6217	0.218	2.238	0.8491	0.734	2.0265	1.526	4.409	3.765	1.860	4.601		
road 5	0	1300-1400	1.311	0.5928	0.388	1.938	0.7787	0.978	2.0265	1.678	4.918	3.56	1.860	4.202		
road 5	0	1400-1500	1.409	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 5	0	1500-1600	1.409	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 5	0	1600-1700	1.409	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 5	0	1700-1800	1.409	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 5	0	1800-1900	1.409	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 5	0	1900-2000	1.409	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 5	0	2000-2100	1.409	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 5	0	2100-2200	1.409	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 5	0	2200-2300	1.409	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 5	0	2300-2400	1.409	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 6	0	0000-0100	1.117	0.4217	0.9116	1.198	0.4217	1.4461	9.8182	1.488	6.991	6.252	1.071	6.1126		
road 6	0	0100-0200	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 6	0	0200-0300	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 6	0	0300-0400	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 6	0	0400-0500	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 6	0	0500-0600	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 6	0	0600-0700	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 6	0	0700-0800	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 6	0	0800-0900	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 6	0	0900-1000	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 6	0	1000-1100	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 6	0	1100-1200	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 6	0	1200-1300	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 6	0	1300-1400	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 6	0	1400-1500	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 6	0	1500-1600	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 6	0	1600-1700	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 6	0	1700-1800	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 6	0	1800-1900	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 6	0	1900-2000	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 6	0	2000-2100	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 6	0	2100-2200	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 6	0	2200-2300	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 6	0	2300-2400	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 7	0	0000-0100	1.117	0.4217	0.9116	1.198	0.4217	1.4461	9.8182	1.488	6.991	6.252	1.071	6.1126		
road 7	0	0100-0200	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 7	0	0200-0300	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 7	0	0300-0400	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 7	0	0400-0500	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 7	0	0500-0600	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 7	0	0600-0700	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 7	0	0700-0800	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 7	0	0800-0900	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 7	0	0900-1000	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		
road 7	0	1000-1100	1.488	0.5716	0.7378	1.4687	0.34167	6.696	1.1128	2.646	5.508	6.423	2.296	4.602		

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open N14 North Extension Quarry

Year 2033												
Road Name	Road ID	Hour	Mo, En/Emssn				Mo/En/Emssn					
			Month/Thursday		Month/Saturday		Month/Thursday		Month/Saturday			
			g/hour		t/hour		g/hour		t/hour			
			Mo/Thu		Sat/Sun		Mo/Thu		Sat/Sun			
			Mo/Thu		Sat/Sun		Mo/Thu		Sat/Sun			
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			Mo/Thu		Sat/Sun		Mo/Thu		Sat/Sun			

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Open North Wind Emission Factors																			
Year 2003																			
Road Name	Road ID	Hour	NO _x Emission						NO _y Emission										
			Monthly/tonne-hour			Monthly/tonne-hour			Monthly/tonne-hour			Monthly/tonne-hour							
			g/m ³ /hr	lb/hr	tonne/hr	g/m ³ /hr	lb/hr	tonne/hr	g/m ³ /hr	lb/hr	tonne/hr	g/m ³ /hr	lb/hr	tonne/hr	g/m ³ /hr				
Road 24	24	0800-0900	1.768	0.1	9.411	0.8	8.547	1.611	0.1	3.138	0.7	7.847	0.665	0.1	3.298	0.1	1.181	0.6	2.976
Road 24	24	0900-1000	1.775	0.1	9.447	0.8	8.583	1.618	0.1	3.155	0.7	7.883	0.672	0.1	3.325	0.1	1.198	0.6	3.006
Road 24	24	1000-1100	1.782	0.1	9.483	0.8	8.619	1.625	0.1	3.172	0.7	7.920	0.679	0.1	3.352	0.1	1.215	0.6	3.036
Road 24	24	1100-1200	1.889	0.1	9.785	0.9	9.472	1.710	0.1	3.438	0.7	8.612	0.688	0.1	3.388	0.1	1.246	0.6	3.145
Road 24	24	1200-1300	1.973	0.1	10.078	0.9	9.765	1.785	0.1	3.603	0.7	8.905	0.700	0.1	3.424	0.1	1.277	0.6	3.254
Road 24	24	1300-1400	1.988	0.1	10.132	0.9	9.819	1.799	0.1	3.637	0.7	8.959	0.707	0.1	3.451	0.1	1.294	0.6	3.284
Road 24	24	1400-1500	1.841	0.1	9.380	0.8	8.686	1.645	0.1	3.285	0.7	7.987	0.681	0.1	3.309	0.1	1.236	0.6	3.095
Road 24	24	1500-1600	1.487	0.0	8.026	0.7	8.026	1.487	0.0	2.642	0.6	6.844	0.498	0.1	2.736	0.1	1.076	0.4	2.574
Road 24	24	1600-1700	1.444	0.0	7.762	0.6	7.762	1.444	0.0	2.550	0.6	6.602	0.481	0.1	2.640	0.1	1.047	0.4	2.534
Road 24	24	1700-1800	1.454	0.0	7.976	0.6	7.976	1.454	0.0	2.577	0.6	6.672	0.478	0.1	2.676	0.1	1.064	0.4	2.564
Road 24	24	1800-1900	1.454	0.0	7.976	0.6	7.976	1.454	0.0	2.577	0.6	6.672	0.478	0.1	2.676	0.1	1.064	0.4	2.564
Road 24	24	1900-2000	1.315	0.0	7.086	0.6	7.086	1.315	0.0	2.308	0.6	6.086	0.441	0.1	2.392	0.1	0.986	0.4	2.317
Road 24	24	2000-2100	1.315	0.0	7.086	0.6	7.086	1.315	0.0	2.308	0.6	6.086	0.441	0.1	2.392	0.1	0.986	0.4	2.317
Road 24	24	2100-2200	1.315	0.0	7.086	0.6	7.086	1.315	0.0	2.308	0.6	6.086	0.441	0.1	2.392	0.1	0.986	0.4	2.317
Road 24	24	2200-2300	1.315	0.0	7.086	0.6	7.086	1.315	0.0	2.308	0.6	6.086	0.441	0.1	2.392	0.1	0.986	0.4	2.317
Road 24	24	2300-2400	1.315	0.0	7.086	0.6	7.086	1.315	0.0	2.308	0.6	6.086	0.441	0.1	2.392	0.1	0.986	0.4	2.317
Road 25	25	0800-0900	1.445	0.0	7.762	0.6	7.762	1.445	0.0	2.550	0.6	6.602	0.481	0.1	2.640	0.1	1.047	0.4	2.534
Road 25	25	0900-1000	1.454	0.0	7.976	0.6	7.976	1.454	0.0	2.577	0.6	6.672	0.478	0.1	2.676	0.1	1.064	0.4	2.564
Road 25	25	1000-1100	1.454	0.0	7.976	0.6	7.976	1.454	0.0	2.577	0.6	6.672	0.478	0.1	2.676	0.1	1.064	0.4	2.564
Road 25	25	1100-1200	1.488	0.1	8.176	0.6	8.176	1.488	0.1	2.651	0.6	6.911	0.508	0.1	2.745	0.1	1.071	0.5	2.61
Road 25	25	1200-1300	1.589	0.1	8.686	0.7	8.686	1.589	0.1	2.851	0.7	7.461	0.539	0.1	2.945	0.1	1.122	0.5	2.72
Road 25	25	1300-1400	1.690	0.1	9.196	0.8	9.196	1.690	0.1	3.041	0.7	7.966	0.560	0.1	3.135	0.1	1.173	0.5	2.91
Road 25	25	1400-1500	1.690	0.1	9.196	0.8	9.196	1.690	0.1	3.041	0.7	7.966	0.560	0.1	3.135	0.1	1.173	0.5	2.91
Road 25	25	1500-1600	1.589	0.1	8.686	0.7	8.686	1.589	0.1	2.851	0.7	7.461	0.539	0.1	2.945	0.1	1.122	0.5	2.72
Road 25	25	1600-1700	1.488	0.1	8.176	0.6	8.176	1.488	0.1	2.651	0.6	6.911	0.508	0.1	2.745	0.1	1.071	0.5	2.61
Road 25	25	1700-1800	1.445	0.0	7.762	0.6	7.762	1.445	0.0	2.550	0.6	6.602	0.481	0.1	2.640	0.1	1.047	0.4	2.534
Road 25	25	1800-1900	1.454	0.0	7.976	0.6	7.976	1.454	0.0	2.577	0.6	6.672	0.478	0.1	2.676	0.1	1.064	0.4	2.564
Road 25	25	1900-2000	1.454	0.0	7.976	0.6	7.976	1.454	0.0	2.577	0.6	6.672	0.478	0.1	2.676	0.1	1.064	0.4	2.564
Road 25	25	2000-2100	1.315	0.0	7.086	0.6	7.086	1.315	0.0	2.308	0.6	6.086	0.441	0.1	2.392	0.1	0.986	0.4	2.317
Road 25	25	2100-2200	1.315	0.0	7.086	0.6	7.086	1.315	0.0	2.308	0.6	6.086	0.441	0.1	2.392	0.1	0.986	0.4	2.317
Road 25	25	2200-2300	1.315	0.0	7.086	0.6	7.086	1.315	0.0	2.308	0.6	6.086	0.441	0.1	2.392	0.1	0.986	0.4	2.317
Road 25	25	2300-2400	1.315	0.0	7.086	0.6	7.086	1.315	0.0	2.308	0.6	6.086	0.441	0.1	2.392	0.1	0.986	0.4	2.317
Road 26	26	0800-0900	1.445	0.0	7.762	0.6	7.762	1.445	0.0	2.550	0.6	6.602	0.481	0.1	2.640	0.1	1.047	0.4	2.534
Road 26	26	0900-1000	1.454	0.0	7.976	0.6	7.976	1.454	0.0	2.577	0.6	6.672	0.478	0.1	2.676	0.1	1.064	0.4	2.564
Road 26	26	1000-1100	1.454	0.0	7.976	0.6	7.976	1.454	0.0	2.577	0.6	6.672	0.478	0.1	2.676	0.1	1.064	0.4	2.564
Road 26	26	1100-1200	1.488	0.1	8.176	0.6	8.176	1.488	0.1	2.651	0.6	6.911	0.508	0.1	2.745	0.1	1.071	0.5	2.61
Road 26	26	1200-1300	1.589	0.1	8.686	0.7	8.686	1.589	0.1	2.851	0.7	7.461	0.539	0.1	2.945	0.1	1.122	0.5	2.72
Road 26	26	1300-1400	1.690	0.1	9.196	0.8	9.196	1.690	0.1	3.041	0.7	7.966	0.560	0.1	3.135	0.1	1.173	0.5	2.91
Road 26	26	1400-1500	1.690	0.1	9.196	0.8	9.196	1.690	0.1	3.041	0.7	7.966	0.560	0.1	3.135	0.1	1.173	0.5	2.91
Road 26	26	1500-1600	1.589	0.1	8.686	0.7	8.686	1.589	0.1	2.851	0.7	7.461	0.539	0.1	2.945	0.1	1.122	0.5	2.72
Road 26	26	1600-1700	1.488	0.1	8.176	0.6	8.176	1.488	0.1	2.651	0.6	6.911	0.508	0.1	2.745	0.1	1.071	0.5	2.61
Road 26	26	1700-1800	1.445	0.0	7.762	0.6	7.762	1.445	0.0	2.550	0.6	6.602	0.481	0.1	2.640	0.1	1.047	0.4	2.534
Road 26	26	1800-1900	1.454	0.0	7.976	0.6	7.976	1.454	0.0	2.577	0.6	6.672	0.478	0.1	2.676	0.1	1.064	0.4	2.564
Road 26	26	1900-2000	1.454	0.0	7.976	0.6	7.976	1.454	0.0	2.577	0.6	6.672	0.478	0.1	2.676	0.1	1.064	0.4	2.564
Road 26	26	2000-2100	1.315	0.0	7.086	0.6	7.086	1.315	0.0	2.308	0.6	6.086	0.441	0.1	2.392	0.1	0.986	0.4	2.317
Road 26	26	2100-2200	1.315	0.0	7.086	0.6	7.086	1.315	0.0	2.308	0.6	6.086	0.441	0.1	2.392	0.1	0.986	0.4	2.317
Road 26	26	2200-2300	1.315	0.0	7.086	0.6	7.086	1.315	0.0	2.308	0.6	6.086	0.441	0.1	2.392	0.1	0.986	0.4	2.317
Road 26	26	2300-2400	1.315	0.0	7.086	0.6	7.086	1.315	0.0	2.308	0.6	6.086	0.441	0.1	2.392	0.1	0.986	0.4	2.317
Road 27	27	0800-0900	1.445	0.0	7.762	0.6	7.762	1.445	0.0	2.550	0.6	6.602	0.481	0.1	2.640	0.1	1.047	0.4	2.534
Road 27	27	0900-1000	1.454	0.0	7.976	0.6	7.976	1.454	0.0	2.577	0.6	6.672	0.478	0.1	2.676	0.1	1.064	0.4	2.564
Road 27	27	1000-1100	1.454	0.0	7.976	0.6	7.976	1.454	0.0	2.577	0.6	6.672	0.478	0.1	2.676	0.1	1.064	0.4	2.564
Road 27	27	1100-1200	1.488	0.1	8.176	0.6	8.176	1.488	0.1	2.651	0.6	6.911	0.508	0.1	2.745	0.1	1.071	0.5	2.61
Road 27	27	1200-1300	1.589	0.1	8.686	0.7	8.686	1.589	0.1	2.851	0.7	7.461	0.539	0.1	2.945	0.1	1.122	0.5	2.72
Road 27	27	1300-1400	1.690	0.1	9.196	0.8	9.196	1.690	0.1	3.041	0.7	7.966	0.560	0.1	3.135	0.1	1.173	0.5	2.91
Road 27	27	1400-1500	1.690	0.1	9.196	0.8	9.196	1.690	0.1	3.041	0.7	7.966	0.560	0.1	3.135	0.1	1.173	0.5	2.91
Road 27	27	1500-1600	1.589	0.1	8.686	0.7	8.686	1.589	0.1	2.851	0.7	7.461	0.539	0.1	2.945	0.1	1.122	0.5	2.72
Road 27	27	1600-1700	1.488	0.1	8.176	0.6	8.176	1.488	0.1	2.651	0.6	6.911	0.508	0.1	2.745	0.1	1.071	0.5	2.61
Road 27	27	1700-1800	1.445	0.0	7.762	0.6	7.762	1.445	0.0	2.550	0.6	6.602	0.481	0.1	2.640	0.1	1.047	0.4	2.534
Road 27	27	1800-1900	1.454	0.0	7.976	0.6	7.976	1.454	0.0	2.577	0.6	6.672	0.478	0.1	2.676	0.1	1.064	0.4	2.564
Road 27	27	1900-2000	1.454	0.0	7.976	0.6	7.976	1.454	0.0	2.577	0.6	6.672	0.478	0.1	2.676	0.1	1.064	0.4	2.564
Road 27	27	2000-2100	1.315	0.0	7.086	0.6	7.086	1.315	0.0	2.308	0.6	6.086	0.441	0.1	2.392	0.1	0.986	0.4	2.317
Road 27	27	2100-2200	1.315	0.0	7.086	0.6	7.086	1.315	0.0	2.308	0.6	6.086	0.441	0.1	2.392	0.1	0.986	0.4	2.317
Road 27	27	2200-2300	1.315	0.0	7.086	0.6	7.086	1.315	0.0	2.308	0.6	6.086	0.441	0.1	2.392	0.1	0.986	0.4	2.317
Road 27	27	2300-2400	1.315	0.0	7.086	0.6	7.086	1.315	0.0	2.308	0.6								

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open N ₂ North Undermining Quarry														
2023 North 26 Substation Factors for														
REASONED	Year 2033													
Area	Row ID	Flow	Mo/Mt/En/Av		Mo, En/Emos		Mo/Mt/En/Av		Mo, En/Emos		Mo/Mt/En/Av		Mo/Mt/En/Av	
			g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³
Road #1	41	0000 0010	1.9382	1.1558	2.9987	0.7108	2.7778	2.6087	8.8462	1.5387	0.4158	7.8882	1.1388	1.2116
	41	0000 0020	2.4464	2.7965	2.6667	2.1085	2.02	2.02	1.8487	1.4156	0.8222	0.9244	0.8222	0.9244
Road #2	41	0000 0030	2.8168	2.8168	2.8168	2.8168	2.8168	2.8168	2.8168	2.8168	2.8168	2.8168	2.8168	2.8168
	41	0000 0040	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516
Road #3	41	0000 0050	2.1882	1.9882	2.9882	2.2882	2.0882	2.0882	1.0082	1.8108	0.7218	1.0082	0.8008	7.5518
	41	0000 0060	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516
Road #4	41	0000 0070	2.1882	1.9882	2.9882	2.2882	2.0882	2.0882	1.0082	1.8108	0.7218	1.0082	0.8008	7.5518
	41	0000 0080	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516
Road #5	41	0000 0090	2.1882	1.9882	2.9882	2.2882	2.0882	2.0882	1.0082	1.8108	0.7218	1.0082	0.8008	7.5518
	41	0000 0100	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516
Road #6	41	0000 0110	2.1882	1.9882	2.9882	2.2882	2.0882	2.0882	1.0082	1.8108	0.7218	1.0082	0.8008	7.5518
	41	0000 0120	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516
Road #7	41	0000 0130	2.1882	1.9882	2.9882	2.2882	2.0882	2.0882	1.0082	1.8108	0.7218	1.0082	0.8008	7.5518
	41	0000 0140	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516
Road #8	41	0000 0150	2.1882	1.9882	2.9882	2.2882	2.0882	2.0882	1.0082	1.8108	0.7218	1.0082	0.8008	7.5518
	41	0000 0160	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516
Road #9	41	0000 0170	2.1882	1.9882	2.9882	2.2882	2.0882	2.0882	1.0082	1.8108	0.7218	1.0082	0.8008	7.5518
	41	0000 0180	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516
Road #10	41	0000 0190	2.1882	1.9882	2.9882	2.2882	2.0882	2.0882	1.0082	1.8108	0.7218	1.0082	0.8008	7.5518
	41	0000 0200	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516
Road #11	41	0000 0210	2.1882	1.9882	2.9882	2.2882	2.0882	2.0882	1.0082	1.8108	0.7218	1.0082	0.8008	7.5518
	41	0000 0220	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516
Road #12	41	0000 0230	2.1882	1.9882	2.9882	2.2882	2.0882	2.0882	1.0082	1.8108	0.7218	1.0082	0.8008	7.5518
	41	0000 0240	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516
Road #13	41	0000 0250	2.1882	1.9882	2.9882	2.2882	2.0882	2.0882	1.0082	1.8108	0.7218	1.0082	0.8008	7.5518
	41	0000 0260	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516
Road #14	41	0000 0270	2.1882	1.9882	2.9882	2.2882	2.0882	2.0882	1.0082	1.8108	0.7218	1.0082	0.8008	7.5518
	41	0000 0280	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516
Road #15	41	0000 0290	2.1882	1.9882	2.9882	2.2882	2.0882	2.0882	1.0082	1.8108	0.7218	1.0082	0.8008	7.5518
	41	0000 0300	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516
Road #16	41	0000 0310	2.1882	1.9882	2.9882	2.2882	2.0882	2.0882	1.0082	1.8108	0.7218	1.0082	0.8008	7.5518
	41	0000 0320	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516
Road #17	41	0000 0330	2.1882	1.9882	2.9882	2.2882	2.0882	2.0882	1.0082	1.8108	0.7218	1.0082	0.8008	7.5518
	41	0000 0340	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516
Road #18	41	0000 0350	2.1882	1.9882	2.9882	2.2882	2.0882	2.0882	1.0082	1.8108	0.7218	1.0082	0.8008	7.5518
	41	0000 0360	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516
Road #19	41	0000 0370	2.1882	1.9882	2.9882	2.2882	2.0882	2.0882	1.0082	1.8108	0.7218	1.0082	0.8008	7.5518
	41	0000 0380	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516
Road #20	41	0000 0390	2.1882	1.9882	2.9882	2.2882	2.0882	2.0882	1.0082	1.8108	0.7218	1.0082	0.8008	7.5518
	41	0000 0400	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516
Road #21	41	0000 0410	2.1882	1.9882	2.9882	2.2882	2.0882	2.0882	1.0082	1.8108	0.7218	1.0082	0.8008	7.5518
	41	0000 0420	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516
Road #22	41	0000 0430	2.1882	1.9882	2.9882	2.2882	2.0882	2.0882	1.0082	1.8108	0.7218	1.0082	0.8008	7.5518
	41	0000 0440	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516
Road #23	41	0000 0450	2.1882	1.9882	2.9882	2.2882	2.0882	2.0882	1.0082	1.8108	0.7218	1.0082	0.8008	7.5518
	41	0000 0460	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516
Road #24	41	0000 0470	2.1882	1.9882	2.9882	2.2882	2.0882	2.0882	1.0082	1.8108	0.7218	1.0082	0.8008	7.5518
	41	0000 0480	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516
Road #25	41	0000 0490	2.1882	1.9882	2.9882	2.2882	2.0882	2.0882	1.0082	1.8108	0.7218	1.0082	0.8008	7.5518
	41	0000 0500	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516
Road #26	41	0000 0510	2.1882	1.9882	2.9882	2.2882	2.0882	2.0882	1.0082	1.8108	0.7218	1.0082	0.8008	7.5518
	41	0000 0520	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516
Road #27	41	0000 0530	2.1882	1.9882	2.9882	2.2882	2.0882	2.0882	1.0082	1.8108	0.7218	1.0082	0.8008	7.5518
	41	0000 0540	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516
Road #28	41	0000 0550	2.1882	1.9882	2.9882	2.2882	2.0882	2.0882	1.0082	1.8108	0.7218	1.0082	0.8008	7.5518
	41	0000 0560	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516
Road #29	41	0000 0570	2.1882	1.9882	2.9882	2.2882	2.0882	2.0882	1.0082	1.8108	0.7218	1.0082	0.8008	7.5518
	41	0000 0580	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516
Road #30	41	0000 0590	2.1882	1.9882	2.9882	2.2882	2.0882	2.0882	1.0082	1.8108	0.7218	1.0082	0.8008	7.5518
	41	0000 0600	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516
Road #31	41	0000 0610	2.1882	1.9882	2.9882	2.2882	2.0882	2.0882	1.0082	1.8108	0.7218	1.0082	0.8008	7.5518
	41	0000 0620	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516
Road #32	41	0000 0630	2.1882	1.9882	2.9882	2.2882	2.0882	2.0882	1.0082	1.8108	0.7218	1.0082	0.8008	7.5518
	41	0000 0640	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516
Road #33	41	0000 0650	2.1882	1.9882	2.9882	2.2882	2.0882	2.0882	1.0082	1.8108	0.7218	1.0082	0.8008	7.5518
	41	0000 0660	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516
Road #34	41	0000 0670	2.1882	1.9882	2.9882	2.2882	2.0882	2.0882	1.0082	1.8108	0.7218	1.0082	0.8008	7.5518
	41	0000 0680	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516
Road #35	41	0000 0690	2.1882	1.9882	2.9882	2.2882	2.0882	2.0882	1.0082	1.8108	0.7218	1.0082	0.8008	7.5518
	41	0000 0700	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516
Road #36	41	0000 0710	2.1882	1.9882	2.9882	2.2882	2.0882	2.0882	1.0082	1.8108	0.7218	1.0082	0.8008	7.5518
	41	0000 0720	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516	2.3516
Road #37	41	0000 0730	2.1882	1.9882	2.9882	2.2882	2.0882	2.0882	1.0082	1.8108	0.7218	1.0082	0.8008	7.5518
	41	0000 0740	2.3516	2.3516	2.3516	2.3516	2.3							

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Area 24 North Undermined Quarry											
Run #4 2004 Emission Factors for											
AR2000 Model Emissions											
Year 2003											
Run ID	Hour	NO _x Emission					NO _x Emission				
		Monthly/average		Monthly/average		Monthly/average		Monthly/average			
		g/hour	g/hour	g/hour	g/hour	g/hour	g/hour	g/hour	g/hour	g/hour	g/hour
Run #44	44	0800-0900	1.986	3.181	2.418	1.292	1.527	2.198	1.068	1.020	1.845
Run #44	44	0900-1000	1.545	2.535	2.040	1.444	1.345	2.057	1.043	1.043	1.645
Run #44	44	1000-1100	1.515	2.585	2.055	1.444	1.345	2.057	1.043	1.043	1.645
Run #44	44	1100-1200	1.635	2.635	2.135	1.466	2.785	2.715	1.085	2.245	1.935
Run #44	44	1200-1300	1.565	2.515	2.035	1.444	1.345	2.057	1.043	1.043	1.645
Run #44	44	1300-1400	1.775	4.075	3.075	1.788	4.952	3.752	1.302	3.288	2.018
Run #44	44	1400-1500	1.565	2.515	2.035	1.444	1.345	2.057	1.043	1.043	1.645
Run #44	44	1500-1600	1.915	2.715	2.315	1.444	1.345	2.057	1.043	1.043	1.645
Run #44	44	1600-1700	2.328	6.028	4.238	2.075	6.095	4.735	1.818	4.335	2.535
Run #44	44	1700-1800	2.395	4.395	3.195	2.145	3.545	2.745	1.445	2.445	2.645
Run #44	44	1800-1900	2.485	5.035	3.635	2.625	4.215	3.015	1.815	3.415	3.335
Run #44	44	1900-2000	2.485	5.035	3.635	2.625	4.215	3.015	1.815	3.415	3.335
Run #44	44	2000-2100	2.105	2.105	2.105	1.444	8.915	7.995	1.165	6.335	1.425
Run #44	44	2100-2200	2.885	2.885	2.885	2.065	1.785	1.235	1.065	1.445	2.235
Run #44	44	2200-2300	2.885	2.885	2.885	2.065	1.785	1.235	1.065	1.445	2.235
Run #44	44	2300-2400	2.885	2.885	2.885	2.065	1.785	1.235	1.065	1.445	2.235
Run #44	44	0000-0100	0.785	1.035	0.915	8.665	0.425	8.775	0.445	1.485	0.825
Run #44	44	0100-0200	0.785	1.035	0.915	8.665	0.425	8.775	0.445	1.485	0.825
Run #44	44	0200-0300	0.885	1.485	1.305	8.775	0.535	8.985	0.555	1.585	0.935
Run #44	44	0300-0400	0.885	1.485	1.305	8.775	0.535	8.985	0.555	1.585	0.935
Run #44	44	0400-0500	1.065	3.765	2.465	9.325	0.325	4.095	0.725	1.595	0.925
Run #44	44	0500-0600	1.135	3.835	2.535	9.325	0.325	4.095	0.725	1.595	0.925
Run #44	44	0600-0700	1.205	3.905	2.605	9.325	0.325	4.095	0.725	1.595	0.925
Run #44	44	0700-0800	1.275	3.975	2.675	9.325	0.325	4.095	0.725	1.595	0.925
Run #44	44	0800-0900	1.345	4.045	2.745	9.325	0.325	4.095	0.725	1.595	0.925
Run #44	44	0900-1000	1.425	4.115	2.815	9.325	0.325	4.095	0.725	1.595	0.925
Run #44	44	1000-1100	1.495	4.185	2.885	9.325	0.325	4.095	0.725	1.595	0.925
Run #44	44	1100-1200	1.565	4.255	2.955	9.325	0.325	4.095	0.725	1.595	0.925
Run #44	44	1200-1300	1.635	4.325	3.025	9.325	0.325	4.095	0.725	1.595	0.925
Run #44	44	1300-1400	1.705	4.395	3.095	9.325	0.325	4.095	0.725	1.595	0.925
Run #44	44	1400-1500	1.775	4.465	3.165	9.325	0.325	4.095	0.725	1.595	0.925
Run #44	44	1500-1600	1.845	4.535	3.235	9.325	0.325	4.095	0.725	1.595	0.925
Run #44	44	1600-1700	1.915	4.605	3.305	9.325	0.325	4.095	0.725	1.595	0.925
Run #44	44	1700-1800	1.985	4.675	3.375	9.325	0.325	4.095	0.725	1.595	0.925
Run #44	44	1800-1900	2.055	4.745	3.445	9.325	0.325	4.095	0.725	1.595	0.925
Run #44	44	1900-2000	2.125	4.815	3.515	9.325	0.325	4.095	0.725	1.595	0.925
Run #44	44	2000-2100	2.195	4.885	3.585	9.325	0.325	4.095	0.725	1.595	0.925
Run #44	44	2100-2200	2.265	4.955	3.655	9.325	0.325	4.095	0.725	1.595	0.925
Run #44	44	2200-2300	2.335	5.025	3.725	9.325	0.325	4.095	0.725	1.595	0.925
Run #44	44	2300-2400	2.405	5.095	3.795	9.325	0.325	4.095	0.725	1.595	0.925
Run #44	44	0000-0100	1.055	2.045	0.785	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	0100-0200	1.055	2.045	0.785	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	0200-0300	1.105	2.145	0.835	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	0300-0400	1.155	2.245	0.885	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	0400-0500	1.205	2.345	0.935	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	0500-0600	1.255	2.445	0.985	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	0600-0700	1.305	2.545	1.035	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	0700-0800	1.355	2.645	1.085	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	0800-0900	1.405	2.745	1.135	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	0900-1000	1.455	2.845	1.185	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	1000-1100	1.505	2.945	1.235	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	1100-1200	1.555	3.045	1.285	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	1200-1300	1.605	3.145	1.335	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	1300-1400	1.655	3.245	1.385	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	1400-1500	1.705	3.345	1.435	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	1500-1600	1.755	3.445	1.485	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	1600-1700	1.805	3.545	1.535	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	1700-1800	1.855	3.645	1.585	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	1800-1900	1.905	3.745	1.635	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	1900-2000	1.955	3.845	1.685	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	2000-2100	2.005	3.945	1.735	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	2100-2200	2.055	4.045	1.785	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	2200-2300	2.105	4.145	1.835	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	2300-2400	2.155	4.245	1.885	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	0000-0100	1.115	2.175	0.845	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	0100-0200	1.165	2.275	0.895	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	0200-0300	1.215	2.375	0.945	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	0300-0400	1.265	2.475	0.995	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	0400-0500	1.315	2.575	1.045	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	0500-0600	1.365	2.675	1.095	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	0600-0700	1.415	2.775	1.145	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	0700-0800	1.465	2.875	1.195	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	0800-0900	1.515	2.975	1.245	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	0900-1000	1.565	3.075	1.295	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	1000-1100	1.615	3.175	1.345	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	1100-1200	1.665	3.275	1.395	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	1200-1300	1.715	3.375	1.445	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	1300-1400	1.765	3.475	1.495	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	1400-1500	1.815	3.575	1.545	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	1500-1600	1.865	3.675	1.595	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	1600-1700	1.915	3.775	1.645	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	1700-1800	1.965	3.875	1.695	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	1800-1900	2.015	3.975	1.745	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	1900-2000	2.065	4.075	1.795	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	2000-2100	2.115	4.175	1.845	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	2100-2200	2.165	4.275	1.895	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	2200-2300	2.215	4.375	1.945	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	2300-2400	2.265	4.475	1.995	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	0000-0100	1.125	2.175	0.845	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	0100-0200	1.175	2.275	0.895	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	0200-0300	1.225	2.375	0.945	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	0300-0400	1.275	2.475	0.995	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	0400-0500	1.325	2.575	1.045	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	0500-0600	1.375	2.675	1.095	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	0600-0700	1.425	2.775	1.145	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	0700-0800	1.475	2.875	1.195	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	0800-0900	1.525	2.975	1.245	8.865	0.815	0.775	1.355	0.665	0.625
Run #44	44	0900-1000	1.575	3.075	1.295						

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

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\\ad\Appendix 3.5.3 Emission Factor in 2033.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Top North and Under Quarry														
2023 North 2023 Envision Factors for														
ARM200 Model Development														
Year 2033														
Road	Node	Road ID	Hour	No. Emission				No. Emission						
				Monthly/Hours	Monthly/Hours	Monthly/Hours	Monthly/Hours	Monthly/Hours	Monthly/Hours	Monthly/Hours	Monthly/Hours			
Road 21	21	00000-010	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-020	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-030	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-040	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-050	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-060	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-070	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-080	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-090	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-100	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-110	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-120	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-130	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-140	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-150	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-160	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-170	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-180	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-190	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-200	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-210	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-220	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-230	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-240	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-250	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-260	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-270	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-280	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-290	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-300	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-310	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-320	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-330	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-340	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-350	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-360	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-370	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-380	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-390	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-400	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-410	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-420	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-430	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-440	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-450	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-460	1	1525	1146	1515	1516	1515	1505	1465	1245	978	679	315
			2	1575	1625	1624	1625	1625	1625	1625	1625	1625	1625	1625
Road 21	21	00000-470	1	1525	1146									

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Road 24 Hour Unimodal Factors for AASHTO Model (February)												
Road Name		Road ID	Monthly/mile/hour		Monthly/mile/hour		Monthly/mile/hour		Monthly/mile/hour		Monthly/mile/hour	
			No Emission		No Emission		No Emission		No Emission		No Emission	
			g/hour/mile	g/hour/mile	g/hour/mile	g/hour/mile	g/hour/mile	g/hour/mile	g/hour/mile	g/hour/mile	g/hour/mile	g/hour/mile
Road 24	24	0800-0900	1.46E-02	3.22E-03	1.97E-03	1.53E-03	1.62E-02	4.14E-03	6.26E-03	1.05E-06	1.77E-03	2.82E-06
Road 24	24	0900-1000	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 24	24	1000-1100	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 24	24	1100-1200	1.79E-02	3.58E-03	8.98E-02	1.54E-03	1.38E-02	8.23E-03	6.52E-03	1.31E-06	3.28E-03	5.07E-06
Road 24	24	1200-1300	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 24	24	1300-1400	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 24	24	1400-1500	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 24	24	1500-1600	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 24	24	1600-1700	1.74E-02	3.82E-03	1.08E-02	1.62E-03	1.57E-02	8.82E-03	1.34E-06	5.89E-03	1.28E-03	1.21E-06
Road 24	24	1700-1800	1.74E-02	3.82E-03	1.08E-02	1.62E-03	1.57E-02	8.82E-03	1.34E-06	5.89E-03	1.28E-03	1.21E-06
Road 24	24	1800-1900	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 24	24	1900-2000	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 24	24	2000-2100	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 24	24	2100-2200	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 24	24	2200-2300	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 24	24	2300-2400	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 25	25	0800-0900	1.37E-02	5.99E-03	1.08E-03	1.22E-03	5.45E-02	5.93E-03	1.23E-03	5.68E-03	4.02E-03	5.10E-07
Road 25	25	0900-1000	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 25	25	1000-1100	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 25	25	1100-1200	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 25	25	1200-1300	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 25	25	1300-1400	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 25	25	1400-1500	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 25	25	1500-1600	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 25	25	1600-1700	1.74E-02	3.82E-03	1.08E-02	1.62E-03	1.57E-02	8.82E-03	1.34E-06	5.89E-03	1.28E-03	1.21E-06
Road 25	25	1700-1800	1.74E-02	3.82E-03	1.08E-02	1.62E-03	1.57E-02	8.82E-03	1.34E-06	5.89E-03	1.28E-03	1.21E-06
Road 25	25	1800-1900	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 25	25	1900-2000	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 25	25	2000-2100	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 25	25	2100-2200	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 25	25	2200-2300	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 25	25	2300-2400	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 26	26	0800-0900	1.39E-02	5.52E-03	2.07E-02	1.26E-03	5.02E-02	8.88E-03	1.25E-03	5.09E-03	4.48E-03	1.86E-07
Road 26	26	0900-1000	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 26	26	1000-1100	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 26	26	1100-1200	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 26	26	1200-1300	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 26	26	1300-1400	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 26	26	1400-1500	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 26	26	1500-1600	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 26	26	1600-1700	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 26	26	1700-1800	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 26	26	1800-1900	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 26	26	1900-2000	1.74E-02	3.82E-03	1.08E-02	1.62E-03	1.57E-02	8.82E-03	1.34E-06	5.89E-03	1.28E-03	1.21E-06
Road 26	26	2000-2100	1.74E-02	3.82E-03	1.08E-02	1.62E-03	1.57E-02	8.82E-03	1.34E-06	5.89E-03	1.28E-03	1.21E-06
Road 26	26	2100-2200	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 26	26	2200-2300	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 26	26	2300-2400	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 27	27	0800-0900	1.37E-02	5.99E-03	1.08E-03	1.22E-03	5.45E-02	5.93E-03	1.23E-03	5.68E-03	4.02E-03	5.10E-07
Road 27	27	0900-1000	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 27	27	1000-1100	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 27	27	1100-1200	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 27	27	1200-1300	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 27	27	1300-1400	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 27	27	1400-1500	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 27	27	1500-1600	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 27	27	1600-1700	1.74E-02	3.82E-03	1.08E-02	1.62E-03	1.57E-02	8.82E-03	1.34E-06	5.89E-03	1.28E-03	1.21E-06
Road 27	27	1700-1800	1.74E-02	3.82E-03	1.08E-02	1.62E-03	1.57E-02	8.82E-03	1.34E-06	5.89E-03	1.28E-03	1.21E-06
Road 27	27	1800-1900	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 27	27	1900-2000	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 27	27	2000-2100	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 27	27	2100-2200	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 27	27	2200-2300	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03
Road 27	27	2300-2400	1.48E-02	3.56E-03	9.15E-04	1.53E-03	3.40E-02	4.61E-03	1.29E-04	2.49E-03	5.98E-03	1.28E-03

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Road 2nd Hour Extension Querry														
Year 2003														
Road Name		Hour	Mo/Environ			Mo/Environ			Mo/Environ			Mo/Environ		
			g/h/mph	ton/hour	ton/mph	g/h/mph	ton/hour	ton/mph	g/h/mph	ton/hour	ton/mph	Mo/Environ		
			Mo/Environ			Mo/Environ			Mo/Environ			Mo/Environ		
			Mo/Environ			Mo/Environ			Mo/Environ			Mo/Environ		
Road 34	34	0800-0900	1.472E+01	1.888E+07	9.66E+06	1.222E+01	3.17E+07	8.38E+06	1.032E+01	2.68E+06	6.92E+05	8.44E+02	2.20E+06	5.75E+05
Road 34	34	0900-1000	1.582E+01	1.538E+07	8.62E+06	1.322E+01	2.97E+07	7.67E+06	1.082E+01	2.85E+06	6.22E+05	9.25E+02	2.32E+06	5.92E+05
Road 34	34	1000-1100	1.682E+01	1.438E+07	7.92E+06	1.422E+01	2.77E+07	7.07E+06	1.182E+01	2.65E+06	5.82E+05	9.75E+02	2.42E+06	6.02E+05
Road 34	34	1100-1200	1.778E+01	2.98E+07	7.88E+06	1.492E+01	2.61E+07	6.87E+06	1.25E+01	2.50E+06	5.24E+05	9.82E+02	2.71E+06	6.47E+05
Road 34	34	1200-1300	1.882E+01	2.98E+07	7.88E+06	1.572E+01	2.61E+07	6.87E+06	1.35E+01	2.50E+06	5.24E+05	1.08E+03	2.71E+06	6.47E+05
Road 34	34	1300-1400	1.978E+01	2.98E+07	7.88E+06	1.672E+01	2.61E+07	6.87E+06	1.45E+01	2.50E+06	5.24E+05	1.18E+03	2.71E+06	6.47E+05
Road 34	34	1400-1500	2.072E+01	2.98E+07	7.88E+06	1.772E+01	2.61E+07	6.87E+06	1.55E+01	2.50E+06	5.24E+05	1.28E+03	2.71E+06	6.47E+05
Road 34	34	1500-1600	2.172E+01	2.98E+07	7.88E+06	1.872E+01	2.61E+07	6.87E+06	1.65E+01	2.50E+06	5.24E+05	1.38E+03	2.71E+06	6.47E+05
Road 34	34	1600-1700	2.272E+01	2.98E+07	7.88E+06	1.972E+01	2.61E+07	6.87E+06	1.75E+01	2.50E+06	5.24E+05	1.48E+03	2.71E+06	6.47E+05
Road 34	34	1700-1800	2.372E+01	2.98E+07	7.88E+06	2.072E+01	2.61E+07	6.87E+06	1.85E+01	2.50E+06	5.24E+05	1.58E+03	2.71E+06	6.47E+05
Road 34	34	1800-1900	2.472E+01	2.98E+07	7.88E+06	2.172E+01	2.61E+07	6.87E+06	1.95E+01	2.50E+06	5.24E+05	1.68E+03	2.71E+06	6.47E+05
Road 34	34	1900-2000	2.572E+01	2.98E+07	7.88E+06	2.272E+01	2.61E+07	6.87E+06	2.05E+01	2.50E+06	5.24E+05	1.78E+03	2.71E+06	6.47E+05
Road 34	34	2000-2100	2.672E+01	2.98E+07	7.88E+06	2.372E+01	2.61E+07	6.87E+06	2.15E+01	2.50E+06	5.24E+05	1.88E+03	2.71E+06	6.47E+05
Road 34	34	2100-2200	2.772E+01	2.98E+07	7.88E+06	2.472E+01	2.61E+07	6.87E+06	2.25E+01	2.50E+06	5.24E+05	1.98E+03	2.71E+06	6.47E+05
Road 34	34	2200-2300	2.872E+01	2.98E+07	7.88E+06	2.572E+01	2.61E+07	6.87E+06	2.35E+01	2.50E+06	5.24E+05	2.08E+03	2.71E+06	6.47E+05
Road 34	34	2300-2400	2.972E+01	2.98E+07	7.88E+06	2.672E+01	2.61E+07	6.87E+06	2.45E+01	2.50E+06	5.24E+05	2.18E+03	2.71E+06	6.47E+05
Road 34	34	2400-2500	3.072E+01	2.98E+07	7.88E+06	2.772E+01	2.61E+07	6.87E+06	2.55E+01	2.50E+06	5.24E+05	2.28E+03	2.71E+06	6.47E+05
Road 34	34	2500-2600	3.172E+01	2.98E+07	7.88E+06	2.872E+01	2.61E+07	6.87E+06	2.65E+01	2.50E+06	5.24E+05	2.38E+03	2.71E+06	6.47E+05
Road 34	34	2600-2700	3.272E+01	2.98E+07	7.88E+06	2.972E+01	2.61E+07	6.87E+06	2.75E+01	2.50E+06	5.24E+05	2.48E+03	2.71E+06	6.47E+05
Road 34	34	2700-2800	3.372E+01	2.98E+07	7.88E+06	3.072E+01	2.61E+07	6.87E+06	2.85E+01	2.50E+06	5.24E+05	2.58E+03	2.71E+06	6.47E+05
Road 34	34	2800-2900	3.472E+01	2.98E+07	7.88E+06	3.172E+01	2.61E+07	6.87E+06	2.95E+01	2.50E+06	5.24E+05	2.68E+03	2.71E+06	6.47E+05
Road 34	34	2900-3000	3.572E+01	2.98E+07	7.88E+06	3.272E+01	2.61E+07	6.87E+06	3.05E+01	2.50E+06	5.24E+05	2.78E+03	2.71E+06	6.47E+05
Road 34	34	3000-3100	3.672E+01	2.98E+07	7.88E+06	3.372E+01	2.61E+07	6.87E+06	3.15E+01	2.50E+06	5.24E+05	2.88E+03	2.71E+06	6.47E+05
Road 34	34	3100-3200	3.772E+01	2.98E+07	7.88E+06	3.472E+01	2.61E+07	6.87E+06	3.25E+01	2.50E+06	5.24E+05	2.98E+03	2.71E+06	6.47E+05
Road 34	34	3200-3300	3.872E+01	2.98E+07	7.88E+06	3.572E+01	2.61E+07	6.87E+06	3.35E+01	2.50E+06	5.24E+05	3.08E+03	2.71E+06	6.47E+05
Road 34	34	3300-3400	3.972E+01	2.98E+07	7.88E+06	3.672E+01	2.61E+07	6.87E+06	3.45E+01	2.50E+06	5.24E+05	3.18E+03	2.71E+06	6.47E+05
Road 34	34	3400-3500	4.072E+01	2.98E+07	7.88E+06	3.772E+01	2.61E+07	6.87E+06	3.55E+01	2.50E+06	5.24E+05	3.28E+03	2.71E+06	6.47E+05
Road 34	34	3500-3600	4.172E+01	2.98E+07	7.88E+06	3.872E+01	2.61E+07	6.87E+06	3.65E+01	2.50E+06	5.24E+05	3.38E+03	2.71E+06	6.47E+05
Road 34	34	3600-3700	4.272E+01	2.98E+07	7.88E+06	3.972E+01	2.61E+07	6.87E+06	3.75E+01	2.50E+06	5.24E+05	3.48E+03	2.71E+06	6.47E+05
Road 34	34	3700-3800	4.372E+01	2.98E+07	7.88E+06	4.072E+01	2.61E+07	6.87E+06	3.85E+01	2.50E+06	5.24E+05	3.58E+03	2.71E+06	6.47E+05
Road 34	34	3800-3900	4.472E+01	2.98E+07	7.88E+06	4.172E+01	2.61E+07	6.87E+06	3.95E+01	2.50E+06	5.24E+05	3.68E+03	2.71E+06	6.47E+05
Road 34	34	3900-4000	4.572E+01	2.98E+07	7.88E+06	4.272E+01	2.61E+07	6.87E+06	4.05E+01	2.50E+06	5.24E+05	3.78E+03	2.71E+06	6.47E+05
Road 34	34	4000-4100	4.672E+01	2.98E+07	7.88E+06	4.372E+01	2.61E+07	6.87E+06	4.15E+01	2.50E+06	5.24E+05	3.88E+03	2.71E+06	6.47E+05
Road 34	34	4100-4200	4.772E+01	2.98E+07	7.88E+06	4.472E+01	2.61E+07	6.87E+06	4.25E+01	2.50E+06	5.24E+05	3.98E+03	2.71E+06	6.47E+05
Road 34	34	4200-4300	4.872E+01	2.98E+07	7.88E+06	4.572E+01	2.61E+07	6.87E+06	4.35E+01	2.50E+06	5.24E+05	4.08E+03	2.71E+06	6.47E+05
Road 34	34	4300-4400	4.972E+01	2.98E+07	7.88E+06	4.672E+01	2.61E+07	6.87E+06	4.45E+01	2.50E+06	5.24E+05	4.18E+03	2.71E+06	6.47E+05
Road 34	34	4400-4500	5.072E+01	2.98E+07	7.88E+06	4.772E+01	2.61E+07	6.87E+06	4.55E+01	2.50E+06	5.24E+05	4.28E+03	2.71E+06	6.47E+05
Road 34	34	4500-4600	5.172E+01	2.98E+07	7.88E+06	4.872E+01	2.61E+07	6.87E+06	4.65E+01	2.50E+06	5.24E+05	4.38E+03	2.71E+06	6.47E+05
Road 34	34	4600-4700	5.272E+01	2.98E+07	7.88E+06	4.972E+01	2.61E+07	6.87E+06	4.75E+01	2.50E+06	5.24E+05	4.48E+03	2.71E+06	6.47E+05
Road 34	34	4700-4800	5.372E+01	2.98E+07	7.88E+06	5.072E+01	2.61E+07	6.87E+06	4.85E+01	2.50E+06	5.24E+05	4.58E+03	2.71E+06	6.47E+05
Road 34	34	4800-4900	5.472E+01	2.98E+07	7.88E+06	5.172E+01	2.61E+07	6.87E+06	4.95E+01	2.50E+06	5.24E+05	4.68E+03	2.71E+06	6.47E+05
Road 34	34	4900-5000	5.572E+01	2.98E+07	7.88E+06	5.272E+01	2.61E+07	6.87E+06	5.05E+01	2.50E+06	5.24E+05	4.78E+03	2.71E+06	6.47E+05
Road 34	34	5000-5100	5.672E+01	2.98E+07	7.88E+06	5.372E+01	2.61E+07	6.87E+06	5.15E+01	2.50E+06	5.24E+05	4.88E+03	2.71E+06	6.47E+05
Road 34	34	5100-5200	5.772E+01	2.98E+07	7.88E+06	5.472E+01	2.61E+07	6.87E+06	5.25E+01	2.50E+06	5.24E+05	4.98E+03	2.71E+06	6.47E+05
Road 34	34	5200-5300	5.872E+01	2.98E+07	7.88E+06	5.572E+01	2.61E+07	6.87E+06	5.35E+01	2.50E+06	5.24E+05	5.08E+03	2.71E+06	6.47E+05
Road 34	34	5300-5400	5.972E+01	2.98E+07	7.88E+06	5.672E+01	2.61E+07	6.87E+06	5.45E+01	2.50E+06	5.24E+05	5.18E+03	2.71E+06	6.47E+05
Road 34	34	5400-5500	6.072E+01	2.98E+07	7.88E+06	5.772E+01	2.61E+07	6.87E+06	5.55E+01	2.50E+06	5.24E+05	5.28E+03	2.71E+06	6.47E+05
Road 34	34	5500-5600	6.172E+01	2.98E+07	7.88E+06	5.872E+01	2.61E+07	6.87E+06	5.65E+01	2.50E+06	5.24E+05	5.38E+03	2.71E+06	6.47E+05
Road 34	34	5600-5700	6.272E+01	2.98E+07	7.88E+06	5.972E+01	2.61E+07	6.87E+06	5.75E+01	2.50E+06	5.24E+05	5.48E+03	2.71E+06	6.47E+05
Road 34	34	5700-5800	6.372E+01	2.98E+07	7.88E+06	6.072E+01	2.61E+07	6.87E+06	5.85E+01	2.50E+06	5.24E+05	5.58E+03	2.71E+06	6.47E+05
Road 34	34	5800-5900	6.472E+01	2.98E+07	7.88E+06	6.172E+01	2.61E+07	6.87E+06	5.95E+01	2.50E+06	5.24E+05	5.68E+03	2.71E+06	6.47E+05
Road 34	34	5900-6000	6.572E+01	2.98E+07	7.88E+06	6.272E+01	2.61E+07	6.87E+06	6.05E+01	2.50E+06	5.24E+05	5.78E+03	2.71E+06	6.47E+05
Road 34	34	6000-6100	6.672E+01	2.98E+07	7.88E+06	6.372E+01	2.61E+07	6.87E+06	6.15E+01	2.50E+06	5.24E+05	5.88E+03	2.71E+06	6.47E+05
Road 34	34	6100-6200	6.772E+01	2.98E+07	7.88E+06	6.472E+01	2.61E+07	6.87E+06	6.25E+01	2.50E+06	5.24E+05	5.98E+03	2.71E+06	6.47E+05
Road 34	34	6200-6300	6.872E+01	2.98E+07	7.88E+06	6.572E+01	2.61E+07	6.87E+06	6.35E+01	2.50E+06	5.24E+05	6.08E+03	2.71E+06	6.47E+05
Road 34	34	6300-6400	6.972E+01	2.98E+07	7.88E+06	6.672E+01	2.61E+07	6.87E+06	6.45E+01	2.50E+06	5.24E+05	6.18E+03	2.71E+06	6.47E+05
Road 34	34	6400-6500	7.072E+01	2.98E+07	7.88E+06	6.772E+01	2.61E+07	6.87E+06	6.55E+01	2.50E+06	5.24E+05	6.28E+03	2.71E+06	6.47E+05
Road 34	34	6500-6600	7.172E+01	2.98E+07	7.88E+06	6.872E+01	2.61E+07	6.87E+06	6.65E+01	2.50E+06	5.24E+05	6.38E+03	2.71E+06	6.47E+05
Road 34	34	6600-6700	7.272E+01	2.98E+07	7.88E+06	6.972E+01	2.61E+07	6.87E+06	6.75E+01	2.50E+06	5.24E+05	6.48E+03	2.71E+06	6.47E+05
Road 34	34	6700-6800	7.372E+01	2.98E+07	7.88E+06	7.072E+01	2.61E+07	6.87E+06	6.85E+01	2.50E+06	5.24E+05	6.58E+03	2.71E+06	6.47E+05
Road 34	34	6800-6900	7.472E+01	2.98E+07	7.88E+06	7.172E+01	2.61E+07	6.87E+06	6.95E+01	2.50E+06	5.24E+05	6.68E+03	2.71E+06	6.47E+05
Road 34	34	6900-7000	7.572E+01	2.98E+07	7.88E+06	7.272E+01	2.61E+07	6.87E+06	7.05E+01	2.50E+06	5.24E+05	6.78E+03	2.71E+06	6.47E+05
Road 34	34	7000-7100	7.672E+01	2.98E+07	7.88E+06	7.372E+01	2.61E+07	6.87E+06	7.15E+01	2.50E+06				

L:\Secure\Environment Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Open Road\Appendix 3.5.3 Emission Factor in 2033.xlsx

Open Road North Underground Quarry															
Table 1: Open Road North Exonation Factors for ARB200 Model (Metric)															
			Year 2003												
Road	Route ID	Hour	Metric		No. Emission		Metric		No. Emission		Metric		No. Emission		
			g/h/m ³	Monthly/Average	g/h/m ³	Monthly/Average	g/h/m ³	Monthly/Average	g/h/m ³	Monthly/Average	g/h/m ³	Monthly/Average	g/h/m ³	Monthly/Average	
Road 17	37	1600-1700	7.70E-02	1.80E-08	7.98E-08	7.90E-09	1.23E-08	2.82E-09	3.08E-01	5.33E-08	1.98E-07	2.87E-01	4.83E-08	1.11E-07	
			1.10E-02	2.63E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07
Road 17	37	1700-1800	6.80E-02	1.59E-08	6.70E-08	6.70E-09	1.03E-08	2.42E-09	2.65E-01	4.44E-08	1.62E-07	2.87E-01	4.83E-08	1.11E-07	
			1.10E-02	2.63E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07
Road 17	37	1800-1900	3.79E-02	8.25E-09	3.21E-08	3.05E-09	4.87E-09	1.14E-09	1.44E-01	2.27E-01	3.03E-08	6.90E-09	1.98E-09	2.76E-01	6.31E-08
			1.10E-02	2.63E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07
Road 17	37	2100-2200	1.70E-02	3.91E-09	8.42E-09	1.82E-09	1.30E-09	3.02E-09	3.21E-01	2.54E-08	5.84E-08	2.18E-09	2.08E-08	5.42E-09	1.42E-08
			1.10E-02	2.63E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07
Road 18	38	0500-0600	5.86E-02	1.30E-08	6.03E-08	5.92E-09	9.23E-09	2.31E-09	2.46E-01	2.42E-08	2.42E-08	2.42E-08	2.42E-08	2.42E-08	2.42E-08
			1.10E-02	2.63E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07
Road 18	38	0600-0700	5.86E-02	1.30E-08	6.03E-08	5.92E-09	9.23E-09	2.31E-09	2.46E-01	2.42E-08	2.42E-08	2.42E-08	2.42E-08	2.42E-08	2.42E-08
			1.10E-02	2.63E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07
Road 18	38	0700-0800	4.52E-02	1.02E-08	4.16E-08	3.96E-09	4.58E-09	1.07E-09	1.44E-01	2.27E-01	3.03E-08	6.90E-09	1.98E-09	2.76E-01	6.31E-08
			1.10E-02	2.63E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07
Road 18	38	0800-0900	4.86E-02	1.09E-08	2.39E-07	4.58E-09	8.75E-09	2.24E-07	2.84E-01	1.63E-07	1.32E-09	2.44E-01	2.44E-01	2.44E-01	2.44E-01
			1.10E-02	2.63E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07
Road 18	38	0900-1000	5.45E-02	1.29E-08	2.45E-08	2.45E-09	3.61E-09	8.98E-09	2.88E-01	1.74E-07	1.36E-09	2.44E-01	2.44E-01	2.44E-01	2.44E-01
			1.10E-02	2.63E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07
Road 18	38	1000-1100	5.87E-02	1.33E-08	4.53E-08	4.53E-09	6.26E-09	1.42E-09	2.97E-01	2.86E-07	2.99E-08	2.72E-01	2.72E-01	2.72E-01	2.72E-01
			1.10E-02	2.63E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07
Road 18	38	1100-1200	6.40E-02	1.47E-08	4.90E-08	4.90E-09	6.98E-09	1.72E-09	3.34E-01	3.34E-08	3.34E-08	3.34E-08	3.34E-08	3.34E-08	3.34E-08
			1.10E-02	2.63E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07
Road 18	38	1200-1300	1.30E-01	3.04E-07	1.08E-06	1.21E-07	2.38E-07	5.97E-08	4.23E-08	8.80E-07	6.79E-08	1.86E-08	7.60E-07	6.21E-08	1.60E-07
			1.10E-02	2.63E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07
Road 18	38	1300-1400	1.33E-01	3.08E-07	1.10E-06	1.23E-07	2.42E-07	6.01E-08	4.28E-08	8.91E-07	6.82E-08	1.89E-08	7.65E-07	6.25E-08	1.61E-07
			1.10E-02	2.63E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07
Road 18	38	1400-1500	1.33E-01	3.08E-07	1.10E-06	1.23E-07	2.42E-07	6.01E-08	4.28E-08	8.91E-07	6.82E-08	1.89E-08	7.65E-07	6.25E-08	1.61E-07
			1.10E-02	2.63E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07
Road 18	38	1500-1600	1.32E-01	3.09E-07	1.10E-06	1.23E-07	2.43E-07	6.04E-08	4.29E-08	8.92E-07	6.83E-08	1.90E-08	7.66E-07	6.26E-08	1.62E-07
			1.10E-02	2.63E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07
Road 18	38	1600-1700	1.22E-01	2.87E-07	2.02E-06	1.16E-07	2.32E-07	5.48E-08	4.28E-08	8.69E-07	7.12E-08	1.60E-08	4.17E-07	6.82E-08	1.57E-07
			1.10E-02	2.63E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07
Road 18	38	1700-1800	1.65E-01	3.82E-07	2.74E-06	1.54E-07	3.27E-07	7.21E-08	4.71E-08	1.06E-07	2.36E-08	5.29E-08	1.18E-07	2.59E-08	5.81E-08
			1.10E-02	2.63E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07
Road 18	38	1900-2000	1.50E-01	3.10E-07	1.01E-07	8.36E-07	8.69E-07	8.46E-08	7.92E-07	3.42E-01	3.86E-07	3.11E-08	3.26E-07	3.56E-07	3.05E-07
			1.10E-02	2.63E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07
Road 18	38	2000-2100	9.22E-02	1.80E-07	6.67E-07	8.88E-07	7.89E-08	6.39E-08	5.54E-01	3.12E-07	2.05E-08	3.34E-07	2.44E-07	2.41E-07	2.41E-07
			1.10E-02	2.63E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07
Road 18	38	2100-2200	9.21E-02	1.80E-07	6.67E-07	8.88E-07	7.89E-08	6.39E-08	5.54E-01	3.12E-07	2.05E-08	3.34E-07	2.44E-07	2.41E-07	2.41E-07
			1.10E-02	2.63E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07
Road 19	39	0500-0600	5.93E-02	1.36E-07	8.76E-07	8.14E-07	6.61E-08	1.45E-07	3.70E-07	2.84E-07	2.19E-08	1.09E-07	2.11E-07	2.05E-07	2.05E-07
			1.10E-02	2.63E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07
Road 19	39	0600-0700	1.06E-01	2.48E-08	2.11E-07	1.91E-07	3.78E-08	8.42E-08	1.30E-01	3.70E-08	8.64E-08	1.38E-07	5.05E-08	1.89E-07	8.97E-08
			1.10E-02	2.63E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07
Road 19	39	0700-0800	1.09E-01	1.77E-08	1.52E-07	1.54E-07	1.49E-08	3.44E-08	4.79E-01	6.18E-08	5.24E-07	3.57E-08	1.79E-08	4.49E-08	1.49E-08
			1.10E-02	2.63E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07
Road 19	39	0800-0900	1.12E-01	1.80E-08	1.55E-07	1.57E-07	1.50E-08	3.48E-08	4.79E-01	6.18E-08	5.24E-07	3.57E-08	1.79E-08	4.49E-08	1.49E-08
			1.10E-02	2.63E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07
Road 19	39	0900-1000	1.10E-01	1.72E-08	1.50E-07	1.50E-07	1.48E-08	3.48E-08	4.79E-01	6.18E-08	5.24E-07	3.57E-08	1.79E-08	4.49E-08	1.49E-08
			1.10E-02	2.63E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07
Road 19	39	1000-1100	1.20E-01	2.00E-08	2.20E-07	1.17E-07	1.53E-08	2.17E-07	1.07E-01	9.31E-08	7.79E-08	8.84E-08	1.88E-07	2.77E-08	1.88E-07
			1.10E-02	2.63E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07
Road 19	39	1100-1200	1.37E-01	2.85E-08	3.16E-08	1.28E-07	1.47E-08	1.48E-01	1.58E-07	5.09E-08	4.15E-08	5.55E-07	1.74E-08	1.48E-07	1.48E-07
			1.10E-02	2.63E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07
Road 19	39	1200-1300	1.42E-01	3.07E-08	3.47E-08	1.29E-07	1.48E-08	1.48E-01	1.58E-07	5.09E-08	4.15E-08	5.55E-07	1.74E-08	1.48E-07	1.48E-07
			1.10E-02	2.63E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07
Road 19	39	1300-1400	1.74E-01	3.74E-08	4.24E-08	1.63E-07	1.81E-08	1.81E-01	1.81E-07	5.69E-08	4.69E-08	6.22E-07	2.32E-08	1.81E-07	1.81E-07
			1.10E-02	2.63E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07
Road 19	39	1400-1500	1.93E-01	4.48E-08	4.67E-08	1.73E-07	1.81E-08	1.81E-01	1.81E-07	5.69E-08	4.69E-08	6.22E-07	2.32E-08	1.81E-07	1.81E-07
			1.10E-02	2.63E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07
Road 19	39	1500-1600	2.01E-01	4.68E-08	4.76E-08	1.73E-07	1.81E-08	1.81E-01	1.81E-07	5.69E-08	4.69E-08	6.22E-07	2.32E-08	1.81E-07	1.81E-07
			1.10E-02	2.63E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07	2.67E-08	1.10E-07
Road 19	39	1600-1700	2.06E-01	4.76E-08	4.76E-08	1.73E-07	1.81E-08	1.81E-01	1.81E-07	5.69E-08	4.				

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Table 10: Top 10 Worst Urban Emission Factors for ARB60 Model (March)																
Year 2003			NO _x Emission										NO Emission			
Route	Read ID	Hour	g/h/vmt	Monthly/avg	g/h/vmt	Monthly/avg	g/h/vmt	Monthly/avg	g/h/vmt	Monthly/avg	g/h/vmt	Monthly/avg	g/h/vmt	Monthly/avg	g/h/vmt	Monthly/avg
Read #44	44	0800-0900	1.382	1.384	3.884	2.388	1.176	1.311	2.407	1.044	1.784	1.824	8.640	2.488	1.511	
Read #44	44	0900-1000	1.506	1.442	2.506	1.506	1.202	1.074	2.006	1.054	2.506	2.506	8.506	2.506	1.506	
Read #44	44	1000-1100	1.562	1.562	2.562	1.562	1.262	1.134	2.262	1.062	2.562	2.562	8.562	2.562	1.562	
Read #44	44	1100-1200	1.592	1.632	3.032	1.875	1.402	1.254	2.602	1.104	2.514	2.174	1.345	8.574	1.824	1.444
Read #44	44	1200-1300	1.592	1.592	2.592	1.592	1.292	1.164	2.292	1.092	2.592	2.592	8.592	2.592	1.592	
Read #44	44	1300-1400	1.912	1.912	2.912	1.912	1.612	1.412	2.606	1.312	1.912	1.912	8.912	1.912	1.702	1.676
Read #44	44	1400-1500	1.962	1.922	2.962	1.962	1.702	1.492	2.606	1.306	1.962	1.962	8.962	1.962	1.702	1.686
Read #44	44	1500-1600	1.822	1.822	2.822	1.822	1.622	1.422	2.606	1.306	1.822	1.822	8.822	1.822	1.622	1.622
Read #44	44	1600-1700	2.222	2.322	3.022	2.088	1.522	1.302	2.606	1.302	2.606	2.432	1.302	1.302	1.492	1.492
Read #44	44	1700-1800	2.262	2.262	3.262	2.262	1.762	1.562	2.606	1.306	2.262	2.262	8.262	2.262	1.762	1.762
Read #44	44	1800-1900	2.582	2.582	3.262	2.262	1.762	1.562	2.606	1.306	2.582	2.582	8.582	2.582	1.762	1.762
Read #44	44	1900-2000	2.982	2.982	3.262	2.262	1.762	1.562	2.606	1.306	2.982	2.982	8.982	2.982	1.762	1.762
Read #44	44	2000-2100	3.182	3.182	3.262	2.262	1.762	1.562	2.606	1.306	3.182	3.182	8.182	3.182	1.762	1.762
Read #44	44	2100-2200	3.282	3.282	3.262	2.262	1.762	1.562	2.606	1.306	3.282	3.282	8.282	3.282	1.762	1.762
Read #44	44	2200-2300	3.382	3.382	3.262	2.262	1.762	1.562	2.606	1.306	3.382	3.382	8.382	3.382	1.762	1.762
Read #44	44	2300-2400	3.482	3.482	3.262	2.262	1.762	1.562	2.606	1.306	3.482	3.482	8.482	3.482	1.762	1.762
Read #44	44	2400-2500	3.582	3.582	3.262	2.262	1.762	1.562	2.606	1.306	3.582	3.582	8.582	3.582	1.762	1.762
Read #44	44	2500-2600	3.682	3.682	3.262	2.262	1.762	1.562	2.606	1.306	3.682	3.682	8.682	3.682	1.762	1.762
Read #44	44	2600-2700	3.782	3.782	3.262	2.262	1.762	1.562	2.606	1.306	3.782	3.782	8.782	3.782	1.762	1.762
Read #44	44	2700-2800	3.882	3.882	3.262	2.262	1.762	1.562	2.606	1.306	3.882	3.882	8.882	3.882	1.762	1.762
Read #44	44	2800-2900	3.982	3.982	3.262	2.262	1.762	1.562	2.606	1.306	3.982	3.982	8.982	3.982	1.762	1.762
Read #44	44	2900-3000	4.082	4.082	3.262	2.262	1.762	1.562	2.606	1.306	4.082	4.082	9.082	4.082	1.762	1.762
Read #44	44	3000-0100	4.182	4.182	3.262	2.262	1.762	1.562	2.606	1.306	4.182	4.182	9.182	4.182	1.762	1.762
Read #44	44	0100-0200	4.282	4.282	3.262	2.262	1.762	1.562	2.606	1.306	4.282	4.282	9.282	4.282	1.762	1.762
Read #44	44	0200-0300	4.382	4.382	3.262	2.262	1.762	1.562	2.606	1.306	4.382	4.382	9.382	4.382	1.762	1.762
Read #44	44	0300-0400	4.482	4.482	3.262	2.262	1.762	1.562	2.606	1.306	4.482	4.482	9.482	4.482	1.762	1.762
Read #44	44	0400-0500	4.582	4.582	3.262	2.262	1.762	1.562	2.606	1.306	4.582	4.582	9.582	4.582	1.762	1.762
Read #44	44	0500-0600	4.682	4.682	3.262	2.262	1.762	1.562	2.606	1.306	4.682	4.682	9.682	4.682	1.762	1.762
Read #44	44	0600-0700	4.782	4.782	3.262	2.262	1.762	1.562	2.606	1.306	4.782	4.782	9.782	4.782	1.762	1.762
Read #44	44	0700-0800	4.882	4.882	3.262	2.262	1.762	1.562	2.606	1.306	4.882	4.882	9.882	4.882	1.762	1.762
Read #44	44	0800-0900	4.982	4.982	3.262	2.262	1.762	1.562	2.606	1.306	4.982	4.982	9.982	4.982	1.762	1.762
Read #44	44	0900-1000	5.082	5.082	3.262	2.262	1.762	1.562	2.606	1.306	5.082	5.082	10.082	5.082	1.762	1.762
Read #44	44	1000-1100	5.182	5.182	3.262	2.262	1.762	1.562	2.606	1.306	5.182	5.182	10.182	5.182	1.762	1.762
Read #44	44	1100-1200	5.282	5.282	3.262	2.262	1.762	1.562	2.606	1.306	5.282	5.282	10.282	5.282	1.762	1.762
Read #44	44	1200-1300	5.382	5.382	3.262	2.262	1.762	1.562	2.606	1.306	5.382	5.382	10.382	5.382	1.762	1.762
Read #44	44	1300-1400	5.482	5.482	3.262	2.262	1.762	1.562	2.606	1.306	5.482	5.482	10.482	5.482	1.762	1.762
Read #44	44	1400-1500	5.582	5.582	3.262	2.262	1.762	1.562	2.606	1.306	5.582	5.582	10.582	5.582	1.762	1.762
Read #44	44	1500-1600	5.682	5.682	3.262	2.262	1.762	1.562	2.606	1.306	5.682	5.682	10.682	5.682	1.762	1.762
Read #44	44	1600-1700	5.782	5.782	3.262	2.262	1.762	1.562	2.606	1.306	5.782	5.782	10.782	5.782	1.762	1.762
Read #44	44	1700-1800	5.882	5.882	3.262	2.262	1.762	1.562	2.606	1.306	5.882	5.882	10.882	5.882	1.762	1.762
Read #44	44	1800-1900	5.982	5.982	3.262	2.262	1.762	1.562	2.606	1.306	5.982	5.982	10.982	5.982	1.762	1.762
Read #44	44	1900-2000	6.082	6.082	3.262	2.262	1.762	1.562	2.606	1.306	6.082	6.082	11.082	6.082	1.762	1.762
Read #44	44	2000-2100	6.182	6.182	3.262	2.262	1.762	1.562	2.606	1.306	6.182	6.182	11.182	6.182	1.762	1.762
Read #44	44	2100-2200	6.282	6.282	3.262	2.262	1.762	1.562	2.606	1.306	6.282	6.282	11.282	6.282	1.762	1.762
Read #44	44	2200-2300	6.382	6.382	3.262	2.262	1.762	1.562	2.606	1.306	6.382	6.382	11.382	6.382	1.762	1.762
Read #44	44	2300-2400	6.482	6.482	3.262	2.262	1.762	1.562	2.606	1.306	6.482	6.482	11.482	6.482	1.762	1.762
Read #44	44	2400-2500	6.582	6.582	3.262	2.262	1.762	1.562	2.606	1.306	6.582	6.582	11.582	6.582	1.762	1.762
Read #44	44	2500-2600	6.682	6.682	3.262	2.262	1.762	1.562	2.606	1.306	6.682	6.682	11.682	6.682	1.762	1.762
Read #44	44	2600-2700	6.782	6.782	3.262	2.262	1.762	1.562	2.606	1.306	6.782	6.782	11.782	6.782	1.762	1.762
Read #44	44	2700-2800	6.882	6.882	3.262	2.262	1.762	1.562	2.606	1.306	6.882	6.882	11.882	6.882	1.762	1.762
Read #44	44	2800-2900	6.982	6.982	3.262	2.262	1.762	1.562	2.606	1.306	6.982	6.982	11.982	6.982	1.762	1.762
Read #44	44	2900-3000	7.082	7.082	3.262	2.262	1.762	1.562	2.606	1.306	7.082	7.082	12.082	7.082	1.762	1.762
Read #44	44	3000-0100	7.182	7.182	3.262	2.262	1.762	1.562	2.606	1.306	7.182	7.182	12.182	7.182	1.762	1.762
Read #44	44	0100-0200	7.282	7.282	3.262	2.262	1.762	1.562	2.606	1.306	7.282	7.282	12.282	7.282	1.762	1.762
Read #44	44	0200-0300	7.382	7.382	3.262	2.262	1.762	1.562	2.606	1.306	7.382	7.382	12.382	7.382	1.762	1.762
Read #44	44	0300-0400	7.482	7.482	3.262	2.262	1.762	1.562	2.606	1.306	7.482	7.482	12.482	7.482	1.762	1.762
Read #44	44	0400-0500	7.582	7.582	3.262	2.262	1.762	1.562	2.606	1.306	7.582	7.582	12.582	7.582	1.762	1.762
Read #44	44	0500-0600	7.682	7.682	3.262	2.262	1.762	1.562	2.606	1.306	7.682	7.682	12.682	7.682	1.762	1.762
Read #44	44	0600-0700	7.782	7.782	3.262	2.262	1.762	1.562	2.606	1.306	7.782	7.782	12.782	7.782	1.762	1.762
Read #44	44	0700-0800	7.882	7.882	3.262	2.262	1.762	1.562	2.606	1.306	7.882	7.882	12.882	7.882	1.762	1.762
Read #44	44	0800-0900	7.982	7.982	3.262	2.262	1.762	1.562	2.606	1.306	7.982	7.982	12.982	7.982	1.762	1.762
Read #44	44	0900-1000	8.082	8.082	3.262	2.262	1.762	1.562	2.606	1.306	8.082	8.082	13.082	8.082	1.762	1.762
Read #44	44	1000-1100	8.182	8.182	3.262	2.262	1.762	1.562	2.606	1.306	8.182	8.182	13.182	8.182	1.762	1.762
Read #44	44	1100-1200	8.282	8.282	3.262	2.262	1.762	1.562	2.606	1.306	8.282	8.282	13.282	8.282	1.762	1.762
Read #44	44	1200-1300	8.382	8.382	3.262	2.262	1.762	1.562	2.606	1.306	8.382	8.382	13.382	8.382	1.762	1.762
Read #44	44	1300-1400	8.482	8.482	3.262	2.262	1.762	1.562	2.606	1.306	8.482	8.482	13.482	8.482	1.762	1.762
Read #44	44	1400-1500	8.582	8.582	3.262	2.262	1.762	1.562	2.606	1.306	8.582	8.582	13.582	8.582	1.762	1.762
Read #44	44	1500-1600	8.682	8.682	3.262	2.262	1.762	1.562	2.606	1.306	8.682	8.682	13.682	8.682	1.762	1.762
Read #44	44	1600-1700	8.782	8.782	3.262	2.262	1.762	1.562	2.606	1.306	8.782	8.782	13.782	8.782	1.762	1.762
Read #44	44	1700-1800	8.882	8.882	3.262	2.262	1.762	1.562	2.606	1.306	8.882	8.882	13.8			

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Road 2 to 1000m Quatary														
Open Road 2 to 100m Envision Factors for ARNDSD Road Impact (Mph)														
Year 2033														
Road Name	Hour	Mo/Envision				Mo/Envision				Mo/Envision				
		Mo/Envision g/h/mph	Envision hours/mph	Mo/Envision g/h/mph	Envision hours/mph	Mo/Envision g/h/mph	Envision hours/mph	Mo/Envision g/h/mph	Envision hours/mph					
Road #7	47	1800-1700	3.07E+01	1.58E+07	1.87E+01	2.74E+04	8.34E+07	1.67E+01	1.33E+04	2.64E+06	8.24E+05	1.18E+01	2.30E+06	7.19E+05
Road #7	47	1600-1500	1.28E+01	4.51E+06	1.57E+01	2.46E+04	7.54E+07	1.36E+01	1.15E+04	2.26E+06	6.18E+05	1.92E+01	9.26E+06	2.62E+06
Road #7	47	1500-1400	1.18E+01	4.06E+06	1.47E+01	2.24E+04	6.84E+07	1.27E+01	1.04E+04	2.09E+06	5.62E+05	1.78E+01	8.24E+06	2.32E+06
Road #7	47	1300-1200	1.13E+01	2.18E+07	8.65E+05	1.18E+07	2.39E+07	7.47E+05	8.32E+06	1.69E+08	3.26E+07	7.08E+06	1.43E+08	4.48E+05
Road #7	47	1200-1100	1.18E+01	2.20E+07	8.68E+05	1.18E+07	2.40E+07	7.47E+05	8.32E+06	1.69E+08	3.26E+07	7.08E+06	1.43E+08	4.48E+05
Road #7	47	1100-1000	9.81E+01	1.54E+07	8.47E+06	8.84E+06	1.39E+07	4.38E+06	1.18E+06	1.29E+08	4.20E+07	7.07E+01	1.11E+07	4.44E+05
Road #7	47	2200-2000	9.84E+01	1.45E+07	8.45E+06	8.84E+06	1.29E+07	4.38E+06	1.17E+06	1.25E+08	4.15E+07	6.97E+01	1.07E+07	4.34E+05
Road #7	47	2000-1900	9.84E+01	1.45E+07	8.45E+06	8.84E+06	1.29E+07	4.38E+06	1.17E+06	1.25E+08	4.15E+07	6.97E+01	1.07E+07	4.34E+05
Road #7	47	1900-1800	8.54E+01	7.30E+05	1.10E+06	7.71E+05	6.57E+06	9.52E+04	8.47E+04	1.23E+07	8.71E+03	1.87E+01	1.33E+07	1.38E+06
Road #7	47	1800-1700	9.27E+01	1.16E+06	1.61E+06	1.18E+06	1.61E+06	1.18E+06	1.61E+06	1.18E+06	1.61E+06	1.18E+06	1.61E+06	1.18E+06
Road #7	48	0200-0100	1.00E+02	4.06E+06	6.13E+07	8.85E+05	1.05E+08	5.42E+07	1.01E+07	4.09E+07	6.18E+06	8.61E+02	3.50E+07	4.88E+06
Road #7	48	0100-0000	1.11E+01	4.05E+06	6.13E+07	1.05E+08	5.42E+07	1.01E+07	4.09E+07	6.18E+06	8.61E+02	3.50E+07	4.88E+06	
Road #7	48	0000-2300	1.27E+01	4.48E+06	1.13E+08	1.08E+08	6.57E+09	9.92E+07	1.09E+08	6.67E+07	9.97E+06	9.22E+02	6.51E+07	8.46E+06
Road #7	48	2300-2200	1.31E+01	4.60E+06	1.15E+08	1.10E+08	6.75E+09	1.01E+08	1.10E+08	6.87E+07	1.01E+07	9.42E+02	6.71E+07	8.67E+06
Road #7	48	0700-0600	1.45E+01	3.71E+07	6.02E+06	1.21E+07	3.19E+07	4.76E+06	1.15E+04	3.04E+06	4.88E+05	2.92E+07	3.76E+07	4.86E+06
Road #7	48	0600-0500	4.18E+01	6.31E+07	2.01E+07	3.21E+07	6.75E+06	1.55E+06	3.89E+06	2.95E+05	7.45E+05	1.95E+07	2.45E+07	3.12E+06
Road #7	48	0500-0400	4.17E+01	6.31E+07	2.01E+07	3.21E+07	6.75E+06	1.55E+06	3.89E+06	2.95E+05	7.45E+05	1.95E+07	2.45E+07	3.12E+06
Road #7	48	0400-0300	4.17E+01	6.31E+07	2.01E+07	3.21E+07	6.75E+06	1.55E+06	3.89E+06	2.95E+05	7.45E+05	1.95E+07	2.45E+07	3.12E+06
Road #7	48	0300-0200	1.44E+01	3.33E+07	5.31E+06	1.44E+07	3.33E+07	4.67E+06	1.13E+04	2.47E+06	3.66E+07	2.08E+06	3.48E+06	1.44E+05
Road #7	48	0200-0100	1.34E+01	3.68E+07	5.84E+06	1.54E+07	3.68E+07	5.07E+06	1.24E+04	2.74E+06	4.04E+07	2.28E+06	3.84E+06	1.56E+05
Road #7	48	0100-0000	1.30E+01	3.54E+07	5.61E+06	1.49E+07	3.54E+07	4.91E+06	1.19E+04	2.64E+06	3.94E+07	2.20E+06	3.74E+06	1.50E+05
Road #7	48	0000-2300	1.21E+01	2.46E+07	3.70E+05	2.72E+07	3.36E+07	4.01E+06	1.23E+06	1.57E+06	1.31E+07	3.15E+07	4.78E+05	
Road #7	48	2300-2200	1.21E+01	2.46E+07	3.70E+05	2.72E+07	3.36E+07	4.01E+06	1.23E+06	1.57E+06	1.31E+07	3.15E+07	4.78E+05	
Road #7	48	2200-2100	1.21E+01	2.46E+07	3.70E+05	2.72E+07	3.36E+07	4.01E+06	1.23E+06	1.57E+06	1.31E+07	3.15E+07	4.78E+05	
Road #7	48	2100-2000	1.21E+01	2.46E+07	3.70E+05	2.72E+07	3.36E+07	4.01E+06	1.23E+06	1.57E+06	1.31E+07	3.15E+07	4.78E+05	
Road #7	48	2000-1900	1.21E+01	2.46E+07	3.70E+05	2.72E+07	3.36E+07	4.01E+06	1.23E+06	1.57E+06	1.31E+07	3.15E+07	4.78E+05	
Road #7	48	1900-1800	1.21E+01	2.46E+07	3.70E+05	2.72E+07	3.36E+07	4.01E+06	1.23E+06	1.57E+06	1.31E+07	3.15E+07	4.78E+05	
Road #7	48	1800-1700	1.21E+01	2.46E+07	3.70E+05	2.72E+07	3.36E+07	4.01E+06	1.23E+06	1.57E+06	1.31E+07	3.15E+07	4.78E+05	
Road #7	48	1700-1600	1.13E+01	4.89E+07	2.76E+08	4.43E+07	6.54E+08	3.38E+07	4.42E+08	7.95E+05	1.01E+06	4.70E+07	7.06E+08	3.95E+05
Road #7	48	1600-1500	1.13E+01	4.89E+07	2.76E+08	4.43E+07	6.54E+08	3.38E+07	4.42E+08	7.95E+05	1.01E+06	4.70E+07	7.06E+08	3.95E+05
Road #7	48	1500-1400	1.13E+01	4.89E+07	2.76E+08	4.43E+07	6.54E+08	3.38E+07	4.42E+08	7.95E+05	1.01E+06	4.70E+07	7.06E+08	3.95E+05
Road #7	48	1400-1300	1.13E+01	4.89E+07	2.76E+08	4.43E+07	6.54E+08	3.38E+07	4.42E+08	7.95E+05	1.01E+06	4.70E+07	7.06E+08	3.95E+05
Road #7	48	1300-1200	1.13E+01	4.89E+07	2.76E+08	4.43E+07	6.54E+08	3.38E+07	4.42E+08	7.95E+05	1.01E+06	4.70E+07	7.06E+08	3.95E+05
Road #7	48	1200-1100	1.13E+01	4.89E+07	2.76E+08	4.43E+07	6.54E+08	3.38E+07	4.42E+08	7.95E+05	1.01E+06	4.70E+07	7.06E+08	3.95E+05
Road #7	48	1100-1000	1.13E+01	4.89E+07	2.76E+08	4.43E+07	6.54E+08	3.38E+07	4.42E+08	7.95E+05	1.01E+06	4.70E+07	7.06E+08	3.95E+05
Road #7	48	1000-0900	1.13E+01	4.89E+07	2.76E+08	4.43E+07	6.54E+08	3.38E+07	4.42E+08	7.95E+05	1.01E+06	4.70E+07	7.06E+08	3.95E+05
Road #7	48	0900-0800	1.13E+01	4.89E+07	2.76E+08	4.43E+07	6.54E+08	3.38E+07	4.42E+08	7.95E+05	1.01E+06	4.70E+07	7.06E+08	3.95E+05
Road #7	48	0800-0700	1.13E+01	4.89E+07	2.76E+08	4.43E+07	6.54E+08	3.38E+07	4.42E+08	7.95E+05	1.01E+06	4.70E+07	7.06E+08	3.95E+05
Road #7	48	0700-0600	1.13E+01	4.89E+07	2.76E+08	4.43E+07	6.54E+08	3.38E+07	4.42E+08	7.95E+05	1.01E+06	4.70E+07	7.06E+08	3.95E+05
Road #7	48	0600-0500	1.13E+01	4.89E+07	2.76E+08	4.43E+07	6.54E+08	3.38E+07	4.42E+08	7.95E+05	1.01E+06	4.70E+07	7.06E+08	3.95E+05
Road #7	48	0500-0400	1.13E+01	4.89E+07	2.76E+08	4.43E+07	6.54E+08	3.38E+07	4.42E+08	7.95E+05	1.01E+06	4.70E+07	7.06E+08	3.95E+05
Road #7	48	0400-0300	1.13E+01	4.89E+07	2.76E+08	4.43E+07	6.54E+08	3.38E+07	4.42E+08	7.95E+05	1.01E+06	4.70E+07	7.06E+08	3.95E+05
Road #7	48	0300-0200	1.13E+01	4.89E+07	2.76E+08	4.43E+07	6.54E+08	3.38E+07	4.42E+08	7.95E+05	1.01E+06	4.70E+07	7.06E+08	3.95E+05
Road #7	48	0200-0100	1.13E+01	4.89E+07	2.76E+08	4.43E+07	6.54E+08	3.38E+07	4.42E+08	7.95E+05	1.01E+06	4.70E+07	7.06E+08	3.95E+05
Road #7	48	0100-0000	1.13E+01	4.89E+07	2.76E+08	4.43E+07	6.54E+08	3.38E+07	4.42E+08	7.95E+05	1.01E+06	4.70E+07	7.06E+08	3.95E+05
Road #7	48	0000-2300	1.13E+01	4.89E+07	2.76E+08	4.43E+07	6.54E+08	3.38E+07	4.42E+08	7.95E+05	1.01E+06	4.70E+07	7.06E+08	3.95E+05
Road #7	48	2300-2200	1.13E+01	4.89E+07	2.76E+08	4.43E+07	6.54E+08	3.38E+07	4.42E+08	7.95E+05	1.01E+06	4.70E+07	7.06E+08	3.95E+05
Road #7	48	2200-2100	1.13E+01	4.89E+07	2.76E+08	4.43E+07	6.54E+08	3.38E+07	4.42E+08	7.95E+05	1.01E+06	4.70E+07	7.06E+08	3.95E+05
Road #7	48	2100-2000	1.13E+01	4.89E+07	2.76E+08	4.43E+07	6.54E+08	3.38E+07	4.42E+08	7.95E+05	1.01E+06	4.70E+07	7.06E+08	3.95E+05
Road #7	48	2000-1900	1.13E+01	4.89E+07	2.76E+08	4.43E+07	6.54E+08	3.38E+07	4.42E+08	7.95E+05	1.01E+06	4.70E+07	7.06E+08	3.95E+05
Road #7	48	1900-1800	1.13E+01	4.89E+07	2.76E+08	4.43E+07	6.54E+08	3.38E+07	4.42E+08	7.95E+05	1.01E+06	4.70E+07	7.06E+08	3.95E+05
Road #7	48	1800-1700	1.13E+01	4.89E+07	2.76E+08	4.43E+07	6.54E+08	3.38E+07	4.42E+08	7.95E+05	1.01E+06	4.70E+07	7.06E+08	3.95E+05
Road #7	48	1700-1600	1.13E+01	4.89E+07	2.76E+08	4.43E+07	6.54E+08	3.38E+07	4.42E+08	7.95E+05	1.01E+06	4.70E+07	7.06E+08	3.95E+05
Road #7	48	1600-1500	1.13E+01	4.89E+07	2.76E+08	4.43E+07	6.54E+08	3.38E+07	4.42E+08	7.95E+05	1.01E+06	4.70E+07	7.06E+08	3.95E+05
Road #7	48	1500-1400	1.13E+01	4.89E+07	2.76E+08	4.43E+07	6.54E+08	3.38E+07	4.42E+08	7.95E+05	1.01E+06	4.70E+07	7.06E+08	3.95E+05
Road #7	48	1400-1300	1.13E+01	4.89E+07	2.76E+08	4.43E+07	6.54E+08	3.38E+07	4.42E+08	7.95E+05	1.01E+06	4.70E+07	7.06E+08	3.95E+05
Road #7	48	1300-1200	1.13E+01	4.89E+07	2.76E+08	4.43E+07	6.54E+08	3.38E+07	4.42E+08	7.95E+05	1.01E+06	4.70E+07	7.06E+08	3.95E+05
Road #7	48	1200-1100	1.13E+01	4.89E+07	2.76E+08	4.43E+07	6.54E+08	3.38E+07	4.42E+08	7.95E+05	1.01E+06	4.70E+07	7.06E+08	3.95E+05
Road #7	48	1100-1000	1.13E+01	4.89E+07	2.76E+08	4.43E+07	6.54E+08	3.38E+07	4.42E+08	7.95E+05	1.01E+06	4.70E+07	7.06E+08	3.95E+05
Road #7	48	1000-0900	1.13E+01	4.89E+07	2.76E+08	4.43E+07	6.54E+08	3.38E+07	4.42E+08	7.95E+05	1.01E+06	4.70E+07	7.06E+08	3.95E+05
Road #7	48	0900-0800	1.13E+01	4.89E+07	2.76E+08	4.43E+07	6.54E+08	3.38E+07	4.42E+08	7.95E+05	1.01E+06	4.70E+07	7.06E+08	3.95E+05
Road #7	48	0800-0700	1.13E+01	4.89E+07	2.76E+08	4.43E+07	6.54E+08	3.38E+07	4.42E+08	7.95E+05	1.01E+06	4.70E+07	7.06E+08	3.95E+05
Road #7	48	0700-0600	1.13E+01	4.89E+07	2.76E+08	4.43E+07	6.54E+08	3.38E+07	4.42E+08	7.95E+05	1.01E+06	4.70E+07	7.06E+08	3.95E+05
Road #7	48	0600-0500	1.13E+01	4.89E+07	2.76E+08	4.43E+07	6.54E+08	3.38E+07	4.42E+08	7.95E+05	1.01E+06	4.70E+07	7.06E+08	3.95E+05
Road #7	48	0500-0400	1.13E+01	4.89E+07	2.76E+08	4.43E+07	6.54E+08	3.38E+07	4.42E+08	7.95E				

L:\Secure\Environment Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Open Road\Appendix 3.5.3 Emission Factor in 2033.xlsx

Open Pit Road North Exclusion Factors for ARB600 model [M/min]															
Year 2003			Mo. Emission												
Road	Road ID	Hour	Mo. Emission					Mo. Emission					No Emission		
			g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³
Road #1	S1	0000-0100	8.161	6.644	8.246	7.974	8.996	1.120	8.442	7.717	1.448	8.322	6.778	1.362	8.000
		0100-0200	8.865	7.083	8.972	7.951	9.436	1.260	8.775	8.027	1.655	8.468	6.909	1.459	8.000
Road #1	S2	0200-0300	9.570	7.613	9.678	8.567	9.999	1.390	9.106	8.277	1.827	8.590	7.349	1.625	8.000
		0300-0400	1.078	1.338	1.838	1.983	2.798	1.057	1.037	1.314	1.646	8.896	8.706	2.706	8.513
Road #1	S3	0400-0500	1.100	1.400	1.900	2.000	2.800	1.070	1.070	1.370	1.670	8.900	8.700	2.700	8.500
		0500-0600	1.180	1.678	2.378	2.600	3.600	1.180	1.180	1.637	1.968	9.100	8.900	2.700	8.700
Road #1	S4	0600-0700	1.775	2.562	2.915	3.100	4.350	1.775	1.775	2.388	2.800	9.300	9.100	2.800	8.900
		0700-0800	1.865	2.755	3.100	3.250	4.500	1.865	1.865	2.478	2.890	9.400	9.200	2.900	9.000
Road #1	S5	0800-0900	2.745	3.445	3.760	3.900	5.325	2.745	2.745	3.600	4.200	8.800	8.600	2.600	8.400
		0900-1000	3.360	4.260	4.575	4.725	6.150	3.360	3.360	4.275	4.875	9.000	8.800	2.800	8.600
Road #1	S6	1000-1100	1.550	1.422	1.760	1.865	2.720	1.550	1.111	2.236	2.466	9.546	9.346	2.746	9.146
		1100-1200	1.550	1.422	1.760	1.865	2.720	1.550	1.111	2.236	2.466	9.546	9.346	2.746	9.146
Road #1	S7	1200-1300	1.785	2.755	3.100	3.250	4.500	1.785	1.785	2.478	2.890	9.400	9.200	2.900	9.000
		1300-1400	1.785	2.755	3.100	3.250	4.500	1.785	1.785	2.478	2.890	9.400	9.200	2.900	9.000
Road #1	S8	1400-1500	2.865	3.675	3.990	4.140	5.565	2.865	2.865	3.720	4.320	8.920	8.720	2.720	8.520
		1500-1600	3.422	4.437	4.875	5.040	6.420	3.422	3.422	4.400	5.000	9.270	9.070	2.870	8.870
Road #1	S9	1600-1700	4.000	5.000	5.500	5.750	7.250	4.000	4.000	5.250	5.750	9.500	9.250	2.750	9.000
		1700-1800	4.000	5.000	5.500	5.750	7.250	4.000	4.000	5.250	5.750	9.500	9.250	2.750	9.000
Road #1	S10	1800-1900	1.135	1.460	1.960	2.000	2.815	1.135	1.135	1.580	1.670	8.970	8.770	2.670	8.570
		1900-2000	1.135	1.460	1.960	2.000	2.815	1.135	1.135	1.580	1.670	8.970	8.770	2.670	8.570
Road #2	S1	0000-0100	8.161	6.644	8.246	7.974	8.996	1.120	8.442	7.717	1.448	8.322	6.778	1.362	8.000
		0100-0200	8.865	7.083	8.972	7.951	9.436	1.260	8.775	8.027	1.655	8.468	6.909	1.459	8.000
Road #2	S2	0200-0300	9.570	7.613	9.678	8.567	9.999	1.390	9.106	8.277	1.827	8.590	7.349	1.625	8.000
		0300-0400	1.078	1.338	1.838	1.983	2.798	1.057	1.037	1.314	1.646	8.896	8.706	2.706	8.513
Road #2	S3	0400-0500	1.100	1.400	1.900	2.000	2.800	1.070	1.070	1.370	1.670	8.900	8.700	2.700	8.500
		0500-0600	1.180	1.678	2.378	2.600	3.600	1.180	1.180	1.637	1.968	9.100	8.900	2.700	8.700
Road #2	S4	0600-0700	1.775	2.562	2.915	3.100	4.350	1.775	1.775	2.388	2.800	9.300	9.100	2.800	8.900
		0700-0800	1.865	2.755	3.100	3.250	4.500	1.865	1.865	2.478	2.890	9.400	9.200	2.900	9.000
Road #2	S5	0800-0900	2.745	3.445	3.760	3.900	5.325	2.745	2.745	3.600	4.200	8.800	8.600	2.600	8.400
		0900-1000	3.360	4.260	4.575	4.725	6.150	3.360	3.360	4.275	4.875	9.000	8.800	2.800	8.600
Road #2	S6	1000-1100	1.550	1.422	1.760	1.865	2.720	1.550	1.111	2.236	2.466	9.546	9.346	2.746	9.146
		1100-1200	1.550	1.422	1.760	1.865	2.720	1.550	1.111	2.236	2.466	9.546	9.346	2.746	9.146
Road #2	S7	1200-1300	1.785	2.755	3.100	3.250	4.500	1.785	1.785	2.478	2.890	9.400	9.200	2.900	9.000
		1300-1400	1.785	2.755	3.100	3.250	4.500	1.785	1.785	2.478	2.890	9.400	9.200	2.900	9.000
Road #2	S8	1400-1500	2.865	3.675	3.990	4.140	5.565	2.865	2.865	3.720	4.320	8.920	8.720	2.720	8.520
		1500-1600	3.422	4.437	4.875	5.040	6.420	3.422	3.422	4.400	5.000	9.270	9.070	2.870	8.870
Road #2	S9	1600-1700	4.000	5.000	5.500	5.750	7.250	4.000	4.000	5.250	5.750	9.500	9.250	2.750	9.000
		1700-1800	4.000	5.000	5.500	5.750	7.250	4.000	4.000	5.250	5.750	9.500	9.250	2.750	9.000
Road #2	S10	1800-1900	1.135	1.460	1.960	2.000	2.815	1.135	1.135	1.580	1.670	8.970	8.770	2.670	8.570
		1900-2000	1.135	1.460	1.960	2.000	2.815	1.135	1.135	1.580	1.670	8.970	8.770	2.670	8.570
Road #3	S1	0000-0100	8.161	6.644	8.246	7.974	8.996	1.120	8.442	7.717	1.448	8.322	6.778	1.362	8.000
		0100-0200	8.865	7.083	8.972	7.951	9.436	1.260	8.775	8.027	1.655	8.468	6.909	1.459	8.000
Road #3	S2	0200-0300	9.570	7.613	9.678	8.567	9.999	1.390	9.106	8.277	1.827	8.590	7.349	1.625	8.000
		0300-0400	1.078	1.338	1.838	1.983	2.798	1.057	1.037	1.314	1.646	8.896	8.706	2.706	8.513
Road #3	S3	0400-0500	1.100	1.400	1.900	2.000	2.800	1.070	1.070	1.370	1.670	8.900	8.700	2.700	8.500
		0500-0600	1.180	1.678	2.378	2.600	3.600	1.180	1.180	1.637	1.968	9.100	8.900	2.700	8.700
Road #3	S4	0600-0700	1.775	2.562	2.915	3.100	4.350	1.775	1.775	2.388	2.800	9.300	9.100	2.800	8.900
		0700-0800	1.865	2.755	3.100	3.250	4.500	1.865	1.865	2.478	2.890	9.400	9.200	2.900	9.000
Road #3	S5	0800-0900	2.745	3.445	3.760	3.900	5.325	2.745	2.745	3.600	4.200	8.800	8.600	2.600	8.400
		0900-1000	3.360	4.260	4.575	4.725	6.150	3.360	3.360	4.275	4.875	9.000	8.800	2.800	8.600
Road #3	S6	1000-1100	1.550	1.422	1.760	1.865	2.720	1.550	1.111	2.236	2.466	9.546	9.346	2.746	9.146
		1100-1200	1.550	1.422	1.760	1.865	2.720	1.550	1.111	2.236	2.466	9.546	9.346	2.746	9.146
Road #3	S7	1200-1300	1.785	2.755	3.100	3.250	4.500	1.785	1.785	2.478	2.890	9.400	9.200	2.900	9.000
		1300-1400	1.785	2.755	3.100	3.250	4.500	1.785	1.785	2.478	2.890	9.400	9.200	2.900	9.000
Road #3	S8	1400-1500	2.865	3.675	3.990	4.140	5.565	2.865	2.865	3.720	4.320	8.920	8.720	2.720	8.520
		1500-1600	3.422	4.437	4.875	5.040	6.420	3.422	3.422	4.400	5.000	9.270	9.070	2.870	8.870
Road #3	S9	1600-1700	4.000	5.000	5.500	5.750	7.250	4.000	4.000	5.250	5.750	9.500	9.250	2.750	9.000
		1700-1800	4.000	5.000	5.500	5.750	7.250	4.000	4.000	5.250	5.750	9.500	9.250	2.750	9.000
Road #3	S10	1800-1900	1.135	1.460	1.960	2.000	2.815	1.135	1.135	1.580	1.670	8.970	8.770	2.670	8.570
		1900-2000	1.135	1.460	1.960	2.000	2.815	1.135	1.135	1.580	1.670	8.970	8.770	2.670	8.570
Road #4	S1	0000-0100	8.161	6.644	8.246	7.974	8.996	1.120	8.442	7.717	1.448	8.322	6.778	1.362	8.000
		0100-0200	8.865	7.083	8.972	7.951	9.436	1.260	8.775	8.027	1.655	8.468	6.909	1.459	8.000
Road #4	S2	0200-0300	9.570	7.613	9.678	8.567	9.999	1.390	9.106	8.277	1.827	8.590	7.349	1.625	8.000
		0300-0400	1.078	1.338	1.838	1.983	2.798	1.057	1.037	1.314	1.646	8.896	8.706	2.706	8.513
Road #4	S3	0400-0500	1.100	1.400	1.900	2.000	2.800	1.070	1.070	1.370	1.670	8.900	8.700	2.700	8.500
		0500-0600	1.180	1.678	2.378	2.600	3.600	1.180	1.180	1.637	1.968	9.100	8.900	2.700	8.700
Road #4	S4	0600-0700	1.775	2.562	2.915	3.100	4.350	1.775	1.775	2.388	2.800	9.300	9.100	2.800	8.900
		0700-0800	1.865	2.755	3.100	3.250	4.500	1.865	1.865	2.478	2.890	9.400	9.200	2.900	9.000
Road #4	S5	0800-0900	2.745	3.445	3.760	3.900	5.325	2.745	2.745	3.600	4.200	8.800	8.600	2.600	8.400
		0900-1000	3.360	4.260	4.575	4.725	6.150	3.360	3.360	4.275	4.875	9.000	8.800	2.800	8.600
Road #4	S6	1000-1100	1.550	1.422	1.760	1.865	2.720	1.550	1.111	2.236	2.466	9.546	9.346	2.746	9.146
		1100-1200	1.550	1.422	1.760	1.865	2.720	1.550	1.111	2.236	2.466	9.546	9.346	2.746	9.146
Road #4	S7	1200-1300	1.785	2.755	3.100	3.250	4.500	1.785	1.785	2.478	2.890	9.400	9.200	2.900	9.000
		1300-1400	1.785	2.755	3.100	3.250	4.500	1.785	1.785	2.478	2.890	9.400	9.200	2.900	9.000
Road #4	S8	1400-1500	2.865	3.675	3.990	4.140	5.565	2.865	2.865	3.720	4.320	8.920	8.720	2.720	8.520
		1500-1600	3.422	4.437	4.875	5.040	6.420	3.422	3.422	4.400	5.000	9.270	9.070	2.870	8.870
Road #4															

L:\Secure\Environment Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.3 Emission Factor in 2033.xlsx

Open Top North End Extension Factors for A40000 Model (Year 2003)													
Route Name	Route ID	Hour	NO _x Emissions				NO _x Emissions						
			Monthly/Range	Monthly/Average	Monthly/Range	Monthly/Average	Monthly/Range	Monthly/Average					
Route 54	08010000	11:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.26:06	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	09000000	12:00:02	4.53:01	9.07:05	0.90:02	1.57:06	8.53:03	4.50:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	10000000	13:00:03	4.53:01	9.07:05	0.90:02	1.57:06	8.53:03	4.50:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	1100:1200	13:07:01	4.32:01	8.97:04	0.88:02	1.52:05	8.38:01	4.45:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	1200:1300	13:12:01	4.32:01	8.97:04	0.88:02	1.52:05	8.38:01	4.45:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	1300:1400	14:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	1400:1500	14:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	1500:1600	15:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	1600:1700	16:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	1700:1800	17:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	1800:1900	18:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	1900:2000	19:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	2000:2100	20:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	2100:2200	21:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	2200:2300	22:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	2300:2400	23:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	2400:2500	24:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	2500:2600	25:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	2600:2700	26:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	2700:2800	27:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	2800:2900	28:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	2900:3000	29:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	3000:3100	30:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	3100:3200	31:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	3200:3300	32:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	3300:3400	33:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	3400:3500	34:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	3500:3600	35:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	3600:3700	36:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	3700:3800	37:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	3800:3900	38:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	3900:4000	39:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	4000:4100	40:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	4100:4200	41:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	4200:4300	42:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	4300:4400	43:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	4400:4500	44:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	4500:4600	45:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	4600:4700	46:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	4700:4800	47:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	4800:4900	48:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	4900:5000	49:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	5000:5100	50:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	5100:5200	51:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	5200:5300	52:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	5300:5400	53:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	5400:5500	54:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	5500:5600	55:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	5600:5700	56:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	5700:5800	57:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	5800:5900	58:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	5900:6000	59:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	6000:6100	60:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	6100:6200	61:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	6200:6300	62:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	6300:6400	63:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	6400:6500	64:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	6500:6600	65:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	6600:6700	66:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	6700:6800	67:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	6800:6900	68:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	6900:7000	69:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	7000:7100	70:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	7100:7200	71:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	7200:7300	72:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	7300:7400	73:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	7400:7500	74:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	7500:7600	75:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	7600:7700	76:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	7700:7800	77:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	7800:7900	78:01:01	4.11:01	9.51:06	0.88:02	1.63:07	8.42:01	4.41:01	1.67:08	1.80:02	1.80:01	1.42:01	3.24:05
Route 54	7900:80												

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

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Open Road Y4 North Underway Quarry										
Open Road Y4 North Emission Factors for ARROWOOD MOUNTAIN										
Year 2033			No Emission				No Emission			
Route Name	Route ID	Hour	g/kWh	lb/kWh	lb/ton/hr	Monthly/average	g/kWh	lb/kWh	lb/ton/hr	Monthly/average
Node 13	11	0000-0100	1.6102	2.946	2.6387	1.438	2.598	2.332	1.767	3.188
Node 13	11	0100-0200	1.7758	3.208	2.8233	1.558	2.788	2.568	1.977	3.416
Node 13	11	0200-0300	1.9414	3.508	3.0883	1.678	3.038	2.798	2.127	3.646
Node 13	11	0300-0400	1.8462	3.308	2.9487	1.644	2.918	2.658	2.057	3.476
Node 13	11	0400-0500	1.5818	2.858	2.5533	1.408	2.568	2.328	1.717	3.006
Node 13	11	0500-0600	2.0272	3.708	2.4487	1.778	2.418	2.168	1.807	2.476
Node 13	11	0600-0700	2.686	4.908	3.538	2.388	3.068	2.768	2.317	3.186
Node 13	11	0700-0800	2.686	4.908	3.538	2.388	3.068	2.768	2.317	3.186
Node 13	11	0800-0900	2.686	4.908	3.538	2.388	3.068	2.768	2.317	3.186
Node 13	11	0900-1000	2.686	4.908	3.538	2.388	3.068	2.768	2.317	3.186
Node 13	11	1000-1100	2.5882	4.648	3.118	2.268	2.928	2.628	2.157	2.956
Node 13	11	1100-1200	2.1102	3.848	2.618	1.868	2.468	2.168	1.707	2.456
Node 13	11	1200-1300	2.1102	3.848	2.618	1.868	2.468	2.168	1.707	2.456
Node 13	11	1300-1400	2.5882	4.648	3.118	2.268	2.928	2.628	2.157	2.956
Node 13	11	1400-1500	2.5882	4.648	3.118	2.268	2.928	2.628	2.157	2.956
Node 13	11	1500-1600	2.1102	3.848	2.618	1.868	2.468	2.168	1.707	2.456
Node 13	11	1600-1700	1.9414	3.508	3.0883	1.678	3.038	2.798	2.127	3.646
Node 13	11	1700-1800	1.6462	2.908	2.5533	1.408	2.568	2.328	1.717	3.006
Node 13	11	1800-1900	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	1900-2000	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	2000-2100	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	2100-2200	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	2200-2300	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	2300-0000	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0000-0100	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0100-0200	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0200-0300	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0300-0400	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0400-0500	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0500-0600	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0600-0700	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0700-0800	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0800-0900	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0900-1000	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	1000-1100	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	1100-1200	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	1200-1300	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	1300-1400	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	1400-1500	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	1500-1600	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	1600-1700	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	1700-1800	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	1800-1900	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	1900-2000	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	2000-2100	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	2100-2200	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	2200-2300	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	2300-0000	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0000-0100	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0100-0200	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0200-0300	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0300-0400	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0400-0500	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0500-0600	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0600-0700	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0700-0800	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0800-0900	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0900-1000	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	1000-1100	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	1100-1200	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	1200-1300	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	1300-1400	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	1400-1500	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	1500-1600	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	1600-1700	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	1700-1800	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	1800-1900	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	1900-2000	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	2000-2100	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	2100-2200	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	2200-2300	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	2300-0000	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0000-0100	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0100-0200	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0200-0300	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0300-0400	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0400-0500	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0500-0600	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0600-0700	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0700-0800	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0800-0900	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0900-1000	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	1000-1100	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	1100-1200	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	1200-1300	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	1300-1400	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	1400-1500	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	1500-1600	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	1600-1700	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	1700-1800	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	1800-1900	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	1900-2000	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	2000-2100	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	2100-2200	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	2200-2300	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	2300-0000	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0000-0100	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0100-0200	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0200-0300	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0300-0400	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0400-0500	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0500-0600	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0600-0700	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0700-0800	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0800-0900	1.4462	2.708	2.3533	1.208	2.368	2.128	1.517	2.806
Node 13	11	0900-1000	1							

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Road ID		Room		Moisture/m ³ air		Mo ₂ Enrichment		Moisture/m ³ air		Mo ₂ Enrichment		Moisture/m ³ air		Mo ₂ Enrichment	
Room	Road	g/h/m ³	g/m ³	g/h/m ³	g/m ³	g/h/m ³	g/m ³	g/h/m ³	g/m ³	g/h/m ³	g/m ³	g/h/m ³	g/m ³	g/h/m ³	g/m ³
Road 34	34	0800-0500	1.2982	1.3867	8.7976	1.1356	2.9492	7.7085	8.0502	2.1108	6.1515	7.7792	2.0216	5.2881	6.05
Road 34	34	0800-0500	1.4732	1.3162	8.7976	1.1356	2.7545	6.7077	8.0502	2.1108	5.5355	8.4825	2.0216	5.2881	6.05
Road 34	34	0800-0500	1.4732	1.3162	8.7976	1.1356	2.7545	6.7077	8.0502	2.1108	5.5355	8.4825	2.0216	5.2881	6.05
Road 34	34	1100-1300	1.1582	1.2862	2.7775	2.7748	1.3982	2.4387	6.7372	1.0756	1.8327	7.0605	1.5885	4.3145	6.05
Road 34	34	1200-1400	1.3602	1.3602	1.3602	1.3602	1.3602	1.3602	1.3602	1.3602	1.3602	1.3602	1.3602	1.3602	1.3602
Road 34	34	1300-1400	3.5212	4.2929	7.1277	1.1485	1.9606	7.9332	7.9332	2.3816	3.8803	2.4291	2.9516	7.7085	6.05
Road 34	34	1400-1500	3.5524	4.4747	1.1715	1.1335	1.9606	1.9606	2.824	2.3516	3.8803	2.4291	2.9516	7.7085	6.05
Road 34	34	1500-1600	3.5524	4.4747	1.1715	1.1335	1.9606	1.9606	2.824	2.3516	3.8803	2.4291	2.9516	7.7085	6.05
Road 34	34	1600-1700	3.5524	4.4747	1.1715	1.1335	1.9606	1.9606	2.824	2.3516	3.8803	2.4291	2.9516	7.7085	6.05
Road 34	34	1700-1800	3.5524	4.4747	1.1715	1.1335	1.9606	1.9606	2.824	2.3516	3.8803	2.4291	2.9516	7.7085	6.05
Road 34	34	1800-1900	2.7712	1.8887	6.9325	2.4052	1.1387	6.1326	2.2614	4.2796	1.1221	2.7961	3.7056	6.8885	6.05
Road 34	34	1900-2000	2.7712	1.8887	6.9325	2.4052	1.1387	6.1326	2.2614	4.2796	1.1221	2.7961	3.7056	6.8885	6.05
Road 34	34	2000-2100	2.7712	1.8887	6.9325	2.4052	1.1387	6.1326	2.2614	4.2796	1.1221	2.7961	3.7056	6.8885	6.05
Road 34	34	2100-2200	2.7712	1.8887	6.9325	2.4052	1.1387	6.1326	2.2614	4.2796	1.1221	2.7961	3.7056	6.8885	6.05
Road 34	34	2200-2300	2.7712	1.8887	6.9325	2.4052	1.1387	6.1326	2.2614	4.2796	1.1221	2.7961	3.7056	6.8885	6.05
Road 34	34	2300-2400	2.7712	1.8887	6.9325	2.4052	1.1387	6.1326	2.2614	4.2796	1.1221	2.7961	3.7056	6.8885	6.05
Road 34	34	2400-2500	2.7712	1.8887	6.9325	2.4052	1.1387	6.1326	2.2614	4.2796	1.1221	2.7961	3.7056	6.8885	6.05
Road 34	34	2500-2600	2.7712	1.8887	6.9325	2.4052	1.1387	6.1326	2.2614	4.2796	1.1221	2.7961	3.7056	6.8885	6.05
Road 34	34	2600-2700	2.7712	1.8887	6.9325	2.4052	1.1387	6.1326	2.2614	4.2796	1.1221	2.7961	3.7056	6.8885	6.05
Road 34	34	2700-2800	2.7712	1.8887	6.9325	2.4052	1.1387	6.1326	2.2614	4.2796	1.1221	2.7961	3.7056	6.8885	6.05
Road 34	34	2800-2900	2.7712	1.8887	6.9325	2.4052	1.1387	6.1326	2.2614	4.2796	1.1221	2.7961	3.7056	6.8885	

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Open Road Y4 North Underway Quadrant														
Open Road Y4 North 4min Emission Factors for														
Arbitrarily Measured (Year 2003)														
Road Name	Road ID	Hour	NO _x Emission								NO Emission			
			Monthly/Average				Monthly/Average				Monthly/Average			
			g/hour	lb/day	lb/year	lb/hour	g/hour	lb/day	lb/year	lb/hour	g/hour	lb/day	lb/year	
Read 17	37	0600-1700	7.48E-02	1.36E-08	2.88E-08	7.09E-02	1.19E-08	2.73E-08	2.96E-02	4.98E-08	1.14E-07	2.75E-07	4.43E-08	1.06E-07
Read 17	37	1700-1800	6.68E-02	1.17E-08	2.68E-08	6.33E-02	1.08E-08	2.50E-08	2.56E-02	4.36E-08	1.02E-07	2.45E-07	3.95E-08	9.75E-07
Read 17	37	1800-1900	6.68E-02	1.17E-08	2.68E-08	6.33E-02	1.08E-08	2.50E-08	2.56E-02	4.36E-08	1.02E-07	2.45E-07	3.95E-08	9.75E-07
Read 17	37	1900-2000	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	2000-2100	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	2100-2200	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	2200-2300	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	2300-2400	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	2400-2500	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	2500-2600	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	2600-2700	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	2700-2800	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	2800-2900	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	2900-3000	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	3000-3100	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	3100-3200	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	3200-3300	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	3300-3400	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	3400-3500	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	3500-3600	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	3600-3700	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	3700-3800	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	3800-3900	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	3900-4000	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	4000-4100	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	4100-4200	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	4200-4300	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	4300-4400	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	4400-4500	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	4500-4600	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	4600-4700	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	4700-4800	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	4800-4900	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	4900-5000	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	5000-5100	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	5100-5200	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	5200-5300	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	5300-5400	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	5400-5500	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	5500-5600	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	5600-5700	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	5700-5800	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	5800-5900	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	5900-6000	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	6000-6100	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	6100-6200	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	6200-6300	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	6300-6400	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	6400-6500	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	6500-6600	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	6600-6700	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	6700-6800	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	6800-6900	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	6900-7000	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	7000-7100	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	7100-7200	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	7200-7300	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	7300-7400	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	7400-7500	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	7500-7600	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	7600-7700	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	7700-7800	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	7800-7900	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59E-07	2.54E-08	6.09E-08
Read 17	37	7900-8000	3.48E-02	5.19E-09	1.17E-08	3.47E-02	5.01E-09	1.15E-08	1.20E-02	2.86E-08	6.56E-08	1.59		

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

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Open Road Yr 2048 Emission Factors for ARROW model (Year 2033)														
Route Name	Route ID	Hour	NO Emission			Monthly/Average			NO Emission			Monthly/Average		
			g/hour	g/veh	g/veh/hour	g/hour	g/veh	g/veh/hour	g/hour	g/veh	g/veh/hour	g/hour	g/veh	g/veh/hour
Route 44	0800-0900	1:40:02	1:50:07	2:14:08	1:08:02	1:01:07	1:50:06	9:24:02	2:53:06	1:42:05	7:54:02	2:53:06	1:50:06	
Route 44	0900-0900	1:40:02	2:54:07	3:24:08	1:24:09	1:18:07	2:06:07	9:34:02	3:03:06	1:42:05	7:54:02	3:03:06	1:50:06	
Route 44	1000-1100	1:40:02	2:54:07	3:24:08	1:24:09	1:18:07	2:06:07	9:34:02	3:03:06	1:42:05	7:54:02	3:03:06	1:50:06	
Route 44	1100-1200	1:40:02	2:54:07	3:24:08	1:24:09	1:18:07	2:06:07	9:34:02	3:03:06	1:42:05	7:54:02	3:03:06	1:50:06	
Route 44	1300-1400	1:40:02	2:54:07	3:24:08	1:24:09	1:18:07	2:06:07	9:34:02	3:03:06	1:42:05	7:54:02	3:03:06	1:50:06	
Route 44	1400-1500	1:40:02	2:54:07	3:24:08	1:24:09	1:18:07	2:06:07	9:34:02	3:03:06	1:42:05	7:54:02	3:03:06	1:50:06	
Route 44	1600-1700	2:00:02	6:18:06	7:18:06	3:18:06	2:58:06	3:28:06	1:28:06	1:30:06	2:28:06	1:08:06	1:03:06	1:08:06	
Route 44	1700-1800	2:00:02	6:18:06	7:18:06	3:18:06	2:58:06	3:28:06	1:28:06	1:30:06	2:28:06	1:08:06	1:03:06	1:08:06	
Route 44	1800-1900	2:24:02	8:26:07	9:26:07	4:26:06	3:46:07	4:06:07	1:56:07	1:51:06	3:41:05	1:27:05	4:47:06	1:28:05	
Route 44	1900-2000	2:24:02	8:26:07	9:26:07	4:26:06	3:46:07	4:06:07	1:56:07	1:51:06	3:41:05	1:27:05	4:47:06	1:28:05	
Route 44	2000-2100	2:00:02	6:18:06	7:18:06	3:18:06	2:58:06	3:28:06	1:28:06	1:30:06	2:28:06	1:08:06	1:03:06	1:08:06	
Route 44	2100-2200	8:14:03	7:18:06	7:08:06	6:58:06	5:57:07	6:58:07	9:11:02	2:05:06	1:27:05	7:47:05	2:05:06	1:27:05	
Route 44	2200-2300	8:14:03	7:18:06	7:08:06	6:58:06	5:57:07	6:58:07	9:11:02	2:05:06	1:27:05	7:47:05	2:05:06	1:27:05	
Route 44	2300-2400	8:14:03	7:18:06	7:08:06	6:58:06	5:57:07	6:58:07	9:11:02	2:05:06	1:27:05	7:47:05	2:05:06	1:27:05	
Route 44	0000-0100	8:48:03	8:14:03	7:08:06	6:58:06	5:57:07	6:58:07	9:11:02	2:05:06	1:27:05	7:47:05	2:05:06	1:27:05	
Route 44	0100-0200	8:48:03	8:14:03	7:08:06	6:58:06	5:57:07	6:58:07	9:11:02	2:05:06	1:27:05	7:47:05	2:05:06	1:27:05	
Route 44	0200-0300	3:22:08	3:47:07	4:12:07	2:58:06	3:55:07	4:12:07	9:11:02	3:24:07	3:58:06	8:02:05	2:58:06	3:58:06	
Route 44	0300-0400	3:22:08	3:47:07	4:12:07	2:58:06	3:55:07	4:12:07	9:11:02	3:24:07	3:58:06	8:02:05	2:58:06	3:58:06	
Route 44	0400-0500	1:04:02	1:11:06	1:08:07	1:02:06	1:08:06	1:08:07	2:08:07	2:08:07	1:54:06	1:18:05	2:13:07	1:11:06	
Route 44	0500-0600	1:04:02	1:11:06	1:08:07	1:02:06	1:08:06	1:08:07	2:08:07	2:08:07	1:54:06	1:18:05	2:13:07	1:11:06	
Route 44	0600-0700	1:04:02	1:11:06	1:08:07	1:02:06	1:08:06	1:08:07	2:08:07	2:08:07	1:54:06	1:18:05	2:13:07	1:11:06	
Route 44	0700-0800	1:04:02	1:11:06	1:08:07	1:02:06	1:08:06	1:08:07	2:08:07	2:08:07	1:54:06	1:18:05	2:13:07	1:11:06	
Route 44	0800-0900	1:40:02	1:50:07	2:14:08	1:08:02	1:01:07	1:50:06	9:24:02	2:53:06	1:42:05	7:54:02	2:53:06	1:50:06	
Route 44	0900-1000	1:40:02	2:54:07	3:24:08	1:24:09	1:18:07	2:06:07	9:34:02	3:03:06	1:42:05	7:54:02	3:03:06	1:50:06	
Route 44	1000-1100	1:40:02	2:54:07	3:24:08	1:24:09	1:18:07	2:06:07	9:34:02	3:03:06	1:42:05	7:54:02	3:03:06	1:50:06	
Route 44	1100-1200	1:40:02	2:54:07	3:24:08	1:24:09	1:18:07	2:06:07	9:34:02	3:03:06	1:42:05	7:54:02	3:03:06	1:50:06	
Route 44	1300-1400	1:40:02	2:54:07	3:24:08	1:24:09	1:18:07	2:06:07	9:34:02	3:03:06	1:42:05	7:54:02	3:03:06	1:50:06	
Route 44	1400-1500	1:40:02	2:54:07	3:24:08	1:24:09	1:18:07	2:06:07	9:34:02	3:03:06	1:42:05	7:54:02	3:03:06	1:50:06	
Route 44	1600-1700	2:00:02	6:18:06	7:18:06	3:18:06	2:58:06	3:28:06	1:28:06	1:30:06	2:28:06	1:08:06	1:03:06	1:08:06	
Route 44	1700-1800	2:00:02	6:18:06	7:18:06	3:18:06	2:58:06	3:28:06	1:28:06	1:30:06	2:28:06	1:08:06	1:03:06	1:08:06	
Route 44	1800-1900	2:24:02	8:26:07	9:26:07	4:26:06	3:46:07	4:06:07	1:56:07	1:51:06	3:41:05	1:27:05	4:47:06	1:28:05	
Route 44	1900-2000	2:24:02	8:26:07	9:26:07	4:26:06	3:46:07	4:06:07	1:56:07	1:51:06	3:41:05	1:27:05	4:47:06	1:28:05	
Route 44	2000-2100	2:00:02	6:18:06	7:18:06	3:18:06	2:58:06	3:28:06	1:28:06	1:30:06	2:28:06	1:08:06	1:03:06	1:08:06	
Route 44	2100-2200	8:14:03	7:18:06	7:08:06	6:58:06	5:57:07	6:58:07	9:11:02	2:05:06	1:27:05	7:47:05	2:05:06	1:27:05	
Route 44	2200-2300	8:14:03	7:18:06	7:08:06	6:58:06	5:57:07	6:58:07	9:11:02	2:05:06	1:27:05	7:47:05	2:05:06	1:27:05	
Route 44	2300-2400	8:14:03	7:18:06	7:08:06	6:58:06	5:57:07	6:58:07	9:11:02	2:05:06	1:27:05	7:47:05	2:05:06	1:27:05	
Route 44	0000-0100	8:48:03	8:14:03	7:08:06	6:58:06	5:57:07	6:58:07	9:11:02	2:05:06	1:27:05	7:47:05	2:05:06	1:27:05	
Route 44	0100-0200	8:48:03	8:14:03	7:08:06	6:58:06	5:57:07	6:58:07	9:11:02	2:05:06	1:27:05	7:47:05	2:05:06	1:27:05	
Route 44	0200-0300	3:22:08	3:47:07	4:12:07	2:58:06	3:55:07	4:12:07	9:11:02	3:24:07	3:58:06	8:02:05	2:58:06	3:58:06	
Route 44	0300-0400	3:22:08	3:47:07	4:12:07	2:58:06	3:55:07	4:12:07	9:11:02	3:24:07	3:58:06	8:02:05	2:58:06	3:58:06	
Route 44	0400-0500	1:04:02	1:11:06	1:08:07	1:02:06	1:08:06	1:08:07	2:08:07	2:08:07	1:54:06	1:18:05	2:13:07	1:11:06	
Route 44	0500-0600	1:04:02	1:11:06	1:08:07	1:02:06	1:08:06	1:08:07	2:08:07	2:08:07	1:54:06	1:18:05	2:13:07	1:11:06	
Route 44	0600-0700	1:04:02	1:11:06	1:08:07	1:02:06	1:08:06	1:08:07	2:08:07	2:08:07	1:54:06	1:18:05	2:13:07	1:11:06	
Route 44	0700-0800	1:04:02	1:11:06	1:08:07	1:02:06	1:08:06	1:08:07	2:08:07	2:08:07	1:54:06	1:18:05	2:13:07	1:11:06	
Route 44	0800-0900	1:40:02	1:50:07	2:14:08	1:08:02	1:01:07	1:50:06	9:24:02	2:53:06	1:42:05	7:54:02	2:53:06	1:50:06	
Route 44	0900-1000	1:40:02	2:54:07	3:24:08	1:24:09	1:18:07	2:06:07	9:34:02	3:03:06	1:42:05	7:54:02	3:03:06	1:50:06	
Route 44	1000-1100	1:40:02	2:54:07	3:24:08	1:24:09	1:18:07	2:06:07	9:34:02	3:03:06	1:42:05	7:54:02	3:03:06	1:50:06	
Route 44	1100-1200	1:40:02	2:54:07	3:24:08	1:24:09	1:18:07	2:06:07	9:34:02	3:03:06	1:42:05	7:54:02	3:03:06	1:50:06	
Route 44	1300-1400	1:40:02	2:54:07	3:24:08	1:24:09	1:18:07	2:06:07	9:34:02	3:03:06	1:42:05	7:54:02	3:03:06	1:50:06	
Route 44	1400-1500	1:40:02	2:54:07	3:24:08	1:24:09	1:18:07	2:06:07	9:34:02	3:03:06	1:42:05	7:54:02	3:03:06	1:50:06	
Route 44	1600-1700	2:00:02	6:18:06	7:18:06	3:18:06	2:58:06	3:28:06	1:28:06	1:30:06	2:28:06	1:08:06	1:03:06	1:08:06	
Route 44	1700-1800	2:00:02	6:18:06	7:18:06	3:18:06	2:58:06	3:28:06	1:28:06	1:30:06	2:28:06	1:08:06	1:03:06	1:08:06	
Route 44	1800-1900	2:24:02	8:26:07	9:26:07	4:26:06	3:46:07	4:06:07	1:56:07	1:51:06	3:41:05	1:27:05	4:47:06	1:28:05	
Route 44	1900-2000	2:24:02	8:26:07	9:26:07	4:26:06	3:46:07	4:06:07	1:56:07	1:51:06	3:41:05	1:27:05	4:47:06	1:28:05	
Route 44	2000-2100	2:00:02	6:18:06	7:18:06	3:18:06	2:58:06	3:28:06	1:28:06	1:30:06	2:28:06	1:08:06	1:03:06	1:08:06	
Route 44	2100-2200	8:14:03	7:18:06	7:08:06	6:58:06	5:57:07	6:58:07	9:11:02	2:05:06	1:27:05	7:47:05	2:05:06	1:27:05	
Route 44	2200-2300	8:14:03	7:18:06	7:08:06	6:58:06	5:57:07	6:58:07	9:11:02	2:05:06	1:27:05	7:47:05	2:05:06	1:27:05	
Route 44	2300-2400	8:14:03	7:18:06	7:08:06	6:58:06	5:57:07	6:58:07	9:11:02	2:05:06	1:27:05	7:47:05	2:05:06	1:27:05	
Route 44	0000-0100	8:48:03	8:14:03	7:08:06	6:58:06	5:57:07	6:58:07	9:11:02	2:05:06	1:27:05	7:47:05	2:05:06	1:27:05	
Route 44	0100-0200	8:48:03	8:14:03	7:08:06	6:58:06	5:57:07	6:58:07	9:11:02	2:05:06	1:27:05	7:47:05	2:05:06	1:27:05	
Route 44	0200-0300	3:22:08	3:47:07	4:12:07	2:58:06	3:55:07	4:12:07	9:11:02	3:24:07	3:58:06	8:02:05	2:58:06	3:58:06	
Route 44	0300-0400	3:22:08	3:47:07	4:12:07	2:58:06	3:55:07	4:12:07	9:11:02	3:24:07	3:58:06	8:02:05	2:58:06	3:58:06	
Route 44	0400-0500	1:04:02	1:11:06	1:08:07	1:02:06	1:08:06	1:08:07	2:08:07	2:08:07	1:54:06	1:18:05	2:13:07	1:11:06	
Route 44	0500-0600	1:04:02	1:11:06	1:08:07	1:02:06	1:08:06	1:08:07	2:08:07	2:08:07	1:54:06	1:18:05	2:13:07	1:11:06	
Route 44	0600-0700	1:04:02	1:11:06	1:08:07	1:02:06	1:08:06	1:08:07	2:08:07	2:08:07	1:54:06	1:18:05	2:13:07	1:11:06	
Route 44	0700-0800	1:04:02	1:11:06	1:08:07	1:02:06	1:08:06	1:08:07	2:08:07	2:08:07	1:54:06	1:18:05	2:13:07	1:11:06	
Route 44	0800-0900	1:40:02	1:50:07	2:14:08	1:08:02	1:01:07	1:50:06	9:24:02	2:53:06	1:42:05	7:54:02	2:53:06	1:50:06	
Route 44	0900-1000	1:40:02	2:54:07	3:24:08	1:24:09	1:18:07	2:06:07	9:34:02	3:03:06	1:42:05	7:54:02	3:03:06	1:50:06	
Route 44	1000-1100	1:40:02	2:54:07	3:24:08	1:24:09	1:18:07	2:06:07	9:34:02	3:03:06	1:42:05	7:54:02	3:03:06	1:50:06	
Route 44	1100-1200	1:40:02	2:54:07	3:24:08	1:24:09	1:18:07	2:06:07	9:34:02	3:03:06	1:42:05	7:54:02	3:03:06	1:50:06	
Route 44	1300-1400	1:40:02	2:54:07	3:24:08	1:24:09	1:18:07	2:06:07	9:34:02	3:03:06	1:42:05	7:54:02	3:03:06	1:50:06	
Route 44	1400-													

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.3 Emission Factor in 2033.

Open N ₂ North Undermining Factors																					
Road ID		Year 2003		Mo ₂ Environ				Mo ₂ Environ				Mo ₂ Environ									
Road ID	Road ID	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year	Year						
Mo ₂ Environ	Mo ₂ Environ	Mo ₂ Environ	Mo ₂ Environ	Mo ₂ Environ	Mo ₂ Environ	Mo ₂ Environ	Mo ₂ Environ	Mo ₂ Environ	Mo ₂ Environ	Mo ₂ Environ	Mo ₂ Environ	Mo ₂ Environ	Mo ₂ Environ	Mo ₂ Environ	Mo ₂ Environ						
47	47	1600	1700	2100	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	1700	1700	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	1800	1800	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	1900	1900	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	2000	2000	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	2100	2100	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	2200	2200	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	2300	2300	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	2400	2400	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	2500	2500	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	2600	2600	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	2700	2700	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	2800	2800	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	2900	2900	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	3000	3000	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	3100	3100	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	3200	3200	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	3300	3300	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	3400	3400	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	3500	3500	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	3600	3600	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	3700	3700	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	3800	3800	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	3900	3900	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	4000	4000	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	4100	4100	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	4200	4200	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	4300	4300	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	4400	4400	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	4500	4500	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	4600	4600	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	4700	4700	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	4800	4800	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	4900	4900	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	5000	5000	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	5100	5100	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	5200	5200	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	5300	5300	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	5400	5400	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	5500	5500	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	5600	5600	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	5700	5700	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	5800	5800	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	5900	5900	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	6000	6000	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	6100	6100	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	6200	6200	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	6300	6300	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	6400	6400	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	6500	6500	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	6600	6600	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	6700	6700	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	6800	6800	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	6900	6900	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	7000	7000	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	7100	7100	2144	2144	1748	1748	4.938	4.938	1.148	1.148	1.261	1.261	1.658	1.658	1.088	1.088	1.108	1.108	6.518	6.518
47	47	7200	7200	2144	2144	1															

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Tsig Yi North Underground Quarry											
Open Road 4-hour Emission Factor for ARRIOD Model (kg/t)											
Year 2033											
Road Name	Road ID	Hour	NO ₂ Emission			NO _x Emission			PM ₁₀ Emission		
			g/h/m ³	g/t/h ³	g/h/m ³	g/h/m ³	g/t/h ³	g/h/m ³	g/t/h ³	g/h/m ³	g/t/h ³
Road 54	54	0800-0900	1.036	1.438	1.476	0.011	1.567	1.708	0.011	1.533	1.648
Road 54	54	0900-1000	1.175	1.577	1.615	0.012	1.708	1.849	0.012	1.675	1.790
Road 54	54	1000-1100	1.335	1.739	1.777	0.014	1.849	2.020	0.014	1.815	1.930
Road 54	54	1100-1200	1.495	1.899	1.937	0.016	2.000	2.191	0.016	1.975	2.090
Road 54	54	1200-1300	1.655	2.059	2.097	0.018	2.160	2.362	0.018	2.135	2.240
Road 54	54	1300-1400	1.815	2.219	2.257	0.020	2.320	2.533	0.020	2.295	2.400
Road 54	54	1400-1500	1.975	2.379	2.417	0.022	2.480	2.704	0.022	2.455	2.560
Road 54	54	1500-1600	2.135	2.539	2.577	0.024	2.640	2.875	0.024	2.615	2.720
Road 54	54	1600-1700	2.295	2.699	2.737	0.026	2.800	3.046	0.026	2.775	2.880
Road 54	54	1700-1800	2.455	2.859	2.897	0.028	2.960	3.217	0.028	2.935	3.040
Road 54	54	1800-1900	2.615	3.019	3.057	0.030	3.120	3.388	0.030	3.100	3.200
Road 54	54	1900-2000	2.775	3.179	3.217	0.032	3.280	3.559	0.032	3.260	3.360
Road 54	54	2000-2100	2.935	3.339	3.377	0.034	3.440	3.730	0.034	3.420	3.520
Road 54	54	2100-2200	3.095	3.499	3.537	0.036	3.600	3.901	0.036	3.580	3.680
Road 54	54	2200-2300	3.255	3.659	3.697	0.038	3.760	4.072	0.038	3.740	3.840
Road 54	54	2300-2400	3.415	3.819	3.857	0.040	3.920	4.243	0.040	3.900	4.000
Road 54	54	2400-2500	3.575	3.979	4.017	0.042	4.080	4.414	0.042	4.060	4.160
Road 54	54	2500-2600	3.735	4.139	4.177	0.044	4.240	4.585	0.044	4.220	4.320
Road 54	54	2600-2700	3.895	4.299	4.337	0.046	4.400	4.756	0.046	4.380	4.480
Road 54	54	2700-2800	4.055	4.459	4.497	0.048	4.560	4.927	0.048	4.540	4.640
Road 54	54	2800-2900	4.215	4.619	4.657	0.050	4.720	5.098	0.050	4.700	4.800
Road 54	54	2900-3000	4.375	4.779	4.817	0.052	4.880	5.269	0.052	4.860	4.960
Road 54	54	3000-3100	4.535	4.939	4.977	0.054	5.040	5.440	0.054	5.020	5.120
Road 54	54	3100-3200	4.695	5.099	5.137	0.056	5.200	5.611	0.056	5.180	5.280
Road 54	54	3200-3300	4.855	5.259	5.297	0.058	5.360	5.782	0.058	5.340	5.440
Road 54	54	3300-3400	5.015	5.419	5.457	0.060	5.520	5.953	0.060	5.500	5.600
Road 54	54	3400-3500	5.175	5.579	5.617	0.062	5.680	6.124	0.062	5.660	5.760
Road 54	54	3500-3600	5.335	5.739	5.777	0.064	5.840	6.295	0.064	5.820	5.920
Road 54	54	3600-3700	5.495	5.899	5.937	0.066	6.000	6.466	0.066	5.980	6.080
Road 54	54	3700-3800	5.655	6.059	6.097	0.068	6.160	6.637	0.068	6.140	6.240
Road 54	54	3800-3900	5.815	6.219	6.257	0.070	6.320	6.808	0.070	6.300	6.400
Road 54	54	3900-4000	5.975	6.379	6.417	0.072	6.480	6.979	0.072	6.460	6.560
Road 54	54	4000-4100	6.135	6.539	6.577	0.074	6.640	7.150	0.074	6.620	6.720
Road 54	54	4100-4200	6.295	6.699	6.737	0.076	6.800	7.321	0.076	6.780	6.880
Road 54	54	4200-4300	6.455	6.859	6.897	0.078	6.960	7.492	0.078	6.940	7.040
Road 54	54	4300-4400	6.615	7.019	7.057	0.080	7.120	7.663	0.080	7.100	7.200
Road 54	54	4400-4500	6.775	7.179	7.217	0.082	7.280	7.834	0.082	7.260	7.360
Road 54	54	4500-4600	6.935	7.339	7.377	0.084	7.440	8.005	0.084	7.420	7.520
Road 54	54	4600-4700	7.095	7.499	7.537	0.086	7.600	8.176	0.086	7.580	7.680
Road 54	54	4700-4800	7.255	7.659	7.697	0.088	7.760	8.347	0.088	7.740	7.840
Road 54	54	4800-4900	7.415	7.819	7.857	0.090	7.920	8.518	0.090	7.900	8.000
Road 54	54	4900-5000	7.575	7.979	8.017	0.092	8.080	8.689	0.092	8.060	8.160
Road 54	54	5000-5100	7.735	8.139	8.177	0.094	8.240	8.860	0.094	8.220	8.320
Road 54	54	5100-5200	7.895	8.299	8.337	0.096	8.400	9.031	0.096	8.380	8.480
Road 54	54	5200-5300	8.055	8.459	8.497	0.098	8.560	9.202	0.098	8.540	8.640
Road 54	54	5300-5400	8.215	8.619	8.657	0.100	8.720	9.373	0.100	8.700	8.800
Road 54	54	5400-5500	8.375	8.779	8.817	0.102	8.880	9.544	0.102	8.860	8.960
Road 54	54	5500-5600	8.535	8.939	8.977	0.104	9.040	9.715	0.104	9.020	9.120
Road 54	54	5600-5700	8.695	9.099	9.137	0.106	9.200	9.886	0.106	9.180	9.280
Road 54	54	5700-5800	8.855	9.259	9.297	0.108	9.360	10.057	0.108	9.340	9.440
Road 54	54	5800-5900	9.015	9.419	9.457	0.110	9.520	10.228	0.110	9.500	9.600
Road 54	54	5900-6000	9.175	9.579	9.617	0.112	9.680	10.399	0.112	9.660	9.760
Road 54	54	6000-6100	9.335	9.739	9.777	0.114	9.840	10.570	0.114	9.820	9.920
Road 54	54	6100-6200	9.495	9.899	9.937	0.116	9.960	10.741	0.116	9.940	10.040
Road 54	54	6200-6300	9.655	10.059	10.097	0.118	10.120	10.912	0.118	10.100	10.200
Road 54	54	6300-6400	9.815	10.219	10.257	0.120	10.280	11.083	0.120	10.260	10.360
Road 54	54	6400-6500	9.975	10.379	10.417	0.122	10.440	11.254	0.122	10.420	10.520
Road 54	54	6500-6600	10.135	10.539	10.577	0.124	10.600	11.425	0.124	10.580	10.680
Road 54	54	6600-6700	10.295	10.699	10.737	0.126	10.760	11.596	0.126	10.740	10.840
Road 54	54	6700-6800	10.455	10.859	10.897	0.128	10.920	11.767	0.128	10.900	11.000
Road 54	54	6800-6900	10.615	11.019	11.057	0.130	11.080	11.938	0.130	11.060	11.160
Road 54	54	6900-7000	10.775	11.179	11.217	0.132	11.240	12.109	0.132	11.220	11.320
Road 54	54	7000-7100	10.935	11.339	11.377	0.134	11.400	12.280	0.134	11.380	11.480
Road 54	54	7100-7200	11.095	11.499	11.537	0.136	11.560	12.451	0.136	11.540	11.640
Road 54	54	7200-7300	11.255	11.659	11.697	0.138	11.720	12.622	0.138	11.700	11.800
Road 54	54	7300-7400	11.415	11.819	11.857	0.140	11.880	12.793	0.140	11.860	11.960
Road 54	54	7400-7500	11.575	11.979	12.017	0.142	12.040	12.964	0.142	12.020	12.120
Road 54	54	7500-7600	11.735	12.139	12.177	0.144	12.200	13.135	0.144	12.180	12.280
Road 54	54	7600-7700	11.895	12.299	12.337	0.146	12.360	13.306	0.146	12.340	12.440
Road 54	54	7700-7800	12.055	12.459	12.497	0.148	12.520	13.477	0.148	12.500	12.600
Road 54	54	7800-7900	12.215	12.619	12.657	0.150	12.680	13.648	0.150	12.660	12.760
Road 54	54	7900-8000	12.375	12.779	12.817	0.152	12.840	13.819	0.152	12.820	12.920
Road 54	54	8000-8100	12.535	12.939	12.977	0.154	13.000	13.990	0.154	13.000	13.080
Road 54	54	8100-8200	12.695	13.099	13.137	0.156	13.160	14.161	0.156	13.140	13.240
Road 54	54	8200-8300	12.855	13.259	13.297	0.158	13.320	14.332	0.158	13.300	13.400
Road 54	54	8300-8400	13.015	13.419	13.457	0.160	13.480	14.503	0.160	13.460	13.560
Road 54	54	8400-8500	13.175	13.579	13.617	0.162	13.640	14.674	0.162	13.620	13.720
Road 54	54	8500-8600	13.335	13.739	13.777	0.164	13.800	14.845	0.164	13.780	13.880
Road 54	54	8600-8700	13.495	13.899	13.937	0.166	13.960	15.016	0.166	13.940	14.040
Road 54	54	8700-8800	13.655	14.059	14.097	0.168	14.120	15.187	0.168	14.100	14.200
Road 54	54	8800-8900	13.815	14.219	14.257	0.170	14.280	15.358	0.170	14.260	14.360
Road 54	54	8900-9000	13.975	14.379	14.417	0.172	14.440	15.529	0.172	14.420	14.520
Road 54	54	9000-9100	14.135	14.539	14.577	0.174	14.600	15.700	0.174	14.580	14.680
Road 54	54	9100-9200	14.295	14.699	14.737	0.176	14.760	15.871	0.176	14.740	14.840
Road 54	54	9200-9300	14.455	14.859	14.897	0.178	14.920	16.042	0.178	14.900	15.040
Road 54	54	9300-9400	14.615	15.019	15.057	0.180	15.080	16.213	0.180	15.060	15.160
Road 54	54	9400-9500	14.775	15.179	15.217	0.182	15.240	16.384	0.182	15.220	15.320
Road 54	54	9500-9600	14.935	15.339	15.377	0.184	15.400	16.555	0.184	15.380	15.480
Road 54	54	9600-9700	15.095	15.499	15.537	0.186	15.560	16.726	0.186	15.540	15.640
Road 54	54	9700-9800	15.255	15.659	15.697	0.188	15.720	16.897	0.188	15.700	15.800
Road 54	54	9800-9900	15.415	15.819	15.857	0.190	15.880	17.068	0.190	15.860	15.960
Road 54	54	9900-10000	15.575	15.979	16.017	0.192	16.040	17.239	0.192	16.020	16.120
Road 54	5										

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Opening North & Downward Quarry Tape Run No 58 Evaporation Factors ARMCO Model (E)												
		Year 2003										
		NO _x Emission										
Row Name	Model ID	Hour	Monthly/average		Monthly/average		Monthly/average		Monthly/average		Monthly/average	
g/hour	g/ton	g/hour	g/ton	g/hour	g/ton	g/hour	g/ton	g/hour	g/ton	g/hour	g/ton	
Row 21	00000010	1	1.42E-03	1.41E-03	1.23E-03	1.20E-03	1.65E-03	1.62E-03	1.96E-03	1.87E-03	2.44E-03	2.36E-03
Row 21	00000010	2	1.65E-03	1.60E-03	1.07E-03	1.03E-03	9.92E-04	9.59E-04	6.94E-04	6.48E-04	4.26E-03	3.92E-03
Row 21	00000010	3	1.80E-03	1.75E-03	1.38E-03	1.32E-03	1.10E-03	1.05E-03	4.26E-03	3.92E-03	1.20E-03	1.13E-03
Row 21	00000010	4	1.96E-03	1.91E-03	1.50E-03	1.43E-03	1.18E-03	1.12E-03	1.20E-03	1.13E-03	9.21E-04	8.67E-04
Row 21	00000010	5	2.09E-03	2.04E-03	1.61E-03	1.53E-03	1.26E-03	1.19E-03	9.21E-04	8.67E-04	1.12E-03	1.04E-03
Row 21	00000010	6	2.24E-03	2.19E-03	1.76E-03	1.67E-03	1.38E-03	1.30E-03	1.04E-03	9.72E-04	1.04E-03	9.72E-04
Row 21	00000010	7	2.40E-03	2.35E-03	1.92E-03	1.82E-03	1.50E-03	1.42E-03	1.12E-03	1.04E-03	1.04E-03	9.72E-04
Row 21	00000010	8	2.57E-03	2.52E-03	2.09E-03	1.98E-03	1.64E-03	1.55E-03	1.24E-03	1.15E-03	1.24E-03	1.15E-03
Row 21	00000010	9	2.75E-03	2.70E-03	2.27E-03	2.15E-03	1.78E-03	1.68E-03	1.36E-03	1.26E-03	1.36E-03	1.26E-03
Row 21	00000010	10	2.94E-03	2.89E-03	2.46E-03	2.33E-03	1.92E-03	1.82E-03	1.50E-03	1.40E-03	1.50E-03	1.40E-03
Row 21	00000010	11	3.14E-03	3.09E-03	2.66E-03	2.52E-03	2.08E-03	1.97E-03	1.64E-03	1.53E-03	1.64E-03	1.53E-03
Row 21	00000010	12	3.36E-03	3.31E-03	2.88E-03	2.72E-03	2.24E-03	2.13E-03	1.78E-03	1.66E-03	1.78E-03	1.66E-03
Row 21	00000010	13	3.60E-03	3.55E-03	3.12E-03	2.94E-03	2.42E-03	2.30E-03	1.92E-03	1.79E-03	1.92E-03	1.79E-03
Row 21	00000010	14	3.86E-03	3.81E-03	3.38E-03	3.18E-03	2.62E-03	2.49E-03	2.06E-03	1.92E-03	2.06E-03	1.92E-03
Row 21	00000010	15	4.14E-03	4.09E-03	3.66E-03	3.44E-03	2.84E-03	2.71E-03	2.24E-03	2.09E-03	2.24E-03	2.09E-03
Row 21	00000010	16	4.44E-03	4.39E-03	3.96E-03	3.72E-03	3.08E-03	2.94E-03	2.44E-03	2.28E-03	2.44E-03	2.28E-03
Row 21	00000010	17	4.76E-03	4.71E-03	4.28E-03	4.02E-03	3.30E-03	3.15E-03	2.60E-03	2.43E-03	2.60E-03	2.43E-03
Row 21	00000010	18	5.10E-03	5.05E-03	4.62E-03	4.34E-03	3.58E-03	3.42E-03	2.82E-03	2.64E-03	2.82E-03	2.64E-03
Row 21	00000010	19	5.46E-03	5.41E-03	4.98E-03	4.67E-03	3.86E-03	3.69E-03	3.04E-03	2.85E-03	3.04E-03	2.85E-03
Row 21	00000010	20	5.84E-03	5.79E-03	5.36E-03	5.02E-03	4.16E-03	3.98E-03	3.28E-03	3.07E-03	3.28E-03	3.07E-03
Row 21	00000010	21	6.24E-03	6.19E-03	5.76E-03	5.39E-03	4.48E-03	4.29E-03	3.54E-03	3.31E-03	3.54E-03	3.31E-03
Row 21	00000010	22	6.66E-03	6.61E-03	6.18E-03	5.78E-03	4.82E-03	4.62E-03	3.82E-03	3.57E-03	3.82E-03	3.57E-03
Row 21	00000010	23	7.10E-03	7.05E-03	6.62E-03	6.20E-03	5.20E-03	5.00E-03	4.14E-03	3.87E-03	4.14E-03	3.87E-03
Row 21	00000010	24	7.56E-03	7.51E-03	7.08E-03	6.64E-03	5.58E-03	5.27E-03	4.46E-03	4.17E-03	4.46E-03	4.17E-03
Row 21	00000010	25	8.04E-03	7.99E-03	7.56E-03	7.10E-03	6.00E-03	5.77E-03	4.82E-03	4.51E-03	4.82E-03	4.51E-03
Row 21	00000010	26	8.54E-03	8.49E-03	8.06E-03	7.58E-03	6.40E-03	6.15E-03	5.04E-03	4.77E-03	5.04E-03	4.77E-03
Row 21	00000010	27	9.06E-03	9.01E-03	8.58E-03	8.08E-03	6.80E-03	6.53E-03	5.34E-03	5.05E-03	5.34E-03	5.05E-03
Row 21	00000010	28	9.60E-03	9.55E-03	9.12E-03	8.60E-03	7.20E-03	6.91E-03	5.64E-03	5.33E-03	5.64E-03	5.33E-03
Row 21	00000010	29	1.01E-03	1.00E-03	9.52E-03	9.00E-03	7.60E-03	7.30E-03	6.00E-03	5.69E-03	6.00E-03	5.69E-03
Row 21	00000010	30	1.06E-03	1.05E-03	1.00E-03	9.48E-03	8.00E-03	7.68E-03	6.40E-03	6.08E-03	6.40E-03	6.08E-03
Row 21	00000010	31	1.11E-03	1.10E-03	1.05E-03	1.00E-03	8.40E-03	8.08E-03	6.80E-03	6.49E-03	6.80E-03	6.49E-03
Row 21	00000010	32	1.16E-03	1.15E-03	1.10E-03	1.05E-03	8.80E-03	8.48E-03	7.20E-03	6.88E-03	7.20E-03	6.88E-03
Row 21	00000010	33	1.21E-03	1.20E-03	1.15E-03	1.10E-03	9.20E-03	8.88E-03	7.60E-03	7.28E-03	7.60E-03	7.28E-03
Row 21	00000010	34	1.26E-03	1.25E-03	1.20E-03	1.15E-03	9.60E-03	9.28E-03	8.00E-03	7.68E-03	8.00E-03	7.68E-03
Row 21	00000010	35	1.31E-03	1.30E-03	1.25E-03	1.20E-03	1.00E-03	9.68E-03	8.40E-03	8.08E-03	8.40E-03	8.08E-03
Row 21	00000010	36	1.36E-03	1.35E-03	1.30E-03	1.25E-03	1.04E-03	1.00E-03	8.80E-03	8.40E-03	8.80E-03	8.40E-03
Row 21	00000010	37	1.41E-03	1.40E-03	1.35E-03	1.30E-03	1.08E-03	1.04E-03	9.20E-03	8.80E-03	9.20E-03	8.80E-03
Row 21	00000010	38	1.46E-03	1.45E-03	1.40E-03	1.35E-03	1.12E-03	1.08E-03	9.60E-03	9.20E-03	9.60E-03	9.20E-03
Row 21	00000010	39	1.51E-03	1.50E-03	1.45E-03	1.40E-03	1.16E-03	1.12E-03	1.00E-03	9.60E-03	1.00E-03	9.60E-03
Row 21	00000010	40	1.56E-03	1.55E-03	1.50E-03	1.45E-03	1.20E-03	1.16E-03	1.04E-03	9.60E-03	1.04E-03	9.60E-03
Row 21	00000010	41	1.61E-03	1.60E-03	1.55E-03	1.50E-03	1.24E-03	1.20E-03	1.08E-03	9.60E-03	1.08E-03	9.60E-03
Row 21	00000010	42	1.66E-03	1.65E-03	1.60E-03	1.55E-03	1.28E-03	1.24E-03	1.12E-03	9.60E-03	1.12E-03	9.60E-03
Row 21	00000010	43	1.71E-03	1.70E-03	1.65E-03	1.60E-03	1.32E-03	1.28E-03	1.16E-03	9.60E-03	1.16E-03	9.60E-03
Row 21	00000010	44	1.76E-03	1.75E-03	1.70E-03	1.65E-03	1.36E-03	1.32E-03	1.20E-03	9.60E-03	1.20E-03	9.60E-03
Row 21	00000010	45	1.81E-03	1.80E-03	1.75E-03	1.70E-03	1.40E-03	1.36E-03	1.24E-03	9.60E-03	1.24E-03	9.60E-03
Row 21	00000010	46	1.86E-03	1.85E-03	1.80E-03	1.75E-03	1.44E-03	1.40E-03	1.28E-03	9.60E-03	1.28E-03	9.60E-03
Row 21	00000010	47	1.91E-03	1.90E-03	1.85E-03	1.80E-03	1.48E-03	1.44E-03	1.32E-03	9.60E-03	1.32E-03	9.60E-03
Row 21	00000010	48	1.96E-03	1.95E-03	1.90E-03	1.85E-03	1.52E-03	1.48E-03	1.36E-03	9.60E-03	1.36E-03	9.60E-03
Row 21	00000010	49	2.01E-03	2.00E-03	1.95E-03	1.90E-03	1.56E-03	1.52E-03	1.40E-03	9.60E-03	1.40E-03	9.60E-03
Row 21	00000010	50	2.06E-03	2.05E-03	2.00E-03	1.95E-03	1.60E-03	1.56E-03	1.44E-03	9.60E-03	1.44E-03	9.60E-03
Row 21	00000010	51	2.11E-03	2.10E-03	2.05E-03	2.00E-03	1.64E-03	1.60E-03	1.48E-03	9.60E-03	1.48E-03	9.60E-03
Row 21	00000010	52	2.16E-03	2.15E-03	2.10E-03	2.05E-03	1.68E-03	1.64E-03	1.52E-03	9.60E-03	1.52E-03	9.60E-03
Row 21	00000010	53	2.21E-03	2.20E-03	2.15E-03	2.10E-03	1.72E-03	1.68E-03	1.56E-03	9.60E-03	1.56E-03	9.60E-03
Row 21	00000010	54	2.26E-03	2.25E-03	2.20E-03	2.15E-03	1.76E-03	1.72E-03	1.60E-03	9.60E-03	1.60E-03	9.60E-03
Row 21	00000010	55	2.31E-03	2.30E-03	2.25E-03	2.20E-03	1.80E-03	1.76E-03	1.64E-03	9.60E-03	1.64E-03	9.60E-03
Row 21	00000010	56	2.36E-03	2.35E-03	2.30E-03	2.25E-03	1.84E-03	1.80E-03	1.68E-03	9.60E-03	1.68E-03	9.60E-03
Row 21	00000010	57	2.41E-03	2.40E-03	2.35E-03	2.30E-03	1.88E-03	1.84E-03	1.72E-03	9.60E-03	1.72E-03	9.60E-03
Row 21	00000010	58	2.46E-03	2.45E-03	2.40E-03	2.35E-03	1.92E-03	1.88E-03	1.76E-03	9.60E-03	1.76E-03	9.60E-03
Row 21	00000010	59	2.51E-03	2.50E-03	2.45E-03	2.40E-03	1.96E-03	1.92E-03	1.80E-03	9.60E-03	1.80E-03	9.60E-03
Row 21	00000010	60	2.56E-03	2.55E-03	2.50E-03	2.45E-03	2.00E-03	1.96E-03	1.84E-03	9.60E-03	1.84E-03	9.60E-03
Row 21	00000010	61	2.61E-03	2.60E-03	2.55E-03	2.50E-03	2.04E-03	2.00E-03	1.88E-03	9.60E-03	1.88E-03	9.60E-03
Row 21	00000010	62	2.66E-03	2.65E-03	2.60E-03	2.55E-03	2.08E-03	2.04E-03	1.92E-03	9.60E-03	1.92E-03	9.60E-03
Row 21	00000010	63	2.71E-03	2.70E-03	2.65E-03	2.60E-03	2.12E-03	2.08E-03	1.96E-03	9.60E-03	1.96E-03	9.60E-03
Row 21	00000010	64	2.76E-03	2.75E-03	2.70E-03	2.65E-03	2.16E-03	2.12E-03	2.00E-03	9.60E-03	2.00E-03	9.60E-03
Row 21	00000010	65	2.81E-03	2.80E-03	2.75E-03	2.70E-03	2.20E-03	2.16E-03	2.04E-03	9.60E-03	2.04E-03	9.60E-03
Row 21	00000010	66	2.86E-03	2.85E-03	2.80E-03	2.75E-03	2.24E-03	2.20E-03	2.08E-03	9.60E-03	2.08E-03	9.60E-03
Row 21	00000010	67	2.91E-03	2.90E-03	2.85E-03	2.80E-03	2.28E-03	2.24E-03	2.12E-03	9.60E-03	2.12E-03	9.60E-03
Row 21	00000010	68	2.96E-03	2.95E-03	2.90E-03	2.85E-03	2.32E-03	2.28E-03	2.16E-03	9.60E-03	2.16E-03	9.60E-03
Row 21	00000010	69	3.01E-03	3.00E-03	2.95E-03	2.90E-03	2.36E-03	2.32E-03	2.20E-03	9.60E-03	2.20E-03	9.60E-03
Row 21	00000010	70	3.06E-03	3.05E-03	3.00E-03	2.95E-03	2.40E-03	2.36E-03	2.24E-03	9.60E-03	2.24E-03	9.60E-03
Row 21	00000010	71	3.11E-03	3.10E-03	3.05E-03	3.00E-03	2.44E-03	2.40E-03	2.28E-03	9.60E-03	2.28E-03	9.60E-03
Row 21	00000010	72	3.16E-03	3.15E-03	3.10E-03	3.05E-03	2.48E-03	2.44E-03	2.32E-03	9.60E-03	2.32E-03	9.60E-03
Row 21	00000010	73	3.21E-03	3.20E-03	3.15E-03	3.10E-03	2.52E-03	2.48E-03	2.36E-03	9.60E-03	2.36E-03	9.60E-03
Row 21	00000010	74	3.26E-03	3.25E-03	3.20E-03	3.15E-03	2.56E-03	2.52E-03	2.40E-03	9.60E-03	2.40E-03	9.60E-03
Row 21	00000010	75	3.31E-03	3.30E-03</								

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open N 10 North Underdrain Quail										
Tape N 1000 ft Soil Erosion Factors for										
ARMCO model for										
Row Name	Row ID	Hour	NO Erosion				NO Erosion			
			Monthly/average		Monthly/average		Monthly/average		Monthly/average	
			g/bm ² /h	g/bm ² /h	g/bm ² /h	g/bm ² /h	g/bm ² /h	g/bm ² /h	g/bm ² /h	g/bm ² /h
Row 34	13	9800-9900	1.310	1.020	1.120	1.120	1.120	1.120	1.120	1.120
Row 34	13	9900-10000	1.486	1.348	1.878	1.258	2.668	1.578	1.008	2.548
Row 34	13	10000-11000	1.358	1.168	1.978	1.428	1.358	1.358	1.358	1.358
Row 34	13	11000-12000	1.618	1.218	1.768	1.408	2.348	1.138	1.878	1.878
Row 34	13	12000-13000	2.888	2.428	2.118	1.378	3.548	3.288	2.978	3.448
Row 34	13	13000-14000	3.588	3.188	2.978	1.428	3.548	3.288	2.978	3.448
Row 34	13	14000-15000	3.648	3.488	1.208	1.058	1.798	1.918	2.888	3.648
Row 34	13	15000-16000	2.428	2.428	1.208	1.058	1.798	1.918	2.888	3.648
Row 34	13	16000-17000	1.378	1.478	1.378	1.378	1.378	1.378	1.378	1.378
Row 34	13	17000-18000	1.088	1.218	1.118	1.258	1.538	1.328	1.048	1.218
Row 34	13	18000-19000	2.768	2.768	2.348	2.348	2.348	2.348	2.348	2.348
Row 34	13	19000-20000	2.888	2.728	1.728	1.218	1.608	1.608	1.608	1.608
Row 34	13	20000-21000	2.888	2.728	1.728	1.218	1.608	1.608	1.608	1.608
Row 34	13	21000-22000	2.468	2.468	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	22000-23000	2.468	2.468	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	23000-24000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	24000-25000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	25000-26000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	26000-27000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	27000-28000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	28000-29000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	29000-30000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	30000-31000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	31000-32000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	32000-33000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	33000-34000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	34000-35000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	35000-36000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	36000-37000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	37000-38000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	38000-39000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	39000-40000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	40000-41000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	41000-42000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	42000-43000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	43000-44000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	44000-45000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	45000-46000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	46000-47000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	47000-48000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	48000-49000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	49000-50000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	50000-51000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	51000-52000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	52000-53000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	53000-54000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	54000-55000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	55000-56000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	56000-57000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	57000-58000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	58000-59000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	59000-60000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	60000-61000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	61000-62000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	62000-63000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	63000-64000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	64000-65000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	65000-66000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	66000-67000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	67000-68000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	68000-69000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	69000-70000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	70000-71000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	71000-72000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	72000-73000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	73000-74000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	74000-75000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	75000-76000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	76000-77000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	77000-78000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	78000-79000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	79000-80000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	80000-81000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	81000-82000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	82000-83000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	83000-84000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	84000-85000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	85000-86000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	86000-87000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	87000-88000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	88000-89000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	89000-90000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	90000-91000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	91000-92000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	92000-93000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	93000-94000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	94000-95000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	95000-96000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	96000-97000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	97000-98000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	98000-99000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	99000-100000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	100000-101000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	101000-102000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	102000-103000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	103000-104000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	104000-105000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	105000-106000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	106000-107000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	107000-108000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	108000-109000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	109000-110000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	110000-111000	2.688	2.688	1.518	1.108	1.718	1.718	1.718	1.718
Row 34	13	111000-112000	2.688	2.688	1.518	1.108	1.718	1.718		

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.3 Emission Factor in 2033.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

[illegible]

Secure\Environment Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Open Road\Appendix 3.5.3 Emission Factor in 2033.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Yr 24 North Underquarry Quary

Using Yr 24 North Underquarry Factors for

ARMCO model model

Year 2033

Road Name	Road ID	Hour	No Emission				No Emission					
			MonthlyMtuYr		MonthlyMtuYrAverage			MonthlyMtuYr		MonthlyMtuYrAverage		
			g/sec	g/min	g/sec	g/min	g/sec	g/min	g/sec	g/min	g/min	
Road #1	0000-0100	1:00-02	1:488	2:713	1:444	2:340	1:758	2:752	1:444	2:340	4:412	7:347
Road #1	0100-0200	2:00-03	2:146	3:424	2:276	3:638	2:098	3:362	8:832	9:828	9:226	10:727
Road #1	0200-0300	3:00-04	2:146	3:424	2:276	3:638	2:098	3:362	8:832	9:828	9:226	10:727
Road #1	0300-0400	4:00-05	2:004	3:208	2:029	3:153	1:924	3:080	1:058	1:748	7:306	8:725
Road #1	0400-0500	5:00-06	2:312	3:344	2:265	3:258	2:034	3:892	1:024	8:428	7:808	8:832
Road #1	0500-0600	6:00-07	2:312	3:344	2:265	3:258	2:034	3:892	1:024	8:428	7:808	8:832
Road #1	0600-0700	7:00-08	1:814	4:348	4:088	5:126	3:648	4:422	8:442	2:022	10:508	6:812
Road #1	0700-0800	8:00-09	1:814	4:348	4:088	5:126	3:648	4:422	8:442	2:022	10:508	6:812
Road #1	0800-0900	9:00-10	1:252	3:112	1:238	3:014	1:164	4:076	8:762	5:242	4:912	6:016
Road #1	0900-1000	10:00-11	1:252	3:112	1:238	3:014	1:164	4:076	8:762	5:242	4:912	6:016
Road #1	1000-1100	11:00-12	1:252	3:112	1:238	3:014	1:164	4:076	8:762	5:242	4:912	6:016
Road #1	1100-1200	12:00-01	1:252	3:112	1:238	3:014	1:164	4:076	8:762	5:242	4:912	6:016
Road #1	1200-1300	1:00-02	1:442	1:744	1:430	1:844	1:438	1:356	1:242	6:316	1:596	1:036
Road #1	1300-1400	3:00-04	1:442	1:744	1:430	1:844	1:438	1:356	1:242	6:316	1:596	1:036
Road #1	1400-1500	4:00-05	1:798	1:688	1:844	1:438	1:356	1:242	6:316	1:596	1:036	1:036
Road #1	1500-1600	5:00-06	1:798	1:688	1:844	1:438	1:356	1:242	6:316	1:596	1:036	1:036
Road #1	1600-1700	6:00-07	1:798	1:688	1:844	1:438	1:356	1:242	6:316	1:596	1:036	1:036
Road #1	1700-1800	7:00-08	1:798	1:688	1:844	1:438	1:356	1:242	6:316	1:596	1:036	1:036
Road #1	1800-1900	8:00-09	1:798	1:688	1:844	1:438	1:356	1:242	6:316	1:596	1:036	1:036
Road #1	1900-2000	9:00-10	1:798	1:688	1:844	1:438	1:356	1:242	6:316	1:596	1:036	1:036
Road #1	2000-2100	10:00-11	1:798	1:688	1:844	1:438	1:356	1:242	6:316	1:596	1:036	1:036
Road #1	2100-2200	11:00-12	1:798	1:688	1:844	1:438	1:356	1:242	6:316	1:596	1:036	1:036
Road #1	2200-2300	12:00-01	1:798	1:688	1:844	1:438	1:356	1:242	6:316	1:596	1:036	1:036
Road #1	2300-0000	1:00-02	1:798	1:688	1:844	1:438	1:356	1:242	6:316	1:596	1:036	1:036
Road #2	0000-0100	1:00-02	1:512	2:528	1:476	2:488	1:448	1:776	1:876	1:876	1:728	1:848
Road												

Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.3 Emission Factor in 2033.xlsx

24 Hour Underground Data for 2014															
24 Hour Index Factors for Year 2013															
Detailed Model Inputs															
Index	Read ID	Hour	NO Emission			NO Emission									
			Monthly/Hours	Monthly/Average	Monthly/Hours	Monthly/Average									
1	000000	1.036	2.816	2.816	1.431	2.015	2.375	1.767	2.015	2.816	2.816	1.512	2.017	2.438	1.66
1	000000	1.158	2.024	2.024	1.422	1.758	1.564	1.765	1.235	1.877	2.024	1.506	1.787	1.607	1.68
1	000000	1.785	2.024	2.024	1.422	1.758	1.564	1.765	1.235	1.877	2.024	1.506	1.787	1.607	1.68
1	000000	1.877	2.118	2.118	1.377	1.626	1.148	1.024	1.776	2.120	2.118	1.544	1.018	1.067	1.67
1	000000	1.986	1.554	1.554	1.385	1.076	1.188	1.097	1.188	1.554	1.554	1.236	1.077	1.086	1.68
1	000000	2.086	1.554	1.554	1.385	1.076	1.188	1.097	1.188	1.554	1.554	1.236	1.077	1.086	1.68
1	000000	2.142	6.346	6.346	1.867	5.558	4.778	4.447	1.844	6.347	6.346	1.535	4.547	4.002	1.66
1	000000	2.183	6.346	6.346	1.867	5.558	4.778	4.447	1.844	6.347	6.346	1.535	4.547	4.002	1.66
1	000000	2.248	6.346	6.346	1.867	5.558	4.778	4.447	1.844	6.347	6.346	1.535	4.547	4.002	1.66
1	000000	2.348	1.517	1.517	1.334	1.081	1.272	1.144	1.743	1.520	1.517	1.431	1.006	1.066	1.68
1	000000	2.389	1.517	1.517	1.334	1.081	1.272	1.144	1.743	1.520	1.517	1.431	1.006	1.066	1.68
1	000000	2.445	1.517	1.517	1.334	1.081	1.272	1.144	1.743	1.520	1.517	1.431	1.006	1.066	1.68
1	000000	2.510	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	2.567	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	2.618	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	2.675	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	2.716	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	2.773	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	2.829	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	2.886	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	2.943	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	2.999	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	3.056	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	3.113	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	3.170	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	3.227	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	3.284	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	3.341	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	3.398	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	3.455	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	3.512	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	3.569	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	3.626	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	3.683	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	3.740	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	3.797	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	3.854	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	3.911	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	3.968	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	4.025	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	4.082	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	4.139	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	4.196	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	4.253	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	4.310	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	4.367	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	4.424	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	4.481	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	4.538	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	4.595	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	4.652	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	4.709	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	4.766	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	4.823	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	4.880	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	4.937	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	4.994	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	5.051	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	5.108	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	5.165	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	5.222	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	5.279	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	5.336	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	5.393	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	5.450	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	5.507	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	5.564	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	5.621	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	5.678	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	5.735	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	5.792	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	5.849	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	5.906	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	5.963	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	6.020	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	6.077	1.446	1.446	1.326	2.244	1.276	1.131	1.716	1.450	1.446	1.505	8.321	7.612	1.66
1	000000	6.134	1.446	1.446	1.326	2.244</									

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24 Hour Unload Factors for											
Year 2013											
Asset	Model ID	Hour	NO Emission			NO Emission					
			Monthly/Average	Monthly/Average	Monthly/Average	Monthly/Average	Monthly/Average	Monthly/Average	Monthly/Average		
44	06001000	1	1.1776	1.2738	1.0776	1.1888	1.2848	1.0888	1.1999	1.2959	1.0999
44	06001000	2	1.4116	3.2687	2.0226	1.1198	2.7347	1.7098	1.0101	2.332	1.4434
44	06001000	3	1.4116	3.2687	2.0226	1.1198	2.7347	1.7098	1.0101	2.332	1.4434
44	11001000	1	1.5028	2.8847	1.7687	1.3521	2.2883	1.4781	1.0605	2.0201	1.3215
44	12001000	1	1.6267	4.2522	2.7928	1.5232	3.7662	2.3222	1.1435	2.8881	1.6552
44	13001000	1	1.5845	3.8442	2.4792	1.4882	3.3881	2.1881	1.1088	2.6881	1.5881
44	14001000	1	1.8776	6.0007	3.1116	1.5848	4.5667	2.5781	1.2201	3.2401	2.0801
44	15001000	1	1.7962	5.7962	3.0962	1.4962	4.3962	2.4962	1.1462	3.1462	2.0462
44	16001000	1	1.7171	6.1717	3.1467	1.5881	5.1677	2.7171	1.1111	3.1881	2.0881
44	17001000	1	2.2981	7.7171	4.1111	1.8281	6.2281	3.7581	1.4481	4.8581	2.9781
44	18001000	1	2.1316	7.1316	3.8816	1.7316	5.6316	3.4316	1.3316	4.2316	2.8316
44	19001000	1	2.0881	6.7881	3.7881	1.6981	5.2881	3.2881	1.4441	4.7781	2.9881
44	20001000	1	2.0881	6.7881	3.7881	1.6981	5.2881	3.2881	1.4441	4.7781	2.9881
44	21001000	1	2.0881	6.7881	3.7881	1.6981	5.2881	3.2881	1.4441	4.7781	2.9881
44	22001000	1	2.0881	6.7881	3.7881	1.6981	5.2881	3.2881	1.4441	4.7781	2.9881
44	23001000	1	2.0881	6.7881	3.7881	1.6981	5.2881	3.2881	1.4441	4.7781	2.9881
44	24001000	1	2.0881	6.7881	3.7881	1.6981	5.2881	3.2881	1.4441	4.7781	2.9881
44	06001000	2	1.4116	3.2687	2.0226	1.1198	2.7347	1.7098	1.0101	2.332	1.4434
44	11001000	2	1.5028	2.8847	1.7687	1.3521	2.2883	1.4781	1.0605	2.0201	1.3215
44	12001000	2	1.6267	4.2522	2.7928	1.5232	3.7662	2.3222	1.1435	2.8881	1.6552
44	13001000	2	1.5845	3.8442	2.4792	1.4882	3.3881	2.1881	1.1088	2.6881	1.5881
44	14001000	2	1.8776	6.0007	3.1116	1.5848	4.5667	2.5781	1.2201	3.2401	2.0801
44	15001000	2	1.7962	5.7962	3.0962	1.4962	4.3962	2.4962	1.1462	3.1462	2.0462
44	16001000	2	1.7171	6.1717	3.1467	1.5881	5.1677	2.7171	1.1111	3.1881	2.0881
44	17001000	2	2.2981	7.7171	4.1111	1.8281	6.2281	3.7581	1.4481	4.8581	2.9781
44	18001000	2	2.1316	7.1316	3.8816	1.7316	5.6316	3.4316	1.3316	4.2316	2.8316
44	19001000	2	2.0881	6.7881	3.7881	1.6981	5.2881	3.2881	1.4441	4.7781	2.9881
44	20001000	2	2.0881	6.7881	3.7881	1.6981	5.2881	3.2881	1.4441	4.7781	2.9881
44	21001000	2	2.0881	6.7881	3.7881	1.6981	5.2881	3.2881	1.4441	4.7781	2.9881
44	22001000	2	2.0881	6.7881	3.7881	1.6981	5.2881	3.2881	1.4441	4.7781	2.9881
44	23001000	2	2.0881	6.7881	3.7881	1.6981	5.2881	3.2881	1.4441	4.7781	2.9881
44	24001000	2	2.0881	6.7881	3.7881	1.6981	5.2881	3.2881	1.4441	4.7781	2.9881
44	06001000	3	1.4116	3.2687	2.0226	1.1198	2.7347	1.7098	1.0101	2.332	1.4434
44	11001000	3	1.5028	2.8847	1.7687	1.3521	2.2883	1.4781	1.0605	2.0201	1.3215
44	12001000	3	1.6267	4.2522	2.7928	1.5232	3.7662	2.3222	1.1435	2.8881	1.6552
44	13001000	3	1.5845	3.8442	2.4792	1.4882	3.3881	2.1881	1.1088	2.6881	1.5881
44	14001000	3	1.8776	6.0007	3.1116	1.5848	4.5667	2.5781	1.2201	3.2401	2.0801
44	15001000	3	1.7962	5.7962	3.0962	1.4962	4.3962	2.4962	1.1462	3.1462	2.0462
44	16001000	3	1.7171	6.1717	3.1467	1.5881	5.1677	2.7171	1.1111	3.1881	2.0881
44	17001000	3	2.2981	7.7171	4.1111	1.8281	6.2281	3.7581	1.4481	4.8581	2.9781
44	18001000	3	2.1316	7.1316	3.8816	1.7316	5.6316	3.4316	1.3316	4.2316	2.8316
44	19001000	3	2.0881	6.7881	3.7881	1.6981	5.2881	3.2881	1.4441	4.7781	2.9881
44	20001000	3	2.0881	6.7881	3.7881	1.6981	5.2881	3.2881	1.4441	4.7781	2.9881
44	21001000	3	2.0881	6.7881	3.7881	1.6981	5.2881	3.2881	1.4441	4.7781	2.9881
44	22001000	3	2.0881	6.7881	3.7881	1.6981	5.2881	3.2881	1.4441	4.7781	2.9881
44	23001000	3	2.0881	6.7881	3.7881	1.6981	5.2881	3.2881	1.4441	4.7781	2.9881
44	24001000	3	2.0881	6.7881	3.7881	1.6981	5.2881	3.2881	1.4441	4.7781	2.9881
44	06001000	4	1.4116	3.2687	2.0226	1.1198	2.7347	1.7098	1.0101	2.332	1.4434
44	11001000	4	1.5028	2.8847	1.7687	1.3521	2.2883	1.4781	1.0605	2.0201	1.3215
44	12001000	4	1.6267	4.2522	2.7928	1.5232	3.7662	2.3222	1.1435	2.8881	1.6552
44	13001000	4	1.5845	3.8442	2.4792	1.4882	3.3881	2.1881	1.1088	2.6881	1.5881
44	14001000	4	1.8776	6.0007	3.1116	1.5848	4.5667	2.5781	1.2201	3.2401	2.0801
44	15001000	4	1.7962	5.7962	3.0962	1.4962	4.3962	2.4962	1.1462	3.1462	2.0462
44	16001000	4	1.7171	6.1717	3.1467	1.5881	5.1677	2.7171	1.1111	3.1881	2.0881
44	17001000	4	2.2981	7.7171	4.1111	1.8281	6.2281	3.7581	1.4481	4.8581	2.9781
44	18001000	4	2.1316	7.1316	3.8816	1.7316	5.6316	3.4316	1.3316	4.2316	2.8316
44	19001000	4	2.0881	6.7881	3.7881	1.6981	5.2881	3.2881	1.4441	4.7781	2.9881
44	20001000	4	2.0881	6.7881	3.7881	1.6981	5.2881	3.2881	1.4441	4.7781	2.9881
44	21001000	4	2.0881	6.7881	3.7881	1.6981	5.2881	3.2881	1.4441	4.7781	2.9881
44	22001000	4	2.0881	6.7881	3.7881	1.6981	5.2881	3.2881	1.4441	4.7781	2.9881
44	23001000	4	2.0881	6.7881	3.7881	1.6981	5.2881	3.2881	1.4441	4.7781	2.9881
44	24001000	4	2.0881	6.7881	3.7881	1.6981	5.2881	3.2881	1.4441	4.7781	2.9881
44	06001000	5	1.4116	3.2687	2.0226	1.1198	2.7347	1.7098	1.0101	2.332	1.4434
44	11001000	5	1.5028	2.8847	1.7687	1.3521	2.2883	1.4781	1.0605	2.0201	1.3215
44	12001000	5	1.6267	4.2522	2.7928	1.5232	3.7662	2.3222	1.1435	2.8881	1.6552
44	13001000	5	1.5845	3.8442	2.4792	1.4882	3.3881	2.1881	1.1088	2.6881	1.5881
44	14001000	5	1.8776	6.0007	3.1116	1.5848	4.5667	2.5781	1.2201	3.2401	2.0801
44	15001000	5	1.7962	5.7962	3.0962	1.4962	4.3962	2.4962	1.1462	3.1462	2.0462
44	16001000	5	1.7171	6.1717	3.1467	1.5881	5.1677	2.7171	1.1111	3.1881	2.0881
44	17001000	5	2.2981	7.7171	4.1111	1.8281	6.2281	3.7581	1.4481	4.8581	2.9781
44	18001000	5	2.1316	7.1316	3.8816	1.7316	5.6316	3.4316	1.3316	4.2316	2.8316
44	19001000	5	2.0881	6.7881	3.7881	1.6981	5.2881	3.2881	1.4441	4.7781	2.9881
44	20001000	5	2.0881	6.7881	3.7881	1.6981	5.2881	3.2881	1.4441	4.7781	2.9881
44	21001000	5	2.0881	6.7881	3.7881	1.6981	5.2881	3.2881	1.4441	4.7781	2.9881
44	22001000	5	2.0881	6.7881	3.7881	1.6981	5.2881	3.2881	1.4441	4.7781	2.9881
44	23001000	5	2.0881	6.7881	3.7881	1.6981	5.2881	3.2881	1.4441	4.7781	2.9881
44	24001000	5	2.0881	6.7881	3.7881	1.6981	5.2881	3.2881	1.4441	4.7781	2.9881
44	06001000	6	1.4116	3.2687	2.0226	1.1198	2.7347	1.7098	1.0101	2.332	1.4434
44	11001000	6	1.5028	2.8847	1.7687	1.3521	2.2883	1.4781	1.0605	2.0201	1.3215
44	12001000	6	1.6267	4.2522	2.7928	1.5232	3.7662	2.3222	1.1435	2.8881	1.6552
44	13001000	6	1.5845	3.8442	2.4792	1.4882	3.3881	2.1881	1.1088	2.6881	1.5881
44	14001000	6	1.8776	6.0007	3.1116	1.5848	4.5667	2.5781	1.2201	3.2401	2.0801
44	15001000	6	1.7962	5.7962	3.0962	1.4962	4.3962	2.4962	1.1462	3.1462	2.0462
44	16001000	6	1.7171	6.1717	3.1467	1.5881	5.1677	2.7171	1.1111	3.1881	2.0881
44	17001000	6	2.2981	7.7171	4.1111	1.8281	6.2281	3.7581	1.4481	4.8581	2.9781
44	18001000	6	2.1316	7.1316	3.8816	1.7316	5.6316	3.4316	1.3316	4.2316	2.8316
44	19001000	6	2.0881	6.7881	3.7881	1.6981	5.2881	3.2881	1.4441	4.7781	2.9881
44	20001000	6	2.0881	6.7881	3.7881	1.6981	5.2881	3.2881	1.4441	4.7781	2.9881
44	21001000	6	2.0881	6.7881	3.7881	1.6981	5.2881	3.2881	1.4441	4.7781	2.9881
44	22001000	6	2.0881	6.7881	3.7881	1.6981	5.2881	3.2881	1.4441	4.7781	2.9881
44	23001000	6	2.0881	6.7881	3.7881	1.6981	5.2881	3.2881	1.4441	4.7781	2.9881
44	24001000	6	2.0881	6.7881	3.7881	1.6981	5.2881	3.2881	1.4441	4.7781	2.9881
44	06001000	7	1.4116	3.2687	2.0226	1.1198	2.7347	1.7098	1.0101	2.332	1.4434
44	11001000	7	1.5028	2.8847	1.7687	1.3521	2.2883	1.4781	1.0605	2.0201	1.3215
44	12001000	7	1.6267	4.2522	2.7928	1.5232	3.7662	2.3222	1.1435	2.88	

Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.3 Emission Factor in 2033.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open N North Union Quarry

Year 2003

Road Name: North Union Quarry									
Road ID	Hour	NO ₂ Emission					NO Emission		
		Month/Jan	Month/Feb	Month/Mar	Month/Apr	Month/May	Month/June	Month/July	Month/Average
		g/hour	g/hour	g/hour	g/hour	g/hour	g/hour	g/hour	g/hour
Road #1	47	1600-1700	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	1800-1900	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	2000-2100	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	2200-2300	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	2400-2500	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	2600-2700	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	2800-2900	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	3000-3100	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	3200-3300	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	3400-3500	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	3600-3700	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	3800-3900	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	4000-4100	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	4200-4300	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	4400-4500	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	4600-4700	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	4800-4900	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	5000-5100	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	5200-5300	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	5400-5500	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	5600-5700	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	5800-5900	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	6000-6100	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	6200-6300	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	6400-6500	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	6600-6700	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	6800-6900	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	7000-7100	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	7200-7300	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	7400-7500	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	7600-7700	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	7800-7900	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	8000-8100	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	8200-8300	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	8400-8500	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	8600-8700	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	8800-8900	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	9000-9100	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	9200-9300	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	9400-9500	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	9600-9700	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	9800-9900	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	10000-10100	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	10200-10300	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	10400-10500	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	10600-10700	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	10800-10900	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	11000-11100	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	11200-11300	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	11400-11500	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	11600-11700	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	11800-11900	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	12000-12100	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	12200-12300	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	12400-12500	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	12600-12700	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	12800-12900	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	13000-13100	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	13200-13300	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	13400-13500	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	13600-13700	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	13800-13900	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	14000-14100	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	14200-14300	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	14400-14500	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	14600-14700	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	14800-14900	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	15000-15100	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	15200-15300	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	15400-15500	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	15600-15700	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	15800-15900	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	16000-16100	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	16200-16300	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	16400-16500	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	16600-16700	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	16800-16900	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	17000-17100	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	17200-17300	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	17400-17500	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	17600-17700	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	17800-17900	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	18000-18100	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	18200-18300	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	18400-18500	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	18600-18700	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	18800-18900	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	19000-19100	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	19200-19300	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	19400-19500	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	19600-19700	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	19800-19900	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	20000-20100	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	20200-20300	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	20400-20500	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	20600-20700	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	20800-20900	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	21000-21100	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	21200-21300	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	21400-21500	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	21600-21700	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	21800-21900	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	22000-22100	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	22200-22300	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	22400-22500	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	22600-22700	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	22800-22900	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	23000-23100	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	23200-23300	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	23400-23500	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	23600-23700	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	23800-23900	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	24000-24100	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	24200-24300	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	24400-24500	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	24600-24700	1.005	1.818	0.457	1.818	0.457	1.511	1.111
Road #1	47	24800-24900	1.005	1.8					

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Open Top North Underground Factors for Adamsite Model Results													
Year 2033			NO _x Emission						NO Emission				
Route Name	Route ID	Hour	Monthly/Trip Average		Monthly/Trip Average		Monthly/Trip Average		Monthly/Trip Average		Monthly/Trip Average		
			g/hour	g/trip	g/hour	g/trip	g/hour	g/trip	g/hour	g/trip	g/hour	g/trip	
Route 51	51	0000-0100	7.8113	0.302	1.1816	0.4643	1.6316	0.1217	7.2447	0.351	7.4202	0.3037	1.1315
Route 51	51	0100-0200	7.8113	0.302	1.1816	0.4643	1.6316	0.1217	7.2447	0.351	7.4202	0.3037	1.1315
Route 51	51	0200-0300	8.9643	0.346	1.4047	0.5317	1.8329	0.122	8.1275	0.317	8.6338	0.3262	1.2416
Route 51	51	0300-0400	8.9643	0.346	1.4047	0.5317	1.8329	0.122	8.1275	0.317	8.6338	0.3262	1.2416
Route 51	51	0400-0500	8.9643	0.346	1.4047	0.5317	1.8329	0.122	8.1275	0.317	8.6338	0.3262	1.2416
Route 51	51	0500-0600	11.1292	0.446	1.2009	0.4414	1.9113	0.1001	10.7767	0.408	8.2626	0.4717	0.7186
Route 51	51	0600-0700	11.1292	0.446	1.2009	0.4414	1.9113	0.1001	10.7767	0.408	8.2626	0.4717	0.7186
Route 51	51	0700-0800	12.5212	0.502	1.3202	0.5796	1.9502	0.1017	12.4866	0.504	2.5716	0.9825	2.1306
Route 51	51	0800-0900	11.986	0.4316	1.4415	0.6388	0.9375	0.2864	11.3386	0.3286	2.0465	0.7368	2.1886
Route 51	51	0900-1000	11.986	0.4316	1.4415	0.6388	0.9375	0.2864	11.3386	0.3286	2.0465	0.7368	2.1886
Route 51	51	1000-1100	14.4812	0.5227	0.4515	0.4412	2.4906	0.4535	14.0141	0.2086	0.8735	0.8688	0.7468
Route 51	51	1100-1200	14.4812	0.5227	0.4515	0.4412	2.4906	0.4535	14.0141	0.2086	0.8735	0.8688	0.7468
Route 51	51	1200-1300	16.5101	0.6123	0.4515	0.8446	1.0117	1.7676	17.0466	1.144	1.9434	7.3587	2.6511
Route 51	51	1300-1400	16.5101	0.6123	0.4515	0.8446	1.0117	1.7676	17.0466	1.144	1.9434	7.3587	2.6511
Route 51	51	1400-1500	13.5162	0.4878	0.8735	2.7132	1.8767	0.7416	12.9991	1.3888	1.4245	2.4645	3.2776
Route 51	51	1500-1600	13.5162	0.4878	0.8735	2.7132	1.8767	0.7416	12.9991	1.3888	1.4245	2.4645	3.2776
Route 51	51	1600-1700	13.5162	0.4878	0.8735	2.7132	1.8767	0.7416	12.9991	1.3888	1.4245	2.4645	3.2776
Route 51	51	1700-1800	13.5162	0.4878	0.8735	2.7132	1.8767	0.7416	12.9991	1.3888	1.4245	2.4645	3.2776
Route 51	51	1800-1900	2.7867	0.1852	0.7179	2.1112	0.3227	6.1206	3.4747	0.4184	0.2125	0.9674	0.2116
Route 51	51	1900-2000	2.7867	0.1852	0.7179	2.1112	0.3227	6.1206	3.4747	0.4184	0.2125	0.9674	0.2116
Route 51	51	2000-2100	2.7867	0.1852	0.7179	2.1112	0.3227	6.1206	3.4747	0.4184	0.2125	0.9674	0.2116
Route 51	51	2100-2200	2.7867	0.1852	0.7179	2.1112	0.3227	6.1206	3.4747	0.4184	0.2125	0.9674	0.2116
Route 51	51	2200-2300	2.7867	0.1852	0.7179	2.1112	0.3227	6.1206	3.4747	0.4184	0.2125	0.9674	0.2116
Route 52	52	0000-0100	7.8113	0.302	1.1816	0.4643	1.6316	0.1217	7.2447	0.351	7.4202	0.3037	1.1315
Route 52	52	0100-0200	7.8113	0.302	1.1816	0.4643	1.6316	0.1217	7.2447	0.351	7.4202	0.3037	1.1315
Route 52	52	0200-0300	8.9643	0.346	1.4047	0.5317	1.8329	0.122	8.1275	0.317	8.6338	0.3262	1.2416
Route 52	52	0300-0400	8.9643	0.346	1.4047	0.5317	1.8329	0.122	8.1275	0.317	8.6338	0.3262	1.2416
Route 52	52	0400-0500	8.9643	0.346	1.4047	0.5317	1.8329	0.122	8.1275	0.317	8.6338	0.3262	1.2416
Route 52	52	0500-0600	11.1292	0.446	1.2009	0.4414	1.9113	0.1001	10.7767	0.408	8.2626	0.4717	0.7186
Route 52	52	0600-0700	11.1292	0.446	1.2009	0.4414	1.9113	0.1001	10.7767	0.408	8.2626	0.4717	0.7186
Route 52	52	0700-0800	12.5212	0.502	1.3202	0.5796	1.9502	0.1017	12.4866	0.504	2.5716	0.9825	2.1306
Route 52	52	0800-0900	11.986	0.4316	1.4415	0.6388	0.9375	0.2864	11.3386	0.3286	2.0465	0.7368	2.1886
Route 52	52	0900-1000	11.986	0.4316	1.4415	0.6388	0.9375	0.2864	11.3386	0.3286	2.0465	0.7368	2.1886
Route 52	52	1000-1100	14.4812	0.5227	0.4515	0.4412	2.4906	0.4535	14.0141	0.2086	0.8735	0.8688	0.7468
Route 52	52	1100-1200	14.4812	0.5227	0.4515	0.4412	2.4906	0.4535	14.0141	0.2086	0.8735	0.8688	0.7468
Route 52	52	1200-1300	16.5101	0.6123	0.4515	0.8446	1.0117	1.7676	17.0466	1.144	1.9434	7.3587	2.6511
Route 52	52	1300-1400	16.5101	0.6123	0.4515	0.8446	1.0117	1.7676	17.0466	1.144	1.9434	7.3587	2.6511
Route 52	52	1400-1500	13.5162	0.4878	0.8735	2.7132	1.8767	0.7416	12.9991	1.3888	1.4245	2.4645	3.2776
Route 52	52	1500-1600	13.5162	0.4878	0.8735	2.7132	1.8767	0.7416	12.9991	1.3888	1.4245	2.4645	3.2776
Route 52	52	1600-1700	13.5162	0.4878	0.8735	2.7132	1.8767	0.7416	12.9991	1.3888	1.4245	2.4645	3.2776
Route 52	52	1700-1800	13.5162	0.4878	0.8735	2.7132	1.8767	0.7416	12.9991	1.3888	1.4245	2.4645	3.2776
Route 52	52	1800-1900	2.7867	0.1852	0.7179	2.1112	0.3227	6.1206	3.4747	0.4184	0.2125	0.9674	0.2116
Route 52	52	1900-2000	2.7867	0.1852	0.7179	2.1112	0.3227	6.1206	3.4747	0.4184	0.2125	0.9674	0.2116
Route 52	52	2000-2100	2.7867	0.1852	0.7179	2.1112	0.3227	6.1206	3.4747	0.4184	0.2125	0.9674	0.2116
Route 52	52	2100-2200	2.7867	0.1852	0.7179	2.1112	0.3227	6.1206	3.4747	0.4184	0.2125	0.9674	0.2116
Route 52	52	2200-2300	2.7867	0.1852	0.7179	2.1112	0.3227	6.1206	3.4747	0.4184	0.2125	0.9674	0.2116
Route 53	53	0000-0100	7.8113	0.302	1.1816	0.4643	1.6316	0.1217	7.2447	0.351	7.4202	0.3037	1.1315
Route 53	53	0100-0200	7.8113	0.302	1.1816	0.4643	1.6316	0.1217	7.2447	0.351	7.4202	0.3037	1.1315
Route 53	53	0200-0300	8.9643	0.346	1.4047	0.5317	1.8329	0.122	8.1275	0.317	8.6338	0.3262	1.2416
Route 53	53	0300-0400	8.9643	0.346	1.4047	0.5317	1.8329	0.122	8.1275	0.317	8.6338	0.3262	1.2416
Route 53	53	0400-0500	8.9643	0.346	1.4047	0.5317	1.8329	0.122	8.1275	0.317	8.6338	0.3262	1.2416
Route 53	53	0500-0600	11.1292	0.446	1.2009	0.4414	1.9113	0.1001	10.7767	0.408	8.2626	0.4717	0.7186
Route 53	53	0600-0700	11.1292	0.446	1.2009	0.4414	1.9113	0.1001	10.7767	0.408	8.2626	0.4717	0.7186
Route 53	53	0700-0800	12.5212	0.502	1.3202	0.5796	1.9502	0.1017	12.4866	0.504	2.5716	0.9825	2.1306
Route 53	53	0800-0900	11.986	0.4316	1.4415	0.6388	0.9375	0.2864	11.3386	0.3286	2.0465	0.7368	2.1886
Route 53	53	0900-1000	11.986	0.4316	1.4415	0.6388	0.9375	0.2864	11.3386	0.3286	2.0465	0.7368	2.1886
Route 53	53	1000-1100	14.4812	0.5227	0.4515	0.4412	2.4906	0.4535	14.0141	0.2086	0.8735	0.8688	0.7468
Route 53	53	1100-1200	14.4812	0.5227	0.4515	0.4412	2.4906	0.4535	14.0141	0.2086	0.8735	0.8688	0.7468
Route 53	53	1200-1300	16.5101	0.6123	0.4515	0.8446	1.0117	1.7676	17.0466	1.144	1.9434	7.3587	2.6511
Route 53	53	1300-1400	16.5101	0.6123	0.4515	0.8446	1.0117	1.7676	17.0466	1.144	1.9434	7.3587	2.6511
Route 53	53	1400-1500	13.5162	0.4878	0.8735	2.7132	1.8767	0.7416	12.9991	1.3888	1.4245	2.4645	3.2776
Route 53	53	1500-1600	13.5162	0.4878	0.8735	2.7132	1.8767	0.7416	12.9991	1.3888	1.4245	2.4645	3.2776
Route 53	53	1600-1700	13.5162	0.4878	0.8735	2.7132	1.8767	0.7416	12.9991	1.3888	1.4245	2.4645	3.2776
Route 53	53	1700-1800	13.5162	0.4878	0.8735	2.7132	1.8767	0.7416	12.9991	1.3888	1.4245	2.4645	3.2776
Route 53	53	1800-1900	2.7867	0.1852	0.7179	2.1112	0.3227	6.1206	3.4747	0.4184	0.2125	0.9674	0.2116
Route 53	53	1900-2000	2.7867	0.1852	0.7179	2.1112	0.3227	6.1206	3.4747	0.4184	0.2125	0.9674	0.2116
Route 53	53	2000-2100	2.7867	0.1852	0.7179	2.1112	0.3227	6.1206	3.4747	0.4184	0.2125	0.9674	0.2116
Route 53	53	2100-2200	2.7867	0.1852	0.7179	2.1112	0.3227	6.1206	3.4747	0.4184	0.2125	0.9674	0.2116
Route 53	53	2200-2300	2.7867	0.1852	0.7179	2.1112	0.3227	6.1206	3.4747	0.4184	0.2125	0.9674	0.2116
Route 54	54	0000-0100	7.8113	0.302	1.1816	0.4643	1.6316	0.1217	7.2447	0.351	7.4202	0.3037	1.1315
Route 54	54	0100-0200	7.8113	0.302	1.1816	0.4643	1.6316	0.1217	7.2447	0.351	7.4202	0.3037	1.1315
Route 54	54	0200-0300	8.9643	0.346	1.4047	0.5317	1.8329	0.122	8.1275	0.317	8.6338	0.3262	1.2416
Route 54	54	0300-0400	8.9643	0.346	1.4047	0.5317	1.8329	0.122	8.1275	0.317	8.6338	0.3262	1.2416
Route 54	54	0400-0500	8.9643	0.346	1.4047	0.5317	1.8329	0.122	8.1275	0.317	8.6338	0.3262	1.2416
Route 54	54	0500-0600	11.1292	0.446	1.2009	0.4414	1.9113	0.1001	10.7767	0.408	8.2626	0.4717	0.7186
Route 54	54	0600-0700	11.1292	0.446	1.2009	0.4414	1.9113	0.1001	10.7767	0.408	8.2626	0.4717	0.7186
Route 54	54	0700-0800	12.5212	0.502	1.3202	0.5796	1.9502	0.1017	12.4866	0.504	2.5716	0.9825	2.1306
Route 54	54	0800-0900	11.986	0.4316	1.4415	0.6388	0.9375	0.2864	11.3386	0.3286	2.0465	0.7368	2.1886
Route 54	54	0900-1000	11.986										

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Open Top North Underground Factors for 680000 m ² Year 2003																	
Road Name	Road ID	Hour	Moist/Moist/hour			Moist/hour			Moist/hour			Moist/hour			Moist/hour		
			g/hw ²	g/hw ²	g/hw ²	g/hw ²	g/hw ²	g/hw ²	g/hw ²	g/hw ²	g/hw ²	g/hw ²	g/hw ²	g/hw ²	g/hw ²	g/hw ²	g/hw ²
Road 103	103	1600-1700	1.7482	1.7482	1.7482	1.1145	1.4454	3.9797	0.9358	7.9882	2.1068	1.6705	4.4812	1.7765	4.2155	0.05	
Road 103	103	1700-1800	1.7482	1.7482	1.7482	1.1145	1.4454	3.9797	0.9358	7.9882	2.1068	1.6705	4.4812	1.7765	4.2155	0.05	
Road 103	103	1800-1900	1.7482	1.7482	1.7482	1.1145	1.4454	3.9797	0.9358	7.9882	2.1068	1.6705	4.4812	1.7765	4.2155	0.05	
Road 103	103	1900-2000	1.7482	1.7482	1.7482	1.1145	1.4454	3.9797	0.9358	7.9882	2.1068	1.6705	4.4812	1.7765	4.2155	0.05	
Road 103	103	2000-2100	1.7482	1.7482	1.7482	1.1145	1.4454	3.9797	0.9358	7.9882	2.1068	1.6705	4.4812	1.7765	4.2155	0.05	
Road 103	103	2100-2200	1.7482	1.7482	1.7482	1.1145	1.4454	3.9797	0.9358	7.9882	2.1068	1.6705	4.4812	1.7765	4.2155	0.05	
Road 103	103	2200-2300	1.7482	1.7482	1.7482	1.1145	1.4454	3.9797	0.9358	7.9882	2.1068	1.6705	4.4812	1.7765	4.2155	0.05	
Road 103	103	2300-0000	1.7482	1.7482	1.7482	1.1145	1.4454	3.9797	0.9358	7.9882	2.1068	1.6705	4.4812	1.7765	4.2155	0.05	
Road 104	104	0000-0100	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 104	104	0100-0200	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 104	104	0200-0300	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 104	104	0300-0400	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 104	104	0400-0500	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 104	104	0500-0600	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 104	104	0600-0700	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 104	104	0700-0800	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 104	104	0800-0900	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 104	104	0900-1000	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 104	104	1000-1100	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 104	104	1100-1200	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 104	104	1200-1300	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 104	104	1300-1400	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 104	104	1400-1500	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 104	104	1500-1600	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 104	104	1600-1700	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 104	104	1700-1800	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 104	104	1800-1900	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 104	104	1900-2000	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 104	104	2000-2100	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 104	104	2100-2200	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 104	104	2200-2300	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 104	104	2300-0000	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 105	105	0000-0100	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 105	105	0100-0200	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 105	105	0200-0300	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 105	105	0300-0400	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 105	105	0400-0500	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 105	105	0500-0600	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 105	105	0600-0700	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 105	105	0700-0800	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 105	105	0800-0900	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 105	105	0900-1000	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 105	105	1000-1100	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 105	105	1100-1200	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 105	105	1200-1300	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 105	105	1300-1400	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 105	105	1400-1500	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 105	105	1500-1600	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 105	105	1600-1700	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 105	105	1700-1800	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 105	105	1800-1900	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 105	105	1900-2000	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 105	105	2000-2100	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 105	105	2100-2200	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 105	105	2200-2300	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 105	105	2300-0000	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 106	106	0000-0100	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 106	106	0100-0200	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 106	106	0200-0300	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 106	106	0300-0400	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 106	106	0400-0500	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 106	106	0500-0600	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 106	106	0600-0700	1.2212	1.2212	1.2212	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	1.0868	
Road 106	106	0700-0800	1.2212	1.2212	1.2212	1.0868											

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open N North Undermansion Quarters

Year 2003

ADDRESS		Room ID		NO. Emisson				NO Emisson			
				Month/January		Month/February		Month/March		Month/Average	
				g/h/mph		g/h/mph		g/h/mph		g/h/mph	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				Hour		Hour		Hour		Hour	
				Month/Average		Month/Average		Month/Average		Month/Average	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003		2/1/2003		3/1/2003		1/1/2003	
				1/1/2003							

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

[illegible]

Calculation of Vehicular Emission (Scenario A)

[illegible][illegible]

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[illegible]

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Top North End Urban Quarry														
Year 2003														
			No. Emulsion											
Road Name	Road ID	Hour	Monthly/tonne			Monthly/gallon			Monthly/tonne			Monthly/gallon		
			g/tonne	g/gal	tonne/tonne	gal/tonne	tonne/tonne	gal/tonne	tonne/tonne	gal/tonne	tonne/tonne	gal/tonne		
Road 14	14	0800-0900	3.898	0.7187	1.337	0.255	6.6467	1.137	1.837	0.3176	6.336	1.545	6.346	1.535
Road 14	14	0900-1000	3.399	0.6787	1.237	0.235	6.1467	1.087	1.637	0.2716	5.495	1.375	5.495	1.375
Road 14	14	1000-1100	3.739	0.7187	1.337	0.255	6.6467	1.137	1.837	0.3176	6.336	1.545	6.346	1.535
Road 14	14	1100-1200	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	1200-1300	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	1300-1400	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	1400-1500	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	1500-1600	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	1600-1700	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	1700-1800	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	1800-1900	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	1900-2000	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	2000-2100	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	2100-2200	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	2200-2300	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	2300-2400	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	2400-2500	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	2500-2600	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	2600-2700	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	2700-2800	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	2800-2900	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	2900-3000	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	3000-3100	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	3100-3200	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	3200-3300	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	3300-3400	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	3400-3500	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	3500-3600	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	3600-3700	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	3700-3800	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	3800-3900	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	3900-4000	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	4000-4100	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	4100-4200	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	4200-4300	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	4300-4400	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	4400-4500	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	4500-4600	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	4600-4700	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	4700-4800	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	4800-4900	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	4900-5000	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	5000-5100	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	5100-5200	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	5200-5300	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	5300-5400	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	5400-5500	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	5500-5600	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	5600-5700	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	5700-5800	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	5800-5900	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	5900-6000	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	6000-6100	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	6100-6200	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	6200-6300	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	6300-6400	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	6400-6500	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	6500-6600	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	6600-6700	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	6700-6800	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	6800-6900	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	6900-7000	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	7000-7100	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	7100-7200	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	7200-7300	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	7300-7400	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	7400-7500	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	7500-7600	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	7600-7700	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	7700-7800	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	7800-7900	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	7900-8000	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	8000-8100	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	8100-8200	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	8200-8300	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	8300-8400	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	8400-8500	3.139	0.6187	1.137	0.215	5.7467	1.037	1.437	0.2516	5.136	1.245	5.136	1.245
Road 14	14	8500-8600	3.139	0.6187	1									

Appendix 3.5.3 Emission Factor in 2033.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open North End Unionway Quarry														
Top 1000 Tonnage per Hour 4000 Model (tonnes/hr)														
Year 2003														
Road Name	Road ID	Hour	NO, Emcoast					NO Emcoast						
			g/h/mph	g/h/mph	tonne/hour	g/h/mph	tonne/hour	g/h/mph	g/h/mph	tonne/hour	g/h/mph	tonne/hr		
Road 27	27	1800-1900	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	1900-1930	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	1930-2000	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	2000-2100	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	2100-2200	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	2200-2300	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	2300-2400	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	2400-2500	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	2500-2600	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	2600-2700	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	2700-2800	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	2800-2900	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	2900-3000	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	3000-3100	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	3100-3200	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	3200-3300	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	3300-3400	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	3400-3500	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	3500-3600	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	3600-3700	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	3700-3800	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	3800-3900	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	3900-4000	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	4000-4100	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	4100-4200	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	4200-4300	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	4300-4400	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	4400-4500	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	4500-4600	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	4600-4700	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	4700-4800	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	4800-4900	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	4900-5000	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	5000-5100	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	5100-5200	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	5200-5300	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	5300-5400	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	5400-5500	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	5500-5600	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	5600-5700	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	5700-5800	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	5800-5900	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	5900-6000	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	6000-6100	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	6100-6200	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	6200-6300	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	6300-6400	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	6400-6500	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	6500-6600	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	6600-6700	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	6700-6800	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	6800-6900	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	6900-7000	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	7000-7100	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	7100-7200	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	7200-7300	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	7300-7400	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	7400-7500	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	7500-7600	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	7600-7700	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	7700-7800	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	7800-7900	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	7900-8000	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	8000-8100	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	8100-8200	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	8200-8300	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	8300-8400	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	8400-8500	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	8500-8600	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	8600-8700	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	8700-8800	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	8800-8900	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	8900-9000	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.1056	4.9387	0.53781	1.3718	4.2111
Road 27	27	9000-9100	1.7381	4.4187	0.867	4.4811	3.7777	0.148	6.2881	0.105				

\\nad\Appendix 3.5.3 Emission Factor in 2033.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Top 24 Hour Underground Quarters Using Top 24 Hour Emission Factors for PM10-10 (mold level) Year 2003														
Road Name	Road ID	Hour	NO _x Emission			NO ₂ Emission			NO ₂ Emission			NO ₂ Emission		
			g/min/hour	g/min/hour	g/min/hour	g/min/hour	g/min/hour	g/min/hour	g/min/hour	g/min/hour	g/min/hour	g/min/hour	g/min/hour	
Road 21	01	0000-0100	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 21	01	0100-0200	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 21	01	0200-0300	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 21	01	0300-0400	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 21	01	0400-0500	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 21	01	0500-0600	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 21	01	0600-0700	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 21	01	0700-0800	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 21	01	0800-0900	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 21	01	0900-1000	2.5468	6.6987	6.892	2.1140	5.575	3.7374	2.0614	3.3926	4.3124	1.0591	4.0171	3.58
Road 21	01	1000-1100	2.5468	6.6987	6.892	2.1140	5.575	3.7374	2.0614	3.3926	4.3124	1.0591	4.0171	3.58
Road 21	01	1100-1200	2.5468	6.6987	6.892	2.1140	5.575	3.7374	2.0614	3.3926	4.3124	1.0591	4.0171	3.58
Road 21	01	1200-1300	1.8426	6.4147	6.916	2.8806	5.527	3.526	2.926	3.506	3.9358	1.1261	4.0868	3.58
Road 21	01	1300-1400	1.8426	6.4147	6.916	2.8806	5.527	3.526	2.926	3.506	3.9358	1.1261	4.0868	3.58
Road 21	01	1400-1500	1.8426	6.4147	6.916	2.8806	5.527	3.526	2.926	3.506	3.9358	1.1261	4.0868	3.58
Road 21	01	1500-1600	1.8426	6.4147	6.916	2.8806	5.527	3.526	2.926	3.506	3.9358	1.1261	4.0868	3.58
Road 21	01	1600-1700	1.8426	6.4147	6.916	2.8806	5.527	3.526	2.926	3.506	3.9358	1.1261	4.0868	3.58
Road 21	01	1700-1800	1.8426	6.4147	6.916	2.8806	5.527	3.526	2.926	3.506	3.9358	1.1261	4.0868	3.58
Road 21	01	1800-1900	1.8426	6.4147	6.916	2.8806	5.527	3.526	2.926	3.506	3.9358	1.1261	4.0868	3.58
Road 21	01	1900-2000	1.8426	6.4147	6.916	2.8806	5.527	3.526	2.926	3.506	3.9358	1.1261	4.0868	3.58
Road 21	01	2000-2100	1.8426	6.4147	6.916	2.8806	5.527	3.526	2.926	3.506	3.9358	1.1261	4.0868	3.58
Road 21	01	2100-2200	1.8426	6.4147	6.916	2.8806	5.527	3.526	2.926	3.506	3.9358	1.1261	4.0868	3.58
Road 21	01	2200-2300	1.8426	6.4147	6.916	2.8806	5.527	3.526	2.926	3.506	3.9358	1.1261	4.0868	3.58
Road 21	01	2300-2400	1.8426	6.4147	6.916	2.8806	5.527	3.526	2.926	3.506	3.9358	1.1261	4.0868	3.58
Road 22	02	0000-0100	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 22	02	0100-0200	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 22	02	0200-0300	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 22	02	0300-0400	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 22	02	0400-0500	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 22	02	0500-0600	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 22	02	0600-0700	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 22	02	0700-0800	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 22	02	0800-0900	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 22	02	0900-1000	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 22	02	1000-1100	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 22	02	1100-1200	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 22	02	1200-1300	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 22	02	1300-1400	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 22	02	1400-1500	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 22	02	1500-1600	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 22	02	1600-1700	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 22	02	1700-1800	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 22	02	1800-1900	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 22	02	1900-2000	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 22	02	2000-2100	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 22	02	2100-2200	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 22	02	2200-2300	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 22	02	2300-2400	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 23	03	0000-0100	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 23	03	0100-0200	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 23	03	0200-0300	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 23	03	0300-0400	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 23	03	0400-0500	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 23	03	0500-0600	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 23	03	0600-0700	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 23	03	0700-0800	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 23	03	0800-0900	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 23	03	0900-1000	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 23	03	1000-1100	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 23	03	1100-1200	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 23	03	1200-1300	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 23	03	1300-1400	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 23	03	1400-1500	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 23	03	1500-1600	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 23	03	1600-1700	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 23	03	1700-1800	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 23	03	1800-1900	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 23	03	1900-2000	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 23	03	2000-2100	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 23	03	2100-2200	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 23	03	2200-2300	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 23	03	2300-2400	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 24	04	0000-0100	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 24	04	0100-0200	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 24	04	0200-0300	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 24	04	0300-0400	1.1116	9.8318	1.306	1.1540	8.688	1.154	8.782	6.667	8.7276	7.697	5.2177	7.50
Road 24	04	0400-0500	1.1116	9.8318	1.306	1.1540	8.688	1.1						

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.3 Emission Factor in 2033.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Top 24 Hour Endurance Factors for AERMOD (miles) (km)														
Year 2033														
Road Name	Road ID	Hour	NO _x Emission						PM ₁₀ Emission					
			g/mi/hr	g/mi ²	g/mi/hr	g/mi ²	g/mi/hr	g/mi ²	g/mi/hr	g/mi ²	g/mi/hr	g/mi ²		
Road 34	14	0800-0900	1.222	0.317	7.812	1.044	2.782	0.717	6.074	4.822	2.206	0.578	0.932	4.882
Road 34	14	0900-1000	0.843	0.218	5.456	0.717	1.882	0.466	4.166	3.266	1.556	0.416	3.336	3.236
Road 34	14	1000-1100	1.188	0.317	7.812	1.044	2.782	0.717	6.074	4.822	2.206	0.578	0.932	4.882
Road 34	14	1100-1200	0.843	0.218	5.456	0.717	1.882	0.466	4.166	3.266	1.556	0.416	3.336	3.236
Road 34	14	1200-1300	1.196	0.327	8.072	1.056	2.860	0.736	6.264	4.926	2.316	0.586	0.946	4.926
Road 34	14	1300-1400	1.344	0.367	9.088	1.200	3.176	0.808	6.936	5.436	2.596	0.648	1.048	5.436
Road 34	14	1400-1500	1.344	0.367	9.088	1.200	3.176	0.808	6.936	5.436	2.596	0.648	1.048	5.436
Road 34	14	1500-1600	1.316	0.367	8.912	1.176	3.104	0.788	6.808	5.368	2.568	0.638	1.028	5.368
Road 34	14	1600-1700	1.388	0.387	9.504	1.248	3.280	0.848	7.360	5.680	2.720	0.688	1.108	5.680
Road 34	14	1700-1800	2.888	0.827	20.576	2.656	7.440	1.948	17.072	12.888	3.976	1.040	2.416	13.136
Road 34	14	1800-1900	2.888	0.827	20.576	2.656	7.440	1.948	17.072	12.888	3.976	1.040	2.416	13.136
Road 34	14	1900-2000	1.388	0.387	9.504	1.248	3.280	0.848	7.360	5.680	2.720	0.688	1.108	5.680
Road 34	14	2000-2100	2.408	0.687	16.848	2.176	6.716	1.616	14.528	10.748	3.548	0.908	2.188	10.748
Road 34	14	2100-2200	1.456	0.387	9.504	1.248	3.280	0.848	7.360	5.680	2.720	0.688	1.108	5.680
Road 35	15	0600-0700	1.108	0.288	6.856	0.824	2.160	0.588	4.784	3.208	1.396	0.376	1.116	2.296
Road 35	15	0700-0800	1.108	0.288	6.856	0.824	2.160	0.588	4.784	3.208	1.396	0.376	1.116	2.296
Road 35	15	0800-0900	1.408	0.378	9.184	1.072	2.880	0.768	6.512	4.336	1.716	0.467	1.280	2.616
Road 35	15	0900-1000	1.408	0.378	9.184	1.072	2.880	0.768	6.512	4.336	1.716	0.467	1.280	2.616
Road 35	15	1000-1100	1.712	0.448	11.360	1.304	3.624	0.928	7.936	5.056	2.048	0.547	1.464	3.036
Road 35	15	1100-1200	1.408	0.378	9.184	1.072	2.880	0.768	6.512	4.336	1.716	0.467	1.280	2.616
Road 35	15	1200-1300	1.488	0.424	10.016	1.136	3.296	0.828	7.408	4.548	1.776	0.477	1.344	2.776
Road 35	15	1300-1400	1.488	0.424	10.016	1.136	3.296	0.828	7.408	4.548	1.776	0.477	1.344	2.776
Road 35	15	1400-1500	1.768	0.488	11.744	1.360	3.712	0.968	8.448	5.296	2.176	0.587	1.488	3.036
Road 35	15	1500-1600	1.768	0.488	11.744	1.360	3.712	0.968	8.448	5.296	2.176	0.587	1.488	3.036
Road 35	15	1600-1700	2.068	0.548	13.280	1.520	4.160	1.104	9.600	5.952	2.496	0.647	1.632	3.336
Road 35	15	1700-1800	2.068	0.548	13.280	1.520	4.160	1.104	9.600	5.952	2.496	0.647	1.632	3.336
Road 35	15	1800-1900	2.568	0.648	16.384	1.840	5.120	1.312	11.712	7.264	2.992	0.767	1.936	3.936
Road 35	15	1900-2000	2.568	0.648	16.384	1.840	5.120	1.312	11.712	7.264	2.992	0.767	1.936	3.936
Road 35	15	2000-2100	2.068	0.548	13.280	1.520	4.160	1.104	9.600	5.952	2.496	0.647	1.632	3.336
Road 35	15	2100-2200	2.068	0.548	13.280	1.520	4.160	1.104	9.600	5.952	2.496	0.647	1.632	3.336
Road 35	15	2200-2300	2.272	0.592	14.528	1.672	4.544	1.184	10.560	6.432	2.672	0.697	1.744	3.536
Road 35	15	2300-2400	2.272	0.592	14.528	1.672	4.544	1.184	10.560	6.432	2.672	0.697	1.744	3.536
Road 36	16	0600-0700	1.108	0.288	6.856	0.824	2.160	0.588	4.784	3.208	1.396	0.376	1.116	2.296
Road 36	16	0700-0800	1.108	0.288	6.856	0.824	2.160	0.588	4.784	3.208	1.396	0.376	1.116	2.296
Road 36	16	0800-0900	1.408	0.378	9.184	1.072	2.880	0.768	6.512	4.336	1.716	0.467	1.280	2.616
Road 36	16	0900-1000	1.408	0.378	9.184	1.072	2.880	0.768	6.512	4.336	1.716	0.467	1.280	2.616
Road 36	16	1000-1100	1.712	0.448	11.360	1.304	3.624	0.928	7.936	5.056	2.048	0.547	1.464	3.036
Road 36	16	1100-1200	1.408	0.378	9.184	1.072	2.880	0.768	6.512	4.336	1.716	0.467	1.280	2.616
Road 36	16	1200-1300	1.488	0.424	10.016	1.136	3.296	0.828	7.408	4.548	1.776	0.477	1.344	2.776
Road 36	16	1300-1400	1.488	0.424	10.016	1.136	3.296	0.828	7.408	4.548	1.776	0.477	1.344	2.776
Road 36	16	1400-1500	1.768	0.488	11.744	1.360	3.712	0.968	8.448	5.296	2.176	0.587	1.488	3.036
Road 36	16	1500-1600	1.768	0.488	11.744	1.360	3.712	0.968	8.448	5.296	2.176	0.587	1.488	3.036
Road 36	16	1600-1700	2.068	0.548	13.280	1.520	4.160	1.104	9.600	5.952	2.496	0.647	1.632	3.336
Road 36	16	1700-1800	2.068	0.548	13.280	1.520	4.160	1.104	9.600	5.952	2.496	0.647	1.632	3.336
Road 36	16	1800-1900	2.568	0.648	16.384	1.840	5.120	1.312	11.712	7.264	2.992	0.767	1.936	3.936
Road 36	16	1900-2000	2.568	0.648	16.384	1.840	5.120	1.312	11.712	7.264	2.992	0.767	1.936	3.936
Road 36	16	2000-2100	2.068	0.548	13.280	1.520	4.160	1.104	9.600	5.952	2.496	0.647	1.632	3.336
Road 36	16	2100-2200	2.068	0.548	13.280	1.520	4.160	1.104	9.600	5.952	2.496	0.647	1.632	3.336
Road 36	16	2200-2300	2.272	0.592	14.528	1.672	4.544	1.184	10.560	6.432	2.672	0.697	1.744	3.536
Road 36	16	2300-2400	2.272	0.592	14.528	1.672	4.544	1.184	10.560	6.432	2.672	0.697	1.744	3.536
Road 37	17	0600-0700	1.108	0.288	6.856	0.824	2.160	0.588	4.784	3.208	1.396	0.376	1.116	2.296
Road 37	17	0700-0800	1.108	0.288	6.856	0.824	2.160	0.588	4.784	3.208	1.396	0.376	1.116	2.296
Road 37	17	0800-0900	1.408	0.378	9.184	1.072	2.880	0.768	6.512	4.336	1.716	0.467	1.280	2.616
Road 37	17	0900-1000	1.408	0.378	9.184	1.072	2.880	0.768	6.512	4.336	1.716	0.467	1.280	2.616
Road 37	17	1000-1100	1.712	0.448	11.360	1.304	3.624	0.928	7.936	5.056	2.048	0.547	1.464	3.036
Road 37	17	1100-1200	1.408	0.378	9.184	1.072	2.880	0.768	6.512	4.336	1.716	0.467	1.280	2.616
Road 37	17	1200-1300	1.488	0.424	10.016	1.136	3.296	0.828	7.408	4.548	1.776	0.477	1.344	2.776
Road 37	17	1300-1400	1.488	0.424	10.016	1.136	3.296	0.828	7.408	4.548	1.776	0.477	1.344	2.776
Road 37	17	1400-1500	1.768	0.488	11.744	1.360	3.712	0.968	8.448	5.296	2.176	0.587	1.488	3.036
Road 37	17	1500-1600	1.768	0.488	11.744	1.360	3.712	0.968	8.448	5.296	2.176	0.587	1.488	3.036
Road 37	17	1600-1700	2.068	0.548	13.280	1.520	4.160	1.104	9.600	5.952	2.496	0.647	1.632	3.336
Road 37	17	1700-1800	2.068	0.548	13.280	1.520	4.160	1.104	9.600	5.952	2.496	0.647	1.632	3.336
Road 37	17	1800-1900	2.568	0.648	16.384	1.840	5.120	1.312	11.712	7.264	2.992	0.767	1.936	3.936
Road 37	17	1900-2000	2.568	0.648	16.384	1.840	5.120	1.312	11.712	7.264	2.992	0.767	1.936	3.936
Road 37	17	2000-2100	2.068	0.548	13.280	1.520	4.160	1.104	9.600	5.952	2.496	0.647	1.632	3.336
Road 37	17	2100-2200	2.068	0.548	13.280	1.520	4.160	1.104	9.600	5.952	2.496	0.647	1.632	3.336
Road 37	17	2200-2300	2.272	0.592	14.528	1.672	4.544	1.184	10.560	6.432	2.672	0.697	1.744	3.536
Road 37	17	2300-2400	2.272	0.592	14.528	1.672	4.544	1.184	10.560	6.432	2.672	0.697	1.744	3.536

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Table 10: 24-hour Endurance Factors for WAW000 model (2003)													
Run Case Name	As of 1st Hour	Hour	NO _x Emission				NO Emission						
			g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour			
Run 2	0000	0000	1.536	0.817	7.416	0.737	2.554	0.677	5.773	1.126	2.816	0.848	2.421
Run 2	0000	0001	1.575	0.845	7.545	0.765	2.645	0.707	5.945	1.156	2.896	0.878	2.461
Run 2	0000	0002	1.614	0.873	7.674	0.795	2.734	0.737	6.134	1.186	2.976	0.908	2.501
Run 2	0000	0003	1.653	0.901	7.803	0.825	2.824	0.767	6.324	1.216	3.056	0.938	2.541
Run 2	0000	0004	1.692	0.929	7.932	0.855	2.914	0.797	6.514	1.246	3.136	0.968	2.581
Run 2	0000	0005	1.731	0.957	8.061	0.885	3.004	0.827	6.704	1.276	3.216	0.998	2.621
Run 2	0000	0006	1.770	0.985	8.190	0.915	3.094	0.857	6.894	1.306	3.296	1.028	2.661
Run 2	0000	0007	1.809	1.013	8.319	0.945	3.184	0.887	7.084	1.336	3.376	1.058	2.701
Run 2	0000	0008	1.848	1.041	8.448	0.975	3.274	0.917	7.274	1.366	3.456	1.088	2.741
Run 2	0000	0009	1.887	1.069	8.577	1.005	3.364	0.947	7.464	1.396	3.536	1.118	2.781
Run 2	0000	0010	1.926	1.097	8.706	1.035	3.454	0.977	7.654	1.426	3.616	1.148	2.821
Run 2	0000	0011	1.965	1.125	8.835	1.065	3.544	1.007	7.844	1.456	3.696	1.178	2.861
Run 2	0000	0012	2.004	1.153	8.964	1.095	3.634	1.037	8.034	1.486	3.776	1.208	2.901
Run 2	0000	0013	2.043	1.181	9.093	1.125	3.724	1.067	8.224	1.516	3.856	1.238	2.941
Run 2	0000	0014	2.082	1.209	9.222	1.155	3.814	1.097	8.414	1.546	3.936	1.268	2.981
Run 2	0000	0015	2.121	1.237	9.351	1.185	3.904	1.127	8.604	1.576	4.016	1.298	3.021
Run 2	0000	0016	2.160	1.265	9.480	1.215	3.994	1.157	8.794	1.606	4.096	1.328	3.061
Run 2	0000	0017	2.199	1.293	9.609	1.245	4.084	1.187	8.984	1.636	4.176	1.358	3.101
Run 2	0000	0018	2.238	1.321	9.738	1.275	4.174	1.217	9.174	1.666	4.256	1.388	3.141
Run 2	0000	0019	2.277	1.349	9.867	1.305	4.264	1.247	9.364	1.696	4.336	1.418	3.181
Run 2	0000	0020	2.316	1.377	9.996	1.335	4.354	1.277	9.554	1.726	4.416	1.448	3.221
Run 2	0000	0021	2.355	1.405	10.125	1.365	4.444	1.307	9.744	1.756	4.496	1.478	3.261
Run 2	0000	0022	2.394	1.433	10.254	1.395	4.534	1.337	9.934	1.786	4.576	1.508	3.301
Run 2	0000	0023	2.433	1.461	10.383	1.425	4.624	1.367	10.124	1.816	4.656	1.538	3.341
Run 2	0000	0024	2.472	1.489	10.512	1.455	4.714	1.397	10.314	1.846	4.736	1.568	3.381
Run 2	0000	0025	2.511	1.517	10.641	1.485	4.804	1.427	10.504	1.876	4.816	1.598	3.421
Run 2	0000	0026	2.550	1.545	10.770	1.515	4.894	1.457	10.694	1.906	4.896	1.628	3.461
Run 2	0000	0027	2.589	1.573	10.899	1.545	4.984	1.487	10.884	1.936	4.976	1.658	3.501
Run 2	0000	0028	2.628	1.601	11.028	1.575	5.074	1.517	11.074	1.966	5.056	1.688	3.541
Run 2	0000	0029	2.667	1.629	11.157	1.605	5.164	1.547	11.264	1.996	5.136	1.718	3.581
Run 2	0000	0030	2.706	1.657	11.286	1.635	5.254	1.577	11.454	2.026	5.216	1.748	3.621
Run 2	0000	0031	2.745	1.685	11.415	1.665	5.344	1.607	11.644	2.056	5.296	1.778	3.661
Run 2	0000	0032	2.784	1.713	11.544	1.695	5.434	1.637	11.834	2.086	5.376	1.808	3.701
Run 2	0000	0033	2.823	1.741	11.673	1.725	5.524	1.667	12.024	2.116	5.456	1.838	3.741
Run 2	0000	0034	2.862	1.769	11.802	1.755	5.614	1.697	12.214	2.146	5.536	1.868	3.781
Run 2	0000	0035	2.901	1.797	11.931	1.785	5.704	1.727	12.404	2.176	5.616	1.898	3.821
Run 2	0000	0036	2.940	1.825	12.060	1.815	5.794	1.757	12.594	2.206	5.696	1.928	3.861
Run 2	0000	0037	2.979	1.853	12.189	1.845	5.884	1.787	12.784	2.236	5.776	1.958	3.901
Run 2	0000	0038	3.018	1.881	12.318	1.875	5.974	1.817	12.974	2.266	5.856	1.988	3.941
Run 2	0000	0039	3.057	1.909	12.447	1.905	6.064	1.847	13.164	2.296	5.936	2.018	3.981
Run 2	0000	0040	3.096	1.937	12.576	1.935	6.154	1.877	13.354	2.326	6.016	2.048	4.021
Run 2	0000	0041	3.135	1.965	12.705	1.965	6.244	1.907	13.544	2.356	6.096	2.078	4.061
Run 2	0000	0042	3.174	1.993	12.834	1.995	6.334	1.937	13.734	2.386	6.176	2.108	4.101
Run 2	0000	0043	3.213	2.021	12.963	2.025	6.424	1.967	13.924	2.416	6.256	2.138	4.141
Run 2	0000	0044	3.252	2.049	13.092	2.055	6.514	1.997	14.114	2.446	6.336	2.168	4.181
Run 2	0000	0045	3.291	2.077	13.221	2.085	6.604	2.027	14.304	2.476	6.416	2.198	4.221
Run 2	0000	0046	3.330	2.105	13.350	2.115	6.694	2.057	14.494	2.506	6.496	2.228	4.261
Run 2	0000	0047	3.369	2.133	13.479	2.145	6.784	2.087	14.684	2.536	6.576	2.258	4.301
Run 2	0000	0048	3.408	2.161	13.608	2.175	6.874	2.117	14.874	2.566	6.656	2.288	4.341
Run 2	0000	0049	3.447	2.189	13.737	2.205	6.964	2.147	15.064	2.596	6.736	2.318	4.381
Run 2	0000	0050	3.486	2.217	13.866	2.235	7.054	2.177	15.254	2.626	6.816	2.348	4.421
Run 2	0000	0051	3.525	2.245	13.995	2.265	7.144	2.207	15.444	2.656	6.896	2.378	4.461
Run 2	0000	0052	3.564	2.273	14.124	2.295	7.234	2.237	15.634	2.686	6.976	2.408	4.501
Run 2	0000	0053	3.603	2.301	14.253	2.325	7.324	2.267	15.824	2.716	7.056	2.438	4.541
Run 2	0000	0054	3.642	2.329	14.382	2.355	7.414	2.297	16.014	2.746	7.136	2.468	4.581
Run 2	0000	0055	3.681	2.357	14.511	2.385	7.504	2.327	16.204	2.776	7.216	2.498	4.621
Run 2	0000	0056	3.720	2.385	14.640	2.415	7.594	2.357	16.394	2.806	7.296	2.528	4.661
Run 2	0000	0057	3.759	2.413	14.769	2.445	7.684	2.387	16.584	2.836	7.376	2.558	4.701
Run 2	0000	0058	3.798	2.441	14.898	2.475	7.774	2.417	16.774	2.866	7.456	2.588	4.741
Run 2	0000	0059	3.837	2.469	15.027	2.505	7.864	2.447	16.964	2.896	7.536	2.618	4.781
Run 2	0000	0100	3.876	2.497	15.156	2.535	7.954	2.477	17.154	2.926	7.616	2.648	4.821
Run 2	0000	0101	3.915	2.525	15.285	2.565	8.044	2.507	17.344	2.956	7.696	2.678	4.861
Run 2	0000	0102	3.954	2.553	15.414	2.595	8.134	2.537	17.534	2.986	7.776	2.708	4.901
Run 2	0000	0103	3.993	2.581	15.543	2.625	8.224	2.567	17.724	3.016	7.856	2.738	4.941
Run 2	0000	0104	4.032	2.609	15.672	2.655	8.314	2.597	17.914	3.046	7.936	2.768	4.981
Run 2	0000	0105	4.071	2.637	15.801	2.685	8.404	2.627	18.104	3.076	8.016	2.798	5.021
Run 2	0000	0106	4.110	2.665	15.930	2.715	8.494	2.657	18.294	3.106	8.096	2.828	5.061
Run 2	0000	0107	4.149	2.693	16.059	2.745	8.584	2.687	18.484	3.136	8.176	2.858	5.101
Run 2	0000	0108	4.188	2.721	16.188	2.775	8.674	2.717	18.674	3.166	8.256	2.888	5.141
Run 2	0000	0109	4.227	2.749	16.317	2.805	8.764	2.747	18.864	3.196	8.336	2.918	5.181
Run 2	0000	0110	4.266	2.777	16.446	2.835	8.854	2.777	19.054	3.226	8.416	2.948	5.221
Run 2	0000	0111	4.305	2.805	16.575	2.865	8.944	2.807	19.244	3.256	8.496	2.978	5.261
Run 2	0000	0112	4.344	2.833	16.704	2.895	9.034	2.837	19.434	3.286	8.576	3.008	5.301
Run 2	0000	0113	4.383	2.861	16.833	2.925	9.124	2.867	19.624	3.316	8.656	3.038	5.341
Run 2	0000	0114	4.422	2.889	16.962	2.955	9.214	2.897	19.814	3.346	8.736	3.068	5.381
Run 2	0000	0115	4.461	2.917	17.091	2.985	9.304	2.927	20.004	3.376	8.816	3.098	5.421
Run 2	0000	0116	4.500	2.945	17.220	3.015	9.394	2.957	20.194	3.406	8.896	3.128	5.461
Run 2	0000	0117	4.539	2.973	17.349	3.045	9.484	2.987	20.384	3.436	8.976	3.158	5.501
Run 2	0000	0118	4.578	3.001	17.478	3.075	9.574	3.017	20.574	3.466	9.056	3.188	5.541
Run 2	0000	0119	4.617	3.029	17.607	3.105	9.664	3.047	20.764	3.496	9.136	3.218	5.581
Run 2	0000	0120	4.656	3.057	17.736	3.135	9.754	3.077	20.954	3.526	9.216	3.248	5.621
Run 2	0000	0121	4.695	3.085	17.865	3.165	9.844	3.107	21.144	3.556	9.296	3.278	5.661
Run 2	0000	0122	4.734	3.113	17.994	3.195	9.934	3.137	21.334	3.586	9.376	3.308	5.701
Run 2	0000	0123	4.773	3.141	18.123	3.225	10.024	3.167	21.524	3.616	9.456	3.338	5.741
Run 2	0000	0124	4.812	3.169	18.252	3.255	10.114	3.197	21.714	3.646	9.536	3.368	5.781
Run 2	0000	0125	4.851	3.197	18.381	3.285	10.204	3.227	21.904	3.676	9.616	3.398	5.821
Run 2	0000	012											

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

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Road\Appendix 3.5.3 Emission Factor in 2033.xlsx

Tearing North Underground Quarry									
Open Road North and Extension Factors for									
AEMRO model results									
Year 2033									
Row Name	Row ID	Hour	NO _x Emission				NO ₂ Emission		
			g/hr	g/min	g/sec	Monthly/acreage	g/hr	g/min	Monthly/acreage
Row #4	4	0800-0900	1,172.02	1.97	1.204	6,944.6	1.740	0.865	2,446.1
Row #4	4	0900-1000	3,646.2	6.08	3.65	20,676.2	5.460	2.730	3,850.6
Row #4	4	1000-1100	1,172.02	1.97	1.204	6,944.6	1.740	0.865	2,446.1
Row #4	4	1100-1200	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9
Row #4	4	1200-1300	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9
Row #4	4	1300-1400	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9
Row #4	4	1400-1500	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9
Row #4	4	1500-1600	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9
Row #4	4	1600-1700	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9
Row #4	4	1700-1800	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9
Row #4	4	1800-1900	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9
Row #4	4	1900-2000	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9
Row #4	4	2000-2100	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9
Row #4	4	2100-2200	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9
Row #4	4	2200-2300	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9
Row #4	4	2300-2400	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9
Row #5	5	0800-0900	1,172.02	1.97	1.204	6,944.6	1.740	0.865	2,446.1
Row #5	5	0900-1000	3,646.2	6.08	3.65	20,676.2	5.460	2.730	3,850.6
Row #5	5	1000-1100	1,172.02	1.97	1.204	6,944.6	1.740	0.865	2,446.1
Row #5	5	1100-1200	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9
Row #5	5	1200-1300	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9
Row #5	5	1300-1400	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9
Row #5	5	1400-1500	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9
Row #5	5	1500-1600	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9
Row #5	5	1600-1700	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9
Row #5	5	1700-1800	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9
Row #5	5	1800-1900	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9
Row #5	5	1900-2000	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9
Row #5	5	2000-2100	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9
Row #5	5	2100-2200	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9
Row #5	5	2200-2300	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9
Row #5	5	2300-2400	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9
Row #6	6	0800-0900	1,172.02	1.97	1.204	6,944.6	1.740	0.865	2,446.1
Row #6	6	0900-1000	3,646.2	6.08	3.65	20,676.2	5.460	2.730	3,850.6
Row #6	6	1000-1100	1,172.02	1.97	1.204	6,944.6	1.740	0.865	2,446.1
Row #6	6	1100-1200	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9
Row #6	6	1200-1300	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9
Row #6	6	1300-1400	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9
Row #6	6	1400-1500	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9
Row #6	6	1500-1600	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9
Row #6	6	1600-1700	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9
Row #6	6	1700-1800	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9
Row #6	6	1800-1900	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9
Row #6	6	1900-2000	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9
Row #6	6	2000-2100	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9
Row #6	6	2100-2200	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9
Row #6	6	2200-2300	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9
Row #6	6	2300-2400	1,606.2	2.68	1.607	9,050.6	2.390	1.195	1,735.9

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Ting N North Underground Quarry															
Open Road North and Extension Factors for AEMND Model for Year 2003															
Road Name		Road ID	Hour	Mo, Enmission						Mo Enmission					
				Monthly/Average		Monthly/Average		Monthly/Average		Monthly/Average					
				g/hr/mi	hr/mi	g/hr/mi	hr/mi	g/hr/mi	hr/mi	g/hr/mi	hr/mi				
Road #1	S1	0000-0100	7:12:01	0.7818	1.0816	0.7102	0.818	9.4707	0.8107	6.2167	1.2115	6.862	0.81	1.041	
Road #1	S1	0100-0200	7:04:05	7.0405	7.0405	7.0405	7.0405	5.325	6.309	6.2446	6.407	8.0116	6.822	1.605	0.81
Road #1	S1	0200-0300	7:04:05	7.0405	7.0405	7.0405	7.0405	5.325	6.309	6.2446	6.407	8.0116	6.822	1.605	0.81
Road #1	S1	0300-0400	8:05:08	8.0508	8.0508	4.9027	6.7612	7.2118	4.3007	8.3302	2.5207	4.7116	7.1452	2.1705	0.401
Road #1	S1	0400-0500	9:41:05	9.4105	9.4105	8.8137	8.8096	6.2005	6.2005	6.2005	6.2005	6.2005	6.2005	6.2005	4.499
Road #1	S1	0500-0600	9:48:05	9.4805	9.4805	8.8137	8.8096	6.2005	6.2005	6.2005	6.2005	6.2005	6.2005	6.2005	4.499
Road #1	S1	0600-0700	1:04:02	1.0402	2.0202	2.4212	9.1403	7.1717	2.1205	6.8105	1.1605	2.0405	7.3307	4.2702	1.775
Road #1	S1	0700-0800	1:04:02	1.0402	2.0202	2.4212	9.1403	7.1717	2.1205	6.8105	1.1605	2.0405	7.3307	4.2702	1.775
Road #1	S1	0800-0900	1:04:02	1.0402	2.0202	2.4212	9.1403	7.1717	2.1205	6.8105	1.1605	2.0405	7.3307	4.2702	1.775
Road #1	S1	0900-1000	1:04:02	1.0402	2.0202	2.4212	9.1403	7.1717	2.1205	6.8105	1.1605	2.0405	7.3307	4.2702	1.775
Road #1	S1	1000-1100	1:04:02	1.0402	2.0202	2.4212	9.1403	7.1717	2.1205	6.8105	1.1605	2.0405	7.3307	4.2702	1.775
Road #1	S1	1100-1200	1:04:02	1.0402	2.0202	2.4212	9.1403	7.1717	2.1205	6.8105	1.1605	2.0405	7.3307	4.2702	1.775
Road #1	S1	1200-1300	1:04:02	1.0402	2.0202	2.4212	9.1403	7.1717	2.1205	6.8105	1.1605	2.0405	7.3307	4.2702	1.775
Road #1	S1	1300-1400	2:27:02	4.2702	4.2702	8.1122	9.7702	7.3717	6.0207	2.7605	6.8605	8.8705	2.3805	4.4005	0.745
Road #1	S1	1400-1500	2:27:02	4.2702	4.2702	8.1122	9.7702	7.3717	6.0207	2.7605	6.8605	8.8705	2.3805	4.4005	0.745
Road #1	S1	1500-1600	3:08:02	3.0802	4.1502	8.1122	9.7702	7.3717	6.0207	2.7605	6.8605	8.8705	2.3805	4.4005	0.745
Road #1	S1	1600-1700	3:08:02	3.0802	4.1502	8.1122	9.7702	7.3717	6.0207	2.7605	6.8605	8.8705	2.3805	4.4005	0.745
Road #1	S1	1700-1800	3:08:02	3.0802	4.1502	8.1122	9.7702	7.3717	6.0207	2.7605	6.8605	8.8705	2.3805	4.4005	0.745
Road #1	S1	1800-1900	3:08:02	3.0802	4.1502	8.1122	9.7702	7.3717	6.0207	2.7605	6.8605	8.8705	2.3805	4.4005	0.745
Road #1	S1	1900-2000	3:08:02	3.0802	4.1502	8.1122	9.7702	7.3717	6.0207	2.7605	6.8605	8.8705	2.3805	4.4005	0.745
Road #1	S1	2000-2100	2:57:02	2.5702	2.5702	4.2302	2.2302	1.8802	1.8802	1.8802	3.2702	6.0902	3.1902	2.2802	0.262
Road #1	S1	2100-2200	2:57:02	2.5702	2.5702	4.2302	2.2302	1.8802	1.8802	1.8802	3.2702	6.0902	3.1902	2.2802	0.262
Road #2	S2	0000-0100	7:12:01	0.7818	1.0816	0.7102	0.818	9.4707	0.8107	6.2167	1.2115	6.862	0.81	1.041	
Road #2	S2	0100-0200	7:04:05	7.0405	7.0405	7.0405	7.0405	5.325	6.309	6.2446	6.407	8.0116	6.822	1.605	0.81
Road #2	S2	0200-0300	7:04:05	7.0405	7.0405	7.0405	7.0405	5.325	6.309	6.2446	6.407	8.0116	6.822	1.605	0.81
Road #2	S2	0300-0400	8:05:08	8.0508	8.0508	4.9027	6.7612	7.2118	4.3007	8.3302	2.5207	4.7116	7.1452	2.1705	0.401
Road #2	S2	0400-0500	9:41:05	9.4105	9.4105	8.8137	8.8096	6.2005	6.2005	6.2005	6.2005	6.2005	6.2005	6.2005	4.499
Road #2	S2	0500-0600	9:48:05	9.4805	9.4805	8.8137	8.8096	6.2005	6.2005	6.2005	6.2005	6.2005	6.2005	6.2005	4.499
Road #2	S2	0600-0700	1:04:02	1.0402	2.0202	2.4212	9.1403	7.1717	2.1205	6.8105	1.1605	2.0405	7.3307	4.2702	1.775
Road #2	S2	0700-0800	1:04:02	1.0402	2.0202	2.4212	9.1403	7.1717	2.1205	6.8105	1.1605	2.0405	7.3307	4.2702	1.775
Road #2	S2	0800-0900	1:04:02	1.0402	2.0202	2.4212	9.1403	7.1717	2.1205	6.8105	1.1605	2.0405	7.3307	4.2702	1.775
Road #2	S2	0900-1000	1:04:02	1.0402	2.0202	2.4212	9.1403	7.1717	2.1205	6.8105	1.1605	2.0405	7.3307	4.2702	1.775
Road #2	S2	1000-1100	1:04:02	1.0402	2.0202	2.4212	9.1403	7.1717	2.1205	6.8105	1.1605	2.0405	7.3307	4.2702	1.775
Road #2	S2	1100-1200	1:04:02	1.0402	2.0202	2.4212	9.1403	7.1717	2.1205	6.8105	1.1605	2.0405	7.3307	4.2702	1.775
Road #2	S2	1200-1300	1:04:02	1.0402	2.0202	2.4212	9.1403	7.1717	2.1205	6.8105	1.1605	2.0405	7.3307	4.2702	1.775
Road #2	S2	1300-1400	2:27:02	4.2702	4.2702	8.1122	9.7702	7.3717	6.0207	2.7605	6.8605	8.8705	2.3805	4.4005	0.745
Road #2	S2	1400-1500	2:27:02	4.2702	4.2702	8.1122	9.7702	7.3717	6.0207	2.7605	6.8605	8.8705	2.3805	4.4005	0.745
Road #2	S2	1500-1600	3:08:02	3.0802	4.1502	8.1122	9.7702	7.3717	6.0207	2.7605	6.8605	8.8705	2.3805	4.4005	0.745
Road #2	S2	1600-1700	3:08:02	3.0802	4.1502	8.1122	9.7702	7.3717	6.0207	2.7605	6.8605	8.8705	2.3805	4.4005	0.745
Road #2	S2	1700-1800	3:08:02	3.0802	4.1502	8.1122	9.7702	7.3717	6.0207	2.7605	6.8605	8.8705	2.3805	4.4005	0.745
Road #2	S2	1800-1900	3:08:02	3.0802	4.1502	8.1122	9.7702	7.3717	6.0207	2.7605	6.8605	8.8705	2.3805	4.4005	0.745
Road #2	S2	1900-2000	3:08:02	3.0802	4.1502	8.1122	9.7702	7.3717	6.0207	2.7605	6.8605	8.8705	2.3805	4.4005	0.745
Road #2	S2	2000-2100	2:57:02	2.5702	2.5702	4.2302	2.2302	1.8802	1.8802	1.8802	3.2702	6.0902	3.1902	2.2802	0.262
Road #2	S2	2100-2200	2:57:02	2.5702	2.5702	4.2302	2.2302	1.8802	1.8802	1.8802	3.2702	6.0902	3.1902	2.2802	0.262
Road #3	S3	0000-0100	7:12:01	0.7818	1.0816	0.7102	0.818	9.4707	0.8107	6.2167	1.2115	6.862	0.81	1.041	
Road #3	S3	0100-0200	7:04:05	7.0405	7.0405	7.0405	7.0405	5.325	6.309	6.2446	6.407	8.0116	6.822	1.605	0.81
Road #3	S3	0200-0300	7:04:05	7.0405	7.0405	7.0405	7.0405	5.325	6.309	6.2446	6.407	8.0116	6.822	1.605	0.81
Road #3	S3	0300-0400	8:05:08	8.0508	8.0508	4.9027	6.7612	7.2118	4.3007	8.3302	2.5207	4.7116	7.1452	2.1705	0.401
Road #3	S3	0400-0500	9:41:05	9.4105	9.4105	8.8137	8.8096	6.2005	6.2005	6.2005	6.2005	6.2005	6.2005	6.2005	4.499
Road #3	S3	0500-0600	9:48:05	9.4805	9.4805	8.8137	8.8096	6.2005	6.2005	6.2005	6.2005	6.2005	6.2005	6.2005	4.499
Road #3	S3	0600-0700	1:04:02	1.0402	2.0202	2.4212	9.1403	7.1717	2.1205	6.8105	1.1605	2.0405	7.3307	4.2702	1.775
Road #3	S3	0700-0800	1:04:02	1.0402	2.0202	2.4212	9.1403	7.1717	2.1205	6.8105	1.1605	2.0405	7.3307	4.2702	1.775
Road #3	S3	0800-0900	1:04:02	1.0402	2.0202	2.4212	9.1403	7.1717	2.1205	6.8105	1.1605	2.0405	7.3307	4.2702	1.775
Road #3	S3	0900-1000	1:04:02	1.0402	2.0202	2.4212	9.1403	7.1717	2.1205	6.8105	1.1605	2.0405	7.3307	4.2702	1.775
Road #3	S3	1000-1100	1:04:02	1.0402	2.0202	2.4212	9.1403	7.1717	2.1205	6.8105	1.1605	2.0405	7.3307	4.2702	1.775
Road #3	S3	1100-1200	1:04:02	1.0402	2.0202	2.4212	9.1403	7.1717	2.1205	6.8105	1.1605	2.0405	7.3307	4.2702	1.775
Road #3	S3	1200-1300	1:04:02	1.0402	2.0202	2.4212	9.1403	7.1717	2.1205	6.8105	1.1605	2.0405	7.3307	4.2702	1.775
Road #3	S3	1300-1400	2:27:02	4.2702	4.2702	8.1122	9.7702	7.3717	6.0207	2.7605	6.8605	8.8705	2.3805	4.4005	0.745
Road #3	S3	1400-1500	2:27:02	4.2702	4.2702	8.1122	9.7702	7.3717	6.0207	2.7605	6.8605	8.8705	2.3805	4.4005	0.745
Road #3	S3	1500-1600	3:08:02	3.0802	4.1502	8.1122	9.7702	7.3717	6.0207	2.7605	6.8605	8.8705	2.3805	4.4005	0.745
Road #3	S3	1600-1700	3:08:02	3.0802	4.1502	8.1122	9.7702	7.3717	6.0207	2.7605	6.8605	8.8705	2.3805	4.4005	0.745
Road #3	S3	1700-1800	3:08:02	3.0802	4.1502	8.1122	9.7702	7.3717	6.0207	2.7605	6.8605	8.8705	2.3805	4.4005	0.745
Road #3	S3	1800-1900	3:08:02	3.0802	4.1502	8.1122	9.7702	7.3717	6.0207	2.7605	6.8605	8.8705	2.3805	4.4005	0.745
Road #3	S3	1900-2000	3:08:02	3.0802	4.1502	8.1122	9.7702	7.3717	6.0207	2.7605	6.8605	8.8705	2.3805	4.4005	0.745
Road #3	S3	2000-2100	2:57:02	2.5702	2.5702	4.2302	2.2302	1.8802	1.8802	1.8802	3.2702	6.0902	3.1902	2.2802	0.262
Road #3	S3	2100-2200	2:57:02	2.5702	2.5702	4.2302	2.2302	1.8802	1.8802	1.8802	3.2702	6.0902	3.1902	2.2802	0.262
Road #4	S4	0000-0100	7:12:01	0.7818	1.0816	0.7102	0.818	9.4707	0.8107	6.2167	1.2115	6.862	0.81	1.041	
Road #4	S4	0100-0200	7:04:05	7.0405	7.0405	7.0405	7.0405	5.325	6.309	6.2446	6.407	8.0116	6.822	1.605	0.81
Road #4	S4	0200-0300	7:04:05	7.0405	7.0405	7.0405	7.0405	5.325	6.309	6.2446	6.407	8.0116	6.822	1.605	0.81
Road #4	S4	0300-0400	8:05:08	8.0508	8.0508	4.9027	6.7612	7.2118	4.3007	8.3302	2.5207	4.7116	7.1452	2.1705	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Road 24 Hour Unidirectional Quarry												
Using 24 Road Noise Emission Factors for ADNMIO model results												
Year 2033												
Road Name	Road ID	Hour	Noise Emission		Monthly/Average		Monthly/Average		Monthly/Average			
			g/hw/m	g/hw/m	g/hw/m	g/hw/m	g/hw/m	g/hw/m				
Road 54	54	0800-0900	9.60E+02	1.02E+03	8.71E+02	3.11E+03	7.98E+02	1.80E+03	1.42E+03	3.72E+03	1.17E+03	2.75E+03
Road 54	54	1000-1200	1.16E+03	4.59E+02	9.72E+02	9.51E+03	4.47E+03	7.02E+04	1.60E+05	5.65E+04	1.34E+05	3.94E+05
Road 54	54	1300-1500	1.20E+03	1.08E+03	1.20E+03	1.20E+03	1.20E+03	1.20E+03	1.20E+03	1.20E+03	1.20E+03	1.20E+03
Road 54	54	1100-1200	1.21E+03	3.82E+02	9.71E+02	1.03E+03	3.72E+02	7.40E+02	4.63E+03	1.45E+04	3.31E+03	3.88E+03
Road 54	54	1200-1300	1.51E+03	2.51E+03	2.41E+03	2.61E+03	2.71E+03	6.20E+03	5.50E+03	4.80E+03	4.90E+03	2.44E+03
Road 54	54	1400-1500	1.51E+03	2.51E+03	2.41E+03	2.61E+03	2.71E+03	6.20E+03	5.50E+03	4.80E+03	4.90E+03	2.44E+03
Road 54	54	1600-1700	1.48E+03	3.57E+03	8.11E+02	2.52E+03	2.99E+02	6.83E+02	5.20E+03	1.27E+04	2.60E+04	4.51E+04
Road 54	54	1800-1900	1.48E+03	3.57E+03	8.11E+02	2.52E+03	2.99E+02	6.83E+02	5.20E+03	1.27E+04	2.60E+04	4.51E+04
Road 54	54	1900-2000	1.48E+03	3.57E+03	8.11E+02	2.52E+03	2.99E+02	6.83E+02	5.20E+03	1.27E+04	2.60E+04	4.51E+04
Road 54	54	2000-2100	1.48E+03	3.57E+03	8.11E+02	2.52E+03	2.99E+02	6.83E+02	5.20E+03	1.27E+04	2.60E+04	4.51E+04
Road 54	54	2100-2200	1.48E+03	3.57E+03	8.11E+02	2.52E+03	2.99E+02	6.83E+02	5.20E+03	1.27E+04	2.60E+04	4.51E+04
Road 54	54	2200-2300	1.48E+03	3.57E+03	8.11E+02	2.52E+03	2.99E+02	6.83E+02	5.20E+03	1.27E+04	2.60E+04	4.51E+04
Road 54	54	2300-2400	1.48E+03	3.57E+03	8.11E+02	2.52E+03	2.99E+02	6.83E+02	5.20E+03	1.27E+04	2.60E+04	4.51E+04
Road 54	54	0000-0100	9.54E+02	1.87E+03	4.09E+03	3.38E+03	1.54E+03	3.55E+03	4.03E+03	7.51E+03	3.72E+03	8.45E+03
Road 54	54	0100-0200	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	0200-0300	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	0300-0400	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	0400-0500	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	0500-0600	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	0600-0700	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	0700-0800	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	0800-0900	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	0900-1000	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	1000-1100	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	1100-1200	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	1200-1300	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	1300-1400	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	1400-1500	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	1500-1600	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	1600-1700	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	1700-1800	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	1800-1900	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	1900-2000	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	2000-2100	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	2100-2200	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	2200-2300	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	2300-2400	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	0000-0100	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	0100-0200	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	0200-0300	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	0300-0400	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	0400-0500	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	0500-0600	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	0600-0700	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	0700-0800	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	0800-0900	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	0900-1000	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	1000-1100	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	1100-1200	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	1200-1300	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	1300-1400	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	1400-1500	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	1500-1600	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	1600-1700	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	1700-1800	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	1800-1900	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	1900-2000	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	2000-2100	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	2100-2200	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	2200-2300	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	2300-2400	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	0000-0100	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	0100-0200	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	0200-0300	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	0300-0400	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	0400-0500	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	0500-0600	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	0600-0700	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	0700-0800	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	0800-0900	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	0900-1000	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	1000-1100	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	1100-1200	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	1200-1300	8.64E+02	3.17E+03	2.48E+03	2.67E+03	2.48E+03	3.58E+03	4.88E+03	3.11E+03	3.11E+03	8.23E+03
Road 54	54	1300-1400	8.64E									

Road\Appendix 3.5.3 Emission Factor in 2033.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open 24 Hour Uninformed Quarry										
Total 24 Hour Emissions Factors for ANEMO model results										
Year 2003										
Route Name	Route ID	Hour	Mo/Emission			Mo/Emission			Mo/Emission	
			g/hour	MonthlyAvg	MonthlyAvgRange	g/hour	MonthlyAvg	MonthlyAvgRange	g/hour	MonthlyAvg
Route 1	0000-0100	7:05:03	0.13	1.54	1.76	0.13	1.54	1.76	0.13	1.54
Route 1	0001-0200	7:02:03	0.81	3.64	3.66	0.73	3.13	3.47	0.62	2.62
Route 1	0002-0300	8:17:03	0.13	1.54	1.76	0.13	1.54	1.76	0.13	1.54
Route 1	0003-0400	8:74:03	4.40:26	4.40:26	4.40:26	4.18:22	4.18:22	4.18:22	4.18:22	4.18:22
Route 1	0004-0500	8:36:03	2.96:08	2.96:08	2.96:08	2.96:08	2.96:08	2.96:08	2.96:08	2.96:08
Route 1	0005-0600	8:36:03	2.96:08	2.96:08	2.96:08	2.96:08	2.96:08	2.96:08	2.96:08	2.96:08
Route 1	0006-0700	1:00:02	2:25:12	2:25:12	2:25:12	2:04:07	2:04:07	2:04:07	2:04:07	2:04:07
Route 1	0007-0800	1:00:02	2:25:12	2:25:12	2:25:12	2:04:07	2:04:07	2:04:07	2:04:07	2:04:07
Route 1	0008-0900	1:17:02	1:41:02	1:41:02	1:41:02	1:40:02	1:40:02	1:40:02	1:40:02	1:40:02
Route 1	0009-1000	1:17:02	1:41:02	1:41:02	1:41:02	1:40:02	1:40:02	1:40:02	1:40:02	1:40:02
Route 1	0010-1100	1:17:02	1:41:02	1:41:02	1:41:02	1:40:02	1:40:02	1:40:02	1:40:02	1:40:02
Route 1	0011-1200	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0012-1300	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0013-1400	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0014-1500	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0015-1600	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0016-1700	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0017-1800	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0018-1900	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0019-2000	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0020-2100	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0021-2200	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0022-2300	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0023-2400	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0024-0100	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0025-0200	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0026-0300	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0027-0400	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0028-0500	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0029-0600	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0030-0700	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0031-0800	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0032-0900	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0033-1000	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0034-1100	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0035-1200	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0036-1300	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0037-1400	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0038-1500	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0039-1600	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0040-1700	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0041-1800	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0042-1900	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0043-2000	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0044-2100	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0045-2200	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0046-2300	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0047-2400	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0048-0100	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0049-0200	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0050-0300	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0051-0400	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0052-0500	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0053-0600	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0054-0700	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0055-0800	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0056-0900	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0057-1000	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0058-1100	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0059-1200	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0060-1300	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0061-1400	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0062-1500	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0063-1600	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0064-1700	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0065-1800	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0066-1900	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0067-2000	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0068-2100	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0069-2200	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0070-2300	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0071-2400	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0072-0100	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0073-0200	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0074-0300	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0075-0400	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0076-0500	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0077-0600	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0078-0700	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0079-0800	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0080-0900	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0081-1000	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0082-1100	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0083-1200	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0084-1300	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0085-1400	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0086-1500	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0087-1600	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0088-1700	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0089-1800	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0090-1900	1:48:02	1:02:02	2:76:02	2:76:02	4:28:02	2:76:02	2:76:02	1:04:02	3:51:02
Route 1	0091-2000	1:48:02	1:02:02	2:76:0						

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TSP North and Underground Query												
Open Road TSP and ENR Emission Factors for AEMPC Model (Year 2003)												
Road Name	Road ID	Hour	NO _x Emission				NO ₂ Emission					
			g/hr/mi	lb/hr/mi	lb/day/mi	Monthly/Average	g/hr/mi	lb/hr/mi	lb/day/mi	Monthly/Average		
Road 4	4	0800-0900	1.1152	0.0147	7.9316	0.4488	1.375	0.0716	8.8406	1.7005	0.6551	0.2301
Road 4	4	0900-1000	1.2622	0.0162	8.6337	0.2085	1.515	0.6326	8.8758	2.5404	1.5108	0.7382
Road 4	4	1000-1100	1.4341	0.0182	9.6127	1.0181	2.776	1.0716	9.8406	3.5404	2.5108	1.2682
Road 4	4	1100-1200	1.3522	0.0171	8.6406	1.1512	2.776	0.9746	9.2712	2.2312	4.0242	7.7722
Road 4	4	1200-1300	1.2622	0.0162	8.6337	1.1266	0.863	7.8105	0.9006	9.0006	6.0515	7.8105
Road 4	4	1300-1400	1.1152	0.0147	7.9316	1.1266	0.863	7.8105	0.9006	9.0006	6.0515	7.8105
Road 4	4	1400-1500	1.1152	0.0147	7.9316	1.2405	0.934	8.8106	0.6512	3.3106	6.7275	8.8106
Road 4	4	1500-1600	1.4111	0.0179	9.5406	1.2405	0.934	8.8106	0.6512	3.3106	6.7275	8.8106
Road 4	4	1600-1700	1.4732	0.0182	9.5105	1.2405	0.934	8.8106	0.6512	3.3106	6.7275	8.8106
Road 4	4	1700-1800	1.5853	0.0202	10.5105	1.2405	0.934	8.8106	0.6512	3.3106	6.7275	8.8106
Road 4	4	1800-1900	1.7316	0.0216	11.5105	1.2405	0.934	8.8106	0.6512	3.3106	6.7275	8.8106
Road 4	4	1900-2000	0.8735	0.0046	8.1506	7.0445	0.418	6.9806	3.3106	3.5516	7.1316	6.9806
Road 4	4	2000-2100	0.7936	0.0038	7.4806	8.1451	0.514	0.514	7.3106	2.8906	3.8115	8.2716
Road 4	4	2100-2200	0.7936	0.0038	7.4806	8.1451	0.514	0.514	7.3106	2.8906	3.8115	8.2716
Road 4	4	2200-2300	0.8735	0.0046	8.1506	7.0445	0.418	6.9806	3.3106	3.5516	7.1316	6.9806
Road 4	4	2300-2400	1.4341	0.0182	9.6127	0.5676	0.252	1.2506	7.5716	0.1606	1.3885	5.4416
Road 5	5	0000-0100	1.1342	0.0139	8.6337	1.0202	0.734	5.9717	0.5314	8.0806	0.7106	1.0202
Road 5	5	0100-0200	1.1342	0.0139	8.6337	1.0202	0.734	5.9717	0.5314	8.0806	0.7106	1.0202
Road 5	5	0200-0300	1.1342	0.0139	8.6337	1.106	1.066	1.066	1.066	3.0116	0.0616	1.3442
Road 5	5	0300-0400	1.1342	0.0139	8.6337	1.106	1.066	1.066	1.066	3.0116	0.0616	1.3442
Road 5	5	0400-0500	1.1342	0.0139	8.6337	1.2132	0.938	1.0002	1.414	3.2806	0.7486	1.1424
Road 5	5	0500-0600	1.1342	0.0139	8.6337	1.2132	0.938	1.0002	1.414	3.2806	0.7486	1.1424
Road 5	5	0600-0700	1.1342	0.0139	8.6337	1.2132	0.938	1.0002	1.414	3.2806	0.7486	1.1424
Road 5	5	0700-0800	2.1522	0.0249	11.4707	2.2068	0.4205	0.7006	1.6445	0	0	0
Road 5	5	0800-0900	2.3752	0.0275	12.5005	2.2068	0.4205	0.7006	1.6445	0	0	0
Road 5	5	0900-1000	2.6501	0.0317	14.0506	2.286	0.447	3.8706	7.3106	3.5146	2.938	1.4716
Road 5	5	1000-1100	2.7816	0.032	14.2606	2.460	0.29	3.3106	1.8816	1.464	2.6216	1.464
Road 5	5	1100-1200	2.6501	0.0275	12.5005	2.460	0.29	3.3106	1.8816	1.464	2.6216	1.464
Road 5	5	1200-1300	2.3308	0.03	11.5106	2.460	0.29	3.3106	1.8816	1.464	2.6216	1.464
Road 5	5	1300-1400	2.3308	0.03	11.5106	2.460	0.29	3.3106	1.8816	1.464	2.6216	1.464
Road 5	5	1400-1500	2.2212	0.028	10.6406	2.748	0.22	6.8506	1.474	5.204	4.346	1.456
Road 5	5	1500-1600	1.7216	0.022	8.1806	2.608	0.22	6.8506	1.8116	5.204	4.346	1.456
Road 5	5	1600-1700	1.6416	0.021	7.9306	2.608	0.22	6.8506	1.8116	5.204	4.346	1.456
Road 5	5	1700-1800	2.5316	0.028	11.8606	2.154	0.25	6.8506	1.5806	6.0606	5.0716	1.024
Road 5	5	1800-1900	2.5316	0.028	11.8606	2.154	0.25	6.8506	1.5806	6.0606	5.0716	1.024
Road 5	5	1900-2000	1.1342	0.0139	8.6337	1.138	0.614	1.8816	0.118	6.1146	1.024	1.024
Road 5	5	2000-2100	1.1342	0.0139	8.6337	1.138	0.614	1.8816	0.118	6.1146	1.024	1.024
Road 5	5	2100-2200	1.1342	0.0139	8.6337	1.138	0.614	1.8816	0.118	6.1146	1.024	1.024
Road 5	5	2200-2300	1.1342	0.0139	8.6337	1.138	0.614	1.8816	0.118	6.1146	1.024	1.024
Road 5	5	2300-2400	1.1342	0.0139	8.6337	1.138	0.614	1.8816	0.118	6.1146	1.024	1.024
Road 6	6	0000-0100	1.811	0.023	10.4706	1.638	0.91	4.4806	1.311	1.2806	3.995	1.1716
Road 6	6	0100-0200	1.796	0.023	10.4706	1.638	0.91	4.4806	1.311	1.2806	3.995	1.1716
Road 6	6	0200-0300	1.796	0.023	10.4706	1.638	0.91	4.4806	1.311	1.2806	3.995	1.1716
Road 6	6	0300-0400	1.796	0.023	10.4706	1.638	0.91	4.4806	1.311	1.2806	3.995	1.1716
Road 6	6	0400-0500	1.796	0.023	10.4706	1.638	0.91	4.4806	1.311	1.2806	3.995	1.1716
Road 6	6	0500-0600	1.796	0.023	10.4706	1.638	0.91	4.4806	1.311	1.2806	3.995	1.1716
Road 6	6	0600-0700	2.8016	0.036	17.4806	2.106	0.95	4.4806	1.311	1.2806	3.995	1.1716
Road 6	6	0700-0800	2.8016	0.036	17.4806	2.106	0.95	4.4806	1.311	1.2806	3.995	1.1716
Road 6	6	0800-0900	2.8016	0.036	17.4806	2.106	0.95	4.4806	1.311	1.2806	3.995	1.1716
Road 6	6	0900-1000	2.8016	0.036	17.4806	2.106	0.95	4.4806	1.311	1.2806	3.995	1.1716
Road 6	6	1000-1100	2.8016	0.036	17.4806	2.106	0.95	4.4806	1.311	1.2806	3.995	1.1716
Road 6	6	1100-1200	2.8016	0.036	17.4806	2.106	0.95	4.4806	1.311	1.2806	3.995	1.1716
Road 6	6	1200-1300	2.8016	0.036	17.4806	2.106	0.95	4.4806	1.311	1.2806	3.995	1.1716
Road 6	6	1300-1400	2.8016	0.036	17.4806	2.106	0.95	4.4806	1.311	1.2806	3.995	1.1716
Road 6	6	1400-1500	2.8016	0.036	17.4806	2.106	0.95	4.4806	1.311	1.2806	3.995	1.1716
Road 6	6	1500-1600	2.8016	0.036	17.4806	2.106	0.95	4.4806	1.311	1.2806	3.995	1.1716
Road 6	6	1600-1700	2.8016	0.036	17.4806	2.106	0.95	4.4806	1.311	1.2806	3.995	1.1716
Road 6	6	1700-1800	2.8016	0.036	17.4806	2.106	0.95	4.4806	1.311	1.2806	3.995	1.1716
Road 6	6	1800-1900	2.8016	0.036	17.4806	2.106	0.95	4.4806	1.311	1.2806	3.995	1.1716
Road 6	6	1900-2000	2.8016	0.036	17.4806	2.106	0.95	4.4806	1.311	1.2806	3.995	1.1716
Road 6	6	2000-2100	2.8016	0.036	17.4806	2.106	0.95	4.4806	1.311	1.2806	3.995	1.1716
Road 6	6	2100-2200	2.8016	0.036	17.4806	2.106	0.95	4.4806	1.311	1.2806	3.995	1.1716
Road 6	6	2200-2300	2.8016	0.036	17.4806	2.106	0.95	4.4806	1.311	1.2806	3.995	1.1716
Road 6	6	2300-2400	2.8016	0.036	17.4806	2.106	0.95	4.4806	1.311	1.2806	3.995	1.1716
Road 7	7	0000-0100	2.7816	0.034	17.9746	2.460	0.29	3.3106	1.8216	2.28	6.1716	1.6116
Road 7	7	0100-0200	2.7816	0.034	17.9746	2.460	0.29	3.3106	1.8216	2.28	6.1716	1.6116
Road 7	7	0200-0300	2.7816	0.034	17.9746	2.460	0.29	3.3106	1.8216	2.28	6.1716	1.6116
Road 7	7	0300-0400	2.7816	0.034	17.9746	2.460	0.29	3.3106	1.8216	2.28	6.1716	1.6116
Road 7	7	0400-0500	2.7816	0.034	17.9746	2.460	0.29	3.3106	1.8216	2.28	6.1716	1.6116
Road 7	7	0500-0600	2.7816	0.034	17.9746	2.460	0.29	3.3106	1.8216	2.28	6.1716	1.6116
Road 7	7	0600-0700	2.7816	0.034	17.9746	2.460	0.29	3.3106	1.8216	2.28	6.1716	1.6116
Road 7	7	0700-0800	2.7816	0.034	17.9746	2.460	0.29	3.3106	1.8216	2.28	6.1716	1.6116
Road 7	7	0800-0900	2.7816	0.034	17.9746	2.460	0.29	3.3106	1.8216	2.28	6.1716	1.6116
Road 7	7	0900-1000	2.7816	0.034	17.9746	2.460	0.29	3.3106	1.8216	2.28	6.1716	1.6116
Road 7	7	1000-1100	2.7816	0.034	17.9746	2.460	0.29	3.3106	1.8216	2.28	6.1716	1.6116
Road 7	7	1100-1200	2.7816	0.034	17.9746	2.460	0.29	3.3106	1.8216	2.28	6.1716	1.6116
Road 7	7	1200-1300	2.7816	0.034	17.9746	2.460	0.29	3.3106	1.8216	2.28	6.1716	1.6116
Road 7	7	1300-1400	2.7816	0.034	17.9746	2.460	0.29	3.3106	1.8216	2.28	6.1716	1.6116
Road 7	7	1400-1500	2.7816	0.034	17.9746	2.460	0.29	3.3106	1.8216	2.28	6.1716	1.6116
Road 7	7	1500-1600	2.7816	0.034	17.9746	2.460	0.29	3.3106	1.8216	2.28	6.1716	1.6116
Road 7	7	1600-1700	2.7816	0.034	17.9746	2.460	0.29	3.3106	1.8216	2.28	6.1716	1.6116
Road 7	7	1700-1800	2.7816	0.034	17.9746	2.460	0.29	3.3106	1.8216	2.28	6.1716	1.6116
Road 7	7	1800-1900	2.7816	0.034	17.9746	2.460	0.29	3.3106	1.8216	2.28	6.1716	1.6116
Road 7	7	1900-2000	2.7816	0.034	17.9746	2.460	0.29	3.3106	1.8216	2.28	6.1716	1.6116
Road 7	7	2000-2100	2.7816	0.034	17.9746	2.460	0.29	3.3106	1.8216	2.28	6.1716	1.6116
Road 7	7	2100-2200	2.7816	0.034	17.9746	2.460	0.29	3.3106	1.8216	2.28	6.1716	1.6116
Road 7	7	2200-2300	2.7816	0.034	17.9746	2.460	0.29	3.3106	1.8216	2.28	6.1716	1.6116
Road 7	7	2300-2400	2.7816	0.034	17.9746	2.460	0.29	3.3106	1.8216	2.28	6.1716	1.6116

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open N North Underway Querry
 Table 24 Hour Emission Factors for
 APM2000 model Year 2003

Road Name	Road ID	Hour	NO _x Emission				NO ₂ Emission			
			g/kwh	tonne/hour	g/kwh	tonne/hour	g/kwh	tonne/hour	g/kwh	tonne/hour
Road 1	1	7 1600-1200	1.7986	3.12E-07	8.65E-04	1.51E-07	2.63E-07	4.59E-08	2.63E-07	4.59E-08
Road 1	1	1300-1700	1.8373	3.26E-07	8.84E-04	1.56E-07	2.70E-07	4.75E-08	2.70E-07	4.75E-08
Road 1	1	1800-2300	1.8602	3.29E-07	8.98E-04	1.59E-07	2.75E-07	4.84E-08	2.75E-07	4.84E-08
Road 2	2	7 1600-1200	2.2862	4.07E-07	1.08E-03	2.01E-07	3.28E-07	5.84E-08	3.28E-07	5.84E-08
Road 2	2	1300-1700	2.3250	4.19E-07	1.10E-03	2.04E-07	3.33E-07	5.93E-08	3.33E-07	5.93E-08
Road 2	2	1800-2300	2.3479	4.22E-07	1.11E-03	2.06E-07	3.36E-07	5.96E-08	3.36E-07	5.96E-08
Road 3	3	7 1600-1200	9.44E-03	1.77E-07	4.88E-03	9.44E-07	1.53E-04	2.81E-05	1.53E-04	2.81E-05
Road 3	3	1300-1700	9.44E-03	1.77E-07	4.88E-03	9.44E-07	1.53E-04	2.81E-05	1.53E-04	2.81E-05
Road 3	3	1800-2300	9.44E-03	1.77E-07	4.88E-03	9.44E-07	1.53E-04	2.81E-05	1.53E-04	2.81E-05
Road 4	4	7 1600-1200	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 4	4	1300-1700	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 4	4	1800-2300	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 5	5	7 1600-1200	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 5	5	1300-1700	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 5	5	1800-2300	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 6	6	7 1600-1200	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 6	6	1300-1700	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 6	6	1800-2300	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 7	7	7 1600-1200	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 7	7	1300-1700	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 7	7	1800-2300	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 8	8	7 1600-1200	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 8	8	1300-1700	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 8	8	1800-2300	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 9	9	7 1600-1200	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 9	9	1300-1700	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 9	9	1800-2300	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 10	10	7 1600-1200	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 10	10	1300-1700	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 10	10	1800-2300	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 11	11	7 1600-1200	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 11	11	1300-1700	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 11	11	1800-2300	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 12	12	7 1600-1200	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 12	12	1300-1700	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 12	12	1800-2300	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 13	13	7 1600-1200	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 13	13	1300-1700	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 13	13	1800-2300	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 14	14	7 1600-1200	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 14	14	1300-1700	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 14	14	1800-2300	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 15	15	7 1600-1200	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 15	15	1300-1700	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 15	15	1800-2300	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 16	16	7 1600-1200	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 16	16	1300-1700	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 16	16	1800-2300	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 17	17	7 1600-1200	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 17	17	1300-1700	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 17	17	1800-2300	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 18	18	7 1600-1200	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 18	18	1300-1700	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 18	18	1800-2300	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 19	19	7 1600-1200	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 19	19	1300-1700	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 19	19	1800-2300	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 20	20	7 1600-1200	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 20	20	1300-1700	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 20	20	1800-2300	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 21	21	7 1600-1200	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 21	21	1300-1700	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 21	21	1800-2300	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 22	22	7 1600-1200	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 22	22	1300-1700	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 22	22	1800-2300	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 23	23	7 1600-1200	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 23	23	1300-1700	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 23	23	1800-2300	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 24	24	7 1600-1200	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 24	24	1300-1700	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 24	24	1800-2300	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 25	25	7 1600-1200	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 25	25	1300-1700	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 25	25	1800-2300	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 26	26	7 1600-1200	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 26	26	1300-1700	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 26	26	1800-2300	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 27	27	7 1600-1200	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 27	27	1300-1700	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 27	27	1800-2300	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 28	28	7 1600-1200	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 28	28	1300-1700	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 28	28	1800-2300	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 29	29	7 1600-1200	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 29	29	1300-1700	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 29	29	1800-2300	8.86E-03	1.63E-07	4.51E-03	8.86E-07	1.44E-04	2.65E-05	1.44E-04	2.65E-05
Road 30	30	7 1600-1200	8.86E-03	1.63E-07						

Open Top Yr North Endurance Factors for Allwood model (km)														
Road Name	Road ID	Year	Moisture/mo			No Emulsion			Moisture/mo			No Emulsion		
			g/m ² /hr	g/m ² /hr	g/m ² /hr	g/m ² /hr	g/m ² /hr	g/m ² /hr	g/m ² /hr	g/m ² /hr	g/m ² /hr	g/m ² /hr	g/m ² /hr	
Road 13	1	0000-0100	2.0668	1.4381	1.5067	2.5484	1.0247	2.8307	2.2769	1.2226	1.4688	2.1445	1.1556	1.4326
Road 13	1	0000-0200	2.0668	1.4381	1.5067	2.5484	1.0247	2.8307	2.2769	1.2226	1.4688	2.1445	1.1556	1.4326
Road 13	1	0000-0300	2.0668	1.4381	1.5067	2.5484	1.0247	2.8307	2.2769	1.2226	1.4688	2.1445	1.1556	1.4326
Road 13	1	0000-0400	2.0668	1.4381	1.5067	2.5484	1.0247	2.8307	2.2769	1.2226	1.4688	2.1445	1.1556	1.4326
Road 13	1	0000-0500	3.7462	1.7006	2.9554	3.7462	1.7006	2.9554	2.4811	1.5002	1.7121	2.3888	1.2390	2.0316
Road 13	1	0000-0600	3.7462	1.7006	2.9554	3.7462	1.7006	2.9554	2.4811	1.5002	1.7121	2.3888	1.2390	2.0316
Road 13	1	0000-0700	4.2151	1.9347	3.5101	4.2151	1.9347	3.5101	2.7165	1.6896	1.9016	2.6440	1.3888	2.2408
Road 13	1	0000-0800	4.2151	1.9347	3.5101	4.2151	1.9347	3.5101	2.7165	1.6896	1.9016	2.6440	1.3888	2.2408
Road 13	1	0000-0900	5.0442	2.4867	4.3846	4.7726	2.0248	3.7657	3.1054	2.1316	2.0642	3.0445	1.9546	2.5906
Road 13	1	0000-1000	5.0442	2.4867	4.3846	4.7726	2.0248	3.7657	3.1054	2.1316	2.0642	3.0445	1.9546	2.5906
Road 13	1	0000-1100	5.0442	2.4867	4.3846	4.7726	2.0248	3.7657	3.1054	2.1316	2.0642	3.0445	1.9546	2.5906
Road 13	1	0000-1200	6.0152	2.8801	3.7986	5.5546	1.9152	3.1547	3.1524	3.1261	1.5044	2.9841	2.4476	1.7965
Road 13	1	0000-1300	6.0152	2.8801	3.7986	5.5546	1.9152	3.1547	3.1524	3.1261	1.5044	2.9841	2.4476	1.7965
Road 13	1	0000-1400	6.4912	3.3447	3.0368	5.9294	1.8231	2.7791	3.1719	3.0484	1.7576	3.0303	2.4134	2.0468
Road 13	1	0000-1500	6.4912	3.3447	3.0368	5.9294	1.8231	2.7791	3.1719	3.0484	1.7576	3.0303	2.4134	2.0468
Road 13	1	0000-1600	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-1700	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-1800	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-1900	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-2000	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-2100	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-2200	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-2300	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-2400	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-2500	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-2600	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-2700	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-2800	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-2900	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-3000	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-3100	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-3200	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-3300	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-3400	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-3500	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-3600	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-3700	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-3800	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-3900	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-4000	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-4100	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-4200	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-4300	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-4400	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-4500	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-4600	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-4700	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-4800	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-4900	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-5000	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-5100	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-5200	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-5300	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-5400	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-5500	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-5600	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-5700	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-5800	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-5900	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-6000	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-6100	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-6200	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-6300	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-6400	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-6500	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-6600	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-6700	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-6800	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-6900	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-7000	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-7100	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-7200	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-7300	7.1001	3.9336	2.4235	6.3046	1.7406	2.4701	4.1053	2.7776	2.0888	3.7005	2.7005	2.4108
Road 13	1	0000-7400	7.1001	3.9336	2.4									

Opening North Road Extension Quarry													
Open Work Road No. 86 Emission Factors for Aerobic Model (t/a)													
Year 2003		Road Name											
Road ID	Road No.	Hour	NO _x Emission						NO ₂ Emission				
			g/hour	g/day	tonne/hour	g/year	tonne/year	g/hour	g/day	tonne/hour	g/year	tonne/year	
14	0800-0900	3.80E-02	7.75E-07	1.32E-05	4.24E-06	6.64E-07	1.31E-05	1.81E-01	3.72E-06	9.31E-05	1.54E-06	1.35E-06	5.89E-05
14	0900-1000	4.32E-02	8.64E-07	1.44E-05	4.80E-06	7.56E-07	1.51E-05	2.02E-01	4.12E-06	1.03E-04	1.66E-06	1.56E-06	6.74E-05
14	1000-1100	4.72E-02	9.44E-07	1.54E-05	5.12E-06	8.16E-07	1.65E-05	2.12E-01	4.32E-06	1.08E-04	1.76E-06	1.68E-06	7.34E-05
14	1100-1200	4.64E-02	9.28E-07	1.50E-05	5.00E-06	7.92E-07	1.61E-05	2.08E-01	4.24E-06	1.06E-04	1.72E-06	1.64E-06	7.19E-05
14	1200-1300	3.76E-02	7.52E-07	1.25E-05	4.16E-06	6.24E-07	1.25E-05	1.66E-01	3.36E-06	8.40E-05	1.44E-06	1.28E-06	5.61E-05
14	1300-1400	3.68E-02	7.36E-07	1.22E-05	4.08E-06	6.12E-07	1.23E-05	1.62E-01	3.28E-06	8.16E-05	1.40E-06	1.24E-06	5.47E-05
14	1400-1500	3.52E-02	7.04E-07	1.17E-05	3.92E-06	5.88E-07	1.18E-05	1.54E-01	3.12E-06	7.84E-05	1.36E-06	1.20E-06	5.23E-05
14	1500-1600	3.44E-02	6.88E-07	1.14E-05	3.84E-06	5.76E-07	1.16E-05	1.50E-01	3.04E-06	7.68E-05	1.32E-06	1.16E-06	5.09E-05
14	1600-1700	3.36E-02	6.72E-07	1.11E-05	3.76E-06	5.64E-07	1.14E-05	1.46E-01	2.96E-06	7.52E-05	1.28E-06	1.12E-06	4.95E-05
14	1700-1800	3.28E-02	6.56E-07	1.08E-05	3.68E-06	5.52E-07	1.12E-05	1.42E-01	2.88E-06	7.36E-05	1.24E-06	1.08E-06	4.81E-05
14	1800-1900	3.20E-02	6.40E-07	1.05E-05	3.60E-06	5.40E-07	1.10E-05	1.38E-01	2.80E-06	7.20E-05	1.20E-06	1.04E-06	4.67E-05
14	1900-2000	3.12E-02	6.24E-07	1.02E-05	3.52E-06	5.28E-07	1.08E-05	1.34E-01	2.72E-06	7.04E-05	1.16E-06	1.00E-06	4.53E-05
14	2000-2100	3.04E-02	6.08E-07	9.92E-06	3.44E-06	5.16E-07	1.06E-05	1.30E-01	2.64E-06	6.88E-05	1.12E-06	9.60E-07	4.39E-05
14	2100-2200	2.96E-02	5.92E-07	9.60E-06	3.36E-06	5.04E-07	1.04E-05	1.26E-01	2.56E-06	6.72E-05	1.08E-06	9.20E-07	4.25E-05
14	2200-2300	2.88E-02	5.76E-07	9.36E-06	3.28E-06	4.92E-07	1.02E-05	1.22E-01	2.48E-06	6.56E-05	1.04E-06	8.80E-07	4.11E-05
14	2300-2400	2.80E-02	5.60E-07	9.12E-06	3.20E-06	4.80E-07	1.00E-05	1.18E-01	2.40E-06	6.40E-05	1.00E-06	8.40E-07	3.97E-05
14	2400-2500	2.72E-02	5.44E-07	8.88E-06	3.12E-06	4.68E-07	9.80E-06	1.14E-01	2.32E-06	6.24E-05	9.60E-07	8.00E-07	3.83E-05
14	2500-2600	2.64E-02	5.28E-07	8.64E-06	3.04E-06	4.56E-07	9.60E-06	1.10E-01	2.24E-06	6.08E-05	9.20E-07	7.60E-07	3.69E-05
14	2600-2700	2.56E-02	5.12E-07	8.40E-06	2.96E-06	4.44E-07	9.40E-06	1.06E-01	2.16E-06	5.92E-05	8.80E-07	7.20E-07	3.55E-05
14	2700-2800	2.48E-02	4.96E-07	8.16E-06	2.88E-06	4.32E-07	9.20E-06	1.02E-01	2.08E-06	5.76E-05	8.40E-07	6.80E-07	3.41E-05
14	2800-2900	2.40E-02	4.80E-07	7.92E-06	2.80E-06	4.20E-07	9.00E-06	9.80E-02	2.00E-06	5.60E-05	8.00E-07	6.40E-07	3.27E-05
14	2900-3000	2.32E-02	4.64E-07	7.68E-06	2.72E-06	4.08E-07	8.80E-06	9.40E-02	1.92E-06	5.44E-05	7.60E-07	6.00E-07	3.13E-05
14	3000-3100	2.24E-02	4.48E-07	7.44E-06	2.64E-06	3.96E-07	8.60E-06	9.00E-02	1.84E-06	5.28E-05	7.20E-07	5.60E-07	3.00E-05
14	3100-3200	2.16E-02	4.32E-07	7.20E-06	2.56E-06	3.84E-07	8.40E-06	8.60E-02	1.76E-06	5.12E-05	6.80E-07	5.20E-07	2.87E-05
14	3200-3300	2.08E-02	4.16E-07	7.04E-06	2.48E-06	3.72E-07	8.20E-06	8.20E-02	1.68E-06	4.96E-05	6.40E-07	4.80E-07	2.74E-05
14	3300-3400	2.00E-02	4.00E-07	6.80E-06	2.40E-06	3.60E-07	8.00E-06	7.80E-02	1.60E-06	4.80E-05	6.00E-07	4.40E-07	2.61E-05
14	3400-3500	1.92E-02	3.84E-07	6.56E-06	2.32E-06	3.48E-07	7.80E-06	7.40E-02	1.52E-06	4.64E-05	5.60E-07	4.00E-07	2.48E-05
14	3500-3600	1.84E-02	3.68E-07	6.32E-06	2.24E-06	3.36E-07	7.60E-06	7.00E-02	1.44E-06	4.48E-05	5.20E-07	3.60E-07	2.35E-05
14	3600-3700	1.76E-02	3.52E-07	6.08E-06	2.16E-06	3.24E-07	7.40E-06	6.60E-02	1.36E-06	4.32E-05	4.80E-07	3.20E-07	2.22E-05
14	3700-3800	1.68E-02	3.36E-07	5.84E-06	2.08E-06	3.12E-07	7.20E-06	6.20E-02	1.28E-06	4.16E-05	4.40E-07	2.80E-07	2.09E-05
14	3800-3900	1.60E-02	3.20E-07	5.60E-06	2.00E-06	3.00E-07	7.00E-06	5.80E-02	1.20E-06	4.00E-05	4.00E-07	2.40E-07	1.96E-05
14	3900-4000	1.52E-02	3.04E-07	5.36E-06	1.92E-06	2.88E-07	6.80E-06	5.40E-02	1.12E-06	3.84E-05	3.60E-07	2.00E-07	1.83E-05
14	4000-4100	1.44E-02	2.88E-07	5.12E-06	1.84E-06	2.76E-07	6.60E-06	5.00E-02	1.04E-06	3.68E-05	3.20E-07	1.60E-07	1.70E-05
14	4100-4200	1.36E-02	2.72E-07	4.88E-06	1.76E-06	2.64E-07	6.40E-06	4.60E-02	9.6E-06	3.52E-05	2.80E-07	1.20E-07	1.57E-05
14	4200-4300	1.28E-02	2.56E-07	4.64E-06	1.68E-06	2.52E-07	6.20E-06	4.20E-02	8.8E-06	3.36E-05	2.40E-07	1.00E-07	1.44E-05
14	4300-4400	1.20E-02	2.40E-07	4.40E-06	1.60E-06	2.40E-07	6.00E-06	3.80E-02	8.0E-06	3.20E-05	2.00E-07	8.0E-07	1.31E-05
14	4400-4500	1.12E-02	2.24E-07	4.16E-06	1.52E-06	2.28E-07	5.80E-06	3.40E-02	7.2E-06	3.04E-05	1.60E-07	6.4E-07	1.18E-05
14	4500-4600	1.04E-02	2.08E-07	3.92E-06	1.44E-06	2.16E-07	5.60E-06	3.00E-02	6.4E-06	2.88E-05	1.20E-07	4.8E-07	1.05E-05
14	4600-4700	9.6E-03	1.92E-07	3.68E-06	1.36E-06	2.04E-07	5.40E-06	2.60E-02	5.6E-06	2.72E-05	8.0E-07	3.2E-07	9.2E-06
14	4700-4800	8.8E-03	1.76E-07	3.44E-06	1.28E-06	1.92E-07	5.20E-06	2.20E-02	4.8E-06	2.56E-05	6.4E-07	2.4E-07	8.0E-06
14	4800-4900	8.0E-03	1.60E-07	3.20E-06	1.20E-06	1.80E-07	5.00E-06	1.80E-02	4.0E-06	2.40E-05	4.8E-07	1.6E-07	6.7E-06
14	4900-5000	7.2E-03	1.44E-07	2.96E-06	1.12E-06	1.68E-07	4.80E-06	1.40E-02	3.2E-06	2.24E-05	3.2E-07	1.2E-07	5.4E-06
14	5000-5100	6.4E-03	1.28E-07	2.72E-06	1.04E-06	1.56E-07	4.60E-06	1.00E-02	2.4E-06	2.08E-05	1.6E-07	8.0E-07	4.0E-06
14	5100-5200	5.6E-03	1.12E-07	2.48E-06	9.6E-07	1.44E-07	4.40E-06	600E-03	1.6E-06	1.92E-05	1.2E-07	4.0E-07	3.0E-06
14	5200-5300	4.8E-03	9.6E-08	2.24E-06	8.8E-07	1.32E-07	4.20E-06	200E-03	1.4E-06	1.76E-05	8.0E-07	2.0E-07	2.0E-06
14	5300-5400	4.0E-03	8.0E-08	2.00E-06	8.0E-07	1.20E-07	4.00E-06	0E+00	1.2E-06	1.60E-05	6.4E-07	1.6E-07	1.0E-06
14	5400-5500	3.2E-03	6.4E-08	1.76E-06	7.2E-07	1.08E-07	3.80E-06	0E+00	1.0E-06	1.44E-05	4.8E-07	1.2E-07	8.0E-06
14	5500-5600	2.4E-03	4.8E-08	1.52E-06	6.4E-07	1.00E-07	3.60E-06	0E+00	8.0E-07	1.28E-05	3.2E-07	8.0E-07	6.0E-06
14	5600-5700	1.6E-03	3.2E-08	1.28E-06	5.12E-07	9.6E-08	3.40E-06	0E+00	6.4E-07	1.12E-05	1.6E-07	4.0E-07	4.0E-06
14	5700-5800	8.0E-04	1.6E-08	6.4E-07	2.56E-07	4.8E-08	3.20E-06	0E+00	3.2E-07	1.04E-05	8.0E-07	2.0E-07	2.0E-06
14	5800-5900	4.0E-04	8.0E-09	3.2E-07	1.28E-07	2.4E-08	3.00E-06	0E+00	1.6E-07	9.6E-06	4.0E-07	1.0E-07	1.0E-06
14	5900-6000	2.0E-04	4.0E-09	1.6E-07	6.4E-08	1.2E-08	2.80E-06	0E+00	8.0E-08	4.8E-06	2.0E-07	5.0E-07	5.0E-06
14	6000-6100	1.0E-04	2.0E-09	8.0E-08	3.2E-08	6.0E-09	2.60E-06	0E+00	4.0E-08	2.4E-06	1.0E-07	2.0E-07	2.0E-06
14	6100-6200	5.0E-05	1.0E-09	4.0E-08	1.6E-08	3.0E-09	2.40E-06	0E+00	2.0E-08	1.2E-06	5.0E-08	1.0E-07	1.0E-06
14	6200-6300	2.5E-05	5.0E-10	2.0E-08	8.0E-09	1.5E-09	2.20E-06	0E+00	1.0E-08	6.0E-07	2.0E-08	5.0E-08	5.0E-06
14	6300-6400	1.0E-05	2.0E-10	8.0E-09	3.2E-09	6.0E-10	2.00E-06	0E+00	4.0E-09	2.4E-07	1.0E-08	2.0E-08	2.0E-06
14	6400-6500	5.0E-06	1.0E-10	4.0E-09	1.6E-09	3.0E-10	1.80E-06	0E+00	2.0E-09	1.2E-07	5.0E-09	1.0E-08	1.0E-06
14	6500-6600	2.5E-06	5.0E-11	2.0E-09	8.0E-10	1.5E-10	1.60E-06	0E+00	1.0E-09	6.0E-08	2.0E-09	5.0E-09	5.0E-06
14	6600-6700	1.0E-06	2.0E-11	8.0E-10	3.2E-10	6.0E-11	1.40E-06	0E+00	4.0E-10	2.4E-08	1.0E-09	2.0E-09	2.0E-06
14	6700-6800	5.0E-07	1.0E-11	4.0E-10	1.6E-10	3.0E-11	1.20E-06	0E+00	2.0E-10	1.2E-08	5.0E-10	1.0E-09	1.0E-06
14	6800-6900	2.5E-07	5.0E-12	2.0E-10	8.0E-11	1.5E-11	1.00E-06	0E+00	1.0E-10	6.0E-09	2.0E-10	5.0E-10	5.0E-06
14	6900-7000	1.0E-07	2.0E-12	8.0E-11	3.2E-11	6.0E-12	9.0E-07	0E+00	4.0E-11	2.4E-09	1.0E-10	2.0E-10	2.0E-06
14	7000-7100	5.0E-08	1.0E-12	4.0E-11	1.6E-11	3.0E-12	8.0E-07	0E+00	2.0E-11	1.2E-09	5.0E-11	1.0E-10	1.0E-06
14	7100-7200	2.5E-08	5.0E-13	2.0E-11	8.0E-12	1.5E-12	7.0E-07	0E+00	1.0E-11	6.0E-10	2.0E-11	5.0E-11	5.0E-06
14	7200-7300	1.0E-08	2.0E-13	8.0E-12	3.2E-12	6.0E-13	6.0E-07	0E+00	4.0E-12	2.4E-10	1.0E-11	2.0E-11	2.0E-06
14	7300-7400	5.0E-09	1.0E-13	4.0E-12	1.6E-12	3.0E-13	5.0E-07	0E+00	2.0E-12	1.2E-10	5.0E-12	1.0E-11	1.0E-06
14	7400-7500	2.5E-09	5.0E-14	2.0E-12	8.0E-13	1.5E-13	4.0E-07	0E+00	1.0E-12	6.0E-11	2.0E-12	5.0E-12	5.0E-06
14	7500-7600	1.0E-09	2.0E-14	8.0E-13	3.2E-13	6.0E-14	3.0E-07	0E+00	4.0E-13	2.4E-11	1.0E-12	2.0E-12	2.0E-06
14	7600-7700	5.0E-10	1.0E-14	4.0E-13	1.6E-13	3.0E-14	2.0E-07	0E+00	2.0E-13	1.2E-11	5.0E-13	1.0E-12	1.0E-06
14	7700												

Open Road 24 Hour Underground Quarry												
Open Road 24 Hour Noise Factors for A-weighted (dBA) (Leq)												
Road Name	Road ID	Year	NO Exposure			NO Emission						
			g/h/m ²	g/m ²	g/m ²	g/h/m ²	g/m ²	g/m ²	g/h/m ²	g/m ²	g/m ²	g/h/m ²
Road 17	1800-1700	8880.00	1.466	1.466	4.248	2.038	1.758	2.444	2.038	1.836	1.836	1.576
Road 17	1800-1700	2.478	1.466	1.466	4.248	2.038	1.758	2.444	2.038	1.836	1.836	1.576
Road 17	1800-1700	2.478	1.466	1.466	4.248	2.038	1.758	2.444	2.038	1.836	1.836	1.576
Road 17	2000-2100	1.466	2.212	0.788	1.332	0.812	1.488	1.168	1.488	4.932	0.932	1.476
Road 17	2100-2200	1.466	2.212	0.788	1.332	0.812	1.488	1.168	1.488	4.932	0.932	1.476
Road 17	2200-2300	1.466	2.212	0.788	1.332	0.812	1.488	1.168	1.488	4.932	0.932	1.476
Road 17	2300-0000	1.038	1.576	4.576	0.332	1.408	4.096	1.408	1.488	3.456	0.000	1.048
Road 17	0000-0100	1.038	1.576	4.576	0.332	1.408	4.096	1.408	1.488	3.456	0.000	1.048
Road 18	0100-0200	1.038	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	0200-0300	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	0300-0400	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	0400-0500	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	0500-0600	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	0600-0700	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	0700-0800	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	0800-0900	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	0900-1000	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	1000-1100	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	1100-1200	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	1200-1300	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	1300-1400	2.712	5.512	0.288	2.348	0.712	1.848	0.288	2.996	1.176	2.544	2.528
Road 18	1400-1500	2.712	5.512	0.288	2.348	0.712	1.848	0.288	2.996	1.176	2.544	2.528
Road 18	1500-1600	2.712	5.512	0.288	2.348	0.712	1.848	0.288	2.996	1.176	2.544	2.528
Road 18	1600-1700	2.712	5.512	0.288	2.348	0.712	1.848	0.288	2.996	1.176	2.544	2.528
Road 18	1700-1800	2.712	5.512	0.288	2.348	0.712	1.848	0.288	2.996	1.176	2.544	2.528
Road 18	1800-1900	2.712	5.512	0.288	2.348	0.712	1.848	0.288	2.996	1.176	2.544	2.528
Road 18	1900-2000	2.712	5.512	0.288	2.348	0.712	1.848	0.288	2.996	1.176	2.544	2.528
Road 18	2000-2100	1.466	2.212	0.788	1.332	0.812	1.488	1.168	1.488	4.932	0.932	1.476
Road 18	2100-2200	1.466	2.212	0.788	1.332	0.812	1.488	1.168	1.488	4.932	0.932	1.476
Road 18	2200-2300	1.466	2.212	0.788	1.332	0.812	1.488	1.168	1.488	4.932	0.932	1.476
Road 18	2300-0000	1.038	1.576	4.576	0.332	1.408	4.096	1.408	1.488	3.456	0.000	1.048
Road 18	0000-0100	1.038	1.576	4.576	0.332	1.408	4.096	1.408	1.488	3.456	0.000	1.048
Road 18	0100-0200	1.038	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	0200-0300	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	0300-0400	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	0400-0500	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	0500-0600	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	0600-0700	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	0700-0800	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	0800-0900	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	0900-1000	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	1000-1100	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	1100-1200	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	1200-1300	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	1300-1400	2.712	5.512	0.288	2.348	0.712	1.848	0.288	2.996	1.176	2.544	2.528
Road 18	1400-1500	2.712	5.512	0.288	2.348	0.712	1.848	0.288	2.996	1.176	2.544	2.528
Road 18	1500-1600	2.712	5.512	0.288	2.348	0.712	1.848	0.288	2.996	1.176	2.544	2.528
Road 18	1600-1700	2.712	5.512	0.288	2.348	0.712	1.848	0.288	2.996	1.176	2.544	2.528
Road 18	1700-1800	2.712	5.512	0.288	2.348	0.712	1.848	0.288	2.996	1.176	2.544	2.528
Road 18	1800-1900	2.712	5.512	0.288	2.348	0.712	1.848	0.288	2.996	1.176	2.544	2.528
Road 18	1900-2000	2.712	5.512	0.288	2.348	0.712	1.848	0.288	2.996	1.176	2.544	2.528
Road 18	2000-2100	1.466	2.212	0.788	1.332	0.812	1.488	1.168	1.488	4.932	0.932	1.476
Road 18	2100-2200	1.466	2.212	0.788	1.332	0.812	1.488	1.168	1.488	4.932	0.932	1.476
Road 18	2200-2300	1.466	2.212	0.788	1.332	0.812	1.488	1.168	1.488	4.932	0.932	1.476
Road 18	2300-0000	1.038	1.576	4.576	0.332	1.408	4.096	1.408	1.488	3.456	0.000	1.048
Road 18	0000-0100	1.038	1.576	4.576	0.332	1.408	4.096	1.408	1.488	3.456	0.000	1.048
Road 18	0100-0200	1.038	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	0200-0300	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	0300-0400	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	0400-0500	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	0500-0600	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	0600-0700	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	0700-0800	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	0800-0900	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	0900-1000	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	1000-1100	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	1100-1200	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	1200-1300	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	1300-1400	2.712	5.512	0.288	2.348	0.712	1.848	0.288	2.996	1.176	2.544	2.528
Road 18	1400-1500	2.712	5.512	0.288	2.348	0.712	1.848	0.288	2.996	1.176	2.544	2.528
Road 18	1500-1600	2.712	5.512	0.288	2.348	0.712	1.848	0.288	2.996	1.176	2.544	2.528
Road 18	1600-1700	2.712	5.512	0.288	2.348	0.712	1.848	0.288	2.996	1.176	2.544	2.528
Road 18	1700-1800	2.712	5.512	0.288	2.348	0.712	1.848	0.288	2.996	1.176	2.544	2.528
Road 18	1800-1900	2.712	5.512	0.288	2.348	0.712	1.848	0.288	2.996	1.176	2.544	2.528
Road 18	1900-2000	2.712	5.512	0.288	2.348	0.712	1.848	0.288	2.996	1.176	2.544	2.528
Road 18	2000-2100	1.466	2.212	0.788	1.332	0.812	1.488	1.168	1.488	4.932	0.932	1.476
Road 18	2100-2200	1.466	2.212	0.788	1.332	0.812	1.488	1.168	1.488	4.932	0.932	1.476
Road 18	2200-2300	1.466	2.212	0.788	1.332	0.812	1.488	1.168	1.488	4.932	0.932	1.476
Road 18	2300-0000	1.038	1.576	4.576	0.332	1.408	4.096	1.408	1.488	3.456	0.000	1.048
Road 18	0000-0100	1.038	1.576	4.576	0.332	1.408	4.096	1.408	1.488	3.456	0.000	1.048
Road 18	0100-0200	1.038	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	0200-0300	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	0300-0400	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	0400-0500	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	0500-0600	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	0600-0700	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	0700-0800	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	0800-0900	1.112	1.876	1.512	0.332	1.368	1.408	0.360	1.448	0.332	1.848	1.752
Road 18	0900-1000	1.112	1.876	1.512	0.332	1.368	1.					

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

[illegible]

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

[illegible]

Open Road 24 Hour Underground Quarry Open Road 24 Hour Noise Factors for ANNEXED MAP (dB)														
Road Name	Road ID	Year	NO Emission				NO Emission							
			Month/Year	g/h/m ²	g/m ²	Month/Year	g/h/m ²	g/m ²	Month/Year	g/h/m ²	g/m ²			
Road 13	13	00/00-01/00	1.478	2.668	2.176	1.138	2.408	2.154	1.188	2.888	2.588	4.28	2.588	2.108
Road 13	13	00/00-02/00	1.478	2.668	2.176	1.138	2.408	2.154	1.188	2.888	2.588	4.28	2.588	2.108
Road 13	13	00/00-03/00	1.478	2.668	2.176	1.138	2.408	2.154	1.188	2.888	2.588	4.28	2.588	2.108
Road 13	13	00/00-04/00	1.478	2.668	2.176	1.138	2.408	2.154	1.188	2.888	2.588	4.28	2.588	2.108
Road 13	13	00/00-05/00	1.478	2.668	2.176	1.138	2.408	2.154	1.188	2.888	2.588	4.28	2.588	2.108
Road 13	13	00/00-06/00	1.478	2.668	2.176	1.138	2.408	2.154	1.188	2.888	2.588	4.28	2.588	2.108
Road 13	13	00/00-07/00	1.478	2.668	2.176	1.138	2.408	2.154	1.188	2.888	2.588	4.28	2.588	2.108
Road 13	13	00/00-08/00	1.478	2.668	2.176	1.138	2.408	2.154	1.188	2.888	2.588	4.28	2.588	2.108
Road 13	13	00/00-09/00	1.478	2.668	2.176	1.138	2.408	2.154	1.188	2.888	2.588	4.28	2.588	2.108
Road 13	13	00/00-10/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-11/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-12/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-13/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-14/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-15/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-16/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-17/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-18/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-19/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-20/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-21/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-22/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-23/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-24/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-25/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-26/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-27/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-28/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-29/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-30/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-31/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-32/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-33/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-34/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-35/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-36/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-37/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-38/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-39/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-40/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-41/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-42/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-43/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-44/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-45/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-46/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-47/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-48/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-49/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-50/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-51/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-52/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-53/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-54/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-55/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-56/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-57/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-58/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-59/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-60/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-61/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-62/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-63/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-64/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-65/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-66/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-67/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-68/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-69/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-70/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-71/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-72/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-73/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-74/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-75/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-76/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-77/00	2.028	4.028	3.188	1.788	3.028	9.748	18.708	18.708	6.028	9.478	8.008	6.008
Road 13	13	00/00-78/00	2.0											

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

TSG Y1 North Underground Quarry																
Open Road Hour Emission Factor for ARMMO model (t/h)																
Road Name	Road ID	Hour	Year 2033						Year 2033							
			NO ₂ Emission			NO ₂ Emission			NO ₂ Emission			NO ₂ Emission				
			g/hour/t	g/hour/t	g/hour/t	g/hour/t	g/hour/t	g/hour/t	g/hour/t	g/hour/t	g/hour/t	g/hour/t	g/hour/t	g/hour/t	g/hour/t	
Road 34	34	0800-0800	1.236	1.316	8.836	1.064	2.716	7.038	8.338	2.726	5.886	7.038	8.338	2.726	5.886	7.038
Road 34	34	0800-0800	1.336	1.416	9.836	1.164	2.816	7.138	8.438	2.826	5.986	7.138	8.438	2.826	5.986	7.138
Road 34	34	0800-0800	1.436	1.516	10.836	1.264	2.916	7.238	8.538	2.926	6.086	7.238	8.538	2.926	6.086	7.238
Road 34	34	0800-0800	1.536	1.616	11.836	1.364	3.016	7.338	8.638	3.026	6.186	7.338	8.638	3.026	6.186	7.338
Road 34	34	0800-0800	1.636	1.716	12.836	1.464	3.116	7.438	8.738	3.126	6.286	7.438	8.738	3.126	6.286	7.438
Road 34	34	0800-0800	1.736	1.816	13.836	1.564	3.216	7.538	8.838	3.226	6.386	7.538	8.838	3.226	6.386	7.538
Road 34	34	0800-0800	1.836	1.916	14.836	1.664	3.316	7.638	8.938	3.326	6.486	7.638	8.938	3.326	6.486	7.638
Road 34	34	0800-0800	1.936	2.016	15.836	1.764	3.416	7.738	9.038	3.426	6.586	7.738	9.038	3.426	6.586	7.738
Road 34	34	0800-0800	2.036	2.116	16.836	1.864	3.516	7.838	9.138	3.526	6.686	7.838	9.138	3.526	6.686	7.838
Road 34	34	0800-0800	2.136	2.216	17.836	1.964	3.616	7.938	9.238	3.626	6.786	7.938	9.238	3.626	6.786	7.938
Road 34	34	0800-0800	2.236	2.316	18.836	2.064	3.716	8.038	9.338	3.726	6.886	8.038	9.338	3.726	6.886	8.038
Road 34	34	0800-0800	2.336	2.416	19.836	2.164	3.816	8.138	9.438	3.826	6.986	8.138	9.438	3.826	6.986	8.138
Road 34	34	0800-0800	2.436	2.516	20.836	2.264	3.916	8.238	9.538	3.926	7.086	8.238	9.538	3.926	7.086	8.238
Road 34	34	0800-0800	2.536	2.616	21.836	2.364	4.016	8.338	9.638	4.026	7.186	8.338	9.638	4.026	7.186	8.338
Road 34	34	0800-0800	2.636	2.716	22.836	2.464	4.116	8.438	9.738	4.126	7.286	8.438	9.738	4.126	7.286	8.438
Road 34	34	0800-0800	2.736	2.816	23.836	2.564	4.216	8.538	9.838	4.226	7.386	8.538	9.838	4.226	7.386	8.538
Road 34	34	0800-0800	2.836	2.916	24.836	2.664	4.316	8.638	9.938	4.326	7.486	8.638	9.938	4.326	7.486	8.638
Road 34	34	0800-0800	2.936	3.016	25.836	2.764	4.416	8.738	10.038	4.426	7.586	8.738	10.038	4.426	7.586	8.738
Road 34	34	0800-0800	3.036	3.116	26.836	2.864	4.516	8.838	10.138	4.526	7.686	8.838	10.138	4.526	7.686	8.838
Road 34	34	0800-0800	3.136	3.216	27.836	2.964	4.616	8.938	10.238	4.626	7.786	8.938	10.238	4.626	7.786	8.938
Road 34	34	0800-0800	3.236	3.316	28.836	3.064	4.716	9.038	10.338	4.726	7.886	9.038	10.338	4.726	7.886	9.038
Road 34	34	0800-0800	3.336	3.416	29.836	3.164	4.816	9.138	10.438	4.826	7.986	9.138	10.438	4.826	7.986	9.138
Road 34	34	0800-0800	3.436	3.516	30.836	3.264	4.916	9.238	10.538	4.926	8.086	9.238	10.538	4.926	8.086	9.238
Road 34	34	0800-0800	3.536	3.616	31.836	3.364	5.016	9.338	10.638	5.026	8.186	9.338	10.638	5.026	8.186	9.338
Road 34	34	0800-0800	3.636	3.716	32.836	3.464	5.116	9.438	10.738	5.126	8.286	9.438	10.738	5.126	8.286	9.438
Road 34	34	0800-0800	3.736	3.816	33.836	3.564	5.216	9.538	10.838	5.226	8.386	9.538	10.838	5.226	8.386	9.538
Road 34	34	0800-0800	3.836	3.916	34.836	3.664	5.316	9.638	10.938	5.326	8.486	9.638	10.938	5.326	8.486	9.638
Road 34	34	0800-0800	3.936	4.016	35.836	3.764	5.416	9.738	11.038	5.426	8.586	9.738	11.038	5.426	8.586	9.738
Road 34	34	0800-0800	4.036	4.116	36.836	3.864	5.516	9.838	11.138	5.526	8.686	9.838	11.138	5.526	8.686	9.838
Road 34	34	0800-0800	4.136	4.216	37.836	3.964	5.616	9.938	11.238	5.626	8.786	9.938	11.238	5.626	8.786	9.938
Road 34	34	0800-0800	4.236	4.316	38.836	4.064	5.716	10.038	11.338	5.726	8.886	10.038	11.338	5.726	8.886	10.038
Road 34	34	0800-0800	4.336	4.416	39.836	4.164	5.816	10.138	11.438	5.826	8.986	10.138	11.438	5.826	8.986	10.138
Road 34	34	0800-0800	4.436	4.516	40.836	4.264	5.916	10.238	11.538	5.926	9.086	10.238	11.538	5.926	9.086	10.238
Road 34	34	0800-0800	4.536	4.616	41.836	4.364	6.016	10.338	11.638	6.026	9.186	10.338	11.638	6.026	9.186	10.338
Road 34	34	0800-0800	4.636	4.716	42.836	4.464	6.116	10.438	11.738	6.126	9.286	10.438	11.738	6.126	9.286	10.438
Road 34	34	0800-0800	4.736	4.816	43.836	4.564	6.216	10.538	11.838	6.226	9.386	10.538	11.838	6.226	9.386	10.538
Road 34	34	0800-0800	4.836	4.916	44.836	4.664	6.316	10.638	11.938	6.326	9.486	10.638	11.938	6.326	9.486	10.638
Road 34	34	0800-0800	4.936	5.016	45.836	4.764	6.416	10.738	12.038	6.426	9.586	10.738	12.038	6.426	9.586	10.738
Road 34	34	0800-0800	5.036	5.116	46.836	4.864	6.516	10.838	12.138	6.526	9.686	10.838	12.138	6.526	9.686	10.838
Road 34	34	0800-0800	5.136	5.216	47.836	4.964	6.616	10.938	12.238	6.626	9.786	10.938	12.238	6.626	9.786	10.938
Road 34	34	0800-0800	5.236	5.316	48.836	5.064	6.716	11.038	12.338	6.726	9.886	11.038	12.338	6.726	9.886	11.038
Road 34	34	0800-0800	5.336	5.416	49.836	5.164	6.816	11.138	12.438	6.826	9.986	11.138	12.438	6.826	9.986	11.138
Road 34	34	0800-0800	5.436	5.516	50.836	5.264	6.916	11.238	12.538	6.926	10.086	11.238	12.538	6.926	10.086	11.238
Road 34	34	0800-0800	5.536	5.616	51.836	5.364	7.016	11.338	12.638	7.026	10.186	11.338	12.638	7.026	10.186	11.338
Road 34	34	0800-0800	5.636	5.716	52.836	5.464	7.116	11.438	12.738	7.126	10.286	11.438	12.738	7.126	10.286	11.438
Road 34	34	0800-0800	5.736	5.816	53.836	5.564	7.216	11.538	12.838	7.226	10.386	11.538	12.838	7.226	10.386	11.538
Road 34	34	0800-0800	5.836	5.916	54.836	5.664	7.316	11.638	12.938	7.326	10.486	11.638	12.938	7.326	10.486	11.638
Road 34	34	0800-0800	5.936	6.016	55.836	5.764	7.416	11.738	13.038	7.426	10.586	11.738	13.038	7.426	10.586	11.738
Road 34	34	0800-0800	6.036	6.116	56.836	5.864	7.516	11.838	13.138	7.526	10.686	11.838	13.138	7.526	10.686	11.838
Road 34	34	0800-0800	6.136	6.216	57.836	5.964	7.616	11.938	13.238	7.626	10.786	11.938	13.238	7.626	10.786	11.938
Road 34	34	0800-0800	6.236	6.316	58.836	6.064	7.716	12.038	13.338	7.726	10.886	12.038	13.338	7.726	10.886	12.038
Road 34	34	0800-0800	6.336	6.416	59.836	6.164	7.816	12.138	13.438	7.826	10.986	12.138	13.438	7.826	10.986	12.138
Road 34	34	0800-0800	6.436	6.516	60.836	6.264	7.916	12.238	13.538	7.926	11.086	12.238	13.538	7.926	11.086	12.238
Road 34	34	0800-0800	6.536	6.616	61.836	6.364	8.016	12.338	13.638	8.026	11.186	12.338	13.638	8.026	11.186	12.338
Road 34	34	0800-0800	6.636	6.716	62.836	6.464	8.116	12.438	13.738	8.126	11.286	12.438	13.738	8.126	11.286	12.438
Road 34	34	0800-0800	6.736	6.816	63.836	6.564	8.216	12.538	13.838	8.226	11.386	12.538	13.838	8.226	11.386	12.538
Road 34	34	0800-0800	6.836	6.916	64.836	6.664	8.316	12.638	13.938	8.326	11.486	12.638	13.938	8.326	11.486	12.638
Road 34	34	0800-0800	6.936	7.016	65.836	6.764	8.416	12.738	14.038	8.426	11.586	12.738	14.038	8.426	11.586	12.738
Road 34	34	0800-0800	7.036	7.116	66.836	6.864	8.516	12.838	14.138	8.526	11.686	12.838	14.138	8.526	11.686	12.838
Road 34	34	0800-0800	7.136	7.216	67.836	6.964	8.616	12.938	14.238	8.626	11.786	12.938	14.238	8.626	11.786	12.938
Road 34	34	0800-0800	7.236	7.316	68.836	7.064	8.716	13.038	14.338	8.726	11.886	13.038	14.338	8.726	11.886	13.038
Road 34	34	0800-0800	7.336	7.416	69.836	7.164	8.816	13.138	14.438	8.826	11.986	13.138	14.438	8.826	11.986	13.138
Road 34	34	0800-0800	7.436	7.516	70.836	7.264	8.916	13.238	14.538	8.926	12.086	13.238	14.538	8.926	12.086	13.238
Road 34	34	0800-0800	7.536	7.616	71.836	7.364	9.016	13.338	14.638	9.026	12.186	13.338	14.638	9.026	12.186	13.338
Road 34	34	0800-0800	7.636	7.716	72.836	7.464	9.116	13.438	14.738	9.126	12.286	13.438	14.738	9.126	12.286	13.438
Road 34	34	0800-0800	7.736	7.816	73.836	7.564	9.216	13.538	14.838	9.226	12.386	13.538	14.838	9.226		

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Top 10 North End Unemployment Quarters														
Open 9th & 10th Unemployment Factors for MINNCO (per Request)														
Year 2003														
No. Emotion														
Road Name	Road ID	Hour	Month/quarter			Month/quarter			Month/quarter			Month/quarter		
			g/h/mw	g/h/mw	time/hours	g/h/mw	time/hours	g/h/mw	time/hours	g/h/mw	time/hours	g/h/mw	time/hours	
Road #1	41	0000:00:00	1.536	2.526	2.837	0.726	2.236	2.006	6.936	1.136	1.066	5.996	9.786	0.616
Road #1	41	0000:00:00	1.546	2.536	2.847	0.736	2.246	2.016	7.046	1.146	1.076	6.106	9.896	0.726
Road #1	41	0000:00:00	1.556	2.546	2.857	0.746	2.256	2.026	7.156	1.156	1.086	6.216	10.006	0.836
Road #1	41	0000:00:00	1.566	2.556	2.867	0.756	2.266	2.036	7.266	1.166	1.096	6.326	10.116	0.946
Road #1	41	0000:00:00	1.576	2.566	2.877	0.766	2.276	2.046	7.376	1.176	1.106	6.436	10.226	1.056
Road #1	41	0000:00:00	1.586	2.576	2.887	0.776	2.286	2.056	7.486	1.186	1.116	6.546	10.336	1.166
Road #1	41	0000:00:00	1.596	2.586	2.897	0.786	2.296	2.066	7.596	1.196	1.126	6.656	10.446	1.276
Road #1	41	0000:00:00	1.606	2.596	2.907	0.796	2.306	2.076	7.706	1.206	1.136	6.766	10.556	1.386
Road #1	41	0000:00:00	1.616	2.606	2.917	0.806	2.316	2.086	7.816	1.216	1.146	6.876	10.666	1.496
Road #1	41	0000:00:00	1.626	2.616	2.927	0.816	2.326	2.096	7.926	1.226	1.156	6.986	10.776	1.606
Road #1	41	0000:00:00	1.636	2.626	2.937	0.826	2.336	2.106	8.036	1.236	1.166	7.096	10.886	1.716
Road #1	41	0000:00:00	1.646	2.636	2.947	0.836	2.346	2.116	8.146	1.246	1.176	7.206	10.996	1.826
Road #1	41	0000:00:00	1.656	2.646	2.957	0.846	2.356	2.126	8.256	1.256	1.186	7.316	11.106	1.936
Road #1	41	0000:00:00	1.666	2.656	2.967	0.856	2.366	2.136	8.366	1.266	1.196	7.426	11.216	2.046
Road #1	41	0000:00:00	1.676	2.666	2.977	0.866	2.376	2.146	8.476	1.276	1.206	7.536	11.326	2.156
Road #1	41	0000:00:00	1.686	2.676	2.987	0.876	2.386	2.156	8.586	1.286	1.216	7.646	11.436	2.266
Road #1	41	0000:00:00	1.696	2.686	2.997	0.886	2.396	2.166	8.696	1.296	1.226	7.756	11.546	2.376
Road #1	41	0000:00:00	1.706	2.696	3.007	0.896	2.406	2.176	8.806	1.306	1.236	7.866	11.656	2.486
Road #1	41	0000:00:00	1.716	2.706	3.017	0.906	2.416	2.186	8.916	1.316	1.246	7.976	11.766	2.596
Road #1	41	0000:00:00	1.726	2.716	3.027	0.916	2.426	2.196	9.026	1.326	1.256	8.086	11.876	2.706
Road #1	41	0000:00:00	1.736	2.726	3.037	0.926	2.436	2.206	9.136	1.336	1.266	8.196	11.986	2.816
Road #1	41	0000:00:00	1.746	2.736	3.047	0.936	2.446	2.216	9.246	1.346	1.276	8.306	12.096	2.926
Road #1	41	0000:00:00	1.756	2.746	3.057	0.946	2.456	2.226	9.356	1.356	1.286	8.416	12.206	3.036
Road #1	41	0000:00:00	1.766	2.756	3.067	0.956	2.466	2.236	9.466	1.366	1.296	8.526	12.316	3.146
Road #1	41	0000:00:00	1.776	2.766	3.077	0.966	2.476	2.246	9.576	1.376	1.306	8.636	12.426	3.256
Road #1	41	0000:00:00	1.786	2.776	3.087	0.976	2.486	2.256	9.686	1.386	1.316	8.746	12.536	3.366
Road #1	41	0000:00:00	1.796	2.786	3.097	0.986	2.496	2.266	9.796	1.396	1.326	8.856	12.646	3.476
Road #1	41	0000:00:00	1.806	2.796	3.107	0.996	2.506	2.276	9.906	1.406	1.336	8.966	12.756	3.586
Road #1	41	0000:00:00	1.816	2.806	3.117	1.006	2.516	2.286	10.016	1.416	1.346	9.076	12.866	3.696
Road #1	41	0000:00:00	1.826	2.816	3.127	1.016	2.526	2.296	10.126	1.426	1.356	9.186	12.976	3.806
Road #1	41	0000:00:00	1.836	2.826	3.137	1.026	2.536	2.306	10.236	1.436	1.366	9.296	13.086	3.916
Road #1	41	0000:00:00	1.846	2.836	3.147	1.036	2.546	2.316	10.346	1.446	1.376	9.406	13.196	4.026
Road #1	41	0000:00:00	1.856	2.846	3.157	1.046	2.556	2.326	10.456	1.456	1.386	9.516	13.306	4.136
Road #1	41	0000:00:00	1.866	2.856	3.167	1.056	2.566	2.336	10.566	1.466	1.396	9.626	13.416	4.246
Road #1	41	0000:00:00	1.876	2.866	3.177	1.066	2.576	2.346	10.676	1.476	1.406	9.736	13.526	4.356
Road #1	41	0000:00:00	1.886	2.876	3.187	1.076	2.586	2.356	10.786	1.486	1.416	9.846	13.636	4.466
Road #1	41	0000:00:00	1.896	2.886	3.197	1.086	2.596	2.366	10.896	1.496	1.426	9.956	13.746	4.576
Road #1	41	0000:00:00	1.906	2.896	3.207	1.096	2.606	2.376	11.006	1.506	1.436	10.066	13.856	4.686
Road #1	41	0000:00:00	1.916	2.906	3.217	1.106	2.616	2.386	11.116	1.516	1.446	10.176	13.966	4.796
Road #1	41	0000:00:00	1.926	2.916	3.227	1.116	2.626	2.396	11.226	1.526	1.456	10.286	14.076	4.906
Road #1	41	0000:00:00	1.936	2.926	3.237	1.126	2.636	2.406	11.336	1.536	1.466	10.396	14.186	5.016
Road #1	41	0000:00:00	1.946	2.936	3.247	1.136	2.646	2.416	11.446	1.546	1.476	10.506	14.296	5.126
Road #1	41	0000:00:00	1.956	2.946	3.257	1.146	2.656	2.426	11.556	1.556	1.486	10.616	14.406	5.236
Road #1	41	0000:00:00	1.966	2.956	3.267	1.156	2.666	2.436	11.666	1.566	1.496	10.726	14.516	5.346
Road #1	41	0000:00:00	1.976	2.966	3.277	1.166	2.676	2.446	11.776	1.576	1.506	10.836	14.626	5.456
Road #1	41	0000:00:00	1.986	2.976	3.287	1.176	2.686	2.456	11.886	1.586	1.516	10.946	14.736	5.566
Road #1	41	0000:00:00	1.996	2.986	3.297	1.186	2.696	2.466	11.996	1.596	1.526	11.056	14.846	5.676
Road #1	41	0000:00:00	2.006	2.996	3.307	1.196	2.706	2.476	12.106	1.606	1.536	11.166	14.956	5.786
Road #1	41	0000:00:00	2.016	3.006	3.317	1.206	2.716	2.486	12.216	1.616	1.546	11.276	15.066	5.896
Road #1	41	0000:00:00	2.026	3.016	3.327	1.216	2.726	2.496	12.326	1.626	1.556	11.386	15.176	6.006
Road #1	41	0000:00:00	2.036	3.026	3.337	1.226	2.736	2.506	12.436	1.636	1.566	11.496	15.286	6.116
Road #1	41	0000:00:00	2.046	3.036	3.347	1.236	2.746	2.516	12.546	1.646	1.576	11.606	15.396	6.226
Road #1	41	0000:00:00	2.056	3.046	3.357	1.246	2.756	2.526	12.656	1.656	1.586	11.716	15.506	6.336
Road #1	41	0000:00:00	2.066	3.056	3.367	1.256	2.766	2.536	12.766	1.666	1.596	11.826	15.616	6.446
Road #1	41	0000:00:00	2.076	3.066	3.377	1.266	2.776	2.546	12.876	1.676	1.606	11.936	15.726	6.556
Road #1	41	0000:00:00	2.086	3.076	3.387	1.276	2.786	2.556	12.986	1.686	1.616	12.046	15.836	6.666
Road #1	41	0000:00:00	2.096	3.086	3.397	1.286	2.796	2.566	13.096	1.696	1.626	12.156	15.946	6.776
Road #1	41	0000:00:00	2.106	3.096	3.407	1.296	2.806	2.576	13.206	1.706	1.636	12.266	16.056	6.886
Road #1	41	0000:00:00	2.116	3.106	3.417	1.306	2.816	2.586	13.316	1.716	1.646	12.376	16.166	6.996
Road #1	41	0000:00:00	2.126	3.116	3.427	1.316	2.826	2.596	13.426	1.726	1.656	12.486	16.276	7.106
Road #1	41	0000:00:00	2.136	3.126	3.437	1.326	2.836	2.606	13.536	1.736	1.666	12.596	16.386	7.216
Road #1	41	0000:00:00	2.146	3.136	3.447	1.336	2.846	2.616	13.646	1.746	1.676	12.706	16.496	7.326
Road #1	41	0000:00:00	2.156	3.146	3.457	1.346	2.856	2.626	13.756	1.756	1.686	12.816	16.606	7.436
Road #1	41	0000:00:00	2.166	3.156	3.467	1.356	2.866	2.636	13.866	1.766	1.696	12.926	16.716	7.546
Road #1	41	0000:00:00	2.176	3.166	3.477	1.366	2.876	2.646	13.976	1.776	1.706	13.036	16.826	7.656
Road #1	41	0000:00:00	2.186	3.176	3.487	1.376	2.886	2.656	14.086	1.786	1.716	13.146	16.936	7.766
Road #1	41	0000:00:00	2.196	3.186	3.497	1.386	2.896	2.666	14.196	1.796	1.726	13.256	17.046	7.876
Road #1	41	0000:00:00	2.206	3.196	3.507	1.396	2.906	2.676	14.306	1.806	1.736	13.366	17.156	7.986
Road #1	41	0000:00:00	2.216	3.206	3.517	1.406	2.916	2.686	14.416	1.816	1.746	13.476	17.266	8.096
Road #1	41	0000:00:00	2.226	3.216	3.527	1.416	2.926	2.696	14.526	1.826	1.756	13.586	17.376	8.206
Road #1	41	0000:00:00	2.236	3.226	3.537	1.426	2.936	2.706	14.636	1.836	1.766	13.696	17.486	8.316
Road #1	41	0000:00:00	2.246	3.236	3.547	1.436	2.946	2.716	14.746	1.846	1.776	13.806	17.596	8.426
Road #1	41	0000:00:00	2.256	3.246	3.557	1.446	2.956	2.726	14.856	1.856	1.786	13.916	17.706	8.536
Road #1	41	0000:00:00	2.266	3.256	3.567	1.456	2.966	2.736	14.966	1.866	1.796	14.026	17.816	8.646
Road #1	41	0000:00:00	2.276	3.266	3.577	1.466	2.976	2.746	15.076	1.876	1.806	14.136	17.926	8.756
Road #1	41	0000:00:00	2.286	3.276	3.587	1.476	2.986	2.756	15.186	1.886	1.816	14.246	18.036	8.866
Road #1	41	0000:00:00	2.296	3.286	3.597	1.486	2.996	2.766	15.296	1.896	1.826	14.356	18.146	8.976
Road #1	41	0000:00:00	2.306	3.296	3.607	1.496	3.006	2.776</						

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

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Open Top 24 Hour Underground Factors													
Year 2013													
Road Name		Road ID		Inflow		Moist/Average		Moist/Average		Moist/Average		Moist/Average	
		gph/m ²		in/hr		gph/m ²		in/hr		gph/m ²		in/hr	
Road 4	0800-0900	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 4	0900-1000	1.4516	4.6142	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 4	1000-1100	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 4	1100-1200	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 4	1200-1300	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 4	1300-1400	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 4	1400-1500	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 4	1500-1600	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 4	1600-1700	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 4	1700-1800	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 4	1800-1900	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 4	1900-2000	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 4	2000-2100	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 4	2100-2200	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 4	2200-2300	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 4	2300-2400	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 5	0800-0900	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 5	0900-1000	1.4516	4.6142	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 5	1000-1100	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 5	1100-1200	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 5	1200-1300	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 5	1300-1400	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 5	1400-1500	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 5	1500-1600	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 5	1600-1700	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 5	1700-1800	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 5	1800-1900	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 5	1900-2000	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 5	2000-2100	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 5	2100-2200	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 5	2200-2300	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 5	2300-2400	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 6	0800-0900	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 6	0900-1000	1.4516	4.6142	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 6	1000-1100	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 6	1100-1200	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 6	1200-1300	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 6	1300-1400	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 6	1400-1500	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 6	1500-1600	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 6	1600-1700	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 6	1700-1800	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 6	1800-1900	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 6	1900-2000	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 6	2000-2100	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 6	2100-2200	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 6	2200-2300	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 6	2300-2400	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 7	0800-0900	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 7	0900-1000	1.4516	4.6142	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 7	1000-1100	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 7	1100-1200	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 7	1200-1300	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 7	1300-1400	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 7	1400-1500	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 7	1500-1600	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 7	1600-1700	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 7	1700-1800	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 7	1800-1900	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 7	1900-2000	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 7	2000-2100	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 7	2100-2200	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 7	2200-2300	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173
Road 7	2300-2400	1.3162	4.4412	0.8326	1.0592	3.7447	7.5116	9.1122	1.7326	6.5215	7.5332	7.488	5.173

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Openroad\Appendix 3.5.3 Emission Factor in

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open N14 North Extension Factors for ARXRD model (Hour)												
Year 2003			Mo, Ensson			Mo, Ensson			Mo, Ensson			
Row Name	Row ID	Hour	Monthly/Average		Mo, Ensson		Monthly/Average		Mo, Ensson		Monthly/Average	
			g/h/m ²	h/m ²	h/m ²	h/m ²	h/m ²	h/m ²	h/m ²	h/m ²	h/m ²	h/m ²
Row 7	1500-1700	2.02E-02	3.32E-07	4.11E-08	1.46E-08	2.93E-07	3.43E-08	1.47E-01	2.54E-08	1.01E-01	1.29E-01	2.10E-01
Row 7	1700-1900	1.53E-03	4.00E-08	1.26E-08	2.48E-08	2.52E-08	2.52E-08	2.52E-08	2.52E-08	2.52E-08	2.52E-08	2.52E-08
Row 7	1900-2100	1.21E-03	1.91E-07	2.28E-08	1.00E-08	1.60E-07	1.80E-08	1.27E-01	2.21E-08	1.61E-01	1.80E-01	2.17E-01
Row 7	2100-2300	1.00E-03	1.91E-07	2.28E-08	1.00E-08	1.60E-07	1.80E-08	1.27E-01	2.21E-08	1.61E-01	1.80E-01	2.17E-01
Row 7	2300-2500	1.00E-03	1.91E-07	2.28E-08	1.00E-08	1.60E-07	1.80E-08	1.27E-01	2.21E-08	1.61E-01	1.80E-01	2.17E-01
Row 7	2500-2700	9.98E-03	3.02E-07	1.53E-08	8.11E-08	1.08E-07	1.47E-08	1.23E-01	1.71E-08	1.80E-01	1.91E-01	1.97E-01
Row 7	2700-2900	1.00E-03	1.91E-07	2.28E-08	1.00E-08	1.60E-07	1.80E-08	1.27E-01	2.21E-08	1.61E-01	1.80E-01	2.17E-01
Row 7	2900-3100	1.00E-03	1.91E-07	2.28E-08	1.00E-08	1.60E-07	1.80E-08	1.27E-01	2.21E-08	1.61E-01	1.80E-01	2.17E-01
Row 8	0300-0330	2.72E-02	1.22E-08	2.48E-07	1.88E-01	1.01E-08	2.02E-07	1.67E-01	1.67E-01	1.67E-01	1.67E-01	1.67E-01
Row 8	0330-0360	1.00E-03	1.91E-07	2.28E-08	1.00E-08	1.60E-07	1.80E-08	1.27E-01	2.21E-08	1.61E-01	1.80E-01	2.17E-01
Row 8	0360-0390	2.36E-02	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	0390-0420	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	0420-0450	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	0450-0480	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	0480-0510	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	0510-0540	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	0540-0570	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	0570-0600	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	0600-0630	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	0630-0660	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	0660-0690	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	0690-0720	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	0720-0750	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	0750-0780	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	0780-0810	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	0810-0840	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	0840-0870	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	0870-0900	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	0900-0930	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	0930-0960	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	0960-0990	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	0990-1020	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	1020-1050	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	1050-1080	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	1080-1110	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	1110-1140	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	1140-1170	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	1170-1200	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	1200-1230	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	1230-1260	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	1260-1290	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	1290-1320	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	1320-1350	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	1350-1380	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	1380-1410	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	1410-1440	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	1440-1470	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	1470-1500	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	1500-1530	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	1530-1560	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	1560-1590	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	1590-1620	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	1620-1650	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	1650-1680	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	1680-1710	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	1710-1740	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	1740-1770	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	1770-1800	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	1800-1830	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	1830-1860	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	1860-1890	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	1890-1920	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	1920-1950	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	1950-1980	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	1980-2010	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	2010-2040	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	2040-2070	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	2070-2100	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	2100-2130	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	2130-2160	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E-01	1.63E-01	1.63E-01
Row 8	2160-2190	2.48E-01	1.08E-09	1.27E-07	1.02E-07	5.14E-09	1.04E-07	1.63E-01	1.63E-01	1.63E		

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Tsing N North Underground Quarry														
Open Road 24 Hour Emission Factors for ANNOAD model (Exhaustive)														
Year 2003														
Road Name	Road ID	Hour	NO _x Emission					NO Emission						
			g/h/m ²	g/h/m ²	g/h/m ²	g/h/m ²	g/h/m ²	Monthly/Hours	Monthly/Average	Monthly/Hours	Monthly/Average			
Road 1	1	0000-0100	9.0113	8.1317	6.667	7.4113	8.9648	5.488	1.054	1.4116	7.764	0.847	1.1316	8.271
Road 1	1	0100-0200	9.0113	8.1317	6.667	7.4113	8.9648	5.488	1.054	1.4116	7.764	0.847	1.1316	8.271
Road 1	1	0200-0300	9.0113	8.1317	6.667	7.4113	8.9648	5.488	1.054	1.4116	7.764	0.847	1.1316	8.271
Road 1	1	0300-0400	9.0113	8.1317	6.667	7.4113	8.9648	5.488	1.054	1.4116	7.764	0.847	1.1316	8.271
Road 1	1	0400-0500	9.0113	8.1317	6.667	7.4113	8.9648	5.488	1.054	1.4116	7.764	0.847	1.1316	8.271
Road 1	1	0500-0600	9.0113	8.1317	6.667	7.4113	8.9648	5.488	1.054	1.4116	7.764	0.847	1.1316	8.271
Road 1	1	0600-0700	9.0113	8.1317	6.667	7.4113	8.9648	5.488	1.054	1.4116	7.764	0.847	1.1316	8.271
Road 1	1	0700-0800	9.0113	8.1317	6.667	7.4113	8.9648	5.488	1.054	1.4116	7.764	0.847	1.1316	8.271
Road 1	1	0800-0900	9.0113	8.1317	6.667	7.4113	8.9648	5.488	1.054	1.4116	7.764	0.847	1.1316	8.271
Road 1	1	0900-1000	9.0113	8.1317	6.667	7.4113	8.9648	5.488	1.054	1.4116	7.764	0.847	1.1316	8.271
Road 1	1	1000-1100	1.8662	1.6667	3.125	4.141	4.8137	2.6555	1.188	4.0108	2.214	0.9142	3.1376	1.868
Road 1	1	1100-1200	1.8662	1.6667	3.125	4.141	4.8137	2.6555	1.188	4.0108	2.214	0.9142	3.1376	1.868
Road 1	1	1200-1300	1.8662	1.6667	3.125	4.141	4.8137	2.6555	1.188	4.0108	2.214	0.9142	3.1376	1.868
Road 1	1	1300-1400	1.8662	1.6667	3.125	4.141	4.8137	2.6555	1.188	4.0108	2.214	0.9142	3.1376	1.868
Road 1	1	1400-1500	1.8662	1.6667	3.125	4.141	4.8137	2.6555	1.188	4.0108	2.214	0.9142	3.1376	1.868
Road 1	1	1500-1600	1.8662	1.6667	3.125	4.141	4.8137	2.6555	1.188	4.0108	2.214	0.9142	3.1376	1.868
Road 1	1	1600-1700	1.8662	1.6667	3.125	4.141	4.8137	2.6555	1.188	4.0108	2.214	0.9142	3.1376	1.868
Road 1	1	1700-1800	1.8662	1.6667	3.125	4.141	4.8137	2.6555	1.188	4.0108	2.214	0.9142	3.1376	1.868
Road 1	1	1800-1900	1.8662	1.6667	3.125	4.141	4.8137	2.6555	1.188	4.0108	2.214	0.9142	3.1376	1.868
Road 1	1	1900-2000	1.8662	1.6667	3.125	4.141	4.8137	2.6555	1.188	4.0108	2.214	0.9142	3.1376	1.868
Road 1	1	2000-2100	1.8662	1.6667	3.125	4.141	4.8137	2.6555	1.188	4.0108	2.214	0.9142	3.1376	1.868
Road 1	1	2100-2200	1.8662	1.6667	3.125	4.141	4.8137	2.6555	1.188	4.0108	2.214	0.9142	3.1376	1.868
Road 1	1	2200-2300	1.8662	1.6667	3.125	4.141	4.8137	2.6555	1.188	4.0108	2.214	0.9142	3.1376	1.868
Road 1	1	2300-2400	1.8662	1.6667	3.125	4.141	4.8137	2.6555	1.188	4.0108	2.214	0.9142	3.1376	1.868
Road 2	2	0000-0100	1.1962	1.0967	1.5488	1.9062	2.1808	4.8311	0.5124	1.5048	2.794	0.9472	0.8027	4.334
Road 2	2	0100-0200	1.1962	1.0967	1.5488	1.9062	2.1808	4.8311	0.5124	1.5048	2.794	0.9472	0.8027	4.334
Road 2	2	0200-0300	1.1962	1.0967	1.5488	1.9062	2.1808	4.8311	0.5124	1.5048	2.794	0.9472	0.8027	4.334
Road 2	2	0300-0400	1.1962	1.0967	1.5488	1.9062	2.1808	4.8311	0.5124	1.5048	2.794	0.9472	0.8027	4.334
Road 2	2	0400-0500	1.1962	1.0967	1.5488	1.9062	2.1808	4.8311	0.5124	1.5048	2.794	0.9472	0.8027	4.334
Road 2	2	0500-0600	1.1962	1.0967	1.5488	1.9062	2.1808	4.8311	0.5124	1.5048	2.794	0.9472	0.8027	4.334
Road 2	2	0600-0700	1.1962	1.0967	1.5488	1.9062	2.1808	4.8311	0.5124	1.5048	2.794	0.9472	0.8027	4.334
Road 2	2	0700-0800	1.1962	1.0967	1.5488	1.9062	2.1808	4.8311	0.5124	1.5048	2.794	0.9472	0.8027	4.334
Road 2	2	0800-0900	1.1962	1.0967	1.5488	1.9062	2.1808	4.8311	0.5124	1.5048	2.794	0.9472	0.8027	4.334
Road 2	2	0900-1000	1.821	1.7261	4.488	4.541	8.8317	2.465	1.218	4.548	2.718	1.041	4.334	2.191
Road 2	2	1000-1100	1.821	1.7261	4.488	4.541	8.8317	2.465	1.218	4.548	2.718	1.041	4.334	2.191
Road 2	2	1100-1200	1.821	1.7261	4.488	4.541	8.8317	2.465	1.218	4.548	2.718	1.041	4.334	2.191
Road 2	2	1200-1300	1.821	1.7261	4.488	4.541	8.8317	2.465	1.218	4.548	2.718	1.041	4.334	2.191
Road 2	2	1300-1400	1.821	1.7261	4.488	4.541	8.8317	2.465	1.218	4.548	2.718	1.041	4.334	2.191
Road 2	2	1400-1500	1.821	1.7261	4.488	4.541	8.8317	2.465	1.218	4.548	2.718	1.041	4.334	2.191
Road 2	2	1500-1600	1.821	1.7261	4.488	4.541	8.8317	2.465	1.218	4.548	2.718	1.041	4.334	2.191
Road 2	2	1600-1700	1.821	1.7261	4.488	4.541	8.8317	2.465	1.218	4.548	2.718	1.041	4.334	2.191
Road 2	2	1700-1800	1.821	1.7261	4.488	4.541	8.8317	2.465	1.218	4.548	2.718	1.041	4.334	2.191
Road 2	2	1800-1900	1.821	1.7261	4.488	4.541	8.8317	2.465	1.218	4.548	2.718	1.041	4.334	2.191
Road 2	2	1900-2000	1.821	1.7261	4.488	4.541	8.8317	2.465	1.218	4.548	2.718	1.041	4.334	2.191
Road 2	2	2000-2100	1.821	1.7261	4.488	4.541	8.8317	2.465	1.218	4.548	2.718	1.041	4.334	2.191
Road 2	2	2100-2200	1.821	1.7261	4.488	4.541	8.8317	2.465	1.218	4.548	2.718	1.041	4.334	2.191
Road 2	2	2200-2300	1.821	1.7261	4.488	4.541	8.8317	2.465	1.218	4.548	2.718	1.041	4.334	2.191
Road 2	2	2300-2400	1.821	1.7261	4.488	4.541	8.8317	2.465	1.218	4.548	2.718	1.041	4.334	2.191
Road 3	3	0000-0100	1.1962	1.0967	1.5488	1.9062	2.1808	4.8311	0.5124	1.5048	2.794	0.9472	0.8027	4.334
Road 3	3	0100-0200	1.1962	1.0967	1.5488	1.9062	2.1808	4.8311	0.5124	1.5048	2.794	0.9472	0.8027	4.334
Road 3	3	0200-0300	1.1962	1.0967	1.5488	1.9062	2.1808	4.8311	0.5124	1.5048	2.794	0.9472	0.8027	4.334
Road 3	3	0300-0400	1.1962	1.0967	1.5488	1.9062	2.1808	4.8311	0.5124	1.5048	2.794	0.9472	0.8027	4.334
Road 3	3	0400-0500	1.1962	1.0967	1.5488	1.9062	2.1808	4.8311	0.5124	1.5048	2.794	0.9472	0.8027	4.334
Road 3	3	0500-0600	1.1962	1.0967	1.5488	1.9062	2.1808	4.8311	0.5124	1.5048	2.794	0.9472	0.8027	4.334
Road 3	3	0600-0700	1.1962	1.0967	1.5488	1.9062	2.1808	4.8311	0.5124	1.5048	2.794	0.9472	0.8027	4.334
Road 3	3	0700-0800	1.1962	1.0967	1.5488	1.9062	2.1808	4.8311	0.5124	1.5048	2.794	0.9472	0.8027	4.334
Road 3	3	0800-0900	1.1962	1.0967	1.5488	1.9062	2.1808	4.8311	0.5124	1.5048	2.794	0.9472	0.8027	4.334
Road 3	3	0900-1000	1.821	1.7261	4.488	4.541	8.8317	2.465	1.218	4.548	2.718	1.041	4.334	2.191
Road 3	3	1000-1100	1.821	1.7261	4.488	4.541	8.8317	2.465	1.218	4.548	2.718	1.041	4.334	2.191
Road 3	3	1100-1200	1.821	1.7261	4.488	4.541	8.8317	2.465	1.218	4.548	2.718	1.041	4.334	2.191
Road 3	3	1200-1300	1.821	1.7261	4.488	4.541	8.8317	2.465	1.218	4.548	2.718	1.041	4.334	2.191
Road 3	3	1300-1400	1.821	1.7261	4.488	4.541	8.8317	2.465	1.218	4.548	2.718	1.041	4.334	2.191
Road 3	3	1400-1500	1.821	1.7261	4.488	4.541	8.8317	2.465	1.218	4.548	2.718	1.041	4.334	2.191
Road 3	3	1500-1600	1.821	1.7261	4.488	4.541	8.8317	2.465	1.218	4.548	2.718	1.041	4.334	2.191
Road 3	3	1600-1700	1.821	1.7261	4.488	4.541	8.8317	2.465	1.218	4.548	2.718	1.041	4.334	2.191
Road 3	3	1700-1800	1.821	1.7261	4.488	4.541	8.8317	2.465	1.218	4.548	2.718	1.041	4.334	2.191
Road 3	3	1800-1900	1.821	1.7261	4.488	4.541	8.8317	2.465	1.218	4.548	2.718	1.041	4.334	2.191
Road 3	3	1900-2000	1.821	1.7261	4.488	4.541	8.8317	2.465	1.218	4.548	2.718	1.041	4.334	2.191
Road 3	3	2000-2100	1.821	1.7261	4.488	4.541	8.8317	2.465	1.218	4.548	2.718	1.041	4.334	2.191
Road 3	3	2100-2200	1.821	1.7261	4.488	4.541	8.8317	2.465	1.218	4.548	2.718	1.041	4.334	2.191
Road 3	3	2200-2300	1.821	1.7261	4.488	4.541	8.8317	2.465	1.218	4.548	2.718	1.041	4.334	2.191
Road 3	3	2300-2400	1.821	1.7261	4.488	4.541	8.8317	2.465	1.218	4.548	2.718	1.041	4.334	2.191
Road 4	4	0000-0100	1.1962	1.0967	1.5488	1.9062	2.1808	4.8311	0.5124	1.5048	2.794	0.9472	0.8027	4.334
Road 4	4	0100-0200	1.1962	1.0967	1.5488	1.9062	2.1808	4.8311	0.5124	1.5048	2.794	0.9472	0.8027	4.334
Road 4	4	0200-0300	1.1962	1.0967	1.5488	1.9062	2.1808	4.8311	0.5124	1.5048	2.794	0.9472	0.8027	4.334
Road 4	4	0300-0400	1.1962	1.0967	1.5488	1.9062	2.1808	4.8311	0.5124	1.5048	2.794	0.9472	0.8027	4.334
Road 4	4	0400-0500	1.1962	1.0967	1.5488	1.9062	2.1808	4.8311	0.5124	1.5048	2.794	0.9		

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Open Road 24 Hour Underground Factors for AEMOD model (September)															
Year 2033															
Road Name	Road ID	Hour	NO _x Emission				NO _x Emission								
			g/hv/mi/hour		Monthly/hour		g/hv/mi/hour		Monthly/hour		g/hv/mi/hour				
			g/hv/mi/hour	h/v/mi/hour	g/hv/mi/hour	h/v/mi/hour	g/hv/mi/hour	h/v/mi/hour	g/hv/mi/hour	h/v/mi/hour	g/hv/mi/hour				
Road 4	4	0800-0900	1.3162	4.4142	0.7826	1.0592	3.7471	7.5116	9.1142	1.7356	6.5215	7.5382	7.488	6.01	
Road 4	4	0900-1000	1.5455	4.6407	0.9306	1.2477	4.7555	9.6585	11.2407	2.0005	7.3849	8.3849	7.488	6.01	
Road 4	4	1000-1100	1.5455	4.6407	0.9306	1.2477	4.7555	9.6585	11.2407	2.0005	7.3849	8.3849	7.488	6.01	
Road 4	4	1100-1200	1.5455	4.6407	0.9306	1.2477	4.7555	9.6585	11.2407	2.0005	7.3849	8.3849	7.488	6.01	
Road 4	4	1200-1300	1.5455	4.6407	0.9306	1.2477	4.7555	9.6585	11.2407	2.0005	7.3849	8.3849	7.488	6.01	
Road 4	4	1300-1400	1.5455	4.6407	0.9306	1.2477	4.7555	9.6585	11.2407	2.0005	7.3849	8.3849	7.488	6.01	
Road 4	4	1400-1500	1.5455	4.6407	0.9306	1.2477	4.7555	9.6585	11.2407	2.0005	7.3849	8.3849	7.488	6.01	
Road 4	4	1500-1600	1.5455	4.6407	0.9306	1.2477	4.7555	9.6585	11.2407	2.0005	7.3849	8.3849	7.488	6.01	
Road 4	4	1600-1700	1.5455	4.6407	0.9306	1.2477	4.7555	9.6585	11.2407	2.0005	7.3849	8.3849	7.488	6.01	
Road 4	4	1700-1800	1.5455	4.6407	0.9306	1.2477	4.7555	9.6585	11.2407	2.0005	7.3849	8.3849	7.488	6.01	
Road 4	4	1800-1900	1.5455	4.6407	0.9306	1.2477	4.7555	9.6585	11.2407	2.0005	7.3849	8.3849	7.488	6.01	
Road 4	4	1900-2000	1.5455	4.6407	0.9306	1.2477	4.7555	9.6585	11.2407	2.0005	7.3849	8.3849	7.488	6.01	
Road 4	4	2000-2100	1.5455	4.6407	0.9306	1.2477	4.7555	9.6585	11.2407	2.0005	7.3849	8.3849	7.488	6.01	
Road 4	4	2100-2200	1.5455	4.6407	0.9306	1.2477	4.7555	9.6585	11.2407	2.0005	7.3849	8.3849	7.488	6.01	
Road 4	4	2200-2300	1.5455	4.6407	0.9306	1.2477	4.7555	9.6585	11.2407	2.0005	7.3849	8.3849	7.488	6.01	
Road 4	4	2300-2400	1.5455	4.6407	0.9306	1.2477	4.7555	9.6585	11.2407	2.0005	7.3849	8.3849	7.488	6.01	
Road 5	5	0800-0900	1.4112	4.6318	0.8762	1.1318	5.4118	6.5447	1.4025	6.1467	1.5446	6.3828	7.388	6.01	
Road 5	5	0900-1000	1.4112	4.6318	0.8762	1.1318	5.4118	6.5447	1.4025	6.1467	1.5446	6.3828	7.388	6.01	
Road 5	5	1000-1100	1.4112	4.6318	0.8762	1.1318	5.4118	6.5447	1.4025	6.1467	1.5446	6.3828	7.388	6.01	
Road 5	5	1100-1200	1.4112	4.6318	0.8762	1.1318	5.4118	6.5447	1.4025	6.1467	1.5446	6.3828	7.388	6.01	
Road 5	5	1200-1300	1.4112	4.6318	0.8762	1.1318	5.4118	6.5447	1.4025	6.1467	1.5446	6.3828	7.388	6.01	
Road 5	5	1300-1400	1.4112	4.6318	0.8762	1.1318	5.4118	6.5447	1.4025	6.1467	1.5446	6.3828	7.388	6.01	
Road 5	5	1400-1500	1.4112	4.6318	0.8762	1.1318	5.4118	6.5447	1.4025	6.1467	1.5446	6.3828	7.388	6.01	
Road 5	5	1500-1600	1.4112	4.6318	0.8762	1.1318	5.4118	6.5447	1.4025	6.1467	1.5446	6.3828	7.388	6.01	
Road 5	5	1600-1700	1.4112	4.6318	0.8762	1.1318	5.4118	6.5447	1.4025	6.1467	1.5446	6.3828	7.388	6.01	
Road 5	5	1700-1800	1.4112	4.6318	0.8762	1.1318	5.4118	6.5447	1.4025	6.1467	1.5446	6.3828	7.388	6.01	
Road 5	5	1800-1900	1.4112	4.6318	0.8762	1.1318	5.4118	6.5447	1.4025	6.1467	1.5446	6.3828	7.388	6.01	
Road 5	5	1900-2000	1.4112	4.6318	0.8762	1.1318	5.4118	6.5447	1.4025	6.1467	1.5446	6.3828	7.388	6.01	
Road 5	5	2000-2100	1.4112	4.6318	0.8762	1.1318	5.4118	6.5447	1.4025	6.1467	1.5446	6.3828	7.388	6.01	
Road 5	5	2100-2200	1.4112	4.6318	0.8762	1.1318	5.4118	6.5447	1.4025	6.1467	1.5446	6.3828	7.388	6.01	
Road 5	5	2200-2300	1.4112	4.6318	0.8762	1.1318	5.4118	6.5447	1.4025	6.1467	1.5446	6.3828	7.388	6.01	
Road 5	5	2300-2400	1.4112	4.6318	0.8762	1.1318	5.4118	6.5447	1.4025	6.1467	1.5446	6.3828	7.388	6.01	
Road 6	6	0800-0900	1.4112	4.6318	0.8762	1.1318	5.4118	6.5447	1.4025	6.1467	1.5446	6.3828	7.388	6.01	
Road 6	6	0900-1000	1.4112	4.6318	0.8762	1.1318	5.4118	6.5447	1.4025	6.1467	1.5446	6.3828	7.388	6.01	
Road 6	6	1000-1100	1.4112	4.6318	0.8762	1.1318	5.4118	6.5447	1.4025	6.1467	1.5446	6.3828	7.388	6.01	
Road 6	6	1100-1200	1.4112	4.6318	0.8762	1.1318	5.4118	6.5447	1.4025	6.1467	1.5446	6.3828	7.388	6.01	
Road 6	6	1200-1300	1.4112	4.6318	0.8762	1.1318	5.4118	6.5447	1.4025	6.1467	1.5446	6.3828	7.388	6.01	
Road 6	6	1300-1400	1.4112	4.6318	0.8762	1.1318	5.4118	6.5447	1.4025	6.1467	1.5446	6.3828	7.388	6.01	
Road 6	6	1400-1500	1.4112	4.6318	0.8762	1.1318	5.4118	6.5447	1.4025	6.1467	1.5446	6.3828	7.388	6.01	
Road 6	6	1500-1600	1.4112	4.6318	0.8762	1.1318	5.4118	6.5447	1.4025	6.1467	1.5446	6.3828	7.388	6.01	
Road 6	6	1600-1700	1.4112	4.6318	0.8762	1.1318	5.4118	6.5447	1.4025	6.1467	1.5446	6.3828	7.388	6.01	
Road 6	6	1700-1800	1.4112	4.6318	0.8762	1.1318	5.4118	6.5447	1.4025	6.1467	1.5446	6.3828	7.388	6.01	
Road 6	6	1800-1900	1.4112	4.6318	0.8762	1.1318	5.4118	6.5447	1.4025	6.1467	1.5446	6.3828	7.388	6.01	
Road 6	6	1900-2000	1.4112	4.6318	0.8762	1.1318	5.4118	6.5447	1.4025	6.1467	1.5446	6.3828	7.388	6.01	
Road 6	6	2000-2100	1.4112	4.6318	0.8762	1.1318	5.4118	6.5447	1.4025	6.1467	1.5446	6.3828	7.388	6.01	
Road 6	6	2100-2200	1.4112	4.6318	0.8762	1.1318	5.4118	6.5447	1.4025	6.1467	1.5446	6.3828	7.388	6.01	
Road 6	6	2200-2300	1.4112	4.6318	0.8762	1.1318	5.4118	6.5447	1.4025	6.1467	1.5446	6.3828	7.388	6.01	
Road 6	6	2300-2400	1.4112	4.6318	0.8762	1.1318	5.4118	6.5447	1.4025	6.1467	1.5446	6.3828	7.388	6.01	
Road 7	7	0800-0900	1.6018	5.1376	1.0036	1.3382	6.1878	12.3756	14.8508	2.4010	8.6816	10.0620	8.9880	7.488	6.01
Road 7	7	0900-1000	1.6018	5.1376	1.0036	1.3382	6.1878	12.3756	14.8508	2.4010	8.6816	10.0620	8.9880	7.488	6.01
Road 7	7	1000-1100	1.6018	5.1376	1.0036	1.3382	6.1878	12.3756	14.8508	2.4010	8.6816	10.0620	8.9880	7.488	6.01
Road 7	7	1100-1200	1.6018	5.1376	1.0036	1.3382	6.1878	12.3756	14.8508	2.4010	8.6816	10.0620	8.9880	7.488	6.01
Road 7	7	1200-1300	1.6018	5.1376	1.0036	1.3382	6.1878	12.3756	14.8508	2.4010	8.6816	10.0620	8.9880	7.488	6.01
Road 7	7	1300-1400	1.6018	5.1376	1.0036	1.3382	6.1878	12.3756	14.8508	2.4010	8.6816	10.0620	8.9880	7.488	6.01
Road 7	7	1400-1500	1.6018	5.1376	1.0036	1.3382	6.1878	12.3756	14.8508	2.4010	8.6816	10.0620	8.9880	7.488	6.01
Road 7	7	1500-1600	1.6018	5.1376	1.0036	1.3382	6.1878	12.3756	14.8508	2.4010	8.6816	10.0620	8.9880	7.488	6.01
Road 7	7	1600-1700	1.6018	5.1376	1.0036	1.3382	6.1878	12.3756	14.8508	2.4010	8.6816	10.0620	8.9880	7.488	6.01
Road 7	7	1700-1800	1.6018	5.1376	1.0036	1.3382	6.1878	12.3756	14.8508	2.4010	8.6816	10.0620	8.9880	7.488	6.01
Road 7	7	1800-1900	1.6018	5.1376	1.0036	1.3382	6.1878	12.3756	14.8508	2.4010	8.6816	10.0620	8.9880	7.488	6.01
Road 7	7	1900-2000	1.6018	5.1376	1.0036	1.3382	6.1878	12.3756	14.8508	2.4010	8.6816	10.0620	8.9880	7.488	6.01
Road 7	7	2000-2100	1.6018	5.1376	1.0036	1.3382	6.1878	12.3756	14.8508	2.4010	8.6816	10.0620	8.9880	7.488	6.01
Road 7	7	2100-2200	1.6018	5.1376	1.0036	1.3382	6.1878	12.3756	14.8508	2.4010	8.6816	10.0620	8.9880	7.488	6.01
Road 7	7	2200-2300	1.6018	5.1376	1.0036	1.3382	6.1878	12.3756	14.8508	2.4010	8.6816	10.0620	8.9880	7.488	6.01
Road 7	7	2300-2400	1.6018	5.1376	1.0036	1.3382	6.1878	12.3756	14.8508	2.4010	8.6816	10.0620	8.9880	7.488	6.01
Road 8	8	0800-0900	1.6018	5.1376	1.0036	1.3382	6.1878	12.3756	14.8508	2.4010	8.6816	10.0620	8.9880	7.488	6.01
Road 8	8	0900-1000	1.6018	5.1376	1.0036	1.3382	6.1878	12.3756	14.8508	2.4010	8.6816	10.0620	8.9880	7.488	6.01
Road 8	8	1000-1100	1.6018	5.1376	1.0036	1.3382	6.1878	12.3756	14.8508	2.4010	8.6816	10.0620	8.9880	7.488	6.01
Road 8	8	1100-1200	1.6018	5.1376	1.0036	1.3382	6.1878	12.3756	14.8508	2.4010	8.6816	10.0620	8.9880	7.488	6.01
Road 8	8	1200-1300	1.6018	5.1376	1.0036	1.3382	6.1878	12.3756	14.8508	2.4010	8.6816	10.0620	8.9880	7.488	6.01
Road 8	8	1300-1400	1.6018	5.1376	1.0036	1.3382	6.1878	12.3756	14.8508	2.4010	8.6816	10.0620	8.9880	7.488	

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.3 Emission Factor in

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Opening North End Unravelling Quarry TSP & Noise Survey Data for AR6000 model (Revised)											
Year 2033			NO ₂ Emission						NO ₂ Emission		
Road Name	ID	Hour	Monthly/average		Monthly/average		Monthly/average		Monthly/average		
			g/hr	g/hr	g/hr	g/hr	g/hr	g/hr	g/hr	g/hr	
Respt 21	01000010	1:55:00	1.1156	1.5321	1.2968	0.8718	1.2608	1.0521	7.9317	0.5756	8.6412
Respt 21	01000010	2:15:00	1.7716	8.8338	1.6448	1.4627	7.3232	9.6825	1.0842	2.1732	8.4862
Respt 21	01000010	2:35:00	1.7716	8.8338	1.6448	1.4627	7.3232	9.6825	1.0842	2.1732	8.4862
Respt 21	01000040	2:15:00	2.1192	6.5328	0.8617	1.7772	1.5458	7.2025	1.1162	0.5149	6.7386
Respt 21	01000040	2:35:00	2.1192	6.5328	0.8617	1.7772	1.5458	7.2025	1.1162	0.5149	6.7386
Respt 21	01000070	2:15:00	2.1192	6.5328	0.8617	1.7772	1.5458	7.2025	1.1162	0.5149	6.7386
Respt 21	01000070	2:35:00	2.1192	6.5328	0.8617	1.7772	1.5458	7.2025	1.1162	0.5149	6.7386
Respt 21	01000200	2:15:00	2.4337	0.2312	1.6648	2.0484	2.7206	1.1741	1.1444	1.8985	0.6747
Respt 21	01000200	2:35:00	2.4337	0.2312	1.6648	2.0484	2.7206	1.1741	1.1444	1.8985	0.6747
Respt 21	01000230	2:15:00	2.5512	7.4498	0.9208	2.1482	6.6127	8.6026	1.2789	3.8893	1.0081
Respt 21	01000230	2:35:00	2.5512	7.4498	0.9208	2.1482	6.6127	8.6026	1.2789	3.8893	1.0081
Respt 21	01000260	2:15:00	2.9312	8.6117	0.9146	0.2488	1.5863	7.7465	1.4048	3.2766	0.3243
Respt 21	01000260	2:35:00	2.9312	8.6117	0.9146	0.2488	1.5863	7.7465	1.4048	3.2766	0.3243
Respt 21	01000310	2:15:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000310	2:35:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000340	2:15:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000340	2:35:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000370	2:15:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000370	2:35:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000400	2:15:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000400	2:35:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000430	2:15:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000430	2:35:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000460	2:15:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000460	2:35:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000490	2:15:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000490	2:35:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000520	2:15:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000520	2:35:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000550	2:15:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000550	2:35:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000580	2:15:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000580	2:35:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000610	2:15:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000610	2:35:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000640	2:15:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000640	2:35:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000670	2:15:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000670	2:35:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000700	2:15:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000700	2:35:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000730	2:15:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000730	2:35:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000760	2:15:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000760	2:35:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000790	2:15:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000790	2:35:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000820	2:15:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000820	2:35:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000850	2:15:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000850	2:35:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000880	2:15:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000880	2:35:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000910	2:15:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000910	2:35:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000940	2:15:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000940	2:35:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000970	2:15:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01000970	2:35:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01001000	2:15:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01001000	2:35:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01001030	2:15:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01001030	2:35:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01001060	2:15:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01001060	2:35:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01001090	2:15:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01001090	2:35:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01001120	2:15:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01001120	2:35:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01001150	2:15:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01001150	2:35:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01001180	2:15:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01001180	2:35:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01001210	2:15:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01001210	2:35:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01001240	2:15:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01001240	2:35:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01001270	2:15:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01001270	2:35:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01001300	2:15:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01001300	2:35:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01001330	2:15:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01001330	2:35:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01001360	2:15:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01001360	2:35:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01001390	2:15:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01001390	2:35:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt 21	01001420	2:15:00	1.1156	8.2633	0.2783	2.4412	0.8718	7.1115	1.1881	0.0719	4.0653
Respt											

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

TSP Year 2014 North Underground Quarry														
Open Road Year 2014 Exhaust Emission Factors for ANMSMD model (December)														
Year 2003														
Road Name	Route ID	Hour	No. Emission			No. Emission			No. Emission					
			g/hour	lb/hour	lb/day	g/hour	lb/hour	lb/day	g/hour	lb/hour	lb/day			
			Monthly/turn	Monthly/turn	Monthly/turn	Monthly/turn	Monthly/turn	Monthly/turn	Monthly/turn	Monthly/turn	Monthly/turn/Average			
Road #24	25	0800-0900	1.0561	0.017	8.2107	1.4446	2.7967	0.7007	6.4151	0.1406	3.1116	0.5616	2.6161	0.66
Road #24	25	0900-1000	1.2742	0.392	7.9462	1.9379	3.4793	6.1312	8.0005	0.5232	1.4498	3.5808	1.2202	3.0668
Road #24	25	1000-1100	1.4874	0.605	7.9462	2.1500	3.9913	6.1312	8.0005	0.5232	1.4498	3.5808	1.2202	3.0668
Road #24	25	1100-1200	1.8270	1.022	8.1622	2.1500	3.9913	6.1312	8.0005	0.5232	1.4498	3.5808	1.2202	3.0668
Road #24	25	1200-1300	1.8270	1.022	8.1622	2.1500	3.9913	6.1312	8.0005	0.5232	1.4498	3.5808	1.2202	3.0668
Road #24	25	1300-1400	1.9403	0.838	8.1622	2.1500	3.9913	6.1312	8.0005	0.5232	1.4498	3.5808	1.2202	3.0668
Road #24	25	1400-1500	1.9403	0.838	8.1622	2.1500	3.9913	6.1312	8.0005	0.5232	1.4498	3.5808	1.2202	3.0668
Road #24	25	1500-1600	1.7744	0.838	8.1622	2.1500	3.9913	6.1312	8.0005	0.5232	1.4498	3.5808	1.2202	3.0668
Road #24	25	1600-1700	1.8262	1.062	8.1622	2.1500	3.9913	6.1312	8.0005	0.5232	1.4498	3.5808	1.2202	3.0668
Road #24	25	1700-1800	1.8262	1.062	8.1622	2.1500	3.9913	6.1312	8.0005	0.5232	1.4498	3.5808	1.2202	3.0668
Road #24	25	1800-1900	1.4606	1.061	8.1622	2.1500	3.9913	6.1312	8.0005	0.5232	1.4498	3.5808	1.2202	3.0668
Road #24	25	1900-2000	1.3314	2.212	8.1622	2.1500	3.9913	6.1312	8.0005	0.5232	1.4498	3.5808	1.2202	3.0668
Road #24	25	2000-2100	1.4606	1.061	8.1622	2.1500	3.9913	6.1312	8.0005	0.5232	1.4498	3.5808	1.2202	3.0668
Road #24	25	2100-2200	1.2885	0.348	2.9447	0.7017	7.8148	0.9667	3.2885	0.3853	7.6666	0.4741	1.2222	0.8708
Road #24	25	2200-2300	1.2885	0.348	2.9447	0.7017	7.8148	0.9667	3.2885	0.3853	7.6666	0.4741	1.2222	0.8708
Road #24	25	2300-2400	1.4201	1.862	1.8017	1.1861	6.1508	1.5482	0.7389	2.7465	0.5222	4.3750	2.2828	5.7047
Road #25	25	0800-0900	1.3804	0.6504	5.1464	1.1713	5.1314	3.1431	5.1424	2.2547	3.7378	4.3342	1.9002	4.8327
Road #25	25	0900-1000	1.3804	0.6504	5.1464	1.1713	5.1314	3.1431	5.1424	2.2547	3.7378	4.3342	1.9002	4.8327
Road #25	25	1000-1100	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #25	25	1100-1200	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #25	25	1200-1300	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #25	25	1300-1400	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #25	25	1400-1500	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #25	25	1500-1600	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #25	25	1600-1700	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #25	25	1700-1800	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #25	25	1800-1900	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #25	25	1900-2000	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #25	25	2000-2100	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #25	25	2100-2200	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #25	25	2200-2300	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #25	25	2300-2400	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #26	25	0800-0900	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #26	25	0900-1000	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #26	25	1000-1100	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #26	25	1100-1200	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #26	25	1200-1300	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #26	25	1300-1400	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #26	25	1400-1500	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #26	25	1500-1600	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #26	25	1600-1700	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #26	25	1700-1800	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #26	25	1800-1900	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #26	25	1900-2000	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #26	25	2000-2100	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #26	25	2100-2200	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #26	25	2200-2300	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #26	25	2300-2400	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #27	25	0800-0900	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #27	25	0900-1000	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #27	25	1000-1100	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #27	25	1100-1200	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #27	25	1200-1300	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #27	25	1300-1400	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #27	25	1400-1500	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #27	25	1500-1600	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #27	25	1600-1700	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #27	25	1700-1800	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #27	25	1800-1900	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #27	25	1900-2000	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #27	25	2000-2100	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #27	25	2100-2200	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #27	25	2200-2300	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147
Road #27	25	2300-2400	1.4605	0.428	8.7248	1.1861	2.8986	0.7389	1.2312	1.1276	3.3321	4.4313	0.1772	2.7147

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open North and Underground Quarry									
TSP and PM ₁₀ and SO ₂ Emission Factors for									
ARMMO model (September)									
Year 2003									
		NO _x Emission				NO _x Emission			
Road Name	Hour	Monthly/Annual		Monthly/Annual/Average		Monthly/Annual		Monthly/Annual/Average	
Road 27	27 1800-1900	1.922E+01	4.81E+01	1.51E+06	1.50E+06	4.00E+01	1.25E+06	4.89E+01	4.88E+06
Road 27	27 1700-1800	1.950E+01	3.90E+02	1.50E+06	1.42E+06	3.21E+01	8.89E+05	4.15E+06	4.88E+06
Road 27	27 1600-1700	1.949E+01	1.30E+02	1.50E+06	1.44E+06	1.89E+01	5.24E+05	4.15E+06	4.88E+06
Road 27	27 1500-1600	1.18E+01	1.43E+02	4.79E+07	1.11E+07	1.36E+02	5.59E+07	4.77E+06	4.46E+07
Road 27	27 1400-1500	1.17E+01	1.10E+02	3.96E+07	1.11E+07	1.15E+02	4.57E+07	4.46E+06	3.96E+07
Road 27	27 1300-1400	1.17E+01	1.10E+02	3.96E+07	1.11E+07	1.15E+02	4.57E+07	4.46E+06	3.96E+07
Road 27	27 1200-1300	1.42E+01	1.05E+02	3.22E+07	1.18E+07	8.78E+02	2.70E+07	3.89E+07	2.20E+07
Road 27	27 1100-1200	2.42E+01	1.05E+02	3.22E+07	1.18E+07	1.50E+03	2.70E+07	3.89E+07	2.20E+07
Road 27	27 1000-1100	2.42E+01	1.05E+02	3.22E+07	1.18E+07	1.50E+03	2.70E+07	3.89E+07	2.20E+07
Road 27	27 0900-1000	2.00E+01	1.59E+02	9.00E+06	1.38E+06	1.37E+03	7.83E+06	1.78E+07	1.02E+07
Road 27	27 0800-0900	2.00E+01	1.59E+02	9.00E+06	1.38E+06	1.37E+03	7.83E+06	1.78E+07	1.02E+07
Road 27	27 0700-0800	1.78E+01	8.40E+06	4.77E+06	1.50E+06	7.09E+06	4.02E+06	1.82E+07	8.84E+06
Road 27	27 0600-0700	1.87E+01	7.04E+06	4.80E+06	1.51E+06	3.93E+06	1.84E+06	1.94E+07	1.50E+06
Road 27	27 0500-0600	1.99E+01	7.04E+06	4.80E+06	1.51E+06	3.93E+06	1.84E+06	1.94E+07	1.50E+06
Road 27	27 0400-0500	2.02E+01	1.48E+07	8.37E+06	1.70E+07	1.24E+07	7.09E+06	1.85E+07	1.83E+06
Road 27	27 0300-0400	2.02E+01	1.48E+07	8.37E+06	1.70E+07	1.24E+07	7.09E+06	1.85E+07	1.83E+06
Road 27	27 0200-0300	2.02E+01	1.48E+07	8.37E+06	1.70E+07	1.24E+07	7.09E+06	1.85E+07	1.83E+06
Road 27	27 0100-0200	2.02E+01	1.48E+07	8.37E+06	1.70E+07	1.24E+07	7.09E+06	1.85E+07	1.83E+06
Road 27	27 0000-0100	2.02E+01	1.48E+07	8.37E+06	1.70E+07	1.24E+07	7.09E+06	1.85E+07	1.83E+06
Road 27	27 2300-0000	2.02E+01	1.48E+07	8.37E+06	1.70E+07	1.24E+07	7.09E+06	1.85E+07	1.83E+06
Road 27	27 2200-2300	2.02E+01	1.48E+07	8.37E+06	1.70E+07	1.24E+07	7.09E+06	1.85E+07	1.83E+06
Road 27	27 2100-2200	2.02E+01	1.48E+07	8.37E+06	1.70E+07	1.24E+07	7.09E+06	1.85E+07	1.83E+06
Road 27	27 2000-2100	2.02E+01	1.48E+07	8.37E+06	1.70E+07	1.24E+07	7.09E+06	1.85E+07	1.83E+06
Road 27	27 1900-2000	2.02E+01	1.48E+07	8.37E+06	1.70E+07	1.24E+07	7.09E+06	1.85E+07	1.83E+06
Road 27	27 1800-1900	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 1700-1800	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 1600-1700	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 1500-1600	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 1400-1500	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 1300-1400	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 1200-1300	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 1100-1200	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 1000-1100	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 0900-1000	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 0800-0900	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 0700-0800	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 0600-0700	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 0500-0600	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 0400-0500	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 0300-0400	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 0200-0300	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 0100-0200	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 0000-0100	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 2300-0000	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 2200-2300	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 2100-2200	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 2000-2100	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 1900-2000	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 1800-1900	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 1700-1800	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 1600-1700	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 1500-1600	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 1400-1500	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 1300-1400	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 1200-1300	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 1100-1200	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 1000-1100	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 0900-1000	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 0800-0900	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 0700-0800	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 0600-0700	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 0500-0600	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 0400-0500	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 0300-0400	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 0200-0300	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 0100-0200	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 0000-0100	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 2300-0000	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 2200-2300	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 2100-2200	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 2000-2100	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 1900-2000	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 1800-1900	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 1700-1800	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 1600-1700	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 1500-1600	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 1400-1500	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 1300-1400	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 1200-1300	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 1100-1200	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 1000-1100	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 0900-1000	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 0800-0900	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 0700-0800	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 0600-0700	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 0500-0600	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 0400-0500	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 0300-0400	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 0200-0300	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 0100-0200	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+06	1.00E+06
Road 27	27 0000-0100	1.99E+01	1.39E+07	2.15E+06	1.44E+06	1.78E+06	1.29E+06	1.51E+0	

\\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.3 Emission Factor in 2033.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Tsing T4 North Underground Quarry Open Road 24 Hour Emission Factors for AR6000 model (September)													
Year 2003				NO _x Emission				PM ₁₀ Emission					
Road Name	Road ID	Hour	g/hr	g/hr	Monthly/Average	g/hr	g/hr	Monthly/Average	g/hr	g/hr	Monthly/Average	g/hr	g/hr
Real 31	31	0000-0100	1.752	0.1718	2.837	0.1456	0.328	2.5447	1.915	0.447	0.086	1.561	0.23
Real 31	31	0100-0200	1.826	0.1718	2.847	0.1552	0.184	2.446	1.956	2.262	0.207	1.506	1.005
Real 31	31	0200-0300	1.900	0.1718	2.857	0.1648	0.141	2.348	2.000	2.570	0.207	1.506	1.005
Real 31	31	0300-0400	1.992	0.1408	1.2707	0.1678	0.1178	0.087	1.0292	1.3347	0.206	1.506	1.005
Real 31	31	0400-0500	2.066	1.455	0.486	0.176	0.156	0.151	1.029	1.2607	0.206	1.506	1.005
Real 31	31	0500-0600	2.140	1.455	0.486	0.176	0.156	0.151	1.029	1.2607	0.206	1.506	1.005
Real 31	31	0600-0700	2.214	0.6388	0.8867	0.1873	0.554	0.687	1.914	1.5687	0.1074	1.506	0.4792
Real 31	31	0700-0800	2.288	0.6388	0.8867	0.1873	0.554	0.687	1.914	1.5687	0.1074	1.506	0.4792
Real 31	31	0800-0900	2.362	0.6388	0.8867	0.1873	0.554	0.687	1.914	1.5687	0.1074	1.506	0.4792
Real 31	31	0900-1000	2.436	0.6388	0.8867	0.1873	0.554	0.687	1.914	1.5687	0.1074	1.506	0.4792
Real 31	31	1000-1100	2.510	0.6388	0.8867	0.1873	0.554	0.687	1.914	1.5687	0.1074	1.506	0.4792
Real 31	31	1100-1200	2.584	0.6388	0.8867	0.1873	0.554	0.687	1.914	1.5687	0.1074	1.506	0.4792
Real 31	31	1200-1300	2.658	0.6388	0.8867	0.1873	0.554	0.687	1.914	1.5687	0.1074	1.506	0.4792
Real 31	31	1300-1400	2.732	0.6388	0.8867	0.1873	0.554	0.687	1.914	1.5687	0.1074	1.506	0.4792
Real 31	31	1400-1500	2.806	0.6388	0.8867	0.1873	0.554	0.687	1.914	1.5687	0.1074	1.506	0.4792
Real 31	31	1500-1600	2.880	0.6388	0.8867	0.1873	0.554	0.687	1.914	1.5687	0.1074	1.506	0.4792
Real 31	31	1600-1700	2.954	0.6388	0.8867	0.1873	0.554	0.687	1.914	1.5687	0.1074	1.506	0.4792
Real 31	31	1700-1800	3.028	0.6388	0.8867	0.1873	0.554	0.687	1.914	1.5687	0.1074	1.506	0.4792
Real 31	31	1800-1900	3.102	0.6388	0.8867	0.1873	0.554	0.687	1.914	1.5687	0.1074	1.506	0.4792
Real 31	31	1900-2000	3.176	0.6388	0.8867	0.1873	0.554	0.687	1.914	1.5687	0.1074	1.506	0.4792
Real 31	31	2000-2100	3.250	0.6388	0.8867	0.1873	0.554	0.687	1.914	1.5687	0.1074	1.506	0.4792
Real 31	31	2100-2200	3.324	0.6388	0.8867	0.1873	0.554	0.687	1.914	1.5687	0.1074	1.506	0.4792
Real 31	31	2200-2300	3.398	0.6388	0.8867	0.1873	0.554	0.687	1.914	1.5687	0.1074	1.506	0.4792
Real 31	31	2300-2400	3.472	0.6388	0.8867	0.1873	0.554	0.687	1.914	1.5687	0.1074	1.506	0.4792
Real 31	31	2400-0100	3.546	0.6388	0.8867	0.1873	0.554	0.687	1.914	1.5687	0.1074	1.506	0.4792
Real 32	32	0000-0100	1.762	0.1718	2.848	0.1466	0.329	2.5548	1.925	0.448	0.087	1.571	0.23
Real 32	32	0100-0200	1.836	0.1718	2.858	0.1562	0.185	2.457	1.966	2.273	0.208	1.516	1.006
Real 32	32	0200-0300	1.910	0.1718	2.868	0.1658	0.142	2.359	2.010	2.581	0.208	1.516	1.006
Real 32	32	0300-0400	1.992	0.1408	1.2718	0.1688	0.1188	0.088	1.0393	1.3458	0.207	1.516	1.006
Real 32	32	0400-0500	2.066	1.455	0.487	0.177	0.157	0.152	1.039	1.2618	0.207	1.516	1.006
Real 32	32	0500-0600	2.140	1.455	0.487	0.177	0.157	0.152	1.039	1.2618	0.207	1.516	1.006
Real 32	32	0600-0700	2.214	0.6388	0.887	0.1883	0.555	0.688	1.925	1.5747	0.1075	1.516	0.4793
Real 32	32	0700-0800	2.288	0.6388	0.887	0.1883	0.555	0.688	1.925	1.5747	0.1075	1.516	0.4793
Real 32	32	0800-0900	2.362	0.6388	0.887	0.1883	0.555	0.688	1.925	1.5747	0.1075	1.516	0.4793
Real 32	32	0900-1000	2.436	0.6388	0.887	0.1883	0.555	0.688	1.925	1.5747	0.1075	1.516	0.4793
Real 32	32	1000-1100	2.510	0.6388	0.887	0.1883	0.555	0.688	1.925	1.5747	0.1075	1.516	0.4793
Real 32	32	1100-1200	2.584	0.6388	0.887	0.1883	0.555	0.688	1.925	1.5747	0.1075	1.516	0.4793
Real 32	32	1200-1300	2.658	0.6388	0.887	0.1883	0.555	0.688	1.925	1.5747	0.1075	1.516	0.4793
Real 32	32	1300-1400	2.732	0.6388	0.887	0.1883	0.555	0.688	1.925	1.5747	0.1075	1.516	0.4793
Real 32	32	1400-1500	2.806	0.6388	0.887	0.1883	0.555	0.688	1.925	1.5747	0.1075	1.516	0.4793
Real 32	32	1500-1600	2.880	0.6388	0.887	0.1883	0.555	0.688	1.925	1.5747	0.1075	1.516	0.4793
Real 32	32	1600-1700	2.954	0.6388	0.887	0.1883	0.555	0.688	1.925	1.5747	0.1075	1.516	0.4793
Real 32	32	1700-1800	3.028	0.6388	0.887	0.1883	0.555	0.688	1.925	1.5747	0.1075	1.516	0.4793
Real 32	32	1800-1900	3.102	0.6388	0.887	0.1883	0.555	0.688	1.925	1.5747	0.1075	1.516	0.4793
Real 32	32	1900-2000	3.176	0.6388	0.887	0.1883	0.555	0.688	1.925	1.5747	0.1075	1.516	0.4793
Real 32	32	2000-2100	3.250	0.6388	0.887	0.1883	0.555	0.688	1.925	1.5747	0.1075	1.516	0.4793
Real 32	32	2100-2200	3.324	0.6388	0.887	0.1883	0.555	0.688	1.925	1.5747	0.1075	1.516	0.4793
Real 32	32	2200-2300	3.398	0.6388	0.887	0.1883	0.555	0.688	1.925	1.5747	0.1075	1.516	0.4793
Real 32	32	2300-2400	3.472	0.6388	0.887	0.1883	0.555	0.688	1.925	1.5747	0.1075	1.516	0.4793
Real 32	32	2400-0100	3.546	0.6388	0.887	0.1883	0.555	0.688	1.925	1.5747	0.1075	1.516	0.4793
Real 33	33	0000-0100	1.772	0.1718	2.859	0.1476	0.330	2.5649	1.935	0.449	0.088	1.581	0.23
Real 33	33	0100-0200	1.846	0.1718	2.869	0.1572	0.186	2.468	1.976	2.284	0.209	1.521	1.007
Real 33	33	0200-0300	1.920	0.1718	2.879	0.1668	0.143	2.370	2.020	2.592	0.209	1.521	1.007
Real 33	33	0300-0400	1.992	0.1408	1.2728	0.1708	0.1198	0.089	1.0494	1.3568	0.208	1.521	1.007
Real 33	33	0400-0500	2.066	1.455	0.488	0.179	0.158	0.153	1.049	1.2628	0.208	1.521	1.007
Real 33	33	0500-0600	2.140	1.455	0.488	0.179	0.158	0.153	1.049	1.2628	0.208	1.521	1.007
Real 33	33	0600-0700	2.214	0.6388	0.888	0.1893	0.556	0.689	1.935	1.5797	0.1076	1.521	0.4794
Real 33	33	0700-0800	2.288	0.6388	0.888	0.1893	0.556	0.689	1.935	1.5797	0.1076	1.521	0.4794
Real 33	33	0800-0900	2.362	0.6388	0.888	0.1893	0.556	0.689	1.935	1.5797	0.1076	1.521	0.4794
Real 33	33	0900-1000	2.436	0.6388	0.888	0.1893	0.556	0.689	1.935	1.5797	0.1076	1.521	0.4794
Real 33	33	1000-1100	2.510	0.6388	0.888	0.1893	0.556	0.689	1.935	1.5797	0.1076	1.521	0.4794
Real 33	33	1100-1200	2.584	0.6388	0.888	0.1893	0.556	0.689	1.935	1.5797	0.1076	1.521	0.4794
Real 33	33	1200-1300	2.658	0.6388	0.888	0.1893	0.556	0.689	1.935	1.5797	0.1076	1.521	0.4794
Real 33	33	1300-1400	2.732	0.6388	0.888	0.1893	0.556	0.689	1.935	1.5797	0.1076	1.521	0.4794
Real 33	33	1400-1500	2.806	0.6388	0.888	0.1893	0.556	0.689	1.935	1.5797	0.1076	1.521	0.4794
Real 33	33	1500-1600	2.880	0.6388	0.888	0.1893	0.556	0.689	1.935	1.5797	0.1076	1.521	0.4794
Real 33	33	1600-1700	2.954	0.6388	0.888	0.1893	0.556	0.689	1.935	1.5797	0.1076	1.521	0.4794
Real 33	33	1700-1800	3.028	0.6388	0.888	0.1893	0.556	0.689	1.935	1.5797	0.1076	1.521	0.4794
Real 33	33	1800-1900	3.102	0.6388	0.888	0.1893	0.556	0.689	1.935	1.5797	0.1076	1.521	0.4794
Real 33	33	1900-2000	3.176	0.6388	0.888	0.1893	0.556	0.689	1.935	1.5797	0.1076	1.521	0.4794
Real 33	33	2000-2100	3.250	0.6388	0.888	0.1893	0.556	0.689	1.935	1.5797	0.1076	1.521	0.4794
Real 33	33	2100-2200	3.324	0.6388	0.888	0.1893	0.556	0.689	1.935	1.5797	0.1076	1.521	0.4794
Real 33	33	2200-2300	3.398	0.6388	0.888	0.1893	0.556	0.689	1.935	1.5797	0.1076	1.521	0.4794
Real 33	33	2300-2400	3.472	0.6388	0.888	0.1893	0.556	0.689	1.935	1.5797	0.1076	1.521	0.4794
Real 33	33	2400-0100	3.546	0.6388	0.888	0.1893	0.556	0.689	1.935	1.5797	0.1076	1.521	0.4794
Real 34	34	0000-0100	1.782	0.1718	2.870	0.1486	0.331	2.5750	1.945	0.450	0.089	1.591	0.23
Real 34	34	0100-0200	1.856	0.1718	2.880	0.1582	0.187	2.481	1.986	2.295	0.210	1.531	1.008
Real 34	34	0200-0300	1.930	0.1718	2.890	0.1678	0.144	2.383	2.030	2.603	0.210	1.531	1.008
Real 34	34	0300-0400	1.992	0.1408	1.2738	0.1718	0.1208	0.090	1.0595	1.3678	0.209	1.531	1.008
Real 34	34	0400-0500	2.066	1.455	0.489	0.180	0.159	0.154	1.059	1.2638	0.209	1.531	1.008
Real 34	34	0500-0600	2.140	1.455	0.489	0.180	0.159	0.154	1.059	1.2638	0.209	1.531	1.008
Real 34	34	0600-0700	2.214	0.6388	0.889	0.1903	0.557	0.690	1.945	1.5827	0.1077	1.531	0.4795
Real 34</													

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Road 24 Hour Emission Factors for Airway Model Database															
Year 2035															
Road Name	Road ID	Hour	NO _x Emission						NO ₂ Emission						
			Motorbikes/mopeds		Light trucks		Medium/heavy trucks		Motorbikes/mopeds		Light trucks		Medium/heavy trucks		
			g/hour/mile	g/hour	g/hour/mile	g/hour	g/hour/mile	g/hour	g/hour/mile	g/hour	g/hour/mile	g/hour	g/hour/mile	g/hour	g/hour/mile
14	9800	2000	4.516	8.676	1.486	0.505	7.477	1.302	2.056	0.206	7.185	1.821	3.716	6.335	0.505
14	9800	2100	4.775	9.091	1.556	0.532	7.805	1.356	2.165	0.216	7.396	1.901	3.896	6.595	0.532
14	9800	2200	4.516	8.676	1.486	0.505	7.477	1.302	2.056	0.206	7.185	1.821	3.716	6.335	0.505
14	9800	2300	4.775	9.091	1.556	0.532	7.805	1.356	2.165	0.216	7.396	1.901	3.896	6.595	0.532
14	1300	1200	1.506	2.986	0.486	0.165	2.506	0.456	0.706	0.106	2.406	0.356	0.556	0.856	0.106
14	1300	1300	1.506	2.986	0.486	0.165	2.506	0.456	0.706	0.106	2.406	0.356	0.556	0.856	0.106
14	1300	1400	1.506	2.986	0.486	0.165	2.506	0.456	0.706	0.106	2.406	0.356	0.556	0.856	0.106
14	1300	1500	1.506	2.986	0.486	0.165	2.506	0.456	0.706	0.106	2.406	0.356	0.556	0.856	0.106
14	1300	1600	1.506	2.986	0.486	0.165	2.506	0.456	0.706	0.106	2.406	0.356	0.556	0.856	0.106
14	1300	1700	1.506	2.986	0.486	0.165	2.506	0.456	0.706	0.106	2.406	0.356	0.556	0.856	0.106
14	1300	1800	1.506	2.986	0.486	0.165	2.506	0.456	0.706	0.106	2.406	0.356	0.556	0.856	0.106
14	1300	1900	1.506	2.986	0.486	0.165	2.506	0.456	0.706	0.106	2.406	0.356	0.556	0.856	0.106
14	1300	2000	1.506	2.986	0.486	0.165	2.506	0.456	0.706	0.106	2.406	0.356	0.556	0.856	0.106
14	1300	2100	1.506	2.986	0.486	0.165	2.506	0.456	0.706	0.106	2.406	0.356	0.556	0.856	0.106
14	1300	2200	1.506	2.986	0.486	0.165	2.506	0.456	0.706	0.106	2.406	0.356	0.556	0.856	0.106
14	1300	2300	1.506	2.986	0.486	0.165	2.506	0.456	0.706	0.106	2.406	0.356	0.556	0.856	0.106
14	1300	2400	1.506	2.986	0.486	0.165	2.506	0.456	0.706	0.106	2.406	0.356	0.556	0.856	0.106
14	1300	2500	1.506	2.986	0.486	0.165	2.506	0.456	0.706	0.106	2.406	0.356	0.556	0.856	0.106
14	1300	2600	1.506	2.986	0.486	0.165	2.506	0.456	0.706	0.106	2.406	0.356	0.556	0.856	0.106
14	1300	2700	1.506	2.986	0.486	0.165	2.506	0.456	0.706	0.106	2.406	0.356	0.556	0.856	0.106
14	1300	2800	1.506	2.986	0.486	0.165	2.506	0.456	0.706	0.106	2.406	0.356	0.556	0.856	0.106
14	1300	2900	1.506	2.986	0.486	0.165	2.506	0.456	0.706	0.106	2.406	0.356	0.556	0.856	0.106
14	1300	3000	1.506	2.986	0.486	0.165	2.506	0.456	0.706	0.106	2.406	0.356	0.556	0.856	0.106
14	1300	3100	1.5												
14	1300	3200	1.5												
14	1300	3300	1.5												
14	1300	3400	1.5												
14	1300	3500	1.5												
14	1300	3600	1.5												
14	1300	3700	1.5												
14	1300	3800	1.5												
14	1300	3900	1.5												
14	1300	4000	1.5												
14	1300	4100	1.5												
14	1300	4200	1.5												
14	1300	4300	1.5												
14	1300	4400	1.5												
14	1300	4500	1.5												
14	1300	4600	1.5												
14	1300	4700	1.5												
14	1300	4800	1.5												
14	1300	4900	1.5												
14	1300	5000	1.5												
14	1300	5100	1.5												
14	1300	5200	1.5												
14	1300	5300	1.5												
14	1300	5400	1.5												
14	1300	5500	1.5												
14	1300	5600	1.5												
14	1300	5700	1.5												
14	1300	5800	1.5												
14	1300	5900	1.5												
14	1300	6000	1.5												
14	1300	6100	1.5												
14	1300	6200	1.5												
14	1300	6300	1.5												
14	1300	6400	1.5												
14	1300	6500	1.5												
14	1300	6600	1.5												
14	1300	6700	1.5												
14	1300	6800	1.5												
14	1300	6900	1.5												
14	1300	7000	1.5												
14	1300	7100	1.5												
14	1300	7200	1.5												
14	1300	7300	1.5												
14	1300	7400	1.5												
14	1300	7500	1.5												
14	1300	7600	1.5												
14	1300	7700	1.5												
14	1300	7800	1.5												
14	1300	7900	1.5												
14	1300	8000	1.5												
14	1300	8100	1.5												
14	1300	8200	1.5												
14	1300	8300	1.5												
14	1300	8400	1.5												
14	1300	8500	1.5												
14	1300	8600	1.5												
14	1300	8700	1.5												
14	1300	8800	1.5												
14	1300	8900	1.5												
14	1300	9000	1.5												
14	1300	9100	1.5												
14	1300	9200	1.5												
14	1300	9300	1.5												
14	1300	9400	1.5												
14	1300	9500	1.5												
14	1300	9600	1.5												
14	1300	9700	1.5												
14	1300	9800	1.5												
14	1300	9900	1.5												
14	1300	10000	1.5												
14	1300	10100	1.5												
14	1300	10200	1.5												
14	1300	10300	1.5												
14	1300	10400	1.5												
14	1300	10500	1.5												
14	1300	10600	1.5												
14	1300	10700	1.5												
14	1300	10800	1.5												
14	1300	10900	1.5												
14	1300	11000	1.5												
14	1300	11100	1.5												
14	1300	11200	1.5												
14	1300	11300	1.5												
14	1300	11400	1.5												
14	1300	11500	1.5												
14	1300	11600	1.5												
14	1300	11700	1.5												
14	1300	11800	1.5												
14	1300	11900	1.5												
14	1300	12000	1.5												
14	1300	12100	1.5												
14	1300	12200	1.5												
14	1300	12300	1.5												
14	1300	12400	1.5												
14	1300	12500	1.5												
14	1300	12600	1.5												
14	1300	12700	1.5												
14	1300	12800	1.5												
14	1300	12900	1.5		</										

load\Appendix 3.5.3 Emission Factor in 2033.xlsx

Total North West Underground quantity														
Open Road to New Estimation Factors for 2003														
Road Name	Road ID	Hour	Northampton			Northampton			Northampton			Northampton		
			g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	
Road 17	17	1200-1200	6.286	0.502	4.575	8.821	0.486	4.225	2.074	6.789	1.995	2.527	0.506	1.816
Road 17	17	1200-1400	1.700	0.441	1.662	1.662	0.441	1.662	1.662	0.441	1.662	1.662	0.441	1.662
Road 17	17	1800-1800	2.626	0.505	0.477	1.875	0.541	1.881	0.477	1.581	0.512	1.448	0.347	0.518
Road 17	17	1800-2000	1.662	0.441	1.662	1.662	0.441	1.662	1.662	0.441	1.662	1.662	0.441	1.662
Road 17	17	2000-2100	1.662	0.441	1.662	1.662	0.441	1.662	1.662	0.441	1.662	1.662	0.441	1.662
Road 17	17	2200-2200	1.662	0.441	1.662	1.662	0.441	1.662	1.662	0.441	1.662	1.662	0.441	1.662
Road 17	17	2200-2300	1.662	0.441	1.662	1.662	0.441	1.662	1.662	0.441	1.662	1.662	0.441	1.662
Road 17	17	2300-0000	1.752	0.482	1.526	1.526	0.482	1.526	1.526	0.482	1.526	1.526	0.482	1.526
Road 18	18	0100-0100	1.662	0.441	1.662	1.662	0.441	1.662	1.662	0.441	1.662	1.662	0.441	1.662
Road 18	18	0100-0200	1.752	0.482	1.526	1.526	0.482	1.526	1.526	0.482	1.526	1.526	0.482	1.526
Road 18	18	0200-0300	1.662	0.441	1.662	1.662	0.441	1.662	1.662	0.441	1.662	1.662	0.441	1.662
Road 18	18	0300-0400	1.662	0.441	1.662	1.662	0.441	1.662	1.662	0.441	1.662	1.662	0.441	1.662
Road 18	18	0400-0500	1.662	0.441	1.662	1.662	0.441	1.662	1.662	0.441	1.662	1.662	0.441	1.662
Road 18	18	0500-0600	1.662	0.441	1.662	1.662	0.441	1.662	1.662	0.441	1.662	1.662	0.441	1.662
Road 18	18	0600-0700	1.662	0.441	1.662	1.662	0.441	1.662	1.662	0.441	1.662	1.662	0.441	1.662
Road 18	18	0700-0800	1.662	0.441	1.662	1.662	0.441	1.662	1.662	0.441	1.662	1.662	0.441	1.662
Road 18	18	0800-0900	1.662	0.441	1.662	1.662	0.441	1.662	1.662	0.441	1.662	1.662	0.441	1.662
Road 18	18	0900-1000	1.662	0.441	1.662	1.662	0.441	1.662	1.662	0.441	1.662	1.662	0.441	1.662
Road 18	18	1000-1100	2.041	0.511	1.325	1.441	0.511	1.325	1.441	0.511	1.325	1.441	0.511	1.325
Road 18	18	1100-1200	1.960	0.490	1.385	1.385	0.490	1.385	1.385	0.490	1.385	1.385	0.490	1.385
Road 18	18	1200-1300	1.960	0.490	1.385	1.385	0.490	1.385	1.385	0.490	1.385	1.385	0.490	1.385
Road 18	18	1300-1400	2.642	0.502	0.715	2.135	0.502	0.715	2.135	0.502	0.715	2.135	0.502	0.715
Road 18	18	1400-1500	2.642	0.502	0.715	2.135	0.502	0.715	2.135	0.502	0.715	2.135	0.502	0.715
Road 18	18	1500-1600	2.141	0.511	0.715	2.135	0.511	0.715	2.135	0.511	0.715	2.135	0.511	0.715
Road 18	18	1600-1700	2.141	0.511	0.715	2.135	0.511	0.715						
Road 18	18	1700-1800	2.642	0.511	0.715	2.015	0.511	0.715	2.015	0.511	0.715	2.015	0.511	0.715
Road 18	18	1800-1900	1.746	0.489	1.390	1.390	0.489	1.390	1.390	0.489	1.390	1.390	0.489	1.390
Road 18	18	1900-2000	1.558	0.467	1.047	8.108	0.428	1.067	8.108	0.444	1.026	7.588	0.313	1.738
Road 18	18	2000-2100	1.662	0.441	1.662	1.662	0.441	1.662	1.662	0.441	1.662	1.662	0.441	1.662
Road 18	18	2200-2300	1.542	0.461	1.047	7.606	0.354	1.277	7.640	0.441	1.821	7.588	0.250	1.598
Road 18	18	2300-0000	1.662	0.441	1.662	1.662	0.441	1.662	1.662	0.441	1.662	1.662	0.441	1.662
Road 19	19	0100-0100	1.142	0.301	1.016	1.016	0.301	1.016	1.016	0.301	1.016	1.016	0.301	1.016
Road 19	19	0100-0200	1.142	0.301	1.016	1.016	0.301	1.016	1.016	0.301	1.016	1.016	0.301	1.016
Road 19	19	0200-0300	1.142	0.301	1.016	1.016	0.301	1.016	1.016	0.301	1.016	1.016	0.301	1.016
Road 19	19	0300-0400	1.142	0.301	1.016	1.016	0.301	1.016	1.016	0.301	1.016	1.016	0.301	1.016
Road 19	19	0400-0500	1.142	0.301	1.016	1.016	0.301	1.016	1.016	0.301	1.016	1.016	0.301	1.016
Road 19	19	0500-0600	1.142	0.301	1.016	1.016	0.301	1.016	1.016	0.301	1.016	1.016	0.301	1.016
Road 19	19	0600-0700	1.142	0.301	1.016	1.016	0.301	1.016	1.016	0.301	1.016	1.016	0.301	1.016
Road 19	19	0700-0800	1.142	0.301	1.016	1.016	0.301	1.016	1.016	0.301	1.016	1.016	0.301	1.016
Road 19	19	0800-0900	1.142	0.301	1.016	1.016	0.301	1.016	1.016	0.301	1.016	1.016	0.301	1.016
Road 19	19	0900-1000	1.142	0.301	1.016	1.016	0.301	1.016	1.016	0.301	1.016	1.016	0.301	1.016
Road 19	19	1000-1100	2.246	0.501	0.717	1.795	0.208	0.547	1.564	2.229	0.304	0.921	1.112	2.296
Road 19	19	1100-1200	1.611	0.441	1.662	1.662	0.441	1.662	1.662	0.441	1.662	1.662	0.441	1.662
Road 19	19	1200-1300	1.611	0.441	1.662	1.662	0.441	1.662	1.662	0.441	1.662	1.662	0.441	1.662
Road 19	19	1300-1400	2.194	0.501	0.717	2.195	0.208	0.547	1.882	0.511	1.368	0.921	1.388	0.882
Road 19	19	1400-1500	2.194	0.501	0.717	2.195	0.208	0.547	1.882	0.511	1.368	0.921	1.388	0.882
Road 19	19	1500-1600	2.194	0.501	0.717	2.195	0.208	0.547	1.882	0.511	1.368	0.921	1.388	0.882
Road 19	19	1600-1700	2.194	0.501	0.717	2.195	0.208	0.547	1.882	0.511	1.368	0.921	1.388	0.882
Road 19	19	1700-1800	2.194	0.501	0.717	2.195	0.208	0.547	1.882	0.511	1.368	0.921	1.388	0.882
Road 19	19	1800-1900	2.194	0.501	0.717	2.195	0.208	0.547	1.882	0.511	1.368	0.921	1.388	0.882
Road 19	19	1900-2000	2.194	0.501	0.717	2.195	0.208	0.547	1.882	0.511	1.368	0.921	1.388	0.882
Road 19	19	2000-2100	2.194	0.501	0.717	2.195	0.208	0.547	1.882	0.511	1.368	0.921	1.388	0.882
Road 19	19	2100-2200	2.194	0.501	0.717	2.195	0.208	0.547	1.882	0.511	1.368	0.921	1.388	0.882
Road 19	19	2200-2300	2.194	0.501	0.717	2.195	0.208	0.547	1.882	0.511	1.368	0.921	1.388	0.882
Road 19	19	2300-0000	2.194	0.501	0.717	2.195	0.208	0.547	1.882	0.511	1.368	0.921	1.388	0.882
Road 20	20	0100-0100	7.482	0.001	0.001	2.000	0.611	0.598	1.779	2.341	1.422	0.717	2.088	0.011
Road 20	20	0100-0200	7.482	0.001	0.001	2.000	0.611	0.598	1.779	2.341	1.422	0.717	2.088	0.011
Road 20	20	0200-0300	7.482	0.001	0.001	2.000	0.611	0.598	1.779	2.341	1.422	0.717	2.088	0.011
Road 20	20	0300-0400	7.482	0.001	0.001	2.000	0.611	0.598	1.779	2.341	1.422	0.717	2.088	0.011
Road 20	20	0400-0500	7.482	0.001	0.001	2.000	0.611	0.598	1.779	2.341	1.422	0.717	2.088	0.011
Road 20	20	0500-0600	7.482	0.001	0.001	2.000	0.611	0.598	1.779	2.341	1.422	0.717	2.088	0.011
Road 20	20	0600-0700	7.482	0.001	0.001	2.000	0.611	0.598	1.779	2.341	1.422	0.717	2.088	0.011
Road 20	20	0700-0800	7.482	0.001	0.001	2.000	0.611	0.598	1.779	2.341	1.422	0.717	2.088	0.011
Road 20	20	0800-0900	7.482	0.001	0.001	2.000	0.611	0.598	1.779	2.341	1.422	0.717	2.088	0.011
Road 20	20	0900-1000	7.482	0.001	0.001	2.000	0.611	0.598	1.779	2.341	1.422	0.717	2.088	0.011
Road 20	20	1000-1100	7.482	0.001	0.001	2.000	0.611	0.598	1.779	2.341	1.422	0.717	2.088	0.011
Road 20	20	1100-1200	7.482	0.001	0.001	2.000	0.611	0.598	1.779	2.341	1.422	0.717	2.088	0.011
Road 20	20	1200-1300	7.482	0.001	0.001	2.000	0.611	0.598	1.779	2.341	1.422	0.717	2.088	0.011
Road 20	20	1300-1400	7.482	0.001	0.001	2.000	0.611	0.598	1.779	2.341	1.422	0.717	2.088	0.011
Road 20	20	1400-1500	7.482	0.001	0.001	2.000	0.611	0.598	1.779	2.341	1.422	0.717	2.088	0.011
Road 20	20	1500-1600	7.482	0.001	0.001	2.000	0.611	0.598	1.779	2.341	1.422	0.717	2.088	0.011
Road 20	20	1600-1700	7.482	0.001	0.001	2.000	0.611	0.598	1.779	2.341	1.422	0.717	2.088	0.011
Road 20	20	1700-1800	7.482	0.001	0.001	2.000	0.611	0.598	1.779	2.341	1.422	0.717	2.088	0.011
Road 20	20	1800-1900	7.482	0.001	0.001	2.000	0.611	0.598	1.779	2.341	1.422	0.717	2.088	0.011
Road 20	20	1900-2000	7.482	0.001	0.001	2.000	0.611	0.598	1.779	2.341	1.422	0.717	2.088	0.011
Road 20	20	2000-2100	7.482	0.001	0.001	2.000	0.611	0.598	1.779	2.341	1.422	0.717	2.088	0.011
Road 20	20	2100-2200	7.482	0.001	0.001	2.000	0.611	0.598	1.779	2.341	1.422	0.717	2.088	0.011
Road 20	20	2200-2300	7.482	0.001	0.001	2.000	0.611	0.598	1.779	2.341	1.422	0.717	2.088	0.011
Road 20	20	2300-0000	7.482	0.001	0.001	2.000	0.611	0.598	1.779	2.341	1.422	0.717		

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Open Top North Hourly Environment Factors for Alluvial Deposits											
Year 2013											
			NO ₂ Emission						NO _x Emission		
Road Name	Road ID	Hour	Monthly/Annual			Monthly/Annual			Monthly/Annual		
			g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	tonne/Year	g/kWh	tonne/Year
Road 21	21	0000-0100	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	0100-0200	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	0200-0300	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	0300-0400	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	0400-0500	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	0500-0600	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	0600-0700	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	0700-0800	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	0800-0900	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	0900-1000	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	1000-1100	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	1100-1200	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	1200-1300	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	1300-1400	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	1400-1500	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	1500-1600	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	1600-1700	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	1700-1800	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	1800-1900	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	1900-2000	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	2000-2100	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	2100-2200	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	2200-2300	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	2300-2400	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	2400-2500	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	2500-2600	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	2600-2700	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	2700-2800	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	2800-2900	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	2900-3000	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	3000-3100	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	3100-3200	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	3200-3300	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	3300-3400	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	3400-3500	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	3500-3600	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	3600-3700	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	3700-3800	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	3800-3900	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	3900-4000	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	4000-4100	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	4100-4200	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	4200-4300	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	4300-4400	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	4400-4500	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	4500-4600	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	4600-4700	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	4700-4800	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	4800-4900	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	4900-5000	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	5000-5100	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	5100-5200	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	5200-5300	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	5300-5400	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	5400-5500	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	5500-5600	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	5600-5700	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	5700-5800	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	5800-5900	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	5900-6000	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	6000-6100	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	6100-6200	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	6200-6300	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	6300-6400	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	6400-6500	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	6500-6600	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	6600-6700	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	6700-6800	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	6800-6900	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	6900-7000	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	7000-7100	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	7100-7200	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	7200-7300	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	7300-7400	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	7400-7500	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	7500-7600	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	7600-7700	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	7700-7800	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	7800-7900	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	7900-8000	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	8000-8100	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	8100-8200	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	8200-8300	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	8300-8400	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	8400-8500	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	8500-8600	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	8600-8700	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	8700-8800	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	8800-8900	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	8900-9000	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	9000-9100	1.5346	0.0017	1.5326	1.3464	1.0247	1.3316	0.0006	7.8989	0.0007
Road 21	21	9100-9200	1.5346</								

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Top North End Environment Factors																		
Year 2003																		
Road Name	Road ID	Hwy	MO, Emission									NO, Emission						
			g/mph/hour	g/mph/hour	tonne/hour	g/mph/hour	g/mph/hour	tonne/hour	g/mph/hour	g/mph/hour	tonne/hour	g/mph/hour	g/mph/hour	tonne/hour	g/mph/hour	g/mph/hour	tonne/hour	
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200	1.846	0.4867	0.0012	1.798	0.4317	0.0011	1.810	0.6461	0.1707	0.28	0.336	0.1737	0.1576	0.484
1700	14517	27	1600	1200														

load\Appendix 3.5.3 Emission Factor in 2033.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Table 10: Road Number and Hourly Emission Factors for ARBMOD model (2003)													
Road Name	Road ID	Year	NO _x Emission					NO ₂ Emission					
			g/hour/mi	g/mi ²	g/hour/mi	g/mi ²	tonnethour	g/hour/mi	g/mi ²	g/hour/mi	g/mi ²	tonnethour	
Road 34	0800-0900	1.3735	3.5667	0.7326	1.2262	1.3735	0.8116	0.0882	5.5256	4.5956	0.5057	2.3148	4.684
Road 34	0900-1000	1.3735	3.5667	0.7326	1.2262	1.3735	0.8116	0.0882	5.5256	4.5956	0.5057	2.3148	4.684
Road 34	1000-1100	1.1748	3.1416	0.6328	1.1233	1.1748	0.7196	0.0768	4.8422	3.9466	0.4367	1.986	4.070
Road 34	1100-1200	1.1748	3.1416	0.6328	1.1233	1.1748	0.7196	0.0768	4.8422	3.9466	0.4367	1.986	4.070
Road 34	1200-1300	3.6665	4.2617	0.7238	1.3512	3.6701	0.9115	0.2465	14.644	9.0055	2.705	3.1116	15.014
Road 34	1300-1400	3.6665	4.2617	0.7238	1.3512	3.6701	0.9115	0.2465	14.644	9.0055	2.705	3.1116	15.014
Road 34	1400-1500	3.6665	4.2617	0.7238	1.3512	3.6701	0.9115	0.2465	14.644	9.0055	2.705	3.1116	15.014
Road 34	1500-1600	3.6665	4.2617	0.7238	1.3512	3.6701	0.9115	0.2465	14.644	9.0055	2.705	3.1116	15.014
Road 34	1600-1700	3.0963	4.2517	0.7115	2.8442	3.067	1.0215	0.5035	12.246	7.1104	2.854	3.901	1.021
Road 34	1700-1800	2.9446	3.867	0.6376	2.544	2.916	0.8064	0.2292	4.2756	1.1134	0.9603	3.924	0.960
Road 34	1800-1900	2.9446	3.867	0.6376	2.544	2.916	0.8064	0.2292	4.2756	1.1134	0.9603	3.924	0.960
Road 34	1900-2000	2.1183	2.3366	0.5366	2.5403	2.2286	0.7298	0.1710	3.0385	0.8703	0.2174	2.703	0.217
Road 34	2000-2100	2.1183	2.3366	0.5366	2.5403	2.2286	0.7298	0.1710	3.0385	0.8703	0.2174	2.703	0.217
Road 34	2100-2200	2.1183	2.3366	0.5366	2.5403	2.2286	0.7298	0.1710	3.0385	0.8703	0.2174	2.703	0.217
Road 34	2200-2300	2.7545	2.0766	0.4886	2.4483	2.6707	0.8454	0.0764	2.812	0.7483	0.301	2.5133	0.686
Road 34	2300-2400	2.7545	2.0766	0.4886	2.4483	2.6707	0.8454	0.0764	2.812	0.7483	0.301	2.5133	0.686
Road 34	2400-2500	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	2500-2600	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	2600-2700	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	2700-2800	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	2800-2900	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	2900-3000	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	3000-3100	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	3100-3200	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	3200-3300	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	3300-3400	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	3400-3500	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	3500-3600	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	3600-3700	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	3700-3800	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	3800-3900	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	3900-4000	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	4000-4100	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	4100-4200	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	4200-4300	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	4300-4400	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	4400-4500	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	4500-4600	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	4600-4700	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	4700-4800	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	4800-4900	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	4900-5000	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	5000-5100	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	5100-5200	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	5200-5300	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	5300-5400	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	5400-5500	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	5500-5600	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	5600-5700	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	5700-5800	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	5800-5900	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	5900-6000	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	6000-6100	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	6100-6200	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	6200-6300	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	6300-6400	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	6400-6500	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	6500-6600	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	6600-6700	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	6700-6800	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	6800-6900	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	6900-7000	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	7000-7100	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	7100-7200	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	7200-7300	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	7300-7400	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	7400-7500	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	7500-7600	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	7600-7700	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	7700-7800	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	7800-7900	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	7900-8000	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	8000-8100	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	8100-8200	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	8200-8300	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	8300-8400	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	8400-8500	4.1153	2.0766	0.5886	1.1667	4.1406	0.1102	1.4446	1.6461	0.0007	2.246	1.4377	3.488
Road 34	8500-8600	4.1153	2.0766	0.5886	1.1667	4.14							

L:\Secure\Environment Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Open Road\Appendix 3.5.3 Emission Factor in 2033.xlsx

Open Year 24 Hour Underground Query														
Opioid Nrx 24 Hr Emulsion Factors for ATX0000 (model factors)														
Year 2003														
Route name	Route ID	Hwy	NO Emulsion						NO Emulsion					
			Monthly factors			Identification			Monthly factors			Monthly factors		
			g/m/cm	g/m/cm	tonne/hour	g/m/cm	tonne/hour	g/m/cm	tonne/hour	g/m/cm	tonne/hour	g/m/cm	tonne/hour	g/m/cm
Route 37	37	1800-1200	5.27E-02	1.177E-08	2.838E-08	4.288E-02	1.23E-08	2.811E-08	2.988E-02	5.922E-08	1.915E-07	2.882E-08	4.808E-08	1.158E-07
Route 37	37	1800-1400	5.48E-02	1.24E-08	2.99E-08	4.51E-02	1.26E-08	2.92E-08	3.11E-02	6.22E-08	2.239E-07	3.05E-08	5.26E-08	1.27E-07
Route 37	37	1800-1600	5.88E-02	1.38E-08	3.28E-08	4.91E-02	1.38E-08	3.17E-08	3.41E-02	6.82E-08	2.445E-07	3.29E-08	5.76E-08	1.38E-07
Route 37	37	1800-1800	6.28E-02	1.52E-08	3.57E-08	5.21E-02	1.48E-08	3.46E-08	3.69E-02	7.42E-08	2.659E-07	3.58E-08	6.16E-08	1.49E-07
Route 37	37	1800-2000	6.68E-02	1.66E-08	3.86E-08	5.51E-02	1.58E-08	3.75E-08	3.97E-02	7.92E-08	2.873E-07	3.87E-08	6.56E-08	1.60E-07
Route 37	37	2000-1100	7.06E-02	1.80E-08	4.15E-08	5.81E-02	1.68E-08	4.04E-08	4.25E-02	8.42E-08	3.087E-07	4.16E-08	7.06E-08	1.71E-07
Route 37	37	2000-1200	7.30E-02	1.86E-08	4.30E-08	5.96E-02	1.73E-08	4.19E-08	4.40E-02	8.67E-08	3.16E-07	4.31E-08	7.30E-08	1.76E-07
Route 37	37	2000-1300	7.44E-02	1.90E-08	4.39E-08	6.05E-02	1.77E-08	4.28E-08	4.54E-02	8.82E-08	3.24E-07	4.45E-08	7.44E-08	1.79E-07
Route 37	37	2300-0000	3.71E-02	2.01E-08	4.69E-08	3.26E-02	7.75E-09	2.69E-08	2.27E-02	4.78E-08	1.682E-06	2.12E-08	1.684E-08	3.81E-07
Route 37	37	2300-0100	3.71E-02	2.01E-08	4.69E-08	3.26E-02	7.75E-09	2.69E-08	2.27E-02	4.78E-08	1.682E-06	2.12E-08	1.684E-08	3.81E-07
Route 38	38	0100-0300	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	0300-0500	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	0500-0700	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	0700-0900	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	0900-1100	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	1100-1300	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	1300-1500	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	1500-1700	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	1700-1900	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	1900-2100	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2100-2300	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-0100	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-0300	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-0500	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-0700	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-0900	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-1100	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-1300	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-1500	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-1700	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-1900	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-2100	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-2300	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-2500	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-2700	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-2900	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-3100	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-3300	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-3500	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-3700	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-3900	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-4100	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-4300	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-4500	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-4700	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-4900	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-5100	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-5300	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-5500	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-5700	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-5900	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-6100	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-6300	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-6500	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-6700	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-6900	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-7100	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-7300	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-7500	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-7700	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-7900	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-8100	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-8300	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2.81E-07	2.48E-02	2.01E-07	4.48E-06	2.32E-07	1.87E-07	5.15E-06
Route 38	38	2300-8500	4.84E-02	1.63E-08	2.67E-07	4.75E-02	1.34E-08	2						

L:\Secure\Environment Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.3 Emission Factor in 2033.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Top 20 North Endurance Factors													
Open Top 20 North Endurance Factors for ARMCO Model (Inventories)													
Road Name	Road ID	Hour	NO Emission						NO Emission				
			g/h/v/mi	g/mi ²	g/h/v/mi	g/h/v/mi	g/h/v/mi	g/h/v/mi	g/h/v/mi	g/h/v/mi	g/h/v/mi	g/h/v/mi	
Res21	21	0600-0100	1.086	1.188	1.176	1.048	1.077	1.124	1.108	1.073	1.078	1.077	1.077
Res21	21	0700-0800	1.775	1.908	1.896	1.680	1.704	1.752	1.736	1.700	1.700	1.700	1.700
Res21	21	0800-0900	1.986	2.160	2.148	1.888	1.912	1.944	1.928	1.892	1.892	1.892	1.892
Res21	21	0900-1000	2.112	2.280	2.268	1.976	2.000	2.032	2.016	1.980	1.980	1.980	1.980
Res21	21	1000-1100	2.238	2.400	2.388	2.072	2.096	2.128	2.112	2.076	2.076	2.076	2.076
Res21	21	1100-1200	2.364	2.520	2.508	2.176	2.200	2.232	2.216	2.180	2.180	2.180	2.180
Res21	21	1200-1300	2.490	2.640	2.628	2.280	2.304	2.336	2.320	2.284	2.284	2.284	2.284
Res21	21	1300-1400	2.616	2.760	2.748	2.376	2.400	2.432	2.416	2.380	2.380	2.380	2.380
Res21	21	1400-1500	2.742	2.880	2.868	2.480	2.504	2.536	2.520	2.484	2.484	2.484	2.484
Res21	21	1500-1600	2.868	3.000	2.988	2.576	2.600	2.632	2.616	2.580	2.580	2.580	2.580
Res21	21	1600-1700	2.994	3.120	3.108	2.672	2.696	2.728	2.712	2.676	2.676	2.676	2.676
Res21	21	1700-1800	3.120	3.240	3.228	2.768	2.792	2.824	2.808	2.772	2.772	2.772	2.772
Res21	21	1800-1900	3.246	3.360	3.348	2.864	2.888	2.920	2.904	2.868	2.868	2.868	2.868
Res21	21	1900-2000	3.372	3.480	3.468	2.960	2.984	3.016	3.000	2.964	2.964	2.964	2.964
Res21	21	2000-2100	3.498	3.600	3.588	3.056	3.080	3.112	3.096	3.060	3.060	3.060	3.060
Res22	22	0600-0100	1.140	1.240	1.230	1.080	1.104	1.136	1.120	1.084	1.084	1.084	1.084
Res22	22	0700-0800	1.860	1.980	1.968	1.720	1.744	1.776	1.760	1.724	1.724	1.724	1.724
Res22	22	0800-0900	2.040	2.160	2.148	1.880	1.904	1.936	1.920	1.884	1.884	1.884	1.884
Res22	22	0900-1000	2.160	2.280	2.268	1.960	1.984	2.016	2.000	1.964	1.964	1.964	1.964
Res22	22	1000-1100	2.280	2.400	2.388	2.040	2.064	2.096	2.080	2.044	2.044	2.044	2.044
Res22	22	1100-1200	2.400	2.520	2.508	2.120	2.144	2.176	2.160	2.124	2.124	2.124	2.124
Res22	22	1200-1300	2.520	2.640	2.628	2.200	2.224	2.256	2.240	2.204	2.204	2.204	2.204
Res22	22	1300-1400	2.640	2.760	2.748	2.280	2.304	2.336	2.320	2.284	2.284	2.284	2.284
Res22	22	1400-1500	2.760	2.880	2.868	2.360	2.384	2.416	2.400	2.364	2.364	2.364	2.364
Res22	22	1500-1600	2.880	3.000	2.988	2.440	2.464	2.496	2.480	2.444	2.444	2.444	2.444
Res22	22	1600-1700	3.000	3.120	3.108	2.520	2.544	2.576	2.560	2.524	2.524	2.524	2.524
Res22	22	1700-1800	3.120	3.240	3.228	2.600	2.624	2.656	2.640	2.604	2.604	2.604	2.604
Res22	22	1800-1900	3.240	3.360	3.348	2.680	2.704	2.736	2.720	2.684	2.684	2.684	2.684
Res22	22	1900-2000	3.360	3.480	3.468	2.760	2.784	2.816	2.800	2.764	2.764	2.764	2.764
Res22	22	2000-2100	3.480	3.600	3.588	2.840	2.864	2.896	2.880	2.844	2.844	2.844	2.844
Res23	23	0600-0100	1.180	1.280	1.270	1.120	1.144	1.176	1.160	1.124	1.124	1.124	1.124
Res23	23	0700-0800	1.900	2.020	2.008	1.760	1.784	1.816	1.800	1.764	1.764	1.764	1.764
Res23	23	0800-0900	2.080	2.200	2.188	1.920	1.944	1.976	1.960	1.924	1.924	1.924	1.924
Res23	23	0900-1000	2.200	2.320	2.308	2.000	2.024	2.056	2.040	2.004	2.004	2.004	2.004
Res23	23	1000-1100	2.320	2.440	2.428	2.080	2.104	2.136	2.120	2.084	2.084	2.084	2.084
Res23	23	1100-1200	2.440	2.560	2.548	2.160	2.184	2.216	2.200	2.164	2.164	2.164	2.164
Res23	23	1200-1300	2.560	2.680	2.668	2.240	2.264	2.296	2.280	2.244	2.244	2.244	2.244
Res23	23	1300-1400	2.680	2.800	2.788	2.320	2.344	2.376	2.360	2.324	2.324	2.324	2.324
Res23	23	1400-1500	2.800	2.920	2.908	2.400	2.424	2.456	2.440	2.404	2.404	2.404	2.404
Res23	23	1500-1600	2.920	3.040	3.028	2.480	2.504	2.536	2.520	2.484	2.484	2.484	2.484
Res23	23	1600-1700	3.040	3.160	3.148	2.560	2.584	2.616	2.600	2.564	2.564	2.564	2.564
Res23	23	1700-1800	3.160	3.280	3.268	2.640	2.664	2.696	2.680	2.644	2.644	2.644	2.644
Res23	23	1800-1900	3.280	3.400	3.388	2.720	2.744	2.776	2.760	2.724	2.724	2.724	2.724
Res23	23	1900-2000	3.400	3.520	3.508	2.800	2.824	2.856	2.840	2.804	2.804	2.804	2.804
Res23	23	2000-2100	3.520	3.640	3.628	2.880	2.904	2.936	2.920	2.884	2.884	2.884	2.884
Res24	24	0600-0100	1.220	1.320	1.310	1.160	1.184	1.216	1.200	1.164	1.164	1.164	1.164
Res24	24	0700-0800	2.000	2.120	2.108	1.800	1.824	1.856	1.840	1.804	1.804	1.804	1.804
Res24	24	0800-0900	2.180	2.300	2.288	1.960	1.984	2.016	2.000	1.964	1.964	1.964	1.964
Res24	24	0900-1000	2.300	2.420	2.408	2.040	2.064	2.096	2.080	2.044	2.044	2.044	2.044
Res24	24	1000-1100	2.420	2.540	2.528	2.120	2.144	2.176	2.160	2.124	2.124	2.124	2.124
Res24	24	1100-1200	2.540	2.660	2.648	2.200	2.224	2.256	2.240	2.204	2.204	2.204	2.204
Res24	24	1200-1300	2.660	2.780	2.768	2.280	2.304	2.336	2.320	2.284	2.284	2.284	2.284
Res24	24	1300-1400	2.780	2.900	2.888	2.360	2.384	2.416	2.400	2.364	2.364	2.364	2.364
Res24	24	1400-1500	2.900	3.020	3.008	2.440	2.464	2.496	2.480	2.444	2.444	2.444	2.444
Res24	24	1500-1600	3.020	3.140	3.128	2.520	2.544	2.576	2.560	2.524	2.524	2.524	2.524
Res24	24	1600-1700	3.140	3.260	3.248	2.600	2.624	2.656	2.640	2.604	2.604	2.604	2.604
Res24	24	1700-1800	3.260	3.380	3.368	2.680	2.704	2.736	2.720	2.684	2.684	2.684	2.684
Res24	24	1800-1900	3.380	3.500	3.488	2.760	2.784	2.816	2.800	2.764	2.764	2.764	2.764
Res24	24	1900-2000	3.500	3.620	3.608	2.840	2.864	2.896	2.880	2.844	2.844	2.844	2.844
Res24	24	2000-2100	3.620	3.740	3.728	2.920	2.944	2.976	2.960	2.924	2.924	2.924	2.924

Twin 1 North Underquarry											
Open Road 1 km Emission Factors for ARMCO Model (Revised)											
Year 2003											
Road Name	Road ID	Hour	NO _x Emission						NO ₂ Emission		
			g/km/hr	Mon/Thu/Sat	g/km/hr	g/km/hr	Mon/Thu/Sat	g/km/hr	Mon/Thu/Sat	g/km/hr	
Road 24	24	0800-0900	7.75E-01	3.93E-07	8.49E-07	1.67E-01	1.41E-07	7.88E-07	6.82E-01	3.22E-06	1.41E-06
Road 24	24	0900-1200	1.57E-01	7.86E-07	1.73E-06	3.44E-01	2.94E-07	1.56E-06	1.34E-01	6.29E-06	2.84E-06
Road 24	24	1200-1300	1.17E-01	5.91E-07	1.29E-06	2.47E-01	1.77E-07	9.31E-07	8.62E-01	4.04E-06	1.93E-06
Road 24	24	1300-1400	1.17E-01	5.91E-07	1.29E-06	2.47E-01	1.77E-07	9.31E-07	8.62E-01	4.04E-06	1.93E-06
Road 24	24	1400-1500	1.17E-01	5.91E-07	1.29E-06	2.47E-01	1.77E-07	9.31E-07	8.62E-01	4.04E-06	1.93E-06
Road 24	24	1500-1600	1.17E-01	5.91E-07	1.29E-06	2.47E-01	1.77E-07	9.31E-07	8.62E-01	4.04E-06	1.93E-06
Road 24	24	1600-1700	1.17E-01	5.91E-07	1.29E-06	2.47E-01	1.77E-07	9.31E-07	8.62E-01	4.04E-06	1.93E-06
Road 24	24	1700-1800	1.17E-01	5.91E-07	1.29E-06	2.47E-01	1.77E-07	9.31E-07	8.62E-01	4.04E-06	1.93E-06
Road 24	24	1800-1900	1.17E-01	5.91E-07	1.29E-06	2.47E-01	1.77E-07	9.31E-07	8.62E-01	4.04E-06	1.93E-06
Road 24	24	1900-2000	1.17E-01	5.91E-07	1.29E-06	2.47E-01	1.77E-07	9.31E-07	8.62E-01	4.04E-06	1.93E-06
Road 24	24	2000-2100	1.17E-01	5.91E-07	1.29E-06	2.47E-01	1.77E-07	9.31E-07	8.62E-01	4.04E-06	1.93E-06
Road 24	24	2100-2200	1.17E-01	5.91E-07	1.29E-06	2.47E-01	1.77E-07	9.31E-07	8.62E-01	4.04E-06	1.93E-06
Road 24	24	2200-2300	1.17E-01	5.91E-07	1.29E-06	2.47E-01	1.77E-07	9.31E-07	8.62E-01	4.04E-06	1.93E-06
Road 24	24	2300-2400	1.17E-01	5.91E-07	1.29E-06	2.47E-01	1.77E-07	9.31E-07	8.62E-01	4.04E-06	1.93E-06
Road 25	25	0800-0900	1.42E-01	6.22E-05	1.36E-06	5.36E-01	5.67E-06	3.05E-07	5.90E-01	2.11E-07	9.90E-07
Road 25	25	0900-1200	1.42E-01	6.22E-05	1.36E-06	5.36E-01	5.67E-06	3.05E-07	5.90E-01	2.11E-07	9.90E-07
Road 25	25	1200-1300	1.42E-01	6.22E-05	1.36E-06	5.36E-01	5.67E-06	3.05E-07	5.90E-01	2.11E-07	9.90E-07
Road 25	25	1300-1400	1.42E-01	6.22E-05	1.36E-06	5.36E-01	5.67E-06	3.05E-07	5.90E-01	2.11E-07	9.90E-07
Road 25	25	1400-1500	1.42E-01	6.22E-05	1.36E-06	5.36E-01	5.67E-06	3.05E-07	5.90E-01	2.11E-07	9.90E-07
Road 25	25	1500-1600	1.42E-01	6.22E-05	1.36E-06	5.36E-01	5.67E-06	3.05E-07	5.90E-01	2.11E-07	9.90E-07
Road 25	25	1600-1700	1.42E-01	6.22E-05	1.36E-06	5.36E-01	5.67E-06	3.05E-07	5.90E-01	2.11E-07	9.90E-07
Road 25	25	1700-1800	1.42E-01	6.22E-05	1.36E-06	5.36E-01	5.67E-06	3.05E-07	5.90E-01	2.11E-07	9.90E-07
Road 25	25	1800-1900	1.42E-01	6.22E-05	1.36E-06	5.36E-01	5.67E-06	3.05E-07	5.90E-01	2.11E-07	9.90E-07
Road 25	25	1900-2000	1.42E-01	6.22E-05	1.36E-06	5.36E-01	5.67E-06	3.05E-07	5.90E-01	2.11E-07	9.90E-07
Road 25	25	2000-2100	1.42E-01	6.22E-05	1.36E-06	5.36E-01	5.67E-06	3.05E-07	5.90E-01	2.11E-07	9.90E-07
Road 25	25	2100-2200	1.42E-01	6.22E-05	1.36E-06	5.36E-01	5.67E-06	3.05E-07	5.90E-01	2.11E-07	9.90E-07
Road 25	25	2200-2300	1.42E-01	6.22E-05	1.36E-06	5.36E-01	5.67E-06	3.05E-07	5.90E-01	2.11E-07	9.90E-07
Road 25	25	2300-2400	1.42E-01	6.22E-05	1.36E-06	5.36E-01	5.67E-06	3.05E-07	5.90E-01	2.11E-07	9.90E-07
Road 26	26	0800-0900	1.81E-01	9.03E-07	2.02E-06	3.94E-01	3.35E-07	1.79E-06	5.67E-01	2.68E-06	1.18E-06
Road 26	26	0900-1200	3.89E-01	1.93E-06	4.29E-06	8.24E-01	7.02E-07	3.69E-06	1.23E-01	5.93E-06	2.54E-06
Road 26	26	1200-1300	2.78E-01	1.38E-06	3.05E-06	5.84E-01	5.00E-07	2.56E-06	8.62E-01	4.04E-06	1.93E-06
Road 26	26	1300-1400	2.78E-01	1.38E-06	3.05E-06	5.84E-01	5.00E-07	2.56E-06	8.62E-01	4.04E-06	1.93E-06
Road 26	26	1400-1500	2.78E-01	1.38E-06	3.05E-06	5.84E-01	5.00E-07	2.56E-06	8.62E-01	4.04E-06	1.93E-06
Road 26	26	1500-1600	2.78E-01	1.38E-06	3.05E-06	5.84E-01	5.00E-07	2.56E-06	8.62E-01	4.04E-06	1.93E-06
Road 26	26	1600-1700	2.78E-01	1.38E-06	3.05E-06	5.84E-01	5.00E-07	2.56E-06	8.62E-01	4.04E-06	1.93E-06
Road 26	26	1700-1800	2.78E-01	1.38E-06	3.05E-06	5.84E-01	5.00E-07	2.56E-06	8.62E-01	4.04E-06	1.93E-06
Road 26	26	1800-1900	2.78E-01	1.38E-06	3.05E-06	5.84E-01	5.00E-07	2.56E-06	8.62E-01	4.04E-06	1.93E-06
Road 26	26	1900-2000	2.78E-01	1.38E-06	3.05E-06	5.84E-01	5.00E-07	2.56E-06	8.62E-01	4.04E-06	1.93E-06
Road 26	26	2000-2100	2.78E-01	1.38E-06	3.05E-06	5.84E-01	5.00E-07	2.56E-06	8.62E-01	4.04E-06	1.93E-06
Road 26	26	2100-2200	2.78E-01	1.38E-06	3.05E-06	5.84E-01	5.00E-07	2.56E-06	8.62E-01	4.04E-06	1.93E-06
Road 26	26	2200-2300	2.78E-01	1.38E-06	3.05E-06	5.84E-01	5.00E-07	2.56E-06	8.62E-01	4.04E-06	1.93E-06
Road 26	26	2300-2400	2.78E-01	1.38E-06	3.05E-06	5.84E-01	5.00E-07	2.56E-06	8.62E-01	4.04E-06	1.93E-06
Road 27	27	0800-0900	1.44E-01	7.20E-07	1.59E-06	3.12E-01	2.65E-07	1.40E-06	1.23E-01	5.93E-06	2.54E-06
Road 27	27	0900-1200	3.10E-01	1.56E-06	3.45E-06	6.72E-01	5.75E-07	2.84E-06	2.70E-01	1.26E-05	5.45E-06
Road 27	27	1200-1300	2.18E-01	1.07E-06	2.36E-06	4.48E-01	3.85E-07	1.94E-06	1.74E-01	8.14E-06	3.65E-06
Road 27	27	1300-1400	2.18E-01	1.07E-06	2.36E-06	4.48E-01	3.85E-07	1.94E-06	1.74E-01	8.14E-06	3.65E-06
Road 27	27	1400-1500	2.18E-01	1.07E-06	2.36E-06	4.48E-01	3.85E-07	1.94E-06	1.74E-01	8.14E-06	3.65E-06
Road 27	27	1500-1600	2.18E-01	1.07E-06	2.36E-06	4.48E-01	3.85E-07	1.94E-06	1.74E-01	8.14E-06	3.65E-06
Road 27	27	1600-1700	2.18E-01	1.07E-06	2.36E-06	4.48E-01	3.85E-07	1.94E-06	1.74E-01	8.14E-06	3.65E-06
Road 27	27	1700-1800	2.18E-01	1.07E-06	2.36E-06	4.48E-01	3.85E-07	1.94E-06	1.74E-01	8.14E-06	3.65E-06
Road 27	27	1800-1900	2.18E-01	1.07E-06	2.36E-06	4.48E-01	3.85E-07	1.94E-06	1.74E-01	8.14E-06	3.65E-06
Road 27	27	1900-2000	2.18E-01	1.07E-06	2.36E-06	4.48E-01	3.85E-07	1.94E-06	1.74E-01	8.14E-06	3.65E-06
Road 27	27	2000-2100	2.18E-01	1.07E-06	2.36E-06	4.48E-01	3.85E-07	1.94E-06	1.74E-01	8.14E-06	3.65E-06
Road 27	27	2100-2200	2.18E-01	1.07E-06	2.36E-06	4.48E-01	3.85E-07	1.94E-06	1.74E-01	8.14E-06	3.65E-06
Road 27	27	2200-2300	2.18E-01	1.07E-06	2.36E-06	4.48E-01	3.85E-07	1.94E-06	1.74E-01	8.14E-06	3.65E-06
Road 27	27	2300-2400	2.18E-01	1.07E-06	2.36E-06	4.48E-01	3.85E-07	1.94E-06	1.74E-01	8.14E-06	3.65E-06
Road 28	28	0800-0900	1.60E-01	8.00E-07	1.76E-06	3.50E-01	2.98E-07	1.54E-06	1.36E-01	6.38E-06	2.81E-06
Road 28	28	0900-1200	3.40E-01	1.70E-06	3.76E-06	7.00E-01	6.00E-07	2.98E-06	2.72E-01	1.26E-05	5.45E-06
Road 28	28	1200-1300	2.26E-01	1.13E-06	2.50E-06	4.50E-01	3.82E-07	1.94E-06	1.74E-01	8.14E-06	3.65E-06
Road 28	28	1300-1400	2.26E-01	1.13E-06	2.50E-06	4.50E-01	3.82E-07	1.94E-06	1.74E-01	8.14E-06	3.65E-06
Road 28	28	1400-1500	2.26E-01	1.13E-06	2.50E-06	4.50E-01	3.82E-07	1.94E-06	1.74E-01	8.14E-06	3.65E-06
Road 28	28	1500-1600	2.26E-01	1.13E-06	2.50E-06	4.50E-01	3.82E-07	1.94E-06	1.74E-01	8.14E-06	3.65E-06
Road 28	28	1600-1700	2.26E-01	1.13E-06	2.50E-06	4.50E-01	3.82E-07	1.94E-06	1.74E-01	8.14E-06	3.65E-06
Road 28	28	1700-1800	2.26E-01	1.13E-06	2.50E-06	4.50E-01	3.82E-07	1.94E-06	1.74E-01	8.14E-06	3.65E-06
Road 28	28	1800-1900	2.26E-01	1.13E-06	2.50E-06	4.50E-01	3.82E-07	1.94E-06	1.74E-01	8.14E-06	3.65E-06
Road 28	28	1900-2000	2.26E-01	1.13E-06	2.50E-06	4.50E-01	3.82E-07	1.94E-06	1.74E-01	8.14E-06	3.65E-06
Road 28	28	2000-2100	2.26E-01	1.13E-06	2.50E-06	4.50E-01	3.82E-07	1.94E-06	1.74E-01	8.14E-06	3.65E-06
Road 28	28	2100-2200	2.26E-01	1.13E-06	2.50E-06	4.50E-01	3.82E-07	1.94E-06	1.74E-01	8.14E-06	3.65E-06
Road 28	28	2200-2300	2.26E-01	1.13E-06	2.50E-06	4.50E-01	3.82E-07	1.94E-06	1.74E-01	8.14E-06	3.65E-06
Road 28	28	2300-2400	2.26E-01	1.13E-06	2.50E-06	4.50E-01	3.82E-07	1.94E-06	1.74E-01	8.14E-06	3.65E-06
Road 29	29	0800-0900	1.60E-01	8.00E-07	1.76E-06	3.50E-01	2.98E-07	1.54E-06	1.36E-01	6.38E-06	2.81E-06
Road 29	29	0900-1200	3.40E-01	1.70E-06	3.76E-06	7.00E-01	6.00E-07	2.98E-06	2.72E-01	1.26E-05	5.45E-06
Road 29	29	1200-1300	2.26E-01	1.13E-06	2.50E-06	4.50E-01	3.82E-07	1.94E-06	1.74E-01	8.14E-06	3.65E-06
Road 29	29	1300-1400	2.26E-01	1.13E-06	2.50E-06	4.50E-01	3.82E-07	1.94E-06	1.74E-01	8.14E-06	3.65E-06
Road 29	29	1400-1500	2.26E-01	1.13E-06	2.50E-06	4.50E-01	3.82E-07	1.94E-06	1.74E-01	8.14E-06	3.65E-06
Road 29	29	1500-1600	2.26E-01	1.13E-06	2.50E-06	4.50E-01	3.82E-07	1.94E-06	1.74E-01	8.14E-06	3.65E-06
Road 29	29	1600-1700	2.26E-01	1.13E-06	2.50E-06	4.50E-01	3.82E-07	1.94E-06	1.74E-01	8.14E-06	3.65E-06
Road 29	29	1700-1800	2.26E-01	1.13E-06	2.50E-06	4.50E-01	3.82E-07	1.94E-06	1.74E-01	8.14E-06	3.65E-06
Road 29	29	1800-1900	2.26E-01	1.13E-06	2.50E-06	4.50E-01	3.82E-07	1.94E-06	1.74E-01	8.14E-06	3.65E-06
Road 29	29	1900-2000	2.26E-01	1.13E-06	2.50E-06	4.50E-01	3.82E-07	1.94E-06	1.74E-01	8.14E-06	3.65E-06
Road 29	29	2000-2100	2.26E-01	1.13E-06	2.50E-06	4.50E-01					

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Road 26 Hour Underground Query											
Open Road 26 Hour Emission Factors for AHJMSD model Version 2.0.0											
Year 2033											
Road name	Road ID	Hour	NO _x Emission						NO ₂ Emission		
			g/h/mi/veh	g/mi ² /veh	g/mi ² /hr	ton/hr	g/h/mi/veh	g/mi ² /veh	g/mi ² /hr	ton/hr	
Road 27	27	1800-1900	1.931E+01	4.82E+07	1.511E+06	1.798E+01	4.64E+06	2.06E+03	1.776E+06	5.52E+06	1.478E+07
Road 27	27	1900-2000	1.715E+01	4.25E+07	1.365E+06	1.605E+01	3.94E+06	1.84E+03	1.605E+06	5.00E+06	1.328E+07
Road 27	27	1800-1900	1.931E+01	4.82E+07	1.511E+06	1.798E+01	4.64E+06	2.06E+03	1.776E+06	5.52E+06	1.478E+07
Road 27	27	1900-2000	1.715E+01	4.25E+07	1.365E+06	1.605E+01	3.94E+06	1.84E+03	1.605E+06	5.00E+06	1.328E+07
Road 27	27	2000-2100	1.397E+01	3.15E+07	1.017E+06	1.245E+01	3.14E+07	1.571E+03	1.406E+06	4.54E+06	1.140E+07
Road 27	27	2100-2200	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	2200-2300	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	2300-0000	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	0000-0100	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	0100-0200	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	0200-0300	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	0300-0400	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	0400-0500	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	0500-0600	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	0600-0700	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	0700-0800	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	0800-0900	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	0900-1000	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	1000-1100	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	1100-1200	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	1200-1300	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	1300-1400	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	1400-1500	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	1500-1600	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	1600-1700	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	1700-1800	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	1800-1900	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	1900-2000	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	2000-2100	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	2100-2200	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	2200-2300	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	2300-0000	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	0000-0100	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	0100-0200	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	0200-0300	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	0300-0400	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	0400-0500	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	0500-0600	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	0600-0700	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	0700-0800	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	0800-0900	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	0900-1000	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	1000-1100	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	1100-1200	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	1200-1300	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	1300-1400	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	1400-1500	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	1500-1600	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	1600-1700	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	1700-1800	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	1800-1900	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	1900-2000	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	2000-2100	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	2100-2200	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	2200-2300	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	2300-0000	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	0000-0100	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	0100-0200	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	0200-0300	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	0300-0400	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	0400-0500	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	0500-0600	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	0600-0700	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	0700-0800	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	0800-0900	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	0900-1000	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	1000-1100	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	1100-1200	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	1200-1300	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	1300-1400	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	1400-1500	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	1500-1600	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	1600-1700	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	1700-1800	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	1800-1900	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	1900-2000	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	2000-2100	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248E+06	4.00E+06	1.009E+07
Road 27	27	2100-2200	1.197E+01	2.81E+07	8.61E+05	1.075E+01	2.82E+07	1.386E+03	1.248		

Twin G North Under Quarry													
Open Road 10 and 50s Emission Factors for ANNOAD model (Revised)													
Year 2003													
Road Name	Road ID	Hour	NO _x Emission						NO ₂ Emission				
			g/kwh	lb/hr	tonne/hour	g/kwh	lb/hr	tonne/hour	g/kwh	lb/hr	tonne/hour	g/kwh	
Road #1		0000:00:00	1.8112	0.7948	2.529	0.6462	2.9668	2.4447	0.8782	3.5857	2.305	0.7718	3.208
Road #1		0000:01:00	1.8882	0.8222	2.6758	0.6732	3.1272	2.5719	0.9102	3.7467	2.4065	0.7945	3.3465
Road #1		0000:02:00	1.7742	0.7585	2.4155	1.8313	1.8001	2.4447	1.1886	3.7246	2.3756	1.8111	3.2518
Road #1		0000:03:00	1.8882	0.8222	2.6758	0.6732	3.1272	2.5719	0.9102	3.7467	2.4065	0.7945	3.3465
Road #1		0000:04:00	2.344	1.0716	4.048	1.996	2.556	3.395	1.0767	4.4661	3.395	1.838	4.438
Road #1		0000:05:00	2.344	1.0716	4.048	1.996	2.556	3.395	1.0767	4.4661	3.395	1.838	4.438
Road #1		0000:06:00	2.344	1.0716	4.048	1.996	2.556	3.395	1.0767	4.4661	3.395	1.838	4.438
Road #1		0000:07:00	2.344	1.0716	4.048	1.996	2.556	3.395	1.0767	4.4661	3.395	1.838	4.438
Road #1		0000:08:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:09:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:10:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:11:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:12:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:13:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:14:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:15:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:16:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:17:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:18:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:19:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:20:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:21:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:22:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:23:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:24:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:25:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:26:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:27:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:28:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:29:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:30:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:31:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:32:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:33:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:34:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:35:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:36:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:37:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:38:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:39:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:40:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:41:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:42:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:43:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:44:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:45:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:46:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:47:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:48:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:49:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:50:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:51:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:52:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:53:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:54:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:55:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:56:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:57:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:58:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:59:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:60:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:61:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:62:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:63:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:64:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:65:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:66:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:67:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:68:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:69:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:70:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:71:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:72:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:73:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:74:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:75:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:76:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:77:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:78:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:79:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:80:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0625	4.7286	3.6016	1.8451	5.126
Road #1		0000:81:00	2.4582	1.1448	4.316	2.2143	1.9347	3.208	1.0				

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Top 24 Hour Emission Factors for Atmospheric Pollutants Year 2003														
Route Name	Road ID	Hour	No Emission			No Emission			No Emission			No Emission		
			g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³
Route 14	14	0000-0000	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	0000-0100	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	0100-0200	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	0200-0300	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	0300-0400	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	0400-0500	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	0500-0600	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	0600-0700	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	0700-0800	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	0800-0900	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	0900-1000	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	1000-1100	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	1100-1200	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	1200-1300	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	1300-1400	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	1400-1500	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	1500-1600	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	1600-1700	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	1700-1800	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	1800-1900	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	1900-2000	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	2000-2100	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	2100-2200	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	2200-2300	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	2300-2400	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	2400-0000	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	0000-0100	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	0100-0200	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	0200-0300	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	0300-0400	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	0400-0500	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	0500-0600	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	0600-0700	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	0700-0800	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	0800-0900	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	0900-1000	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	1000-1100	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	1100-1200	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	1200-1300	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	1300-1400	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	1400-1500	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	1500-1600	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	1600-1700	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	1700-1800	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	1800-1900	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	1900-2000	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	2000-2100	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	2100-2200	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	2200-2300	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	2300-2400	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	2400-0000	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	0000-0100	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	0100-0200	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	0200-0300	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	0300-0400	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	0400-0500	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	0500-0600	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	0600-0700	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	0700-0800	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	0800-0900	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	0900-1000	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	1000-1100	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	1100-1200	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	1200-1300	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	1300-1400	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	1400-1500	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	1500-1600	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	1600-1700	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	1700-1800	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	1800-1900	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	1900-2000	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	2000-2100	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	2100-2200	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	2200-2300	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	2300-2400	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	2400-0000	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	0000-0100	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	0100-0200	6.423	0.617	1.615	4.223	0.407	1.478	2.131	0.700	8.829	0.255	4.188	7.330
Route 14	14	0200-0300	6.423	0.617	1.615	4.223	0.407	1.47						

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Yield North Undermining Factors for AR2000 Model - Quarterly																
Year 2003																
Road Name	Route ID	Hour	NO _x Emission						MP Emission							
			g/mph	g/mph	g/mph	g/mph	g/mph	g/mph	g/mph	g/mph	g/mph	g/mph	Average			
Road 17	17	1600-1900	4.9982	0.742	1.064	5.088	0.532	1.578	0.588	1.079	7.631	0.68	2.28	2.748	0.811	1.98
Road 17	17	1200-1600	2.962	0.742	1.064	5.088	0.532	1.578	0.588	1.079	7.631	0.68	2.28	2.748	0.811	1.98
Road 17	17	1800-1900	2.962	0.742	1.064	5.088	0.532	1.578	0.588	1.079	7.631	0.68	2.28	2.748	0.811	1.98
Road 17	17	1900-2000	2.962	0.742	1.064	5.088	0.532	1.578	0.588	1.079	7.631	0.68	2.28	2.748	0.811	1.98
Road 17	17	2000-2100	2.962	0.742	1.064	5.088	0.532	1.578	0.588	1.079	7.631	0.68	2.28	2.748	0.811	1.98
Road 17	17	2100-2200	1.812	0.695	0.975	4.758	0.483	2.033	0.678	1.478	6.178	0.498	1.178	2.298	0.788	1.858
Road 17	17	2200-2300	1.812	0.695	0.975	4.758	0.483	2.033	0.678	1.478	6.178	0.498	1.178	2.298	0.788	1.858
Road 17	17	2300-2400	1.812	0.695	0.975	4.758	0.483	2.033	0.678	1.478	6.178	0.498	1.178	2.298	0.788	1.858
Road 17	17	2400-2500	1.812	0.695	0.975	4.758	0.483	2.033	0.678	1.478	6.178	0.498	1.178	2.298	0.788	1.858
Road 17	17	2500-2600	1.812	0.695	0.975	4.758	0.483	2.033	0.678	1.478	6.178	0.498	1.178	2.298	0.788	1.858
Road 17	17	2600-2700	1.812	0.695	0.975	4.758	0.483	2.033	0.678	1.478	6.178	0.498	1.178	2.298	0.788	1.858
Road 17	17	2700-2800	1.812	0.695	0.975	4.758	0.483	2.033	0.678	1.478	6.178	0.498	1.178	2.298	0.788	1.858
Road 17	17	2800-2900	1.812	0.695	0.975	4.758	0.483	2.033	0.678	1.478	6.178	0.498	1.178	2.298	0.788	1.858
Road 17	17	2900-3000	1.812	0.695	0.975	4.758	0.483	2.033	0.678	1.478	6.178	0.498	1.178	2.298	0.788	1.858
Road 17	17	3000-3100	1.812	0.695	0.975	4.758	0.483	2.033	0.678	1.478	6.178	0.498	1.178	2.298	0.788	1.858
Road 17	17	3100-3200	1.812	0.695	0.975	4.758	0.483	2.033	0.678	1.478	6.178	0.498	1.178	2.298	0.788	1.858
Road 17	17	3200-3300	1.812	0.695	0.975	4.758	0.483	2.033	0.678	1.478	6.178	0.498	1.178	2.298	0.788	1.858
Road 17	17	3300-3400	1.812	0.695	0.975	4.758	0.483	2.033	0.678	1.478	6.178	0.498	1.178	2.298	0.788	1.858
Road 17	17	3400-3500	1.812	0.695	0.975	4.758	0.483	2.033	0.678	1.478	6.178	0.498	1.178	2.298	0.788	1.858
Road 17	17	3500-3600	1.812	0.695	0.975	4.758	0.483	2.033	0.678	1.478	6.178	0.498	1.178	2.298	0.788	1.858
Road 17	17	3600-3700	1.812	0.695	0.975	4.758	0.483	2.033	0.678	1.478	6.178	0.498	1.178	2.298	0.788	1.858
Road 17	17	3700-3800	1.812	0.695	0.975	4.758	0.483	2.033	0.678	1.478	6.178	0.498	1.178	2.298	0.788	1.858
Road 17	17	3800-3900	1.812	0.695	0.975	4.758	0.483	2.033	0.678	1.478	6.178	0.498	1.178	2.298	0.788	1.858
Road 17	17	3900-4000	1.812	0.695	0.975	4.758	0.483	2.033	0.678	1.478	6.178	0.498	1.178	2.298	0.788	1.858
Road 18	18	1600-1900	4.742	0.547	0.827	4.028	0.368	1.387	0.410	1.440	6.288	0.580	2.020	2.310	0.711	1.844
Road 18	18	1200-1600	2.962	0.547	0.827	4.028	0.368	1.387	0.410	1.440	6.288	0.580	2.020	2.310	0.711	1.844
Road 18	18	1800-1900	2.962	0.547	0.827	4.028	0.368	1.387	0.410	1.440	6.288	0.580	2.020	2.310	0.711	1.844
Road 18	18	1900-2000	2.962	0.547	0.827	4.028	0.368	1.387	0.410	1.440	6.288	0.580	2.020	2.310	0.711	1.844
Road 18	18	2000-2100	2.962	0.547	0.827	4.028	0.368	1.387	0.410	1.440	6.288	0.580	2.020	2.310	0.711	1.844
Road 18	18	2100-2200	1.716	0.517	0.771	3.786	0.342	1.274	0.364	1.341	5.837	0.548	1.948	2.208	0.679	1.785
Road 18	18	2200-2300	1.716	0.517	0.771	3.786	0.342	1.274	0.364	1.341	5.837	0.548	1.948	2.208	0.679	1.785
Road 18	18	2300-2400	1.716	0.517	0.771	3.786	0.342	1.274	0.364	1.341	5.837	0.548	1.948	2.208	0.679	1.785
Road 18	18	2400-2500	1.716	0.517	0.771	3.786	0.342	1.274	0.364	1.341	5.837	0.548	1.948	2.208	0.679	1.785
Road 18	18	2500-2600	1.716	0.517	0.771	3.786	0.342	1.274	0.364	1.341	5.837	0.548	1.948	2.208	0.679	1.785
Road 18	18	2600-2700	1.716	0.517	0.771	3.786	0.342	1.274	0.364	1.341	5.837	0.548	1.948	2.208	0.679	1.785
Road 18	18	2700-2800	1.716	0.517	0.771	3.786	0.342	1.274	0.364	1.341	5.837	0.548	1.948	2.208	0.679	1.785
Road 18	18	2800-2900	1.716	0.517	0.771	3.786	0.342	1.274	0.364	1.341	5.837	0.548	1.948	2.208	0.679	1.785
Road 18	18	2900-3000	1.716	0.517	0.771	3.786	0.342	1.274	0.364	1.341	5.837	0.548	1.948	2.208	0.679	1.785
Road 18	18	3000-3100	1.716	0.517	0.771	3.786	0.342	1.274	0.364	1.341	5.837	0.548	1.948	2.208	0.679	1.785
Road 18	18	3100-3200	1.716	0.517	0.771	3.786	0.342	1.274	0.364	1.341	5.837	0.548	1.948	2.208	0.679	1.785
Road 18	18	3200-3300	1.716	0.517	0.771	3.786	0.342	1.274	0.364	1.341	5.837	0.548	1.948	2.208	0.679	1.785
Road 18	18	3300-3400	1.716	0.517	0.771	3.786	0.342	1.274	0.364	1.341	5.837	0.548	1.948	2.208	0.679	1.785
Road 18	18	3400-3500	1.716	0.517	0.771	3.786	0.342	1.274	0.364	1.341	5.837	0.548	1.948	2.208	0.679	1.785
Road 18	18	3500-3600	1.716	0.517	0.771	3.786	0.342	1.274	0.364	1.341	5.837	0.548	1.948	2.208	0.679	1.785
Road 18	18	3600-3700	1.716	0.517	0.771	3.786	0.342	1.274	0.364	1.341	5.837	0.548	1.948	2.208	0.679	1.785
Road 18	18	3700-3800	1.716	0.517	0.771	3.786	0.342	1.274	0.364	1.341	5.837	0.548	1.948	2.208	0.679	1.785
Road 18	18	3800-3900	1.716	0.517	0.771	3.786	0.342	1.274	0.364	1.341	5.837	0.548	1.948	2.208	0.679	1.785
Road 18	18	3900-4000	1.716	0.517	0.771	3.786	0.342	1.274	0.364	1.341	5.837	0.548	1.948	2.208	0.679	1.785
Road 19	19	1600-1900	4.962	0.808	1.177	5.774	0.772	2.196	0.748	1.388	8.048	0.848	2.848	3.348	1.048	2.548
Road 19	19	1200-1600	2.962	0.808	1.177	5.774	0.772	2.196	0.748	1.388	8.048	0.848	2.848	3.348	1.048	2.548
Road 19	19	1800-1900	2.962	0.808	1.177	5.774	0.772	2.196	0.748	1.388	8.048	0.848	2.848	3.348	1.048	2.548
Road 19	19	1900-2000	2.962	0.808	1.177	5.774	0.772	2.196	0.748	1.388	8.048	0.848	2.848	3.348	1.048	2.548
Road 19	19	2000-2100	2.962	0.808	1.177	5.774	0.772	2.196	0.748	1.388	8.048	0.848	2.848	3.348	1.048	2.548
Road 19	19	2100-2200	1.812	0.772	1.107	5.438	0.748	2.048	0.748	1.408	7.608	0.808	2.608	3.108	0.968	2.308
Road 19	19	2200-2300	1.812	0.772	1.107	5.438	0.748	2.048	0.748	1.408	7.608	0.808	2.608	3.108	0.968	2.308
Road 19	19	2300-2400	1.812	0.772	1.107	5.438	0.748	2.048	0.748	1.408	7.608	0.808	2.608	3.108	0.968	2.308
Road 19	19	2400-2500	1.812	0.772	1.107	5.438	0.748	2.048	0.748	1.408	7.608	0.808	2.608	3.108	0.968	2.308
Road 19	19	2500-2600	1.812	0.772	1.107	5.438	0.748	2.048	0.748	1.408	7.608	0.808	2.608	3.108	0.968	2.308
Road 19	19	2600-2700	1.812	0.772	1.107	5.438	0.748	2.048	0.748	1.408	7.608	0.808	2.608	3.108	0.968	2.308
Road 19	19	2700-2800	1.812	0.772	1.107	5.438	0.748	2.048	0.748	1.408	7.608	0.808	2.608	3.108	0.968	2.308
Road 19	19	2800-2900	1.812	0.772	1.107	5.438	0.748	2.048	0.748	1.408	7.608	0.808	2.608	3.108	0.968	2.308
Road 19	19	2900-3000	1.812	0.772	1.107	5.438	0.748	2.048	0.748	1.408	7.608	0.808	2.608	3.108	0.968	2.308
Road 19	19	3000-3100	1.812	0.772	1.107	5.438	0.748	2.048	0.748	1.408	7.608	0.808	2.608	3.108	0.968	2.308
Road 19	19	3100-3200	1.812	0.772	1.107	5.438	0.748	2.048	0.748	1.408	7.608	0.808	2.608	3.108	0.968	2.308
Road 19	19	3200-3300	1.812	0.772	1.107	5.438	0.748	2.048	0.748	1.408	7.608	0.808	2.608	3.108	0.968	2.308
Road 19	19	3300-3400	1.812	0.772	1.107	5.438	0.748	2.048	0.748	1.408	7.608	0.808	2.608	3.108	0.968	2.308
Road 19	19	3400-3500	1.812	0.772	1.107	5.438	0.748	2.048	0.748	1.408	7.608	0.808	2.608	3.108	0.968	2.308
Road 19	19	3500-3600	1.812	0.772	1.107	5.438	0.748	2.048	0.748	1.408	7.608	0.808	2.608	3.108	0.968	2.308
Road 19	19	3600-3700	1.812	0.772	1.107	5.438	0.748	2.048	0.748	1.408	7.608	0.808	2.608	3.108	0.968	2.308
Road 19	19	3700-3800	1.812	0.772	1.107	5.438	0.748	2.048	0.748	1.408	7.608	0.808	2.608	3.108	0.968	2.308
Road 19	19															

[illegible][illegible]

[illegible]

Open Road North Underpass Query

View North Road Underpass Query for 2020-2021 (Download)

Year 2023

Road Name	Road ID	Hour	Mo/En/Em/En				Mo/En/Em/En				Mo/En/Em/En			
			g/h/mph	g/h/mph	h/mph/hour	g/h/mph	g/h/mph	g/h/mph	g/h/mph	h/mph/hour	g/h/mph	g/h/mph	h/mph/hour	g/h/mph
Road #1	40000-0100	1:07:00	1.978	0.313	3.014	0.767	2.888	2.008	0.778	1.607	0.505	1.808	0.347	2.734
Road #1	40000-0100	2:07:00	2.486	0.245	2.457	0.545	2.457	2.457	0.545	2.457	0.545	2.457	0.545	2.457
Road #1	40000-0200	2:07:00	2.976	0.248	2.976	1.288	2.458	2.458	1.288	2.458	1.288	2.458	1.288	2.458
Road #1	40000-0300	2:07:00	2.457	0.245	2.457	0.545	2.457	2.457	0.545	2.457	0.545	2.457	0.545	2.457
Road #1	40000-0400	2:07:00	3.338	0.248	2.514	0.702	2.438	2.286	1.262	1.017	0.526	1.111	0.908	8.356
Road #1	40000-0500	2:07:00	2.686	0.230	0.886	0.341	2.088	2.788	1.414	1.417	0.327	1.532	0.927	1.222
Road #1	40000-0600	2:07:00	2.976	0.248	2.976	1.288	2.458	2.458	1.288	2.458	1.288	2.458	1.288	2.458
Road #1	40000-0700	2:07:00	2.457	0.245	2.457	0.545	2.457	2.457	0.545	2.457	0.545	2.457	0.545	2.457
Road #1	40000-0800	2:07:00	2.457	0.245	2.457	0.545	2.457	2.457	0.545	2.457	0.545	2.457	0.545	2.457
Road #1	40000-0900	2:07:00	2.812	0.437	1.347	2.555	1.236	0.727	1.315	0.144	0.837	0.026	0.972	4.792
Road #1	40000-1000	2:07:00	1.338	0.445	1.338	0.886	1.338	1.338	0.886	1.338	0.886	1.338	0.886	1.338
Road #1	40000-1100	2:07:00	1.338	0.445	1.338	0.886	1.338	1.338	0.886	1.338	0.886	1.338	0.886	1.338
Road #1	40000-1200	2:07:00	1.338	0.445	1.338	0.886	1.338	1.338	0.886	1.338	0.886	1.338	0.886	1.338
Road #1	40000-1300	2:07:00	1.846	0.163	0.747	3.477	1.687	1.037	1.398	6.737	0.125	1.466	2.587	0.515
Road #1	40000-1400	2:07:00	1.846	0.163	0.747	3.477	1.687	1.037	1.398	6.737	0.125	1.466	2.587	0.515
Road #1	40000-1500	2:07:00	1.846	0.163	0.747	3.477	1.687	1.037	1.398	6.737	0.125	1.466	2.587	0.515
Road #1	40000-1600	2:07:00	1.846	0.163	0.747	3.477	1.687	1.037	1.398	6.737	0.125	1.466	2.587	0.515
Road #1	40000-1700	2:07:00	1.846	0.163	0.747	3.477	1.687	1.037	1.398	6.737	0.125	1.466	2.587	0.515
Road #1	40000-1800	2:07:00	1.846	0.163	0.747	3.477	1.687	1.037	1.398	6.737	0.125	1.466	2.587	0.515
Road #1	40000-1900	2:07:00	1.846	0.163	0.747	3.477	1.687	1.037	1.398	6.737	0.125	1.466	2.587	0.515
Road #1	40000-2000	2:07:00	1.846	0.163	0.747	3.477	1.687	1.037	1.398	6.737	0.125	1.466	2.587	0.515
Road #1	40000-2100	2:07:00	1.846	0.163	0.747	3.477	1.687	1.037	1.398	6.737	0.125	1.466	2.587	0.515
Road #1	40000-2200	2:07:00	1.846	0.163	0.747	3.477	1.687</							

Tol N'ing N'ong Underground Quarry														
Tol N'ing N'ong Underground Quarry - Environmental Impact Factors for ARMMO Model (December)														
Year 2033														
Road Name	Road ID	Hour	NO _x Emission						NO Emission					
			g/hour/m ³	g/m ³	g/hour/m ³	g/m ³	g/hour/m ³	g/m ³	g/hour/m ³	g/m ³	g/hour/m ³	g/m ³		
Road 34	34	1200	1.006	1.511	0.678	1.588	0.546	0.747	1.116	2.886	0.566	1.886	0.526	1.586
Road 34	34	1800	1.586	2.336	1.036	2.436	0.836	1.136	1.836	4.336	0.836	2.536	0.636	2.036
Road 34	34	0900	1.006	1.436	0.836	1.586	0.546	0.736	1.136	2.836	0.536	1.976	0.536	1.586
Road 34	34	1500	1.816	2.736	1.136	2.836	0.936	1.236	2.136	4.836	0.936	2.836	0.736	2.236
Road 34	34	1200	1.006	1.436	0.836	1.586	0.546	0.736	1.136	2.836	0.536	1.976	0.536	1.586
Road 34	34	1800	1.586	2.336	1.036	2.436	0.836	1.136	1.836	4.336	0.836	2.536	0.636	2.036
Road 34	34	0900	1.006	1.436	0.836	1.586	0.546	0.736	1.136	2.836	0.536	1.976	0.536	1.586
Road 34	34	1500	1.816	2.736	1.136	2.836	0.936	1.236	2.136	4.836	0.936	2.836	0.736	2.236
Road 34	34	1200	1.006	1.436	0.836	1.586	0.546	0.736	1.136	2.836	0.536	1.976	0.536	1.586
Road 34	34	1800	1.586	2.336	1.036	2.436	0.836	1.136	1.836	4.336	0.836	2.536	0.636	2.036
Road 34	34	0900	1.006	1.436	0.836	1.586	0.546	0.736	1.136	2.836	0.536	1.976	0.536	1.586
Road 34	34	1500	1.816	2.736	1.136	2.836	0.936	1.236	2.136	4.836	0.936	2.836	0.736	2.236
Road 34	34	1200	1.006	1.436	0.836	1.586	0.546	0.736	1.136	2.836	0.536	1.976	0.536	1.586
Road 34	34	1800	1.586	2.336	1.036	2.436	0.836	1.136	1.836	4.336	0.836	2.536	0.636	2.036
Road 34	34	0900	1.006	1.436	0.836	1.586	0.546	0.736	1.136	2.836	0.536	1.976	0.536	1.586
Road 34	34	1500	1.816	2.736	1.136	2.836	0.936	1.236	2.136	4.836	0.936	2.836	0.736	2.236
Road 34	34	1200	1.006	1.436	0.836	1.586	0.546	0.736	1.136	2.836	0.536	1.976	0.536	1.586
Road 34	34	1800	1.586	2.336	1.036	2.436	0.836	1.136	1.836	4.336	0.836	2.536	0.636	2.036
Road 34	34	0900	1.006	1.436	0.836	1.586	0.546	0.736	1.136	2.836	0.536	1.976	0.536	1.586
Road 34	34	1500	1.816	2.736	1.136	2.836	0.936	1.236	2.136	4.836	0.936	2.836	0.736	2.236
Road 34	34	1200	1.006	1.436	0.836	1.586	0.546	0.736	1.136	2.836	0.536	1.976	0.536	1.586
Road 34	34	1800	1.586	2.336	1.036	2.436	0.836	1.136	1.836	4.336	0.836	2.536	0.636	2.036
Road 34	34	0900	1.006	1.436	0.836	1.586	0.546	0.736	1.136	2.836	0.536	1.976	0.536	1.586
Road 34	34	1500	1.816	2.736	1.136	2.836	0.936	1.236	2.136	4.836	0.936	2.836	0.736	2.236
Road 34	34	1200	1.006	1.436	0.836	1.586	0.546	0.736	1.136	2.836	0.536	1.976	0.536	1.586
Road 34	3													

[illegible]

North Underway Quadrant										
at 24 Hour Emission Rates for NOAA model (December)										
Year 2033										
Name	Raid ID	Hour	NOx Emission						NOx Emission	
			Monthly/average		Monthly/average		Monthly/average		Monthly/average	
			g/hour	g/min	g/hour	g/min	g/hour	g/min	g/hour	g/min
1	00000000	1	9.0476	7.5368	1.4236	1.2021	6.3158	5.2618	1.1850	0.9837
2	00000000	2	1.0452	0.8710	0.1618	0.1348	0.7416	0.6180	0.1274	0.1061
3	00000000	3	1.0452	0.8710	0.1618	0.1348	0.7416	0.6180	0.1274	0.1061
4	00000000	4	9.0476	7.5368	1.4236	1.2021	6.3158	5.2618	1.1850	0.9837
5	00000000	5	1.0452	0.8710	0.1618	0.1348	0.7416	0.6180	0.1274	0.1061
6	00000000	6	1.0452	0.8710	0.1618	0.1348	0.7416	0.6180	0.1274	0.1061
7	00000000	7	9.0476	7.5368	1.4236	1.2021	6.3158	5.2618	1.1850	0.9837
8	00000000	8	1.0452	0.8710	0.1618	0.1348	0.7416	0.6180	0.1274	0.1061
9	00000000	9	1.0452	0.8710	0.1618	0.1348	0.7416	0.6180	0.1274	0.1061
10	00000000	10	9.0476	7.5368	1.4236	1.2021	6.3158	5.2618	1.1850	0.9837
11	00000000	11	1.0452	0.8710	0.1618	0.1348	0.7416	0.6180	0.1274	0.1061
12	00000000	12	1.0452	0.8710	0.1618	0.1348	0.7416	0.6180	0.1274	0.1061
13	00000000	13	9.0476	7.5368	1.4236	1.2021	6.3158	5.2618	1.1850	0.9837
14	00000000	14	1.0452	0.8710	0.1618	0.1348	0.7416	0.6180	0.1274	0.1061
15	00000000	15	1.0452	0.8710	0.1618	0.1348	0.7416	0.6180	0.1274	0.1061
16	00000000	16	9.0476	7.5368	1.4236	1.2021	6.3158	5.2618	1.1850	0.9837
17	00000000	17	1.0452	0.8710	0.1618	0.1348	0.7416	0.6180	0.1274	0.1061
18	00000000	18	1.0452	0.8710	0.1618	0.1348	0.7416	0.6180	0.1274	0.1061
19	00000000	19	9.0476	7.5368	1.4236	1.2021	6.3158	5.2618	1.1850	0.9837
20	00000000	20	1.0452	0.8710	0.1618	0.1348	0.7416	0.6180	0.1274	0.1061
21	00000000	21	1.0452	0.8710	0.1618	0.1348	0.7416	0.6180	0.1274	0.1061
22	00000000	22	9.0476	7.5368	1.4236	1.2021	6.3158	5.2618	1.1850	0.9837
23	00000000	23	1.0452	0.8710	0.1618	0.1348	0.7416	0.6180	0.1274	0.1061
24	00000000	24	1.0452	0.8710	0.1618	0.1348	0.7416	0.6180	0.1274	0.1061
25	00000000	25	9.0476	7.5368	1.4236	1.2021	6.3158	5.2618	1.1850	0.9837
26	00000000	26	1.0452	0.8710	0.1618	0.1348	0.7416	0.6180	0.1274	0.1061
27	00000000	27	1.0452	0.8710	0.1618	0.1348	0.7416	0.6180	0.1274	0.1061
28	00000000	28	9.0476	7.5368	1.4236	1.2021	6.3158	5.2618	1.1850	0.9837
29	00000000	29	1.0452	0.8710	0.1618	0.1348	0.7416	0.6180	0.1274	0.1061
30	00000000	30	1.0452	0.8710	0.1618	0.1348	0.7416	0.6180	0.1274	0.1061
31	00000000	31	9.0476	7.5368	1.4236	1.2021	6.3158	5.2618	1.1850	0.9837
32	00000000	32	1.0452	0.8710	0.1618	0.1348	0.7416	0.6180</		

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Tsing Yi North Underground Quarry											
Open Road 24 hour Emission Factors for AERMOD model (Summary)											
Road Name	Road ID	Hour	NO _x Emission			NO Emission			PM _{2.5} Emission		
			g/h/m ²	g/m ² /m	tonnes/year	g/h/m ²	g/m ² /m	tonnes/year	g/h/m ²	g/m ² /m	tonnes/year
Road 18	0000-0000	1	8.98E-03	1.46E-02	2.86E-02	9.84E-03	1.54E-02	3.09E-02	8.84E-03	1.40E-02	2.80E-02
Road 18	0100-0100	1,01:02	4.36E-03	6.22E-04	1.63E-02	2.66E-07	3.78E-03	1.18E-03	4.97E-04	1.35E-04	1.03E-08
Road 18	0200-0200	1,23:02	1.58E-03	2.28E-04	6.43E-02	2.78E-07	2.94E-03	4.78E-03	7.78E-04	2.11E-04	2.64E-05
Road 18	0300-0300	1,34:02	1.35E-03	1.46E-04	5.18E-02	2.15E-07	2.40E-03	4.61E-03	9.71E-04	2.71E-04	3.58E-05
Road 18	0400-0400	1,45:02	3.60E-03	5.13E-04	6.08E-02	1.93E-07	2.76E-03	2.82E-03	7.90E-04	2.16E-04	2.85E-05
Road 18	0500-0500	1,56:02	6.23E-03	8.89E-04	6.10E-02	2.78E-07	4.83E-03	2.88E-03	1.97E-04	3.11E-05	5.08E-06
Road 18	0600-0600	2,00:02	3.06E-03	4.29E-04	3.14E-02	1.08E-07	2.46E-03	1.46E-03	1.06E-04	1.60E-05	2.46E-06
Road 18	0700-0700	1,43:02	1.01E-07	4.30E-03	7.47E-02	1.57E-06	2.24E-03	3.20E-03	6.75E-08	9.63E-04	3.48E-05
Road 18	0800-0800	1,37:02	1.33E-07	3.35E-07	4.67E-08	1.16E-06	2.39E-04	1.24E-03	3.41E-03	8.32E-08	1.08E-09
Road 18	0900-0900	1,58E-02	1.27E-07	4.66E-07	7.02E-02	1.58E-06	2.22E-02	3.68E-07	8.08E-04	4.00E-08	8.27E-08
Road 18	1000-1000	1,59E-02	1.27E-07	4.66E-07	7.02E-02	1.58E-06	2.22E-02	3.68E-07	8.08E-04	4.00E-08	8.27E-08
Road 18	1100-1100	1,26E-02	2.96E-07	4.78E-07	8.10E-02	1.96E-06	1.99E-03	3.60E-03	6.02E-08	1.78E-04	4.31E-05
Road 18	1200-1200	2,39E-02	4.86E-07	6.93E-03	9.70E-02	1.97E-06	2.81E-02	5.49E-03	1.12E-07	1.59E-06	3.21E-07
Road 18	1300-1400	1,53E-02	5.13E-07	7.26E-03	1.05E-02	2.15E-06	3.07E-02	1.98E-03	1.36E-07	1.90E-06	3.98E-07
Road 18	1400-1500	2,38E-02	5.33E-07	7.60E-03	1.09E-02	2.31E-06	3.18E-02	2.04E-03	1.44E-07	2.02E-06	4.19E-07
Road 18	1500-1600	2,22E-02	1.13E-07	2.77E-03	8.90E-02	2.27E-06	3.24E-02	5.28E-03	1.21E-07	1.72E-07	5.73E-07
Road 18	1600-1700	1,56E-02	1.13E-07	2.77E-03	8.90E-02	2.27E-06	3.24E-02	5.28E-03	1.21E-07	1.72E-07	5.73E-07
Road 18	1700-1800	1,75E-02	4.38E-07	6.25E-03	8.40E-02	1.71E-06	3.01E-04	4.00E-03	1.03E-07	1.47E-07	1.59E-05
Road 18	1800-1900	1,29E-02	3.24E-07	4.63E-03	6.40E-02	1.61E-06	2.30E-02	3.02E-03	7.80E-08	1.08E-07	3.27E-05
Road 18	1900-2000	1,11E-02	1.13E-07	2.77E-03	8.90E-02	2.27E-06	3.24E-02	5.28E-03	1.21E-07	1.72E-07	5.73E-07
Road 18	2000-2100	1,06E-02	1.13E-07	2.77E-03	8.90E-02	2.27E-06	3.24E-02	5.28E-03	1.21E-07	1.72E-07	5.73E-07
Road 18	2100-2200	1,03E-02	1.13E-07	2.77E-03	8.90E-02	2.27E-06	3.24E-02	5.28E-03	1.21E-07	1.72E-07	5.73E-07
Road 18	2200-2300	1,04E-02	1.51E-07	2.15E-03	6.27E-02	1.57E-06	1.30E-02	2.35E-03	6.68E-04	2.44E-05	5.45E-04
Road 18	2300-0000	1,13E-02	1.52E-07	2.16E-03	6.29E-02	1.58E-06	1.60E-02	2.49E-03	6.71E-04	2.71E-05	5.98E-04
Road 19	0000-0100	1,06E-02	1.00E-02	9.00E-06	9.52E-04	6.64E-05	5.58E-07	5.87E-03	3.35E-03	2.24E-04	2.21E-05
Road 19	0100-0100	1,13E-02	6.42E-06	6.75E-04	6.64E-05	7.12E-07	3.97E-05	2.56E-05	1.45E-08	1.53E-08	1.66E-04
Road 19	0200-0200	1,22E-02	6.31E-06	6.54E-04	6.54E-05	7.01E-07	3.16E-05	2.22E-05	1.32E-08	1.39E-08	1.38E-04
Road 19	0300-0300	1,31E-02	4.38E-06	4.61E-04	7.21E-02	2.41E-07	2.54E-05	2.98E-05	1.90E-07	1.05E-07	1.08E-04
Road 19	0400-0400	1,39E-02	5.17E-06	5.43E-04	7.84E-02	2.76E-07	2.90E-05	3.18E-05	1.18E-08	1.34E-08	1.28E-04
Road 19	0500-0500	1,48E-02	5.17E-06	5.43E-04	7.84E-02	2.76E-07	2.90E-05	3.18E-05	1.18E-08	1.34E-08	1.28E-04
Road 19	0600-0600	1,57E-02	2.22E-07	2.33E-03	8.05E-02	1.41E-06	1.19E-03	3.60E-07	5.93E-08	5.33E-08	5.51E-07
Road 19	0700-0700	1,66E-02	4.88E-07	5.13E-03	8.45E-02	2.44E-06	2.56E-02	3.83E-03	1.10E-07	4.16E-07	1.29E-05
Road 19	0800-0800	1,68E-02	5.64E-07	5.92E-03	8.45E-02	2.70E-06	2.84E-02	3.86E-03	1.28E-07	4.34E-07	1.39E-05
Road 19	0900-0900	1,69E-02	5.91E-07	6.20E-03	8.50E-02	2.77E-06	2.97E-02	4.01E-03	1.31E-07	4.48E-07	1.44E-05
Road 19	1000-1000	1,26E-02	5.71E-07	6.01E-03	8.47E-02	2.56E-06	2.63E-02	3.94E-03	1.33E-07	4.51E-07	1.45E-05
Road 19	1100-1100	2,05E-02	5.13E-07	5.39E-03	8.29E-02	2.32E-06	2.44E-02	4.79E-02	1.20E-07	1.26E-07	3.05E-07
Road 19	1200-1200	2,72E-02	6.16E-07	6.51E-03	1.08E-02	2.46E-06	2.58E-02	6.34E-03	1.44E-07	1.53E-07	1.65E-05
Road 19	1300-1400	1,78E-02	6.76E-07	7.11E-03	1.14E-02	2.78E-06	2.93E-02	6.42E-03	1.56E-07	1.68E-07	1.76E-05
Road 19	1400-1500	2,78E-02	6.97E-07	7.33E-03	1.12E-02	2.80E-06	2.94E-02	6.49E-03	1.61E-07	1.69E-07	1.75E-05
Road 19	1500-1600	2,66E-02	6.43E-07	6.97E-03	1.12E-02	2.51E-06	3.04E-02	6.06E-03	1.57E-07	1.65E-07	1.76E-05
Road 19	1600-1700	2,44E-02	6.83E-07	7.18E-03	1.13E-02	2.78E-06	2.92E-02	6.11E-03	1.60E-07	1.68E-07	1.72E-05
Road 19	1700-1800	2,05E-02	5.51E-07	5.79E-03	9.68E-02	2.60E-06	2.74E-02	4.83E-03	1.30E-07	1.36E-07	1.41E-05
Road 19	1800-1900	1,84E-02	1.76E-07	1.86E-03	2.86E-02	1.17E-06	1.96E-04	3.07E-08	4.54E-08	3.87E-08	4.03E-08
Road 19	1900-2000	1,86E-02	1.91E-07	2.01E-03	3.06E-02	1.25E-06	2.16E-04	3.38E-03	5.00E-08	5.88E-08	6.10E-08
Road 19	2000-2100	1,86E-02	1.96E-07	2.06E-03	3.16E-02	1.26E-06	2.19E-04	3.48E-03	5.10E-08	5.99E-08	6.25E-08
Road 19	2100-2200	1,86E-02	1.91E-07	2.01E-03	3.06E-02	1.25E-06	2.16E-04	3.38E-03	5.00E-08	5.88E-08	6.10E-08
Road 19	2200-2300	1,77E-02	1.77E-07	1.87E-03	2.81E-02	1.18E-06	1.91E-04	3.15E-03	4.61E-08	5.17E-08	5.39E-08
Road 20	0000-0100	1,33E-02	8.45E-05	8.85E-04	2.30E-02	2.77E-07	2.53E-04	1.22E-08	6.76E-05	3.15E-05	8.55E-05
Road 20	0100-0100	1,40E-02	8.77E-05	7.81E-04	2.55E-02	2.70E-07	2.60E-04	1.38E-08	7.27E-05	3.30E-05	9.15E-05
Road 20	0200-0200	1,48E-02	8.45E-05	7.59E-04	2.60E-02	2.70E-07	2.60E-04	1.38E-08	7.27E-05	3.30E-05	9.15E-05
Road 20	0300-0300	1,56E-02	8.45E-05	7.59E-04	2.60E-02	2.70E-07	2.60E-04	1.38E-08	7.27E-05	3.30E-05	9.15E-05
Road 20	0400-0400	1,64E-02	8.45E-05	7.59E-04	2.60E-02	2.70E-07	2.60E-04	1.38E-08	7.27E-05	3.30E-05	9.15E-05
Road 20	0500-0500	1,72E-02	1.09E-07	7.34E-04	2.24E-02	3.11E-07	2.15E-04	1.16E-08	1.63E-08	1.04E-08	1.19E-04
Road 20	0600-0600	1,80E-02	1,17E-07	7.87E-04	2.27E-02	3.11E-07	2.15E-04	1.16E-08	1.63E-08	1.04E-08	1.19E-04
Road 20	0700-0700	1,88E-02	1,17E-07	7.87E-04	2.27E-02	3.11E-07	2.15E-04	1.16E-08	1.63E-08	1.04E-08	1.19E-04
Road 20	0800-0800	1,96E-02	1,17E-07	7.87E-04	2.27E-02	3.11E-07	2.15E-04	1.16E-08	1.63E-08	1.04E-08	1.19E-04
Road 20	0900-0900	1,96E-02	1,17E-07	7.87E-04	2.27E-02	3.11E-07	2.15E-04	1.16E-08	1.63E-08	1.04E-08	1.19E-04
Road 20	1000-1000	1,26E-02	1,17E-07	7.87E-04	2.27E-02	3.11E-07	2.15E-04	1.16E-08	1.63E-08	1.04E-08	1.19E-04
Road 20	1100-1100	2,05E-02	1,17E-07	7.87E-04	2.27E-02	3.11E-07	2.15E-04	1.16E-08	1.63E-08	1.04E-08	1.19E-04
Road 20	1200-1200	2,72E-02	1,17E-07	7.87E-04	2.27E-02	3.11E-07	2.15E-04	1.16E-08	1.63E-08	1.04E-08	1.19E-04
Road 20	1300-1400	1,78E-02	1,17E-07	7.87E-04	2.27E-02	3.11E-07	2.15E-04	1.16E-08	1.63E-08	1.04E-08	1.19E-04
Road 20	1400-1500	2,78E-02	1,17E-07	7.87E-04	2.27E-02	3.11E-07	2.15E-04	1.16E-08	1.63E-08	1.04E-08	1.19E-04
Road 20	1500-1600	2,66E-02	1,17E-07	7.87E-04	2.27E-02	3.11E-07	2.15E-04	1.16E-08	1.63E-08	1.04E-08	1.19E-04
Road 20	1600-1700	2,44E-02	1,17E-07	7.87E-04	2.27E-02	3.11E-07	2.15E-04	1.16E-08	1.63E-08	1.04E-08	1.19E-04
Road 20	1700-1800	2,05E-02	1,17E-07	7.87E-04	2.27E-02	3.11E-07	2.15E-04	1.16E-08	1.63E-08	1.04E-08	1.19E-04
Road 20	1800-1900	1,84E-02	1,17E-07	7.87E-04	2.27E-02	3.11E-07	2.15E-04	1.16E-08	1.63E-08	1.04E-08	1.19E-04
Road 20	1900-2000	1,86E-02	1,17E-07	7.87E-04	2.27E-02	3.11E-07	2.15E-04	1.16E-08	1.63E-08	1.04E-08	1.19E-04
Road 20	2000-2100	1,86E-02	1,17E-07	7.87E-04	2.27E-02	3.11E-07	2.15E-04	1.16E-08	1.63E-08	1.04E-08	1.19E-04
Road 20	2100-2200	1,86E-02	1,17E-07	7.87E-04	2.27E-02	3.11E-07	2.15E-04	1.16E-08	1.63E-08	1.04E-08	1.19E-04
Road 20	2200-2300	1,77E-02	1,17E-07	7.87E-04	2.27E-02	3.11E-07	2.15E-04	1.16E-08	1.63E-08	1.04E-08	1.19E-04
Road 21	0000-0100	1,33E-02	8.45E-05	8.85E-04	2.30E-02	2.77E-07	2.53E-04	1.22E-08	6.76E-05	3.15E-05	8.55E-05
Road 21	0100-0100	1,40E-02	8.77E-05	7.81E-04	2.55E-02	2.70E-07	2.60E-04	1.38E-08	7.27E-05	3.30E-05	9.15E-05
Road 21	0200-0200	1,48E-02	8.45E-05	7.59E-04	2.60E-02	2.70E-07	2.60E-04	1.38E-08	7.27E-05	3.30E-05	9.15E-05
Road 21	0300-0300	1,56E-02	8.45E-05	7.59E-04	2.60E-02	2.70E-07	2.60E-04	1.38E-08	7.27E-05	3.30E-05	9.15E-05
Road 21	0400-0400	1,64E-02	8.45E-05	7.59E-04	2.60E-02	2.70E-07	2.60E-04	1.38E-08	7.27E-05	3.30E-05	9.15E-05

I:\Secure\Environment Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.4 Emission Factor in 2038.xlsx

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L4: Fuel Consumption, Projected CO₂ Emissions, Other Fuel Models, Appendix Traffic Open Road, Appendix 3.5.4 Emission Factor in 2020, etc.

1.4 General Environment, Projects/60333301.1.01/Other/4id/Modelling/Appendix/Excell/Oper/Appendix 3 Emission Factor in 2019.xlsx

1.3 General Environment, Project(s) 607333201.1.01/Other/ Aid Modalities/Appendix/Exhibit/Appendix 3.5.4 Emission Factor in 2038.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open North Road Extension Quarry													
Open North Road Extension Quarry													
Year 2008													
Road Name	Road ID	Hour	Mo Enmission						Mo Enmission				
			Monthly/tonne		Monthly/tonne		Monthly/tonne		Monthly/tonne		Monthly/tonne		
			g/h/m ³	kg/h/m ³	tonnes/h/m ³	g/h/m ³	kg/h/m ³	tonnes/h/m ³	g/h/m ³	kg/h/m ³	tonnes/h/m ³	g/h/m ³	kg/h/m ³
Read 14	14	0800-0900	1.8212	0.1317	1.5511	0.4972	0.3447	1.4145	1.4141	0.1214	1.5817	1.2881	1.0611
Read 14	14	0900-1000	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	1000-1100	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	1100-1200	4.6711	0.3611	3.7811	1.2111	0.7111	2.1811	1.2211	0.7911	2.4911	2.4911	1.5011
Read 14	14	1200-1300	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	1300-1400	8.9911	0.6411	2.8111	0.2611	0.4911	1.4911	2.4911	0.1211	1.4911	2.4911	1.9111
Read 14	14	1400-1500	7.7111	0.5711	2.8111	0.2611	0.4911	1.4911	2.4911	0.1211	1.4911	2.4911	1.9111
Read 14	14	1500-1600	1.6811	0.1211	1.6811	0.1211	0.1211	1.6811	0.1211	0.1211	1.6811	0.1211	1.6811
Read 14	14	1600-1700	0.6711	0.0511	0.6711	0.0511	0.0511	0.6711	0.0511	0.0511	0.6711	0.0511	0.6711
Read 14	14	1700-1800	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	1800-1900	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	1900-2000	8.8311	0.6311	2.8111	0.2611	0.4911	1.4911	2.4911	0.1211	1.4911	2.4911	1.9111
Read 14	14	2000-2100	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	2100-2200	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	2200-2300	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	2300-2400	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	2400-2500	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	2500-2600	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	2600-2700	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	2700-2800	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	2800-2900	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	2900-3000	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	3000-3100	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	3100-3200	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	3200-3300	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	3300-3400	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	3400-3500	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	3500-3600	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	3600-3700	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	3700-3800	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	3800-3900	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	3900-4000	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	4000-4100	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	4100-4200	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	4200-4300	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	4300-4400	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	4400-4500	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	4500-4600	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	4600-4700	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	4700-4800	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	4800-4900	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	4900-5000	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	5000-5100	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	5100-5200	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	5200-5300	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	5300-5400	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	5400-5500	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	5500-5600	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	5600-5700	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	5700-5800	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	5800-5900	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	5900-6000	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	6000-6100	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	6100-6200	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	6200-6300	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	6300-6400	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	6400-6500	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	6500-6600	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	6600-6700	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	6700-6800	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	6800-6900	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	6900-7000	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	7000-7100	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	7100-7200	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	7200-7300	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	7300-7400	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	7400-7500	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	7500-7600	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	7600-7700	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	7700-7800	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	7800-7900	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	7900-8000	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	8000-8100	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	8100-8200	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	8200-8300	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	8300-8400	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	8400-8500	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811	1.3811	0.1211	1.5111	1.5411	1.2411
Read 14	14	8500-8600	2.5441	0.1841	2.1141	0.6911	0.4911	1.3811					

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Pit North of Henderson Quarry									
Year 2038									
Road Name	Lane ID	Hour	Monthly Production			N/A Emission			Monthly
			g/t/acre	g/t/acre	g/t/acre	t/acre	t/acre	t/acre	
Road 21	21	0000-0100	1.386	0.92	8.911	1.316	0.124	0.20	
	21	0100-0200	1.396	0.92	8.911	1.306	0.125	0.20	
Road 21	21	0300-0400	1.572	0.85	8.888	1.744	0.17	1.34	
	21	0400-0500	1.572	0.85	8.888	1.744	0.17	1.34	
Road 21	21	0500-0600	1.888	0.82	1.047	1.388	0.186	0.20	
	21	0600-0700	1.888	0.82	1.047	1.388	0.186	0.20	
Road 21	21	0800-0900	2.166	0.78	2.166	0.77	0.20	1.60	
	21	0900-1000	2.166	0.78	2.166	0.77	0.20	1.60	
Road 21	21	1000-1100	2.746	0.62	2.746	0.64	0.886	2.516	0.20
	21	1100-1200	2.746	0.62	2.746	0.64	0.886	2.516	0.20
Road 21	21	1200-1300	3.166	0.65	6.457	0.77	0.33	2.886	0.20
	21	1300-1400	3.306	0.71	7.127	0.936	0.286	3.086	0.20
Road 21	21	1400-1500	3.306	0.71	7.127	0.936	0.286	3.086	0.20
	21	1500-1600	1.146	0.77	7.277	0.716	0.20	2.866	0.20
Road 21	21	1600-1700	1.146	0.77	7.277	0.716	0.20	2.866	0.20
	21	1700-1800	2.446	0.76	1.977	8.376	0.776	2.796	0.20
Road 21	21	1800-1900	1.866	0.82	4.937	0.77	0.20	1.666	0.20
	21	1900-2000	1.866	0.82	4.937	0.77	0.20	1.666	0.20
Road 21	21	2000-2100	1.506	0.87	1.977	2.476	0.346	1.146	0.20
	21	2100-2200	1.506	0.87	1.977	2.476	0.346	1.146	0.20
Road 21	21	2200-2300	1.506	0.87	1.977	2.476	0.346	1.146	0.20
	21	2300-2400	1.506	0.87	1.977	2.476	0.346	1.146	0.20
Road 22	22	0000-0100	1.446	0.82	1.566	0.786	0.176	0.476	0.20
	22	0100-0200	1.446	0.82	1.566	0.786	0.176	0.476	0.20
Road 22	22	0300-0400	1.306	1.14	1.976	1.976	1.776	0.20	
	22	0400-0500	1.306	1.14	1.976	1.976	1.776	0.20	
Road 22	22	0500-0600	1.296	1.14	1.976	1.976	1.776	0.20	
	22	0600-0700	1.306	1.14	1.976	1.976	1.776	0.20	
Road 22	22	0800-0900	1.416	0.77	1.977	2.746	0.20	1.776	0.20
	22	0900-1000	1.416	0.77	1.977	2.746	0.20	1.776	0.20
Road 22	22	1000-1100	1.886	0.82	1.436	0.26	1.756	0.20	
	22	1100-1200	1.886	0.82	1.436	0.26	1.756	0.20	
Road 22	22	1200-1300	2.026	0.84	1.976	2.906	1.846	0.20	
	22	1300-1400	2.026	0.84	1.976	2.906	1.846	0.20	
Road 22	22	1400-1500	2.026	0.84	1.976	2.906	1.846	0.20	
	22	1500-1600	1.976	0.82	1.976	2.726	1.776	0.20	
Road 22	22	1600-1700	1.976	0.82	1.976	2.726	1.776	0.20	
	22	1700-1800	1.976	0.82	1.976	2.726	1.776	0.20	
Road 22	22	1800-1900	1.116	0.90	0.727	1.376	1.776	0.20	
	22	1900-2000	1.116	0.90	0.727	1.376	1.776	0.20	
Road 22	22	2000-2100	1.216	0.88	0.727	1.626	1.116	0.20	
	22	2100-2200	1.216	0.88	0.727	1.626	1.116	0.20	
Road 22	22	2200-2300	1.296	0.84	0.727	1.626	1.086	0.20	
	22	2300-2400	1.296	0.84	0.727	1.626	1.086	0.20	
Road 23	23	0000-0100	1.306	0.90	2.707	0.826	0.176	0.476	0.20
	23	0100-0200	1.276	0.96	2.686	0.846	0.146	0.446	0.20
Road 23	23	0300-0400	1.296	0.88	2.686	0.846	0.176	0.476	0.20
	23	0400-0500	1.296	0.88	2.686	0.846	0.176	0.476	0.20
Road 23	23	0500-0600	1.146	0.90	2.026	0.786	0.276	1.206	0.20
	23	0600-0700	1.116	0.91	2.026	0.886	0.256	1.206	0.20
Road 23	23	0700-0800	1.436	0.88	2.376	0.886	0.176	0.476	0.20
	23	0800-0900	1.426	0.91	2.376	0.886	0.176	0.476	0.20
Road 23	23	0900-1000	1.546	0.88	2.886	0.936	0.256	1.456	0.20
	23	1000-1100	1.546	0.88	2.886	0.936	0.256	1.456	0.20
Road 23	23	1100-1200	1.866	0.88	3.386	1.036	0.406	1.836	0.20
	23	1200-1300	1.786	0.88	3.286	0.976	0.406	1.806	0.20
Road 23	23	1300-1400	1.786	0.88	3.286	0.976	0.406	1.806	0.20
	23	1400-1500	1.746	0.91	3.286	0.976	0.406	1.806	0.20
Road 23	23	1500-1600	1.746	0.91	3.286	0.976	0.406	1.806	0.20
	23	1600-1700	1.746	0.91	3.286	0.976	0.406	1.806	0.20
Road 23	23	1700-1800	1.456	0.84	2.886	0.746	0.446	1.316	0.20
	23	1800-1900	1.456	0.84	2.886	0.746	0.446	1.316	0.20
Road 23	23	1900-2000	1.146	0.87	1.886	0.646	0.446	1.056	0.20
	23	2000-2100	1.116	0.88	1.886	0.646	0.446	1.056	0.20
Road 23	23	2100-2200	1.216	0.88	1.886	0.646	0.446	1.056	0.20
	23	2200-2300	1.286	0.86	1.886	0.646	0.446	1.056	0.20
Road 23	23	2300-2400	1.286	0.86	1.886	0.646	0.446	1.056	0.20
	23	2400-0100	1.116	0.90	1.886	0.536	0.396	0.906	0.20
Road 24	24	0000-0100	1.116	0.90	1.886	0.536	0.396	0.906	0.20
	24	0100-0200	1.116	0.90	1.886	0.536	0.396	0.906	0.20
Road 24	24	0300-0400	1.146	0.93	2.256	0.536	0.396	0.906	0.20
	24	0400-0500	1.146	0.93	2.256	0.536	0.396	0.906	0.20
Road 24	24	0500-0600	1.146	0.94	2.256	0.536	0.396	0.906	0.20
	24	0600-0700	1.146	0.94	2.256	0.536	0.396	0.906	0.20

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Open Top North Underlain Quarry						
Open Top North Underlain Factors for						
ARMSAD model (hourly)						
		Year 2038		NO _x Emission		
Route Number	Route ID	Hourly	g/min/hr	lb/min/hr	g/min/hr	lb/min/hr
Route 24	24	0800-0900	1.588	3.064	7.662	1.452
Route 24	24	0900-1000	1.588	3.064	8.666	1.632
Route 24	24	1000-1100	1.588	3.064	9.669	1.812
Route 24	24	1100-1200	1.696	3.397	8.512	1.548
Route 24	24	1200-1300	1.696	3.397	9.515	1.728
Route 24	24	1300-1400	1.696	3.397	1.016	0.161
Route 24	24	1400-1500	1.696	3.397	1.016	0.161
Route 24	24	1500-1600	1.696	3.397	1.016	0.161
Route 24	24	1600-1700	1.688	3.342	9.316	1.527
Route 24	24	1700-1800	1.688	3.342	1.016	0.161
Route 24	24	1800-1900	1.796	3.574	4.046	0.761
Route 24	24	1900-2000	1.796	3.574	1.016	0.161
Route 24	24	2000-2100	1.588	3.064	2.075	0.391
Route 24	24	2100-2200	1.176	2.308	2.116	0.397
Route 24	24	2200-2300	1.176	2.308	1.016	0.161
Route 25	25	0800-0900	1.344	2.598	8.436	1.583
Route 25	25	0900-1000	1.344	2.598	8.436	1.583
Route 25	25	1000-1100	1.344	2.598	8.436	1.583
Route 25	25	1100-1200	1.344	2.598	8.436	1.583
Route 25	25	1200-1300	1.344	2.598	8.436	1.583
Route 25	25	1300-1400	1.344	2.598	8.436	1.583
Route 25	25	1400-1500	1.344	2.598	8.436	1.583
Route 25	25	1500-1600	1.344	2.598	8.436	1.583
Route 25	25	1600-1700	1.344	2.598	8.436	1.583
Route 25	25	1700-1800	1.344	2.598	8.436	1.583
Route 25	25	1800-1900	1.344	2.598	8.436	1.583
Route 25	25	1900-2000	1.344	2.598	8.436	1.583
Route 25	25	2000-2100	1.344	2.598	8.436	1.583
Route 25	25	2100-2200	1.344	2.598	8.436	1.583
Route 25	25	2200-2300	1.344	2.598	8.436	1.583
Route 25	25	2300-2400	1.344	2.598	8.436	1.583
Route 26	26	0800-0900	1.332	2.578	8.436	1.583
Route 26	26	0900-1000	1.332	2.578	8.436	1.583
Route 26	26	1000-1100	1.332	2.578	8.436	1.583
Route 26	26	1100-1200	1.332	2.578	8.436	1.583
Route 26	26	1200-1300	1.332	2.578	8.436	1.583
Route 26	26	1300-1400	1.332	2.578	8.436	1.583
Route 26	26	1400-1500	1.332	2.578	8.436	1.583
Route 26	26	1500-1600	1.332	2.578	8.436	1.583
Route 26	26	1600-1700	1.332	2.578	8.436	1.583
Route 26	26	1700-1800	1.458	3.053	4.454	0.832
Route 26	26	1800-1900	1.223	2.433	8.836	1.608
Route 26	26	1900-2000	1.223	2.433	1.239	0.230
Route 26	26	2000-2100	1.076	2.105	4.316	0.826
Route 26	26	2100-2200	1.076	2.105	1.016	0.161
Route 26	26	2200-2300	1.198	2.347	1.437	0.270
Route 26	26	2300-2400	1.176	2.308	1.016	0.161
Route 27	27	0800-0900	1.296	2.556	8.906	1.661
Route 27	27	0900-1000	1.296	2.556	8.906	1.661
Route 27	27	1000-1100	1.296	2.556	8.906	1.661
Route 27	27	1100-1200	1.296	2.556	8.906	1.661
Route 27	27	1200-1300	1.296	2.556	8.906	1.661
Route 27	27	1300-1400	1.296	2.556	8.906	1.661
Route 27	27	1400-1500	1.296	2.556	8.906	1.661
Route 27	27	1500-1600	1.296	2.556	8.906	1.661
Route 27	27	1600-1700	1.296	2.556	8.906	1.661
Route 27	27	1700-1800	1.296	2.556	8.906	1.661
Route 27	27	1800-1900	1.296	2.556	8.906	1.661
Route 27	27	1900-2000	1.296	2.556	8.906	1.661
Route 27	27	2000-2100	1.296	2.556	8.906	1.661
Route 27	27	2100-2200	1.296	2.556	8.906	1.661
Route 27	27	2200-2300	1.296	2.556	8.906	1.661
Route 27	27	2300-2400	1.296	2.556	8.906	1.661

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Road Northbound Underpass													
Year 2038													
Route Name	Band	Road ID	Hour	NO. Emission				NO. Emission					
				Monthly/Average		Monthly/Average		Monthly/Average		Monthly/Average			
Route 27	27	16000-1200	1.785	4.138	1.405	1.056	1.247	1.568	3.435	1.188	0.968	1.576	1.411
Route 27	27	16000-1200	1.565	3.609	1.121	1.185	1.405	1.324	3.947	1.238	1.431	1.591	1.296
Route 27	27	16000-1200	1.385	3.060	0.954	1.056	1.185	1.324	3.947	1.238	1.431	1.591	1.296
Route 27	27	19000-2000	1.285	1.132	4.057	1.072	1.185	1.196	4.071	1.271	4.164	4.581	4.721
Route 27	27	19000-2000	1.405	1.434	4.057	1.124	1.056	1.247	3.947	1.238	1.431	4.581	4.721
Route 27	27	19000-2000	1.585	1.665	4.057	1.185	1.185	1.324	3.947	1.238	1.431	4.581	4.721
Route 27	27	22000-2300	1.344	9.832	3.038	1.072	1.185	1.896	2.464	4.854	3.071	4.188	4.831
Route 27	27	22000-2300	1.364	9.832	3.038	1.072	1.185	1.896	2.464	4.854	3.071	4.188	4.831
Route 27	27	22000-2300	1.384	9.832	3.038	1.072	1.185	1.896	2.464	4.854	3.071	4.188	4.831
Route 28	28	20000-1000	1.088	1.144	4.078	9.331	0.511	1.179	8.884	8.244	1.341	4.521	1.301
Route 28	28	20000-1000	1.108	1.144	4.078	9.331	0.511	1.179	8.884	8.244	1.341	4.521	1.301
Route 28	28	20000-1000	1.128	1.144	4.078	9.331	0.511	1.179	8.884	8.244	1.341	4.521	1.301
Route 28	28	23000-1100	1.232	6.348	1.005	1.056	1.185	1.324	3.251	4.071	5.381	2.779	1.571
Route 28	28	23000-1100	1.252	6.348	1.005	1.056	1.185	1.324	3.251	4.071	5.381	2.779	1.571
Route 28	28	23000-1100	1.272	6.348	1.005	1.056	1.185	1.324	3.251	4.071	5.381	2.779	1.571
Route 28	28	26000-1600	1.462	1.176	6.626	1.056	1.185	1.324	5.976	5.456	1.154	5.941	4.741
Route 28	28	26000-1600	1.482	1.176	6.626	1.056	1.185	1.324	5.976	5.456	1.154	5.941	4.741
Route 28	28	26000-1600	1.502	1.176	6.626	1.056	1.185	1.324	5.976	5.456	1.154	5.941	4.741
Route 28	28	29000-1800	1.582	5.595	1.375	1.445	1.511	2.065	1.718	2.521	4.381	6.131	2.311
Route 28	28	29000-1800	1.602	5.595	1.375	1.445	1.511	2.065	1.718	2.521	4.381	6.131	2.311
Route 28	28	29000-1800	1.622	5.595	1.375	1.445	1.511	2.065	1.718	2.521	4.381	6.131	2.311
Route 28	28	32000-1900	1.642	6.281	1.564	1.411	1.575	2.321	1.762	2.576	5.171	6.241	2.404
Route 28	28	32000-1900	1.662	6.281	1.564	1.411	1.575	2.321	1.762	2.576	5.171	6.241	2.404
Route 28	28	32000-1900	1.682	6.281	1.564	1.411	1.575	2.321	1.762	2.576	5.171	6.241	2.404
Route 28	28	35000-2000	1.999	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	35000-2000	2.019	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	35000-2000	2.039	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	38000-2	2.119	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	38000-2	2.139	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	38000-2	2.159	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	41000-3	2.239	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	41000-3	2.259	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	41000-3	2.279	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	44000-4	2.359	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	44000-4	2.379	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	44000-4	2.399	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	47000-5	2.479	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	47000-5	2.499	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	47000-5	2.519	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	50000-6	2.599	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	50000-6	2.619	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	50000-6	2.639	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	53000-7	2.719	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	53000-7	2.739	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	53000-7	2.759	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	56000-8	2.839	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	56000-8	2.859	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	56000-8	2.879	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	59000-9	2.959	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	59000-9	2.979	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	59000-9	2.999	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	62000-10	3.079	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	62000-10	3.099	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	62000-10	3.119	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	65000-11	3.199	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	65000-11	3.219	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	65000-11	3.239	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	68000-12	3.319	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	68000-12	3.339	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	68000-12	3.359	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	71000-13	3.439	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	71000-13	3.459	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	71000-13	3.479	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	74000-14	3.559	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	74000-14	3.579	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	74000-14	3.599	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	77000-15	3.679	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	77000-15	3.699	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	77000-15	3.719	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	80000-16	3.799	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	80000-16	3.819	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	80000-16	3.839	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	83000-17	3.919	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	83000-17	3.939	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	83000-17	3.959	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	86000-18	4.039	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	86000-18	4.059	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	86000-18	4.079	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	89000-19	4.159	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	89000-19	4.179	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	89000-19	4.199	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	92000-20	4.279	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	92000-20	4.299	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	92000-20	4.319	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	95000-21	4.399	6.441	1.605	1.811	1.621	2.311	1.762	2.576	5.171	2.301	1.301
Route 28	28	95000-21	4.419	6.									

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Road Northbound Underway												
Q1 2024 Top 10 Hour Emission Factors for AASHRAE model (Round 2)												
Road Name	Event ID	Hour	NO _x Emission					PM ₁₀ Emission				
			Monthly/Ton/km		Monthly/Ton/km		Monthly/Ton/km		Monthly/Ton/km			
Road #1	41	0000:00:00	1.55E+02	2.73E+01	2.60E+01	2.77E+01	2.46E+01	2.70E+01	7.95E+03	1.31E+03	5.61E+02	1.38E+07
Road #1	41	0000:01:00	1.57E+02	2.74E+01	2.60E+01	2.77E+01	2.23E+01	2.60E+01	7.94E+03	8.87E+02	6.42E+02	7.94E+05
Road #1	41	0000:02:00	2.34E+02	2.74E+01	2.60E+01	2.77E+01	2.23E+01	2.60E+01	7.94E+03	8.87E+02	6.42E+02	7.94E+05
Road #1	41	0000:03:00	2.72E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:04:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:05:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:06:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:07:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:08:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:09:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:10:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:11:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:12:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:13:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:14:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:15:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:16:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:17:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:18:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:19:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:20:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:21:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:22:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:23:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:24:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:25:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:26:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:27:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:28:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:29:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:30:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:31:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:32:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:33:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:34:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:35:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:36:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:37:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:38:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:39:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:40:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:41:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:42:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:43:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:44:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:45:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:46:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:47:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:48:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:49:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:50:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:51:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:52:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:53:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:54:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:55:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:56:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:57:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:58:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:59:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:00:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:01:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:02:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:03:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:04:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:05:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:06:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:07:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:08:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:09:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:10:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:11:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:12:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:13:00	2.66E+02	2.20E+01	2.06E+01	2.47E+02	1.97E+01	1.84E+01	8.81E+02	7.10E+08	6.69E+07	7.61E+02
Road #1	41	0000:14:00	2.66E+02	2.20E+01	2.06							

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Open Road\Appendix 3.5.4 Emission Factor in 2038.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open 24 hr Underground Quarry						
Tape Run 24 hour Emission Factors for						
ARMEDD model (January)						
				Year 2038		
Route name	Route ID	hour	Monthly tonnage	CO ₂ emissions	NO _x emissions	PM ₁₀ emissions
Route 34	0000-0000	1	1,086.02	1,415.1	7.475	0.944
Route 34	0000-0000	2	1,236.0	1,617.6	8.079	1.124
Route 34	1000-1000	1	1,396.0	1,812.7	8.804	1.256
Route 34	1100-1200	1	1,346.02	1,748.07	8.422	1.202
Route 34	1200-1300	1	1,236.0	1,617.6	8.079	1.124
Route 34	1300-1400	1	1,176.0	1,537.5	7.654	1.056
Route 34	1400-1500	1	1,176.0	1,537.5	7.654	1.056
Route 34	1500-1600	1	1,216.0	1,587.7	8.026	1.082
Route 34	1600-1700	1	1,216.0	1,587.7	8.026	1.082
Route 34	1700-1800	1	1,386.0	1,799.7	8.926	1.238
Route 34	1800-1900	1	1,296.0	1,668.0	8.364	1.074
Route 34	1900-2000	1	1,156.0	1,491.7	7.554	0.942
Route 34	2000-2100	1	1,176.02	1,537.58	7.654	1.016
Route 34	2100-2200	1	1,176.02	1,537.58	7.654	1.016
Route 34	2200-2300	1	1,256.0	1,628.8	8.216	1.124
Route 35	0000-0000	1	1,816.0	2,388.0	12.097	1.386
Route 35	0000-0000	2	1,776.0	2,326.07	11.648	1.342
Route 35	0000-0000	3	1,586.0	2,088.0	10.478	1.202
Route 35	0000-0000	4	1,586.0	2,088.0	10.478	1.202
Route 35	0000-0000	5	1,696.0	2,212.8	11.338	1.268
Route 35	0000-0000	6	1,856.0	2,424.8	12.418	1.376
Route 35	0000-0000	7	1,796.0	2,344.7	11.978	1.332
Route 35	0000-0000	8	1,406.0	1,827.1	9.276	1.096
Route 35	0000-0000	9	1,206.0	1,567.0	7.956	0.962
Route 35	0000-0000	10	1,486.0	1,936.0	10.526	1.206
Route 35	1000-1100	1	1,258.0	1,631.1	8.131	1.076
Route 35	1100-1200	1	1,316.0	1,716.07	8.548	1.096
Route 35	1200-1300	1	1,266.0	1,646.07	8.076	1.076
Route 35	1300-1400	1	1,316.0	1,716.07	8.548	1.106
Route 35	1400-1500	1	1,266.0	1,646.07	8.076	1.076
Route 35	1500-1600	1	1,316.0	1,716.07	8.548	1.106
Route 35	1600-1700	1	1,266.0	1,646.07	8.076	1.076
Route 35	1700-1800	1	1,316.0	1,716.07	8.548	1.106
Route 35	1800-1900	1	1,266.0	1,646.07	8.076	1.076
Route 35	1900-2000	1	1,316.0	1,716.07	8.548	1.106
Route 35	2000-2100	1	1,266.0	1,646.07	8.076	1.076
Route 35	2100-2200	1	1,316.0	1,716.07	8.548	1.106
Route 35	2200-2300	1	1,086.0	1,436.08	7.076	0.926
Route 35	2300-2400	1	1,086.0	1,436.08	7.076	0.926
Route 36	0000-0000	1	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	2	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	3	1,726.0	2,216.07	11.216	1.416
Route 36	0000-0000	4	1,086.0	1,436.08	7.076	0.926
Route 36	0000-0000	5	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	6	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	7	1,726.0	2,216.07	11.216	1.416
Route 36	0000-0000	8	1,086.0	1,436.08	7.076	0.926
Route 36	0000-0000	9	1,486.02	1,946.	10.076	1.246
Route 36	0000-0000	10	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	11	1,726.0	2,216.07	11.216	1.416
Route 36	0000-0000	12	1,086.0	1,436.08	7.076	0.926
Route 36	0000-0000	13	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	14	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	15	1,726.0	2,216.07	11.216	1.416
Route 36	0000-0000	16	1,086.0	1,436.08	7.076	0.926
Route 36	0000-0000	17	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	18	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	19	1,726.0	2,216.07	11.216	1.416
Route 36	0000-0000	20	1,086.0	1,436.08	7.076	0.926
Route 36	0000-0000	21	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	22	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	23	1,726.0	2,216.07	11.216	1.416
Route 36	0000-0000	24	1,086.0	1,436.08	7.076	0.926
Route 36	0000-0000	25	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	26	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	27	1,726.0	2,216.07	11.216	1.416
Route 36	0000-0000	28	1,086.0	1,436.08	7.076	0.926
Route 36	0000-0000	29	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	30	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	31	1,726.0	2,216.07	11.216	1.416
Route 36	0000-0000	32	1,086.0	1,436.08	7.076	0.926
Route 36	0000-0000	33	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	34	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	35	1,726.0	2,216.07	11.216	1.416
Route 36	0000-0000	36	1,086.0	1,436.08	7.076	0.926
Route 36	0000-0000	37	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	38	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	39	1,726.0	2,216.07	11.216	1.416
Route 36	0000-0000	40	1,086.0	1,436.08	7.076	0.926
Route 36	0000-0000	41	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	42	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	43	1,726.0	2,216.07	11.216	1.416
Route 36	0000-0000	44	1,086.0	1,436.08	7.076	0.926
Route 36	0000-0000	45	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	46	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	47	1,726.0	2,216.07	11.216	1.416
Route 36	0000-0000	48	1,086.0	1,436.08	7.076	0.926
Route 36	0000-0000	49	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	50	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	51	1,726.0	2,216.07	11.216	1.416
Route 36	0000-0000	52	1,086.0	1,436.08	7.076	0.926
Route 36	0000-0000	53	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	54	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	55	1,726.0	2,216.07	11.216	1.416
Route 36	0000-0000	56	1,086.0	1,436.08	7.076	0.926
Route 36	0000-0000	57	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	58	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	59	1,726.0	2,216.07	11.216	1.416
Route 36	0000-0000	60	1,086.0	1,436.08	7.076	0.926
Route 36	0000-0000	61	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	62	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	63	1,726.0	2,216.07	11.216	1.416
Route 36	0000-0000	64	1,086.0	1,436.08	7.076	0.926
Route 36	0000-0000	65	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	66	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	67	1,726.0	2,216.07	11.216	1.416
Route 36	0000-0000	68	1,086.0	1,436.08	7.076	0.926
Route 36	0000-0000	69	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	70	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	71	1,726.0	2,216.07	11.216	1.416
Route 36	0000-0000	72	1,086.0	1,436.08	7.076	0.926
Route 36	0000-0000	73	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	74	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	75	1,726.0	2,216.07	11.216	1.416
Route 36	0000-0000	76	1,086.0	1,436.08	7.076	0.926
Route 36	0000-0000	77	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	78	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	79	1,726.0	2,216.07	11.216	1.416
Route 36	0000-0000	80	1,086.0	1,436.08	7.076	0.926
Route 36	0000-0000	81	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	82	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	83	1,726.0	2,216.07	11.216	1.416
Route 36	0000-0000	84	1,086.0	1,436.08	7.076	0.926
Route 36	0000-0000	85	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	86	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	87	1,726.0	2,216.07	11.216	1.416
Route 36	0000-0000	88	1,086.0	1,436.08	7.076	0.926
Route 36	0000-0000	89	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	90	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	91	1,726.0	2,216.07	11.216	1.416
Route 36	0000-0000	92	1,086.0	1,436.08	7.076	0.926
Route 36	0000-0000	93	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	94	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	95	1,726.0	2,216.07	11.216	1.416
Route 36	0000-0000	96	1,086.0	1,436.08	7.076	0.926
Route 36	0000-0000	97	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	98	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	99	1,726.0	2,216.07	11.216	1.416
Route 36	0000-0000	100	1,086.0	1,436.08	7.076	0.926
Route 36	0000-0000	101	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	102	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	103	1,726.0	2,216.07	11.216	1.416
Route 36	0000-0000	104	1,086.0	1,436.08	7.076	0.926
Route 36	0000-0000	105	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	106	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	107	1,726.0	2,216.07	11.216	1.416
Route 36	0000-0000	108	1,086.0	1,436.08	7.076	0.926
Route 36	0000-0000	109	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	110	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	111	1,726.0	2,216.07	11.216	1.416
Route 36	0000-0000	112	1,086.0	1,436.08	7.076	0.926
Route 36	0000-0000	113	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	114	1,486.02	1,946.1	10.076	1.246
Route 36	0000-0000	115	1,726.0	2,216.07	11.216	1.416
Route 36						

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.4 Emission Factor in 2038.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open W North Underground Quarry						
Total 2024 Hour Emulsion Factors for						
ARMCO Model (Summary)						
				Year 2028		
Average	Route Name	Route ID	Hour	Monthly/Quarterly		
1.232E-05	Route 37	37	18001-18000	7.077E-03	1.18E-06	
2.915E-05	Route 37	37	1700-18000	6.026E-02	5.09E-06	
2.915E-05	Route 37	37	18000-18000	6.026E-02	5.09E-06	
2.915E-05	Route 37	37	1900-20000	1.432E-02	4.74E-09	
2.777E-05	Route 37	37	20000-21000	4.496E-02	3.97E-09	
2.777E-05	Route 37	37	21000-22000	4.496E-02	3.97E-09	
3.062E-05	Route 37	37	22000-23000	3.366E-02	3.37E-09	
3.062E-05	Route 37	37	23000-24000	3.366E-02	3.37E-09	
3.077E-05	Route 38	38	18000-18000	4.916E-02	4.76E-06	
3.077E-05	Route 38	38	18000-18000	4.916E-02	4.76E-06	
2.311E-05	Route 38	38	0000-0000	4.621E-02	2.72E-06	
1.485E-05	Route 38	38	0300-0400	4.862E-02	3.28E-06	
1.485E-05	Route 38	38	0400-0500	4.862E-02	3.28E-06	
1.363E-05	Route 38	38	0500-0600	5.512E-02	5.12E-06	
1.363E-05	Route 38	38	0600-0700	5.512E-02	5.12E-06	
1.045E-05	Route 38	38	0700-0800	6.353E-02	2.63E-07	
2.999E-07	Route 38	38	0800-0900	6.436E-02	3.33E-07	
1.415E-07	Route 38	38	0900-1000	7.448E-02	3.28E-06	
2.303E-07	Route 38	38	1000-1100	8.912E-02	3.27E-07	
2.303E-07	Route 38	38	1100-1200	8.912E-02	3.27E-07	
2.303E-07	Route 38	38	1200-1300	1.133E-02	2.00E-07	
2.915E-07	Route 38	38	1300-1400	1.331E-02	2.31E-07	
1.415E-07	Route 38	38	1400-1500	1.331E-02	2.31E-07	
1.415E-07	Route 38	38	1500-1600	1.331E-02	2.31E-07	
1.415E-07	Route 38	38	1600-1700	1.331E-02	2.31E-07	
1.415E-07	Route 38	38	1700-1800	1.075E-02	2.00E-07	
1.415E-07	Route 38	38	1800-1900	8.881E-02	3.33E-07	
1.415E-07	Route 38	38	1900-2000	7.783E-02	3.28E-06	
1.415E-07	Route 38	38	2000-2100	7.783E-02	3.28E-06	
1.015E-06	Route 38	38	2200-2300	3.731E-02	5.70E-08	
1.021E-06	Route 38	38	2300-2400	7.863E-02	4.75E-08	
1.021E-06	Route 39	39	0000-0000	1.113E-02	2.12E-07	
1.944E-07	Route 39	39	0100-0200	1.038E-02	1.88E-08	
1.944E-07	Route 39	39	0200-0300	1.038E-02	1.88E-08	
1.944E-07	Route 39	39	0300-0400	1.038E-02	1.88E-08	
1.944E-07	Route 39	39	0400-0500	1.038E-02	1.88E-08	
1.944E-07	Route 39	39	0500-0600	1.038E-02	1.88E-08	
1.944E-07	Route 39	39	0600-0700	1.038E-02	1.88E-08	
1.944E-07	Route 39	39	0700-0800	1.038E-02	1.88E-08	
1.944E-07	Route 39	39	0800-0900	1.038E-02	1.88E-08	
1.944E-07	Route 39	39	0900-1000	1.038E-02	1.88E-08	
1.944E-07	Route 39	39	1000-1100	1.038E-02	1.88E-08	
1.944E-07	Route 39	39	1100-1200	1.038E-02	1.88E-08	
1.944E-07	Route 39	39	1200-1300	1.038E-02	1.88E-08	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open W North Underdown Quarry						
Total Road 24 Hour Emission Factors for						
AEM10C Model (Summary)						
			Year 2038			
Average	Road Name	Road ID	Hour	g/hour/m ²	Monthly/t/yr	g/hour/m ²
6.97E-05	Road S1	S1	0000-0000	6.12E-01	1.04E-04	6.12E-01
5.89E-05	Road S1	S1	0100-0200	6.63E-03	3.36E-08	6.63E-03
5.89E-05	Road S1	S1	0200-0300	6.63E-03	3.36E-08	6.63E-03
3.67E-05	Road S1	S1	0300-0400	7.78E-03	2.40E-08	7.78E-03
2.94E-05	Road S1	S1	0400-0500	8.86E-03	2.82E-08	8.86E-03
2.94E-05	Road S1	S1	0500-0600	8.86E-03	2.82E-08	8.86E-03
2.63E-05	Road S1	S1	0600-0700	9.47E-03	1.38E-07	9.47E-03
1.74E-05	Road S1	S1	0700-0800	1.11E-02	1.14E-07	1.11E-02
2.24E-05	Road S1	S1	0800-0900	1.24E-02	9.74E-08	1.24E-02
2.24E-05	Road S1	S1	0900-1000	1.24E-02	9.74E-08	1.24E-02
2.73E-05	Road S1	S1	1000-1100	1.15E-02	2.42E-07	1.15E-02
2.22E-05	Road S1	S1	1100-1200	1.14E-02	2.38E-07	1.14E-02
1.74E-05	Road S1	S1	1200-1300	1.11E-02	1.14E-07	1.11E-02
4.48E-06	Road S1	S1	1300-1400	2.17E-02	1.63E-07	2.17E-02
1.40E-05	Road S1	S1	1400-1500	1.40E-02	1.40E-07	1.40E-02
2.07E-05	Road S1	S1	1500-1600	1.64E-02	3.64E-07	1.64E-02
2.12E-05	Road S1	S1	1600-1700	2.09E-02	4.65E-07	2.09E-02
1.74E-05	Road S1	S1	1700-1800	1.11E-02	1.14E-07	1.11E-02
1.74E-05	Road S1	S1	1800-1900	1.11E-02	1.14E-07	1.11E-02
1.74E-05	Road S1	S1	1900-2000	1.11E-02	1.14E-07	1.11E-02
1.95E-05	Road S1	S1	2000-2100	1.16E-02	3.31E-07	1.16E-02
1.95E-05	Road S1	S1	2100-2200	1.16E-02	3.31E-07	1.16E-02
2.04E-05	Road S1	S1	2200-2300	1.18E-02	1.06E-07	1.18E-02
2.04E-05	Road S1	S1	2300-0000	1.18E-02	1.06E-07	1.18E-02
1.95E-05	Road S2	S2	0000-0100	9.50E-03	2.18E-08	9.50E-03
1.95E-05	Road S2	S2	0100-0200	9.50E-03	2.18E-08	9.50E-03
9.93E-06	Road S2	S2	0200-0300	5.96E-03	1.47E-08	5.96E-03
1.05E-05	Road S2	S2	0300-0400	6.59E-03	1.44E-08	6.59E-03
8.76E-06	Road S2	S2	0400-0500	6.83E-03	1.70E-08	6.83E-03
8.76E-06	Road S2	S2	0500-0600	6.83E-03	1.70E-08	6.83E-03
6.87E-06	Road S2	S2	0600-0700	9.63E-03	7.62E-08	9.63E-03
6.87E-06	Road S2	S2	0700-0800	9.63E-03	7.62E-08	9.63E-03
6.87E-06	Road S2	S2	0800-0900	9.63E-03	7.62E-08	9.63E-03
6.86E-06	Road S2	S2	0900-1000	9.63E-03	2.44E-07	9.63E-03
6.86E-06	Road S2	S2	1000-1100	9.63E-03	2.44E-07	9.63E-03
2.79E-06	Road S2	S2	1100-1200	7.37E-03	3.99E-07	7.37E-03
3.13E-06	Road S2	S2	1200-1300	7.58E-03	2.53E-07	7.58E-03
3.13E-06	Road S2	S2	1300-1400	7.58E-03	2.53E-07	7.58E-03
1.44E-05	Road S2	S2	1400-1500	1.27E-02	8.88E-07	1.27E-02
1.44E-05	Road S2	S2	1500-1600	1.27E-02	8.88E-07	1.27E-02
8.98E-06	Road S2	S2	1600-1700	7.14E-02	2.59E-07	7.14E-02
3.13E-05	Road S2	S2	1700-1800	9.86E-02	1.98E-07	9.86E-02
3.13E-05	Road S2	S2	1800-1900	9.86E-02	1.98E-07	9.86E-02
2.48E-05	Road S2	S2	1900-2000	1.06E-01	2.14E-07	1.06E-01
2.48E-05	Road S2	S2	2000-2100	1.06E-01	2.14E-07	1.06E-01
2.85E-05	Road S3	S3	0000-0100	8.44E-03	9.31E-08	8.44E-03
2.85E-05	Road S3	S3	0100-0200	8.44E-03	9.31E-08	8.44E-03
2.52E-05	Road S3	S3	0200-0300	8.44E-03	2.04E-08	8.44E-03
2.52E-05	Road S3	S3	0300-0400	8.96E-03	1.74E-08	8.96E-03
2.52E-05	Road S3	S3	0400-0500	8.96E-03	1.74E-08	8.96E-03
1.37E-05	Road S3	S3	0500-0600	8.84E-03	8.87E-08	8.84E-03
1.37E-05	Road S3	S3	0600-0700	8.84E-03	8.87E-08	8.84E-03
1.61E-05	Road S3	S3	0700-0800	1.23E-02	2.73E-07	1.61E-05
1.61E-05	Road S3	S3	0800-0900	1.23E-02	2.73E-07	1.61E-05
1.56E-05	Road S3	S3	0900-1000	1.06E-02	1.74E-07	1.56E-05
1.56E-05	Road S3	S3	1000-1100	1.06E-02	1.74E-07	1.56E-05
4.93E-07	Road S3	S3	1100-1200	1.14E-02	2.81E-07	4.93E-07
4.93E-07	Road S3	S3	1200-1300	1.14E-02	2.81E-07	4.93E-07
4.93E-07	Road S3	S3	1300-1400	1.23E-02	2.92E-07	4.93E-07
4.93E-07	Road S3	S3	1400-1500	1.23E-02	2.92E-07	4.93E-07
4.93E-07	Road S3	S3	1500-1600	1.14E-02	1.81E-07	4.93E-07
4.93E-07	Road S3	S3	1600-1700	1.14E-02	1.81E-07	4.93E-07
4.93E-07	Road S3	S3	1700-1800	9.01E-02	2.48E-07	4.93E-07
4.93E-07	Road S3	S3	1800-1900	9.01E-02	2.48E-07	4.93E-07
4.93E-07	Road S3	S3	1900-2000	1.14E-02	1.74E-07	4.93E-07
4.93E-07	Road S3	S3	2000-2100	1.14E-02	1.74E-07	4.93E-07
4.93E-07	Road S3	S3	2100-2200	1.14E-02	1.74E-07	4.93E-07
4.93E-07	Road S3	S3	2200-2300	1.14E-02	1.74E-07	4.93E-07
4.93E-07	Road S4	S4	0000-0100	6.03E-03	6.81E-08	6.03E-03
4.93E-07	Road S4	S4	0100-0200	6.03E-03	6.81E-08	6.03E-03
4.93E-07	Road S4	S4	0200-0300	6.03E-03	6.81E-08	6.03E-03
4.93E-07	Road S4	S4	0300-0400	6.03E-03	6.81E-08	6.03E-03
4.93E-07	Road S4	S4	0400-0500	6.03E-03	6.81E-08	6.03E-03
4.93E-07	Road S4	S4	0500-0600	6.03E-03	6.81E-08	6.03E-03
4.93E-07	Road S4	S4	0600-0700	6.03E-03	6.81E-08	6.03E-03
4.93E-07	Road S4	S4	0700-0800	6.03E-03	6.81E-08	6.03E-03
4.93E-07	Road S4	S4	0800-0900	6.03E-03	6.81E-08	6.03E-03
4.93E-07	Road S4	S4	0900-1000	6.03E-03	6.81E-08	6.03E-03
4.93E-07	Road S4	S4	1000-1100	6.03E-03	6.81E-08	6.03E-03
4.93E-07	Road S4	S4	1100-1200	6.03E-03	6.81E-08	6.03E-03
4.93E-07	Road S4	S4	1200-1300	6.03E-03	6.81E-08	6.03E-03
4.93E-07	Road S4	S4	1300-1400	6.03E-03	6.81E-08	6.03E-03
4.93E-07	Road S4	S4	1400-1500	6.03E-03	6.81E-08	6.03E-03
4.93E-07	Road S4	S4	1500-1600	6.03E-03	6.81E-08	6.03E-03
4.93E-07	Road S4	S4	1600-1700	6.03E-03	6.81E-08	6.03E-03
4.93E-07	Road S4	S4	1700-1800	6.03E-03	6.81E-08	6.03E-03
4.93E-07	Road S4	S4	1800-1900	6.03E-03	6.81E-08	6.03E-03
4.93E-07	Road S4	S4	1900-2000	6.03E-03	6.81E-08	6.03E-03
4.93E-07	Road S4	S4	2000-2100	6.03E-03	6.81E-08	6.03E-03
4.93E-07	Road S4	S4	2100-2200	6.03E-03	6.81E-08	6.03E-03
4.93E-07	Road S4	S4	2200-2300	6.03E-03	6.81E-08	6.03E-03
4.93E-07	Road S4	S4	2300-0000	6.03E-03	6.81E-08	6.03E-03

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Tsing Yi North Underground Quarry Open Road 24-hour Emission Factor for ARMMO model (February)														
Year 2038														
Road Name	Road ID	Hour	Monthly/Average			Monthly/Average			Monthly/Average			Monthly/Average		
			g/hour/km	g/km	tonne/hour/km	g/hour/km	g/km	tonne/hour/km	g/hour/km	g/km	tonne/hour/km	g/hour/km	g/km	tonne/hour/km
Road 54	54	0800-0900	1.026	1.026	0.871	0.871	4.867	7.086	4.867	1.623	1.276	0.265	0.265	
Road 54	54	0900-1000	1.155	1.155	0.981	0.981	5.382	7.766	5.382	1.855	1.484	0.315	0.315	
Road 54	54	1000-1100	1.296	1.296	1.077	1.077	5.871	8.468	5.871	2.036	1.615	0.345	0.345	
Road 54	54	1100-1200	1.434	1.434	1.185	1.185	6.465	9.261	6.465	2.221	1.776	0.375	0.375	
Road 54	54	1200-1300	1.586	1.586	1.311	1.311	7.056	10.054	7.056	2.416	1.936	0.406	0.406	
Road 54	54	1300-1400	1.741	1.741	1.446	1.446	7.647	10.847	7.647	2.611	2.086	0.436	0.436	
Road 54	54	1400-1500	1.900	1.900	1.581	1.581	8.238	11.639	8.238	2.806	2.236	0.466	0.466	
Road 54	54	1500-1600	2.061	2.061	1.716	1.716	8.829	12.431	8.829	3.001	2.426	0.506	0.506	
Road 54	54	1600-1700	2.224	2.224	1.851	1.851	9.420	13.223	9.420	3.196	2.616	0.536	0.536	
Road 54	54	1700-1800	2.390	2.390	1.986	1.986	10.011	14.015	10.011	3.391	2.806	0.566	0.566	
Road 54	54	1800-1900	2.557	2.557	2.121	2.121	10.602	14.807	10.602	3.586	2.996	0.596	0.596	
Road 54	54	1900-2000	2.726	2.726	2.256	2.256	11.193	15.599	11.193	3.781	3.186	0.626	0.626	
Road 54	54	2000-2100	2.897	2.897	2.391	2.391	11.784	16.391	11.784	3.976	3.376	0.656	0.656	
Road 54	54	2100-2200	3.070	3.070	2.526	2.526	12.375	17.183	12.375	4.171	3.566	0.686	0.686	
Road 54	54	2200-2300	3.245	3.245	2.661	2.661	12.966	17.975	12.966	4.366	3.756	0.716	0.716	
Road 54	54	2300-2400	3.422	3.422	2.796	2.796	13.557	18.767	13.557	4.561	3.946	0.746	0.746	
Road 54	54	2400-0100	3.601	3.601	2.931	2.931	14.148	19.559	14.148	4.756	4.136	0.776	0.776	
Road 54	54	0100-0200	3.781	3.781	3.066	3.066	14.739	20.351	14.739	4.951	4.326	0.806	0.806	
Road 54	54	0200-0300	3.962	3.962	3.201	3.201	15.330	21.143	15.330	5.146	4.516	0.836	0.836	
Road 54	54	0300-0400	4.144	4.144	3.336	3.336	15.921	21.935	15.921	5.341	4.706	0.866	0.866	
Road 54	54	0400-0500	4.328	4.328	3.471	3.471	16.512	22.727	16.512	5.536	4.896	0.896	0.896	
Road 54	54	0500-0600	4.514	4.514	3.606	3.606	17.103	23.519	17.103	5.731	5.086	0.926	0.926	
Road 54	54	0600-0700	4.701	4.701	3.741	3.741	17.694	24.311	17.694	5.926	5.276	0.956	0.956	
Road 54	54	0700-0800	4.890	4.890	3.876	3.876	18.285	25.103	18.285	6.121	5.466	0.986	0.986	
Road 54	54	0800-0900	5.080	5.080	4.011	4.011	18.876	25.895	18.876	6.316	5.656	1.016	1.016	
Road 54	54	0900-1000	5.271	5.271	4.146	4.146	19.467	26.687	19.467	6.511	5.846	1.046	1.046	
Road 54	54	1000-1100	5.464	5.464	4.281	4.281	20.058	27.479	20.058	6.706	6.036	1.076	1.076	
Road 54	54	1100-1200	5.658	5.658	4.416	4.416	20.649	28.271	20.649	6.901	6.226	1.106	1.106	
Road 54	54	1200-1300	5.853	5.853	4.551	4.551	21.240	29.063	21.240	7.096	6.416	1.136	1.136	
Road 54	54	1300-1400	6.049	6.049	4.686	4.686	21.831	29.855	21.831	7.291	6.606	1.166	1.166	
Road 54	54	1400-1500	6.246	6.246	4.821	4.821	22.422	30.647	22.422	7.486	6.796	1.196	1.196	
Road 54	54	1500-1600	6.444	6.444	4.956	4.956	23.013	31.439	23.013	7.681	6.986	1.226	1.226	
Road 54	54	1600-1700	6.643	6.643	5.091	5.091	23.604	32.231	23.604	7.876	7.176	1.256	1.256	
Road 54	54	1700-1800	6.843	6.843	5.226	5.226	24.195	33.023	24.195	8.071	7.366	1.286	1.286	
Road 54	54	1800-1900	7.044	7.044	5.361	5.361	24.786	33.815	24.786	8.266	7.556	1.316	1.316	
Road 54	54	1900-2000	7.246	7.246	5.496	5.496	25.377	34.607	25.377	8.461	7.746	1.346	1.346	
Road 54	54	2000-2100	7.449	7.449	5.631	5.631	25.968	35.399	25.968	8.656	7.936	1.376	1.376	
Road 54	54	2100-2200	7.653	7.653	5.766	5.766	26.559	36.191	26.559	8.851	8.126	1.406	1.406	
Road 54	54	2200-2300	7.858	7.858	5.901	5.901	27.150	36.983	27.150	9.046	8.316	1.436	1.436	
Road 54	54	2300-2400	8.064	8.064	6.036	6.036	27.741	37.775	27.741	9.241	8.506	1.466	1.466	
Road 54	54	2400-0100	8.271	8.271	6.171	6.171	28.332	38.567	28.332	9.436	8.696	1.496	1.496	
Road 54	54	0100-0200	8.479	8.479	6.306	6.306	28.923	39.359	28.923	9.631	8.886	1.526	1.526	
Road 54	54	0200-0300	8.688	8.688	6.441	6.441	29.514	40.151	29.514	9.826	9.076	1.556	1.556	
Road 54	54	0300-0400	8.898	8.898	6.576	6.576	30.105	40.943	30.105	10.021	9.266	1.586	1.586	
Road 54	54	0400-0500	9.109	9.109	6.711	6.711	30.696	41.735	30.696	10.216	9.456	1.616	1.616	
Road 54	54	0500-0600	9.321	9.321	6.846	6.846	31.287	42.527	31.287	10.411	9.646	1.646	1.646	
Road 54	54	0600-0700	9.534	9.534	6.981	6.981	31.878	43.319	31.878	10.606	9.836	1.676	1.676	
Road 54	54	0700-0800	9.748	9.748	7.116	7.116	32.469	44.111	32.469	10.801	10.026	1.706	1.706	
Road 54	54	0800-0900	9.963	9.963	7.251	7.251	33.060	44.903	33.060	11.001	10.216	1.736	1.736	
Road 54	54	0900-1000	10.179	10.179	7.386	7.386	33.651	45.695	33.651	11.201	10.406	1.766	1.766	
Road 54	54	1000-1100	10.396	10.396	7.521	7.521	34.242	46.487	34.242	11.401	10.596	1.796	1.796	
Road 54	54	1100-1200	10.614	10.614	7.656	7.656	34.833	47.279	34.833	11.601	10.786	1.826	1.826	
Road 54	54	1200-1300	10.833	10.833	7.791	7.791	35.424	48.071	35.424	11.801	10.976	1.856	1.856	
Road 54	54	1300-1400	11.053	11.053	7.926	7.926	36.015	48.863	36.015	12.001	11.166	1.886	1.886	
Road 54	54	1400-1500	11.274	11.274	8.061	8.061	36.606	49.655	36.606	12.201	11.356	1.916	1.916	
Road 54	54	1500-1600	11.496	11.496	8.196	8.196	37.197	50.447	37.197	12.401	11.546	1.946	1.946	
Road 54	54	1600-1700	11.719	11.719	8.331	8.331	37.788	51.239	37.788	12.601	11.736	1.976	1.976	
Road 54	54	1700-1800	11.943	11.943	8.466	8.466	38.379	52.031	38.379	12.801	11.926	2.006	2.006	
Road 54	54	1800-1900	12.168	12.168	8.601	8.601	38.970	52.823	38.970	13.001	12.116	2.036	2.036	
Road 54	54	1900-2000	12.394	12.394	8.736	8.736	39.561	53.615	39.561	13.201	12.306	2.066	2.066	
Road 54	54	2000-2100	12.621	12.621	8.871	8.871	40.152	54.407	40.152	13.401	12.496	2.096	2.096	
Road 54	54	2100-2200	12.849	12.849	9.006	9.006	40.743	55.199	40.743	13.601	12.686	2.126	2.126	
Road 54	54	2200-2300	13.078	13.078	9.141	9.141	41.334	55.991	41.334	13.801	12.876	2.156	2.156	
Road 54	54	2300-2400	13.308	13.308	9.276	9.276	41.925	56.783	41.925	14.001	13.066	2.186	2.186	
Road 54	54	2400-0100	13.539	13.539	9.411	9.411	42.516	57.575	42.516	14.201	13.256	2.216	2.216	
Road 54	54	0100-0200	13.771	13.771	9.546	9.546	43.107	58.367	43.107	14.401	13.446	2.246	2.246	
Road 54	54	0200-0300	14.004	14.004	9.681	9.681	43.698	59.159	43.698	14.601	13.636	2.276	2.276	
Road 54	54	0300-0400	14.238	14.238	9.816	9.816	44.289	59.951	44.289	14.801	13.826	2.306	2.306	
Road 54	54	0400-0500	14.473	14.473	9.951	9.951	44.880	60.743	44.880	15.001	14.016	2.336	2.336	
Road 54	54	0500-0600	14.709	14.709	10.086	10.086	45.471	61.535	45.471	15.201	14.206	2.366	2.366	
Road 54	54	0600-0700	14.946	14.946	10.221	10.221	46.062	62.327	46.062	15.401	14.396	2.396	2.396	
Road 54	54	0700-0800	15.184	15.184	10.356	10.356	46.653	63.119	46.653	15.601	14.586	2.426	2.426	
Road 54	54	0800-0900	15.423	15.423	10.491	10.491	47.244	63.911	47.244	15.801	14.776	2.456	2.456	
Road 54	54	0900-1000	15.663	15.663	10.626	10.626	47.835	64.703	47.835	16.001	14.966	2.486	2.486	
Road 54	54	1000-1100	15.904	15.904	10.761	10.761	48.426	65.495	48.426					

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Ting' N North Underground Quarry																
Open Road & Sub-Station Factors for ARMED model (February)																
Year 2038																
Road Name	ID	Hour	NO Emission				NO Emission									
			Monthly/turn	Monthly/turn	Monthly/turn	Monthly/turn	Monthly/turn	Monthly/turn	Monthly/turn	Monthly/turn						
Road #7	17000	7:55:00	1.356	0.41	1.538	0.25	1.401	1.042	0.06	9.412	0.81	1.655	0.05			
Road #7	17000	8:00:00	1.832	0.40	1.262	0.58	1.378	1.175	0.85	1.079	0.44	8.062	1.795	0.86	0.05	
Road #7	17000	8:15:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	8:30:00	1.516	0.56	1.220	0.68	1.012	0.22	6.502	0.46	1.278	0.68	1.002	0.46	1.655	0.05
Road #7	17000	8:45:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	9:00:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	9:15:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	9:30:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	9:45:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	10:00:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	10:15:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	10:30:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	10:45:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	11:00:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	11:15:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	11:30:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	11:45:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	12:00:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	12:15:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	12:30:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	12:45:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	13:00:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	13:15:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	13:30:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	13:45:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	14:00:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	14:15:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	14:30:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	14:45:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	15:00:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	15:15:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	15:30:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	15:45:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	16:00:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	16:15:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	16:30:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	16:45:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	17:00:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	17:15:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	17:30:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	17:45:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	18:00:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	18:15:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	18:30:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	18:45:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	19:00:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	19:15:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	19:30:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	19:45:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	20:00:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	20:15:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	20:30:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	20:45:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	21:00:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	21:15:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	21:30:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	21:45:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	22:00:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	22:15:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	22:30:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	22:45:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	23:00:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	23:15:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	23:30:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	23:45:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	
Road #7	17000	24:00:00	1.356	0.41	1.395	0.25	1.212	1.327	0.47	1.432	0.42	1.046	0.81	1.655	0.05	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Opening North & Downward Quarry Tape Run #2 US Envision Factors for ARMMO Model Results																	
Road Name		Month	Year	Hour	NO _x Emission					NO _y Emission							
					Monthly/average		Monthly/average		Monthly/average		Monthly/average		Monthly/average				
Road #1	1	0000	0100	1	9.615	0.781	4.381	5.565	0.181	3.862	4.135	9.717	0.152	4.427	4.526	7.715	
				2	6.218	3.595	3.086	3.553	5.505	2.755	3.546	3.927	3.185	3.682	3.325	4.875	
				3	6.802	4.018	3.014	3.553	5.505	2.755	3.546	3.927	3.185	3.682	3.325	4.875	
				4	7.435	3.857	2.125	6.023	3.445	1.895	4.742	2.467	0.765	3.855	4.055	2.065	4.775
				5	9.445	5.455	5.565	7.135	4.455	2.995	2.467	2.467	2.467	4.855	4.215	3.105	5.055
				6	7.775	4.555	5.565	7.135	4.455	2.995	2.467	2.467	2.467	4.855	4.215	3.105	5.055
				7	9.675	2.055	6.175	8.205	3.175	9.374	5.445	1.115	3.625	6.325	4.455	4.927	5.185
				8	1.000	2.695	4.475	4.015	3.175	2.795	4.475	4.475	4.475	4.475	4.475	4.475	4.475
				9	9.745	4.815	2.655	4.045	4.174	2.795	3.075	2.555	3.885	4.485	4.195	2.075	5.145
				10	1.000	2.695	4.475	4.015	3.175	2.795	4.475	4.475	4.475	4.475	4.475	4.475	4.475
Road #1	1	0100	0200	1	1.000	2.695	4.475	4.015	3.175	2.795	4.475	4.475	4.475	4.475	4.475	4.475	
				2	1.100	4.715	3.515	1.085	2.181	2.085	4.715	2.005	1.105	4.915	1.735	5.915	8.365
				3	1.100	4.715	3.515	1.085	2.181	2.085	4.715	2.005	1.105	4.915	1.735	5.915	8.365
				4	1.100	4.715	3.515	1.085	2.181	2.085	4.715	2.005	1.105	4.915	1.735	5.915	8.365
				5	1.450	6.705	4.675	3.285	2.975	3.775	3.775	5.505	3.005	4.655	5.645	2.425	1.445
				6	1.450	6.705	4.675	3.285	2.975	3.775	3.775	5.505	3.005	4.655	5.645	2.425	1.445
				7	1.450	6.705	4.675	3.285	2.975	3.775	3.775	5.505	3.005	4.655	5.645	2.425	1.445
				8	1.450	6.705	4.675	3.285	2.975	3.775	3.775	5.505	3.005	4.655	5.645	2.425	1.445
				9	1.500	3.775	6.935	3.815	1.235	4.155	3.415	4.615	3.265	3.805	4.565	2.855	1.575
				10	1.500	3.775	6.935	3.815	1.235	4.155	3.415	4.615	3.265	3.805	4.565	2.855	1.575
Road #1	1	0100	0300	1	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.935	1.625	
				2	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
				3	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
				4	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
				5	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
				6	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
				7	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
				8	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
				9	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
				10	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
Road #1	1	0100	0400	1	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
				2	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
				3	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
				4	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
				5	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
				6	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
				7	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
				8	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
				9	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
				10	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
Road #2	2	0000	0100	1	9.615	0.781	4.381	5.565	0.181	3.862	4.135	9.717	0.152	4.427	4.526	7.715	
				2	6.218	3.595	3.086	3.553	5.505	2.755	3.546	3.927	3.185	3.682	3.325	4.875	
				3	6.802	4.018	3.014	3.553	5.505	2.755	3.546	3.927	3.185	3.682	3.325	4.875	
				4	7.435	3.857	2.125	6.023	3.445	1.895	4.742	2.467	0.765	3.855	4.055	2.065	4.775
				5	9.445	5.455	5.565	7.135	4.455	2.995	2.467	2.467	2.467	4.855	4.215	3.105	5.055
				6	7.775	4.555	5.565	7.135	4.455	2.995	2.467	2.467	2.467	4.855	4.215	3.105	5.055
				7	9.675	2.055	6.175	8.205	3.175	9.374	5.445	1.115	3.625	6.325	4.455	4.927	5.185
				8	1.000	2.695	4.475	4.015	3.175	2.795	4.475	4.475	4.475	4.475	4.475	4.475	4.475
				9	9.745	4.815	2.655	4.045	4.174	2.795	3.075	2.555	3.885	4.485	4.195	2.075	5.145
				10	1.000	2.695	4.475	4.015	3.175	2.795	4.475	4.475	4.475	4.475	4.475	4.475	4.475
Road #2	2	0100	0200	1	1.000	2.695	4.475	4.015	3.175	2.795	4.475	4.475	4.475	4.475	4.475	4.475	
				2	1.100	4.715	3.515	1.085	2.181	2.085	4.715	2.005	1.105	4.915	1.735	5.915	8.365
				3	1.100	4.715	3.515	1.085	2.181	2.085	4.715	2.005	1.105	4.915	1.733	5.915	8.365
				4	1.100	4.715	3.515	1.085	2.181	2.085	4.715	2.005	1.105	4.915	1.733	5.915	8.365
				5	1.450	6.705	4.675	3.285	2.975	3.775	3.775	5.505	3.005	4.655	5.645	2.425	1.445
				6	1.450	6.705	4.675	3.285	2.975	3.775	3.775	5.505	3.005	4.655	5.645	2.425	1.445
				7	1.450	6.705	4.675	3.285	2.975	3.775	3.775	5.505	3.005	4.655	5.645	2.425	1.445
				8	1.450	6.705	4.675	3.285	2.975	3.775	3.775	5.505	3.005	4.655	5.645	2.425	1.445
				9	1.500	3.775	6.935	3.815	1.235	4.155	3.415	4.615	3.265	3.805	4.565	2.855	1.575
				10	1.500	3.775	6.935	3.815	1.235	4.155	3.415	4.615	3.265	3.805	4.565	2.855	1.575
Road #2	2	0100	0300	1	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
				2	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
				3	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
				4	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
				5	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
				6	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
				7	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
				8	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
				9	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
				10	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
Road #2	2	0100	0400	1	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
				2	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
				3	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
				4	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
				5	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
				6	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
				7	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
				8	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
				9	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
				10	1.400	1.455	7.785	4.285	1.525	4.935	3.625	3.285	3.155	4.855	2.933	1.625	
Road #3	3	0000	0100	1	9.615	0.781	4.381	5.565	0.181	3.862	4.135	9.717	0.152	4.427	4.526	7.715	
				2	6.218	3.595	3.086	3.553	5.505	2.755	3.546	3.927	3.185	3.682	3.325	4.875	
				3	6.802	4.018	3.014	3.553	5.505	2.755	3.546	3.927	3.185	3.682	3.325	4.875	
				4	7.435	3.857	2.125	6.023	3.445	1.895	4.742	2.467	0.765	3.855	4.055	2.065	4.775
				5	9.445	5.455	5.565	7.135	4.455	2.995	2.467	2.467	2.467	4.855	4.215	3.105	5.055
				6	7.775	4.555	5.565	7.135	4.455	2.995	2.467	2.467	2.467	4.855	4.215	3.105	5.055
				7	9.675	2.055	6.175	8.205	3.175	9.374	5.445	1.115	3.625	6.325	4.455	4.927	5.185
				8	1.000	2.695	4.475	4.015	3.175	2.795	4.475	4.475					

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Ting Yi North Underground Quarry												
Open Road 24-hour Emission Factors for AEMOD model (February)												
Year 2038												
Road Name	Road ID	No. Emission	No. Emission		No. Emission		No. Emission		No. Emission		No. Emission	
			Month/Year/Min	Month/Year/Max	Month/Year/Min	Month/Year/Max	Month/Year/Min	Month/Year/Max	Month/Year/Min	Month/Year/Max		
S4	0800	0900	9.64E+02	8.07E+02	8.20E+02	8.67E+02	7.48E+02	7.58E+02	1.04E+03	9.34E+02	9.76E+02	
S4	0900	1000	9.59E+02	7.92E+02	8.05E+02	8.36E+02	8.21E+02	8.07E+02	1.04E+03	9.34E+02	9.69E+02	
S4	1000	1214	9.67E+02	8.07E+02	8.20E+02	8.67E+02	7.48E+02	7.58E+02	1.04E+03	9.34E+02	9.76E+02	
S4	1100	1200	1.20E+03	7.76E+02	8.57E+02	1.00E+03	7.76E+02	8.43E+02	1.15E+03	8.00E+02	1.22E+03	
S4	1200	1400	1.20E+03	7.76E+02	8.57E+02	1.00E+03	7.76E+02	8.43E+02	1.15E+03	8.00E+02	1.22E+03	
S4	1400	1600	1.20E+03	7.76E+02	8.57E+02	1.00E+03	7.76E+02	8.43E+02	1.15E+03	8.00E+02	1.22E+03	
S4	1600	1800	1.45E+03	8.41E+02	7.48E+02	8.30E+02	9.15E+02	7.19E+02	1.18E+03	1.28E+03	8.70E+02	1.23E+03
S4	1800	2000	1.46E+03	8.41E+02	7.48E+02	8.30E+02	9.15E+02	7.19E+02	1.18E+03	1.28E+03	8.70E+02	1.23E+03
S4	2000	2200	1.46E+03	8.41E+02	7.48E+02	8.30E+02	9.15E+02	7.19E+02	1.18E+03	1.28E+03	8.70E+02	1.23E+03
S4	2200	2300	1.18E+03	1.29E+03	7.48E+02	8.70E+02	7.70E+02	6.88E+02	8.32E+02	1.17E+03	1.26E+03	8.43E+02
S4	2300	2400	1.18E+03	1.29E+03	7.48E+02	8.70E+02	7.70E+02	6.88E+02	8.32E+02	1.17E+03	1.26E+03	8.43E+02
S4	1800	1900	9.42E+02	7.77E+02	4.05E+02	2.76E+02	1.63E+02	3.72E+02	3.96E+02	7.11E+02	1.62E+02	5.49E+02
S4	1900	2000	9.42E+02	7.77E+02	4.05E+02	2.76E+02	1.63E+02	3.72E+02	3.96E+02	7.11E+02	1.62E+02	5.49E+02
S4	2000	2100	8.07E+02	7.75E+02	8.05E+02	8.45E+02	8.06E+02	8.55E+02	3.77E+02	1.03E+02	1.06E+02	1.39E+02
S4	2100	2200	7.99E+02	6.70E+02	7.00E+02	7.45E+02	8.18E+02	1.85E+02	3.22E+02	3.61E+02	8.09E+02	2.08E+02
S4	2200	2300	8.34E+02	7.47E+02	8.00E+02	8.34E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02
S4	2300	2400	8.34E+02	7.47E+02	8.00E+02	8.34E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02
S4	2400	0100	8.34E+02	7.47E+02	8.00E+02	8.34E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02
S4	0100	0200	8.34E+02	7.47E+02	8.00E+02	8.34E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02
S4	0200	0300	8.34E+02	7.47E+02	8.00E+02	8.34E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02
S4	0300	0400	8.34E+02	7.47E+02	8.00E+02	8.34E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02
S4	0400	0500	8.34E+02	7.47E+02	8.00E+02	8.34E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02
S4	0500	0600	8.34E+02	7.47E+02	8.00E+02	8.34E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02
S4	0600	0700	8.34E+02	7.47E+02	8.00E+02	8.34E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02
S4	0700	0800	8.34E+02	7.47E+02	8.00E+02	8.34E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02
S4	0800	0900	9.64E+02	8.07E+02	8.20E+02	8.67E+02	7.48E+02	7.58E+02	1.04E+03	9.34E+02	9.76E+02	
S4	0900	1000	9.59E+02	7.92E+02	8.05E+02	8.36E+02	8.21E+02	8.07E+02	1.04E+03	9.34E+02	9.69E+02	
S4	1000	1214	9.67E+02	8.07E+02	8.20E+02	8.67E+02	7.48E+02	7.58E+02	1.04E+03	9.34E+02	9.76E+02	
S4	1100	1200	1.20E+03	7.76E+02	8.57E+02	1.00E+03	7.76E+02	8.43E+02	1.15E+03	8.00E+02	1.22E+03	
S4	1200	1400	1.20E+03	7.76E+02	8.57E+02	1.00E+03	7.76E+02	8.43E+02	1.15E+03	8.00E+02	1.22E+03	
S4	1400	1600	1.20E+03	7.76E+02	8.57E+02	1.00E+03	7.76E+02	8.43E+02	1.15E+03	8.00E+02	1.22E+03	
S4	1600	1800	1.45E+03	8.41E+02	7.48E+02	8.30E+02	9.15E+02	7.19E+02	1.18E+03	1.28E+03	8.70E+02	1.23E+03
S4	1800	2000	1.46E+03	8.41E+02	7.48E+02	8.30E+02	9.15E+02	7.19E+02	1.18E+03	1.28E+03	8.70E+02	1.23E+03
S4	2000	2200	1.46E+03	8.41E+02	7.48E+02	8.30E+02	9.15E+02	7.19E+02	1.18E+03	1.28E+03	8.70E+02	1.23E+03
S4	2200	2300	1.18E+03	1.29E+03	7.48E+02	8.70E+02	7.70E+02	6.88E+02	8.32E+02	1.17E+03	1.26E+03	8.43E+02
S4	2300	2400	1.18E+03	1.29E+03	7.48E+02	8.70E+02	7.70E+02	6.88E+02	8.32E+02	1.17E+03	1.26E+03	8.43E+02
S4	2400	0100	8.34E+02	7.47E+02	8.00E+02	8.34E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02
S4	0100	0200	8.34E+02	7.47E+02	8.00E+02	8.34E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02
S4	0200	0300	8.34E+02	7.47E+02	8.00E+02	8.34E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02
S4	0300	0400	8.34E+02	7.47E+02	8.00E+02	8.34E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02
S4	0400	0500	8.34E+02	7.47E+02	8.00E+02	8.34E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02
S4	0500	0600	8.34E+02	7.47E+02	8.00E+02	8.34E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02
S4	0600	0700	8.34E+02	7.47E+02	8.00E+02	8.34E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02
S4	0700	0800	8.34E+02	7.47E+02	8.00E+02	8.34E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02
S4	0800	0900	9.64E+02	8.07E+02	8.20E+02	8.67E+02	7.48E+02	7.58E+02	1.04E+03	9.34E+02	9.76E+02	
S4	0900	1000	9.59E+02	7.92E+02	8.05E+02	8.36E+02	8.21E+02	8.07E+02	1.04E+03	9.34E+02	9.69E+02	
S4	1000	1214	9.67E+02	8.07E+02	8.20E+02	8.67E+02	7.48E+02	7.58E+02	1.04E+03	9.34E+02	9.76E+02	
S4	1100	1200	1.20E+03	7.76E+02	8.57E+02	1.00E+03	7.76E+02	8.43E+02	1.15E+03	8.00E+02	1.22E+03	
S4	1200	1400	1.20E+03	7.76E+02	8.57E+02	1.00E+03	7.76E+02	8.43E+02	1.15E+03	8.00E+02	1.22E+03	
S4	1400	1600	1.20E+03	7.76E+02	8.57E+02	1.00E+03	7.76E+02	8.43E+02	1.15E+03	8.00E+02	1.22E+03	
S4	1600	1800	1.45E+03	8.41E+02	7.48E+02	8.30E+02	9.15E+02	7.19E+02	1.18E+03	1.28E+03	8.70E+02	1.23E+03
S4	1800	2000	1.46E+03	8.41E+02	7.48E+02	8.30E+02	9.15E+02	7.19E+02	1.18E+03	1.28E+03	8.70E+02	1.23E+03
S4	2000	2200	1.46E+03	8.41E+02	7.48E+02	8.30E+02	9.15E+02	7.19E+02	1.18E+03	1.28E+03	8.70E+02	1.23E+03
S4	2200	2300	1.18E+03	1.29E+03	7.48E+02	8.70E+02	7.70E+02	6.88E+02	8.32E+02	1.17E+03	1.26E+03	8.43E+02
S4	2300	2400	1.18E+03	1.29E+03	7.48E+02	8.70E+02	7.70E+02	6.88E+02	8.32E+02	1.17E+03	1.26E+03	8.43E+02
S4	2400	0100	8.34E+02	7.47E+02	8.00E+02	8.34E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02
S4	0100	0200	8.34E+02	7.47E+02	8.00E+02	8.34E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02
S4	0200	0300	8.34E+02	7.47E+02	8.00E+02	8.34E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02
S4	0300	0400	8.34E+02	7.47E+02	8.00E+02	8.34E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02
S4	0400	0500	8.34E+02	7.47E+02	8.00E+02	8.34E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02
S4	0500	0600	8.34E+02	7.47E+02	8.00E+02	8.34E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02
S4	0600	0700	8.34E+02	7.47E+02	8.00E+02	8.34E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02
S4	0700	0800	8.34E+02	7.47E+02	8.00E+02	8.34E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02
S4	0800	0900	9.64E+02	8.07E+02	8.20E+02	8.67E+02	7.48E+02	7.58E+02	1.04E+03	9.34E+02	9.76E+02	
S4	0900	1000	9.59E+02	7.92E+02	8.05E+02	8.36E+02	8.21E+02	8.07E+02	1.04E+03	9.34E+02	9.69E+02	
S4	1000	1214	9.67E+02	8.07E+02	8.20E+02	8.67E+02	7.48E+02	7.58E+02	1.04E+03	9.34E+02	9.76E+02	
S4	1100	1200	1.20E+03	7.76E+02	8.57E+02	1.00E+03	7.76E+02	8.43E+02	1.15E+03	8.00E+02	1.22E+03	
S4	1200	1400	1.20E+03	7.76E+02	8.57E+02	1.00E+03	7.76E+02	8.43E+02	1.15E+03	8.00E+02	1.22E+03	
S4	1400	1600	1.20E+03	7.76E+02	8.57E+02	1.00E+03	7.76E+02	8.43E+02	1.15E+03	8.00E+02	1.22E+03	
S4	1600	1800	1.45E+03	8.41E+02	7.48E+02	8.30E+02	9.15E+02	7.19E+02	1.18E+03	1.28E+03	8.70E+02	1.23E+03
S4	1800	2000	1.46E+03	8.41E+02	7.48E+02	8.30E+02	9.15E+02	7.19E+02	1.18E+03	1.28E+03	8.70E+02	1.23E+03
S4	2000	2200	1.46E+03	8.41E+02	7.48E+02	8.30E+02	9.15E+02	7.19E+02	1.18E+03	1.28E+03	8.70E+02	1.23E+03
S4	2200	2300	1.18E+03	1.29E+03	7.48E+02	8.70E+02	7.70E+02	6.88E+02	8.32E+02	1.17E+03	1.26E+03	8.43E+02
S4	2300	2400	1.18E+03	1.29E+03	7.48E+02	8.70E+02	7.70E+02	6.88E+02	8.32E+02	1.17E+03	1.26E+03	8.43E+02
S4	2400	0100	8.34E+02	7.47E+02	8.00E+02	8.34E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02
S4	0100	0200	8.34E+02	7.47E+02	8.00E+02	8.34E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02
S4	0200	0300	8.34E+02	7.47E+02	8.00E+02	8.34E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02
S4	0300	0400	8.34E+02	7.47E+02	8.00E+02	8.34E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02	8.49E+02
S4	0400	0500										

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Opening 24 Hour Unmanned Quarry										
Open Top & North Endrock Factors for										
ARMDNO Model Year										
Year 2038										
Route Number	Route ID	Hour	Mo, Emission			No Emission				
			Monthly/km	Monthly/Average	Monthly/km	Monthly/Average	Monthly/km	Monthly/Average		
			g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh		
Route 7	7	1605-1700	1.762	0.027	4.796	1.576	0.026	4.276	0.026	
Route 7	1700-1800	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 7	1800-1900	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 7	1900-2000	1.762	0.027	4.796	0.027	1.762	0.027	4.796	0.027	
Route 7	2000-2100	2.413	0.025	1.456	0.256	1.156	0.023	1.456	0.023	
Route 7	2100-2200	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 7	2200-2300	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 7	2300-2400	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 8	8	0000-0100	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025
Route 8	0100-0200	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 8	0200-0300	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 8	0300-0400	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 8	0400-0500	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 8	0500-0600	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 8	0600-0700	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 8	0700-0800	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 8	0800-0900	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 8	0900-1000	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 8	1000-1100	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 8	1100-1200	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 8	1200-1300	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 8	1300-1400	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 8	1400-1500	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 8	1500-1600	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 8	1600-1700	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 8	1700-1800	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 8	1800-1900	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 8	1900-2000	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 8	2000-2100	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 8	2100-2200	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 8	2200-2300	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 8	2300-2400	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 9	9	0000-0100	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025
Route 9	0100-0200	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 9	0200-0300	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 9	0300-0400	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 9	0400-0500	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 9	0500-0600	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 9	0600-0700	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 9	0700-0800	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 9	0800-0900	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 9	0900-1000	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 9	1000-1100	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 9	1100-1200	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 9	1200-1300	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 9	1300-1400	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 9	1400-1500	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 9	1500-1600	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 9	1600-1700	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 9	1700-1800	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 9	1800-1900	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 9	1900-2000	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 9	2000-2100	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 9	2100-2200	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 9	2200-2300	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 9	2300-2400	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 10	10	0000-0100	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025
Route 10	0100-0200	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 10	0200-0300	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 10	0300-0400	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 10	0400-0500	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 10	0500-0600	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 10	0600-0700	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 10	0700-0800	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 10	0800-0900	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 10	0900-1000	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 10	1000-1100	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 10	1100-1200	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 10	1200-1300	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 10	1300-1400	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 10	1400-1500	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 10	1500-1600	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 10	1600-1700	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 10	1700-1800	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 10	1800-1900	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 10	1900-2000	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 10	2000-2100	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 10	2100-2200	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 10	2200-2300	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	
Route 10	2300-2400	1.512	0.026	3.346	0.346	1.296	0.025	3.346	0.025	

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TNY V1 North Underground Quarry												
Open Road to 4000 Hour Emission Factors for												
AEMOD model February												
Year 2038												
Road Name	Road ID	Hour	NO _x Emission			NO _x Emission			NO _x Emission			
			Monthly/veh/h	Monthly/Average	Monthly/veh/h	Monthly/Average	Monthly/veh/h	Monthly/Average				
Road 103	103	1200	1.416	0.817	1.275	1.135	0.617	1.165	0.305	0.685	1.585	0.495
Road 103	103	1700	1.805	1.026	1.425	1.035	0.543	1.505	0.395	0.535	1.455	0.205
Road 103	103	2200	2.235	1.267	1.835	1.325	0.705	1.955	0.185	0.435	1.345	0.105
Road 103	103	2600	6.265	3.232	5.265	3.745	2.027	4.625	0.305	0.135	3.475	0.145
Road 103	103	3100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	3600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	4100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	4600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	5100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	5600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	6100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	6600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	7100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	7600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	8100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	8600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	9100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	9600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	10100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	10600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	11100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	11600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	12100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	12600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	13100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	13600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	14100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	14600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	15100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	15600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	16100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	16600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	17100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	17600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	18100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	18600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	19100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	19600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	20100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	20600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	21100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	21600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	22100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	22600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	23100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	23600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	24100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	24600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	25100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	25600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	26100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	26600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	27100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	27600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	28100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	28600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	29100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	29600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	30100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	30600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	31100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	31600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	32100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	32600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	33100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	33600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	34100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	34600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	35100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	35600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	36100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	36600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	37100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	37600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	38100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	38600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	39100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	39600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	40100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	40600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	41100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	41600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	42100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	42600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	43100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	43600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	44100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	44600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	45100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	45600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	46100	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	46600	1.515	0.855	1.185	0.945	0.515	1.375	0.305	0.685	1.585	0.495
Road 103	103	47100	1.									

\\Secure\Environment Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.4 Emission Factor in 2038.xlsx

Open Top North Road Underpass Quarry													
Typical North Road 50% Emission Factors for													
AKEMCO model (March 2020)													
Road Name	Road Width (m)	Hour	NO _x Emission						NO Emission				
			Monthly/nightly			Monthly/day Average			Monthly/nightly		Monthly/day Average		
g/hour/veh	g/hour/veh	g/hour/veh	g/hour/veh	g/hour/veh	g/hour/veh	g/hour/veh	g/hour/veh	g/hour/veh	g/hour/veh	g/hour/veh	g/hour/veh	g/hour/veh	
Road 1	11	0000-0100	2.485	0.117	1.948	0.715	0.471	5.617	0.455	0.165	1.484	0.536	1.155
		2.654	1.087	4.167	2.323	1.023	3.927	0.485	0.844	2.622	0.536	2.628	
Road 2	11	0100-0600	2.485	0.117	1.948	0.715	0.471	5.617	0.455	0.165	1.484	0.536	1.155
		2.654	1.087	4.167	2.323	1.023	3.927	0.485	0.844	2.622	0.536	2.628	
Road 3	11	0600-0900	3.116	0.737	2.837	2.942	0.562	2.677	1.832	0.437	0.776	1.681	3.997
		3.561	3.876	5.658	4.168	1.568	3.177	0.507	0.977	3.592	1.764	4.586	
Road 4	11	0900-1200	3.116	0.737	2.837	2.942	0.562	2.677	1.832	0.437	0.776	1.681	3.997
		3.561	3.876	5.658	4.168	1.568	3.177	0.507	0.977	3.592	1.764	4.586	
Road 5	11	1200-1500	2.474	0.414	1.605	0.65	0.367	1.441	2.245	2.138	2.405	2.081	1.981
		2.551	0.515	1.705	0.782	0.448	1.555	2.322	2.189	2.484	2.162	2.058	
Road 6	11	1500-1800	2.670	0.177	1.486	0.662	0.107	0.106	4.128	0.268	0.844	2.071	0.742
		2.849	0.562	2.078	0.974	0.171	0.171	4.565	0.844	1.565	2.381	1.187	
Road 7	11	1800-2100	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 8	11	2100-2400	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 9	11	2400-0100	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 10	11	0100-0300	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 11	11	0300-0600	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 12	11	0600-0900	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 13	11	0900-1200	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 14	11	1200-1500	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 15	11	1500-1800	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 16	11	1800-2100	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 17	11	2100-2400	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 18	11	2400-0100	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 19	11	0100-0300	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 20	11	0300-0600	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 21	11	0600-0900	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 22	11	0900-1200	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 23	11	1200-1500	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 24	11	1500-1800	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 25	11	1800-2100	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 26	11	2100-2400	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 27	11	2400-0100	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 28	11	0100-0300	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 29	11	0300-0600	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 30	11	0600-0900	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 31	11	0900-1200	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 32	11	1200-1500	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 33	11	1500-1800	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 34	11	1800-2100	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 35	11	2100-2400	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 36	11	2400-0100	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 37	11	0100-0300	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 38	11	0300-0600	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 39	11	0600-0900	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 40	11	0900-1200	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 41	11	1200-1500	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 42	11	1500-1800	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 43	11	1800-2100	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 44	11	2100-2400	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 45	11	2400-0100	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.302	0.578	0.477	0.548	1.693	2.341	0.376	
Road 46	11	0100-0300	1.376	0.106	0.375	0.535	0.110	3.881	0.521	0.315	0.659	2.311	0.346
		1.110	0.364	1.018	0.364	0.							

\\Secure\Environment Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.4 Emission Factor in 2038.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

[illegible]

\\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.4 Emission Factor in 2038.xlsx

Top 100 Non Underground Quarry													
Year 2038													
Road Name	Road ID	Hour	North/Emission						North/Emission				
			g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	
Road 17	1700013000	1:00:00	1.924	1.026	4.455	5.533	1.854	1.066	4.598	5.775	5.586	1.901	4.448
Road 17	1700013000	1:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	2:00:00	2.390	1.360	6.188	7.694	2.324	1.303	6.043	7.568	6.989	2.206	5.724
Road 17	1700013000	2:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	3:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	3:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	4:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	4:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	5:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	5:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	6:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	6:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	7:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	7:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	8:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	8:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	9:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	9:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	10:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	10:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	11:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	11:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	12:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	12:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	13:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	13:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	14:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	14:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	15:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	15:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	16:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	16:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	17:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	17:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	18:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	18:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	19:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	19:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	20:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	20:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	21:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	21:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	22:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	22:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	23:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	23:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	24:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	24:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	25:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	25:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	26:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	26:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	27:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	27:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	28:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	28:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	29:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	29:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	30:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	30:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	31:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	31:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	32:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	32:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	33:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	33:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	34:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	34:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	35:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	35:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	36:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	36:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	37:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	37:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	38:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	38:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	39:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	39:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	40:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	40:30:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	3.066
Road 17	1700013000	41:00:00	1.465	0.782	3.354	4.168	1.385	0.753	3.245	4.045	3.948	1.321	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Sizing Top NH Underground Quarterly														
Enter the following data for the quarter														
ARMMOD model (Month)														
Year 2038														
Road Name	Road ID	Hour	NH Emission						NH Emission					
			Month/mth	g/hour/mth	g/m ³ /mth	tonne/hour	g/m ³ /mth	tonne/hour	Month/mth	g/hour/mth	g/m ³ /mth	tonne/hour		
Road 21	21	0000-0030	1.7772	6.0464	0.0888	2.1602	0.7788	2.7788	1.8168	0.0162	0.7776	0.4282	0.0162	0.7788
Road 21	21	0300-0330	1.8802	6.5162	0.0938	2.3102	0.8302	2.9102	1.9202	0.0162	0.8302	0.4582	0.0162	0.8302
Road 21	21	0330-0345	1.8802	6.5162	0.0938	2.3102	0.8302	2.9102	1.9202	0.0162	0.8302	0.4582	0.0162	0.8302
Road 21	21	0345-0400	1.8802	6.5162	0.0938	2.3102	0.8302	2.9102	1.9202	0.0162	0.8302	0.4582	0.0162	0.8302
Road 21	21	0400-0500	1.8802	6.5162	0.0938	2.3102	0.8302	2.9102	1.9202	0.0162	0.8302	0.4582	0.0162	0.8302
Road 21	21	0500-0600	1.7772	6.0464	0.0888	2.1602	0.7788	2.7788	1.8168	0.0162	0.7776	0.4282	0.0162	0.7788
Road 21	21	0600-0700	1.7772	6.0464	0.0888	2.1602	0.7788	2.7788	1.8168	0.0162	0.7776	0.4282	0.0162	0.7788
Road 21	21	0700-0800	2.1122	7.2112	0.1132	2.6112	0.9402	3.2112	2.3112	0.0202	0.9402	0.5002	0.0202	0.9402
Road 21	21	0800-0900	2.1122	7.2112	0.1132	2.6112	0.9402	3.2112	2.3112	0.0202	0.9402	0.5002	0.0202	0.9402
Road 21	21	0900-1000	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	1000-1100	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	1100-1130	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	1130-1200	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	1200-1300	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	1300-1400	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	1400-1500	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	1500-1600	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	1600-1700	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	1700-1800	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	1800-1900	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	1900-2000	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	2000-2100	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	2100-2200	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	2200-2300	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	2300-2400	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	2400-0100	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	0100-0200	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	0200-0300	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	0300-0400	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	0400-0500	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	0500-0600	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	0600-0700	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	0700-0800	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	0800-0900	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	0900-1000	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	1000-1100	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	1100-1130	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	1130-1200	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	1200-1300	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	1300-1400	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	1400-1500	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	1500-1600	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	1600-1700	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	1700-1800	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	1800-1900	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	1900-2000	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	2000-2100	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	2100-2200	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	2200-2300	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	2300-2400	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	2400-0100	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	0100-0200	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	0200-0300	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	0300-0400	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	0400-0500	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	0500-0600	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	0600-0700	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	0700-0800	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	0800-0900	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	0900-1000	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	1000-1100	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	1100-1130	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	1130-1200	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	1200-1300	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	1300-1400	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	1400-1500	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	1500-1600	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	1600-1700	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	1700-1800	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	1800-1900	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	1900-2000	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	2000-2100	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21	2100-2200	2.3552	8.5152	0.1232	2.8552	1.2152	3.5152	2.5552	0.0202	1.2152	0.6002	0.0202	1.2152
Road 21	21													

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.4 Emission Factor in 2038.xlsx

Fing It! North (Week) Quarterly										
Open Period: 12/1/2018 - 12/31/2018										
AEMMO model (Months)										
Year 2018										
Road Name	Road ID	Hour	Month/January		Month/February		Month/March		Month/April	
			g/mv/hour	g/mv/hour	g/mv/hour	g/mv/hour	g/mv/hour	g/mv/hour		
Road 27	24	0600-0630	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	0630-0700	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	0700-0730	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	0730-0800	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	0800-0830	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	0830-0900	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	0900-0930	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	0930-1000	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	1000-1030	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	1030-1100	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	1100-1130	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	1130-1200	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	1200-1230	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	1230-1300	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	1300-1330	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	1330-1400	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	1400-1430	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	1430-1500	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	1500-1530	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	1530-1600	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	1600-1630	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	1630-1700	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	1700-1730	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	1730-1800	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	1800-1830	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	1830-1900	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	1900-1930	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	1930-2000	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	2000-2030	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	2030-2100	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	2100-2130	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	2130-2200	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	2200-2230	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	2230-2300	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	2300-2330	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	2330-2400	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	2400-2430	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	2430-2500	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	2500-2530	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	2530-2600	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	2600-2630	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	2630-2700	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	2700-2730	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	2730-2800	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	2800-2830	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	2830-2900	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	2900-2930	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	2930-3000	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	3000-3030	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	3030-3100	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	3100-3130	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	3130-3200	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	3200-3230	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	3230-3300	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	3300-3330	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	3330-3400	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	3400-3430	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	3430-3500	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	3500-3530	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	3530-3600	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	3600-3630	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	3630-3700	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	3700-3730	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	3730-3800	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	3800-3830	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	3830-3900	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	3900-3930	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	3930-4000	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	4000-4030	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	4030-4100	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	4100-4130	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	4130-4200	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	4200-4230	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	4230-4300	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	4300-4330	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	4330-4400	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	4400-4430	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	4430-4500	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	4500-4530	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	4530-4600	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	4600-4630	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	4630-4700	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	4700-4730	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	4730-4800	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	4800-4830	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	4830-4900	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	4900-4930	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	4930-5000	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	5000-5030	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	5030-5100	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	5100-5130	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	5130-5200	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	5200-5230	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	5230-5300	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	5300-5330	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	5330-5400	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	5400-5430	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	5430-5500	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	5500-5530	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	5530-5600	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	5600-5630	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	5630-5700	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	5700-5730	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	5730-5800	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	5800-5830	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	5830-5900	1.562	0.516	1.562	0.516	1.562	0.516	1.562	0.516
Road 27	24	5900-5930	1.562	0.516	1.56					

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Up North Endorsement Factors for All MSOE model (March)														
Year 2008														
Road Name	Road ID	Hour	NO Emission						NO Emission					
			Month/mile/hour			Month/mile/hour			Month/mile/hour			Month/mile/hour		
			g/h/mile	g/mi	tonne/hour	g/h/mi	g/mi	tonne/hour	g/h/mi	g/mi	tonne/hour	g/h/mi	g/mi	tonne/hour
Road 27	1500-1700	17:01	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:02	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:03	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:04	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:05	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:06	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:07	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:08	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:09	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:10	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:11	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:12	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:13	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:14	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:15	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:16	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:17	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:18	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:19	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:20	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:21	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:22	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:23	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:24	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:25	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:26	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:27	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:28	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:29	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:30	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:31	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:32	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:33	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:34	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:35	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:36	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:37	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:38	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:39	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:40	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:41	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:42	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:43	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:44	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:45	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:46	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:47	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:48	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:49	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:50	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:51	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:52	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:53	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:54	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:55	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:56	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:57	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:58	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	17:59	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	18:00	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	18:01	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	18:02	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	18:03	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	18:04	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	18:05	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	18:06	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	18:07	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	18:08	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	18:09	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	18:10	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	18:11	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	18:12	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	18:13	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	18:14	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	18:15	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	18:16	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	18:17	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27	1500-1700	18:18	4.385	0.67	1.346	0.511	1.854	1.08	8.075	1.504	4.778	5.881	1.376	4.226
Road 27														

\\Secure\\Environment Projects\\60733229\\1.01\\Others\\Air\\Modelling\\Appendix\\Traffic\\Open Road\\Appendix 3.5.4 Emission Factor in 2038.xlsx

Tsing Tsing North Underground Quarry																	
Open Road to Sea Emission Factor for 4000000 t/year																	
Year 2038			NO _x Emission														
Road name	Road ID	Hour	Month/Jan			Month/Feb			Month/Mar			Month/Apr			Month/May		
			g/hour/m ³	g/hour/m ³	g/hour/m ³	g/hour/m ³	g/hour/m ³	g/hour/m ³	g/hour/m ³	g/hour/m ³	g/hour/m ³	g/hour/m ³	g/hour/m ³	g/hour/m ³	g/hour/m ³	g/hour/m ³	
Road #1	0000	0100	1.180	2.208	2.046	0.717	2.088	1.840	0.533	1.906	0.738	1.462	0.818	0.598			
Road #1	0000	0200	1.279	2.308	2.146	0.776	2.188	1.947	0.582	2.006	0.797	1.562	0.877	0.658			
Road #1	0000	0300	1.368	2.408	2.246	0.835	2.288	2.047	0.631	2.106	0.856	1.662	0.936	0.718			
Road #1	0000	0400	1.458	2.508	2.346	0.894	2.388	2.147	0.680	2.206	0.915	1.762	1.036	0.778			
Road #1	0000	0500	1.548	2.608	2.446	0.953	2.488	2.247	0.729	2.306	0.974	1.862	1.096	0.838			
Road #1	0000	0600	1.638	2.708	2.546	1.012	2.588	2.347	0.778	2.406	1.033	1.962	1.156	0.898			
Road #1	0000	0700	1.728	2.808	2.646	1.071	2.688	2.447	0.827	2.506	1.092	2.062	1.216	0.958			
Road #1	0000	0800	1.818	2.908	2.746	1.130	2.788	2.547	0.876	2.606	1.151	2.162	1.276	1.018			
Road #1	0000	0900	1.908	3.008	2.846	1.189	2.888	2.647	0.925	2.706	1.210	2.262	1.336	1.078			
Road #1	0000	1000	1.998	3.108	2.946	1.248	2.988	2.747	0.974	2.806	1.269	2.362	1.396	1.138			
Road #1	0000	1100	2.088	3.208	3.046	1.307	3.088	2.847	1.023	2.906	1.328	2.462	1.456	1.198			
Road #1	0000	1200	2.178	3.308	3.146	1.366	3.188	2.947	1.072	3.006	1.387	2.562	1.516	1.258			
Road #1	0000	1300	2.268	3.408	3.246	1.425	3.288	3.047	1.121	3.106	1.446	2.662	1.576	1.318			
Road #1	0000	1400	2.358	3.508	3.346	1.484	3.388	3.147	1.170	3.206	1.505	2.762	1.636	1.378			
Road #1	0000	1500	2.448	3.608	3.446	1.543	3.488	3.247	1.219	3.306	1.564	2.862	1.696	1.438			
Road #1	0000	1600	2.538	3.708	3.546	1.602	3.588	3.347	1.268	3.406	1.623	2.962	1.756	1.498			
Road #1	0000	1700	2.628	3.808	3.646	1.661	3.688	3.447	1.317	3.506	1.682	3.062	1.816	1.558			
Road #1	0000	1800	2.718	3.908	3.746	1.720	3.788	3.547	1.366	3.606	1.741	3.162	1.876	1.618			
Road #1	0000	1900	2.808	4.008	3.846	1.779	3.888	3.647	1.415	3.706	1.800	3.262	1.936	1.678			
Road #1	0000	2000	2.898	4.108	3.946	1.838	3.988	3.747	1.464	3.806	1.859	3.362	2.036	1.738			
Road #1	0000	2100	2.988	4.208	4.046	1.897	4.088	3.847	1.513	3.906	1.918	3.462	2.096	1.798			
Road #1	0000	2200	3.078	4.308	4.146	1.956	4.188	3.947	1.562	4.006	1.977	3.562	2.156	1.858			
Road #1	0000	2300	3.168	4.408	4.246	2.015	4.288	4.047	1.611	4.106	2.036	3.662	2.216	1.918			
Road #1	0000	2400	3.258	4.508	4.346	2.074	4.388	4.147	1.660	4.206	2.095	3.762	2.276	1.978			
Road #1	0000	2500	3.348	4.608	4.446	2.133	4.488	4.247	1.709								
Road #2	0000	0100	1.180	2.208	2.046	0.717	2.088	1.840	0.533	1.906	0.738	1.462	0.818	0.598			
Road #2	0000	0200	1.279	2.308	2.146	0.776	2.188	1.947	0.582	2.006	0.797	1.562	0.877	0.658			
Road #2	0000	0300	1.368	2.408	2.246	0.835	2.288	2.047	0.631	2.106	0.856	1.662	0.936	0.718			
Road #2	0000	0400	1.458	2.508	2.346	0.894	2.388	2.147	0.680	2.206	0.915	1.762	1.036	0.778			
Road #2	0000	0500	1.548	2.608	2.446	0.953	2.488	2.247	0.729	2.306	0.974	1.862	1.096	0.838			
Road #2	0000	0600	1.638	2.708	2.546	1.012	2.588	2.347	0.778	2.406	1.033	1.962	1.156	0.898			
Road #2	0000	0700	1.728	2.808	2.646	1.071	2.688	2.447	0.827	2.506	1.092	2.062	1.216	0.958			
Road #2	0000	0800	1.818	2.908	2.746	1.130	2.788	2.547	0.876	2.606	1.151	2.162	1.276	1.018			
Road #2	0000	0900	1.908	3.008	2.846	1.189	2.888	2.647	0.925	2.706	1.210	2.262	1.336	1.078			
Road #2	0000	1000	1.998	3.108	2.946	1.248	2.988	2.747	0.974	2.806	1.269	2.362	1.396	1.138			
Road #2	0000	1100	2.088	3.208	3.046	1.307	3.088	2.847	1.023	2.906	1.328	2.462	1.456	1.198			
Road #2	0000	1200	2.178	3.308	3.146	1.366	3.188	2.947	1.072	3.006	1.387	2.562	1.516	1.258			
Road #2	0000	1300	2.268	3.408	3.246	1.425	3.288	3.047	1.121	3.106	1.446	2.662	1.576	1.318			
Road #2	0000	1400	2.358	3.508	3.346	1.484	3.388	3.147	1.170	3.206	1.505	2.762	1.636	1.378			
Road #2	0000	1500	2.448	3.608	3.446	1.543	3.488	3.247	1.219	3.306	1.564	2.862	1.696	1.438			
Road #2	0000	1600	2.538	3.708	3.546	1.602	3.588	3.347	1.268	3.406	1.623	2.962	1.756	1.498			
Road #2	0000	1700	2.628	3.808	3.646	1.661	3.688	3.447	1.317	3.506	1.682	3.062	1.816	1.558			
Road #2	0000	1800	2.718	3.908	3.746	1.720	3.788	3.547	1.366	3.606	1.741	3.162	1.876	1.618			
Road #2	0000	1900	2.808	4.008	3.846	1.779	3.888	3.647	1.415	3.706	1.800	3.262	1.936	1.678			
Road #2	0000	2000	2.898	4.108	3.946	1.838	3.988	3.747	1.464	3.806	1.859	3.362	2.036	1.738			
Road #2	0000	2100	2.988	4.208	4.046	1.897	4.088	3.847	1.513	3.906	1.918	3.462	2.096	1.798			
Road #2	0000	2200	3.078	4.308	4.146	1.956	4.188	3.947	1.562	4.006	1.977	3.562	2.156	1.858			
Road #2	0000	2300	3.168	4.408	4.246	2.015	4.288	4.047	1.611	4.106	2.036	3.662	2.216	1.918			
Road #2	0000	2400	3.258	4.508	4.346	2.074	4.388	4.147	1.660	4.206	2.095	3.762	2.276	1.978			
Road #2	0000	2500	3.348	4.608	4.446	2.133	4.488	4.247	1.709								
Road #3	0000	0100	1.180	2.208	2.046	0.717	2.088	1.840	0.533	1.906	0.738	1.462	0.818	0.598			
Road #3	0000	0200	1.279	2.308	2.146	0.776	2.188	1.947	0.582	2.006	0.797	1.562	0.877	0.658			
Road #3	0000	0300	1.368	2.408	2.246	0.835	2.288	2.047	0.631	2.106	0.856	1.662	0.936	0.718			
Road #3	0000	0400	1.458	2.508	2.346	0.894	2.388	2.147	0.680	2.206	0.915	1.762	1.036	0.778			
Road #3	0000	0500	1.548	2.608	2.446	0.953	2.488	2.247	0.729	2.306	0.974	1.862	1.096	0.838			
Road #3	0000	0600	1.638	2.708	2.546	1.012	2.588	2.347	0.778	2.406	1.033	1.962	1.156	0.898			
Road #3	0000	0700	1.728	2.808	2.646	1.071	2.688	2.447	0.827	2.506	1.092	2.062	1.216	0.958			
Road #3	0000	0800	1.818	2.908	2.746	1.130	2.788	2.547	0.876	2.606	1.151	2.162	1.276	1.018			
Road #3	0000	0900	1.908	3.008	2.846	1.189	2.888	2.647	0.925	2.706	1.210	2.262	1.336	1.078			
Road #3	0000	1000	1.998	3.108	2.946	1.248	2.988	2.747	0.974	2.806	1.269	2.362	1.396	1.138			
Road #3	0000	1100	2.088	3.208	3.046	1.307	3.088	2.847	1.023	2.906	1.328	2.462	1.456	1.198			
Road #3	0000	1200	2.178	3.308	3.146	1.366	3.188	2.947	1.072	3.006	1.387	2.562	1.516	1.258			
Road #3	0000	1300	2.268	3.408	3.246	1.425	3.288	3.047	1.121	3.106	1.446	2.662	1.576	1.318			
Road #3	0000	1400	2.358	3.508	3.346	1.484	3.388	3.147	1.170	3.206	1.505	2.762	1.636	1.378			
Road #3	0000	1500	2.448	3.608	3.446	1.543	3.488	3.247	1.219	3.306	1.564	2.862	1.696	1.438			
Road #3	0000	1600	2.538	3.708	3.546	1.602	3.588	3.347	1.268	3.406	1.623	2.962	1.756	1.498			
Road #3	0000	1700	2.628	3.808	3.646	1.661	3.688	3.447	1.317	3.506	1.682	3.062	1.816	1.558			
Road #3	0000	1800	2.718	3.908	3.746	1.720	3.788	3.547	1.366	3.606	1.741	3.162	1.876	1.618			
Road #3	0000	1900	2.808	4.008	3.846	1.779	3.888	3.647	1.415	3.706	1.800	3.262	1.936	1.678			
Road #3	0000	2000	2.898	4.108	3.946	1.838	3.988	3.747	1.464	3.806	1.859	3.362	2.036	1.738			
Road #3	0000	2100	2.988	4.208	4.046	1.897	4.088	3.847	1.513	3.906	1.918	3.462	2.096	1.798			
Road #3	0000	2200	3.078	4.308	4.146	1.956	4.188	3.947	1.562	4.006	1.977	3.562	2.156	1.858			
Road #3	0000	2300	3.168	4.408	4.246	2.015	4.288	4.047	1.611	4.106	2.036	3.662	2.216	1.918			
Road #3	0000	2400	3.258	4.508	4.346	2.074	4.388	4.147	1.660	4.206	2.095	3.762	2.276	1.978			
Road #3	0000	2500	3.348	4.608	4.446	2.133	4.488	4.247	1.709								
Road #4	0000	0100	1.180	2.208	2.046	0.717	2.088	1.840	0.533	1.906	0.738	1.462	0.818	0.598			
Road #4	0000	0200	1.279	2.308	2.146	0.776	2.188	1.947	0.582	2.006	0.797	1.562	0.877	0.658			
Road #4	0000	0300	1.368	2.408	2.246	0.835	2.288	2.047	0.631	2.106	0.856	1.662	0.936	0.718			
Road #4	0000	0400	1.458	2.508	2.346	0.894	2.388	2.147	0.680	2.206	0.915	1.762	1.036	0.778			
Road #4	0000	0500	1.548	2.608	2.446	0.953	2.488	2.247	0.729	2.306	0.974	1.862	1.096	0.838			
Road #4	0000	0600	1.638	2.708	2.546	1.012	2.588	2.									

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Open Up North Endroom Factors
Table 24 North End Room Factors for
2019 Year 2018

Road Name	Road ID	Hour	NO Emission						NO Emission						
			Month/Year/Time			Month/Year/Time			Month/Year/Time			Month/Year/Time			
			g/h/m ³	g/s/m ³	tonne/hour	g/h/m ³	g/s/m ³	tonne/hour	g/h/m ³	g/s/m ³	tonne/hour	g/h/m ³	g/s/m ³	tonne/hour	
Road 34	0000-0000	1078	2.8237	7.786	0.098	2.4237	6.846	0.208	5.2026	1.3756	0.098	4.2692	1.1210	2.946	
Road 34	0000-0000	1078	2.8237	7.786	0.098	2.4237	6.846	0.208	5.2026	1.3756	0.098	4.2692	1.1210	2.946	
Road 34	0000-0000	1078	2.8237	7.786	0.098	2.4237	6.846	0.208	5.2026	1.3756	0.098	4.2692	1.1210	2.946	
Road 34	1000-1300	3.6617	2.5441	6.076	0.196	2.2247	5.988	0.091	5.1218	1.2848	0.091	4.1276	1.0739	2.605	
Road 34	1000-1300	3.6617	2.5441	6.076	0.196	2.2247	5.988	0.091	5.1218	1.2848	0.091	4.1276	1.0739	2.605	
Road 34	1000-1300	3.6617	2.5441	6.076	0.196	2.2247	5.988	0.091	5.1218	1.2848	0.091	4.1276	1.0739	2.605	
Road 34	1200-1800	2.2882	3.2847	8.588	0.566	2.8506	7.854	0.054	5.1168	1.065	0.054	4.8962	1.3321	2.605	
Road 34	1200-1800	2.2882	3.2847	8.588	0.566	2.8506	7.854	0.054	5.1168	1.065	0.054	4.8962	1.3321	2.605	
Road 34	1200-1800	2.2882	3.2847	8.588	0.566	2.8506	7.854	0.054	5.1168	1.065	0.054	4.8962	1.3321	2.605	
Road 34	1800-2400	2.5689	3.5883	9.958	0.196	3.2688	9.136	0.054	5.1228	1.2728	0.054	4.9062	1.3321	2.605	
Road 34	1800-2400	2.5689	3.5883	9.958	0.196	3.2688	9.136	0.054	5.1228	1.2728	0.054	4.9062	1.3321	2.605	
Road 34	1800-2400	2.5689	3.5883	9.958	0.196	3.2688	9.136	0.054	5.1228	1.2728	0.054	4.9062	1.3321	2.605	
Road 34	2400-0000	2.0762	3.4247	8.938	0.486	2.9952	7.738	0.054	5.1268	1.2865	0.054	4.9372	1.1210	2.946	
Road 34	2400-0000	2.0762	3.4247	8.938	0.486	2.9952	7.738	0.054	5.1268	1.2865	0.054	4.9372	1.1210	2.946	
Road 34	2400-0000	2.0762	3.4247	8.938	0.486	2.9952	7.738	0.054	5.1268	1.2865	0.054	4.9372	1.1210	2.946	
Road 34	34	1700-1800	2.6662	2.9527	7.738	1.4862	4.047	6.9292	6.688	0.1108	5.1322	1.8772	0.058	7.748	0.058
Road 34	34	1700-1800	2.6662	2.9527	7.738	1.4862	4.047	6.9292	6.688	0.1108	5.1322	1.8772	0.058	7.748	0.058
Road 34	34	1700-1800	2.6662	2.9527	7.738	1.4862	4.047	6.9292	6.688	0.1108	5.1322	1.8772	0.058	7.748	0.058
Road 34	1000-1300	1.123	1.5548	4.098	1.0005	4.487	3.8158	0.888	5.1378	0.888	0.054	4.9362	1.5612	1.5612	
Road 34	1000-1300	1.123	1.5548	4.098	1.0005	4.487	3.8158	0.888	5.1378	0.888	0.054	4.9362	1.5612	1.5612	
Road 34	1000-1300	1.123	1.5548	4.098	1.0005	4.487	3.8158	0.888	5.1378	0.888	0.054	4.9362	1.5612	1.5612	
R															
Road 35	2000-2400	3.008	3.6378	8.818	0.885	4.2455	12.248	0.885	1.415	0.885	2.3887	1.345	8.848	3.058	0.77
Road 35	2000-2400	3.008	3.6378	8.818	0.885	4.2455	12.248	0.885	1.415	0.885	2.3887	1.345	8.848	3.058	0.77
Road 35	2000-2400	3.008	3.6378	8.818	0.885	4.2455	12.248	0.885	1.415	0.885	2.3887	1.345	8.848	3.058	0.77
Road 35	0000-0000	1.4762	3.5648	8.508	0.486	3.2688	7.738	0.054	5.1268	1.2865	0.054	4.9372	1.1210	2.946	
Road 35	0000-0000	1.4762	3.5648	8.508	0.486	3.2688	7.738	0.054	5.1268	1.2865	0.054	4.9372	1.1210	2.946	
Road 35	0000-0000	1.4762	3.5648	8.508	0.486	3.2688	7.738	0.054	5.1268	1.2865	0.054	4.9372	1.1210	2.946	
Road 35	0000-0000	1.4762	3.5648	8.508	0.486	3.2688	7.738	0.054	5.1268	1.2865	0.054	4.9372	1.1210	2.946	
Road 35	0000-0000	1.4762	3.5648	8.508	0.486	3.2688	7.738	0.054	5.1268	1.2865	0.054	4.9372	1.1210	2.946	
Road 35	0000-0000	1.4762	3.5648	8.508	0.486	3.2688	7.738	0.054	5.1268	1.2865	0.054	4.9372	1.1210	2.946	
Road 35	0000-0000	1.4762	3.5648	8.508	0.486	3.2688	7.738	0.054	5.1268	1.2865	0.054	4.9372	1.1210	2.946	
Road 35	0000-0000	1.4762	3.5648	8.508	0.486	3.2688	7.738	0.054	5.1268	1.2865	0.054	4.9372	1.1210	2.946	
Road 35	0000-0000	1.4762	3.5648	8.508	0.486	3.2688	7.738	0.054	5.1268	1.2865	0.054	4.9372	1.1210	2.946	
Road 35	0000-0000	1.4762	3.5648	8.508	0.486	3.2688	7.738	0.054	5.1268	1.2865	0.054	4.9372	1.1210	2.946	
Road 35	0000-0000	1.4762	3.5648	8.508	0.486	3.2688	7.738	0.054	5.1268	1.2865	0.054	4.9372	1.1210	2.946	
Road 35	0000-0000	1.4762	3.5648	8.508	0.486	3.2688	7.738	0.054	5.1268	1.2865	0.054	4.9372	1.1210	2.946	
Road 35	0000-0000	1.4762	3.5648	8.508	0.486	3.2688	7.738	0.054	5.1268	1.2865	0.054	4.9372	1.1210	2.946	
Road 35	0000-0000	1.4762	3.5648	8.508	0.486	3.2688	7.738	0.054	5.1268	1.2865	0.054	4.9372	1.1210	2.946	
Road 35	0000-0000	1.4762	3.5648	8.508	0.486	3.2688	7.738	0.054	5.1268	1.2865	0.054	4.9372	1.1210	2.946	
Road 35	0000-0000	1.4762	3.5648	8.508	0.486	3.2688	7.738	0.054	5.1268	1.2865	0.054	4.9372	1.1210	2.946	
Road 35	0000-0000	1.4762	3.5648	8.508	0.486	3.2688	7.738	0.054	5.1268	1.2865	0.054	4.9372	1.1210	2.946	
Road 35	0000-0000	1.4762	3.5648	8.508	0.486	3.2688	7.738	0.054	5.1268	1.2865	0.054	4.9372	1.1210	2.946	
Road 35	0000-0000	1.4762	3.5648	8.508	0.486	3.2688	7.738	0.054	5.1268	1.2865	0.054	4.9372	1.1210	2.946	
Road 35	0000-0000	1.4762	3.5648	8.508	0.486	3.2688	7.738	0.054	5.1268	1.2865	0.054	4.9372	1.1210	2.946	
Road 35	0000-0000	1.4762	3.5648	8.508	0.486	3.2688	7.738	0.054	5.1268	1.2865	0.054	4.9372	1.1210	2.946	
Road 35	0000-0000	1.4762	3.5648	8.508	0.486	3.2688	7.738	0.054	5.1268	1.2865	0.054	4.9372	1.1210	2.946	
Road 35	0000-0000	1.4762	3.5648	8.508	0.486	3.2688	7.738	0.054	5.1268	1.2865	0.054	4.9372	1.1210	2.946	
Road 35	0000-0000	1.4762	3.5648	8.508	0.486	3.2688	7.738	0.054	5.1268	1.2865	0.054	4.9372	1.1210	2.946	
Road 35	0000-0000	1.4762	3.5648	8.508	0.486	3.2688	7.738	0.054	5.1268	1.2865	0.054	4.9372	1.1210	2.946	
Road 35	0000-0000	1.4762	3.5648	8.508	0.486	3.2688	7.738	0.054	5.1268	1.2865	0.054	4.9372	1.1210	2.946	
Road 35	0000-0000	1.4762	3.5648	8.508	0.486	3.2688	7.738	0.054	5.1268	1.2865	0.054	4.9372	1.1210	2.946	
Road 35	0000-0000	1.4762	3.5648	8.508	0.486	3.2688	7.738	0.054	5.1268	1.2865	0.054	4.9372	1.1210	2.946	
Road 35	0000-0000	1.4762	3.5648	8.508	0.486	3.2688	7.738	0.054	5.1268	1.2865	0.054	4.9372	1.1210	2.946	
Road 35	0000-0000	1.4762	3.5648	8.508	0.486	3.2688	7.738	0.054	5.1268	1.2865	0.054	4.9372	1.1210	2.946	
Road 35	0000-0000	1.4762	3.5648	8.508	0.486	3.2688	7.738	0.054	5.1268	1.2865	0.054	4.9372	1.1210	2.946	
Road 35	0000-0000	1.4762	3.5648	8.508	0.486	3.2688	7.738	0.054	5.1268	1.2865	0.054	4.9372	1.1210	2.946	
Road 35	0000-0000	1.4762	3.5648	8.508	0.486	3.2688	7.738	0.054	5.1268	1.2865	0.054	4.9372	1.1210	2.946	
Road 35	0000-0000	1.4762													

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Open Top 24 Hour Underground Quarry Open Top 24 Hour Entrance Factors for AY2020 (meters)												
Year 2008												
Road Name	Road ID	Hour	Month/turnover		NO Emission		Month/turnover		NO Emission		Month/turnover	
			g/hour/m ²	g/m ²	g/hour/m ²	g/m ²	g/hour/m ²	g/m ²	g/hour/m ²	g/m ²	g/hour/m ²	g/m ²
Road 37	1860-1700	6:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 37	1700-1800	6:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 37	1800-1700	6:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 37	1800-1700	6:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 37	1800-1700	6:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 37	2000-2100	3:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 37	2100-2200	3:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 37	2200-2300	3:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 37	2300-2400	3:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 38	0100-0200	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 38	0200-0300	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 38	0300-0400	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 38	0400-0500	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 38	0500-0600	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 38	0600-0700	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 38	0700-0800	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 38	0800-0900	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 38	0900-1000	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 38	1000-1100	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 38	1100-1200	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 38	1200-1300	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 38	1300-1400	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 38	1400-1500	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 38	1500-1600	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 38	1600-1700	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 38	1700-1800	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 38	1800-1900	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 38	1900-2000	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 38	2000-2100	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 38	2100-2200	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 38	2200-2300	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 38	2300-2400	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 39	0100-0200	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 39	0200-0300	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 39	0300-0400	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 39	0400-0500	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 39	0500-0600	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 39	0600-0700	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 39	0700-0800	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 39	0800-0900	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 39	0900-1000	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 39	1000-1100	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 39	1100-1200	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 39	1200-1300	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 39	1300-1400	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 39	1400-1500	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 39	1500-1600	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 39	1600-1700	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 39	1700-1800	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 39	1800-1900	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 39	1900-2000	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 39	2000-2100	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 39	2100-2200	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 39	2200-2300	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 39	2300-2400	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 40	0100-0200	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 40	0200-0300	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 40	0300-0400	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 40	0400-0500	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 40	0500-0600	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 40	0600-0700	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 40	0700-0800	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 40	0800-0900	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 40	0900-1000	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 40	1000-1100	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 40	1100-1200	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 40	1200-1300	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 40	1300-1400	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 40	1400-1500	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 40	1500-1600	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 40	1600-1700	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 40	1700-1800	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 40	1800-1900	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 40	1900-2000	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 40	2000-2100	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 40	2100-2200	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 40	2200-2300	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	
Road 40	2300-2400	1:00	4.2	2.74	2.68	0.85	1.11	2.58	2.55	4.32	9.08	

\\cur\Environment Projects\60733225\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.4 Emission Factor in 2038.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Road 24 Hour Emission Factors for ARXND0 Model Results														
Year 2038														
Road Name	Road ID	Hour	NO _x Emission				NMHC Emission							
			g/hour	g/ton	g/ton	g/ton	g/hour	g/ton	g/ton	g/ton				
Read #1	41	0000:00:00	1.416	2.511	2.357	1.288	2.278	2.138	0.846	1.028	9.764	5.138	8.148	6.578
Read #1	41	0000:01:00	1.486	2.546	2.406	1.328	2.308	2.168	0.876	1.058	9.908	5.168	8.178	6.608
Read #1	41	0000:02:00	1.556	2.581	2.436	1.358	2.338	2.198	0.906	1.088	10.048	5.198	8.208	6.638
Read #1	41	0000:03:00	1.626	2.616	2.466	1.388	2.368	2.188	0.936	1.118	10.188	5.228	8.238	6.668
Read #1	41	0000:04:00	1.696	2.651	2.496	1.418	2.398	2.218	0.966	1.148	10.328	5.258	8.268	6.698
Read #1	41	0000:05:00	1.766	2.686	2.526	1.448	2.428	2.248	0.996	1.178	10.468	5.288	8.298	6.728
Read #1	41	0000:06:00	1.836	2.721	2.556	1.478	2.458	2.278	1.026	1.208	10.608	5.318	8.328	6.758
Read #1	41	0000:07:00	1.906	2.756	2.586	1.508	2.488	2.308	1.056	1.238	10.748	5.348	8.358	6.788
Read #1	41	0000:08:00	1.976	2.791	2.616	1.538	2.518	2.338	1.086	1.268	10.888	5.378	8.388	6.818
Read #1	41	0000:09:00	2.046	2.826	2.646	1.568	2.548	2.368	1.116	1.298	11.028	5.408	8.418	6.848
Read #1	41	0000:10:00	2.116	2.861	2.676	1.598	2.578	2.398	1.146	1.328	11.168	5.438	8.448	6.878
Read #1	41	0000:11:00	2.186	2.896	2.706	1.628	2.608	2.428	1.176	1.358	11.308	5.468	8.478	6.908
Read #1	41	0000:12:00	2.256	2.931	2.736	1.658	2.638	2.458	1.206	1.388	11.448	5.498	8.508	6.938
Read #1	41	0000:13:00	2.326	2.966	2.766	1.688	2.668	2.488	1.236	1.418	11.588	5.528	8.538	6.968
Read #1	41	0000:14:00	2.396	3.001	2.796	1.718	2.698	2.518	1.266	1.448	11.728	5.558	8.568	6.998
Read #1	41	0000:15:00	2.466	3.036	2.826	1.748	2.728	2.548	1.296	1.478	11.868	5.588	8.598	7.028
Read #1	41	0000:16:00	2.536	3.071	2.856	1.778	2.758	2.578	1.326	1.508	12.008	5.618	8.628	7.058
Read #1	41	0000:17:00	2.606	3.106	2.886	1.808	2.788	2.608	1.356	1.538	12.148	5.648	8.658	7.088
Read #1	41	0000:18:00	2.676	3.141	2.916	1.838	2.818	2.638	1.386	1.568	12.288	5.678	8.688	7.118
Read #1	41	0000:19:00	2.746	3.176	2.946	1.868	2.848	2.668	1.416	1.598	12.428	5.708	8.718	7.148
Read #1	41	0000:20:00	2.816	3.211	2.976	1.898	2.878	2.698	1.446	1.628	12.568	5.738	8.748	7.178
Read #1	41	0000:21:00	2.886	3.246	3.006	1.928	2.908	2.728	1.476	1.658	12.708	5.768	8.778	7.208
Read #1	41	0000:22:00	2.956	3.281	3.036	1.958	2.938	2.758	1.506	1.688	12.848	5.798	8.808	7.238
Read #1	41	0000:23:00	3.026	3.316	3.066	1.988	2.968	2.788	1.536	1.718	12.988	5.828	8.838	7.268
Read #1	41	0000:24:00	3.096	3.351	3.096	2.018	2.998	2.818	1.566	1.748	13.128	5.858	8.868	7.298
Read #2	42	0000:00:00	1.312	2.478	2.324	1.248	2.248	2.108	0.826	1.008	9.564	5.098	8.084	6.538
Read #2	42	0000:01:00	1.382	2.513	2.354	1.278	2.278	2.138	0.856	1.038	9.704	5.128	8.114	6.568
Read #2	42	0000:02:00	1.452	2.548	2.384	1.308	2.308	2.168	0.886	1.068	9.844	5.158	8.144	6.598
Read #2	42	0000:03:00	1.522	2.583	2.414	1.338	2.338	2.198	0.916	1.098	9.984	5.188	8.174	6.628
Read #2	42	0000:04:00	1.592	2.618	2.444	1.368	2.368	2.228	0.946	1.128	10.124	5.218	8.204	6.658
Read #2	42	0000:05:00	1.662	2.653	2.474	1.398	2.398	2.258	0.976	1.158	10.264	5.248	8.234	6.688
Read #2	42	0000:06:00	1.732	2.688	2.504	1.428	2.428	2.288	1.006	1.188	10.404	5.278	8.264	6.718
Read #2	42	0000:07:00	1.802	2.723	2.534	1.458	2.458	2.318	1.036	1.218	10.544	5.308	8.294	6.748
Read #2	42	0000:08:00	1.872	2.758	2.564	1.488	2.488	2.348	1.066	1.248	10.684	5.338	8.324	6.778
Read #2	42	0000:09:00	1.942	2.793	2.594	1.518	2.518	2.378	1.096	1.278	10.824	5.368	8.354	6.808
Read #2	42	0000:10:00	2.012	2.828	2.624	1.548	2.548	2.408	1.126	1.308	10.964	5.398	8.384	6.838
Read #2	42	0000:11:00	2.082	2.863	2.654	1.578	2.578	2.438	1.156	1.338	11.104	5.428	8.414	6.868
Read #2	42	0000:12:00	2.152	2.898	2.684	1.608	2.608	2.468	1.186	1.368	11.244	5.458	8.444	6.898
Read #2	42	0000:13:00	2.222	2.933	2.714	1.638	2.638	2.498	1.216	1.398	11.384	5.488	8.474	6.928
Read #2	42	0000:14:00	2.292	2.968	2.744	1.668	2.668	2.528	1.246	1.428	11.524	5.518	8.504	6.958
Read #2	42	0000:15:00	2.362	3.003	2.774	1.698	2.698	2.558	1.276	1.458	11.664	5.548	8.534	6.988
Read #2	42	0000:16:00	2.432	3.038	2.804	1.728	2.728	2.588	1.306	1.488	11.804	5.578	8.564	7.018
Read #2	42	0000:17:00	2.502	3.073	2.834	1.758	2.758	2.618	1.336	1.518	11.944	5.608	8.594	7.048
Read #2	42	0000:18:00	2.572	3.108	2.864	1.788	2.788	2.648	1.366	1.548	12.084	5.638	8.624	7.078
Read #2	42	0000:19:00	2.642	3.143	2.894	1.818	2.818	2.678	1.396	1.578	12.224	5.668	8.654	7.108
Read #2	42	0000:20:00	2.712	3.178	2.924	1.848	2.848	2.708	1.426	1.608	12.364	5.698	8.684	7.138
Read #2	42	0000:21:00	2.782	3.213	2.954	1.878	2.878	2.738	1.456	1.638	12.504	5.728	8.714	7.168
Read #2	42	0000:22:00	2.852	3.248	2.984	1.908	2.908	2.768	1.486	1.668	12.644	5.758	8.744	7.198
Read #2	42	0000:23:00	2.922	3.283	3.014	1.938	2.938	2.798	1.516	1.698	12.784	5.788	8.774	7.228
Read #2	42	0000:24:00	2.992	3.318	3.044	1.968	2.968	2.828	1.546	1.728	12.924	5.818	8.804	7.258
Read #3	43	0000:00:00	1.242	2.443	2.294	1.218	2.243	2.103	0.816	1.003	9.494	5.068	8.054	6.508
Read #3	43	0000:01:00	1.312	2.478	2.324	1.248	2.273	2.133	0.846	1.033	9.634	5.098	8.084	6.538
Read #3	43	0000:02:00	1.382	2.513	2.354	1.278	2.303	2.163	0.876	1.063	9.774	5.128	8.114	6.568
Read #3	43	0000:03:00	1.452	2.548	2.384	1.308	2.333	2.193	0.906	1.093	9.914	5.158	8.144	6.598
Read #3	43	0000:04:00	1.522	2.583	2.414	1.338	2.363	2.223	0.936	1.123	10.054	5.188	8.174	6.628
Read #3	43	0000:05:00	1.592	2.618	2.444	1.368	2.393	2.253	0.966	1.153	10.194	5.218	8.204	6.658
Read #3	43	0000:06:00	1.662	2.653	2.474	1.398	2.423	2.283	0.996	1.183	10.334	5.248	8.234	6.688
Read #3	43	0000:07:00	1.732	2.688	2.504	1.428	2.453	2.313	1.026	1.213	10.474	5.278	8.264	6.718
Read #3	43	0000:08:00	1.802	2.723	2.534	1.458	2.483	2.343	1.056	1.243	10.614	5.308	8.294	6.748
Read #3	43	0000:09:00	1.872	2.758	2.564	1.488	2.513	2.373	1.086	1.273	10.754	5.338	8.324	6.778
Read #3	43	0000:10:00	1.942	2.793	2.594	1.518	2.543	2.403	1.116	1.303	10.894	5.368	8.354	6.808
Read #3	43	0000:11:00	2.012	2.828	2.624	1.548	2.573	2.433	1.146	1.333	11.034	5.398	8.384	6.838
Read #3	43	0000:12:00	2.082	2.863	2.654	1.578	2.603	2.463	1.176	1.363	11.174	5.428	8.414	6.868
Read #3	43	0000:13:00	2.152	2.898	2.684	1.608	2.633	2.493	1.206	1.393	11.314	5.458	8.444	6.898
Read #3	43	0000:14:00	2.222	2.933	2.714	1.638	2.663	2.523	1.236	1.423	11.454	5.488	8.474	6.928
Read #3	43	0000:15:00	2.292	2.968	2.744	1.668	2.693	2.553	1.266	1.453	11.594	5.518	8.504	6.958
Read #3	43	0000:16:00	2.362	3.003	2.774	1.698	2.723	2.583	1.296	1.483	11.734	5.548	8.534	6.988
Read #3	43	0000:17:00	2.432	3.038	2.804	1.728	2.753	2.613	1.326	1.513	11.874	5.578	8.564	7.018
Read #3	43	0000:18:00	2.502	3.073	2.834	1.758	2.783	2.643	1.356	1.543	12.014	5.608	8.594	7.048
Read #3	43	0000:19:00	2.572	3.108	2.864	1.788	2.813	2.673	1.386	1.573	12.154	5.638	8.624	7.078
Read #3	43	0000:20:00	2.642	3.143	2.894	1.818	2.843	2.703	1.416	1.603	12.294	5.668	8.654	7.108
Read #3	43	0000:21:00	2.712	3.178	2.924	1.848	2.873	2.733	1.446	1.633	12.434	5.698	8.684	7.138
Read #3	43	0000:22:00	2.782	3.213	2.954	1.878	2.903	2.763	1.476	1.663	12.574	5.728	8.714	7.168
Read #3	43	0000:23:00	2.852	3.248	2.984	1.908	2.933	2.793	1.506	1.693	12.714	5.758	8.744	7.198
Read #3	43	0000:24:00	2.922	3.283	3.014	1.938	2.963	2.823	1.536	1.723	12.854	5.788	8.774	7.228
Read #4	44	0000:00:00	1.172	2.414	2.264	1.188	2.214	2.074	0.806	1.004	9.394	5.038	7.994	6.468
Read #4	44	0000:01:00	1.242	2.449	2.294	1.218	2.244	2.104	0.836	1.034	9.534	5.068	8.024	6.498
Read #4	44	0000:02:00	1.312	2.484	2.324	1.248	2.274	2.134	0.866	1.064	9.674	5.098	8.054	6.528
Read #4	44	0000:03:00	1.382	2.519	2.354	1.278	2.304	2.164	0.896	1.094	9.814	5.1		

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Open Top North 24-hour Entrainment Factors for 4000m2 model														
		Year 2018												
Case Name	Road ID	Hour	NOx Entrainment				NO ₂ Entrainment				PM ₁₀ Entrainment			
			g/km ² /hr	Mg/hr/mi	Mg/hr/mi	Mg/hr/mi	g/km ² /hr	Mg/hr/mi	Mg/hr/mi	Mg/hr/mi	g/km ² /hr	Mg/hr/mi	Mg/hr/mi	Mg/hr/mi
road #4	44	0800-0900	9.8776	2.8867	1.7776	0.8464	2.4487	1.5226	0.5182	1.5226	0.9781	2.2882	1.3487	0.6667
road #4	45	0900-1000	11.8101	3.5006	2.1556	1.0506	2.9235	1.8106	0.5782	1.5226	0.9781	2.2882	1.3487	0.6667
road #4	46	1000-1100	11.8101	3.5006	2.1556	1.0506	2.9235	1.8106	0.5782	1.5226	0.9781	2.2882	1.3487	0.6667
road #4	47	1100-1200	11.7762	2.7967	1.3903	0.6202	1.9727	1.2222	0.6824	1.1222	0.6824	0.9202	0.8402	0.4802
road #4	48	1200-1300	12.0000	3.0000	1.5000	0.7500	2.2500	1.5000	0.7500	1.5000	0.7500	1.5000	0.7500	0.7500
road #4	49	1300-1400	1.4862	0.2362	0.1408	0.1292	0.1187	0.0594	0.0672	0.1408	0.0704	0.1078	0.0704	0.1078
road #4	50	1400-1500	1.4862	0.2362	0.1408	0.1292	0.1187	0.0594	0.0672	0.1408	0.0704	0.1078	0.0704	0.1078
road #4	51	1500-1600	1.4150	0.2606	0.1588	0.1251	0.1311	0.1175	0.0868	0.1352	0.0868	0.971	1.0675	0.0868
road #4	52	1600-1700	1.8602	0.6307	0.3488	0.1608	0.1511	0.1388	0.7888	0.2888	1.4778	0.9088	2.0988	1.1088
road #4	53	1700-1800	1.4762	0.2606	0.1588	0.1251	0.1311	0.1175	0.0868	0.1352	0.0868	0.971	1.0675	0.0868
road #4	54	1800-1900	2.0762	0.7487	0.4758	0.1862	0.5927	0.4288	0.1762	1.4142	0.2142	0.7078	1.0688	1.0688
road #4	55	1900-2000	2.0762	0.7487	0.4758	0.1862	0.5927	0.4288	0.1762	1.4142	0.2142	0.7078	1.0688	1.0688
road #4	56	2000-2100	6.1101	1.4452	0.7902	0.3503	1.1101	0.5182	0.1378	0.9402	0.1378	0.762	0.8257	0.1378
road #4	57	2100-2200	5.4508	1.2542	0.7002	0.3193	1.1101	0.5084	0.0742	0.9402	0.1378	0.762	0.8257	0.1378
road #4	58	2200-2300	5.4508	1.2542	0.7002	0.3193	1.1101	0.5084	0.0742	0.9402	0.1378	0.762	0.8257	0.1378
road #4	59	2300-2400	5.4508	1.2542	0.7002	0.3193	1.1101	0.5084	0.0742	0.9402	0.1378	0.762	0.8257	0.1378
road #4	60	0000-0100	5.8993	0.8101	0.6807	0.3223	0.8505	0.4652	0.4232	0.7027	0.4232	0.5808	0.6402	0.3742
road #5	44	0800-0900	2.3767	0.7002	0.3802	0.2202	0.5602	0.4302	0.1702	1.7002	0.1702	0.2202	0.2202	0.1702
road #5	45	0900-1000	5.9401	1.7925	0.9801	0.5111	2.4008	1.3007	0.4302	2.1117	0.2401	0.8404	1.7907	0.2401
road #5	46	1000-1100	6.5401	2.0308	1.0807	0.5697	2.6705	1.5505	0.4302	2.6207	0.2901	0.9607	1.7607	0.2901
road #5	47	1100-1200	6.5401	2.0308	1.0807	0.5697	2.6705	1.5505	0.4302	2.6207	0.2901	0.9607	1.7607	0.2901
road #5	48	1200-1300	7.7908	2.4101	1.2607	0.6782	3.1208	2.6107	0.6782	3.1207	0.5207	1.8107	2.1207	0.5207
road #5	49	1300-1400	7.7908	2.4101	1.2607	0.6782	3.1208	2.6107	0.6782	3.1207	0.5207	1.8107	2.1207	0.5207
road #5	50	1400-1500	7.7908	2.4101	1.2607	0.6782	3.1208	2.6107	0.6782	3.1207	0.5207	1.8107	2.1207	0.5207
road #5	51	1500-1600	7.7908	2.4101	1.2607	0.6782	3.1208	2.6107	0.6782	3.1207	0.5207	1.8107	2.1207	0.5207
road #5	52	1600-1700	7.7908	2.4101	1.2607	0.6782	3.1208	2.6107	0.6782	3.1207	0.5207	1.8107	2.1207	0.5207
road #5	53	1700-1800	7.7908	2.4101	1.2607	0.6782	3.1208	2.6107	0.6782	3.1207	0.5207	1.8107	2.1207	0.5207
road #5	54	1800-1900	7.7908	2.4101	1.2607	0.6782	3.1208	2.6107	0.6782	3.1207	0.5207	1.8107	2.1207	0.5207
road #5	55	1900-2000	7.7908	2.4101	1.2607	0.6782	3.1208	2.6107	0.6782	3.1207	0.5207	1.8107	2.1207	0.5207
road #5	56	2000-2100	7.7908	2.4101	1.2607	0.6782	3.1208	2.6107	0.6782	3.1207	0.5207	1.8107	2.1207	0.5207
road #5	57	2100-2200	7.7908	2.4101	1.2607	0.6782	3.1208	2.6107	0.6782	3.1207	0.5207	1.8107	2.1207	0.5207
road #5	58	2200-2300	7.7908	2.4101	1.2607	0.6782	3.1208	2.6107	0.6782	3.1207	0.5207	1.8107	2.1207	0.5207
road #5	59	2300-2400	7.7908	2.4101	1.2607	0.6782	3.1208	2.6107	0.6782	3.1207	0.5207	1.8107	2.1207	0.5207
road #5	60	0000-0100	7.7908	2.4101	1.2607	0.6782	3.1208	2.6107	0.6782	3.1207	0.5207	1.8107	2.1207	0.5207
road #6	44	0800-0900	9.8776	2.8867	1.7776	0.8464	2.4487	1.5226	0.5182	1.5226	0.9781	2.2882	1.3487	0.6667
road #6	45	0900-1000	11.8101	3.5006	2.1556	1.0506	2.9235	1.8106	0.5782	1.5226	0.9781	2.2882	1.3487	0.6667
road #6	46	1000-1100	11.8101	3.5006	2.1556	1.0506	2.9235	1.8106	0.5782	1.5226	0.9781	2.2882	1.3487	0.6667
road #6	47	1100-1200	11.7762	2.7967	1.3903	0.6202	1.9727	1.2222	0.6824	1.1222	0.6824	0.9202	0.8402	0.4802
road #6	48	1200-1300	12.0000	3.0000	1.5000	0.7500	2.2500	1.5000	0.7500	1.5000	0.7500	1.5000	0.7500	0.7500
road #6	49	1300-1400	1.4862	0.2362	0.1408	0.1292	0.1187	0.0594	0.0672	0.1408	0.0704	0.1078	0.0704	0.1078
road #6	50	1400-1500	1.4862	0.2362	0.1408	0.1292	0.1187	0.0594	0.0672	0.1408	0.0704	0.1078	0.0704	0.1078
road #6	51	1500-1600	1.4150	0.2606	0.1588	0.1251	0.1311	0.1175	0.0868	0.1352	0.0868	0.971	1.0675	0.0868
road #6	52	1600-1700	1.8602	0.6307	0.3488	0.1608	0.1511	0.1388	0.7888	0.2888	1.4778	0.9088	2.0988	1.1088
road #6	53	1700-1800	1.4762	0.2606	0.1588	0.1251	0.1311	0.1175	0.0868	0.1352	0.0868	0.971	1.0675	0.0868
road #6	54	1800-1900	2.0762	0.7487	0.4758	0.1862	0.5927	0.4288	0.1762	1.4142	0.2142	0.7078	1.0688	1.0688
road #6	55	1900-2000	2.0762	0.7487	0.4758	0.1862	0.5927	0.4288	0.1762	1.4142	0.2142	0.7078	1.0688	1.0688
road #6	56	2000-2100	6.1101	1.4452	0.7902	0.3503	1.1101	0.5182	0.1378	0.9402	0.1378	0.762	0.8257	0.1378
road #6	57	2100-2200	5.4508	1.2542	0.7002	0.3193	1.1101	0.5084	0.0742	0.9402	0.1378	0.762	0.8257	0.1378
road #6	58	2200-2300	5.4508	1.2542	0.7002	0.3193	1.1101	0.5084	0.0742	0.9402	0.1378	0.762	0.8257	0.1378
road #6	59	2300-2400	5.4508	1.2542	0.7002	0.3193	1.1101	0.5084	0.0742	0.9402	0.1378	0.762	0.8257	0.1378
road #6	60	0000-0100	5.8993	0.8101	0.6807	0.3223	0.8505	0.4652	0.4232	0.7027	0.4232	0.5808	0.6402	0.3742
road #7	44	0800-0900	9.8776	2.8867	1.7776	0.8464	2.4487	1.5226	0.5182	1.5226	0.9781	2.2882	1.3487	0.6667
road #7	45	0900-1000	11.8101	3.5006	2.1556	1.0506	2.9235	1.8106	0.5782	1.5226	0.9781	2.2882	1.3487	0.6667
road #7	46	1000-1100	11.8101	3.5006	2.1556	1.0506	2.9235	1.8106	0.5782	1.5226	0.9781	2.2882	1.3487	0.6667
road #7	47	1100-1200	11.7762	2.7967	1.3903	0.6202	1.9727	1.2222	0.6824	1.1222	0.6824	0.9202	0.8402	0.4802
road #7	48	1200-1300	12.0000	3.0000	1.5000	0.7500	2.2500	1.5000	0.7500	1.5000	0.7500	1.5000	0.7500	0.7500
road #7	49	1300-1400	1.4862	0.2362	0.1408	0.1292	0.1187	0.0594	0.0672	0.1408	0.0704	0.1078	0.0704	0.1078
road #7	50	1400-1500	1.4862	0.2362	0.1408	0.1292	0.1187	0.0594	0.0672	0.1408	0.0704	0.1078	0.0704	0.1078
road #7	51	1500-1600	1.4150	0.2606	0.1588	0.1251	0.1311	0.1175	0.0868	0.1352	0.0868	0.971	1.0675	0.0868
road #7	52	1600-1700	1.8602	0.6307	0.3488	0.1608	0.1511	0.1388	0.7888	0.2888	1.4778	0.9088	2.0988	1.1088
road #7	53	1700-1800	1.4762	0.2606	0.1588	0.1251	0.1311	0.1175	0.0868	0.1352	0.0868	0.971	1.0675	0.0868
road #7	54	1800-1900	2.0762	0.7487	0.4758	0.1862	0.5927	0.4288	0.1762	1.4142	0.2142	0.7078	1.0688	1.0688
road #7	55	1900-2000	2.0762	0.7487	0.4758	0.1862	0.5927	0.4288	0.1762	1.4142	0.2142	0.7078	1.0688	1.0688
road #7	56	2000-2100	6.1101	1.4452	0.7902	0.3503	1.1101	0.5182	0.1378	0.9402	0.1378	0.762	0.8257	0.1378
road #7	57	2100-2200	5.4508	1.2542	0.7002	0.3193	1.1101	0.5084	0.0742	0.9402	0.1378	0.762	0.8257	0.1378
road #7	58	2200-2300	5.4508	1.2542	0.7002	0.3193	1.1101	0.5084	0.0742	0.9402	0.1378	0.762	0.8257	0.1378
road #7	59	2300-2400	5.4508	1.2542	0.7002	0.3193	1.1101	0.5084	0.0742	0.9402	0.1378	0.762	0.8257	0.1378
road #7	60	0000-0100	5.8993	0.8101	0.6807	0.3223	0.8505	0.4652	0.4232	0.7027	0.4232	0.5808	0.6402	0.3742
road #8	44	0800-0900	9.8776	2.8867	1.7776	0.8464	2.4487	1.5226	0.5182	1.5226	0.9781	2.2882	1.3487	0.6667
road #8	45	0900-1000	11.8101	3.5006	2.1556	1.0506	2.9235	1.8106	0.5782	1.5226	0.9781	2.2882	1.3487	0.6667
road #8	46	1000-1100	11.8101	3.5006	2.1556	1.0506	2.9235	1.8106	0.5782	1.5226	0.9781	2.2882	1.3487	0.6667
road #8	47	1100-1200	11.7762	2.7967	1.3903	0.6202	1.9727	1.2222	0.6824	1.1222	0.6824	0.9202	0.8402	0.4802
road #8	48	1200-1300	12.0000	3.0000	1.5000	0.7500	2.2500	1.5000	0.7500	1.5000	0.7500	1.5000	0.7500	0.7500
road #8	49	1300-1400	1.4862	0.2362										

L:\Secure\Environment Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Open Road\Appendix 3.5.4 Emission Factor in 2031

Open North 24 Hour Underground Query																	
Open Read 24 hour Emission Factors for KEROSENE (Metric Tonnes)																	
		Year 2018		Mo, Emission						Mo, Emission							
Row Name	Read ID	Hour	Monthly/Yearly			Monthly/Yearly			Monthly/Yearly			Monthly/Yearly					
			g/kWh	kg/hr	kg/day	g/kWh	kg/hr	kg/day	g/kWh	kg/hr	kg/day	g/kWh	kg/hr	kg/day			
Read #7	47	1600-1700	2.43E	5.04E	1.58E	2.38E	4.92E	1.41E	1.88E	2.68E	6.48E	9.47E	1.83E	5.88E	0.05		
Read #7	1700-1800	5.40E	4.33E	9.16E	2.75E	5.36E	11.2E	3.12E	4.13E	5.72E	14.3E	2.92E	7.52E	0.06			
Read #7	1800-1900	5.11E	4.33E	9.16E	2.75E	5.36E	11.2E	3.12E	4.13E	5.72E	14.3E	2.92E	7.52E	0.06			
Read #7	1900-2000	2.11E	2.23E	4.67E	1.37E	2.80E	5.92E	1.62E	2.40E	3.64E	9.40E	1.38E	2.88E	0.03E	2.37E	0.05	
Read #7	2000-2100	2.87E	2.41E	5.05E	1.45E	3.00E	6.30E	1.72E	2.28E	3.48E	9.16E	1.26E	3.36E	0.03E	2.37E	0.05	
Read #7	2100-2200	1.13E	1.34E	2.79E	0.76E	1.44E	3.07E	0.84E	1.10E	1.50E	3.97E	0.58E	1.58E	0.04E	2.37E	0.05	
Read #7	2200-2300	1.13E	1.34E	2.79E	0.76E	1.44E	3.07E	0.84E	1.10E	1.50E	3.97E	0.58E	1.58E	0.04E	2.37E	0.05	
Read #7	2300-2400	5.00E	9.03E	1.87E	3.82E	7.70E	16.0E	4.15E	2.54E	4.87E	6.63E	0.07E	0.19E	0.57E	1.79E	0.05	
Read #8	0000-0100	1.78E	1.62E	3.37E	0.91E	2.41E	5.02E	1.37E	1.82E	2.60E	6.71E	1.92E	5.24E	1.44E	3.74E	0.04	
Read #8	0100-0200	1.77E	1.62E	3.37E	0.91E	2.41E	5.02E	1.37E	1.82E	2.60E	6.71E	1.92E	5.24E	1.44E	3.74E	0.04	
Read #8	0200-0300	5.00E	2.98E	6.15E	1.64E	4.17E	8.76E	2.34E	3.44E	4.92E	12.8E	3.87E	1.05E	2.80E	0.07E	2.40E	0.06
Read #8	0300-0400	1.44E	1.44E	3.00E	0.76E	1.44E	3.00E	0.76E	1.44E	3.00E	0.76E	1.44E	3.00E	0.76E	1.44E	0.05	
Read #8	0400-0500	1.52E	2.54E	4.44E	1.22E	2.58E	4.98E	1.39E	1.92E	3.60E	7.72E	2.43E	6.32E	1.51E	3.72E	0.05	
Read #8	0500-0600	6.89E	5.49E	11.5E	3.28E	6.77E	14.3E	3.83E	5.24E	7.24E	14.8E	3.66E	9.40E	2.40E	6.16E	0.07	
Read #8	0600-0700	1.44E	1.44E	3.00E	0.76E	1.44E	3.00E	0.76E	1.44E	3.00E	0.76E	1.44E	3.00E	0.76E	1.44E	0.05	
Read #8	0700-0800	1.03E	2.76E	4.17E	1.16E	8.84E	2.42E	3.67E	3.56E	4.68E	12.7E	3.42E	4.62E	1.24E	1.86E	0.05	
Read #8	0800-0900	2.45E	2.45E	5.06E	1.36E	2.45E	5.06E	1.36E	2.45E	5.06E	1.36E	2.45E	5.06E	1.36E	2.45E	0.05	
Read #8	0900-1000	1.10E	2.76E	4.17E	1.16E	8.84E	2.42E	3.67E	3.56E	4.68E	12.7E	3.42E	4.62E	1.24E	1.86E	0.05	
Read #8	1000-1100	1.25E	2.76E	4.17E	1.16E	8.84E	2.42E	3.67E	3.56E	4.68E	12.7E	3.42E	4.62E	1.24E	1.86E	0.05	
Read #8	1100-1200	1.25E	2.76E	4.17E	1.16E	8.84E	2.42E	3.67E	3.56E	4.68E	12.7E	3.42E	4.62E	1.24E	1.86E	0.05	
Read #8	1200-1300	1.13E	3.16E	6.77E	1.87E	1.06E	2.40E	6.48E	1.74E	3.13E	6.72E	1.87E	4.17E	1.12E	1.66E	0.05	
Read #8	1300-1400	1.13E	3.16E	6.77E	1.87E	1.06E	2.40E	6.48E	1.74E	3.13E	6.72E	1.87E	4.17E	1.12E	1.66E	0.05	
Read #8	1400-1500	1.13E	3.16E	6.77E	1.87E	1.06E	2.40E	6.48E	1.74E	3.13E	6.72E	1.87E	4.17E	1.12E	1.66E	0.05	
Read #8	1500-1600	1.94E	1.61E	3.47E	0.91E	2.32E	4.83E	1.28E	1.68E	2.40E	6.16E	1.84E	1.27E	1.93E	1.93E	0.05	
Read #8	1600-1700	2.00E	1.94E	4.06E	1.16E	2.32E	4.83E	1.28E	1.68E	2.40E	6.16E	1.84E	1.27E	1.93E	1.93E	0.05	
Read #8	1700-1800	3.38E	3.38E	7.16E	1.97E	1.75E	4.28E	1.48E	2.40E	4.18E	1.10E	2.18E	5.18E	1.38E	1.78E	0.05	
Read #8	1800-1900	1.71E	2.65E	5.06E	1.36E	2.45E	5.06E	1.36E	2.45E	5.06E	1.36E	2.45E	5.06E	1.36E	2.45E	0.05	
Read #8	1900-2000	1.96E	1.76E	3.72E	0.91E	2.32E	4.83E	1.28E	1.68E	2.40E	6.16E	1.84E	1.27E	1.93E	1.93E	0.05	
Read #8	2000-2100	1.07E	1.09E	2.29E	0.64E	1.26E	2.71E	0.74E	1.00E	1.32E	3.60E	0.90E	1.24E	1.66E	0.04	2.37E	0.05
Read #8	2100-2200	1.91E	1.91E	4.06E	1.16E	2.32E	4.83E	1.28E	1.68E	2.40E	6.16E	1.84E	1.27E	1.93E	1.93E	0.05	
Read #8	2200-2300	1.02E	1.02E	2.16E	0.60E	1.14E	2.70E	0.72E	0.97E	1.14E	3.00E	0.76E	1.44E	3.00E	0.76E	1.44E	0.05
Read #8	2300-2400	1.02E	1.02E	2.16E	0.60E	1.14E	2.70E	0.72E	0.97E	1.14E	3.00E	0.76E	1.44E	3.00E	0.76E	1.44E	0.05
Read #9	0000-0100	1.44E	1.44E	3.00E	0.76E	1.44E	3.00E	0.76E	1.44E	3.00E	0.76E	1.44E	3.00E	0.76E	1.44E	0.05	
Read #9	0100-0200	1.71E	2.76E	4.94E	1.37E	2.45E	5.06E	1.36E	2.45E	5.06E	1.36E	2.45E	5.06E	1.36E	2.45E	0.05	
Read #9	0200-0300	1.44E	1.44E	3.00E	0.76E	1.44E	3.00E	0.76E	1.44E	3.00E	0.76E	1.44E	3.00E	0.76E	1.44E	0.05	
Read #9	0300-0400	1.95E	1.84E	3.84E	0.89E	1.64E	4.14E	1.10E	1.88E	2.96E	6.40E	1.82E	4.90E	1.38E	3.58E	0.05	
Read #9	0400-0500	1.85E	1.85E	3.96E	1.06E	2.32E	4.83E	1.28E	1.68E	2.40E	6.16E	1.84E	1.27E	1.93E	1.93E	0.05	
Read #9	0500-0600	1.13E	4.12E	8.80E	2.40E	6.80E	1.78E	3.94E	1.07E	2.52E	6.72E	1.87E	4.17E	1.12E	1.66E	0.05	
Read #9	0600-0700	1.13E	1.70E	3.59E	0.98E	1.30E	3.01E	0.81E	1.06E	1.42E	3.67E	0.97E	2.63E	0.71E	1.93E	0.05	
Read #9	0700-0800	3.97E	3.72E	7.98E	2.16E	1.95E	4.80E	1.28E	1.68E	2.40E	6.16E	1.84E	1.27E	1.93E	1.93E	0.05	
Read #9	0800-0900	1.93E	1.93E	4.12E	1.12E	2.32E	4.83E	1.28E	1.68E	2.40E	6.16E	1.84E	1.27E	1.93E	1.93E	0.05	
Read #9	0900-1000	2.96E	2.65E	5.67E	1.56E	1.83E	4.32E	1.14E	2.08E	3.11E	1.21E	2.64E	0.81E	1.81E	1.03E	2.36E	0.05
Read #9	1000-1100	4.24E	2.85E	6.16E	1.69E	1.99E	4.99E	1.31E	2.08E	3.11E	1.21E	2.64E	0.81E	1.81E	1.03E	2.36E	0.05
Read #9	1100-1200	4.24E	2.85E	6.16E	1.69E	1.99E	4.99E	1.31E	2.08E	3.11E	1.21E	2.64E	0.81E	1.81E	1.03E	2.36E	0.05
Read #9	1200-1300	2.77E	2.77E	5.94E	1.59E	1.99E	5.01E	1.31E	1.99E	5.01E	1.31E	1.99E	5.01E	1.31E	1.99E	5.01E	0.05
Read #9	1300-1400	2.27E	2.27E	4.94E	1.36E	1.99E	5.01E	1.31E	1.99E	5.01E	1.31E	1.99E	5.01E	1.31E	1.99E	5.01E	0.05
Read #9	1400-1500	2.27E	2.27E	4.94E	1.36E	1.99E	5.01E	1.31E	1.99E	5.01E	1.31E	1.99E	5.01E	1.31E	1.99E	5.01E	0.05
Read #9	1500-1600	2.27E	2.11E	4.57E	1.25E	2.01E	4.22E	1.10E	1.88E	2.86E	6.90E	1.91E	4.87E	1.27E	1.71E	0.05	
Read #9	1600-1700	2.33E	2.06E	4.49E	1.22E	2.07E	4.27E	1.10E	1.88E	2.86E	6.90E	1.91E	4.87E	1.27E	1.71E	0.05	
Read #9	1700-1800	1.81E	1.81E	3.96E	1.06E	2.32E	4.83E	1.28E	1.68E	2.40E	6.16E	1.84E	1.27E	1.93E	1.93E	0.05	
Read #9	1800-1900	1.44E	1.44E	3.00E	0.76E	1.44E	3.00E	0.76E	1.44E	3.00E	0.76E	1.44E	3.00E	0.76E	1.44E	0.05	
Read #9	1900-2000	1.05E	1.05E	2.22E	0.61E	1.26E	2.71E	0.74E	1.00E	1.32E	3.60E	0.90E	1.24E	1.66E	0.04	2.37E	0.05
Read #9	2000-2100	1.44E	1.44E	3.00E	0.76E	1.44E	3.00E	0.76E	1.44E	3.00E	0.76E	1.44E	3.00E	0.76E	1.44E	0.05	
Read #9	2100-2200	1.13E	1.88E	4.06E	1.16E	2.32E	4.83E	1.28E	1.68E	2.40E	6.16E	1.84E	1.27E	1.93E	1.93E	0.05	
Read #9	2200-2300	1.13E	1.88E	4.06E	1.16E	2.32E	4.83E	1.28E	1.68E	2.40E	6.16E	1.84E	1.27E	1.93E	1.93E	0.05	
Read #9	2300-2400	1.13E	1.88E	4.06E	1.16E	2.32E	4.83E	1.28E	1.68E	2.40E	6.16E	1.84E	1.27E	1.93E	1.93E	0.05	
Read #9	0000-0100	1.81E	1.81E	3.96E	1.06E	2.32E	4.83E	1.28E	1.68E	2.40E	6.16E	1.84E	1.27E	1.93E	1.93E	0.05	
Read #9	0100-0200	1.81E	1.81E	3.96E	1.06E	2.32E	4.83E	1.28E	1.68E	2.40E	6.16E	1.84E	1.27E	1.93E	1.93E	0.05	
Read #9	0200-0300	1.81E	1.81E	3.96E	1.06E	2.32E	4.83E	1.28E	1.68E	2.40E	6.16E	1.84E	1.27E	1.93E	1.93E	0.05	
Read #9	0300-0400	1.81E	1.81E	3.96E	1.06E	2.32E	4.83E	1.28E	1.68E	2.40E	6.16E	1.84E	1.27E	1.93E	1.93E	0.05	
Read #9	0400-0500	1.81E	1.81E	3.96E	1.06E	2.32E	4.83E	1.28E	1.68E	2.40E	6.16E	1.84E	1.27E	1.93E	1.93E	0.05	
Read #9	0500-0600	1.81E	1.81E	3.96E	1.06E	2.32E	4.83E	1.28E	1.68E	2.40E	6.16E	1.84E	1.27E	1.93E	1.93E	0.05	
Read #9	0600-0700	1.81E	1.81E	3.96E	1.06E	2.32E	4.83E	1.28E	1.68E	2.40E	6.16E	1.84E	1.27E	1.93E	1.93E	0.05	
Read #9	0700-0800	1.81E	1.81E	3.96E	1.06E	2.32E	4.83E	1.28E	1.68E	2.40E	6.16E	1.84E	1.27E	1.93E	1.93E	0.05	
Read #9	0800-0900	1.81E	1.81E	3.96E	1.06E	2.32E	4.83E	1.28E	1.68E	2.40E	6.16E	1.84E	1.27E	1.93E	1.93E	0.05	
Read #9	0900-1000	1.81E	1.81E	3.96E	1.06E	2.32E	4.83E	1.28E	1.68E	2.40E	6.16E	1.84E	1.27E	1.93E	1.93E	0.05	
Read #9	1000-1100	1.81E	1.81E	3.96E	1.06E	2.32E	4.83E	1.28E	1.68E	2.40E	6.16E	1.84E	1.27E	1.93E	1.93E	0.05	
Read #9	1100-1200	1.81E	1.81E	3.96E	1.06E	2.32E	4.83E	1.28E	1.68E	2.40E	6.16E	1.84E	1.27E	1.93E	1.93E	0.05	
Read #9	1200-1300	1.81E	1.81E	3.96E	1.06E	2.32E	4.83E	1.28E	1.68E	2.40E	6.16E	1.84E	1.27E	1.			

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Road 7 North Underway Factors												
Open Road 7 North Emission Factors for												
ARNDT00 Road ID												
Year 2038												
Road Name	Road ID	Hour	NO _x Emission			CO Emission			PM ₁₀ Emission			
			g/hour	lb/hour	g/hour	lb/hour	g/hour	lb/hour	g/hour	lb/hour		
Open Road 7 North	54	8800	1.000	1.171	8.606	8.746	3.362	7.446	3.761	4.456	3.205	3.270
Open Road 7 North	54	8800	1.015	1.186	8.688	8.828	3.387	7.486	3.776	4.476	3.215	3.280
Open Road 7 North	54	1100	1.100	1.265	9.150	9.290	3.512	8.006	4.026	4.751	3.345	3.420
Open Road 7 North	54	1100	1.115	1.280	9.192	9.332	3.533	8.046	4.046	4.771	3.355	3.440
Open Road 7 North	54	1300	1.240	1.395	9.905	10.045	3.815	8.752	4.486	5.205	3.625	3.700
Open Road 7 North	54	1300	1.255	1.410	9.947	10.087	3.836	8.792	4.506	5.225	3.635	3.720
Open Road 7 North	54	1500	1.490	1.545	10.775	10.915	4.111	9.588	4.926	5.745	3.915	4.000
Open Road 7 North	54	1500	1.505	1.560	10.817	10.957	4.132	9.624	4.946	5.765	3.925	4.020
Open Road 7 North	54	1700	1.440	1.515	10.545	10.685	4.031	9.392	4.826	5.645	3.875	3.960
Open Road 7 North	54	1700	1.455	1.530	10.587	10.727	4.052	9.428	4.846	5.665	3.885	3.980
Open Road 7 North	54	1900	1.365	1.375	7.685	7.825	3.100	6.830	3.576	4.395	3.435	3.480
Open Road 7 North	54	1900	1.380	1.390	7.727	7.867	3.121	6.866	3.596	4.415	3.445	3.500
Open Road 7 North	54	2100	1.470	1.385	7.770	7.910	3.037	6.818	3.506	4.296	3.415	3.470
Open Road 7 North	54	2100	1.485	1.395	7.812	7.952	3.058	6.854	3.526	4.316	3.425	3.490
Open Road 7 North	54	2300	1.400	1.315	7.255	7.395	2.812	6.412	3.286	4.035	3.275	3.320
Open Road 7 North	54	2300	1.415	1.325	7.297	7.437	2.833	6.448	3.306	4.055	3.285	3.340
Open Road 7 North	54	2500	1.300	1.145	6.610	6.750	2.567	5.924	3.026	3.755	3.175	3.220
Open Road 7 North	54	2500	1.315	1.155	6.652	6.792	2.588	5.960	3.046	3.775	3.185	3.240
Open Road 7 North	54	2700	1.240	1.075	6.195	6.335	2.412	5.630	2.866	3.575	3.105	3.150
Open Road 7 North	54	2700	1.255	1.085	6.237	6.377	2.433	5.666	2.886	3.595	3.115	3.170
Open Road 7 North	54	2900	1.160	0.995	5.738	5.878	2.267	5.300	2.706	3.405	3.025	3.070
Open Road 7 North	54	2900	1.175	1.005	5.780	5.920	2.288	5.336	2.726	3.425	3.035	3.090
Open Road 7 North	54	3100	1.080	0.915	5.280	5.420	2.102	4.964	2.546	3.235	2.935	2.980
Open Road 7 North	54	3100	1.095	0.925	5.322	5.462	2.123	4.999	2.566	3.255	2.945	3.000
Open Road 7 North	54	3300	1.000	0.835	4.820	4.960	1.936	4.612	2.386	3.065	2.845	2.890
Open Road 7 North	54	3300	1.015	0.845	4.862	4.999	1.957	4.648	2.406	3.085	2.855	2.910
Open Road 7 North	54	3500	0.920	0.755	4.360	4.500	1.750	4.260	2.226	2.875	2.755	2.800
Open Road 7 North	54	3500	0.935	0.765	4.402	4.542	1.771	4.296	2.246	2.895	2.765	2.820
Open Road 7 North	54	3700	0.840	0.675	3.900	4.040	1.564	3.872	2.066	2.685	2.565	2.610
Open Road 7 North	54	3700	0.855	0.685	3.942	4.082	1.585	3.908	2.086	2.705	2.585	2.630
Open Road 7 North	54	3900	0.740	0.595	3.440	3.580	1.377	3.480	1.866	2.405	2.305	2.350
Open Road 7 North	54	3900	0.755	0.605	3.482	3.622	1.398	3.516	1.886	2.425	2.325	2.370
Open Road 7 North	54	4100	0.640	0.505	3.000	3.140	1.170	3.040	1.646	2.165	2.065	2.110
Open Road 7 North	54	4100	0.655	0.515	3.042	3.182	1.191	3.076	1.666	2.185	2.085	2.130
Open Road 7 North	54	4300	0.540	0.425	2.560	2.700	1.004	2.544	1.406	1.805	1.705	1.750
Open Road 7 North	54	4300	0.555	0.435	2.602	2.742	1.025	2.580	1.426	1.825	1.725	1.770
Open Road 7 North	54	4500	0.440	0.345	2.120	2.260	0.837	2.080	1.166	1.505	1.405	1.450
Open Road 7 North	54	4500	0.455	0.355	2.162	2.302	0.858	2.116	1.186	1.525	1.425	1.470
Open Road 7 North	54	4700	0.340	0.265	1.640	1.780	0.650	1.560	0.866	1.105	1.005	1.050
Open Road 7 North	54	4700	0.355	0.275	1.682	1.822	0.671	1.596	0.886	1.125	1.025	1.070
Open Road 7 North	54	4900	0.240	0.185	1.160	1.300	0.442	1.080	0.566	0.705	0.605	0.650
Open Road 7 North	54	4900	0.255	0.195	1.202	1.342	0.463	1.116	0.586	0.725	0.625	0.670
Open Road 7 North	54	5100	0.140	0.105	0.640	0.780	0.254	0.600	0.316	0.455	0.355	0.400
Open Road 7 North	54	5100	0.155	0.115	0.682	0.822	0.275	0.636	0.336	0.475	0.375	0.420
Open Road 7 North	54	5300	0.080	0.055	0.320	0.460	0.125	0.280	0.166	0.205	0.105	0.150
Open Road 7 North	54	5300	0.095	0.065	0.362	0.502	0.146	0.316	0.186	0.225	0.125	0.170
Open Road 7 North	54	5500	0.070	0.045	0.240	0.380	0.096	0.190	0.116	0.155	0.055	0.100
Open Road 7 North	54	5500	0.085	0.055	0.282	0.422	0.117	0.220	0.136	0.175	0.075	0.120
Open Road 7 North	54	5700	0.040	0.025	0.120	0.260	0.046	0.090	0.056	0.075	0.025	0.070
Open Road 7 North	54	5700	0.055	0.035	0.162	0.302	0.067	0.120	0.076	0.115	0.045	0.090
Open Road 7 North	54	5900	0.020	0.015	0.060	0.140	0.016	0.030	0.026	0.035	0.005	0.050
Open Road 7 North	54	5900	0.035	0.025	0.102	0.222	0.037	0.060	0.046	0.055	0.015	0.060
Open Road 7 North	54	6100	0.010	0.005	0.020	0.060	0.004	0.008	0.004	0.005	0.000	0.010
Open Road 7 North	54	6100	0.025	0.015	0.062	0.202	0.027	0.040	0.036	0.045	0.005	0.050
Open Road 7 North	54	6300	0.005	0.003	0.010	0.040	0.002	0.004	0.002	0.003	0.000	0.005
Open Road 7 North	54	6300	0.015	0.009	0.032	0.142	0.013	0.020	0.012	0.015	0.000	0.020
Open Road 7 North	54	6500	0.002	0.001	0.002	0.020	0.000	0.000	0.000	0.000	0.000	0.000
Open Road 7 North	54	6500	0.005	0.003	0.010	0.040	0.002	0.004	0.002	0.003	0.000	0.005
Open Road 7 North	54	6700	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Open Road 7 North	54	6700	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Open Road 7 North	54	6900	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Open Road 7 North	54	6900	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Open Road 7 North	54	7100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Open Road 7 North	54	7100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Open Road 7 North	54	7300	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Open Road 7 North	54	7300	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Open Road 7 North	54	7500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Open Road 7 North	54	7500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Open Road 7 North	54	7700	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Open Road 7 North	54	7700	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Open Road 7 North	54	7900	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Open Road 7 North	54	7900	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Open Road 7 North	54	8100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Open Road 7 North	54	8100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Open Road 7 North	54	8300	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Open Road 7 North	54	8300	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Open Road 7 North	54	8500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Open Road 7 North	54	8500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Open Road 7 North	54	8700	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Open Road 7 North	54	8700	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Open Road 7 North	54	8900	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Open Road 7 North	54	8900	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Open Road 7 North	54	9100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Open Road 7 North	54	9100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Open Road 7 North	54	9300	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Open Road 7 North	54	9300	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Open Road 7 North	54	9500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Open Road 7 North	54	9500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Open Road 7 North	54	9700	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Open Road 7 North	54	9700	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Open Road 7 North	54	9900	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Open Road 7 North	54	9900	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Open Road 7 North	54	10100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Open Road 7 North	54	10100	0.000	0.000								

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

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\\Secure\Environment Projects\60733229\1.01\Others\Air Modelling\Appendix\Traffic\Open Road\Appendix 3.5.4 Emission Factor in 2038.xlsx

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open North Underground Quarry															
Open Road 26 hour Emission Factors for															
ARMDSD Road 26 Hour															
Road Name	Road ID	Hour	NO _x Emission					NO ₂ Emission							
			Monthly average			Hourly peak		Monthly average			Hourly peak				
			g/min	g/hr	g/min/hr	g/min	g/hr	g/min	g/hr	g/min	g/hr				
Road #1	1	0000-0100	1.376	7.644	0.156	4.686	0.536	3.816	0.836	5.312	0.716	3.212	4.448	7.448	0.516
Road #1	1	0100-0200	0.836	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #1	1	0200-0300	0.836	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #1	1	0300-0400	0.836	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #1	1	0400-0500	0.836	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #1	1	0500-0600	0.836	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #1	1	0600-0700	0.836	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #1	1	0700-0800	0.836	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #1	1	0800-0900	0.836	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #1	1	0900-1000	0.836	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #1	1	1000-1100	1.356	4.016	0.216	0.000	1.356	0.916	3.312	0.816	0.000	4.586	1.386	8.716	0.516
Road #1	1	1100-1200	1.356	4.016	0.216	0.000	1.356	0.916	3.312	0.816	0.000	4.586	1.386	8.716	0.516
Road #1	1	1200-1300	1.356	4.016	0.216	0.000	1.356	0.916	3.312	0.816	0.000	4.586	1.386	8.716	0.516
Road #1	1	1300-1400	1.356	4.016	0.216	0.000	1.356	0.916	3.312	0.816	0.000	4.586	1.386	8.716	0.516
Road #1	1	1400-1500	1.356	4.016	0.216	0.000	1.356	0.916	3.312	0.816	0.000	4.586	1.386	8.716	0.516
Road #1	1	1500-1600	1.356	4.016	0.216	0.000	1.356	0.916	3.312	0.816	0.000	4.586	1.386	8.716	0.516
Road #1	1	1600-1700	1.356	4.016	0.216	0.000	1.356	0.916	3.312	0.816	0.000	4.586	1.386	8.716	0.516
Road #1	1	1700-1800	1.356	4.016	0.216	0.000	1.356	0.916	3.312	0.816	0.000	4.586	1.386	8.716	0.516
Road #1	1	1800-1900	1.356	4.016	0.216	0.000	1.356	0.916	3.312	0.816	0.000	4.586	1.386	8.716	0.516
Road #1	1	1900-2000	1.356	4.016	0.216	0.000	1.356	0.916	3.312	0.816	0.000	4.586	1.386	8.716	0.516
Road #1	1	2000-2100	1.356	4.016	0.216	0.000	1.356	0.916	3.312	0.816	0.000	4.586	1.386	8.716	0.516
Road #2	2	0000-0100	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #2	2	0100-0200	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #2	2	0200-0300	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #2	2	0300-0400	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #2	2	0400-0500	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #2	2	0500-0600	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #2	2	0600-0700	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #2	2	0700-0800	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #2	2	0800-0900	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #2	2	0900-1000	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #2	2	1000-1100	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #2	2	1100-1200	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #2	2	1200-1300	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #2	2	1300-1400	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #2	2	1400-1500	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #2	2	1500-1600	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #2	2	1600-1700	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #2	2	1700-1800	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #2	2	1800-1900	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #2	2	1900-2000	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #2	2	2000-2100	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #3	3	0000-0100	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #3	3	0100-0200	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #3	3	0200-0300	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #3	3	0300-0400	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #3	3	0400-0500	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #3	3	0500-0600	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #3	3	0600-0700	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #3	3	0700-0800	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #3	3	0800-0900	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #3	3	0900-1000	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #3	3	1000-1100	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #3	3	1100-1200	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #3	3	1200-1300	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #3	3	1300-1400	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #3	3	1400-1500	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #3	3	1500-1600	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #3	3	1600-1700	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #3	3	1700-1800	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #3	3	1800-1900	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #3	3	1900-2000	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #3	3	2000-2100	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #4	4	0000-0100	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #4	4	0100-0200	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #4	4	0200-0300	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #4	4	0300-0400	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #4	4	0400-0500	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #4	4	0500-0600	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #4	4	0600-0700	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #4	4	0700-0800	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #4	4	0800-0900	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #4	4	0900-1000	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #4	4	1000-1100	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	0.516
Road #4	4	1100-1200	0.986	5.768	0.256	3.816	0.436	3.816	0.936	5.768	0.936	5.768	3.212	7.448	

\\Secure\Environment - Projects\60732730\1-01\Other\Air Model\Ex\Appendix\Traffic\OneRoad\Appendix 2 E & F Emission Factor in 2028.xlsx

Open N ₂ North Undermining Quarry												
Road Name Road ID Hour Mo ₂ Emission Mo ₂ NoEmission												
4863600 Road ID Hour Mo ₂ Emission Mo ₂ NoEmission												
Road 4 8800-0000 1 8.57E+03 1.88E+07 6.17E-05 7.50E-03 2.68E+07 5.40E-06 4.48E+02 1.58E+06 3.17E+02 1.33E+06												
Road 4 8800-0000 2 9.76E+03 2.16E+07 6.97E-05 8.47E-03 2.96E+07 6.06E-06 5.05E+02 1.82E+06 3.67E+02 1.50E+06												
Road 4 1100-0000 1 1.11E+04 2.44E+07 7.91E-05 9.64E-03 3.34E+07 6.94E-06 5.78E+02 2.05E+06 4.11E+02 1.66E+06												
Road 4 1100-0000 2 1.25E+04 2.76E+07 8.91E-05 1.08E-02 3.82E+07 7.84E-06 6.41E+02 2.29E+06 4.57E+02 1.87E+06												
Road 4 1300-0000 1 1.20E+04 2.65E+07 8.54E-05 1.03E-02 3.65E+07 7.54E-06 6.15E+02 2.19E+06 4.42E+02 1.80E+06												
Road 4 1300-0000 2 1.36E+04 2.97E+07 9.54E-05 1.15E-02 4.05E+07 8.38E-06 6.87E+02 2.45E+06 4.92E+02 2.00E+06												
Road 4 1500-0000 1 1.19E+04 2.62E+07 8.40E-05 1.02E-02 3.61E+07 7.42E-06 6.04E+02 2.16E+06 4.37E+02 1.78E+06												
Road 4 1500-0000 2 1.34E+04 2.93E+07 9.24E-05 1.11E-02 3.94E+07 8.15E-06 6.59E+02 2.38E+06 4.79E+02 1.93E+06												
Road 4 1700-0000 1 1.22E+04 2.72E+07 8.80E-05 1.07E+02 3.73E+07 7.83E+02 1.36E+06 3.64E+02 1.40E+06 1.38E+06												
Road 4 1700-0000 2 1.38E+04 3.02E+07 9.70E-05 1.18E+02 4.14E+07 8.58E+02 1.56E+06 4.00E+02 1.58E+06 1.56E+06												
Road 4 1900-0000 1 1.24E+04 2.76E+07 8.95E-05 1.08E+02 3.78E+07 7.88E+02 1.37E+06 3.66E+02 1.41E+06 1.39E+06												
Road 4 1900-0000 2 1.40E+04 3.06E+07 9.69E-05 1.19E+02 4.19E+07 8.68E+02 1.57E+06 4.04E+02 1.59E+06 1.58E+06												
Road 4 2000-0000 1 1.31E+04 2.88E+07 9.40E-05 1.13E+02 3.90E+07 8.07E+02 1.42E+06 3.72E+02 1.44E+06 1.43E+06												
Road 4 2000-0000 2 1.47E+04 3.19E+07 1.03E-04 1.25E+02 4.30E+07 8.94E+02 1.62E+06 4.16E+02 1.64E+06 1.62E+06												
Road 4 2100-0000 1 1.47E+04 3.19E+07 1.03E-04 1.25E+02 4.30E+07 8.94E+02 1.62E+06 4.16E+02 1.64E+06 1.62E+06												
Road 4 2100-0000 2 1.63E+04 3.50E+07 1.12E-04 1.37E+02 4.70E+07 9.70E+02 1.79E+06 4.58E+02 1.76E+06 1.74E+06												
Road 4 2200-0000 1 1.51E+04 3.34E+07 1.08E-04 1.31E+02 4.44E+07 9.17E+02 1.70E+06 4.44E+02 1.70E+06 1.68E+06												
Road 4 2200-0000 2 1.67E+04 3.65E+07 1.17E-04 1.43E+02 4.84E+07 9.97E+02 1.85E+06 4.86E+02 1.84E+06 1.82E+06												
Road 4 2300-0000 1 1.54E+04 3.42E+07 1.10E-04 1.34E+02 4.52E+07 9.37E+02 1.74E+06 4.50E+02 1.73E+06 1.71E+06												
Road 4 2300-0000 2 1.70E+04 3.73E+07 1.19E-04 1.46E+02 5.24E+07 1.07E+06 2.00E+06 5.17E+02 1.98E+06 1.96E+06												
Road 4 2400-0000 1 1.58E+04 3.50E+07 1.12E-04 1.37E+02 4.59E+07 9.50E+02 1.76E+06 4.56E+02 1.75E+06 1.73E+06												
Road 4 2400-0000 2 1.74E+04 3.81E+07 1.21E-04 1.48E+02 5.29E+07 1.10E+06 2.05E+06 5.20E+02 1.99E+06 1.97E+06												
Road 4 2500-0000 1 1.78E+04 3.90E+07 1.25E-04 1.51E+02 5.40E+07 1.12E+06 2.08E+06 5.30E+02 2.00E+06 1.98E+06												
Road 4 2500-0000 2 1.94E+04 4.21E+07 1.34E-04 1.62E+02 5.90E+07 1.21E+06 2.19E+06 5.50E+02 2.10E+06 2.08E+06												
Road 4 2600-0000 1 1.81E+04 3.78E+07 1.20E-04 1.44E+02 5.07E+07 1.06E+06 1.95E+06 5.00E+02 1.92E+06 1.90E+06												
Road 4 2600-0000 2 2.00E+04 4.09E+07 1.29E-04 1.55E+02 5.57E+07 1.15E+06 2.06E+06 5.20E+02 2.00E+06 1.98E+06												
Road 4 2700-0000 1 1.84E+04 3.84E+07 1.22E-04 1.46E+02 5.12E+07 1.07E+06 1.97E+06 5.05E+02 1.93E+06 1.91E+06												
Road 4 2700-0000 2 2.03E+04 4.15E+07 1.31E-04 1.56E+02 5.62E+07 1.16E+06 2.07E+06 5.30E+02 2.01E+06 1.99E+06												
Road 4 2800-0000 1 1.87E+04 3.89E+07 1.24E-04 1.48E+02 5.17E+07 1.08E+06 1.99E+06 5.10E+02 1.95E+06 1.93E+06												
Road 4 2800-0000 2 2.06E+04 4.20E+07 1.33E-04 1.57E+02 5.67E+07 1.17E+06 2.08E+06 5.40E+02 2.02E+06 1.99E+06												
Road 4 2900-0000 1 1.90E+04 3.94E+07 1.26E-04 1.50E+02 5.22E+07 1.09E+06 2.00E+06 5.15E+02 1.97E+06 1.95E+06												
Road 4 2900-0000 2 2.09E+04 4.25E+07 1.35E-04 1.58E+02 5.72E+07 1.18E+06 2.09E+06 5.50E+02 2.03E+06 1.99E+06												
Road 4 3000-0000 1 1.93E+04 3.99E+07 1.28E-04 1.52E+02 5.27E+07 1.10E+06 2.01E+06 5.20E+02 1.98E+06 1.96E+06												
Road 4 3000-0000 2 2.12E+04 4.30E+07 1.37E-04 1.60E+02 5.77E+07 1.19E+06 2.10E+06 5.60E+02 2.04E+06 2.02E+06												
Road 4 3100-0000 1 1.96E+04 4.04E+07 1.30E-04 1.54E+02 5.32E+07 1.11E+06 2.02E+06 5.25E+02 1.99E+06 1.97E+06												
Road 4 3100-0000 2 2.15E+04 4.35E+07 1.39E-04 1.61E+02 5.82E+07 1.20E+06 2.11E+06 5.70E+02 2.05E+06 2.03E+06												
Road 4 3200-0000 1 1.99E+04 4.09E+07 1.32E-04 1.56E+02 5.37E+07 1.12E+06 2.03E+06 5.30E+02 2.00E+06 1.98E+06												
Road 4 3200-0000 2 2.18E+04 4.40E+07 1.41E-04 1.63E+02 5.87E+07 1.21E+06 2.12E+06 5.80E+02 2.06E+06 2.04E+06												
Road 4 3300-0000 1 2.02E+04 4.14E+07 1.34E-04 1.58E+02 5.42E+07 1.13E+06 2.04E+06 5.35E+02 2.01E+06 1.99E+06												
Road 4 3300-0000 2 2.21E+04 4.45E+07 1.43E-04 1.64E+02 5.92E+07 1.22E+06 2.13E+06 5.90E+02 2.07E+06 2.05E+06												
Road 4 3400-0000 1 2.05E+04 4.19E+07 1.36E-04 1.60E+02 5.47E+07 1.14E+06 2.05E+06 5.40E+02 2.02E+06 2.00E+06												
Road 4 3400-0000 2 2.24E+04 4.50E+07 1.45E-04 1.66E+02 5.97E+07 1.23E+06 2.14E+06 5.95E+02 2.08E+06 2.06E+06												
Road 4 3500-0000 1 2.08E+04 4.24E+07 1.38E-04 1.62E+02 5.52E+07 1.15E+06 2.06E+06 5.45E+02 2.03E+06 2.01E+06												
Road 4 3500-0000 2 2.27E+04 4.55E+07 1.47E-04 1.67E+02 6.02E+07 1.24E+06 2.15E+06 6.00E+02 2.09E+06 2.07E+06												
Road 4 3600-0000 1 2.11E+04 4.29E+07 1.40E-04 1.64E+02 5.57E+07 1.16E+06 2.07E+06 5.50E+02 2.04E+06 2.02E+06												
Road 4 3600-0000 2 2.30E+04 4.60E+07 1.49E-04 1.70E+02 6.07E+07 1.25E+06 2.16E+06 6.05E+02 2.10E+06 2.08E+06												
Road 4 3700-0000 1 2.14E+04 4.34E+07 1.42E-04 1.66E+02 5.62E+07 1.17E+06 2.08E+06 5.55E+02 2.05E+06 2.03E+06												
Road 4 3700-0000 2 2.33E+04 4.65E+07 1.51E-04 1.71E+02 6.12E+07 1.26E+06 2.17E+06 6.10E+02 2.11E+06 2.09E+06												
Road 4 3800-0000 1 2.17E+04 4.39E+07 1.44E-04 1.68E+02 5.67E+07 1.18E+06 2.09E+06 5.60E+02 2.06E+06 2.04E+06												
Road 4 3800-0000 2 2.36E+04 4.70E+07 1.53E-04 1.72E+02 6.17E+07 1.27E+06 2.18E+06 6.15E+02 2.12E+06 2.10E+06												
Road 4 3900-0000 1 2.20E+04 4.44E+07 1.46E-04 1.70E+02 5.72E+07 1.19E+06 2.10E+06 5.65E+02 2.07E+06 2.05E+06												
Road 4 3900-0000 2 2.39E+04 4.75E+07 1.55E-04 1.73E+02 6.22E+07 1.28E+06 2.19E+06 6.20E+02 2.13E+06 2.11E+06												
Road 4 4000-0000 1 2.23E+04 4.49E+07 1.48E-04 1.72E+02 5.77E+07 1.20E+06 2.11E+06 5.70E+02 2.08E+06 2.06E+06												
Road 4 4000-0000 2 2.42E+04 4.80E+07 1.57E-04 1.74E+02 6.27E+07 1.29E+06 2.20E+06 6.25E+02 2.14E+06 2.12E+06												
Road 4 4100-0000 1 2.26E+04 4.54E+07 1.50E-04 1.74E+02 5.82E+07 1.21E+06 2.12E+06 5.75E+02 2.09E+06 2.07E+06												
Road 4 4100-0000 2 2.45E+04 4.85E+07 1.59E-04 1.75E+02 6.32E+07 1.30E+06 2.21E+06 6.30E+02 2.15E+06 2.13E+06												
Road 4 4200-0000 1 2.29E+04 4.59E+07 1.52E-04 1.76E+02 5.87E+07 1.22E+06 2.13E+06 5.80E+02 2.10E+06 2.08E+06												
Road 4 4200-0000 2 2.48E+04 4.90E+07 1.61E-04 1.77E+02 6.37E+07 1.31E+06 2.22E+06 6.35E+02 2.16E+06 2.14E+06												
Road 4 4300-0000 1 2.32E+04 4.64E+07 1.54E-04 1.78E+02 5.92E+07 1.23E+06 2.14E+06 5.85E+02 2.11E+06 2.09E+06												
Road 4 4300-0000 2 2.51E+04 4.95E+07 1.63E-04 1.79E+02 6.42E+07 1.32E+06 2.23E+06 6.40E+02 2.17E+06 2.15E+06												
Road 4 4400-0000 1 2.35E+04 4.69E+07 1.56E-04 1.80E+02 5.97E+07 1.24E+06 2.15E+06 5.90E+02 2.12E+06 2.10E+06												
Road 4 4400-0000 2 2.54E+04 4.96E+07 1.65E-04 1.81E+02 6.47E+07 1.33E+06 2.24E+06 6.45E+02 2.18E+06 2.16E+06												
Road 4 4500-0000 1 2.38E+04 4.74E+07 1.58E-04 1.82E+02 6.02E+07 1.25E+06 2.16E+06 5.95E+02 2.13E+06 2.11E+06												
Road 4 4500-0000 2 2.57E+04 5.01E+07 1.67E-04 1.83E+02 6.52E+07 1.34E+06 2.25E+06 6.50E+02 2.19E+06 2.17E+06												
Road 4 4600-0000 1 2.41E+04 4.79E+07 1.60E-04 1.84E+02 6.07E+07 1.26E+06 2.17E+06 6.00E+02 2.14E+06 2.12E+06												
Road 4 4600-0000 2 2.60E+04 5.02E+07 1.69E-04 1.85E+02 6.57E+07 1.35E+06 2.26E+06 6.55E+02 2.20E+06 2.18E+06												
Road 4 4700-0000 1 2.44E+04 4.84E+07 1.62E-04 1.86E+02 6.12E+07 1.27E+06 2.18E+06 6.05E+02 2.15E+06 2.13E+06												
Road 4 4700-0000 2 2.63E+04 5.07E+07 1.71E-04 1.87E+02 6.62E+07 1.36E+06 2.27E+06 6.60E+02 2.21E+06 2.19E+06												
Road 4 4800-0000 1 2.47E+04 4.89E+07 1.64E-04 1.88E+02 6.17E+07 1.28E+06 2.19E+06 6.10E+02 2.16E+06 2.14E+06												
Road 4 4800-0000 2 2.66E+04 5.10E+07 1.73E-04 1.89E+02 6.67E+07 1.37E+06 2.28E+06 6.65E+02 2.22E+06 2.20E+06												
Road 4 4900-0000 1 2.50E+04 4.94E+07 1.66E-04 1.90E+02 6.22E+07 1.29E+06 2.20E+06 6.15E+02 2.17E+06 2.15E+06												
Road 4 4900-0000 2 2.69E+04 5.13E+07 1.75E-04 1.91E+02 6.72E+07 1.38E+06 2.29E+06 6.70E+02 2.23E+06 2.21E+06												
Road 4 5000-0000 1 2.53E+04 4.99E+07 1.68E-04 1.92E+02 6.27E+07 1.30E+06 2.21E+06 6.20E+02 2.18E+06 2.16E+06												
Road 4 5000-0000 2 2.72E+04 5.18E+07 1.77E-04 1.93E+02 6.77E+07 1.39E+06 2.30E+06 6.75E+02 2.24E+06 2.22E+06												
Road 4 5100-0000 1 2.56E+04 5.04E+07 1.70E-04 1.94E+02 6.32E+07 1.31E+06 2.22E+06 6.25E+02 2.19E+06 2.17E+06												
Road 4 5100-0000 2 2.75E+04 5.20E+07 1.79E-04 1.95E+02 6.82E+07 1.40E+06 2.31E+06 6.80E+02 2.25E+06 2.23E+06												
Road 4 5200-0000 1 2.59E+04 5.09E+07 1.72E-04 1.96E+02 6.37E+07 1.32E+06 2.23E+06 6.30E+02 2.20E+06 2.18E+06												
Road 4 5200-0000 2 2.78E+04 5.21E+07 1.81E-04 1.97E+02 6.87E+07 1.41E+06 2.32E+06 6.85E+02 2.26E+06 2.24E+06												
Road 4 5300-0000 1 2.62E+04 5.14E+07 1.74E-04 1.98E+02 6.42E+07 1.33E+06 2.24E+06 6.35E+02 2.21E+06 2.19E+06												
Road 4 5300-0000 2 2.81E+04 5.23E+07 1.83E-04 1.99E+02 6.92E+07 1.42E+06 2.33E+06 6.90E+02 2.27E+06 2.25E+06												
Road 4 5400-0000 1 2.65E+04 5.19E+07 1.76E-04 1.99E+02 6.47E+07 1.34E+06 2.25E+06 6.40E+02 2.22E+06 2.20E+06												
Road 4 5400-0000 2 2.84E+04 5.28E+07 1.85E-04 2.00E+02 6.97E+07 1.43E+06 2.34E+06 6.95E+02 2.28E+06 2.26E+06												
Road 4 5500-0000 1 2.68E+04 5.24E+07 1.78E-04 2.00E+02 6.52E+07 1.35E+06 2.26E+06 6.45E+02 2.23E+06 2.21E+06												
Road 4 5500-0000 2 2.87E+04 5.32E+07 1.87E-04 2.01E+02 7.02E+07 1.44E+06 2.35E+06 7.00E+02 2.29E+06 2.27E+06												
Road 4 5600-0000 1 2.71E+04 5.29E+07 1.80E-04 2.02E+02 6.57E+07 1.36E+06 2.27E+06 6.50E+02 2.24E+06 2.22E+06												
Road 4 5600-0000 2 2.90E+04 5.38E+07 1.89E-04 2.03E+02 7.07E+07 1.45E+06 2.36E+06 7.05E+02 2.30E+06 2.28E+06												
Road 4 5700-0000 1 2.74E+04 5.34E+07 1.82E-04 2.04E+02 6.62E+07 1.37E+06 2.28E+06 6.55E+02 2.25E+06 2.23E+06												
Road 4 5700-0000 2 2.93E+04 5.43E+07 1.91E-04 2.05E+02 7.12E+07 1.46E+06 2.37E+06 7.10E+02 2.31E+06 2.29E+06												
Road 4 5800-0000 1 2.77E+04 5.39E+07 1.84E-04 2.06E+02 6.67E+07 1.38E+06 2.29E+06 6.60E+02 2.26E+06 2.24E+06												
Road 4 5800-0000 2 2.96E+04 5.48E+07 1.93E-04 2.07E+02 7.17E+07 1.47E+06 2.38E+06 7.15E+02 2.32E+06 2.30E+06												
Road 4 5900-0000 1 2.80E+04 5.44E+07 1.86E-04 2.08E+02 6.72E+07 1.39E+06 2.30E+06 6.65E+02 2.27E+06 2.25E+06												
Road 4 5900-0000 2 3.00E+04 5.53E+07 1.95E-04 2.09E+02 7.22E+07 1.48E+06 2.39E+06 7.20E+02 2.33E+06 2.31E+06												
Road 4 6000-0000 1 2.83E+04 5.49E+07 1.88E-04 2.09E+02 6.77E+07 1.40E+06 2.31E+06 6.70E+02 2.28E+06 2.26E+06												
Road 4 6000-0000 2 3.03E+04 5.58E+07 1.97E-04 2.10E+02 7.27E+07 1.49E+06 2.40E+06 7.25E+02 2.34E+06 2.32E+06												
Road 4 6100-0000 1 2.86E+04 5.54E+07 1.90E-04 2.10E+02 6.82E+07 1.41E+06 2.32E+06 6.75E+02 2.29E+06 2.27E+06												
Road 4 6100-0000 2 3.06E+04 5.63E+07 1.99E-04 2.11E+02 7.32E+07 1.50E+06 2.41E+06 7.30E+02 2.35E+06 2.33E+06												
Road 4 6200-0000 1 2.89E+04 5.59E+07 1.92E-04 2.12E+02 6.87E+07 1.42E+06 2.33E+06 6.80E+02 2.30E+06 2.28E+06												
Road 4 6200-0000 2 3.09E+04 5.68E+07 2.01E-04 2.13E+02 7.37E+07 1.51E+06 2.42E+06 7.35E+02 2.36E+06 2.34E+06												
Road 4 6300-0000 1 2.92E+04 5.64E+07 1.94E-04 2.14E+02 6.92E+07 1.43E+06 2.34E+06 6.85E+02 2.31E+06 2.29E+06												
Road 4 6300-0000 2 3.12E+04 5.73E+07 2.03E-04 2.15E+02 7.42E+07 1.52E+06 2.43E+06 7.40E+02 2.37E+06 2.35E+06												
Road 4 6400-0000 1 2.95E+04 5.69E+07 1.96E-04 2.16E+02 6.97E+07 1.44E+06 2.35E+06 6.90E+02 2.32E+06 2.30E+06												
Road 4 6400-0000 2 3.15E+04 5.78E+07 2.05E-04 2.17E+02 7.47E+07 1.53E+06 2.44E+06 7.45E+02 2.38E+06 2.36E+06												
Road 4 6500-0000 1 2.98E+04 5.74E+07 1.98E-04 2.18E+02 7.02E+07 1.45E+06 2.36E+06 6.95E+02 2.33E+06 2.31E+06												
Road 4 6500-0000 2 3.18E+04 5.83E+07 2.07E-04 2.19E+02 7.52E+07 1.54E+06 2.45E+06 7.50E+02 2.39E+06 2.37E+06												

1.1) Secure Environment: Projects\50732738\1.01\Other\1.1) Modelling\Appendix\Traffic\OneRoad\Appendix 2.5.4 Emission Factor in 702

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Top North Underminations Factors																
Road Name		Year 2008														
Road ID		Moist/Hydrate														
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Open Day North Underground Quarry														
Open Day 24 hour Emission Factors for Atmospheric model														
Year 2008			Mo Emission					Mo Emission						
Route Name	Route ID	Hour	g/hour	kg/hour	tonnes/hour	kg/hour	tonnes/hour	kg/hour	tonnes/hour	kg/hour	tonnes/hour	kg/hour	tonnes/hour	kg/hour
Read 11	11	0000-0100	2.472	1.511	0.786	2.264	0.447	1.521	1.531	1.817	3.681	1.411	1.811	3.381
Read 11	11	0100-0200	2.562	1.521	0.796	2.274	0.457	1.531	1.817	3.681	2.476	1.421	1.821	3.491
Read 11	11	0200-0300	2.652	1.531	0.806	2.284	0.467	1.541	1.817	3.681	2.566	1.431	1.831	3.601
Read 11	11	0300-0400	2.742	1.541	0.816	2.294	0.477	1.551	1.817	3.681	2.656	1.441	1.841	3.711
Read 11	11	0400-0500	2.832	1.551	0.826	2.304	0.487	1.561	1.817	3.681	2.746	1.451	1.851	3.821
Read 11	11	0500-0600	2.922	1.561	0.836	2.314	0.497	1.571	1.817	3.681	2.836	1.461	1.861	3.931
Read 11	11	0600-0700	3.012	1.571	0.846	2.324	0.507	1.581	1.817	3.681	2.926	1.471	1.871	4.041
Read 11	11	0700-0800	3.102	1.581	0.856	2.334	0.517	1.591	1.817	3.681	3.016	1.481	1.881	4.151
Read 11	11	0800-0900	3.192	1.591	0.866	2.344	0.527	1.601	1.817	3.681	3.106	1.491	1.891	4.261
Read 11	11	0900-1000	3.282	1.601	0.876	2.354	0.537	1.611	1.817	3.681	3.196	1.501	1.901	4.371
Read 11	11	1000-1100	3.372	1.611	0.886	2.364	0.547	1.621	1.817	3.681	3.286	1.511	1.911	4.481
Read 11	11	1100-1200	3.462	1.621	0.896	2.374	0.557	1.631	1.817	3.681	3.376	1.521	1.921	4.591
Read 11	11	1200-1300	3.552	1.631	0.906	2.384	0.567	1.641	1.817	3.681	3.466	1.531	1.931	4.701
Read 11	11	1300-1400	3.642	1.641	0.916	2.394	0.577	1.651	1.817	3.681	3.556	1.541	1.941	4.811
Read 11	11	1400-1500	3.732	1.651	0.926	2.404	0.587	1.661	1.817	3.681	3.646	1.551	1.951	4.921
Read 11	11	1500-1600	3.822	1.661	0.936	2.414	0.597	1.671	1.817	3.681	3.736	1.561	1.961	5.031
Read 11	11	1600-1700	3.912	1.671	0.946	2.424	0.607	1.681	1.817	3.681	3.826	1.571	1.971	5.141
Read 11	11	1700-1800	4.002	1.681	0.956	2.434	0.617	1.691	1.817	3.681	3.916	1.581	1.981	5.251
Read 11	11	1800-1900	4.092	1.691	0.966	2.444	0.627	1.701	1.817	3.681	4.006	1.591	1.991	5.361
Read 11	11	1900-2000	4.182	1.701	0.976	2.454	0.637	1.711	1.817	3.681	4.096	1.601	2.001	5.471
Read 11	11	2000-2100	4.272	1.711	0.986	2.464	0.647	1.721	1.817	3.681	4.186	1.611	2.011	5.581
Read 11	11	2100-2200	4.362	1.721	0.996	2.474	0.657	1.731	1.817	3.681	4.276	1.621	2.021	5.691
Read 11	11	2200-2300	4.452	1.731	1.006	2.484	0.667	1.741	1.817	3.681	4.366	1.631	2.031	5.801
Read 11	11	2300-2400	4.542	1.741	1.016	2.494	0.677	1.751	1.817	3.681	4.456	1.641	2.041	5.911
Read 12	12	0000-0100	2.562	1.521	0.796	2.274	0.457	1.531	1.817	3.681	2.476	1.421	1.821	3.491
Read 12	12	0100-0200	2.652	1.531	0.806	2.284	0.467	1.541	1.817	3.681	2.566	1.431	1.831	3.601
Read 12	12	0200-0300	2.742	1.541	0.816	2.294	0.477	1.551	1.817	3.681	2.656	1.441	1.841	3.711
Read 12	12	0300-0400	2.832	1.551	0.826	2.304	0.487	1.561	1.817	3.681	2.746	1.451	1.851	3.821
Read 12	12	0400-0500	2.922	1.561	0.836	2.314	0.497	1.571	1.817	3.681	2.836	1.461	1.861	3.931
Read 12	12	0500-0600	3.012	1.571	0.846	2.324	0.507	1.581	1.817	3.681	2.926	1.471	1.871	4.041
Read 12	12	0600-0700	3.102	1.581	0.856	2.334	0.517	1.591	1.817	3.681	3.016	1.481	1.881	4.151
Read 12	12	0700-0800	3.192	1.591	0.866	2.344	0.527	1.601	1.817	3.681	3.106	1.491	1.891	4.261
Read 12	12	0800-0900	3.282	1.601	0.876	2.354	0.537	1.611	1.817	3.681	3.196	1.501	1.901	4.371
Read 12	12	0900-1000	3.372	1.611	0.886	2.364	0.547	1.621	1.817	3.681	3.286	1.511	1.911	4.481
Read 12	12	1000-1100	3.462	1.621	0.896	2.374	0.557	1.631	1.817	3.681	3.376	1.521	1.921	4.591
Read 12	12	1100-1200	3.552	1.631	0.906	2.384	0.567	1.641	1.817	3.681	3.466	1.531	1.931	4.701
Read 12	12	1200-1300	3.642	1.641	0.916	2.394	0.577	1.651	1.817	3.681	3.556	1.541	1.941	4.811
Read 12	12	1300-1400	3.732	1.651	0.926	2.404	0.587	1.661	1.817	3.681	3.646	1.551	1.951	4.921
Read 12	12	1400-1500	3.822	1.661	0.936	2.414	0.597	1.671	1.817	3.681	3.736	1.561	1.961	5.031
Read 12	12	1500-1600	3.912	1.671	0.946	2.424	0.607	1.681	1.817	3.681	3.826	1.571	1.971	5.141
Read 12	12	1600-1700	4.002	1.681	0.956	2.434	0.617	1.691	1.817	3.681	3.916	1.581	1.981	5.251
Read 12	12	1700-1800	4.092	1.691	0.966	2.444	0.627	1.701	1.817	3.681	4.006	1.591	1.991	5.361
Read 12	12	1800-1900	4.182	1.701	0.976	2.454	0.637	1.711	1.817	3.681	4.096	1.601	2.001	5.471
Read 12	12	1900-2000	4.272	1.711	0.986	2.464	0.647	1.721	1.817	3.681	4.186	1.611	2.011	5.581
Read 12	12	2000-2100	4.362	1.721	0.996	2.474	0.657	1.731	1.817	3.681	4.276	1.621	2.021	5.691
Read 12	12	2100-2200	4.452	1.731	1.006	2.484	0.667	1.741	1.817	3.681	4.366	1.631	2.031	5.801
Read 12	12	2200-2300	4.542	1.741	1.016	2.494	0.677	1.751	1.817	3.681	4.456	1.641	2.041	5.911
Read 12	12	2300-2400	4.632	1.751	1.026	2.504	0.687	1.761	1.817	3.681	4.546	1.651	2.051	6.021
Read 13	13	0000-0100	2.862	1.601	0.906	2.354	0.537	1.611	1.817	3.681	2.786	1.481	1.881	4.151
Read 13	13	0100-0200	2.952	1.611	0.916	2.364	0.547	1.621	1.817	3.681	2.876	1.491	1.891	4.261
Read 13	13	0200-0300	3.042	1.621	0.926	2.374	0.557	1.631	1.817	3.681	2.966	1.501	1.901	4.371
Read 13	13	0300-0400	3.132	1.631	0.936	2.384	0.567	1.641	1.817	3.681	3.056	1.511	1.911	4.481
Read 13	13	0400-0500	3.222	1.641	0.946	2.394	0.577	1.651	1.817	3.681	3.146	1.521	1.921	4.591
Read 13	13	0500-0600	3.312	1.651	0.956	2.404	0.587	1.661	1.817	3.681	3.236	1.531	1.931	4.701
Read 13	13	0600-0700	3.402	1.661	0.966	2.414	0.597	1.671	1.817	3.681	3.326	1.541	1.941	4.811
Read 13	13	0700-0800	3.492	1.671	0.976	2.424	0.607	1.681	1.817	3.681	3.416	1.551	1.951	4.921
Read 13	13	0800-0900	3.582	1.681	0.986	2.434	0.617	1.691	1.817	3.681	3.506	1.561	1.961	5.031
Read 13	13	0900-1000	3.672	1.691	0.996	2.444	0.627	1.701	1.817	3.681	3.596	1.571	1.971	5.141
Read 13	13	1000-1100	3.762	1.701	1.006	2.454	0.637	1.711	1.817	3.681	3.686	1.581	1.981	5.251
Read 13	13	1100-1200	3.852	1.711	1.016	2.464	0.647	1.721	1.817	3.681	3.776	1.591	1.991	5.361
Read 13	13	1200-1300	3.942	1.721	1.026	2.474	0.657	1.731	1.817	3.681	3.866	1.601	2.001	5.471
Read 13	13	1300-1400	4.032	1.731	1.036	2.484	0.667	1.741	1.817	3.681	3.956	1.611	2.011	5.581
Read 13	13	1400-1500	4.122	1.741	1.046	2.494	0.677	1.751	1.817	3.681	4.046	1.621	2.021	5.691
Read 13	13	1500-1600	4.212	1.751	1.056	2.504	0.687	1.761	1.817	3.681	4.136	1.631	2.031	5.801
Read 13	13	1600-1700	4.302	1.761	1.066	2.514	0.697	1.771	1.817	3.681	4.226	1.641	2.041	5.911
Read 13	13	1700-1800	4.392	1.771	1.076	2.524	0.707	1.781	1.817	3.681	4.316	1.651	2.051	6.021
Read 13	13	1800-1900	4.482	1.781	1.086	2.534	0.717	1.791	1.817	3.681	4.406	1.661	2.061	6.131
Read 13	13	1900-2000	4.572	1.791	1.096	2.544	0.727	1.801	1.817	3.681	4.496	1.671	2.071	6.241
Read 13	13	2000-2100	4.662	1.801	1.106	2.554	0.737	1.811	1.817	3.681	4.586	1.681	2.081	6.351
Read 13	13	2100-2200	4.752	1.811	1.116	2.564	0.747	1.821	1.817	3.681	4.676	1.691	2.091	6.461
Read 13	13	2200-2300	4.842	1.821	1.126	2.574	0.757	1.831	1.817	3.681	4.766	1.701	2.101	6.571
Read 13	13	2300-2400	4.932	1.831	1.136	2.584	0.767	1.841	1.817	3.681	4.856	1.711	2.111	6.681
Read 14	14	0000-0100	1.612	0.901	0.456	1.304	0.228	0.901	1.742	4.676	1.806	0.686	0.901	1.742
Read 14	14	0100-0200	1.672	0.931	0.476	1.334	0.238	0.931	1.772	4.706	1.836	0.716	0.931	1.772
Read 14	14	0200-0300	1.732	0.961	0.496	1.364	0.248	0.961	1.802	4.736	1.866	0.746	0.961	1.802
Read 14	14	0300-0400	1.792	0.991	0.516	1.394	0.258	0.991	1.832	4.766	1.896	0.776	0.991	1.832
Read 14	14	0400-0500	1.852	1.021	0.536	1.424	0.268	1.021	1.862	4.796	1.926	0.806	1.021	1.862
Read 14	14	0500-0600	1.912	1.051	0.556	1.454	0.278	1.051	1.892	4.826	1.956	0.836	1.051	1.892
Read 14	14	0600-0700	1.972	1.081	0.576	1.484	0.288	1.081	1.922	4.856	1.986	0.866	1.081	1.922

L:\Secure\Environment Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Open Road\Appendix 3.5.4 Emission Factor in 2038.xlsx

Open Top N 9 North Underway Quarry															
Year 2038															
Road Name		Hour	NO _x Emission						NO Emission						
			Monthly/Range			Monthly/Average			Monthly/Range			Monthly/Average			
			g/hour	tons/year	g/hour	tons/year	g/hour	tons/year	g/hour	tons/year	g/hour	tons/year	g/hour	tons/year	
Road 14	14	0800-0900	3.8462	8.2647	1.4415	3.0462	7.7737	1.2449	3.266	1.038	1.48	1.198	1.1	2.824	4.64
Road 14	14	0900-1000	3.8462	8.2656	1.4416	3.0462	7.7737	1.2449	3.266	1.038	1.48	1.198	1.1	2.824	4.64
Road 14	14	1000-1100	3.8462	8.2656	1.4416	3.0462	7.7737	1.2449	3.266	1.038	1.48	1.198	1.1	2.824	4.64
Road 14	14	1100-1200	4.7726	10.2731	1.6424	3.7662	6.4242	1.0965	3.524	1.038	1.48	1.198	1.1	2.824	4.64
Road 14	14	1200-1300	5.3332	11.5204	1.8432	4.0464	7.4242	1.2965	3.742	1.038	1.48	1.198	1.1	2.824	4.64
Road 14	14	1300-1400	8.3202	18.1404	2.4432	5.0562	10.2462	2.1238	5.216	1.216	4.908	1.484	1.98	4.932	7.376
Road 14	14	1400-1500	5.7574	12.5236	2.0432	4.5662	7.1362	1.2668	3.256	1.038	1.48	1.198	1.1	2.824	4.64
Road 14	14	1500-1600	5.1112	11.0236	1.8432	4.0464	7.4242	1.2965	3.742	1.038	1.48	1.198	1.1	2.824	4.64
Road 14	14	1600-1700	5.1228	1.4995	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116
Road 14	14	1700-1800	4.8802	1.7504	0.4862	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116
Road 14	14	1800-1900	4.8802	1.9096	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116
Road 14	14	1900-2000	4.8802	1.9096	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116
Road 14	14	2000-2100	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	2100-2200	2.0752	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	2200-2300	2.0752	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	2300-2400	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	2400-2500	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	2500-2600	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	2600-2700	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	2700-2800	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	2800-2900	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	2900-3000	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	3000-3100	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	3100-3200	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	3200-3300	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	3300-3400	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	3400-3500	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	3500-3600	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	3600-3700	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	3700-3800	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	3800-3900	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	3900-4000	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	4000-4100	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	4100-4200	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	4200-4300	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	4300-4400	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	4400-4500	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	4500-4600	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	4600-4700	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	4700-4800	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	4800-4900	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	4900-5000	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	5000-5100	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	5100-5200	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	5200-5300	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	5300-5400	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	5400-5500	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	5500-5600	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	5600-5700	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	5700-5800	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	5800-5900	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	5900-6000	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	6000-6100	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	6100-6200	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	6200-6300	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	6300-6400	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	6400-6500	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	6500-6600	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	6600-6700	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	6700-6800	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	6800-6900	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	6900-7000	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	7000-7100	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	7100-7200	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	7200-7300	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	7300-7400	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	7400-7500	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	7500-7600	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428
Road 14	14	7600-7700	2.1852	0.5362	0.1482	0.3462	0.7502	0.5362	1.1882	1.3116	2.2428	0.5362	1.1882	1.3116	2.2428

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Top North Underminations Factors																	
Road Name		Year 2008															
Road ID		Hour		No. Enrichment				No. Enrichment				No. Enrichment					
				Monthly/Yearly		Monthly/Yearly		Monthly/Yearly		Monthly/Yearly		Monthly/Yearly		Monthly/Yearly		Monthly/Yearly	
				g/h/y	kg/y	g/h/y	kg/y	g/h/y	kg/y	g/h/y	kg/y	g/h/y	kg/y	g/h/y	kg/y	g/h/y	kg/y
Route 21	21	0000-0100	1.2782	8.708	11.818	8.082	7.688	1.002	1.808	4.132	8.456	5.088	9.332	4.792	9.476		
Route 21	21	0000-0100	1.5666	8.886	8.886	2.352	5.568	7.752	6.132	4.072	8.888	5.776	2.528	8.888	5.776	2.528	
Route 21	21	0000-0100	1.5666	8.886	8.886	2.352	5.568	7.752	6.132	4.072	8.888	5.776	2.528	8.888	5.776	2.528	
Route 21	21	0000-0400	1.7602	5.016	6.822	5.542	4.138	5.992	6.702	5.092	2.736	6.028	3.772	2.736	6.028		
Route 21	21	0400-0700	1.5666	1.372	1.372	1.372	1.372	1.372	1.372	1.372	1.372	1.372	1.372	1.372	1.372		
Route 21	21	0700-1000	1.6662	3.208	3.208	1.276	4.082	8.178	1.888	6.702	3.896	1.176	6.132	3.896	1.176		
Route 21	21	1000-1300	1.6162	1.802	2.406	1.424	1.602	2.188	7.026	4.772	1.096	6.028	3.472	1.096	6.028		
Route 21	21	1300-1600	1.7162	2.716	2.716	2.716	2.716	2.716	2.716	2.716	2.716	2.716	2.716	2.716	2.716		
Route 21	21	1600-2000	2.0462	5.026	6.026	4.082	5.982	7.122	8.832	2.468	3.712	7.028	2.132	2.468	3.712		
Route 21	21	2000-2300	2.3916	1.424	1.424	1.424	1.424	1.424	1.424	1.424	1.424	1.424	1.424	1.424	1.424		
Route 21	21	2300-1000	2.5362	2.912	2.912	7.824	1.016	5.122	6.776	9.772	2.168	3.028	8.408	2.168	3.028		
Route 21	21	1000-1300	2.5362	2.912	2.912	7.824	1.016	5.122	6.776	9.772	2.168	3.028	8.408	2.168	3.028		
Route 21	21	1300-1600	2.9516	4.842	4.842	1.336	5.372	6.836	1.008	2.776	4.268	2.188	3.832	4.842	2.188		
Route 21	21	1600-2000	3.0462	6.682	6.682	8.026	2.572	7.032	1.132	2.416	3.328	9.152	2.376	2.888	9.152		
Route 21	21	2000-2300	3.4762	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488		
Route 21	21	2300-1000	3.5262	2.912	2.912	7.824	1.016	5.122	6.776	9.772	2.168	3.028	8.408	2.168	3.028		
Route 21	21	1000-1300	3.5262	2.912	2.912	7.824	1.016	5.122	6.776	9.772	2.168	3.028	8.408	2.168	3.028		
Route 21	21	1300-1600	3.9416	5.712	5.712	8.896	2.522	5.872	7.712	1.148	2.696	3.552	1.008	3.232	1.008		
Route 21	21	1600-2000	4.2916	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488		
Route 21	21	2000-2300	4.3416	2.912	2.912	7.824	1.016	5.122	6.776	9.772	2.168	3.028	8.408	2.168	3.028		
Route 21	21	2300-1000	4.3416	2.912	2.912	7.824	1.016	5.122	6.776	9.772	2.168	3.028	8.408	2.168	3.028		
Route 21	21	1000-1300	4.7562	5.712	5.712	8.896	2.522	5.872	7.712	1.148	2.696	3.552	1.008	3.232	1.008		
Route 21	21	1300-1600	5.1716	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488		
Route 21	21	1600-2000	5.2216	2.912	2.912	7.824	1.016	5.122	6.776	9.772	2.168	3.028	8.408	2.168	3.028		
Route 21	21	2000-2300	5.2716	2.912	2.912	7.824	1.016	5.122	6.776	9.772	2.168	3.028	8.408	2.168	3.028		
Route 21	21	2300-1000	5.2716	2.912	2.912	7.824	1.016	5.122	6.776	9.772	2.168	3.028	8.408	2.168	3.028		
Route 21	21	1000-1300	5.6862	5.712	5.712	8.896	2.522	5.872	7.712	1.148	2.696	3.552	1.008	3.232	1.008		
Route 21	21	1300-1600	6.1016	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488		
Route 21	21	1600-2000	6.1516	2.912	2.912	7.824	1.016	5.122	6.776	9.772	2.168	3.028	8.408	2.168	3.028		
Route 21	21	2000-2300	6.2016	2.912	2.912	7.824	1.016	5.122	6.776	9.772	2.168	3.028	8.408	2.168	3.028		
Route 21	21	2300-1000	6.2016	2.912	2.912	7.824	1.016	5.122	6.776	9.772	2.168	3.028	8.408	2.168	3.028		
Route 21	21	1000-1300	6.6162	5.712	5.712	8.896	2.522	5.872	7.712	1.148	2.696	3.552	1.008	3.232	1.008		
Route 21	21	1300-1600	7.0316	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488		
Route 21	21	1600-2000	7.0816	2.912	2.912	7.824	1.016	5.122	6.776	9.772	2.168	3.028	8.408	2.168	3.028		
Route 21	21	2000-2300	7.1316	2.912	2.912	7.824	1.016	5.122	6.776	9.772	2.168	3.028	8.408	2.168	3.028		
Route 21	21	2300-1000	7.1316	2.912	2.912	7.824	1.016	5.122	6.776	9.772	2.168	3.028	8.408	2.168	3.028		
Route 21	21	1000-1300	7.5462	5.712	5.712	8.896	2.522	5.872	7.712	1.148	2.696	3.552	1.008	3.232	1.008		
Route 21	21	1300-1600	7.9616	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488		
Route 21	21	1600-2000	8.0116	2.912	2.912	7.824	1.016	5.122	6.776	9.772	2.168	3.028	8.408	2.168	3.028		
Route 21	21	2000-2300	8.0616	2.912	2.912	7.824	1.016	5.122	6.776	9.772	2.168	3.028	8.408	2.168	3.028		
Route 21	21	2300-1000	8.0616	2.912	2.912	7.824	1.016	5.122	6.776	9.772	2.168	3.028	8.408	2.168	3.028		
Route 21	21	1000-1300	8.4762	5.712	5.712	8.896	2.522	5.872	7.712	1.148	2.696	3.552	1.008	3.232	1.008		
Route 21	21	1300-1600	8.8916	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488		
Route 21	21	1600-2000	8.9416	2.912	2.912	7.824	1.016	5.122	6.776	9.772	2.168	3.028	8.408	2.168	3.028		
Route 21	21	2000-2300	8.9916	2.912	2.912	7.824	1.016	5.122	6.776	9.772	2.168	3.028	8.408	2.168	3.028		
Route 21	21	2300-1000	8.9916	2.912	2.912	7.824	1.016	5.122	6.776	9.772	2.168	3.028	8.408	2.168	3.028		
Route 21	21	1000-1300	9.4062	5.712	5.712	8.896	2.522	5.872	7.712	1.148	2.696	3.552	1.008	3.232	1.008		
Route 21	21	1300-1600	9.8216	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488		
Route 21	21	1600-2000	9.8716	2.912	2.912	7.824	1.016	5.122	6.776	9.772	2.168	3.028	8.408	2.168	3.028		
Route 21	21	2000-2300	9.9216	2.912	2.912	7.824	1.016	5.122	6.776	9.772	2.168	3.028	8.408	2.168	3.028		
Route 21	21	2300-1000	9.9216	2.912	2.912	7.824	1.016	5.122	6.776	9.772	2.168	3.028	8.408	2.168	3.028		
Route 21	21	1000-1300	10.3362	5.712	5.712	8.896	2.522	5.872	7.712	1.148	2.696	3.552	1.008	3.232	1.008		
Route 21	21	1300-1600	10.7516	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488		
Route 21	21	1600-2000	10.8016	2.912	2.912	7.824	1.016	5.122	6.776	9.772	2.168	3.028	8.408	2.168	3.028		
Route 21	21	2000-2300	10.8516	2.912	2.912	7.824	1.016	5.122	6.776	9.772	2.168	3.028	8.408	2.168	3.028		
Route 21	21	2300-1000	10.8516	2.912	2.912	7.824	1.016	5.122	6.776	9.772	2.168	3.028	8.408	2.168	3.028		
Route 21	21	1000-1300	11.2662	5.712	5.712	8.896	2.522	5.872	7.712	1.148	2.696	3.552	1.008	3.232	1.008		
Route 21	21	1300-1600	11.6816	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488		
Route 21	21	1600-2000	11.7316	2.912	2.912	7.824	1.016	5.122	6.776	9.772	2.168	3.028	8.408	2.168	3.028		
Route 21	21	2000-2300	11.7816	2.912	2.912	7.824	1.016	5.122	6.776	9.772	2.168	3.028	8.408	2.168	3.028		
Route 21	21	2300-1000	11.7816	2.912	2.912	7.824	1.016	5.122	6.776	9.772	2.168	3.028	8.408	2.168	3.028		
Route 21	21	1000-1300	12.1962	5.712	5.712	8.896	2.522	5.872	7.712	1.148	2.696	3.552	1.008	3.232	1.008		
Route 21	21	1300-1600	12.6116	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488		
Route 21	21	1600-2000	12.6616	2.912	2.912	7.824	1.016	5.122	6.776	9.772	2.168	3.028	8.408	2.168	3.028		
Route 21	21	2000-2300	12.7116	2.912	2.912	7.824	1.016	5.122	6.776	9.772	2.168	3.028	8.408	2.168	3.028		
Route 21	21	2300-1000	12.7116	2.912	2.912	7.824	1.016	5.122	6.776	9.772	2.168	3.028	8.408	2.168	3.028		
Route 21	21	1000-1300	13.1262	5.712	5.712	8.896	2.522	5.872	7.712	1.148	2.696	3.552	1.008	3.232	1.008		
Route 21	21	1300-1600	13.5416	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488	1.488		
Route 21	21	1600-2000	13.5916	2.912	2.912	7.824	1.016	5.122	6.776	9.772	2.168	3.028	8.408	2.168	3.028		
Route 21	21	2000-2300	13.6416	2.912	2.912	7.824	1.										

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Open Yield North Under Normal Quarry														
Open Road 24 hour Emission Factors for														
ADMSec model for														
Year 2018														
Route Name	Route ID	Hour	NO _x Emission				NO _x Emission							
			g/hour/ha		MetricTonne/ha		g/hour/ha		MetricTonne/ha					
			g/hour/ha	kg/hour/ha	tonnes/hr	tonnes/ha	g/hour/ha	kg/hour/ha	tonnes/hr	tonnes/ha				
Route 24	24	0800-0900	1.4181	0.7267	6.9867	1.3721	0.4467	6.1176	5.3211	1.1836	2.5801	4.7181	0.1131	2.281
Route 24	24	0900-1000	1.4652	0.7512	7.2502	1.4501	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	1000-1100	1.5123	0.7757	7.5137	1.5281	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	1100-1200	1.5594	0.8001	7.7677	1.5787	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	1200-1300	1.6065	0.8246	8.0217	1.6281	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	1300-1400	1.6536	0.8491	8.2757	1.6781	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	1400-1500	1.7007	0.8736	8.5302	1.7281	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	1500-1600	1.7478	0.8981	8.7842	1.7781	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	1600-1700	1.7949	0.9226	9.0382	1.8281	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	1700-1800	1.8420	0.9471	9.2922	1.8781	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	1800-1900	1.8891	0.9716	9.5462	1.9281	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	1900-2000	1.9362	0.9961	9.8002	1.9781	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	2000-2100	1.9833	1.0206	10.0542	2.0281	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	2100-2200	2.0304	1.0451	10.3082	2.0781	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	2200-2300	2.0775	1.0696	10.5622	2.1281	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	2300-2400	2.1246	1.0941	10.8162	2.1781	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	0000-0100	2.1717	1.1186	11.0702	2.2281	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	0100-0200	2.2188	1.1431	11.3242	2.2781	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	0200-0300	2.2659	1.1676	11.5782	2.3281	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	0300-0400	2.3130	1.1921	11.8322	2.3781	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	0400-0500	2.3601	1.2166	12.0862	2.4281	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	0500-0600	2.4072	1.2411	12.3402	2.4781	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	0600-0700	2.4543	1.2656	12.5942	2.5281	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	0700-0800	2.5014	1.2901	12.8482	2.5781	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	0800-0900	2.5485	1.3146	13.1022	2.6281	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	0900-1000	2.5956	1.3391	13.3562	2.6781	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	1000-1100	2.6427	1.3636	13.6102	2.7281	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	1100-1200	2.6898	1.3881	13.8642	2.7781	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	1200-1300	2.7369	1.4126	14.1182	2.8281	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	1300-1400	2.7840	1.4371	14.3722	2.8781	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	1400-1500	2.8311	1.4616	14.6262	2.9281	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	1500-1600	2.8782	1.4861	14.8802	2.9781	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	1600-1700	2.9253	1.5106	15.1342	3.0281	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	1700-1800	2.9724	1.5351	15.3882	3.0781	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	1800-1900	3.0195	1.5596	15.6422	3.1281	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	1900-2000	3.0666	1.5841	15.8962	3.1781	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	2000-2100	3.1137	1.6086	16.1502	3.2281	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	2100-2200	3.1608	1.6331	16.4042	3.2781	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	2200-2300	3.2079	1.6576	16.6582	3.3281	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	2300-2400	3.2550	1.6821	16.9122	3.3781	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	0000-0100	3.3021	1.7066	17.1662	3.4281	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	0100-0200	3.3492	1.7311	17.4202	3.4781	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	0200-0300	3.3963	1.7556	17.6742	3.5281	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	0300-0400	3.4434	1.7801	17.9282	3.5781	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	0400-0500	3.4905	1.8046	18.1822	3.6281	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	0500-0600	3.5376	1.8291	18.4362	3.6781	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	0600-0700	3.5847	1.8536	18.6902	3.7281	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	0700-0800	3.6318	1.8781	18.9442	3.7781	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	0800-0900	3.6789	1.9026	19.1982	3.8281	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	0900-1000	3.7260	1.9271	19.4522	3.8781	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	1000-1100	3.7731	1.9516	19.7062	3.9281	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	1100-1200	3.8202	1.9761	19.9602	3.9781	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	1200-1300	3.8673	2.0006	20.2142	4.0281	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	1300-1400	3.9144	2.0251	20.4682	4.0781	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	1400-1500	3.9615	2.0496	20.7222	4.1281	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	1500-1600	4.0086	2.0741	20.9762	4.1781	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	1600-1700	4.0557	2.0986	21.2302	4.2281	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	1700-1800	4.1028	2.1231	21.4842	4.2781	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	1800-1900	4.1499	2.1476	21.7382	4.3281	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	1900-2000	4.1970	2.1721	21.9922	4.3781	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	2000-2100	4.2441	2.1966	22.2462	4.4281	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	2100-2200	4.2912	2.2211	22.5002	4.4781	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	2200-2300	4.3383	2.2456	22.7542	4.5281	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	2300-2400	4.3854	2.2701	23.0082	4.5781	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	0000-0100	4.4325	2.2946	23.2622	4.6281	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	0100-0200	4.4796	2.3191	23.5162	4.6781	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	0200-0300	4.5267	2.3436	23.7702	4.7281	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	0300-0400	4.5738	2.3681	24.0242	4.7781	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	0400-0500	4.6209	2.3926	24.2782	4.8281	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	0500-0600	4.6680	2.4171	24.5322	4.8781	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	0600-0700	4.7151	2.4416	24.7862	4.9281	2.7966	7.0007	6.0007	1.3501	3.0007	4.6101	0.1131	2.281
Route 24	24	0700-0800	4.7622	2.4661	25.0402	4.9781	2.7966	7.0007	6.0007	1.3501	3.000			

L:\Secure\Environment Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Open Road\Appendix 3.5.4 Emission Factor in 2038.xlsx

Open Top N 9 North Under Quarry													
Top N 9 North 2008 Emission Factors for ARB/NOE model (lb/d)													
Road ID	Road Name	Hour	NO _x Emission						NO Emission				
			Monthly/Mean			Monthly/Average			Monthly/Mean			Monthly/Average	
			g/hour	g/d	lb/day	g/hour	g/d	lb/day	g/hour	g/d	lb/day	g/d	lb/day
Road 27	27 1800-1900	1.927E+11	4.318E+7	1.278E+16	4.181E+7	1.856E+07	1.132E+08	1.775E+17	1.474E+08	4.525E+06	1.081E+08	1.306E+09	3.998E+06
Road 27	27 1700-1800	1.944E+11	4.350E+7	1.296E+16	4.236E+08	1.879E+07	1.152E+08	1.792E+17	1.500E+08	4.596E+06	1.103E+08	1.332E+09	4.058E+06
Road 27	27 1600-1700	1.961E+11	4.382E+7	1.314E+16	4.292E+08	1.902E+07	1.169E+08	1.810E+17	1.522E+08	4.628E+06	1.120E+08	1.350E+09	4.100E+06
Road 27	27 1500-1600	1.146E+11	1.188E+7	3.838E+07	1.251E+05	1.048E+07	3.202E+05	4.544E+04	4.688E+07	4.446E+04	4.001E+07	4.133E+07	1.276E+05
Road 27	27 1400-1500	1.220E+11	1.262E+7	4.092E+07	1.333E+05	1.108E+07	3.402E+05	4.844E+04	4.988E+07	4.750E+04	4.301E+07	4.433E+07	1.360E+05
Road 27	27 1300-1400	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 1200-1300	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 1100-1200	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 1000-1100	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 0900-1000	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 0800-0900	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 0700-0800	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 0600-0700	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 0500-0600	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 0400-0500	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 0300-0400	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 0200-0300	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 0100-0200	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 0000-0100	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 2300-0000	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 2200-2300	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 2100-2200	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 2000-2100	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 1900-2000	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 1800-1900	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 1700-1800	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 1600-1700	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 1500-1600	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 1400-1500	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 1300-1400	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 1200-1300	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 1100-1200	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 1000-1100	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 0900-1000	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 0800-0900	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 0700-0800	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 0600-0700	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 0500-0600	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 0400-0500	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 0300-0400	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 0200-0300	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 0100-0200	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 0000-0100	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 2300-0000	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 2200-2300	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 2100-2200	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 2000-2100	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 1900-2000	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 1800-1900	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 1700-1800	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 1600-1700	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 1500-1600	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 1400-1500	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 1300-1400	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 1200-1300	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 1100-1200	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 1000-1100	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 0900-1000	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 0800-0900	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 0700-0800	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 0600-0700	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.144E+04	5.288E+07	5.030E+04	4.581E+07	4.711E+07	1.450E+05
Road 27	27 0500-0600	1.310E+11	1.351E+7	4.450E+07	1.451E+05	1.198E+07	3.694E+05	5.1					

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Open W North Underway Query														
Open W North 2nd Emersion Factors for 4849600 (MJD)														
Year 2008														
Row Name	Row ID	Hour	MO, Emersion				NO Emersion							
			North/Altitude		Longitude		North/Altitude		Longitude					
			g/h/m/s	h/m/s	h/m/s	h/m/s	g/h/m/s	h/m/s	h/m/s	h/m/s	g/h/m/s	h/m/s	h/m/s	
Row #1	31	0000:01:00	1.1126	1.1396	1.9607	1.9663	1.9188	1.7187	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.1216	1.1556	1.9606	1.9663	1.9226	1.7255	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.1306	1.1646	1.9605	1.9663	1.9316	1.7345	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.1396	1.1736	1.9604	1.9663	1.9406	1.7435	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.1486	1.1826	1.9603	1.9663	1.9496	1.7525	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.1576	1.1916	1.9602	1.9663	1.9586	1.7615	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.1666	1.2006	1.9601	1.9663	1.9676	1.7705	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.1756	1.2096	1.9600	1.9663	1.9766	1.7795	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.1846	1.2186	1.9599	1.9663	1.9856	1.7885	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.1936	1.2276	1.9598	1.9663	1.9946	1.7975	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.2026	1.2366	1.9597	1.9663	2.0036	1.8065	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.2116	1.2456	1.9596	1.9663	2.0126	1.8155	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.2206	1.2546	1.9595	1.9663	2.0216	1.8245	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.2296	1.2636	1.9594	1.9663	2.0306	1.8335	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.2386	1.2726	1.9593	1.9663	2.0396	1.8425	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.2476	1.2816	1.9592	1.9663	2.0486	1.8515	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.2566	1.2906	1.9591	1.9663	2.0576	1.8605	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.2656	1.2996	1.9590	1.9663	2.0666	1.8695	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.2746	1.3086	1.9589	1.9663	2.0756	1.8785	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.2836	1.3176	1.9588	1.9663	2.0846	1.8875	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.2926	1.3266	1.9587	1.9663	2.0936	1.8965	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.3016	1.3356	1.9586	1.9663	2.1026	1.9055	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.3106	1.3446	1.9585	1.9663	2.1116	1.9145	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.3196	1.3536	1.9584	1.9663	2.1206	1.9235	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.3286	1.3626	1.9583	1.9663	2.1296	1.9325	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.3376	1.3716	1.9582	1.9663	2.1386	1.9415	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.3466	1.3806	1.9581	1.9663	2.1476	1.9505	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.3556	1.3896	1.9580	1.9663	2.1566	1.9595	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.3646	1.3986	1.9579	1.9663	2.1656	1.9685	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.3736	1.4076	1.9578	1.9663	2.1746	1.9775	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.3826	1.4166	1.9577	1.9663	2.1836	1.9865	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.3916	1.4256	1.9576	1.9663	2.1926	1.9955	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.4006	1.4346	1.9575	1.9663	2.2016	2.0045	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.4096	1.4436	1.9574	1.9663	2.2106	2.0135	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.4186	1.4526	1.9573	1.9663	2.2196	2.0225	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.4276	1.4616	1.9572	1.9663	2.2286	2.0315	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.4366	1.4706	1.9571	1.9663	2.2376	2.0405	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.4456	1.4796	1.9570	1.9663	2.2466	2.0495	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.4546	1.4886	1.9569	1.9663	2.2556	2.0585	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.4636	1.4976	1.9568	1.9663	2.2646	2.0675	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.4726	1.5066	1.9567	1.9663	2.2736	2.0765	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.4816	1.5156	1.9566	1.9663	2.2826	2.0855	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.4906	1.5246	1.9565	1.9663	2.2916	2.0945	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.5000	1.5336	1.9564	1.9663	2.3006	2.1035	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.5090	1.5426	1.9563	1.9663	2.3096	2.1125	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.5180	1.5516	1.9562	1.9663	2.3186	2.1215	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.5270	1.5606	1.9561	1.9663	2.3276	2.1305	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.5360	1.5696	1.9560	1.9663	2.3366	2.1395	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.5450	1.5786	1.9559	1.9663	2.3456	2.1485	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.5540	1.5876	1.9558	1.9663	2.3546	2.1575	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.5630	1.5966	1.9557	1.9663	2.3636	2.1665	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.5720	1.6056	1.9556	1.9663	2.3726	2.1755	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.5810	1.6146	1.9555	1.9663	2.3816	2.1845	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.5900	1.6236	1.9554	1.9663	2.3906	2.1935	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.5990	1.6326	1.9553	1.9663	2.4000	2.2025	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.6080	1.6416	1.9552	1.9663	2.4090	2.2115	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.6170	1.6506	1.9551	1.9663	2.4180	2.2205	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.6260	1.6596	1.9550	1.9663	2.4270	2.2295	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.6350	1.6686	1.9549	1.9663	2.4360	2.2385	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.6440	1.6776	1.9548	1.9663	2.4450	2.2475	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.6530	1.6866	1.9547	1.9663	2.4540	2.2565	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.6620	1.6956	1.9546	1.9663	2.4630	2.2655	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.6710	1.7046	1.9545	1.9663	2.4720	2.2745	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.6800	1.7136	1.9544	1.9663	2.4810	2.2835	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.6890	1.7226	1.9543	1.9663	2.4900	2.2925	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.6980	1.7316	1.9542	1.9663	2.4990	2.3015	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.7070	1.7406	1.9541	1.9663	2.5080	2.3105	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.7160	1.7496	1.9540	1.9663	2.5170	2.3195	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.7250	1.7586	1.9539	1.9663	2.5260	2.3285	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.7340	1.7676	1.9538	1.9663	2.5350	2.3375	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.7430	1.7766	1.9537	1.9663	2.5440	2.3465	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.7520	1.7856	1.9536	1.9663	2.5530	2.3555	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.7610	1.7946	1.9535	1.9663	2.5620	2.3645	5.2762	1.0708	9.1667	4.5402	8.808	8.7877
Row #1	31	0000:01:00	1.7700	1.8036										

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open North End Underway Querry

Year 2008

Road Name	Road ID	Hour	No.Emulsion						No.Emulsion						
			Metric/tonne			Metric/tonne			Metric/tonne			Metric/tonne			
			g/l/min	g/l/hr	tonne/hr	g/l/min	g/l/hr	tonne/hr	g/l/min	g/l/hr	tonne/hr	g/l/min	g/l/hr	tonne/hr	
Road 1	14	0800-0900	9.730	2.576	6.724	8.538	2.256	5.676	5.876	4.572	12.106	3.156	8.180	2.080	5.500
Road 1	14	1100-1200	11.250	2.988	7.500	9.816	2.584	6.696	6.936	5.544	13.836	3.584	9.360	2.384	6.400
Road 1	14	1400-1500	10.800	2.880	7.360	8.616	2.280	5.840	6.000	4.680	11.960	3.080	7.960	2.040	5.600
Road 1	14	1700-1800	12.000	3.120	7.920	10.080	2.640	6.720	6.960	5.568	14.016	3.648	9.440	2.416	6.560
Road 1	14	2000-2100	11.250	2.988	7.500	9.816	2.584	6.696	6.936	5.544	13.836	3.584	9.360	2.384	6.400
Road 3	14	1200-1300	2.126	0.566	0.715	1.866	0.516	2.486	2.016	1.436	3.646	0.946	2.416	0.616	1.546
Road 3	14	1500-1600	2.126	0.566	0.715	1.866	0.516	2.486	2.016	1.436	3.646	0.946	2.416	0.616	1.546
Road 3	14	1800-1900	2.126	0.566	0.715	1.866	0.516	2.486	2.016	1.436	3.646	0.946	2.416	0.616	1.546
Road 3	14	2100-2200	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	2400-2500	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	2700-2800	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	3000-3100	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	3300-3400	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	3600-3700	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	3900-4000	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	4200-4300	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	4500-4600	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	4800-4900	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	5100-5200	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	5400-5500	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	5700-5800	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	6000-6100	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	6300-6400	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	6600-6700	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	6900-7000	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	7200-7300	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	7500-7600	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	7800-7900	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	8100-8200	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	8400-8500	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	8700-8800	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	9000-9100	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	9300-9400	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	9600-9700	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	9900-10000	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	1000-1100	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	1100-1200	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	1200-1300	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	1300-1400	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	1400-1500	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	1500-1600	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	1600-1700	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	1700-1800	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	1800-1900	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	1900-2000	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	2000-2100	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	2100-2200	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	2200-2300	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	2300-2400	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	2400-2500	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	2500-2600	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	2600-2700	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	2700-2800	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	2800-2900	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	2900-3000	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	3000-3100	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	3100-3200	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	3200-3300	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	3300-3400	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	3400-3500	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	3500-3600	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	3600-3700	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	3700-3800	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	3800-3900	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	3900-4000	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	4000-4100	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	4100-4200	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	4200-4300	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	4300-4400	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	4400-4500	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	4500-4600	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	4600-4700	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	4700-4800	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	4800-4900	1.063	0.283	0.358	0.933	0.258	1.243	1.008	0.718	1.823	0.473	1.208	0.308	0.773
Road 3	14	4900-5000	1.063	0.283	0.358	0.933	0.								

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Tsing Yi NP Underground Facility											
Open 24 hour Emergency Quarters for 400000 model Area											
Year 2038											
Host Name	Room ID	Hour	NO Evacuation						NO Evacuation		
			Month/June/June			Month/June/June			Month/June/June		Month/June/June
			g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³
Room 41	41	0000:00:00	2.5156	2.4938	2.2327	1.1862	1.2328	1.9978	1.4892	2.7658	3.9182
Room 41	41	0100:00:00	2.7857	2.7639	2.5028	1.2662	1.3128	2.0998	1.5602	2.9368	4.0892
Room 41	41	0200:00:00	2.6769	2.6551	2.3940	1.2312	1.2778	2.0648	1.5252	2.8218	3.9742
Room 41	41	0300:00:00	2.5156	2.4938	2.2327	1.1862	1.2328	1.9978	1.4892	2.7658	3.9182
Room 41	41	0400:00:00	2.5156	2.4938	2.2327	1.1862	1.2328	1.9978	1.4892	2.7658	3.9182
Room 41	41	0500:00:00	2.5156	2.4938	2.2327	1.1862	1.2328	1.9978	1.4892	2.7658	3.9182
Room 41	41	0600:00:00	2.5156	2.4938	2.2327	1.1862	1.2328	1.9978	1.4892	2.7658	3.9182
Room 41	41	0700:00:00	2.5156	2.4938	2.2327	1.1862	1.2328	1.9978	1.4892	2.7658	3.9182
Room 41	41	0800:00:00	2.5156	2.4938	2.2327	1.1862	1.2328	1.9978	1.4892	2.7658	3.9182
Room 41	41	0900:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	1000:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	1100:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	1200:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	1300:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	1400:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	1500:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	1600:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	1700:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	1800:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	1900:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	2000:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	2100:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	2200:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	2300:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	0000:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	0100:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	0200:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	0300:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	0400:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	0500:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	0600:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	0700:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	0800:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	0900:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	1000:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	1100:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	1200:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	1300:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	1400:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	1500:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	1600:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	1700:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	1800:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	1900:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	2000:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	2100:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	2200:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	2300:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	0000:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	0100:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	0200:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	0300:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	0400:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	0500:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	0600:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	0700:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	0800:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	0900:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	1000:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	1100:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	1200:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	1300:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	1400:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	1500:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	1600:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	1700:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	1800:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	1900:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	2000:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	2100:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	2200:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	2300:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	0000:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	0100:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	0200:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	0300:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	0400:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	0500:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	0600:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	0700:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	0800:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	0900:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	1000:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	1100:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	1200:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	1300:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	1400:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	1500:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	1600:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062
Room 41	41	1700:00:00	2.5212	2.4917	2.0524	1.0578	1.0732	1.6702	1.0381	1.6715	2.4062

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Tsing Yi North Underground Quarry														
Open Road 24 Hour Emission Factors for ANNOX (NO _x)														
Year 2018														
Road Name	Road ID	Hour	Month/January			NO _x Emission			Month/January			NO _x Emission		
			g/hour	g/min	g/sec	Month/January	g/hour	g/min	g/sec	Month/January	g/hour	g/min	g/sec	
Road #44	00000000	8:07:00	8.070	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	8:10:00	8.100	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	8:13:00	8.130	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	8:16:00	8.160	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	8:19:00	8.190	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	8:22:00	8.220	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	8:25:00	8.250	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	8:28:00	8.280	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	8:31:00	8.310	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	8:34:00	8.340	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	8:37:00	8.370	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	8:40:00	8.400	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	8:43:00	8.430	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	8:46:00	8.460	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	8:49:00	8.490	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	8:52:00	8.520	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	8:55:00	8.550	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	8:58:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	9:01:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	9:04:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	9:07:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	9:10:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	9:13:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	9:16:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	9:19:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	9:22:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	9:25:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	9:28:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	9:31:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	9:34:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	9:37:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	9:40:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	9:43:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	9:46:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	9:49:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	9:52:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	9:55:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	9:58:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	10:01:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	10:04:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	10:07:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	10:10:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	10:13:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	10:16:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	10:19:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	10:22:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	10:25:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	10:28:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	10:31:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	10:34:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	10:37:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	10:40:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	10:43:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	10:46:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	10:49:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	10:52:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	10:55:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	10:58:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	11:01:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	11:04:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	11:07:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	11:10:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	11:13:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	11:16:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	11:19:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	11:22:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	11:25:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	11:28:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	11:31:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	11:34:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	11:37:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	11:40:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	11:43:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	11:46:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	11:49:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	11:52:00	8.580	0.134	2.200	0.177	1.858	2.200	0.377	1.415	4.600	0.134	2.200	0.177
Road #44	00000000	11:55:00	8.580	0.134	2.200	0.177	1.858							

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open North End Underway Querry														
Top 10 North End Unmanned Factors for AEMM model (kg)														
Year 2008														
Road name	Road ID	Hour	No.Emmison						No.Emmison					
			Metric/tonne/hour			Metric/tonne/hour			Metric/tonne/hour			Metric/tonne/hour		
			g/hour	g/m ³	tonne/hour	g/hour	g/m ³	tonne/hour	g/hour	g/m ³	tonne/hour	g/hour	g/m ³	tonne/hour
Road 1	1700	1000	2.486	0.7767	1.486	0.137	4.7367	1.305	0.101	1.9106	0.0378	8.662	0.686	5.109
Road 1	1700	1700	1.759	0.5479	1.076	0.095	3.4567	0.778	0.062	1.1367	0.029	6.586	0.506	3.926
Road 1	1700	2400	1.068	0.3247	0.605	0.052	2.0267	0.468	0.037	0.6867	0.017	3.926	0.306	2.326
Road 1	1700	3100	0.508	0.1547	0.286	0.024	0.8767	0.218	0.018	0.3367	0.008	1.926	0.146	1.126
Road 1	1700	3800	0.248	0.0767	0.136	0.012	0.4267	0.108	0.009	0.1667	0.004	0.926	0.076	0.576
Road 1	1700	4500	0.148	0.0467	0.086	0.006	0.2267	0.058	0.005	0.0967	0.002	0.526	0.046	0.326
Road 1	1700	5200	0.088	0.0267	0.046	0.003	0.1267	0.038	0.003	0.0567	0.001	0.276	0.026	0.176
Road 1	1700	5900	0.048	0.0167	0.026	0.001	0.0667	0.018	0.001	0.0267	0.000	0.136	0.016	0.096
Road 1	1700	6600	0.028	0.0087	0.016	0.000	0.0367	0.009	0.000	0.0167	0.000	0.066	0.008	0.056
Road 1	1700	7300	0.018	0.0057	0.010	0.000	0.0267	0.006	0.000	0.0087	0.000	0.046	0.005	0.036
Road 1	1700	8000	0.013	0.0047	0.007	0.000	0.0167	0.004	0.000	0.0067	0.000	0.036	0.004	0.026
Road 1	1700	8700	0.008	0.0037	0.005	0.000	0.0107	0.003	0.000	0.0047	0.000	0.026	0.003	0.016
Road 1	1700	9400	0.005	0.0027	0.003	0.000	0.0067	0.002	0.000	0.0037	0.000	0.016	0.002	0.010
Road 1	1700	10100	0.003	0.0017	0.002	0.000	0.0037	0.001	0.000	0.0027	0.000	0.010	0.001	0.006
Road 1	1700	10800	0.002	0.0017	0.001	0.000	0.0027	0.001	0.000	0.0017	0.000	0.006	0.001	0.004
Road 1	1700	11500	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	12200	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	12900	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	13600	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	14300	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	15000	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	15700	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	16400	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	17100	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	17800	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	18500	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	19200	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	19900	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	20600	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	21300	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	22000	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	22700	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	23400	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	24100	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	24800	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	25500	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	26200	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	26900	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	27600	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	28300	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	29000	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	29700	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	30400	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	31100	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	31800	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	32500	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	33200	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	33900	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	34600	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	35300	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	36000	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	36700	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	37400	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	38100	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	38800	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	39500	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	40200	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	40900	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	41600	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	42300	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	43000	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	43700	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	44400	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	45100	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	45800	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	46500	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	47200	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	47900	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	48600	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	49300	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	50000	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	50700	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	51400	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	52100	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	52800	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	53500	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	54200	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	54900	0.001	0.0007	0.001	0.000	0.0017	0.000	0.000	0.0007	0.000	0.004	0.000	0.002
Road 1	1700	55600	0.001	0.0007	0.001	0.000								

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Open Top North End Exhaustion Factors for AEMMO model (Jan)												
		Year 2038		NO Emission				NO Emission				
Road Name	Road ID	hour	Month/year	g/hour/mi	hour/month	Month/year/mi	Month/year/mi	Month/year/mi	Month/year/mi	Month/year/mi	Month/year/mi	
Road #1	0100-0000	5:20:00	12/01	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #1	0100-0000	5:20:00	12/02	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #1	0100-0000	5:20:00	12/03	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #1	0100-0000	5:20:00	12/04	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #1	0100-0000	5:20:00	12/05	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #1	0100-0000	5:20:00	12/06	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #1	0100-0000	5:20:00	12/07	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #1	0100-0000	5:20:00	12/08	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #1	0100-0000	5:20:00	12/09	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #1	0100-0000	5:20:00	12/10	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #1	0100-0000	5:20:00	12/11	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #1	0100-0000	5:20:00	12/12	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #1	0100-0000	5:20:00	12/13	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #1	0100-0000	5:20:00	12/14	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #1	0100-0000	5:20:00	12/15	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #1	0100-0000	5:20:00	12/16	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #1	0100-0000	5:20:00	12/17	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #1	0100-0000	5:20:00	12/18	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #1	0100-0000	5:20:00	12/19	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #1	0100-0000	5:20:00	12/20	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #1	0100-0000	5:20:00	12/21	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #1	0100-0000	5:20:00	12/22	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #1	0100-0000	5:20:00	12/23	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #1	0100-0000	5:20:00	12/24	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #1	0100-0000	5:20:00	12/25	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #1	0100-0000	5:20:00	12/26	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #1	0100-0000	5:20:00	12/27	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #1	0100-0000	5:20:00	12/28	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #1	0100-0000	5:20:00	12/29	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #1	0100-0000	5:20:00	12/30	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #1	0100-0000	5:20:00	12/31	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #2	0200-0000	5:20:00	12/01	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #2	0200-0000	5:20:00	12/02	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #2	0200-0000	5:20:00	12/03	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #2	0200-0000	5:20:00	12/04	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #2	0200-0000	5:20:00	12/05	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #2	0200-0000	5:20:00	12/06	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #2	0200-0000	5:20:00	12/07	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #2	0200-0000	5:20:00	12/08	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #2	0200-0000	5:20:00	12/09	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #2	0200-0000	5:20:00	12/10	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #2	0200-0000	5:20:00	12/11	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #2	0200-0000	5:20:00	12/12	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #2	0200-0000	5:20:00	12/13	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #2	0200-0000	5:20:00	12/14	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #2	0200-0000	5:20:00	12/15	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #2	0200-0000	5:20:00	12/16	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #2	0200-0000	5:20:00	12/17	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #2	0200-0000	5:20:00	12/18	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #2	0200-0000	5:20:00	12/19	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #2	0200-0000	5:20:00	12/20	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #2	0200-0000	5:20:00	12/21	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #2	0200-0000	5:20:00	12/22	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #2	0200-0000	5:20:00	12/23	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #2	0200-0000	5:20:00	12/24	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #2	0200-0000	5:20:00	12/25	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #2	0200-0000	5:20:00	12/26	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #2	0200-0000	5:20:00	12/27	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #2	0200-0000	5:20:00	12/28	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #2	0200-0000	5:20:00	12/29	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #2	0200-0000	5:20:00	12/30	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #2	0200-0000	5:20:00	12/31	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #3	0300-0000	5:20:00	12/01	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #3	0300-0000	5:20:00	12/02	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #3	0300-0000	5:20:00	12/03	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #3	0300-0000	5:20:00	12/04	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #3	0300-0000	5:20:00	12/05	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #3	0300-0000	5:20:00	12/06	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #3	0300-0000	5:20:00	12/07	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #3	0300-0000	5:20:00	12/08	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #3	0300-0000	5:20:00	12/09	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #3	0300-0000	5:20:00	12/10	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #3	0300-0000	5:20:00	12/11	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #3	0300-0000	5:20:00	12/12	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #3	0300-0000	5:20:00	12/13	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #3	0300-0000	5:20:00	12/14	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #3	0300-0000	5:20:00	12/15	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #3	0300-0000	5:20:00	12/16	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #3	0300-0000	5:20:00	12/17	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #3	0300-0000	5:20:00	12/18	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #3	0300-0000	5:20:00	12/19	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #3	0300-0000	5:20:00	12/20	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #3	0300-0000	5:20:00	12/21	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #3	0300-0000	5:20:00	12/22	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #3	0300-0000	5:20:00	12/23	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #3	0300-0000	5:20:00	12/24	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #3	0300-0000	5:20:00	12/25	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #3	0300-0000	5:20:00	12/26	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #3	0300-0000	5:20:00	12/27	4.305	8.61	4.305	1.752	6.997	3.011	5.12	5.882	1.637
Road #3	0300-0000	5:20:00	12/28	4.305	8.61	4.305	1.752	6.997	3.0			

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Tsing Yi North Underground Quarry											
Open Road 24 Hour Emission Factors for ANFO/NO ₂ and Diesel											
Year 2018											
Road Name	Road ID	Hour	Month/Jan/Feb			NO ₂ Emission			Month/Mar/Apr		
			g/hour	g/min	g/sec	g/hour	g/min	g/sec	g/hour	g/min	g/sec
Road 101	10001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	11001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	12001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	13001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	14001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	15001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	16001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	17001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	18001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	19001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	20001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	21001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	22001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	23001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	24001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	25001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	26001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	27001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	28001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	29001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	30001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	31001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	32001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	33001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	34001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	35001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	36001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	37001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	38001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	39001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	40001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	41001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	42001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	43001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	44001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	45001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	46001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	47001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	48001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	49001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	50001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	51001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	52001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	53001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	54001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	55001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	56001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	57001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	58001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	59001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	60001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	61001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	62001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	63001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	64001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	65001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	66001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	67001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	68001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	69001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	70001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	71001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	72001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	73001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	74001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	75001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	76001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	77001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	78001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	79001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	80001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	81001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	82001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	83001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	84001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	85001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	86001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	87001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	88001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	89001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	90001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	91001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	92001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	93001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	94001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	95001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	96001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	97001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	98001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	99001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	100001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	101001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	102001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	103001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	104001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	105001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	106001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	107001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085	0.018	0.0003
Road 101	108001	1	1.085	0.018	0.0003	1.278	0.021	0.0004	1.085</		

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open N North Undernourishment Factors for AEMSD model											
Year 2008											
Row Name	Row ID	Hour	Mort/Mort/Hour			Mort/Ennion			Mort/Ennion		
			g/hour	h/hour	h/hour	h/hour	h/hour	h/hour	h/hour	h/hour	h/hour
Row 14	S4	0800-0900	9.512E-01	1.53E-01	8.18E-06	8.04E-02	1.80E-01	6.84E-06	1.512E-01	1.80E-01	2.98E-01
Row 15	S4	0900-1000	1.01E-01	1.84E-01	8.71E-06	1.21E-01	7.42E-06	5.80E-06	1.410E-01	1.40E-01	2.21E-01
Row 16	S4	1000-1100	1.46E-01	2.61E-01	1.24E-05	1.64E-01	1.01E-01	8.41E-06	1.710E-01	1.71E-01	2.61E-01
Row 17	S4	1100-1200	1.18E-01	1.89E-01	8.81E-06	1.85E-01	9.97E-06	7.04E-06	1.422E-01	1.12E-01	3.52E-01
Row 18	S4	1200-1300	1.46E-01	2.61E-01	1.24E-05	1.64E-01	1.01E-01	8.41E-06	1.710E-01	1.71E-01	2.61E-01
Row 19	S4	1300-1400	1.441E-01	1.41E-01	7.87E-06	1.81E-01	2.81E-01	6.42E-01	1.12E-01	1.27E-01	1.78E-01
Row 20	S4	1400-1500	1.44E-01	1.53E-01	8.05E-06	1.21E-01	6.87E-06	6.52E-06	1.50E-01	1.27E-01	1.78E-01
Row 21	S4	1500-1600	1.34E-01	1.53E-01	8.05E-06	1.21E-01	6.87E-06	6.52E-06	1.50E-01	1.27E-01	1.78E-01
Row 22	S4	1600-1700	1.44E-01	1.31E-01	6.74E-06	1.81E-01	2.78E-01	6.28E-06	1.95E-01	1.17E-01	1.88E-01
Row 23	S4	1700-1800	1.34E-01	1.53E-01	8.05E-06	1.21E-01	6.87E-06	6.52E-06	1.50E-01	1.27E-01	1.78E-01
Row 24	S4	1800-1900	1.92E-01	1.73E-01	3.94E-06	1.86E-01	1.48E-01	1.37E-06	1.71E-01	1.69E-01	1.56E-01
Row 25	S4	1900-2000	1.41E-01	1.53E-01	8.05E-06	1.21E-01	6.87E-06	6.52E-06	1.50E-01	1.27E-01	1.78E-01
Row 26	S4	2000-2100	7.95E-01	1.43E-01	1.91E-05	1.81E-01	7.95E-01	1.81E-01	1.46E-01	1.75E-01	2.55E-01
Row 27	S4	2100-2200	7.71E-01	1.84E-01	2.40E-05	1.82E-01	7.41E-01	1.85E-01	1.10E-01	3.70E-01	2.76E-01
Row 28	S4	2200-2300	8.13E-01	1.84E-01	2.40E-05	1.82E-01	7.41E-01	1.85E-01	1.10E-01	3.70E-01	2.76E-01
Row 29	S4	2300-0000	8.14E-01	1.84E-01	2.40E-05	1.82E-01	7.41E-01	1.85E-01	1.10E-01	3.70E-01	2.76E-01
Row 30	S4	0000-0100	8.14E-01	1.84E-01	2.40E-05	1.82E-01	7.41E-01	1.85E-01	1.10E-01	3.70E-01	2.76E-01
Row 31	S4	0100-0200	8.88E-01	1.54E-01	2.04E-05	1.97E-01	1.46E-01	1.34E-01	2.40E-01	2.28E-01	2.66E-01
Row 32	S4	0200-0300	7.56E-01	1.44E-01	1.84E-06	1.69E-01	1.51E-01	1.43E-01	1.54E-01	1.84E-01	3.81E-01
Row 33	S4	0300-0400	7.56E-01	1.44E-01	1.84E-06	1.69E-01	1.51E-01	1.43E-01	1.54E-01	1.84E-01	3.81E-01
Row 34	S4	0400-0500	9.01E-01	1.31E-01	1.714E-06	1.84E-01	1.84E-01	1.84E-01	1.50E-01	1.62E-01	1.90E-01
Row 35	S4	0500-0600	9.01E-01	1.31E-01	1.714E-06	1.84E-01	1.84E-01	1.84E-01	1.50E-01	1.62E-01	1.90E-01
Row 36	S4	0600-0700	1.03E-01	1.85E-01	3.78E-06	1.57E-01	6.21E-01	3.56E-01	1.83E-01	1.83E-01	1.47E-01
Row 37	S4	0700-0800	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 38	S4	0800-0900	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 39	S4	0900-1000	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 40	S4	1000-1100	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 41	S4	1100-1200	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 42	S4	1200-1300	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 43	S4	1300-1400	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 44	S4	1400-1500	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 45	S4	1500-1600	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 46	S4	1600-1700	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 47	S4	1700-1800	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 48	S4	1800-1900	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 49	S4	1900-2000	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 50	S4	2000-2100	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 51	S4	2100-2200	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 52	S4	2200-2300	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 53	S4	2300-0000	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 54	S4	0000-0100	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 55	S4	0100-0200	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 56	S4	0200-0300	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 57	S4	0300-0400	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 58	S4	0400-0500	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 59	S4	0500-0600	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 60	S4	0600-0700	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 61	S4	0700-0800	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 62	S4	0800-0900	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 63	S4	0900-1000	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 64	S4	1000-1100	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 65	S4	1100-1200	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 66	S4	1200-1300	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 67	S4	1300-1400	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 68	S4	1400-1500	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 69	S4	1500-1600	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 70	S4	1600-1700	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 71	S4	1700-1800	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 72	S4	1800-1900	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 73	S4	1900-2000	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 74	S4	2000-2100	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 75	S4	2100-2200	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 76	S4	2200-2300	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 77	S4	2300-0000	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 78	S4	0000-0100	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 79	S4	0100-0200	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 80	S4	0200-0300	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 81	S4	0300-0400	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 82	S4	0400-0500	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 83	S4	0500-0600	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 84	S4	0600-0700	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 85	S4	0700-0800	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 86	S4	0800-0900	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 87	S4	0900-1000	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 88	S4	1000-1100	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 89	S4	1100-1200	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 90	S4	1200-1300	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 91	S4	1300-1400	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 92	S4	1400-1500	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 93	S4	1500-1600	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 94	S4	1600-1700	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 95	S4	1700-1800	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 96	S4	1800-1900	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 97	S4	1900-2000	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 98	S4	2000-2100	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 99	S4	2100-2200	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				
Row 100	S4	2200-2300	1.11E-01	1.03E-01	1.60E-06	1.44E-01	1				

Road\Appendix 3.5.4 Emission Factor in 2038.xlsx

Open Yield North Underground Quarry																
Using Data 24 Hour Enrichment Factors for Atlantic Model Quarry																
Year 2038																
Route Name	Route ID	Hour	Month/Year/Mark		NO _x Emission		PM ₁₀ Emission		PM _{2.5} Emission		NO _x Emission		PM ₁₀ Emission		PM _{2.5} Emission	
			g/hour	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day
			g/hour	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day	lb/day
Route 103	103	1600-1700	1.44E+02	3.11E 07	1.28E+03	1.32E+02	4.48E+07	1.06E+05	8.24E+02	2.79E+05	5.51E 04	5.04E+02	1.85E 06	4.46E+05		
Route 103	103	1800-1900	1.02E+02	2.17E 07	9.00E+02	9.40E+02	3.40E+07	8.00E+04	6.20E+02	2.00E+05	3.90E+04	3.42E+02	1.24E+06	2.85E+05		
Route 103	103	0000-0100	1.02E+02	2.17E 07	9.00E+02	9.40E+02	3.40E+07	8.00E+04	6.20E+02	2.00E+05	3.90E+04	3.42E+02	1.24E+06	2.85E+05		
Route 103	103	0100-0200	6.08E+03	2.68E 07	2.50E+05	5.31E+03	1.83E+07	4.39E+05	3.72E+03	1.13E+06	3.10E+05	2.70E+03	3.09E+07	2.57E+05		
Route 103	103	0200-0300	6.08E+03	2.68E 07	2.50E+05	5.31E+03	1.83E+07	4.39E+05	3.72E+03	1.13E+06	3.10E+05	2.70E+03	3.09E+07	2.57E+05		
Route 103	103	0300-0400	4.91E+03	2.17E 07	3.30E+05	3.11E+07	2.87E+07	6.70E+05	2.90E+03	1.00E+06	2.52E+05	1.34E+04	8.75E+07	2.90E+05		
Route 103	103	0400-0500	4.87E+03	1.31E 07	1.40E+05	4.31E+07	1.77E+07	2.72E+05	1.00E+03	2.40E+05	2.40E+05	1.12E+04	8.00E+07	2.60E+05		
Route 103	103	0500-0600	5.47E+03	1.31E 07	1.40E+05	4.31E+07	1.77E+07	2.72E+05	1.00E+03	2.40E+05	2.40E+05	1.12E+04	8.00E+07	2.60E+05		
Route 104	104	0000-0100	8.74E+03	8.90E 07	3.70E+06	1.77E+06	6.30E+07	1.52E+06	4.32E+04	1.60E+06	8.37E+04	8.71E+03	1.81E+07	3.46E+06		
Route 104	104	0100-0200	8.74E+03	8.90E 07	3.70E+06	1.77E+06	6.30E+07	1.52E+06	4.32E+04	1.60E+06	8.37E+04	8.71E+03	1.81E+07	3.46E+06		
Route 104	104	0200-0300	8.74E+03	8.90E 07	3.70E+06	1.77E+06	6.30E+07	1.52E+06	4.32E+04	1.60E+06	8.37E+04	8.71E+03	1.81E+07	3.46E+06		
Route 104	104	0300-0400	1.14E+02	4.98E 05	1.00E+05	9.86E+03	4.36E+08	8.88E+07	5.58E+02	2.44E+07	4.97E+04	4.75E+02	2.08E+07	4.23E+06		
Route 104	104	0400-0500	1.14E+02	4.98E 05	1.00E+05	9.86E+03	4.36E+08	8.88E+07	5.58E+02	2.44E+07	4.97E+04	4.75E+02	2.08E+07	4.23E+06		
Route 104	104	0500-0600	1.12E+05	1.55E 06	1.55E+06	1.41E+06	4.00E+07	8.00E+07	6.00E+02	2.00E+06	8.00E+05	5.11E+02	7.00E+07	1.29E+06		
Route 104	104	0600-0700	1.41E+02	9.72E 08	3.80E+05	2.02E+06	8.23E+08	1.68E+08	6.44E+04	4.02E+04	9.02E+03	3.29E+04	8.60E+07	7.42E+05		
Route 104	104	0700-0800	1.41E+02	9.72E 08	3.80E+05	2.02E+06	8.23E+08	1.68E+08	6.44E+04	4.02E+04	9.02E+03	3.29E+04	8.60E+07	7.42E+05		
Route 104	104	0800-0900	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	0900-1000	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	1000-1100	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	1100-1200	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	1200-1300	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	1300-1400	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	1400-1500	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	1500-1600	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	1600-1700	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	1700-1800	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	1800-1900	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	1900-2000	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	2000-2100	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	2100-2200	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	2200-2300	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	2300-2400	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	2400-0100	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	0100-0200	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	0200-0300	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	0300-0400	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	0400-0500	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	0500-0600	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	0600-0700	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	0700-0800	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	0800-0900	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	0900-1000	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	1000-1100	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	1100-1200	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	1200-1300	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	1300-1400	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	1400-1500	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	1500-1600	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	1600-1700	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	1700-1800	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	1800-1900	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	1900-2000	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	2000-2100	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	2100-2200	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	2200-2300	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	2300-2400	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	2400-0100	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	0100-0200	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	0200-0300	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06	4.28E+05	1.67E+05	1.73E+05	3.52E+05		
Route 104	104	0300-0400	1.54E+02	1.48E+07	9.79E+06	1.32E+07	4.07E+07	8.28E+08	6.42E+02	2.10E+06						

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Open Top North Underminers Factors											
Road ID		Hour	MO,Enmission				NO,Enmission				
ASPH	ROAD		g/hour	g/m ³	100mg/hour	g/hour	g/m ³	100mg/hour	g/hour	g/m ³	100mg/hour
Read 1	1	0000-0100	4.92(3.03)	0.82(1.18)	0.78(1.06)	4.30(6.39)	5.97(8.08)	3.38(4.66)	3.14(3.42)	4.74(5.07)	4.42(4.78)
Read 1	1	0100-0200	5.73(4.05)	0.93(0.64)	2.66(1.96)	4.48(3.28)	4.22(3.06)	3.55(2.56)	3.75(2.62)	2.90(2.02)	2.56(1.67)
Read 1	1	0200-0300	5.73(4.05)	0.93(0.64)	2.66(1.96)	4.48(3.28)	4.22(3.06)	3.55(2.56)	3.75(2.62)	2.90(2.02)	2.56(1.67)
Read 1	1	0300-0400	6.27(4.03)	1.26(2.18)	3.76(4.98)	4.45(4.87)	2.85(4.10)	1.97(2.56)	3.74(4.07)	3.15(4.42)	3.01(4.05)
Read 1	1	0400-0500	6.89(3.12)	1.50(1.22)	3.25(2.56)	4.37(3.58)	3.37(2.56)	2.56(1.96)	3.37(2.56)	2.56(1.96)	2.56(1.96)
Read 1	1	0500-0600	7.30(4.03)	1.20(1.28)	3.36(4.28)	6.32(4.82)	3.18(4.06)	2.44(3.06)	3.96(4.07)	3.20(4.36)	3.11(4.17)
Read 1	1	0600-0700	7.71(4.03)	1.07(1.07)	3.15(3.15)	5.83(4.46)	4.47(4.70)	4.24(4.82)	3.57(4.03)	3.51(4.12)	3.41(4.03)
Read 1	1	0700-0800	8.14(4.03)	1.14(1.14)	3.25(3.25)	5.83(4.46)	4.47(4.70)	4.24(4.82)	3.57(4.03)	3.51(4.12)	3.41(4.03)
Read 1	1	0800-0900	8.14(4.03)	1.14(1.14)	3.25(3.25)	5.83(4.46)	4.47(4.70)	4.24(4.82)	3.57(4.03)	3.51(4.12)	3.41(4.03)
Read 1	1	0900-1000	8.14(4.03)	1.14(1.14)	3.25(3.25)	5.83(4.46)	4.47(4.70)	4.24(4.82)	3.57(4.03)	3.51(4.12)	3.41(4.03)
Read 1	1	1000-1100	10.96(4.02)	1.81(1.07)	2.18(2.05)	9.22(4.03)	3.22(4.07)	3.77(4.05)	5.01(4.74)	9.43(4.05)	4.11(4.42)
Read 1	1	1100-1200	11.16(4.02)	1.81(1.07)	2.31(2.05)	9.48(4.03)	3.49(4.07)	3.91(4.05)	4.78(4.05)	9.43(4.05)	4.27(4.42)
Read 1	1	1200-1300	12.71(4.02)	1.73(1.07)	2.31(2.05)	9.48(4.03)	3.49(4.07)	3.91(4.05)	4.78(4.05)	9.43(4.05)	4.27(4.42)
Read 1	1	1300-1400	12.96(4.02)	1.89(1.07)	2.11(2.05)	9.11(4.03)	3.15(4.07)	3.28(4.05)	5.69(4.05)	10.08(4.05)	4.45(4.42)
Read 1	1	1400-1500	13.27(4.02)	1.89(1.07)	2.11(2.05)	9.11(4.03)	3.15(4.07)	3.28(4.05)	5.69(4.05)	10.08(4.05)	4.45(4.42)
Read 1	1	1500-1600	12.71(4.02)	1.81(1.07)	2.31(2.05)	9.48(4.03)	3.49(4.07)	3.91(4.05)	4.78(4.05)	9.43(4.05)	4.27(4.42)
Read 1	1	1600-1700	12.71(4.02)	1.81(1.07)	2.31(2.05)	9.48(4.03)	3.49(4.07)	3.91(4.05)	4.78(4.05)	9.43(4.05)	4.27(4.42)
Read 1	1	1700-1800	13.16(4.02)	1.66(1.07)	2.11(2.05)	9.48(4.03)	3.49(4.07)	3.91(4.05)	4.78(4.05)	9.43(4.05)	4.27(4.42)
Read 1	1	1800-1900	14.66(4.02)	1.41(1.07)	2.55(2.05)	8.82(4.03)	3.85(4.07)	3.12(4.05)	2.18(4.05)	2.71(4.05)	2.96(4.05)
Read 1	1	1900-2000	14.66(4.02)	1.41(1.07)	2.55(2.05)	8.82(4.03)	3.85(4.07)	3.12(4.05)	2.18(4.05)	2.71(4.05)	2.96(4.05)
Read 1	2	0000-0100	5.10(4.08)	0.98(1.28)	1.20(1.06)	4.80(4.03)	1.96(4.05)	1.38(4.06)	1.07(4.06)	2.96(4.05)	2.11(4.06)
Read 1	2	0100-0200	5.10(4.08)	0.98(1.28)	1.20(1.06)	4.80(4.03)	1.96(4.05)	1.38(4.06)	1.07(4.06)	2.96(4.05)	2.11(4.06)
Read 1	2	0200-0300	5.10(4.08)	0.98(1.28)	1.20(1.06)	4.80(4.03)	1.96(4.05)	1.38(4.06)	1.07(4.06)	2.96(4.05)	2.11(4.06)
Read 1	2	0300-0400	5.10(4.08)	0.98(1.28)	1.20(1.06)	4.80(4.03)	1.96(4.05)	1.38(4.06)	1.07(4.06)	2.96(4.05)	2.11(4.06)
Read 1	2	0400-0500	5.10(4.08)	0.98(1.28)	1.20(1.06)	4.80(4.03)	1.96(4.05)	1.38(4.06)	1.07(4.06)	2.96(4.05)	2.11(4.06)
Read 1	2	0500-0600	5.10(4.08)	0.98(1.28)	1.20(1.06)	4.80(4.03)	1.96(4.05)	1.38(4.06)	1.07(4.06)	2.96(4.05)	2.11(4.06)
Read 1	2	0600-0700	5.10(4.08)	0.98(1.28)	1.20(1.06)	4.80(4.03)	1.96(4.05)	1.38(4.06)	1.07(4.06)	2.96(4.05)	2.11(4.06)
Read 1	2	0700-0800	5.10(4.08)	0.98(1.28)	1.20(1.06)	4.80(4.03)	1.96(4.05)	1.38(4.06)	1.07(4.06)	2.96(4.05)	2.11(4.06)
Read 1	2	0800-0900	5.10(4.08)	0.98(1.28)	1.20(1.06)	4.80(4.03)	1.96(4.05)	1.38(4.06)	1.07(4.06)	2.96(4.05)	2.11(4.06)
Read 1	2	0900-1000	5.10(4.08)	0.98(1.28)	1.20(1.06)	4.80(4.03)	1.96(4.05)	1.38(4.06)	1.07(4.06)	2.96(4.05)	2.11(4.06)
Read 1	2	1000-1100	5.10(4.08)	0.98(1.28)	1.20(1.06)	4.80(4.03)	1.96(4.05)	1.38(4.06)	1.07(4.06)	2.96(4.05)	2.11(4.06)
Read 1	2	1100-1200	5.10(4.08)	0.98(1.28)	1.20(1.06)	4.80(4.03)	1.96(4.05)	1.38(4.06)	1.07(4.06)	2.96(4.05)	2.11(4.06)
Read 1	2	1200-1300	5.10(4.08)	0.98(1.28)	1.20(1.06)	4.80(4.03)	1.96(4.05)	1.38(4.06)	1.07(4.06)	2.96(4.05)	2.11(4.06)
Read 1	2	1300-1400	5.10(4.08)	0.98(1.28)	1.20(1.06)	4.80(4.03)	1.96(4.05)	1.38(4.06)	1.07(4.06)	2.96(4.05)	2.11(4.06)
Read 1	2	1400-1500	5.10(4.08)	0.98(1.28)	1.20(1.06)	4.80(4.03)	1.96(4.05)	1.38(4.06)	1.07(4.06)	2.96(4.05)	2.11(4.06)
Read 1	2	1500-1600	5.10(4.08)	0.98(1.28)	1.20(1.06)	4.80(4.03)	1.96(4.05)	1.38(4.06)	1.07(4.06)	2.96(4.05)	2.11(4.06)
Read 1	2	1600-1700	5.10(4.08)	0.98(1.28)	1.20(1.06)	4.80(4.03)	1.96(4.05)	1.38(4.06)	1.07(4.06)	2.96(4.05)	2.11(4.06)
Read 1	2	1700-1800	5.10(4.08)	0.98(1.28)	1.20(1.06)	4.80(4.03)	1.96(4.05)	1.38(4.06)	1.07(4.06)	2.96(4.05)	2.11(4.06)
Read 1	2	1800-1900	5.10(4.08)	0.98(1.28)	1.20(1.06)	4.80(4.03)	1.96(4.05)	1.38(4.06)	1.07(4.06)	2.96(4.05)	2.11(4.06)
Read 1	2	1900-2000	5.10(4.08)	0.98(1.28)	1.20(1.06)	4.80(4.03)	1.96(4.05)	1.38(4.06)	1.07(4.06)	2.96(4.05)	2.11(4.06)
Read 2	2	0000-0100	6.52(4.03)	4.52(4.08)	2.75(4.06)	5.86(4.16)	3.97(4.08)	2.01(4.06)	4.62(4.07)	3.16(4.07)	1.94(4.07)
Read 2	2	0100-0200	6.52(4.03)	4.52(4.08)	2.75(4.06)	5.86(4.16)	3.97(4.08)	2.01(4.06)	4.62(4.07)	3.16(4.07)	1.94(4.07)
Read 2	2	0200-0300	6.52(4.03)	4.52(4.08)	2.75(4.06)	5.86(4.16)	3.97(4.08)	2.01(4.06)	4.62(4.07)	3.16(4.07)	1.94(4.07)
Read 2	2	0300-0400	6.52(4.03)	4.52(4.08)	2.75(4.06)	5.86(4.16)	3.97(4.08)	2.01(4.06)	4.62(4.07)	3.16(4.07)	1.94(4.07)
Read 2	2	0400-0500	6.52(4.03)	4.52(4.08)	2.75(4.06)	5.86(4.16)	3.97(4.08)	2.01(4.06)	4.62(4.07)	3.16(4.07)	1.94(4.07)
Read 2	2	0500-0600	6.52(4.03)	4.52(4.08)	2.75(4.06)	5.86(4.16)	3.97(4.08)	2.01(4.06)	4.62(4.07)	3.16(4.07)	1.94(4.07)
Read 2	2	0600-0700	6.52(4.03)	4.52(4.08)	2.75(4.06)	5.86(4.16)	3.97(4.08)	2.01(4.06)	4.62(4.07)	3.16(4.07)	1.94(4.07)
Read 2	2	0700-0800	6.52(4.03)	4.52(4.08)	2.75(4.06)	5.86(4.16)	3.97(4.08)	2.01(4.06)	4.62(4.07)	3.16(4.07)	1.94(4.07)
Read 2	2	0800-0900	6.52(4.03)	4.52(4.08)	2.75(4.06)	5.86(4.16)	3.97(4.08)	2.01(4.06)	4.62(4.07)	3.16(4.07)	1.94(4.07)
Read 2	2	0900-1000	6.52(4.03)	4.52(4.08)	2.75(4.06)	5.86(4.16)	3.97(4.08)	2.01(4.06)	4.62(4.07)	3.16(4.07)	1.94(4.07)
Read 2	2	1000-1100	6.52(4.03)	4.52(4.08)	2.75(4.06)	5.86(4.16)	3.97(4.08)	2.01(4.06)	4.62(4.07)	3.16(4.07)	1.94(4.07)
Read 2	2	1100-1200	6.52(4.03)	4.52(4.08)	2.75(4.06)	5.86(4.16)	3.97(4.08)	2.01(4.06)	4.62(4.07)	3.16(4.07)	1.94(4.07)
Read 2	2	1200-1300	6.52(4.03)	4.52(4.08)	2.75(4.06)	5.86(4.16)	3.97(4.08)	2.01(4.06)	4.62(4.07)	3.16(4.07)	1.94(4.07)
Read 2	2	1300-1400	6.52(4.03)	4.52(4.08)	2.75(4.06)	5.86(4.16)	3.97(4.08)	2.01(4.06)	4.62(4.07)	3.16(4.07)	1.94(4.07)
Read 2	2	1400-1500	6.52(4.03)	4.52(4.08)	2.75(4.06)	5.86(4.16)	3.97(4.08)	2.01(4.06)	4.62(4.07)	3.16(4.07)	1.94(4.07)
Read 2	2	1500-1600	6.52(4.03)	4.52(4.08)	2.75(4.06)	5.86(4.16)	3.97(4.08)	2.01(4.06)	4.62(4.07)	3.16(4.07)	1.94(4.07)
Read 2	2	1600-1700	6.52(4.03)	4.52(4.08)	2.75(4.06)	5.86(4.16)	3.97(4.08)	2.01(4.06)	4.62(4.07)	3.16(4.07)	1.94(4.07)
Read 2	2	1700-1800	6.52(4.03)	4.52(4.08)	2.75(4.06)	5.86(4.16)	3.97(4.08)	2.01(4.06)	4.62(4.07)	3.16(4.07)	1.94(4.07)
Read 2	2	1800-1900	6.52(4.03)	4.52(4.08)	2.75(4.06)	5.86(4.16)	3.97(4.08)	2.01(4.06)	4.62(4.07)	3.16(4.07)	1.94(4.07)
Read 2	2	1900-2000	6.52(4.03)	4.52(4.08)	2.75(4.06)	5.86(4.16)	3.97(4.08)	2.01(4.06)	4.62(4.07)	3.16(4.07)	1.94(4.07)
Read 2	3	0000-0100	6.52(4.03)	4.52(4.08)	2.75(4.06)	5.86(4.16)	3.97(4.08)	2.01(4.06)	4.62(4.07)	3.16(4.07)	1.94(4.07)
Read 2	3	0100-0200	6.52(4.03)	4.52(4.08)	2.75(4.06)	5.86(4.16)	3.97(4.08)	2.01(4.06)	4.62(4.07)	3.16(4.07)	1.94(4.07)
Read 2	3	0200-0300	6.52(4.03)	4.52(4.08)	2.75(4.06)	5.86(4.16)	3.97(4.08)	2.01(4.06)	4.62(4.07)	3.16(4.07)	1.94(4.07)
Read 2	3	0300-0400	6.52(4.03)	4.52(4.08)	2.75(4.06)	5.86(4.16)	3.97(4.08)	2.01(4.06)	4.62(4.07)	3.16(4.07)	1.94(4.07)
Read 2	3	0400-0500	6.52(4.03)	4.52(4.08)	2.75(4.06)	5.86(4.16)	3.97(4.08)	2.01(4.06)	4.62(4.07)	3.16(4.07)	1.94(4.07)
Read 2	3	0500-0600	6.52(4.03)	4.52(4.08)	2.75(4.06)	5.86(4.16)	3.97(4.08)	2.01(4.06)	4.62(4.07)	3.16(4.07)	1.94(4.07)
Read 2	3	0600-0700	6.52(4.03)	4.52(4.08)	2.75(4.06)	5.86(4.16)	3.97(4.08)	2.01(4.06)	4.62(4.07)	3.16(4.07)	1.94(4.07)
Read 2	3	0700-0800	6.52(4.03)	4.52(4.08)	2.75(4.06)	5.86(4.16)	3.97(4.08)	2.01(4.06)	4.62(4.07)	3.16(4.07)	1.94(4.07)
Read 2	3	0800-0900	6.52(4.03)	4.52(4.08)	2.75(4.06)	5.86(4.16)	3.97(4.08)	2.01(4.06)	4.62(4.07)	3.16(4.07)	1.94(4.07)
Read 2	3	0900-1000	6.52(4.03)	4.52(4.08)	2.75(4.06)	5.86(4.16)	3.97(4.08)	2.01(4.06)	4.62(4.07)	3.16(4.07)	1.94(4.07)
Read 2	3	1000-1100	6.52(4.03)	4.52(4.08)	2.75(4.06)	5.86(4.16)	3.97(4.08)	2.01(4.06)	4.62(4.07)	3.16(4.07)	1.94(4.07)
Read 2	3	1100-1200	6.52(4.03)	4.52(4.08)	2.75(4.06)	5.86(4.16)	3.97(4.08)	2.01(4.06)	4.62(4.07)	3.16(4.07)	1.94(4.07)
Read 2	3	1200-1300	6.52(4.03)	4.52(4.08)	2.75(4.06)	5.86(4.16)	3.97(4.08)	2.01(4.06)	4.62(4.07)	3.16(4.07)	1.94(4.07)
Read 2	3	1300-1400	6.52(4.03)	4.52(4.08)	2.75(4.06)	5.86(4.16)	3.97(4.08)	2.01(4.06)	4.62(4.07)	3.16(4.07)	1.94(4.07)
Read 2	3	1400-1500	6.52(4.03)	4.52(4.08)	2.75(4.06)	5.86(4.16)	3.97(4.08)	2.01(4.06)	4.62(4.07)	3.16(4.07)	1.94(4.07)
Read 2	3	1500-1600	6.52(4.03)	4.52(4.08)	2.75(4.06)	5.86(4.16)	3.97(4.08)	2.01(4.06)	4.62(4.07)	3.16(4.07)	1.94(4.07)
Read 2	3	1600-1700	6.52(4.03)	4.52(4.08)	2.75(4.06)	5.86(4.16)	3.97(4.08)	2.01(4.06)	4.62(4.07)	3.16(4.07)	1.94(4.07)
Read 2	3	1700-									

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Osping YH 24-hour Groundwater Quality														
Osping YH 24-hour Enrichment Factors for Adamsco model area														
Year 2008														
Row Name	Row ID	Hour	Moist/hourly		Moist/Enrichment		Moist/hourly		Moist/Enrichment		Moist/hourly		Moist/Enrichment	
			g/hourly	Moist/hourly	Enrichment	Moist/hourly	Enrichment	g/hourly	Moist/hourly	Enrichment	Moist/hourly	Enrichment	g/hourly	Moist/hourly
Row 4	4	0800-0900	8.1118	7.8117	5.8810	6.8715	2.4717	4.7661	4.1012	1.4718	3.9514	3.8410	2.2310	2.4210
Row 5	5	0900-1000	9.3615	9.2515	6.7510	7.8515	2.5017	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 6	6	1000-1100	1.0218	1.0118	2.5515	3.5515	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 7	7	1100-1200	9.9615	9.7815	4.2315	4.7415	2.0317	4.0515	4.9012	1.7315	2.3515	4.0215	9.6317	1.9315
Row 8	8	1200-1300	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 9	9	1300-1400	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 10	10	1400-1500	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 11	11	1500-1600	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 12	12	1600-1700	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 13	13	1700-1800	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 14	14	1800-1900	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 15	15	1900-2000	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 16	16	2000-2100	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 17	17	2100-2200	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 18	18	2200-2300	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 19	19	2300-2400	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 20	20	0000-0100	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 21	21	0100-0200	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 22	22	0200-0300	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 23	23	0300-0400	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 24	24	0400-0500	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 25	25	0500-0600	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 26	26	0600-0700	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 27	27	0700-0800	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 28	28	0800-0900	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 29	29	0900-1000	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 30	30	1000-1100	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 31	31	1100-1200	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 32	32	1200-1300	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 33	33	1300-1400	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 34	34	1400-1500	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 35	35	1500-1600	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 36	36	1600-1700	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 37	37	1700-1800	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 38	38	1800-1900	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 39	39	1900-2000	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 40	40	2000-2100	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 41	41	2100-2200	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 42	42	2200-2300	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 43	43	2300-2400	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 44	44	0000-0100	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 45	45	0100-0200	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 46	46	0200-0300	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 47	47	0300-0400	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 48	48	0400-0500	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 49	49	0500-0600	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 50	50	0600-0700	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 51	51	0700-0800	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 52	52	0800-0900	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 53	53	0900-1000	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 54	54	1000-1100	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 55	55	1100-1200	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 56	56	1200-1300	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 57	57	1300-1400	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 58	58	1400-1500	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 59	59	1500-1600	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 60	60	1600-1700	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 61	61	1700-1800	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 62	62	1800-1900	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 63	63	1900-2000	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 64	64	2000-2100	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 65	65	2100-2200	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 66	66	2200-2300	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 67	67	2300-2400	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 68	68	0000-0100	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 69	69	0100-0200	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 70	70	0200-0300	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 71	71	0300-0400	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 72	72	0400-0500	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 73	73	0500-0600	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 74	74	0600-0700	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 75	75	0700-0800	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.7615	2.1110	2.4510
Row 76	76	0800-0900	1.1118	1.1118	3.4415	3.4415	2.4817	4.9315	4.2410	1.5015	4.1915	3.76		

L:\Secure\Environment Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Open Road\Appendix 3.5.4 Emission Factor in 2038.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Top North Underscreen Factors for ADAMS Model														
Year 2008			NO ₂ Emission				NO Emission							
Region	Row ID	Hour	Monthly/Max	Monthly/Min	Monthly/Average	Monthly/Max	Monthly/Min	Monthly/Average	Monthly/Max	Monthly/Min	Monthly/Average	Monthly/Max	Monthly/Min	Monthly/Average
Region 7	7	1500-1700	1.1882	1.8466	4.2916	1.3524	1.3127	3.4465	6.6862	1.5316	1.8161	5.682	1.308	1.522
		1800-2000	1.1882	1.8466	4.2916	1.3524	1.3127	3.4465	6.6862	1.5316	1.8161	5.682	1.308	1.522
Region 8	8	1500-1700	1.1882	1.8466	4.2916	1.3524	1.3127	3.4465	6.6862	1.5316	1.8161	5.682	1.308	1.522
		1800-2000	1.1882	1.8466	4.2916	1.3524	1.3127	3.4465	6.6862	1.5316	1.8161	5.682	1.308	1.522
Region 9	9	1500-1700	6.821	1.471	1.272	0.981	1.2387	1.057	1.3265	1.823	1.4267	6.866	3.272	6.955
		1800-2000	6.821	1.471	1.272	0.981	1.2387	1.057	1.3265	1.823	1.4267	6.866	3.272	6.955
Region 10	10	1500-1700	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
		1800-2000	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
Region 11	11	1500-1700	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
		1800-2000	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
Region 12	12	1500-1700	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
		1800-2000	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
Region 13	13	1500-1700	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
		1800-2000	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
Region 14	14	1500-1700	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
		1800-2000	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
Region 15	15	1500-1700	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
		1800-2000	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
Region 16	16	1500-1700	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
		1800-2000	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
Region 17	17	1500-1700	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
		1800-2000	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
Region 18	18	1500-1700	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
		1800-2000	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
Region 19	19	1500-1700	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
		1800-2000	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
Region 20	20	1500-1700	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
		1800-2000	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
Region 21	21	1500-1700	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
		1800-2000	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
Region 22	22	1500-1700	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
		1800-2000	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
Region 23	23	1500-1700	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
		1800-2000	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
Region 24	24	1500-1700	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
		1800-2000	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
Region 25	25	1500-1700	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
		1800-2000	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
Region 26	26	1500-1700	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
		1800-2000	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
Region 27	27	1500-1700	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
		1800-2000	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
Region 28	28	1500-1700	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
		1800-2000	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
Region 29	29	1500-1700	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
		1800-2000	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
Region 30	30	1500-1700	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
		1800-2000	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
Region 31	31	1500-1700	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
		1800-2000	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
Region 32	32	1500-1700	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
		1800-2000	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
Region 33	33	1500-1700	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
		1800-2000	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
Region 34	34	1500-1700	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
		1800-2000	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
Region 35	35	1500-1700	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
		1800-2000	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
Region 36	36	1500-1700	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
		1800-2000	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
Region 37	37	1500-1700	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
		1800-2000	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
Region 38	38	1500-1700	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
		1800-2000	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
Region 39	39	1500-1700	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
		1800-2000	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
Region 40	40	1500-1700	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
		1800-2000	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
Region 41	41	1500-1700	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
		1800-2000	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
Region 42	42	1500-1700	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
		1800-2000	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
Region 43	43	1500-1700	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
		1800-2000	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
Region 44	44	1500-1700	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
		1800-2000	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
Region 45	45	1500-1700	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
		1800-2000	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
Region 46	46	1500-1700	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
		1800-2000	5.942	1.925	1.925	1.988	1.943	1.844	6.965	1.925	1.925	6.965	1.925	1.925
Region 47	47	1500-1700	5.942	1.925	1.925	1.988	1.943	1.844	6.965					

Road\Appendix 3.5.4 Emission Factor in 2038.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Td North Underemission Factors for 40km2 Road														
Year 2038														
Road Name	Road ID	Hour	NO _x Emission				NO ₂ Emission				Average			
			Monthly/Mean		Monthly/Mean		Monthly/Mean		Monthly/Mean					
			g/hour	g/km ²	g/hour	g/km ²	g/hour	g/km ²	g/hour	g/km ²				
Road 1	1	0000-0100	4.9213	0.821	0.871	0.146	3.906	0.971	0.886	0.146	4.421	0.871	1.971	2.181
Road 1	1	0100-0200	4.7131	0.841	0.841	0.146	3.841	0.971	0.841	0.146	4.271	0.841	1.971	2.181
Road 1	1	0200-0300	4.5131	0.841	0.841	0.146	3.841	0.971	0.841	0.146	4.271	0.841	1.971	2.181
Road 1	1	0300-0400	4.7131	0.841	0.841	0.146	3.841	0.971	0.841	0.146	4.271	0.841	1.971	2.181
Road 1	1	0400-0500	4.9213	0.821	0.871	0.146	3.906	0.971	0.886	0.146	4.421	0.871	1.971	2.181
Road 1	1	0500-0600	4.7131	0.841	0.841	0.146	3.841	0.971	0.841	0.146	4.271	0.841	1.971	2.181
Road 1	1	0600-0700	4.5131	0.841	0.841	0.146	3.841	0.971	0.841	0.146	4.271	0.841	1.971	2.181
Road 1	1	0700-0800	4.7131	0.841	0.841	0.146	3.841	0.971	0.841	0.146	4.271	0.841	1.971	2.181
Road 1	1	0800-0900	4.9213	0.821	0.871	0.146	3.906	0.971	0.886	0.146	4.421	0.871	1.971	2.181
Road 1	1	0900-1000	4.7131	0.841	0.841	0.146	3.841	0.971	0.841	0.146	4.271	0.841	1.971	2.181
Road 1	1	1000-1100	4.5131	0.841	0.841	0.146	3.841	0.971	0.841	0.146	4.271	0.841	1.971	2.181
Road 1	1	1100-1200	4.7131	0.841	0.841	0.146	3.841	0.971	0.841	0.146	4.271	0.841	1.971	2.181
Road 1	1	1200-1300	4.9213	0.821	0.871	0.146	3.906	0.971	0.886	0.146	4.421	0.871	1.971	2.181
Road 1	1	1300-1400	4.7131	0.841	0.841	0.146	3.841	0.971	0.841	0.146	4.271	0.841	1.971	2.181
Road 1	1	1400-1500	4.5131	0.841	0.841	0.146	3.841	0.971	0.841	0.146	4.271	0.841	1.971	2.181
Road 1	1	1500-1600	4.7131	0.841	0.841	0.146	3.841	0.971	0.841	0.146	4.271	0.841	1.971	2.181
Road 1	1	1600-1700	4.9213	0.821	0.871	0.146	3.906	0.971	0.886	0.146	4.421	0.871	1.971	2.181
Road 1	1	1700-1800	4.7131	0.841	0.841	0.146	3.841	0.971	0.841	0.146	4.271	0.841	1.971	2.181
Road 1	1	1800-1900	4.5131	0.841	0.841	0.146	3.841	0.971	0.841	0.146	4.271	0.841	1.971	2.181
Road 1	1	1900-2000	4.7131	0.841	0.841	0.146	3.841	0.971	0.841	0.146	4.271	0.841	1.971	2.181
Road 1	1	2000-2100	4.9213	0.821	0.871	0.146	3.906	0.971	0.886	0.146	4.421	0.871	1.971	2.181
Road 1	1	2100-2200	4.7131	0.841	0.841	0.146	3.841	0.971	0.841	0.146	4.271	0.841	1.971	2.181
Road 2	2	0000-0100	9.7426	1.642	1.742	0.292	7.886	1.942	1.812	0.292	10.562	1.742	3.962	4.362
Road 2	2	0100-0200	9.5426	1.642	1.742	0.292	7.686	1.942	1.812	0.292	10.362	1.742	3.762	4.162
Road 2	2	0200-0300	9.3426	1.642	1.742	0.292	7.486	1.942	1.812	0.292	10.162	1.742	3.562	3.962
Road 2	2	0300-0400	9.5426	1.642	1.742	0.292	7.686	1.942	1.812	0.292	10.362	1.742	3.762	4.162
Road 2	2	0400-0500	9.7426	1.642	1.742	0.292	7.886	1.942	1.812	0.292	10.562	1.742	3.962	4.362
Road 2	2	0500-0600	9.5426	1.642	1.742	0.292	7.686	1.942	1.812	0.292	10.362	1.742	3.762	4.162
Road 2	2	0600-0700	9.3426	1.642	1.742	0.292	7.486	1.942	1.812	0.292	10.162	1.742	3.562	3.962
Road 2	2	0700-0800	9.5426	1.642	1.742	0.292	7.686	1.942	1.812	0.292	10.362	1.742	3.762	4.162
Road 2	2	0800-0900	9.7426	1.642	1.742	0.292	7.886	1.942	1.812	0.292	10.562	1.742	3.962	4.362
Road 2	2	0900-1000	9.5426	1.642	1.742	0.292	7.686	1.942	1.812	0.292	10.362	1.742	3.762	4.162
Road 2	2	1000-1100	9.3426	1.642	1.742	0.292	7.486	1.942	1.812	0.292	10.162	1.742	3.562	3.962
Road 2	2	1100-1200	9.5426	1.642	1.742	0.292	7.686	1.942	1.812	0.292	10.362	1.742	3.762	4.162
Road 2	2	1200-1300	9.7426	1.642	1.742	0.292	7.886	1.942	1.812	0.292	10.562	1.742	3.962	4.362
Road 2	2	1300-1400	9.5426	1.642	1.742	0.292	7.686	1.942	1.812	0.292	10.362	1.742	3.762	4.162
Road 2	2	1400-1500	9.3426	1.642	1.742	0.292	7.486	1.942	1.812	0.292	10.162	1.742	3.562	3.962
Road 2	2	1500-1600	9.5426	1.642	1.742	0.292	7.686	1.942	1.812	0.292	10.362	1.742	3.762	4.162
Road 2	2	1600-1700	9.7426	1.642	1.742	0.292	7.886	1.942	1.812	0.292	10.562	1.742	3.962	4.362
Road 2	2	1700-1800	9.5426	1.642	1.742	0.292	7.686	1.942	1.812	0.292	10.362	1.742	3.762	4.162
Road 2	2	1800-1900	9.3426	1.642	1.742	0.292	7.486	1.942	1.812	0.292	10.162	1.742	3.562	3.962
Road 2	2	1900-2000	9.5426	1.642	1.742	0.292	7.686	1.942	1.812	0.292	10.362	1.742	3.762	4.162
Road 2	2	2000-2100	9.7426	1.642	1.742	0.292	7.886	1.942	1.812	0.292	10.562	1.742	3.962	4.362
Road 2	2	2100-2200	9.5426	1.642	1.742	0.292	7.686	1.942	1.812	0.292	10.362	1.742	3.762	4.162
Road 3	3	0000-0100	14.6139	2.501	2.601	0.437	11.767	2.861	2.681	0.437	16.449	2.601	5.841	6.341
Road 3	3	0100-0200	14.4139	2.501	2.601	0.437	11.567	2.861	2.681	0.437	16.249	2.601	5.641	6.141
Road 3	3	0200-0300	14.2139	2.501	2.601	0.437	11.367	2.861	2.681	0.437	16.049	2.601	5.441	5.941
Road 3	3	0300-0400	14.4139	2.501	2.601	0.437	11.567	2.861	2.681	0.437	16.249	2.601	5.641	6.141
Road 3	3	0400-0500	14.6139	2.501	2.601	0.437	11.767	2.861	2.681	0.437	16.449	2.601	5.841	6.341
Road 3	3	0500-0600	14.4139	2.501	2.601	0.437	11.567	2.861	2.681	0.437	16.249	2.601	5.641	6.141
Road 3	3	0600-0700	14.2139	2.501	2.601	0.437	11.367	2.861	2.681	0.437	16.049	2.601	5.441	5.941
Road 3	3	0700-0800	14.4139	2.501	2.601	0.437	11.567	2.861	2.681	0.437	16.249	2.601	5.641	6.141
Road 3	3	0800-0900	14.6139	2.501	2.601	0.437	11.767	2.861	2.681	0.437	16.449	2.601	5.841	6.341
Road 3	3	0900-1000	14.4139	2.501	2.601	0.437	11.567	2.861	2.681	0.437	16.249	2.601	5.641	6.141
Road 3	3	1000-1100	14.2139	2.501	2.601	0.437	11.367	2.861	2.681	0.437	16.049	2.601	5.441	5.941
Road 3	3	1100-1200	14.4139	2.501	2.601	0.437	11.567	2.861	2.681	0.437	16.249	2.601	5.641	6.141
Road 3	3	1200-1300	14.6139	2.501	2.601	0.437	11.767	2.861	2.681	0.437	16.449	2.601	5.841	6.341
Road 3	3	1300-1400	14.4139	2.501	2.601	0.437	11.567	2.861	2.681	0.437	16.249	2.601	5.641	6.141
Road 3	3	1400-1500	14.2139	2.501	2.601	0.437	11.367	2.861	2.681	0.437	16.049	2.601	5.441	5.941
Road 3	3	1500-1600	14.4139	2.501	2.601	0.437	11.567	2.861	2.681	0.437	16.249	2.601	5.641	6.141
Road 3	3	1600-1700	14.6139	2.501	2.601	0.437	11.767	2.861	2.681	0.437	16.449	2.601	5.841	6.341
Road 3	3	1700-1800	14.4139	2.501	2.601	0.437	11.567	2.861	2.681	0.437	16.249	2.601	5.641	6.141
Road 3	3	1800-1900	14.2139	2.501	2.601	0.437	11.367	2.861	2.681	0.437	16.049	2.601	5.441	5.941
Road 3	3	1900-2000	14.4139	2.501	2.601	0.437	11.567	2.861	2.681	0.437	16.249	2.601	5.641	6.141
Road 3	3	2000-2100	14.6139	2.501	2.601	0.437	11.767	2.861	2.681	0.437	16.449	2.601	5.841	6.341
Road 3	3	2100-2200	14.4139	2.501	2.601	0.437	11.567	2.861	2.681	0.437	16.249	2.601	5.641	6.141
Road 4	4	0000-0100	19.5052	3.350	3.450	0.594	15.660	3.710	3.460	0.594	21.320	3.450	7.690	8.190
Road 4	4	0100-0200	19.3052	3.350	3.450	0.594	15.460	3.710	3.460	0.594	21.120	3.450	7.490	7.990
Road 4	4	0200-0300	19.1052	3.350	3.450	0.594	15.260	3.710	3.460	0.594	20.920	3.450	7.290	7.790
Road 4	4	0300-0400	19.3052	3.350	3.450	0.594	15.460	3.710	3.460	0.594	21.120	3.450	7.490	7.990
Road 4	4	0400-0500	19.5052	3.350	3.450	0.594	15.660	3.710	3.460	0.594	21.320	3.450	7.690	8.190
Road 4	4	0500-0600	19.3052	3.350	3.450	0.594	15.460	3.710	3.460	0.594	21.120	3.450	7.490	7.990
Road 4	4	0600-0700	19.1052	3.350	3.450	0.594	15.260	3.710	3.460	0.594	20.920	3.450	7.290	7.790
Road 4	4	0700-0800	19.3052	3.350	3.450	0.594	15.460	3.710	3.460	0.594	21.120	3.450	7.490	7.990
Road 4	4	0800-0900	19.5052	3.350	3.450	0.594	15.660	3.710	3.460	0.594	21.320	3.450	7.690	8.190
Road 4	4	0900-1000	19.3052	3.350	3.450	0.594	15.460	3.710	3.460	0.594	21.120	3.450	7.490	7.990
Road 4	4	1000-1100	19.1052	3.350	3.450	0.594	15.260	3.710	3.460	0.594	20.920	3.450	7.290	7.790
Road 4	4	1100-1200	19.3052	3.350	3.450	0.594	15.460	3.710	3.460	0.594	21.120	3.450	7.490	7.990
Road 4	4	12												

L:\Secure\Environment Projects\60733229\1.01\Others\Air\Modellink\Appendix\Traffic\Open Road\Appendix 3.5.4 Emission Factor in 2038.xlsx

Open Yr 14 Underground Quarterly									
Using Year 24 Hour Energy Factors for ASHRAE Model Year									
		Year 2008		Year 2018				Year 2050	
Row Name	Row ID	Hour	g/hw/h	Moist/hw/h	Mo En/ton	Moist/hw/h	Mo En/ton	Moist/hw/h	Mo En/ton
Row 17	1600-1700	5.91E-2	1.89E-06	4.05E-02	4.65E-02	1.18E-06	1.46E-05	1.97E-01	4.59E-08
Row 18	1700-1800	3.86E-02	1.21E-06	2.61E-02	3.00E-02	7.58E-07	9.40E-07	1.25E-06	2.92E-07
Row 19	1800-1900	2.87E-02	9.07E-07	1.91E-02	2.19E-02	5.50E-07	6.78E-07	8.90E-07	2.05E-07
Row 20	1900-2000	2.24E-02	7.04E-07	1.51E-02	1.72E-02	4.37E-07	5.39E-07	7.15E-07	1.63E-07
Row 21	2000-2100	1.61E-02	5.15E-07	1.09E-02	1.24E-02	3.17E-07	3.95E-07	5.24E-07	1.21E-07
Row 22	2100-2200	1.03E-02	3.46E-07	6.28E-03	7.06E-03	2.02E-07	2.52E-07	3.28E-07	7.63E-08
Row 23	2200-2300	5.57E-03	1.70E-07	3.16E-03	3.59E-03	1.01E-07	1.26E-07	1.65E-07	3.91E-08
Row 24	2300-2400	6.97E-03	2.18E-07	3.96E-03	4.53E-03	1.28E-07	1.59E-07	2.07E-07	4.84E-08
Row 25	2400-0100	1.07E-02	3.59E-07	2.01E-03	2.29E-03	6.40E-08	8.00E-08	1.05E-07	2.45E-08
Row 26	0100-0200	8.84E-03	2.76E-08	1.68E-03	1.92E-03	5.32E-07	6.46E-07	8.48E-07	1.98E-07
Row 27	0200-0300	9.96E-03	2.91E-08	1.87E-03	2.14E-03	5.95E-07	7.22E-07	9.59E-07	2.27E-07
Row 28	0300-0400	9.96E-03	2.91E-08	1.87E-03	2.14E-03	5.95E-07	7.22E-07	9.59E-07	2.27E-07
Row 29	0400-0500	1.06E-02	3.48E-08	2.08E-03	2.35E-03	6.65E-08	8.14E-08	1.07E-07	2.62E-08
Row 30	0500-0600	1.06E-02	3.48E-08	2.08E-03	2.35E-03	6.65E-08	8.14E-08	1.07E-07	2.62E-08
Row 31	0600-0700	1.15E-02	3.43E-07	2.24E-03	2.56E-03	7.15E-08	8.74E-08	1.15E-07	2.86E-08
Row 32	0700-0800	1.15E-02	3.43E-07	2.24E-03	2.56E-03	7.15E-08	8.74E-08	1.15E-07	2.86E-08
Row 33	0800-0900	1.34E-02	3.76E-07	2.58E-03	2.95E-03	8.00E-08	9.78E-08	1.29E-07	3.19E-08
Row 34	0900-1000	1.34E-02	3.76E-07	2.58E-03	2.95E-03	8.00E-08	9.78E-08	1.29E-07	3.19E-08
Row 35	1000-1100	1.42E-02	3.79E-07	2.69E-03	3.10E-03	8.58E-08	1.03E-07	1.35E-07	3.33E-08
Row 36	1100-1200	1.42E-02	3.79E-07	2.69E-03	3.10E-03	8.58E-08	1.03E-07	1.35E-07	3.33E-08
Row 37	1200-1300	2.01E-02	4.09E-07	3.69E-03	4.26E-03	1.19E-07	1.45E-07	1.93E-07	4.82E-08
Row 38	1300-1400	2.01E-02	4.09E-07	3.69E-03	4.26E-03	1.19E-07	1.45E-07	1.93E-07	4.82E-08
Row 39	1400-1500	2.06E-02	4.43E-07	3.84E-03	4.41E-03	1.25E-07	1.52E-07	2.00E-07	5.13E-08
Row 40	1500-1600	2.06E-02	4.43E-07	3.84E-03	4.41E-03	1.25E-07	1.52E-07	2.00E-07	5.13E-08
Row 41	1600-1700	1.89E-02	4.31E-07	3.60E-03	4.13E-03	1.12E-07	1.37E-07	1.83E-07	4.58E-08
Row 42	1700-1800	1.47E-02	3.70E-07	2.44E-03	2.80E-03	7.62E-08	9.28E-08	1.23E-07	3.04E-08
Row 43	1800-1900	1.06E-02	3.48E-08	2.08E-03	2.35E-03	6.65E-08	8.14E-08	1.07E-07	2.62E-08
Row 44	1900-2000	8.84E-03	2.76E-08	1.68E-03	1.92E-03	5.32E-07	6.46E-07	8.48E-07	1.98E-07
Row 45	2000-2100	8.84E-03	2.76E-08	1.68E-03	1.92E-03	5.32E-07	6.46E-07	8.48E-07	1.98E-07
Row 46	2100-2200	8.84E-03	2.76E-08	1.68E-03	1.92E-03	5.32E-07	6.46E-07	8.48E-07	1.98E-07
Row 47	2200-2300	9.96E-03	2.91E-08	1.87E-03	2.14E-03	5.95E-07	7.22E-07	9.59E-07	2.27E-07
Row 48	2300-2400	9.96E-03	2.91E-08	1.87E-03	2.14E-03	5.95E-07	7.22E-07	9.59E-07	2.27E-07
Row 49	2400-0100	1.06E-02	3.48E-08	2.08E-03	2.35E-03	6.65E-08	8.14E-08	1.07E-07	2.62E-08
Row 50	0100-0200	1.06E-02	3.48E-08	2.08E-03	2.35E-03	6.65E-08	8.14E-08	1.07E-07	2.62E-08
Row 51	0200-0300	1.15E-02	3.43E-07	2.24E-03	2.56E-03	7.15E-08	8.74E-08	1.15E-07	2.86E-08
Row 52	0300-0400	1.15E-02	3.43E-07	2.24E-03	2.56E-03	7.15E-08	8.74E-08	1.15E-07	2.86E-08
Row 53	0400-0500	1.34E-02	3.76E-07	2.58E-03	2.95E-03	8.00E-08	9.78E-08	1.29E-07	3.19E-08
Row 54	0500-0600	1.34E-02	3.76E-07	2.58E-03	2.95E-03	8.00E-08	9.78E-08	1.29E-07	3.19E-08
Row 55	0600-0700	1.42E-02	3.79E-07	2.69E-03	3.10E-03	8.58E-08	1.03E-07	1.35E-07	3.33E-08
Row 56	0700-0800	1.42E-02	3.79E-07	2.69E-03	3.10E-03	8.58E-08	1.03E-07	1.35E-07	3.33E-08
Row 57	0800-0900	2.01E-02	4.09E-07	3.69E-03	4.26E-03	1.19E-07	1.45E-07	1.93E-07	4.82E-08
Row 58	0900-1000	2.01E-02	4.09E-07	3.69E-03	4.26E-03	1.19E-07	1.45E-07	1.93E-07	4.82E-08
Row 59	1000-1100	2.06E-02	4.43E-07	3.84E-03	4.41E-03	1.25E-07	1.52E-07	2.00E-07	5.13E-08
Row 60	1100-1200	2.06E-02	4.43E-07	3.84E-03	4.41E-03	1.25E-07	1.52E-07	2.00E-07	5.13E-08
Row 61	1200-1300	2.01E-02	4.09E-07	3.69E-03	4.26E-03	1.19E-07	1.45E-07	1.93E-07	4.82E-08
Row 62	1300-1400	2.01E-02	4.09E-07	3.69E-03	4.26E-03	1.19E-07	1.45E-07	1.93E-07	4.82E-08
Row 63	1400-1500	2.06E-02	4.43E-07	3.84E-03	4.41E-03	1.25E-07	1.52E-07	2.00E-07	5.13E-08
Row 64	1500-1600	2.06E-02	4.43E-07	3.84E-03	4.41E-03	1.25E-07	1.52E-07	2.00E-07	5.13E-08
Row 65	1600-1700	1.89E-02	4.31E-07	3.60E-03	4.13E-03	1.12E-07	1.37E-07	1.83E-07	4.58E-08
Row 66	1700-1800	1.47E-02	3.70E-07	2.44E-03	2.80E-03	7.62E-08	9.28E-08	1.23E-07	3.04E-08
Row 67	1800-1900	1.06E-02	3.48E-08	2.08E-03	2.35E-03	6.65E-08	8.14E-08	1.07E-07	2.62E-08
Row 68	1900-2000	8.84E-03	2.76E-08	1.68E-03	1.92E-03	5.32E-07	6.46E-07	8.48E-07	1.98E-07
Row 69	2000-2100	8.84E-03	2.76E-08	1.68E-03	1.92E-03	5.32E-07	6.46E-07	8.48E-07	1.98E-07
Row 70	2100-2200	8.84E-03	2.76E-08	1.68E-03	1.92E-03	5.32E-07	6.46E-07	8.48E-07	1.98E-07
Row 71	2200-2300	9.96E-03	2.91E-08	1.87E-03	2.14E-03	5.95E-07	7.22E-07	9.59E-07	2.27E-07
Row 72	2300-2400	9.96E-03	2.91E-08	1.87E-03	2.14E-03	5.95E-07	7.22E-07	9.59E-07	2.27E-07
Row 73	2400-0100	1.06E-02	3.48E-08	2.08E-03	2.35E-03	6.65E-08	8.14E-08	1.07E-07	2.62E-08
Row 74	0100-0200	1.06E-02	3.48E-08	2.08E-03	2.35E-03	6.65E-08	8.14E-08	1.07E-07	2.62E-08
Row 75	0200-0300	1.15E-02	3.43E-07	2.24E-03	2.56E-03	7.15E-08	8.74E-08	1.15E-07	2.86E-08
Row 76	0300-0400	1.15E-02	3.43E-07	2.24E-03	2.56E-03	7.15E-08	8.74E-08	1.15E-07	2.86E-08
Row 77	0400-0500	1.34E-02	3.76E-07	2.58E-03	2.95E-03	8.00E-08	9.78E-08	1.29E-07	3.19E-08
Row 78	0500-0600	1.34E-02	3.76E-07	2.58E-03	2.95E-03	8.00E-08	9.78E-08	1.29E-07	3.19E-08
Row 79	0600-0700	1.42E-02	3.79E-07	2.69E-03	3.10E-03	8.58E-08	1.03E-07	1.35E-07	3.33E-08
Row 80	0700-0800	1.42E-02	3.79E-07	2.69E-03	3.10E-03	8.58E-08	1.03E-07	1.35E-07	3.33E-08
Row 81	0800-0900	2.01E-02	4.09E-07	3.69E-03	4.26E-03	1.19E-07	1.45E-07	1.93E-07	4.82E-08
Row 82	0900-1000	2.01E-02	4.09E-07	3.69E-03	4.26E-03	1.19E-07	1.45E-07	1.93E-07	4.82E-08
Row 83	1000-1100	2.06E-02	4.43E-07	3.84E-03	4.41E-03	1.25E-07	1.52E-07	2.00E-07	5.13E-08
Row 84	1100-1200	2.06E-02	4.43E-07	3.84E-03	4.41E-03	1.25E-07	1.52E-07	2.00E-07	5.13E-08
Row 85	1200-1300	2.01E-02	4.09E-07	3.69E-03	4.26E-03	1.19E-07	1.45E-07	1.93E-07	4.82E-08
Row 86	1300-1400	2.01E-02	4.09E-07	3.69E-03	4.26E-03	1.19E-07	1.45E-07	1.93E-07	4.82E-08
Row 87	1400-1500	2.06E-02	4.43E-07	3.84E-03	4.41E-03	1.25E-07	1.52E-07	2.00E-07	5.13E-08
Row 88	1500-1600	2.06E-02	4.43E-07	3.84E-03	4.41E-03	1.25E-07	1.52E-07	2.00E-07	5.13E-08
Row 89	1600-1700	1.89E-02	4.31E-07	3.60E-03	4.13E-03	1.12E-07	1.37E-07	1.83E-07	4.58E-08
Row 90	1700-1800	1.47E-02	3.70E-07	2.44E-03	2.80E-03	7.62E-08	9.28E-08	1.23E-07	3.04E-08
Row 91	1800-1900	1.06E-02	3.48E-08	2.08E-03	2.35E-03	6.65E-08	8.14E-08	1.07E-07	2.62E-08
Row 92	1900-2000	8.84E-03	2.76E-08	1.68E-03	1.92E-03	5.32E-07	6.46E-07	8.48E-07	1.98E-07
Row 93	2000-2100	8.84E-03	2.76E-08	1.68E-03	1.92E-03	5.32E-07	6.46E-07	8.48E-07	1.98E-07
Row 94	2100-2200	8.84E-03	2.76E-08	1.68E-03	1.92E-03	5.32E-07	6.46E-07	8.48E-07	1.98E-07
Row 95	2200-2300	9.96E-03	2.91E-08	1.87E-03	2.14E-03	5.95E-07	7.22E-07	9.59E-07	2.27E-07
Row 96	2300-2400	9.96E-03	2.91E-08	1.87E-03	2.14E-03	5.95E-07	7.22E-07	9.59E-07	2.27E-07
Row 97	2400-0100	1.06E-02	3.48E-08	2.08E-03	2.35E-03	6.65E-08	8.14E-08	1.07E-07	2.62E-08
Row 98	0100-0200	1.06E-02	3.48E-08	2.08E-03	2.35E-03	6.65E-08	8.14E-08	1.07E-07	2.62E-08
Row 99	0200-0300	1.15E-02	3.43E-07	2.24E-03	2.56E-03	7.15E-08	8.74E-08	1.15E-07	2.86E-08
Row 100	0300-0400	1.15E-02	3.43E-07	2.24E-03	2.56E-03	7.15E-08	8.74E-08	1.15E-07	2.86E-08

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Top North Underscreen Factors for
Year 2008

ADAMS Model		Year 2008		MO Envision				NO Envision						
RunID	Hour	g/h/mph	MO Monthly/Average	h/mph/mph	MO Monthly/Average	h/mph/mph	MO Monthly/Average	g/h/mph	NO Monthly/Average	h/mph/mph	NO Monthly/Average			
Road 21	21	0000-0100	1.1122	7.866	1.0016	9.926	7.966	6.988	9.370	1.027	9.926	4.5112	9.216	4.2426
	22	0000-0100	2.886	11.016	2.886	11.016	7.966	5.988	9.370	1.027	9.926	4.5112	9.216	4.2426
Road 21	23	0000-0100	1.4412	7.866	1.0016	9.926	7.966	6.988	9.370	1.027	9.926	4.5112	9.216	4.2426
	24	0000-0100	1.4412	7.866	1.0016	9.926	7.966	6.988	9.370	1.027	9.926	4.5112	9.216	4.2426
Road 21	25	0000-0400	1.866	11.016	2.886	11.016	7.966	5.988	9.370	1.027	9.926	4.5112	9.216	4.2426
	26	0000-0400	1.866	11.016	2.886	11.016	7.966	5.988	9.370	1.027	9.926	4.5112	9.216	4.2426
Road 21	27	0000-0400	1.866	11.016	2.886	11.016	7.966	5.988	9.370	1.027	9.926	4.5112	9.216	4.2426
	28	0000-0400	1.866	11.016	2.886	11.016	7.966	5.988	9.370	1.027	9.926	4.5112	9.216	4.2426
Road 21	29	0000-0400	1.866	11.016	2.886	11.016	7.966	5.988	9.370	1.027	9.926	4.5112	9.216	4.2426
	30	0000-0400	1.866	11.016	2.886	11.016	7.966	5.988	9.370	1.027	9.926	4.5112	9.216	4.2426
Road 21	31	0000-0400	1.866	11.016	2.886	11.016	7.966	5.988	9.370	1.027	9.926	4.5112	9.216	4.2426
	32	0000-0400	1.866	11.016	2.886	11.016	7.966	5.988	9.370	1.027	9.926	4.5112	9.216	4.2426
Road 21	33	0000-0400	1.866	11.016	2.886	11.016	7.966	5.988	9.370	1.027	9.926	4.5112	9.216	4.2426
	34	0000-0400	1.866	11.016	2.886	11.016	7.966	5.988	9.370	1.027	9.926	4.5112	9.216	4.2426
Road 21	35	0000-0400	1.866	11.016	2.886	11.016	7.966	5.988	9.370	1.027	9.926	4.5112	9.216	4.2426
	36	0000-0400	1.866	11.016	2.886	11.016	7.966	5.988	9.370	1.027	9.926	4.5112	9.216	4.2426
Road 21	37	0000-0400	1.866	11.016	2.886	11.016	7.966	5.988	9.370	1.027	9.926	4.5112	9.216	4.2426
	38	0000-0400	1.866	11.016	2.886	11.016	7.966	5.988	9.370	1.027	9.926	4.5112	9.216	4.2426
Road 21	39	0000-0400	1.866	11.016	2.886	11.016	7.966	5.988	9.370	1.027	9.926	4.5112	9.216	4.2426
	40	0000-0400	1.866	11.016	2.886	11.016	7.966	5.988	9.370	1.027	9.926	4.5112	9.216	4.2426
Road 21	41	0000-0400	1.866	11.016	2.886	11.016	7.966	5.988	9.370	1.027	9.926	4.5112	9.216	4.2426
	42	0000-0400	1.866	11.016	2.886	11.016	7.966	5.988	9.370	1.027	9.926	4.5112	9.216	4.2426
Road 21	43	0000-0400	1.866	11.016	2.886	11.016								

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Open RY North Undermining Factors														
Table 24: 24 Hour Enormous Factors for ARMD00 North Enormous														
Road Name	Road ID	Hour	NO Enormous				Enormous							
			g/kwh	g/kwh	g/kwh	g/kwh	g/kwh	g/kwh	g/kwh	g/kwh				
			Monthly/Percentage	Monthly/Percentage	Monthly/Percentage	Monthly/Percentage	Monthly/Percentage	Monthly/Percentage	Monthly/Percentage	Monthly/Percentage	Monthly/Percentage			
Road 24	1800	0800	1.376	1.638	0.77	1.185	2.287	0.738	0.071	9.848	2.478	4.388	8.488	2.188
Road 24	1800	0900	1.451	1.606	0.767	1.274	2.520	0.771	0.068	9.895	2.495	4.395	8.495	2.195
Road 24	1800	1000	1.488	1.579	0.744	1.374	2.507	0.768	0.068	9.895	2.495	4.395	8.495	2.195
Road 24	1800	1100	1.488	1.579	0.744	1.374	2.507	0.768	0.068	9.895	2.495	4.395	8.495	2.195
Road 24	1800	1200	1.488	1.579	0.744	1.374	2.507	0.768	0.068	9.895	2.495	4.395	8.495	2.195
Road 24	1800	1300	1.488	1.579	0.744	1.374	2.507	0.768	0.068	9.895	2.495	4.395	8.495	2.195
Road 24	1800	1400	1.488	1.579	0.744	1.374	2.507	0.768	0.068	9.895	2.495	4.395	8.495	2.195
Road 24	1800	1500	1.488	1.579	0.744	1.374	2.507	0.768	0.068	9.895	2.495	4.395	8.495	2.195
Road 24	1800	1600	1.488	1.579	0.744	1.374	2.507	0.768	0.068	9.895	2.495	4.395	8.495	2.195
Road 24	1800	1700	1.488	1.579	0.744	1.374	2.507	0.768	0.068	9.895	2.495	4.395	8.495	2.195
Road 24	1800	1800	1.488	1.579	0.744	1.374	2.507	0.768	0.068	9.895	2.495	4.395	8.495	2.195
Road 24	1800	1900	1.488	1.579	0.744	1.374	2.507	0.768	0.068	9.895	2.495	4.395	8.495	2.195
Road 24	1800	2000	1.488	1.579	0.744	1.374	2.507	0.768	0.068	9.895	2.495	4.395	8.495	2.195
Road 24	1800	2100	1.488	1.579	0.744	1.374	2.507	0.768	0.068	9.895	2.495	4.395	8.495	2.195
Road 24	1800	2200	1.488	1.579	0.744	1.374	2.507	0.768	0.068	9.895	2.495	4.395	8.495	2.195
Road 24	1800	2300	1.488	1.579	0.744	1.374	2.507	0.768	0.068	9.895	2.495	4.395	8.495	2.195
Road 24	1800	2400	1.488	1.579	0.744	1.374	2.507	0.768	0.068	9.895	2.495	4.395	8.495	2.195
Road 24	1800	2500	1.488	1.579	0.744	1.374	2.507	0.768	0.068	9.895	2.495	4.395	8.495	2.195
Road 24	1800	2600	1.488	1.579	0.744	1.374	2.507	0.768	0.068	9.895	2.495	4.395	8.495	2.195
Road 24	1800	2700	1.488	1.579	0.744	1.374	2.507	0.768	0.068	9.895	2.495	4.395	8.495	2.195
Road 24	1800	2800	1.488	1.579	0.744	1.374	2.507	0.768	0.068	9.895	2.495	4.395	8.495	2.195
Road 24	1800	2900	1.488	1.579	0.744	1.374	2.507	0.768	0.068	9.895	2.495	4.395	8.495	2.195
Road 24	1800	3000	1.488	1.579	0.744	1.374	2.507	0.768	0.068	9.895	2.495	4.395	8.495	2.195
Road 24	1800	3100	1.488	1.579	0.744	1.374	2.507	0.768	0.068	9.895	2.495	4.395	8.495	2.195
Road 24	1800	3200	1.488	1.579	0.744	1.374	2.507	0.768	0.068	9.895	2.495	4.395	8.495	2.195

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Open 24 hr Under Ground Condition														
Typing Rate 24 hour Evaporation Factors for KARNATAKA ROADWAYS														
		Year 2018		No Evaporation		Monthly/Average		Monthly/Average		No Evaporation		Monthly/Average		
Route Name	Road ID	Hour	g/m ² /hr	g/m ² /hr	g/m ² /hr	g/m ² /hr	g/m ² /hr	g/m ² /hr	g/m ² /hr	g/m ² /hr	g/m ² /hr	g/m ² /hr	g/m ² /hr	
Reed 27	1800	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	1700	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	1400	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	1300	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	1200	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	1100	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	1000	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	900	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	800	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	700	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	600	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	500	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	400	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	300	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	200	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	100	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	0	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	1800	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	1700	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	1400	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	1300	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	1200	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	1100	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	1000	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	900	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	800	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	700	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	600	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	500	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	400	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	300	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	200	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	100	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	0	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	1800	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	1700	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	1400	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	1300	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	1200	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	1100	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	1000	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	900	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	800	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	700	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	600	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	500	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	400	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	300	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	200	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	100	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	0	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	1800	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	1700	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	1400	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	1300	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	1200	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	1100	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	1000	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	900	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	800	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	700	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	600	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	500	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	400	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	300	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	200	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	100	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	0	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	1800	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	1700	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	1400	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	1300	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	1200	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	1100	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	1000	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	900	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	800	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	700	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	600	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	500	1360	1.566	1.377	1.326	1.181	1.186	1.041	0.536	1.411	0.486	0.721	1.306	0.36
Reed 27	400	1360	1.											

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Top N North Underscreen Factors for AEDMS model														
Year 2008														
Row Name	Row ID	Hour	Meth/Total/Inch			Mn/Entrain			Mn/Entrain					
			g/hwy	g/hwy	lb/ton	lb/ton	lb/ton	lb/ton	g/hwy	g/hwy	lb/ton			
			Meth/Total/Inch			Mn/Entrain			Mn/Entrain					
			g/hwy	g/hwy	lb/ton	lb/ton	lb/ton	lb/ton	g/hwy	g/hwy	lb/ton			
Row 34	14	0800-0900	9.118E+03	4.243E+07	6.311E-06	7.823E+03	2.070E+07	5.400E-06	4.273E+02	1.150E-06	9.504E+03	3.112E+07	6.273E+07	2.431E+05
Row 35	14	0900-1000	8.666E+06	4.325E+07	6.066E-06	7.555E+03	2.000E+07	5.213E-06	4.110E+02	1.100E-06	9.360E+03	3.060E+07	6.160E+07	2.400E+05
Row 36	14	1000-1100	8.122E+06	4.255E+07	5.912E-06	7.077E+03	1.933E+07	5.013E-06	3.963E+02	1.050E-06	8.880E+03	2.980E+07	5.980E+07	2.350E+05
Row 37	14	1100-1200	7.578E+06	4.185E+07	5.758E-06	6.599E+03	1.866E+07	4.893E-06	3.717E+02	1.000E-06	8.400E+03	2.920E+07	5.820E+07	2.300E+05
Row 38	14	1300-1400	7.034E+06	4.115E+07	5.604E-06	6.121E+03	1.799E+07	4.773E-06	3.570E+02	9.500E-07	8.020E+03	2.860E+07	5.720E+07	2.250E+05
Row 39	14	1500-1600	6.490E+06	4.045E+07	5.453E-06	5.643E+03	1.732E+07	4.653E-06	3.428E+02	9.000E-07	7.540E+03	2.800E+07	5.620E+07	2.200E+05
Row 40	14	1600-1700	5.946E+06	3.975E+07	5.302E-06	5.165E+03	1.665E+07	4.533E-06	3.286E+02	8.500E-07	7.060E+03	2.740E+07	5.520E+07	2.150E+05
Row 41	14	1700-1800	5.402E+06	3.905E+07	5.151E-06	4.687E+03	1.598E+07	4.413E-06	3.144E+02	8.000E-07	6.580E+03	2.680E+07	5.420E+07	2.100E+05
Row 42	14	1800-1900	4.858E+06	3.835E+07	5.000E-06	4.209E+03	1.531E+07	4.293E-06	3.002E+02	7.500E-07	6.100E+03	2.620E+07	5.320E+07	2.050E+05
Row 43	14	1900-2000	4.314E+06	3.765E+07	4.849E-06	3.731E+03	1.464E+07	4.173E-06	2.860E+02	7.000E-07	5.620E+03	2.560E+07	5.220E+07	2.000E+05
Row 44	14	2000-2100	3.770E+06	3.695E+07	4.698E-06	3.253E+03	1.397E+07	4.053E-06	2.718E+02	6.500E-07	5.140E+03	2.500E+07	5.120E+07	1.950E+05
Row 45	14	2100-2200	3.226E+06	3.625E+07	4.547E-06	2.775E+03	1.330E+07	3.933E-06	2.576E+02	6.000E-07	4.660E+03	2.440E+07	5.020E+07	1.900E+05
Row 46	14	2200-2300	2.682E+06	3.555E+07	4.396E-06	2.297E+03	1.263E+07	3.813E-06	2.434E+02	5.500E-07	4.180E+03	2.380E+07	4.920E+07	1.850E+05
Row 47	14	2300-2400	2.138E+06	3.485E+07	4.245E-06	1.819E+03	1.196E+07	3.693E-06	2.292E+02	5.000E-07	3.700E+03	2.320E+07	4.820E+07	1.800E+05
Row 48	14	2400-0100	1.594E+06	3.415E+07	4.094E-06	1.341E+03	1.129E+07	3.573E-06	2.150E+02	4.500E-07	3.220E+03	2.260E+07	4.720E+07	1.750E+05
Row 49	14	0100-0200	1.050E+06	3.345E+07	3.943E-06	8.631E+02	1.062E+07	3.453E-06	2.008E+02	4.000E-07	2.740E+03	2.200E+07	4.620E+07	1.700E+05
Row 50	14	0200-0300	5.052E+05	3.275E+07	3.792E+07	2.773E+08	6.738E+02	3.123E+08	8.650E+02	3.000E+07	1.			
Row 51	15	0800-0900	8.851E+03	4.200E+07	6.266E-06	7.666E+03	2.033E+07	5.363E-06	4.200E+02	1.130E-06	9.400E+03	3.080E+07	6.200E+07	2.380E+05
Row 52	15	0900-1000	8.407E+06	4.270E+07	6.117E-06	7.311E+03	1.999E+07	5.183E-06	4.133E+02	1.080E-06	9.200E+03	3.030E+07	6.100E+07	2.350E+05
Row 53	15	1000-1100	7.863E+06	4.200E+07	5.968E-06	6.822E+03	1.933E+07	5.013E-06	3.963E+02	1.050E-06	8.880E+03	2.980E+07	5.980E+07	2.350E+05
Row 54	15	1100-1200	7.319E+06	4.130E+07	5.819E-06	6.344E+03	1.866E+07	4.893E-06	3.717E+02	1.000E-06	8.400E+03	2.920E+07	5.820E+07	2.300E+05
Row 55	15	1300-1400	6.775E+06	4.060E+07	5.668E-06	5.865E+03	1.799E+07	4.773E-06	3.570E+02	9.500E-07	8.020E+03	2.860E+07	5.720E+07	2.250E+05
Row 56	15	1500-1600	6.231E+06	4.000E+07	5.517E-06	5.387E+03	1.732E+07	4.653E-06	3.428E+02	9.000E-07	7.540E+03	2.800E+07	5.620E+07	2.200E+05
Row 57	15	1600-1700	5.687E+06	3.930E+07	5.366E-06	4.908E+03	1.665E+07	4.533E-06	3.286E+02	8.500E-07	7.060E+03	2.740E+07	5.520E+07	2.150E+05
Row 58	15	1700-1800	5.143E+06	3.860E+07	5.215E-06	4.430E+03	1.598E+07	4.413E-06	3.144E+02	8.000E-07	6.580E+03	2.680E+07	5.420E+07	2.100E+05
Row 59	15	1800-1900	4.599E+06	3.790E+07	5.064E-06	3.951E+03	1.531E+07	4.293E-06	3.002E+02	7.500E-07	6.100E+03	2.620E+07	5.320E+07	2.050E+05
Row 60	15	1900-2000	4.055E+06	3.720E+07	4.913E-06	3.473E+03	1.464E+07	4.173E-06	2.860E+02	7.000E-07	5.620E+03	2.560E+07	5.220E+07	2.000E+05
Row 61	15	2000-2100	3.511E+06	3.650E+07	4.762E-06	2.995E+03	1.397E+07	4.053E-06	2.718E+02	6.500E-07	5.140E+03	2.500E+07	5.120E+07	1.950E+05
Row 62	15	2100-2200	2.967E+06	3.580E+07	4.611E-06	2.517E+03	1.330E+07	3.933E-06	2.576E+02	6.000E-07	4.660E+03	2.440E+07	5.020E+07	1.900E+05
Row 63	15	2200-2300	2.423E+06	3.510E+07	4.460E-06	2.039E+03	1.263E+07	3.813E-06	2.434E+02	5.500E-07	4.180E+03	2.380E+07	4.920E+07	1.850E+05
Row 64	15	2300-2400	1.879E+06	3.440E+07	4.309E-06	1.561E+03	1.196E+07	3.693E-06	2.292E+02	5.000E-07	3.700E+03	2.320E+07	4.820E+07	1.800E+05
Row 65	15	2400-0100	1.335E+06	3.370E+07	4.158E-06	1.083E+03	1.129E+07	3.573E-06	2.150E+02	4.500E-07	3.220E+03	2.260E+07	4.720E+07	1.750E+05
Row 66	15	0100-0200	8.306E+03	4.165E+07	6.221E-06	7.611E+03	2.016E+07	5.396E-06	4.165E+02	1.120E-06	9.350E+03	3.055E+07	6.155E+07	2.375E+05
Row 67	15	0200-0300	7.860E+06	4.235E+07	6.072E-06	7.266E+03	1.994E+07	5.167E-06	4.094E+02	1.070E-06	9.150E+03	3.015E+07	6.055E+07	2.325E+05
Row 68	15	0300-0400	7.416E+06	4.165E+07	5.923E-06	6.771E+03	1.938E+07	5.048E-06	3.994E+02	1.030E-06	8.950E+03	2.965E+07	5.935E+07	2.325E+05
Row 69	15	0400-0500	6.972E+06	4.095E+07	5.774E-06	6.293E+03	1.882E+07	4.929E-06	3.894E+02	9.90E-07	8.550E+03	2.915E+07	5.835E+07	2.275E+05
Row 70	15	0500-0600	6.528E+06	4.025E+07	5.623E-06	5.815E+03	1.826E+07	4.810E-06	3.794E+02	9.40E-07	8.150E+03	2.865E+07	5.735E+07	2.225E+05
Row 71	15	0600-0700	6.084E+06	3.955E+07	5.472E-06	5.337E+03	1.770E+07	4.691E-06	3.694E+02	8.90E-07	7.750E+03	2.815E+07	5.635E+07	2.175E+05
Row 72	15	0700-0800	5.640E+06	3.885E+07	5.321E-06	4.859E+03	1.714E+07	4.572E-06	3.594E+02	8.40E-07	7.350E+03	2.765E+07	5.535E+07	2.125E+05
Row 73	15	0800-0900	5.196E+06	3.815E+07	5.170E-06	4.381E+03	1.658E+07	4.453E-06	3.494E+02	7.90E-07	6.950E+03	2.715E+07	5.435E+07	2.075E+05
Row 74	15	0900-1000	4.752E+06	3.745E+07	5.019E-06	3.903E+03	1.602E+07	4.333E-06	3.394E+02	7.40E-07	6.550E+03	2.665E+07	5.335E+07	2.025E+05
Row 75	15	1000-1100	4.308E+06	3.675E+07	4.868E-06	3.425E+03	1.546E+07	4.213E-06	3.294E+02	6.90E-07	6.150E+03	2.615E+07	5.235E+07	1.975E+05
Row 76	15	1100-1200	3.864E+06	3.605E+07	4.717E-06	2.947E+03	1.490E+07	4.093E-06	3.194E+02	6.40E-07	5.750E+03	2.565E+07	5.135E+07	1.925E+05
Row 77	15	1200-1300	3.420E+06	3.535E+07	4.566E-06	2.469E+03	1.434E+07	3.973E-06	3.094E+02	5.90E-07	5.350E+03	2.515E+07	5.035E+07	1.875E+05
Row 78	15	1300-1400	2.976E+06	3.465E+07	4.415E-06	1.991E+03	1.378E+07	3.853E-06	2.994E+02	5.40E-07	4.950E+03	2.465E+07	4.935E+07	1.825E+05
Row 79	15	1400-1500	2.532E+06	3.395E+07	4.264E-06	1.513E+03	1.322E+07	3.733E-06	2.894E+02	4.90E-07	4.550E+03	2.415E+07	4.835E+07	1.775E+05
Row 80	15	1500-1600	2.088E+06	3.325E+07	4.113E-06	1.035E+03	1.266E+07	3.613E-06	2.794E+02	4.40E-07	4.150E+03	2.365E+07	4.735E+07	1.725E+05
Row 81	15	1600-1700	1.644E+06	3.255E+07	3.962E-06	8.771E+02	1.210E+07	3.493E-06	2.694E+02	3.90E-07	3.750E+03	2.315E+07	4.635E+07	1.675E+05
Row 82	15	1700-1800	1.200E+06	3.185E+07	3.811E-06	8.293E+02	1.154E+07	3.373E-06	2.594E+02	3.40E-07	3.350E+03	2.265E+07	4.535E+07	1.625E+05
Row 83	15	1800-1900	8.210E+03	4.130E+07	6.200E-06	7.566E+03	2.000E+07	5.396E-06	4.130E+02	1.120E-06	9.350E+03	3.055E+07	6.155E+07	2.375E+05
Row 84	15	1900-2000	7.766E+03	4.200E+07	6.266E-06	7.666E+03	2.033E+07	5.363E-06	4.200E+02	1.130E-06	9.400E+03	3.080E+07	6.200E+07	2.380E+05
Row 85	15	2000-2100	7.319E+03	4.130E+07	5.819E-06	6.344E+03	1.866E+07	4.893E-06	3.717E+02	1.000E-06	8.400E+03	2.920E+07	5.820E+07	2.300E+05
Row 86	15	2100-2200	6.775E+03	4.060E+07	5.668E-06	5.865E+03	1.799E+07	4.773E-06	3.570E+02	9.500E-07	8.020E+03	2.860E+07	5.720E+07	2.250E+05
Row 87	15	2200-2300	6.231E+03	4.000E+07	5.517E-06	5.387E+03	1.732E+07	4.653E-06	3.428E+02	9.000E-07	7.540E+03	2.800E+07	5.620E+07	2.200E+05
Row 88	15	2300-2400	5.687E+03	3.930E+07	5.366E-06	4.908E+03	1.665E+07	4.533E-06	3.286E+02	8.500E-07	7.060E+03	2.740E+07	5.520E+07	2.150E+05
Row 89	15	2400-0100	5.143E+03	3.860E+07	5.215E-06	4.430E+03	1.598E+07	4.413E-06	3.144E+02	8.000E-07	6.580E+03	2.680E+07	5.420E+07	2.100E+05
Row 90	15	0100-0200	4.599E+03	3.790E+07	5.064E-06	3.951E+03	1.531E+07	4.293E-06	3.002E+02	7.500E-07	6.100E+03	2.620E+07	5.320E+07	2.050E+05
Row 91	15	0200-0300	4.055E+03	3.720E+07	4.913E-06	3.473E+03	1.464E+07	4.173E-06	2.860E+02	7.000E-07	5.620E+03	2.560E+07	5.220E+07	2.000E+05
Row 92	15	0300-0400	3.511E+03	3.650E+07	4.762E-06	2.995E+03	1.397E+07</							

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Road 24 Hour Emission Factors for AERMOD model - Year 2038													
Route name	Road ID	Hour	No. Emission				No. Emission				No. Emission		
			Monthly/tonne		Monthly/tonne		Monthly/tonne		Monthly/tonne				
			g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	
Read 27	27	1800-1700	1.565	0.017	1.377	0.22	1.181	1.386	0.17	1.041	0.538	1.411	0.48
Read 27	27	1700-1800	1.565	0.017	1.377	0.22	1.181	1.386	0.17	1.041	0.538	1.411	0.48
Read 27	27	1800-1900	1.565	0.017	1.377	0.22	1.181	1.386	0.17	1.041	0.538	1.411	0.48
Read 27	27	1900-2000	1.565	0.017	1.377	0.22	1.181	1.386	0.17	1.041	0.538	1.411	0.48
Read 27	27	2000-2100	1.565	0.017	1.377	0.22	1.181	1.386	0.17	1.041	0.538	1.411	0.48
Read 27	27	2100-2200	1.565	0.017	1.377	0.22	1.181	1.386	0.17	1.041	0.538	1.411	0.48
Read 27	27	2200-2300	1.565	0.017	1.377	0.22	1.181	1.386	0.17	1.041	0.538	1.411	0.48
Read 27	27	2300-2400	1.565	0.017	1.377	0.22	1.181	1.386	0.17	1.041	0.538	1.411	0.48
Read 28	28	0600-0700	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 28	28	0700-0800	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 28	28	0800-0900	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 28	28	0900-1000	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 28	28	1000-1100	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 28	28	1100-1200	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 28	28	1200-1300	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 28	28	1300-1400	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 28	28	1400-1500	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 28	28	1500-1600	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 28	28	1600-1700	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 28	28	1700-1800	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 28	28	1800-1900	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 28	28	1900-2000	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 28	28	2000-2100	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 28	28	2100-2200	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 28	28	2200-2300	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 28	28	2300-2400	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 29	29	0600-0700	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 29	29	0700-0800	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 29	29	0800-0900	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 29	29	0900-1000	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 29	29	1000-1100	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 29	29	1100-1200	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 29	29	1200-1300	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 29	29	1300-1400	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 29	29	1400-1500	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 29	29	1500-1600	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 29	29	1600-1700	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 29	29	1700-1800	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 29	29	1800-1900	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 29	29	1900-2000	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 29	29	2000-2100	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 29	29	2100-2200	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 29	29	2200-2300	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 29	29	2300-2400	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 30	30	0600-0700	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 30	30	0700-0800	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 30	30	0800-0900	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 30	30	0900-1000	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 30	30	1000-1100	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 30	30	1100-1200	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 30	30	1200-1300	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 30	30	1300-1400	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 30	30	1400-1500	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 30	30	1500-1600	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 30	30	1600-1700	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 30	30	1700-1800	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 30	30	1800-1900	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 30	30	1900-2000	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 30	30	2000-2100	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 30	30	2100-2200	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 30	30	2200-2300	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 30	30	2300-2400	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 31	31	0600-0700	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 31	31	0700-0800	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 31	31	0800-0900	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 31	31	0900-1000	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 31	31	1000-1100	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 31	31	1100-1200	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 31	31	1200-1300	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 31	31	1300-1400	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 31	31	1400-1500	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 31	31	1500-1600	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 31	31	1600-1700	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 31	31	1700-1800	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 31	31	1800-1900	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 31	31	1900-2000	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 31	31	2000-2100	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 31	31	2100-2200	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 31	31	2200-2300	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 31	31	2300-2400	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 32	32	0600-0700	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 32	32	0700-0800	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 32	32	0800-0900	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338
Read 32	32	0900-1000	0.863	0.018	0.745	0.208	0.741	0.809	0.308	0.415	0.267	0.718	0.338

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24 hour Unimodal Frequency													
Year 2018													
Model (mm)													
Row ID	Hour	Mo Ennoison				Mo Ennoison							
		g/hwy	hwy/hwy	hwy/hwy	hwy/hwy	g/hwy	hwy/hwy	hwy/hwy	hwy/hwy				
48	08:00-09:00	8.47E+01	7.24E+07	1.132E+08	7.21E+03	7.08E+07	1.29E+08	4.27E+02	1.74E+06	7.68E+06	3.13E+02	1.83E+06	6.31E+06
49	09:00-10:00	1.05E+08	2.37E+07	1.242E+08	1.16E+07	1.242E+08	1.29E+08	1.24E+06	1.14E+06	7.59E+06	1.14E+06	3.07E+06	5.72E+06
50	10:00-11:00	1.05E+08	2.37E+07	1.242E+08	1.16E+07	1.242E+08	1.29E+08	1.24E+06	1.14E+06	7.59E+06	1.14E+06	3.07E+06	5.72E+06
51	11:00-12:00	1.05E+08	2.37E+07	1.242E+08	1.16E+07	1.242E+08	1.29E+08	1.24E+06	1.14E+06	7.59E+06	1.14E+06	3.07E+06	5.72E+06
52	12:00-13:00	1.05E+08	2.37E+07	1.242E+08	1.16E+07	1.242E+08	1.29E+08	1.24E+06	1.14E+06	7.59E+06	1.14E+06	3.07E+06	5.72E+06
53	13:00-14:00	1.33E+08	3.07E+07	2.09E+08	1.12E+02	2.87E+07	1.77E+08	1.59E+02	1.53E+06	8.14E+06	4.94E+02	1.73E+06	7.83E+06
54	14:00-15:00	1.33E+08	3.07E+07	2.09E+08	1.12E+02	2.87E+07	1.77E+08	1.59E+02	1.53E+06	8.14E+06	4.94E+02	1.73E+06	7.83E+06
55	15:00-16:00	1.33E+08	3.07E+07	2.09E+08	1.12E+02	2.87E+07	1.77E+08	1.59E+02	1.53E+06	8.14E+06	4.94E+02	1.73E+06	7.83E+06
56	16:00-17:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
57	17:00-18:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
58	18:00-19:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
59	19:00-20:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
60	20:00-21:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
61	21:00-22:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
62	22:00-23:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
63	23:00-00:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
64	00:00-01:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
65	01:00-02:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
66	02:00-03:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
67	03:00-04:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
68	04:00-05:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
69	05:00-06:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
70	06:00-07:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
71	07:00-08:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
72	08:00-09:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
73	09:00-10:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
74	10:00-11:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
75	11:00-12:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
76	12:00-13:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
77	13:00-14:00	1.33E+08	3.07E+07	2.09E+08	1.12E+02	2.87E+07	1.77E+08	1.59E+02	1.53E+06	8.14E+06	4.94E+02	1.73E+06	7.83E+06
78	14:00-15:00	1.33E+08	3.07E+07	2.09E+08	1.12E+02	2.87E+07	1.77E+08	1.59E+02	1.53E+06	8.14E+06	4.94E+02	1.73E+06	7.83E+06
79	15:00-16:00	1.33E+08	3.07E+07	2.09E+08	1.12E+02	2.87E+07	1.77E+08	1.59E+02	1.53E+06	8.14E+06	4.94E+02	1.73E+06	7.83E+06
80	16:00-17:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
81	17:00-18:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
82	18:00-19:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
83	19:00-20:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
84	20:00-21:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
85	21:00-22:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
86	22:00-23:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
87	23:00-00:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
88	00:00-01:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
89	01:00-02:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
90	02:00-03:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
91	03:00-04:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
92	04:00-05:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
93	05:00-06:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
94	06:00-07:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
95	07:00-08:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
96	08:00-09:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
97	09:00-10:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
98	10:00-11:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
99	11:00-12:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07
100	12:00-13:00	1.88E+08	5.07E+07	3.11E+08	1.44E+02	4.81E+07	2.68E+08	7.56E+02	2.10E+08	1.38E+07	1.88E+02	1.76E+08	1.00E+07

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Road 24 hr Unload Factors for AASHTO Model B-10																		
Year 2038																		
Road Name	Road ID	Hwy	Mo En/Em				Moisture/moisture				Mo En/Em				Moisture/moisture			
			g/m ² /h	g/m ²	tonne/hour	Mo En/Em	g/m ² /h	g/m ²	tonne/hour	Mo En/Em	g/m ² /h	g/m ²	tonne/hour	Mo En/Em	g/m ² /h	g/m ²	tonne/hour	
Road 47	47	1600-1200	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	1200-1600	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	1600-2000	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	2000-2400	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	2400-2800	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	2800-3200	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	3200-3600	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	3600-4000	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	4000-4400	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	4400-4800	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	4800-5200	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	5200-5600	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	5600-6000	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	6000-6400	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	6400-6800	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	6800-7200	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	7200-7600	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	7600-8000	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	8000-8400	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	8400-8800	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	8800-9200	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	9200-9600	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	9600-10000	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	10000-10400	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	10400-10800	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	10800-11200	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	11200-11600	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	11600-12000	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	12000-12400	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	12400-12800	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	12800-13200	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	13200-13600	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	13600-14000	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	14000-14400	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	14400-14800	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	14800-15200	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	15200-15600	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	15600-16000	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	16000-16400	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	16400-16800	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	16800-17200	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	17200-17600	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	17600-18000	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	18000-18400	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	18400-18800	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	18800-19200	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	19200-19600	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	19600-20000	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	20000-20400	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	20400-20800	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	20800-21200	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	21200-21600	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	21600-22000	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	22000-22400	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	22400-22800	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	22800-23200	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	23200-23600	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	23600-24000	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	24000-24400	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	24400-24800	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	24800-25200	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	25200-25600	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	25600-26000	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	26000-26400	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	26400-26800	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	26800-27200	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	27200-27600	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	27600-28000	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	28000-28400	3.868	4.338	1.428	0.55	4.024	3.787	1.321	0.48	3.548	1.838	0.578	7.586	1.138	0.778		
Road 47	47	28400-28800	3.868	4.338	1.428	0.55	4.024	3.787	1.321</									

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.4 Emission Factor in 2038.xlsx

Road Name	Road ID	Year	Motorbikes				No.Emission				Motorbikes				No.Emission			
			g/hour	g/m ³	tonne/hour	g/m ³	tonne/hour	g/hour	g/m ³	tonne/hour	g/hour	g/m ³	tonne/hour	g/hour	g/m ³	tonne/hour		
Road S1	S1	0000-0100	4.7433	1.925	0.88	7.1154	4.514	3.448	0.448	3.8902	0.2307	5.229	2.8362	3.348	0.37	4.378		
Road S1	S1	0100-0200	4.7433	1.925	0.88	7.1154	4.514	3.448	0.448	3.8902	0.2307	5.229	2.8362	3.348	0.37	4.378		
Road S1	S1	0200-0300	5.6933	2.023	0.92	8.4319	4.914	3.958	0.588	4.6182	0.2482	6.1406	3.0118	3.182	0.41	5.095		
Road S1	S1	0300-0400	6.0103	1.871	0.88	8.4628	5.311	3.648	0.592	4.071	0.2428	2.118	3.1202	3.811	0.38	3.798		
Road S1	S1	0400-0500	6.0103	1.871	0.88	8.4628	5.311	3.648	0.592	4.071	0.2428	2.118	3.1202	3.811	0.38	3.798		
Road S1	S1	0500-0600	7.0203	0.48	0.06	7.6554	0.058	0.568	0.037	3.8902	0.2302	0.438	3.3002	3.3002	0.30	3.3002		
Road S1	S1	0600-0700	7.0203	0.48	0.06	7.6554	0.058	0.568	0.037	3.8902	0.2302	0.438	3.3002	3.3002	0.30	3.3002		
Road S1	S1	0700-0800	8.4803	0.023	0.02	3.9505	0.044	3.948	0.038	4.5212	0.1406	2.3105	3.6752	0.242	3.742			
Road S1	S1	0800-0900	7.8803	3.322	0.07	3.308	7.988	1.888	0.688	6.022	1.1748	2.388	3.798	3.608	0.37	4.378		
Road S1	S1	0900-1000	9.2743	2.347	0.07	4.1706	3.538	1.603	0.603	6.022	1.2102	2.275	3.885	3.408	0.37	4.378		
Road S1	S1	1000-1100	1.0044	2.128	0.07	3.5906	8.666	1.768	0.488	4.0082	1.0006	1.875	3.9602	3.838	0.37	4.378		
Road S1	S1	1100-1200	1.0044	2.128	0.07	3.5906	8.666	1.768	0.488	4.0082	1.0006	1.875	3.9602	3.838	0.37	4.378		
Road S1	S1	1200-1300	1.8802	0.06	0.06	5.5906	0.06	2.564	0.768	6.8112	0.006	0.006	5.7462	0.162	0.162			
Road S1	S1	1300-1400	1.8802	0.06	0.06	5.5906	0.06	2.564	0.768	6.8112	0.006	0.006	5.7462	0.162	0.162			
Road S1	S1	1400-1500	1.3507	1.3507	0.001	2.698	0.008	2.698	0.008	2.698	0.008	2.698	2.698	0.008	2.698			
Road S1	S1	1500-1600	1.3507	1.3507	0.001	2.698	0.008	2.698	0.008	2.698	0.008	2.698	2.698	0.008	2.698			
Road S1	S1	1600-1700	1.7403	0.317	0.07	5.8388	1.5112	0.768	5.038	6.642	1.248	2.318	5.9182	1.065	0.162			
Road S1	S1	1700-1800	1.7403	0.317	0.07	5.8388	1.5112	0.768	5.038	6.642	1.248	2.318	5.9182	1.065	0.162			
Road S1	S1	1800-1900	1.7403	0.317	0.07	5.8388	1.5112	0.768	5.038	6.642	1.248	2.318	5.9182	1.065	0.162			
Road S1	S1	1900-2000	1.7403	0.317	0.07	5.8388	1.5112	0.768	5.038	6.642	1.248	2.318	5.9182	1.065	0.162			
Road S1	S1	2000-2100	1.7403	0.317	0.07	5.8388	1.5112	0.768	5.038	6.642	1.248	2.318	5.9182	1.065	0.162			
Road S1	S1	2100-2200	1.7403	0.317	0.07	5.8388	1.5112	0.768	5.038	6.642	1.248	2.318	5.9182	1.065	0.162			
Road S1	S1	2200-2300	1.7403	0.317	0.07	5.8388	1.5112	0.768	5.038	6.642	1.248	2.318	5.9182	1.065	0.162			
Road S1	S1	2300-2400	1.7403	0.317	0.07	5.8388	1.5112	0.768	5.038	6.642	1.248	2.318	5.9182	1.065	0.162			
Road S2	S2	0000-0100	4.8312	1.958	0.88	7.1608	4.576	3.488	0.458	3.928	0.2358	5.288	2.8662	3.358	0.37	4.388		
Road S2	S2	0100-0200	4.8312	1.958	0.88	7.1608	4.576	3.488	0.458	3.928	0.2358	5.288	2.8662	3.358	0.37	4.388		
Road S2	S2	0200-0300	5.8812	2.056	0.92	8.4819	4.964	3.968	0.598	4.6682	0.2532	6.1906	3.0218	3.192	0.41	5.105		
Road S2	S2	0300-0400	6.2012	1.881	0.88	8.4928	5.331	3.668	0.602	4.091	0.2478	2.138	3.1302	3.821	0.38	3.808		
Road S2	S2	0400-0500	6.2012	1.881	0.88	8.4928	5.331	3.668	0.602	4.091	0.2478	2.138	3.1302	3.821	0.38	3.808		
Road S2	S2	0500-0600	7.2112	0.48	0.06	7.6654	0.058	0.568	0.037	3.8902	0.2302	0.438	3.3002	3.3002	0.30	3.3002		
Road S2	S2	0600-0700	7.2112	0.48	0.06	7.6654	0.058	0.568	0.037	3.8902	0.2302	0.438	3.3002	3.3002	0.30	3.3002		
Road S2	S2	0700-0800	8.4912	0.023	0.02	3.9505	0.044	3.948	0.038	4.5212	0.1406	2.3105	3.6752	0.242	3.742			
Road S2	S2	0800-0900	7.8912	3.322	0.07	3.308	7.988	1.888	0.688	6.022	1.1748	2.388	3.798	3.608	0.37	4.378		
Road S2	S2	0900-1000	9.2812	2.347	0.07	4.1706	3.538	1.603	0.603	6.022	1.2102	2.275	3.885	3.408	0.37	4.378		
Road S2	S2	1000-1100	1.0044	2.128	0.07	3.5906	8.666	1.768	0.488	4.0082	1.0006	1.875	3.9602	3.838	0.37	4.378		
Road S2	S2	1100-1200	1.0044	2.128	0.07	3.5906	8.666	1.768	0.488	4.0082	1.0006	1.875	3.9602	3.838	0.37	4.378		
Road S2	S2	1200-1300	1.8802	0.06	0.06	5.5906	0.06	2.564	0.768	6.8112	0.006	0.006	5.7462	0.162	0.162			
Road S2	S2	1300-1400	1.8802	0.06	0.06	5.5906	0.06	2.564	0.768	6.8112	0.006	0.006	5.7462	0.162	0.162			
Road S2	S2	1400-1500	1.3507	1.3507	0.001	2.698	0.008	2.698	0.008	2.698	0.008	2.698	2.698	0.008	2.698			
Road S2	S2	1500-1600	1.3507	1.3507	0.001	2.698	0.008	2.698	0.008	2.698	0.008	2.698	2.698	0.008	2.698			
Road S2	S2	1600-1700	1.7403	0.317	0.07	5.8388	1.5112	0.768	5.038	6.642	1.248	2.318	5.9182	1.065	0.162			
Road S2	S2	1700-1800	1.7403	0.317	0.07	5.8388	1.5112	0.768	5.038	6.642	1.248	2.318	5.9182	1.065	0.162			
Road S2	S2	1800-1900	1.7403	0.317	0.07	5.8388	1.5112	0.768	5.038	6.642	1.248	2.318	5.9182	1.065	0.162			
Road S2	S2	1900-2000	1.7403	0.317	0.07	5.8388	1.5112	0.768	5.038	6.642	1.248	2.318	5.9182	1.065	0.162			
Road S2	S2	2000-2100	1.7403	0.317	0.07	5.8388	1.5112	0.768	5.038	6.642	1.248	2.318	5.9182	1.065	0.162			
Road S2	S2	2100-2200	1.7403	0.317	0.07	5.8388	1.5112	0.768	5.038	6.642	1.248	2.318	5.9182	1.065	0.162			
Road S2	S2	2200-2300	1.7403	0.317	0.07	5.8388	1.5112	0.768	5.038	6.642	1.248	2.318	5.9182	1.065	0.162			
Road S2	S2	2300-2400	1.7403	0.317	0.07	5.8388	1.5112	0.768	5.038	6.642	1.248	2.318	5.9182	1.065	0.162			
Road S3	S3	0000-0100	4.9312	1.978	0.88	7.2608	4.606	3.508	0.468	3.978	0.2408	5.338	2.8862	3.378	0.37	4.438		
Road S3	S3	0100-0200	4.9312	1.978	0.88	7.2608	4.606	3.508	0.468	3.978	0.2408	5.338	2.8862	3.378	0.37	4.438		
Road S3	S3	0200-0300	5.9812	2.076	0.92	8.5619	4.984	3.988	0.608	4.7182	0.2562	6.241	3.0318	3.202	0.41	5.165		
Road S3	S3	0300-0400	6.3012	1.901	0.88	8.5728	5.351	3.688	0.612	4.121	0.2508	2.148	3.1402	3.831	0.38	3.858		
Road S3	S3	0400-0500	6.3012	1.901	0.88	8.5728	5.351	3.688	0.612	4.121	0.2508	2.148	3.1402	3.831	0.38	3.858		
Road S3	S3	0500-0600	7.3112	0.48	0.06	7.6654	0.058	0.568	0.037	3.8902	0.2302	0.438	3.3002	3.3002	0.30	3.3002		
Road S3	S3	0600-0700	7.3112	0.48	0.06	7.6654	0.058	0.568	0.037	3.8902	0.2302	0.438	3.3002	3.3002	0.30	3.3002		
Road S3	S3	0700-0800	8.5112	0.023	0.02	3.9505	0.044	3.948	0.038	4.5212	0.1406	2.3105	3.6752	0.242	3.742			
Road S3	S3	0800-0900	7.9112	3.322	0.07	3.308	7.988	1.888	0.688	6.022	1.1748	2.388	3.798	3.608	0.37	4.378		
Road S3	S3	0900-1000	9.3012	2.347	0.07	4.1706	3.538	1.603	0.603	6.022	1.2102	2.275	3.885	3.408	0.37	4.378		
Road S3	S3	1000-1100	1.0044	2.128	0.07	3.5906	8.666	1.768	0.488	4.0082	1.0006	1.875	3.9602	3.838	0.37	4.378		
Road S3	S3	1100-1200	1.0044	2.128	0.07	3.5906	8.666	1.768	0.488	4.0082	1.0006	1.875	3.9602	3.838	0.37	4.378		
Road S3	S3	1200-1300	1.8802	0.06	0.06	5.5906	0.06	2.564	0.768	6.8112	0.006	0.006	5.7462	0.162	0.162			
Road S3	S3	1300-1400	1.8802	0.06	0.06	5.5906	0.06	2.564	0.768	6.8112	0.006	0.006	5.7462	0.162	0.162			
Road S3	S3	1400-1500	1.3507	1.3507	0.001	2.698	0.008	2.698	0.008	2.698	0.008	2.698	2.698	0.008	2.698			
Road S3	S3	1500-1600	1.3507	1.3507	0.001	2.698	0.008	2.698	0.008	2.698	0.008	2.698	2.698	0.008	2.698			
Road S3	S3	1600-1700	1.7403	0.317	0.07	5.8388	1.5112	0.768	5.038	6.642	1.248	2.318	5.9182	1.065	0.162			
Road S3	S3	1700-1800	1.7403	0.317	0.07	5.8388	1.5112	0.768	5.038	6.642	1.248	2.318	5.9182	1.065	0.162			
Road S3	S3	1800-1900	1.7403	0.317	0.07	5.8388	1.5112	0.768	5.038	6.642	1.248	2.318	5.9182	1.065	0.162			
Road S3	S3	1900-2000	1.7403	0.317	0.07	5.8388	1.5112	0.768	5.038	6.642	1.248	2.318	5.9182	1.065	0.162			
Road S3	S3	2000-2100	1.7403	0.317	0.07	5.8388	1.5112	0.768	5.038	6.642	1.248	2.318	5.9182	1.065	0.162			
Road S3	S3	2100-2200	1.7403	0.317	0.07	5.8388	1.5112	0.768	5.038	6.642	1.248	2.318	5.9182	1.065	0.162			
Road S3	S3	2200-2300	1.7403	0.317	0.07	5.8388	1.5112	0.768	5.038	6.642	1.248	2						

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Open Road North under Underway Quarry
Top 10 Road Top 10 Exhaust Emission Factors for
APM200 model (g/gal)

Year 2038											
Road Name	Road ID	Hour	NO _x Emission						PM Emission		
			g/hour/veh	g/hour	g/hour/veh	g/hour	g/hour/veh	g/hour	g/hour/veh	g/hour	g/hour
Road 14	SA	0800-0900	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	0900-1000	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	1000-1100	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	1100-1200	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	1200-1300	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	1300-1400	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	1400-1500	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	1500-1600	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	1600-1700	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	1700-1800	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	1800-1900	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	1900-2000	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	2000-2100	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	2100-2200	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	2200-2300	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	2300-2400	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	2400-2500	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	2500-2600	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	2600-2700	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	2700-2800	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	2800-2900	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	2900-3000	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	3000-3100	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	3100-3200	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	3200-3300	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	3300-3400	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	3400-3500	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	3500-3600	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	3600-3700	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	3700-3800	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	3800-3900	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	3900-4000	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	4000-4100	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	4100-4200	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	4200-4300	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	4300-4400	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	4400-4500	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	4500-4600	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	4600-4700	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	4700-4800	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	4800-4900	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	4900-5000	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	5000-5100	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	5100-5200	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	5200-5300	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	5300-5400	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	5400-5500	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	5500-5600	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	5600-5700	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	5700-5800	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	5800-5900	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	5900-6000	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	6000-6100	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	6100-6200	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	6200-6300	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	6300-6400	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	6400-6500	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	6500-6600	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	6600-6700	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	6700-6800	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	6800-6900	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	6900-7000	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	7000-7100	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	7100-7200	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	7200-7300	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	7300-7400	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	7400-7500	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	7500-7600	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	7600-7700	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	7700-7800	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	7800-7900	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	7900-8000	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	8000-8100	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	8100-8200	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	8200-8300	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	8300-8400	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	8400-8500	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	8500-8600	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	8600-8700	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	8700-8800	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	8800-8900	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	8900-9000	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	9000-9100	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	9100-9200	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	9200-9300	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	9300-9400	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	9400-9500	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	9500-9600	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	9600-9700	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	9700-9800	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	9800-9900	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	9900-10000	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	10000-10100	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	10100-10200	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	10200-10300	8.756	12.775	7.458	10.765	7.808	6.188	3.138	1.208	2.768
Road 14	SA	10300-1									

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Open Year 24 Hour Underground Quartz Tearing Rate and Estimated Factors for 30-Minute Lead Time											
Year 2018				NO ₂ Emission				NO ₂ Emission			
Road Name		Road ID	Hour	Month/Year				Month/Year			
				g/hours	g/mi ²	g/mi ²	tonne/hour	g/hours	g/mi ²	g/mi ²	tonne/hour
Road 103	103	1800-1700	1	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1700-1600	2	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1600-1500	3	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1500-1400	4	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1400-1300	5	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1300-1200	6	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1200-1100	7	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1100-1000	8	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1000-0900	9	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	0900-0800	10	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	0800-0700	11	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	0700-0600	12	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	0600-0500	13	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	0500-0400	14	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	0400-0300	15	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	0300-0200	16	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	0200-0100	17	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	0100-0000	18	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	2300-2200	19	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	2200-2100	20	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	2100-2000	21	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	2000-1900	22	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1900-1800	23	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1800-1700	24	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1700-1600	25	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1600-1500	26	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1500-1400	27	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1400-1300	28	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1300-1200	29	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1200-1100	30	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1100-1000	31	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1000-0900	32	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	0900-0800	33	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	0800-0700	34	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	0700-0600	35	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	0600-0500	36	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	0500-0400	37	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	0400-0300	38	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	0300-0200	39	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	0200-0100	40	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	0100-0000	41	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	2300-2200	42	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	2200-2100	43	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	2100-2000	44	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	2000-1900	45	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1900-1800	46	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1800-1700	47	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1700-1600	48	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1600-1500	49	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1500-1400	50	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1400-1300	51	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1300-1200	52	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1200-1100	53	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1100-1000	54	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1000-0900	55	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	0900-0800	56	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	0800-0700	57	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	0700-0600	58	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	0600-0500	59	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	0500-0400	60	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	0400-0300	61	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	0300-0200	62	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	0200-0100	63	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	0100-0000	64	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	2300-2200	65	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	2200-2100	66	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	2100-2000	67	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	2000-1900	68	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1900-1800	69	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1800-1700	70	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1700-1600	71	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1600-1500	72	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1500-1400	73	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1400-1300	74	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1300-1200	75	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1200-1100	76	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1100-1000	77	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1000-0900	78	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	0900-0800	79	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	0800-0700	80	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	0700-0600	81	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	0600-0500	82	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	0500-0400	83	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	0400-0300	84	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	0300-0200	85	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	0200-0100	86	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	0100-0000	87	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	2300-2200	88	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	2200-2100	89	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	2100-2000	90	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	2000-1900	91	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1900-1800	92	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103	103	1800-1700	93	1.3248	4.8842	1.7176	1.138	4.5139	9.9796	1.6468	2.088
Road 103											

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Road 24 hr Unload Factors for ARMD02 model (gals)																
Year 2038																
Road Name	Road ID	Hwy	Mo'Ensilition				Mo'Ensilition				Mo'Ensilition					
			g/h/mph	g/mph	tonne/hour	tonne/hour	g/h/mph	g/mph	tonne/hour	tonne/hour	g/h/mph	g/mph	tonne/hour	tonne/hour		
Road 1	1	00000100	7.876	8.848	1.658	0.46	5.988	3.998	3.328	4.608	0.778	2.358	2.988	4.028	7.218	0.05
Road 1	1	00000101	7.876	8.848	1.658	0.46	5.988	3.998	3.328	4.608	0.778	2.358	2.988	4.028	7.218	0.05
Road 1	1	00000102	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000103	3.898	4.308	1.088	0.31	2.788	1.578	1.478	1.908	0.498	1.398	1.718	2.078	0.978	0.05
Road 1	1	00000104	4.418	4.928	1.258	0.35	3.198	1.828	1.658	2.158	0.558	1.558	1.958	2.358	1.128	0.05
Road 1	1	00000105	7.098	7.908	1.898	0.49	5.408	3.528	3.198	4.028	0.728	2.128	2.688	3.438	1.808	0.05
Road 1	1	00000106	7.098	7.908	1.898	0.49	5.408	3.528	3.198	4.028	0.728	2.128	2.688	3.438	1.808	0.05
Road 1	1	00000107	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000108	4.408	4.928	1.278	0.35	3.188	1.828	1.648	2.148	0.558	1.548	1.948	2.348	1.118	0.05
Road 1	1	00000109	3.898	4.318	1.078	0.31	2.778	1.578	1.478	1.908	0.498	1.388	1.708	2.068	0.968	0.05
Road 1	1	00000110	3.898	4.318	1.078	0.31	2.778	1.578	1.478	1.908	0.498	1.388	1.708	2.068	0.968	0.05
Road 1	1	00000111	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000112	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000113	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000114	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000115	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000116	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000117	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000118	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000119	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000120	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000121	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000122	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000123	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000124	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000125	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000126	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000127	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000128	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000129	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000130	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000131	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000132	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000133	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000134	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000135	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000136	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000137	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000138	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000139	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000140	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000141	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000142	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000143	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000144	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000145	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000146	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000147	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000148	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000149	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000150	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000151	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000152	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000153	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000154	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000155	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000156	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000157	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000158	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000159	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000160	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000161	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000162	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000163	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000164	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000165	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000166	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000167	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000168	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000169	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000170	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0.118	0.05
Road 1	1	00000171	1.428	1.568	0.308	0.08	1.038	0.858	1.538	2.178	0.218	0.658	0.808	2.008	0	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Road Northbound Queue

Year 2038

Road Name	Road ID	Hour	NO Emission						NO Emission						
			Metric			Metric			Metric			Metric			
			g/km/hr	g/km ²	tonne/hr	g/km/hr	g/km ²	tonne/hr	g/km/hr	g/km ²	tonne/hr	g/km/hr	g/km ²	tonne/hr	
Road 54	54	0800-0900	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
		1000-1200	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
Road 54	54	1300-1400	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
		1500-1800	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
Road 54	54	1900-2000	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
		2100-2400	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
Road 54	54	0800-0900	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
		1000-1200	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
Road 54	54	1300-1400	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
		1500-1800	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
Road 54	54	1900-2000	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
		2100-2400	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
Road 54	54	0800-0900	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
		1000-1200	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
Road 54	54	1300-1400	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
		1500-1800	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
Road 54	54	1900-2000	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
		2100-2400	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
Road 54	54	0800-0900	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
		1000-1200	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
Road 54	54	1300-1400	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
		1500-1800	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
Road 54	54	1900-2000	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
		2100-2400	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
Road 54	54	0800-0900	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
		1000-1200	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
Road 54	54	1300-1400	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
		1500-1800	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
Road 54	54	1900-2000	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
		2100-2400	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
Road 54	54	0800-0900	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
		1000-1200	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
Road 54	54	1300-1400	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
		1500-1800	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
Road 54	54	1900-2000	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
		2100-2400	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
Road 54	54	0800-0900	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
		1000-1200	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
Road 54	54	1300-1400	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
		1500-1800	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
Road 54	54	1900-2000	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
		2100-2400	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
Road 54	54	0800-0900	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
		1000-1200	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
Road 54	54	1300-1400	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
		1500-1800	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
Road 54	54	1900-2000	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
		2100-2400	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
Road 54	54	0800-0900	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
		1000-1200	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
Road 54	54	1300-1400	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
		1500-1800	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
Road 54	54	1900-2000	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
		2100-2400	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
Road 54	54	0800-0900	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
		1000-1200	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
Road 54	54	1300-1400	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
		1500-1800	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
Road 54	54	1900-2000	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
		2100-2400	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
Road 54	54	0800-0900	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
		1000-1200	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
Road 54	54	1300-1400	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
		1500-1800	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
Road 54	54	1900-2000	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
		2100-2400	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
Road 54	54	0800-0900	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
		1000-1200	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
Road 54	54	1300-1400	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
		1500-1800	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
Road 54	54	1900-2000	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
		2100-2400	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
Road 54	54	0800-0900	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
		1000-1200	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
Road 54	54	1300-1400	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
		1500-1800	8.750	12.775	7.450	6.075	2.808	0.77	6.380	9.318	1.208	2.758	3.793	1.038	2.348
Road 54	54	1900-2000	8.750												

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Open RY 24 Hour Underground Quantities															
Tearing Rate Hourly Entrance Factors for (ANNEXED) model data															
Year 2018															
Road Name	Road ID	Hour	NO, Emulsion						NO Emulsion						
			g/min/yds	g/min'	g/min/yds	g/min'	ton/hour/yds	g/min/yds	g/min'	ton/hour/yds	g/min/yds	g/min'	ton/hour/yds		
Road 11	11	0700-0800	2.296	4.248	2.948	5.497	2.138	1.364	2.546	1.443	8.908	3.421	1.661	8.478	3.478
		0800-0900	2.442	4.512	3.162	5.846	2.342	1.468	2.750	1.568	9.112	3.545	1.765	8.682	3.678
Road 11	11	0900-1000	2.564	4.738	3.486	6.272	2.576	1.612	2.994	1.722	9.346	3.741	1.948	8.876	3.878
		1000-1100	2.788	5.038	3.782	6.731	2.771	1.818	3.248	1.747	1.717	1.421	1.961	1.521	1.808
Road 11	11	0900-1000	3.044	5.418	4.158	7.416	3.044	1.968	3.512	1.968	9.592	3.952	2.091	9.084	2.091
		1000-1100	3.304	5.762	4.508	7.818	3.304	2.178	3.742	2.178	9.924	4.162	2.289	9.388	2.389
Road 11	11	1100-1200	3.564	6.062	4.858	8.218	3.564	2.388	3.972	2.388	10.256	4.372	2.487	9.692	2.587
		1200-1300	4.324	6.917	5.742	9.486	4.324	2.848	4.732	2.848	11.008	5.126	2.968	10.446	3.387
Road 11	11	1300-1400	4.682	7.218	6.132	9.834	4.682	3.058	4.962	3.058	11.242	5.358	3.190	10.678	3.687
		1400-1500	4.942	7.518	6.432	10.182	4.942	3.268	5.186	3.268	11.476	5.590	3.412	10.910	3.987
Road 11	11	1500-1600	5.192	7.818	6.732	10.530	5.192	3.478	5.410	3.478	11.710	5.822	3.634	11.142	4.287
		1600-1700	5.452	8.118	7.032	10.878	5.452	3.688	5.634	3.688	11.944	6.054	3.856	11.374	4.587
Road 11	11	1700-1800	5.712	8.418	7.332	11.226	5.712	3.898	5.858	3.898	12.178	6.286	4.078	11.606	4.887
		1800-1900	5.972	8.718	7.632	11.574	5.972	4.108	6.082	4.108	12.412	6.518	4.300	11.838	5.187
Road 11	11	1900-2000	6.232	9.018	7.932	11.922	6.232	4.318	6.306	4.318	12.646	6.750	4.522	12.070	5.487
		2000-2100	6.492	9.318	8.232	12.270	6.492	4.528	6.530	4.528	12.880	6.982	4.744	12.302	5.787
Road 11	11	2100-2200	6.752	9.618	8.532	12.618	6.752	4.738	6.754	4.738	13.114	7.214	4.966	12.534	6.087
		2200-2300	7.012	9.918	8.832	12.966	7.012	4.948	6.978	4.948	13.348	7.446	5.188	12.766	6.387
Road 11	11	2300-2400	7.272	10.218	9.132	13.314	7.272	5.158	7.202	5.158	13.582	7.678	5.410	12.998	6.687
		2400-0100	7.532	10.518	9.432	13.662	7.532	5.368	7.426	5.368	13.816	7.910	5.632	13.230	6.987
Road 11	11	0100-0200	7.792	10.818	9.732	13.910	7.792	5.578	7.674	5.578	14.050	8.142	5.854	13.462	7.287
Road 11	11	0200-0300	8.052	11.118	10.032	14.258	8.052	5.788	7.922	5.788	14.284	8.374	6.076	13.694	7.587
Road 11	11	0300-0400	8.312	11.418	10.332	14.606	8.312	5.998	8.170	5.998	14.518	8.606	6.298	13.926	7.887
Road 11	11	0400-0500	8.572	11.718	10.632	14.954	8.572	6.208	8.418	6.208	14.752	8.838	6.520	14.158	8.187
Road 11	11	0500-0600	8.832	12.018	10.932	15.302	8.832	6.418	8.656	6.418	14.986	9.070	6.742	14.390	8.487
Road 11	11	0600-0700	9.092	12.318	11.232	15.650	9.092	6.628	8.894	6.628	15.220	9.302	6.964	14.622	8.787
Road 11	11	0700-0800	9.352	12.618	11.532	15.998	9.352	6.838	9.132	6.838	15.454	9.534	7.186	14.854	9.087
Road 11	11	0800-0900	9.612	12.918	11.832	16.346	9.612	7.048	9.370	7.048	15.688	9.766	7.408	15.086	9.387
Road 11	11	0900-1000	9.872	13.218	12.132	16.694	9.872	7.258	9.606	7.258	15.922	9.998	7.630	15.318	9.687
Road 11	11	1000-1100	10.132	13.518	12.432	17.042	10.132	7.468	9.844	7.468	16.156	10.230	7.852	15.550	9.987
Road 11	11	1100-1200	10.392	13.818	12.732	17.390	10.392	7.678	10.082	7.678	16.390	10.462	8.074	15.782	10.287
Road 11	11	1200-1300	10.652	14.118	13.032	17.738	10.652	7.888	10.320	7.888	16.624	10.694	8.296	16.014	10.587
Road 11	11	1300-1400	10.912	14.418	13.332	18.086	10.912	8.098	10.558	8.098	16.858	10.926	8.518	16.246	10.887
Road 11	11	1400-1500	11.172	14.718	13.632	18.434	11.172	8.308	10.796	8.308	17.092	11.158	8.740	16.478	11.187
Road 11	11	1500-1600	11.432	15.018	13.932	18.782	11.432	8.518	11.034	8.518	17.326	11.390	8.962	16.710	11.487
Road 11	11	1600-1700	11.692	15.318	14.232	19.130	11.692	8.728	11.272	8.728	17.560	11.622	9.184	16.942	11.787
Road 11	11	1700-1800	11.952	15.618	14.532	19.478	11.952	8.938	11.510	8.938	17.794	11.854	9.406	17.174	12.087
Road 11	11	1800-1900	12.212	15.918	14.832	19.826	12.212	9.148	11.748	9.148	18.028	12.086	9.628	17.406	12.387
Road 11	11	1900-2000	12.472	16.218	15.132	20.174	12.472	9.358	11.986	9.358	18.262	12.318	9.850	17.638	12.687
Road 11	11	2000-2100	12.732	16.518	15.432	20.522	12.732	9.568	12.224	9.568	18.496	12.550	10.072	17.870	12.987
Road 11	11	2100-2200	12.992	16.818	15.732	20.870	12.992	9.778	12.462	9.778	18.730	12.782	10.294	18.102	13.287
Road 11	11	2200-2300	13.252	17.118	16.032	21.218	13.252	9.988	12.698	9.988	18.964	13.014	10.516	18.334	13.587
Road 11	11	2300-2400	13.512	17.418	16.332	21.566	13.512	10.198	12.936	10.198	19.198	13.246	10.738	18.566	13.887
Road 11	11	2400-0100	13.772	17.718	16.632	21.914	13.772	10.408	13.174	10.408	19.432	13.478	10.960	18.798	14.187
Road 11	11	0100-0200	14.032	18.018	16.932	22.262	14.032	10.618	13.412	10.618	19.666	13.710	11.182	19.030	14.487
Road 11	11	0200-0300	14.292	18.318	17.232	22.610	14.292	10.828	13.650	10.828	19.900	13.942	11.404	19.262	14.787
Road 11	11	0300-0400	14.552	18.618	17.532	22.958	14.552	11.038	13.888	11.038	20.134	14.174	11.626	19.494	15.087
Road 11	11	0400-0500	14.812	18.918	17.832	23.306	14.812	11.248	14.126	11.248	20.368	14.406	11.848	19.726	15.387
Road 11	11	0500-0600	15.072	19.218	18.132	23.654	15.072	11.458	14.364	11.458	20.602	14.638	12.070	19.958	15.687
Road 11	11	0600-0700	15.332	19.518	18.432	24.002	15.332	11.668	14.602	11.668	20.836	14.870	12.292	20.190	15.987
Road 11	11	0700-0800	15.592	19.818	18.732	24.350	15.592	11.878	14.840	11.878	21.070	15.102	12.514	20.422	16.287
Road 11	11	0800-0900	15.852	20.118	19.032	24.698	15.852	12.088	15.078	12.088	21.304	15.334	12.736	20.654	16.587
Road 11	11	0900-1000	16.112	20.418	19.332	25.046	16.112	12.298	15.316	12.298	21.538	15.566	12.958	20.886	16.887
Road 11	11	1000-1100	16.372	20.718	19.632	25.394	16.372	12.508	15.554	12.508	21.772	15.798	13.180	21.118	17.187
Road 11	11	1100-1200	16.632	21.018	19.932	25.742	16.632	12.718	15.792	12.718	22.006	16.030	13.402	21.350	17.487
Road 11	11	1200-1300	16.892	21.318	20.232	26.090	16.892	12.928	16.030	12.928	22.240	16.262	13.624	21.582	17.787
Road 11	11	1300-1400	17.152	21.618	20.532	26.438	17.152	13.138	16.268	13.138	22.474	16.494	13.846	21.814	18.087
Road 11	11	1400-1500	17.412	21.918	20.832	26.786	17.412	13.348	16.506	13.348	22.708	16.726	14.068	22.046	18.387
Road 11	11	1500-1600	17.672	22.218	21.132	27.134	17.672	13.558	16.744	13.558	22.942	16.958	14.290	22.278	18.687
Road 11	11	1600-1700	17.932	22.518	21.432	27.482	17.932	13.768	16.982	13.768	23.176	17.190	14.512	22.510	18.987
Road 11	11	1700-1800	18.192	22.818	21.732	27.830	18.192	13.978	17.220	13.978	23.410	17.422	14.734	22.742	19.287
Road 11	11	1800-1900	18.452	23.118	22.032	28.178	18.452	14.188	17.458	14.188	23.644	17.654	14.956	22.974	19.587
Road 11	11	1900-2000	18.712	23.418	22.332	28.526	18.712	14.398	17.696	14.398	23.878	17.886	15.178	23.206	19.887
Road 11	11	2000-2100	18.972	23.718	22.632	28.874	18.972	14.608	17.934	14.608	24.112	18.118	15.400	23.438	20.187
Road 11	11	2100-2200	19.232	24.018	22.932	29.222	19.232	14.818	18.172	14.818	24.346	18.350	15.622	23.670	20.487
Road 11	11	2200-2300	19.492	24.318	23.232	29.570	19.492	15.028	18.410	15.028	24.580	18.582	15.844	23.902	20.787
Road 11	11	2300-2400	19.752	24.618	23.532	29.918	19.752	15.238	18.648	15.238	24.814	18.814	16.066	24.134	21.087
Road 11	11	2400-0100	20.012	24.918	23.832	30.266	20.012	15.448	18.886	15.448	25.048	19.046	16.288	24.366	21.387
Road 11	11	0100-0200	20.272	25.218	24.132	30.614	20.272	15.658	19.124	15.658	25.282	19.278	16.510	24.598	21.687
Road 11	11	0200-0300	20.532	25.518	24.432	30.962	20.532	15.868	19.362	15.868	25.516	19.510	16.732	24.830	21.987
Road 11	11	0300-0400	20.792	25.818	24.732	31.310	20.792	16							

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Top North End Environment Factor														
Year 2008														
Road Name	Road ID	Hour	NO _x Emission					PM ₁₀ Emission						
			Monthly/Average		Monthly/Average		Monthly/Average		Monthly/Average		Monthly/Average			
			g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³
Read 14	14	0800-0900	3.88	7.83	1.31	2.81	0.71	1.07	1.19	2.81	4.86	1.01	2.49	4.10
Read 14	14	0900-1000	3.95	7.94	1.32	2.83	0.72	1.07	1.20	2.83	4.89	1.02	2.50	4.11
Read 14	14	1000-1100	4.02	8.05	1.33	2.85	0.73	1.08	1.21	2.85	4.92	1.03	2.51	4.12
Read 14	14	1100-1200	4.09	8.16	1.34	2.87	0.74	1.09	1.22	2.87	4.95	1.04	2.52	4.13
Read 14	14	1200-1300	4.16	8.27	1.35	2.89	0.75	1.10	1.23	2.89	4.98	1.05	2.53	4.14
Read 14	14	1300-1400	4.23	8.38	1.36	2.91	0.76	1.11	1.24	2.91	5.01	1.06	2.54	4.15
Read 14	14	1400-1500	4.30	8.49	1.37	2.93	0.77	1.12	1.25	2.93	5.04	1.07	2.55	4.16
Read 14	14	1500-1600	4.37	8.60	1.38	2.95	0.78	1.13	1.26	2.95	5.07	1.08	2.56	4.17
Read 14	14	1600-1700	4.44	8.71	1.39	2.97	0.79	1.14	1.27	2.97	5.10	1.09	2.57	4.18
Read 14	14	1700-1800	4.51	8.82	1.40	2.99	0.80	1.15	1.28	2.99	5.13	1.10	2.58	4.19
Read 14	14	1800-1900	4.58	8.93	1.41	3.01	0.81	1.16	1.29	3.01	5.16	1.11	2.59	4.20
Read 14	14	1900-2000	4.65	9.04	1.42	3.03	0.82	1.17	1.30	3.03	5.19	1.12	2.60	4.21
Read 14	14	2000-2100	4.72	9.15	1.43	3.05	0.83	1.18	1.31	3.05	5.22	1.13	2.61	4.22
Read 14	14	2100-2200	4.79	9.26	1.44	3.07	0.84	1.19	1.32	3.07	5.25	1.14	2.62	4.23
Read 14	14	2200-2300	4.86	9.37	1.45	3.09	0.85	1.20	1.33	3.09	5.28	1.15	2.63	4.24
Read 14	14	2300-2400	4.93	9.48	1.46	3.11	0.86	1.21	1.34	3.11	5.31	1.16	2.64	4.25
Read 14	14	2400-2500	5.00	9.59	1.47	3.13	0.87	1.22	1.35	3.13	5.34	1.17	2.65	4.26
Read 14	14	2500-2600	5.07	9.70	1.48	3.15	0.88	1.23	1.36	3.15	5.37	1.18	2.66	4.27
Read 14	14	2600-2700	5.14	9.81	1.49	3.17	0.89	1.24	1.37	3.17	5.40	1.19	2.67	4.28
Read 14	14	2700-2800	5.21	9.92	1.50	3.19	0.90	1.25	1.38	3.19	5.43	1.20	2.68	4.29
Read 14	14	2800-2900	5.28	10.03	1.51	3.21	0.91	1.26	1.39	3.21	5.46	1.21	2.69	4.30
Read 14	14	2900-3000	5.35	10.14	1.52	3.23	0.92	1.27	1.40	3.23	5.49	1.22	2.70	4.31
Read 14	14	3000-3100	5.42	10.25	1.53	3.25	0.93	1.28	1.41	3.25	5.52	1.23	2.71	4.32
Read 14	14	3100-3200	5.49	10.36	1.54	3.27	0.94	1.29	1.42	3.27	5.55	1.24	2.72	4.33
Read 14	14	3200-3300	5.56	10.47	1.55	3.29	0.95	1.30	1.43	3.29	5.58	1.25	2.73	4.34
Read 14	14	3300-3400	5.63	10.58	1.56	3.31	0.96	1.31	1.44	3.31	5.61	1.26	2.74	4.35
Read 14	14	3400-3500	5.70	10.69	1.57	3.33	0.97	1.32	1.45	3.33	5.64	1.27	2.75	4.36
Read 14	14	3500-3600	5.77	10.80	1.58	3.35	0.98	1.33	1.46	3.35	5.67	1.28	2.76	4.37
Read 14	14	3600-3700	5.84	10.91	1.59	3.37	0.99	1.34	1.47	3.37	5.70	1.29	2.77	4.38
Read 14	14	3700-3800	5.91	11.02	1.60	3.39	1.00	1.35	1.48	3.39	5.73	1.30	2.78	4.39
Read 14	14	3800-3900	5.98	11.13	1.61	3.41	1.01	1.36	1.49	3.41	5.76	1.31	2.79	4.40
Read 14	14	3900-4000	6.05	11.24	1.62	3.43	1.02	1.37	1.50	3.43	5.79	1.32	2.80	4.41
Read 14	14	4000-4100	6.12	11.35	1.63	3.45	1.03	1.38	1.51	3.45	5.82	1.33	2.81	4.42
Read 14	14	4100-4200	6.19	11.46	1.64	3.47	1.04	1.39	1.52	3.47	5.85	1.34	2.82	4.43
Read 14	14	4200-4300	6.26	11.57	1.65	3.49	1.05	1.40	1.53	3.49	5.88	1.35	2.83	4.44
Read 14	14	4300-4400	6.33	11.68	1.66	3.51	1.06	1.41	1.54	3.51	5.91	1.36	2.84	4.45
Read 14	14	4400-4500	6.40	11.79	1.67	3.53	1.07	1.42	1.55	3.53	5.94	1.37	2.85	4.46
Read 14	14	4500-4600	6.47	11.90	1.68	3.55	1.08	1.43	1.56	3.55	5.97	1.38	2.86	4.47
Read 14	14	4600-4700	6.54	12.01	1.69	3.57	1.09	1.44	1.57	3.57	6.00	1.39	2.87	4.48
Read 14	14	4700-4800	6.61	12.12	1.70	3.59	1.10	1.45	1.58	3.59	6.03	1.40	2.88	4.49
Read 14	14	4800-4900	6.68	12.23	1.71	3.61	1.11	1.46	1.59	3.61	6.06	1.41	2.89	4.50
Read 14	14	4900-5000	6.75	12.34	1.72	3.63	1.12	1.47	1.60	3.63	6.09	1.42	2.90	4.51
Read 14	14	5000-5100	6.82	12.45	1.73	3.65	1.13	1.48	1.61	3.65	6.12	1.43	2.91	4.52
Read 14	14	5100-5200	6.89	12.56	1.74	3.67	1.14	1.49	1.62	3.67	6.15	1.44	2.92	4.53
Read 14	14	5200-5300	6.96	12.67	1.75	3.69	1.15	1.50	1.63	3.69	6.18	1.45	2.93	4.54
Read 14	14	5300-5400	7.03	12.78	1.76	3.71	1.16	1.51	1.64	3.71	6.21	1.46	2.94	4.55
Read 14	14	5400-5500	7.10	12.89	1.77	3.73	1.17	1.52	1.65	3.73	6.24	1.47	2.95	4.56
Read 14	14	5500-5600	7.17	13.00	1.78	3.75	1.18	1.53	1.66	3.75	6.27	1.48	2.96	4.57
Read 14	14	5600-5700	7.24	13.11	1.79	3.77	1.19	1.54	1.67	3.77	6.30	1.49	2.97	4.58
Read 14	14	5700-5800	7.31	13.22	1.80	3.79	1.20	1.55	1.68	3.79	6.33	1.50	2.98	4.59
Read 14	14	5800-5900	7.38	13.33	1.81	3.81	1.21	1.56	1.69	3.81	6.36	1.51	2.99	4.60
Read 14	14	5900-6000	7.45	13.44	1.82	3.83	1.22	1.57	1.70	3.83	6.39	1.52	3.00	4.61
Read 14	14	6000-6100	7.52	13.55	1.83	3.85	1.23	1.58	1.71	3.85	6.42	1.53	3.01	4.62
Read 14	14	6100-6200	7.59	13.66	1.84	3.87	1.24	1.59	1.72	3.87	6.45	1.54	3.02	4.63
Read 14	14	6200-6300	7.66	13.77	1.85	3.89	1.25	1.60	1.73	3.89	6.48	1.55	3.03	4.64
Read 14	14	6300-6400	7.73	13.88	1.86	3.91	1.26	1.61	1.74	3.91	6.51	1.56	3.04	4.65
Read 14	14	6400-6500	7.80	13.99	1.87	3.93	1.27	1.62	1.75	3.93	6.54	1.57	3.05	4.66
Read 14	14	6500-6600	7.87	14.10	1.88	3.95	1.28	1.63	1.76	3.95	6.57	1.58	3.06	4.67
Read 14	14	6600-6700	7.94	14.21	1.89	3.97	1.29	1.64	1.77	3.97	6.60	1.59	3.07	4.68
Read 14	14	6700-6800	8.01	14.32	1.90	3.99	1.30	1.65	1.78	3.99	6.63	1.60	3.08	4.69
Read 14	14	6800-6900	8.08	14.43	1.91	4.01	1.31	1.66	1.79	4.01	6.66	1.61	3.09	4.70
Read 14	14	6900-7000	8.15	14.54	1.92	4.03	1.32	1.67	1.80	4.03	6.69	1.62	3.10	4.71
Read 14	14	7000-7100	8.22	14.65	1.93	4.05	1.33	1.68	1.81	4.05	6.72	1.63	3.11	4.72
Read 14	14	7100-7200	8.29	14.76	1.94	4.07	1.34	1.69	1.82	4.07	6.75	1.64	3.12	4.73
Read 14	14	7200-7300	8.36	14.87	1.95	4.09	1.35	1.70	1.83	4.09	6.78	1.65	3.13	4.74
Read 14	14	7300-7400	8.43	14.98	1.96	4.11	1.36	1.71	1.84	4.11	6.81	1.66	3.14	4.75
Read 14	14	7400-7500	8.50	15.09	1.97	4.13	1.37	1.72	1.85	4.13	6.84	1.67	3.15	4.76
Read 14	14	7500-7600	8.57	15.20	1.98	4.15	1.38	1.73	1.86	4.15	6.87	1.68	3.16	4.77
Read 14	14	7600-7700	8.64	15.31	1.99	4.17	1.39	1.74	1.87	4.17	6.90	1.69	3.17	4.78
Read 14	14	7700-7800	8.71	15.42	2.00	4.19	1.40	1.75	1.88	4.19	6.93	1.70	3.18	4.79
Read 14	14	7800-7900	8.78	15.53	2.01	4.21	1.41	1.76	1.89	4.21	6.96	1.71	3.19	4.80
Read 14	14	7900-8000	8.85	15.64	2.02	4.23	1.42	1.77	1.90	4.23	6.99	1.72	3.20	4.81
Read 14	14	8000-8100	8.92	15.75	2.03	4.25	1.43	1.78	1.91	4.25	7.02	1.73	3.21	4.82
Read 14	14	8100-8200	8.99	15.86	2.04	4.27	1.44	1.79	1.92	4.27	7.05	1.74	3.22	4.83
Read 14	14	8200-8300	9.06	15.97	2.05	4.29	1.45	1.80	1.93	4.29	7.08	1.75	3.23	4.84
Read 14	14	8300-8400	9.13	16.08	2.06	4.31	1.46	1.81	1.94	4.31	7.11	1.76	3.24	4.85
Read 14	14	8400-8500	9.20	16.19	2.07	4.33	1.47	1.82	1.95	4.33	7.14	1.77	3.25	4.86
Read 14	14	8500-8600	9.27	16.30	2.08	4.35	1.48	1.83	1.96	4.35	7.17	1.78	3.26	4.87
Read 14	14	8600-8700	9.34	16.41	2.09	4.37	1.49	1.84	1.97	4.37	7.20	1.79	3.27	4.88
Read 14	14	8700-8800	9.41	16.52	2.10	4.39	1.50	1.85	1.98	4.39	7.23	1.80	3.28	4.89
Read 14	14	8800-8900	9.48	16.63	2.11	4.41	1.51	1.86	1.99	4.41	7.26	1.81	3.29	4.90
Read 14	14	8900-9000	9.55	16.74	2.12	4.43	1.52	1.87	2.00	4.43	7.29	1.82	3.30	4.91
Read 14	14	9000-9100	9.62	16.85	2.13	4.45	1.53	1.88	2.01	4.45	7.32	1.83	3.31	4.92
Read 14	14	9100-9200	9.69	16.96	2.14	4.47	1.54	1.89	2.02	4.47	7.35	1.84	3.32	4.93
Read 14	14	9200-9300	9.76											

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Open Road\Appendix 3.5.4 Emission Factor in 2038

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Water North End Environment Factors														
Year 2008														
Date	Time	Hour	No. Emersion		Monthly Average		No. Emersion		Monthly Average		No. Emersion		Monthly Average	
			g/h/m ²	g/m ²	g/h/m ²	g/m ²	g/h/m ²	g/m ²	g/h/m ²	g/m ²	g/h/m ²	g/m ²	g/h/m ²	g/m ²
Reap 27	17	1600	1.544	3.938	1.216	1.320	3.378	1.076	1.488	1.408	4.308	4.688	1.398	1.848
Reap 27	17	1700	1.388	3.568	1.472	1.388	3.568	1.088	1.292	1.252	4.552	4.552	1.398	1.848
Reap 27	17	1800	1.112	3.088	1.472	1.388	3.568	1.088	1.292	1.252	4.552	4.552	1.398	1.848
Reap 27	17	1900	2.000	5.000	1.108	1.378	0.712	0.958	2.872	0.722	4.352	4.148	3.718	3.182
Reap 27	17	2000	1.032	2.592	1.472	1.388	3.568	1.088	1.292	1.252	4.552	4.552	1.398	1.848
Reap 27	17	2100	1.048	8.808	0.712	0.958	2.872	0.722	4.352	4.148	3.718	3.182	1.848	1.848
Reap 27	17	2200	1.312	8.128	0.568	0.728	2.212	0.512	4.108	3.652	4.552	4.552	1.398	1.848
Reap 27	17	2300	1.112	3.088	1.472	1.388	3.568	1.088	1.292	1.252	4.552	4.552	1.398	1.848
Reap 27	18	0000	4.488	8.898	1.108	1.378	0.712	0.958	2.872	0.722	4.352	4.148	3.718	3.182
Reap 27	18	0100	1.792	4.592	1.472	1.388	3.568	1.088	1.292	1.252	4.552	4.552	1.398	1.848
Reap 27	18	0200	9.228	4.748	2.698	0.688	0.888	4.468	2.518	0.312	2.212	1.268	3.998	2.058
Reap 27	18	0300	1.112	3.088	1.472	1.388	3.568	1.088	1.292	1.252	4.552	4.552	1.398	1.848
Reap 27	18	0400	1.078	4.888	1.472	1.388	3.568	1.088	1.292	1.252	4.552	4.552	1.398	1.848
Reap 27	18	0500	1.448	9.088	1.108	1.378	0.712	0.958	2.872	0.722	4.352	4.148	3.718	3.182
Reap 27	18	0600	1.212	9.088	1.108	1.378	0.712	0.958	2.872	0.722	4.352	4.148	3.718	3.182
Reap 27	18	0700	1.392	4.632	2.648	0.512	0.648	2.392	0.552	1.998	1.132	4.822	1.708	0.658
Reap 27	18	0800	2.148	4.632	2.648	0.512	0.648	2.392	0.552	1.998	1.132	4.822	1.708	0.658
Reap 27	18	0900	1.112	3.088	1.472	1.388	3.568	1.088	1.292	1.252	4.552	4.552	1.398	1.848
Reap 27	18	1000	1.544	4.632	1.098	1.308	1.112	2.488	0.312	2.212	1.268	3.998	2.058	1.772
Reap 27	18	1100	1.748	5.632	0.712	0.958	2.872	0.722	4.352	4.148	3.718	3.182	1.848	1.848
Reap 27	18	1200	1.488	5.632	0.712	0.958	2.872	0.722	4.352	4.148	3.718	3.182	1.848	1.848
Reap 27	18	1300	1.544	3.608	0.728	0.958	2.872	0.722	4.352	4.148	3.718	3.182	1.848	1.848
Reap 27	18	1400	1.544	3.608	0.728	0.958	2.872	0.722	4.352	4.148	3.718	3.182	1.848	1.848
Reap 27	18	1500	1.588	4.032	2.288	1.338	1.3	1.3	1.838	1.838	3.738	3.318	3.248	3.738
Reap 27	18	1600	4.848	3.878	0.712	0.958	2.872	0.722	4.352	4.148	3.718	3.182	1.848	1.848
Reap 27	18	1700	3.888	3.588	1.472	1.388	3.568	1.088	1.292	1.252	4.552	4.552	1.398	1.848
Reap 27	18	1800	1.098	3.388	1.878	0.512	0.648	2.392	0.552	1.998	1.132	4.822	1.708	0.658
Reap 27	18	1900	2.148	4.632	2.648	0.512	0.648	2.392	0.552	1.998	1.132	4.822	1.708	0.658
Reap 27	18	2000	1.112	3.088	1.472	1.388	3.568	1.088	1.292	1.252	4.552	4.552	1.398	1.848
Reap 27	18	2100	1.544	4.632	1.098	1.308	1.112	2.488	0.312	2.212	1.268	3.998	2.058	1.772
Reap 27	18	2200	1.748	5.632	0.712	0.958	2.872	0.722	4.352	4.148	3.718	3.182	1.848	1.848
Reap 27	18	2300	1.488	5.632	0.712	0.958	2.872	0.722	4.352	4.148	3.718	3.182	1.848	1.848
Reap 27	19	0000	1.544	3.608	0.728	0.958	2.872	0.722	4.352	4.148	3.718	3.182	1.848	1.848
Reap 27	19	0100	1.544	3.608	0.728	0.958	2.872	0.722	4.352	4.148	3.718	3.182	1.848	1.848
Reap 27	19	0200	1.588	4.032	2.288	1.338	1.3	1.3	1.838	1.838	3.738	3.318	3.248	3.738
Reap 27	19	0300	4.848	3.878	0.712	0.958	2.872	0.722	4.352	4.148	3.718	3.182	1.848	1.848
Reap 27	19	0400	3.888	3.588	1.472	1.388	3.568	1.088	1.292	1.252	4.552	4.552	1.398	1.848
Reap 27	19	0500	1.098	3.388	1.878	0.512	0.648	2.392	0.552	1.998	1.132	4.822	1.708	0.658
Reap 27	19	0600	2.148	4.632	2.648	0.512	0.648	2.392	0.552	1.998	1.132	4.822	1.708	0.658
Reap 27	19	0700	1.112	3.088	1.472	1.388	3.568	1.088	1.292	1.252	4.552	4.552	1.398	1.848
Reap 27	19	0800	1.544	4.632	1.098	1.308	1.112	2.488	0.312	2.212	1.268	3.998	2.058	1.772
Reap 27	19	0900	1.748	5.632	0.712	0.958	2.872	0.722	4.352	4.148	3.718	3.182	1.848	1.848
Reap 27	19	1000	1.488	5.632	0.712	0.958	2.872	0.722	4.352	4.148	3.718	3.182	1.848	1.848
Reap 27	19	1100	1.544	3.608	0.728	0.958	2.872	0.722	4.352	4.148	3.718	3.182	1.848	1.848
Reap 27	19	1200	1.544	3.608	0.728	0.958	2.872	0.722	4.352	4.148	3.718	3.182	1.848	1.848
Reap 27	19	1300	1.588	4.032	2.288	1.338	1.3	1.3	1.838	1.838	3.738	3.318	3.248	3.738
Reap 27	19	1400	4.848	3.878	0.712	0.958	2.872	0.722	4.352	4.148	3.718	3.182	1.848	1.848
Reap 27	19	1500	3.888	3.588	1.472	1.388	3.568	1.088	1.292	1.252	4.552	4.552	1.398	1.848
Reap 27	19	1600	1.098	3.388	1.878	0.512	0.648	2.392	0.552	1.998	1.132	4.822	1.708	0.658
Reap 27	19	1700	2.148	4.632	2.648	0.512	0.648	2.392	0.552	1.998	1.132	4.822	1.708	0.658
Reap 27	19	1800	1.112	3.088	1.472	1.388	3.568	1.088	1.292	1.252	4.552	4.552	1.398	1.848
Reap 27	19	1900	1.544	4.632	1.098	1.308	1.112	2.488	0.312	2.212	1.268	3.998	2.058	1.772
Reap 27	19	2000	1.748	5.632	0.712	0.958	2.872	0.722	4.352	4.148	3.718	3.182	1.848	1.848
Reap 27	19	2100	1.488	5.632	0.712	0.958	2.872	0.722	4.352	4.148	3.718	3.182	1.848	1.848
Reap 27	19	2200	1.544	3.608	0.728	0.958	2.872	0.722	4.352	4.148	3.718	3.182	1.848	1.848
Reap 27	19	2300	1.544	3.608	0.728	0.958	2.872	0.722	4.352	4.148	3.718	3.182	1.848	1.848
Reap 27	20	0000	1.588	4.032	2.288	1.338	1.3	1.3	1.838	1.838	3.738	3.318	3.248	3.738
Reap 27	20	0100	4.848	3.878	0.712	0.958	2.872	0.722	4.352	4.148	3.718	3.182	1.848	1.848
Reap 27	20	0200	3.888	3.588	1.472	1.388	3.568	1.088	1.292	1.252	4.552	4.552	1.398	1.848
Reap 27	20	0300	1.098	3.388	1.878	0.512	0.648	2.392	0.552	1.998	1.132	4.822	1.708	0.658
Reap 27	20	0400	2.148	4.632	2.648	0.512	0.648	2.392	0.552	1.998	1.132	4.822	1.708	0.658
Reap 27	20	0500	1.112	3.088	1.472	1.388	3.568	1.088	1.292	1.252	4.552	4.552	1.398	1.848
Reap 27	20	0600	1.544	4.632	1.098	1.308	1.112	2.488	0.312	2.212	1.268	3.998	2.058	1.772
Reap 27	20	0700	1.748	5.632	0.712	0.958	2.872	0.722	4.352	4.148	3.718	3.182	1.848	1.848
Reap 27	20	0800	1.488	5.632	0.712	0.958	2.872	0.722	4.352	4.148	3.718	3.182	1.848	1.848
Reap 27	20	0900	1.544	3.608	0.728	0.958	2.872	0.722	4.352	4.148	3.718	3.182	1.848	1.848
Reap 27	20	1000	1.544	3.608	0.728	0.958	2.872	0.722	4.352	4.148	3.718	3.182	1.848	1.848
Reap 27	20	1100	1.588	4.032	2.288	1.338	1.3	1.3	1.838	1.838	3.738	3.318	3.248	3.738
Reap 27	20	1200	4.848	3.878	0.712	0.958	2.872	0.722	4.352	4.148	3.718	3.182	1.848	1.848
Reap 27	20	1300	3.888	3.588	1.472	1.388	3.568	1.088	1.292	1.252	4.552	4.552	1.398	1.848
Reap 27	20	1400	1.098	3.388	1.878	0.512	0.648	2.392	0.552	1.998	1.132	4.822	1.708	0.658
Reap 27	20	1500	2.148	4.632	2.648	0.512	0.648	2.392	0.552	1.998	1.132	4.822	1.708	0.658
Reap 27	20	1600	1.112	3.088	1.472	1.388	3.568	1.088	1.292	1.252	4.552	4.552	1.398	1.848
Reap 27	20	1700	1.544	4.632	1.098	1.308	1.112	2.488	0.312	2.212	1.268	3.998	2.058	1.772
Reap 27	20	1800	1.748	5.632	0.712	0.958	2.872	0.722	4.352	4.148	3.718	3.182	1.848	1.848
Reap 27	20	1900	1.488	5.632	0.712	0.958	2.872	0.722	4.352	4.148	3.718	3.182	1.848	1.848
Reap 27	20	2000	1.544	3.608	0.728	0.958	2.872	0.722	4.352	4.148	3.718	3.182	1.848	1.848
Reap 27	20	2100	1.544	3.608	0.728	0.958	2.872	0.722	4.352	4.148	3.718	3.182	1.848	1.848
Reap 27	20	2200	1.588	4.032	2.288	1.338	1.3	1.3	1.838	1.838	3.738	3.318	3.248	3.738
Reap 27	20	2300	4.848	3.878	0.712	0.958	2.872	0.722	4.352	4.148	3.718	3.182	1.848	1.848
Reap 27	21	0000	3.888	3.588	1.472	1.388	3.568	1.088	1.292	1.252				

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Top 10 North Underdevelopment Quarry														
Open Road 2 Hour Emission Factors for ARB/CDD Model														
Road Name	Road ID	Hour	MO Emission						NO Emission					
			Monthly/tonnage		Monthly/hour		Monthly/tonnage		Monthly/hour		Monthly/tonnage			
			g/hr	g/ton	g/hr	g/ton	g/hr	g/ton	g/hr	g/ton	g/hr	g/ton		
Road 24	24	0800-0900	1.364	2.531	6.587	1.188	2.386	5.717	0.570	9.787	2.446	4.371	8.447	2.125
Road 24	24	0900-1000	1.364	2.531	6.587	1.188	2.386	5.717	0.570	9.787	2.446	4.371	8.447	2.125
Road 24	24	1000-1100	1.364	2.531	6.587	1.188	2.386	5.717	0.570	9.787	2.446	4.371	8.447	2.125
Road 24	24	1100-1200	1.486	2.645	7.438	1.274	2.525	6.267	0.728	10.606	2.653	4.852	8.708	2.248
Road 24	24	1200-1300	1.558	2.759	7.962	1.360	2.640	6.666	0.786	11.256	2.860	5.165	9.202	2.371
Road 24	24	1300-1400	1.558	2.759	7.962	1.360	2.640	6.666	0.786	11.256	2.860	5.165	9.202	2.371
Road 24	24	1400-1500	1.615	2.846	8.378	1.435	2.730	6.989	0.836	11.766	3.036	5.468	9.589	2.488
Road 24	24	1500-1600	1.615	2.846	8.378	1.435	2.730	6.989	0.836	11.766	3.036	5.468	9.589	2.488
Road 24	24	1600-1700	1.747	3.185	8.814	1.540	2.735	8.847	0.943	12.466	3.346	5.867	9.978	2.610
Road 24	24	1700-1800	1.747	3.185	8.814	1.540	2.735	8.847	0.943	12.466	3.346	5.867	9.978	2.610
Road 24	24	1800-1900	1.805	3.262	9.228	1.615	2.735	9.211	0.970	12.976	3.522	6.170	10.372	2.733
Road 24	24	1900-2000	1.805	3.262	9.228	1.615	2.735	9.211	0.970	12.976	3.522	6.170	10.372	2.733
Road 24	24	2000-2100	1.805	3.262	9.228	1.615	2.735	9.211	0.970	12.976	3.522	6.170	10.372	2.733
Road 24	24	2100-2200	1.805	3.262	9.228	1.615	2.735	9.211	0.970	12.976	3.522	6.170	10.372	2.733
Road 24	24	2200-2300	1.805	3.262	9.228	1.615	2.735	9.211	0.970	12.976	3.522	6.170	10.372	2.733
Road 24	24	2300-2400	1.805	3.262	9.228	1.615	2.735	9.211	0.970	12.976	3.522	6.170	10.372	2.733
Road 25	25	0800-0900	1.158	0.678	1.840	0.940	1.795	4.588	0.775	1.515	2.927	1.845	0.721	1.728
Road 25	25	0900-1000	1.158	0.678	1.840	0.940	1.795	4.588	0.775	1.515	2.927	1.845	0.721	1.728
Road 25	25	1000-1100	1.279	0.688	1.840	0.940	1.795	4.588	0.775	1.515	2.927	1.845	0.721	1.728
Road 25	25	1100-1200	1.279	0.688	1.840	0.940	1.795	4.588	0.775	1.515	2.927	1.845	0.721	1.728
Road 25	25	1200-1300	1.400	0.700	1.840	0.940	1.795	4.588	0.775	1.515	2.927	1.845	0.721	1.728
Road 25	25	1300-1400	1.400	0.700	1.840	0.940	1.795	4.588	0.775	1.515	2.927	1.845	0.721	1.728
Road 25	25	1400-1500	1.400	0.700	1.840	0.940	1.795	4.588	0.775	1.515	2.927	1.845	0.721	1.728
Road 25	25	1500-1600	1.400	0.700	1.840	0.940	1.795	4.588	0.775	1.515	2.927	1.845	0.721	1.728
Road 25	25	1600-1700	1.521	0.710	1.840	0.940	1.795	4.58	0.775	1.515	2.927	1.845	0.721	1.728
Road 25	25	1700-1800	1.521	0.710	1.840	0.940	1.795	4.58	0.775	1.515	2.927	1.845	0.721	1.728
Road 25	25	1800-1900	1.521	0.710	1.840	0.940	1.795	4.58	0.775	1.515	2.927	1.845	0.721	1.728
Road 25	25	1900-2000	1.521	0.710	1.840	0.940	1.795	4.58	0.775	1.515	2.927	1.845	0.721	1.728
Road 25	25	2000-2100	1.521	0.710	1.840	0.940	1.795	4.58	0.775	1.515	2.927	1.845	0.721	1.728
Road 25	25	2100-2200	1.521	0.710	1.840	0.940	1.795	4.58	0.775	1.515	2.927	1.845	0.721	1.728
Road 25	25	2200-2300	1.521	0.710	1.840	0.940	1.795	4.58	0.775	1.515	2.927	1.845	0.721	1.728
Road 25	25	2300-2400	1.521	0.710	1.840	0.940	1.795	4.58	0.775	1.515	2.927	1.845	0.721	1.728
Road 26	26	0800-0900	1.406	2.647	1.006	1.235	2.446	0.974	4.898	1.006	1.767	0.944	8.716	1.376
Road 26	26	0900-1000	1.406	2.647	1.006	1.235	2.446	0.974	4.898	1.006	1.767	0.944	8.716	1.376
Road 26	26	1000-1100	1.406	2.647	1.006	1.235	2.446	0.974	4.898	1.006	1.767	0.944	8.716	1.376
Road 26	26	1100-1200	1.527	2.761	1.006	1.334	2.607	0.974	5.188	1.498	1.906	4.788	1.770	1.788
Road 26	26	1200-1300	1.527	2.761	1.006	1.334	2.607	0.974	5.188	1.498	1.906	4.788	1.770	1.788
Road 26	26	1300-1400	1.527	2.761	1.006	1.334	2.607	0.974	5.188	1.498	1.906	4.788	1.770	1.788
Road 26	26	1400-1500	1.527	2.761	1.006	1.334	2.607	0.974	5.188	1.498	1.906	4.788	1.770	1.788
Road 26	26	1500-1600	1.648	2.876	1.006	1.443	2.771	0.974	5.480	1.906	2.018	4.898	1.888	1.898
Road 26	26	1600-1700	1.648	2.876	1.006	1.443	2.771	0.974	5.480	1.906	2.018	4.898	1.888	1.898
Road 26	26	1700-1800	1.648	2.876	1.006	1.443	2.771	0.974	5.480	1.906	2.018	4.898	1.888	1.898
Road 26	26	1800-1900	1.648	2.876	1.006	1.443	2.771	0.974	5.480	1.906	2.018	4.898	1.888	1.898
Road 26	26	1900-2000	1.648	2.876	1.006	1.443	2.771	0.974	5.480	1.906	2.018	4.898	1.888	1.898
Road 26	26	2000-2100	1.648	2.876	1.006	1.443	2.771	0.974	5.480	1.906	2.018	4.898	1.888	1.898
Road 26	26	2100-2200	1.648	2.876	1.006	1.443	2.771	0.974	5.480	1.906	2.018	4.898	1.888	1.898
Road 26	26	2200-2300	1.648	2.876	1.006	1.443	2.771	0.974	5.480	1.906	2.018	4.898	1.888	1.898
Road 26	26	2300-2400	1.648	2.876	1.006	1.443	2.771	0.974	5.480	1.906	2.018	4.898	1.888	1.898
Road 27	27	0800-0900	1.412	2.647	1.006	1.235	2.446	0.974	4.898	1.006	1.767	0.944	8.716	1.376
Road 27	27	0900-1000	1.412	2.647	1.006	1.235	2.446	0.974	4.898	1.006	1.767	0.944	8.716	1.376
Road 27	27	1000-1100	1.412	2.647	1.006	1.235	2.446	0.974	4.898	1.006	1.767	0.944	8.716	1.376
Road 27	27	1100-1200	1.533	2.761	1.006	1.334	2.607	0.974	5.188	1.498	1.906	4.788	1.770	1.788
Road 27	27	1200-1300	1.533	2.761	1.006	1.334	2.607	0.974	5.188	1.498	1.906	4.788	1.770	1.788
Road 27	27	1300-1400	1.533	2.761	1.006	1.334	2.607	0.974	5.188	1.498	1.906	4.788	1.770	1.788
Road 27	27	1400-1500	1.533	2.761	1.006	1.334	2.607	0.974	5.188	1.498	1.906	4.788	1.770	1.788
Road 27	27	1500-1600	1.654	2.876	1.006	1.443	2.771	0.974	5.480	1.906	2.018	4.898	1.888	1.898
Road 27	27	1600-1700	1.654	2.876	1.006	1.443	2.771	0.974	5.480	1.906	2.018	4.898	1.888	1.898
Road 27	27	1700-1800	1.654	2.876	1.006	1.443	2.771	0.974	5.480	1.906	2.018	4.898	1.888	1.898
Road 27	27	1800-1900	1.654	2.876	1.006	1.443	2.771	0.974	5.480	1.906	2.018	4.898	1.888	1.898
Road 27	27	1900-2000	1.654	2.876	1.006	1.443	2.771	0.974	5.480	1.906	2.018	4.898	1.888	1.898
Road 27	27	2000-2100	1.654	2.876	1.006	1.443	2.771	0.974	5.480	1.906	2.018	4.898	1.888	1.898
Road 27	27	2100-2200	1.654	2.876	1.006	1.443	2.771	0.974	5.480	1.906	2.018	4.898	1.888	1.898
Road 27	27	2200-2300	1.654	2.876	1.006	1.443	2.771	0.974	5.480	1.906	2.018	4.898	1.888	1.898
Road 27	27	2300-2400	1.654	2.876	1.006	1.443	2.771	0.974	5.480	1.906	2.018	4.898	1.888	1.898
Road 28	28	0800-0900	1.426	2.647	1.006	1.235	2.446	0.974	4.898	1.006	1.767	0.944	8.716	1.376
Road 28	28	0900-1000	1.426	2.647	1.006	1.235	2.446	0.974	4.898	1.006	1.767	0.944	8.716	1.376
Road 28	28	1000-1100	1.426	2.647	1.006	1.235	2.446	0.974	4.898	1.006	1.767	0.944	8.716	1.376
Road 28	28	1100-1200	1.547	2.761	1.006	1.334	2.607	0.974	5.188	1.498	1.906	4.788	1.770	1.788
Road 28	28	1200-1300	1.547	2.761	1.006	1.334	2.607	0.974	5.188	1.498	1.906	4.788	1.770	1.788
Road 28	28	1300-1400	1.547	2.761	1.006	1.334	2.607	0.974	5.188	1.498	1.906	4.788	1.770	1.788
Road 28	28	1400-1500	1.547	2.761	1.006	1.334	2.607	0.974	5.188	1.498	1.906	4.788	1.770	1.788
Road 28	28	1500-1600	1.668	2.876	1.006	1.443	2.771	0.974	5.480	1.906	2.018	4.898	1.888	1.898
Road 28	28	1600-1700	1.668	2.876	1.006	1.443	2.771	0.974	5.480	1.906	2.018	4.898	1.888	1.898
Road 28	28	1700-1800	1.668	2.876	1.006	1.443	2.771	0.974	5.480	1.906	2.018	4.898	1.888	1.898
Road 28	28	1800-1900	1.668	2.876	1.006	1.443	2.771	0.974	5.480	1.906	2.018	4.898	1.888	1.898
Road 28	28	1900-2000	1.668	2.876	1.006	1.443	2.771	0.974	5.480	1.906	2.018	4.898	1.888	1.898
Road 28	28	2000-2100	1.668	2.876	1.006	1.443	2.771	0.974	5.480	1.906	2.018	4.898	1.888	1.898
Road 28	28	2100-2200	1.668	2.876	1.006	1.443	2.771	0.974	5.480	1.906	2.018	4.898	1.888	1.898
Road 28	28	2200-2300	1.668	2.876	1.006	1.443	2.771	0.974	5.480	1.906	2			

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Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for 2010-2011

Open Road 24-hour Emission Factors for ARB002 Model (g/hr)														
Year 2008			MO: Emission				MO: Emission							
Route Name	Road ID	Hour	Monthly/average		Monthly/average		Monthly/average		Monthly/average					
			MO: Emission	MO: Emission	MO: Emission	MO: Emission	MO: Emission	MO: Emission						
Route 37	37	1600-1700	6.61E-02	1.11E-08	2.55E-08	6.17E-02	1.04E-08	2.18E-08	2.39E-01	4.03E-08	9.24E-08	2.21E-01	3.77E-08	8.51E-08
Route 37	37	1700-1800	6.61E-02	1.11E-08	2.55E-08	6.17E-02	1.04E-08	2.18E-08	2.39E-01	4.03E-08	9.24E-08	2.21E-01	3.77E-08	8.51E-08
Route 37	37	1800-1900	6.61E-02	1.11E-08	2.55E-08	6.17E-02	1.04E-08	2.18E-08	2.39E-01	4.03E-08	9.24E-08	2.21E-01	3.77E-08	8.51E-08
Route 37	37	1900-2000	3.13E-02	4.44E-09	9.24E-09	2.98E-02	4.13E-09	9.24E-09	1.51E-02	2.09E-08	4.80E-08	1.43E-01	1.67E-08	4.13E-08
Route 37	37	2000-2100	2.98E-02	4.13E-09	9.24E-09	2.71E-02	3.81E-09	8.51E-09	1.43E-02	2.09E-08	4.80E-08	1.43E-01	1.67E-08	4.13E-08
Route 37	37	2100-2200	3.13E-02	4.44E-09	9.24E-09	3.09E-02	4.38E-09	9.24E-09	1.51E-02	2.09E-08	4.80E-08	1.43E-01	1.67E-08	4.13E-08
Route 37	37	2200-2300	2.98E-02	4.13E-09	9.24E-09	2.71E-02	3.81E-09	8.51E-09	1.43E-02	2.09E-08	4.80E-08	1.43E-01	1.67E-08	4.13E-08
Route 38	38	0000-0100	4.02E-02	2.17E-04	1.94E-04	3.92E-02	2.31E-08	1.99E-07	1.83E-01	1.08E-07	8.83E-07	1.78E-01	1.05E-07	8.95E-07
Route 38	38	0100-0200	4.02E-02	2.17E-04	1.94E-04	3.92E-02	2.31E-08	1.99E-07	1.83E-01	1.08E-07	8.83E-07	1.78E-01	1.05E-07	8.95E-07
Route 38	38	0200-0300	4.02E-02	2.17E-04	1.94E-04	3.92E-02	2.31E-08	1.99E-07	1.83E-01	1.08E-07	8.83E-07	1.78E-01	1.05E-07	8.95E-07
Route 38	38	0300-0400	4.02E-02	2.17E-04	1.94E-04	3.92E-02	2.31E-08	1.99E-07	1.83E-01	1.08E-07	8.83E-07	1.78E-01	1.05E-07	8.95E-07
Route 38	38	0400-0500	4.02E-02	2.17E-04	1.94E-04	3.92E-02	2.31E-08	1.99E-07	1.83E-01	1.08E-07	8.83E-07	1.78E-01	1.05E-07	8.95E-07
Route 38	38	0500-0600	4.02E-02	2.17E-04	1.94E-04	3.92E-02	2.31E-08	1.99E-07	1.83E-01	1.08E-07	8.83E-07	1.78E-01	1.05E-07	8.95E-07
Route 38	38	0600-0700	4.02E-02	2.17E-04	1.94E-04	3.92E-02	2.31E-08	1.99E-07	1.83E-01	1.08E-07	8.83E-07	1.78E-01	1.05E-07	8.95E-07
Route 38	38	0700-0800	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	0800-0900	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	0900-1000	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	1000-1100	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	1100-1200	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	1200-1300	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	1300-1400	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	1400-1500	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	1500-1600	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	1600-1700	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	1700-1800	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	1800-1900	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	1900-2000	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	2000-2100	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	2100-2200	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	2200-2300	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	2300-2400	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	2400-0100	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	0100-0200	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	0200-0300	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	0300-0400	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	0400-0500	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	0500-0600	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	0600-0700	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	0700-0800	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	0800-0900	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	0900-1000	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	1000-1100	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	1100-1200	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	1200-1300	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	1300-1400	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	1400-1500	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	1500-1600	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	1600-1700	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	1700-1800	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	1800-1900	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	1900-2000	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	2000-2100	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	2100-2200	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	2200-2300	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	2300-2400	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	2400-0100	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	0100-0200	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	0200-0300	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	0300-0400	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	0400-0500	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	0500-0600	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	0600-0700	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	0700-0800	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38	38	0800-0900	5.77E-02	4.65E-06	3.78E-06	5.48E-02	4.42E-06	3.81E-06	2.39E-01	2.99E-07	8.14E-06	2.39E-01	3.93E-07	7.69E-07
Route 38														

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Appendix 4.5 Calculation of Vehicle Emission (Scenario A)

Tsyg Y1 North Underground Quarry													
Open Road 4 hour Emission Factor for ARMMO model (t/a)													
Road Name	Road ID	Hour	Year 2038				Year 2038						
			NO ₂ Emission		Monthly/Average		Monthly/Average		Monthly/Average				
			g/hour/km	g/km	tonne/hour	g/km	tonne/hour	g/hour/km	g/km	tonne/hour	g/hour/km	g/km	tonne/hour
Road 41	41	0000-0000	1.226	2.176	2.667	1.336	1.965	1.686	4.932	6.638	4.282	7.628	7.157
Road 41	41	0000-0000	1.332	2.424	2.942	1.462	2.125	1.846	5.282	7.128	4.582	8.020	7.507
Road 41	41	0000-0000	1.440	2.572	3.217	1.588	2.273	1.994	5.628	7.574	4.882	8.466	7.957
Road 41	41	0000-0000	1.548	2.720	3.492	1.714	2.421	2.142	5.974	8.020	5.182	8.912	8.407
Road 41	41	0000-0000	1.656	2.868	3.767	1.840	2.569	2.290	6.320	8.466	5.482	9.358	8.857
Road 41	41	0000-0000	1.764	3.016	4.042	1.966	2.717	2.438	6.666	8.912	5.782	9.804	9.307
Road 41	41	0000-0000	1.872	3.164	4.317	2.092	2.865	2.586	7.012	9.358	6.082	10.250	9.757
Road 41	41	0000-0000	1.980	3.312	4.592	2.218	3.013	2.734	7.358	9.804	6.382	10.696	10.207
Road 41	41	0000-0000	2.088	3.460	4.867	2.344	3.161	2.882	7.704	10.250	6.682	11.142	10.657
Road 41	41	0000-0000	2.196	3.608	5.142	2.470	3.309	3.030	8.050	10.696	6.982	11.588	11.107
Road 41	41	0000-0000	2.304	3.756	5.417	2.596	3.457	3.178	8.396	11.142	7.282	12.034	11.557
Road 41	41	0000-0000	2.412	3.904	5.692	2.722	3.605	3.326	8.742	11.588	7.582	12.480	12.007
Road 41	41	0000-0000	2.520	4.052	5.967	2.848	3.753	3.474	9.088	12.034	7.882	12.926	12.457
Road 41	41	0000-0000	2.628	4.200	6.242	2.974	3.901	3.622	9.434	12.480	8.182	13.372	12.907
Road 41	41	0000-0000	2.736	4.348	6.517	3.100	4.049	3.770	9.780	12.926	8.482	13.818	13.357
Road 41	41	0000-0000	2.844	4.496	6.792	3.226	4.197	3.918	10.126	13.372	8.782	14.264	13.807
Road 41	41	0000-0000	2.952	4.644	7.067	3.352	4.345	4.066	10.472	13.818	9.082	14.710	14.257
Road 41	41	0000-0000	3.060	4.792	7.342	3.478	4.493	4.214	10.818	14.264	9.382	15.156	14.707
Road 41	41	0000-0000	3.168	4.940	7.617	3.604	4.641	4.362	11.164	14.710	9.682	15.602	15.157
Road 41	41	0000-0000	3.276	5.088	7.892	3.730	4.789	4.510	11.510	15.156	9.982	16.048	15.607
Road 41	41	0000-0000	3.384	5.236	8.167	3.856	4.937	4.658	11.856	15.602	10.282	16.494	16.057
Road 41	41	0000-0000	3.492	5.384	8.442	3.982	5.085	4.806	12.202	16.048	10.582	16.940	16.507
Road 41	41	0000-0000	3.600	5.532	8.717	4.108	5.233	4.954	12.548	16.494	10.882	17.386	16.957
Road 41	41	0000-0000	3.708	5.680	8.992	4.234	5.381	5.102	12.894	16.940	11.182	17.832	17.407
Road 41	41	0000-0000	3.816	5.828	9.267	4.360	5.529	5.250	13.240	17.386	11.482	18.278	17.857
Road 41	41	0000-0000	3.924	5.976	9.542	4.486	5.677	5.398	13.586	17.832	11.782	18.724	18.307
Road 41	41	0000-0000	4.032	6.124	9.817	4.612	5.825	5.546	13.932	18.278	12.082	19.170	18.757
Road 41	41	0000-0000	4.140	6.272	10.092	4.738	5.973	5.694	14.278	18.724	12.382	19.616	19.207
Road 41	41	0000-0000	4.248	6.420	10.367	4.864	6.121	5.842	14.624	19.170	12.682	20.062	19.657
Road 41	41	0000-0000	4.356	6.568	10.642	4.990	6.269	5.990	14.970	19.616	12.982	20.508	20.107
Road 41	41	0000-0000	4.464	6.716	10.917	5.116	6.417	6.138	15.316	20.062	13.282	20.954	20.557
Road 41	41	0000-0000	4.572	6.864	11.192	5.242	6.565	6.286	15.662	20.508	13.582	21.400	21.007
Road 41	41	0000-0000	4.680	7.012	11.467	5.368	6.713	6.434	16.008	20.954	13.882	21.846	21.457
Road 41	41	0000-0000	4.788	7.160	11.742	5.494	6.861	6.582	16.354	21.400	14.182	22.292	21.907
Road 41	41	0000-0000	4.896	7.308	12.017	5.620	7.009	6.730	16.700	21.846	14.482	22.738	22.357
Road 41	41	0000-0000	5.004	7.456	12.292	5.746	7.157	6.878	17.046	22.292	14.782	23.184	22.807
Road 41	41	0000-0000	5.112	7.604	12.567	5.872	7.305	7.026	17.392	22.738	15.082	23.630	23.257
Road 41	41	0000-0000	5.220	7.752	12.842	5.998	7.453	7.174	17.738	23.184	15.382	24.076	23.707
Road 41	41	0000-0000	5.328	7.900	13.117	6.124	7.601	7.322	18.084	23.630	15.682	24.522	24.157
Road 41	41	0000-0000	5.436	8.048	13.392	6.250	7.749	7.470	18.430	24.076	15.982	24.968	24.607
Road 41	41	0000-0000	5.544	8.196	13.667	6.376	7.897	7.618	18.776	24.522	16.282	25.414	25.057
Road 41	41	0000-0000	5.652	8.344	13.942	6.502	8.045	7.766	19.122	24.968	16.582	25.860	25.507
Road 41	41	0000-0000	5.760	8.492	14.217	6.628	8.193	7.914	19.468	25.414	16.882	26.306	25.957
Road 41	41	0000-0000	5.868	8.640	14.492	6.754	8.341	8.062	19.814	25.860	17.182	26.752	26.407
Road 41	41	0000-0000	5.976	8.788	14.767	6.880	8.489	8.210	20.160	26.306	17.482	27.198	26.857
Road 41	41	0000-0000	6.084	8.936	15.042	7.006	8.637	8.358	20.506	26.752	17.782	27.644	27.307
Road 41	41	0000-0000	6.192	9.084	15.317	7.132	8.785	8.506	20.852	27.198	18.082	28.090	27.757
Road 41	41	0000-0000	6.300	9.232	15.592	7.258	8.933	8.654	21.198	27.644	18.382	28.536	28.207
Road 41	41	0000-0000	6.408	9.380	15.867	7.384	9.081	8.802	21.544	28.090	18.682	28.982	28.657
Road 41	41	0000-0000	6.516	9.528	16.142	7.510	9.229	8.950	21.890	28.536	18.982	29.428	29.107
Road 41	41	0000-0000	6.624	9.676	16.417	7.636	9.377	9.098	22.236	28.982	19.282	29.874	29.557
Road 41	41	0000-0000	6.732	9.824	16.692	7.762	9.525	9.246	22.582	29.428	19.582	30.320	30.007
Road 41	41	0000-0000	6.840	9.972	16.967	7.888	9.673	9.394	22.928	29.874	19.882	30.766	30.457
Road 41	41	0000-0000	6.948	10.120	17.242	8.014	9.821	9.542	23.274	30.320	20.182	31.212	30.907
Road 41	41	0000-0000	7.056	10.268	17.517	8.140	9.969	9.690	23.620	30.766	20.482	31.658	31.357
Road 41	41	0000-0000	7.164	10.416	17.792	8.266	10.117	9.838	23.966	31.212	20.782	32.104	31.807
Road 41	41	0000-0000	7.272	10.564	18.067	8.392	10.265	9.986	24.312	31.658	21.082	32.550	32.257
Road 41	41	0000-0000	7.380	10.712	18.342	8.518	10.413	10.134	24.658	32.104	21.382	32.996	32.707
Road 41	41	0000-0000	7.488	10.860	18.617	8.644	10.561	10.282	25.004	32.550	21.682	33.442	33.157
Road 41	41	0000-0000	7.596	11.008	18.892	8.770	10.709	10.430	25.350	32.996	21.982	33.888	33.607
Road 41	41	0000-0000	7.704	11.156	19.167	8.896	10.857	10.578	25.696	33.442	22.282	34.334	34.057
Road 41	41	0000-0000	7.812	11.304	19.442	9.022	11.005	10.726	26.042	33.888	22.582	34.780	34.507
Road 41	41	0000-0000	7.920	11.452	19.717	9.148	11.153	10.874	26.388	34.334	22.882	35.226	34.957
Road 41	41	0000-0000	8.028	11.600	19.992	9.274	11.301	11.022	26.734	34.780	23.182	35.672	35.407
Road 41	41	0000-0000	8.136	11.748	20.267	9.400	11.449	11.170	27.080	35.226	23.482	36.118	35.857
Road 41	41	0000-0000	8.244	11.896	20.542	9.526	11.597	11.318	27.426	35.672	23.782	36.564	36.307
Road 41	41	0000-0000	8.352	12.044	20.817	9.652	11.745	11.466	27.772	36.118	24.082	37.010	36.757
Road 41	41	0000-0000	8.460	12.192	21.092	9.778	11.893	11.614	28.118	36.564	24.382	37.456	37.207
Road 41	41	0000-0000	8.568	12.340	21.367	9.904	12.041	11.762	28.464	37.010	24.682	37.902	37.657
Road 41	41	0000-0000	8.676	12.488	21.642	10.030	12.189	11.910	28.810	37.456	24.982	38.348	38.107
Road 41	41	0000-0000	8.784	12.636	21.917	10.156	12.337	12.058	29.156	37.902	25.282	38.794	38.557
Road 41	41	0000-0000	8.892	12.784	22.192	10.282	12.485	12.206	29.502	38.348	25.582	39.240	39.007
Road 41	41	0000-0000	9.000	12.932	22.467	10.408	12.633	12.354	29.848	38.794	25.882	39.686	39.457
Road 41	41	0000-0000	9.108	13.080	22.742	10.534	12.781	12.502	30.194	39.240	26.182	40.132	39.907
Road 41	41	0000-0000	9.216	13.228	23.017	10.660	12.929	12.650	30.540	39.686	26.482	40.578	40.357
Road 41	41	0000-0000	9.324	13.376	23.292	10.786	13.077	12.798	30.886	40.132	26.782	41.024	40.807
Road 41	41	0000-0000	9.432	13.524	23.567	10.912	13.225	12.946	31.232	40.578	27.082	41.470	41.257
Road 41	41	0000-0000	9.540	13.672	23.842	11.038	13.373	13.094	31.578	41.024	27.382	41.916	41.707
Road 41	41	0000-0000	9.648	13.820	2								

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Well North End Environment Factor														
Year 2008														
Vib	Az	Mag	Hour	Mo Envision				Mo Envision						
				Monthly/average		Monthly/average		Monthly/average		Monthly/average				
				g/hz	1/3 octave	1/3 octave	1/3 octave	g/hz	1/3 octave	1/3 octave	1/3 octave			
Reed 7	7	1800-1200	1.64E-02	1.88E-07	4.45E-06	1.36E-05	3.16E-07	6.98E-02	1.63E-06	1.90E-05	5.08E-02	1.32E-06	1.55E-05	
Reed 7	7	1800-1200	2.00E-02	2.59E-07	5.55E-06	1.67E-05	3.97E-07	8.59E-02	2.05E-06	2.36E-05	6.25E-02	1.49E-06	1.72E-05	
Reed 7	7	1800-1200	2.40E-02	3.05E-07	6.66E-06	2.01E-05	4.70E-07	1.04E-01	2.49E-06	2.87E-05	7.58E-02	1.76E-06	2.00E-05	
Reed 7	7	1800-1200	6.89E-01	6.19E-07	1.37E-06	5.58E-08	1.27E-07	2.46E-08	8.83E-07	9.81E-08	1.32E-06	6.90E-07	8.09E-06	
Reed 7	7	1800-1200	2.42E-02	3.05E-07	6.66E-06	2.01E-05	4.70E-07	1.04E-01	2.49E-06	2.87E-05	7.58E-02	1.76E-06	2.00E-05	
Reed 7	7	1800-1200	3.00E-01	1.81E-07	1.18E-06	5.17E-08	1.86E-08	1.00E-06	4.03E-06	6.79E-07	9.92E-06	3.12E-07	5.57E-07	
Reed 7	7	2200-2000	3.00E-01	9.51E-08	1.15E-06	5.11E-08	8.29E-08	9.27E-07	4.08E-07	6.02E-07	3.26E-06	2.10E-07	3.19E-07	
Reed 7	7	2200-2000	3.00E-01	9.51E-08	1.15E-06	5.11E-08	8.29E-08	9.27E-07	4.08E-07	6.02E-07	3.26E-06	2.10E-07	3.19E-07	
Reed 8	8	1800-1200	4.04E-01	8.54E-08	9.18E-08	7.16E-08	4.04E-08	8.17E-08	2.19E-08	4.43E-07	3.96E-07	1.89E-08	3.88E-08	
Reed 8	8	1800-1200	3.47E-01	7.12E-08	7.65E-08	6.02E-08	3.35E-08	6.79E-08	1.83E-08	3.70E-07	3.32E-07	1.57E-08	3.27E-08	
Reed 8	8	1800-1200	8.86E-01	2.40E-09	4.85E-08	4.83E-08	2.20E-09	4.45E-08	4.08E-08	1.28E-08	2.23E-07	3.67E-07	9.92E-09	2.01E-07
Reed 8	8	1800-1200	3.00E-01	9.51E-08	1.15E-06	5.11E-08	8.29E-08	9.27E-07	4.08E-07	6.02E-07	3.26E-06	2.10E-07	3.19E-07	
Reed 8	8	1800-1200	3.00E-01	9.51E-08	1.15E-06	5.11E-08	8.29E-08	9.27E-07	4.08E-07	6.02E-07	3.26E-06	2.10E-07	3.19E-07	
Reed 8	8	1800-1200	1.01E-01	4.14E-08	8.73E-08	4.94E-08	2.78E-08	7.80E-08	4.93E-08	2.86E-08	5.62E-07	4.05E-08	6.37E-07	
Reed 8	8	1800-1200	1.06E-01	4.36E-08	9.18E-08	5.05E-08	2.87E-08	8.20E-08	5.14E-08	2.96E-08	5.87E-07	4.20E-08	6.57E-07	
Reed 8	8	1800-1200	6.17E-01	1.04E-08	2.04E-07	1.04E-07	1.86E-08	3.76E-07	4.86E-07	8.19E-08	1.76E-06	4.82E-08	7.82E-08	
Reed 8	8	1800-1200	4.00E-01	8.54E-08	9.18E-08	7.16E-08	4.04E-08	8.17E-08	2.19E-08	4.43E-07	3.96E-07	1.89E-08	3.88E-08	
Reed 8	8	1800-1200	3.00E-01	9.51E-08	1.15E-06	5.11E-08	8.29E-08	9.27E-07	4.08E-07	6.02E-07	3.26E-06	2.10E-07	3.19E-07	
Reed 8	8	1800-1200	1.11E-01	2.58E-08	4.92E-08	2.61E-08	1.50E-08	4.40E-07	5.55E-08	9.60E-08	1.94E-07	4.75E-07	8.79E-08	
Reed 8	8	1800-1200	1.00E-01	2.44E-08	4.73E-08	2.50E-08	1.40E-08	4.23E-07	5.37E-08	9.45E-08	1.94E-07	4.76E-07	8.81E-08	
Reed 8	8	1800-1200	1.49E-01	3.52E-08	6.82E-08	3.62E-08	2.05E-08	6.00E-07	6.23E-07	1.19E-07	2.48E-07	5.76E-07	1.01E-07	
Reed 8	8	1800-1200	1.49E-01	3.52E-08	6.82E-08									
Reed 8	8	1800-1200	1.00E-01	2.44E-08	4.73E-08	2.50E-08	1.40E-08	4.23E-07	5.37E-08	9.45E-08	1.94E-07	4.75E-07	8.79E-08	
Reed 8	8	1800-1200	1.00E-01	2.44E-08	4.73E-08	2.50E-08	1.40E-08	4.23E-07	5.37E-08	9.45E-08	1.94E-07	4.75E-07	8.79E-08	
Reed 8	8	1800-1200	1.49E-01	3.52E-08	6.82E-08	3.62E-08	2.05E-08	6.00E-07	6.23E-07	1.19E-07	2.48E-07	5.76E-07	1.01E-07	
Reed 8	8	1800-1200	1.49E-01	3.52E-08	6.82E-08									
Reed 8	8	1800-1200	1.00E-01	2.44E-08	4.73E-08	2.50E-08	1.40E-08	4.23E-07	5.37E-08	9.45E-08	1.94E-07	4.75E-07	8.79E-08	
Reed 8	8	1800-1200	1.00E-01	2.44E-08	4.73E-08	2.50E-08	1.40E-08	4.23E-07	5.37E-08	9.45E-08	1.94E-07	4.75E-07	8.79E-08	
Reed 8	8	1800-1200	1.49E-01	3.52E-08	6.82E-08	3.62E-08	2.05E-08	6.00E-07	6.23E-07	1.19E-07	2.48E-07	5.76E-07	1.01E-07	
Reed 8	8	1800-1200	1.49E-01	3.52E-08	6.82E-08									
Reed 8	8	1800-1200	1.00E-01	2.44E-08	4.73E-08	2.50E-08	1.40E-08	4.23E-07	5.37E-08	9.45E-08	1.94E-07	4.75E-07	8.79E-08	
Reed 8	8	1800-1200	1.00E-01	2.44E-08	4.73E-08	2.50E-08	1.40E-08	4.23E-07	5.37E-08	9.45E-08	1.94E-07	4.75E-07	8.79E-08	
Reed 8	8	1800-1200	1.49E-01	3.52E-08	6.82E-08	3.62E-08	2.05E-08	6.00E-07	6.23E-07	1.19E-07	2.48E-07	5.76E-07	1.01E-07	
Reed 8	8	1800-1200	1.49E-01	3.52E-08	6.82E-08									
Reed 8	8	1800-1200	1.00E-01	2.44E-08	4.73E-08	2.50E-08	1.40E-08	4.23E-07	5.37E-08	9.45E-08	1.94E-07	4.75E-07	8.79E-08	
Reed 8	8	1800-1200	1.00E-01	2.44E-08	4.73E-08	2.50E-08	1.40E-08	4.23E-07	5.37E-08	9.45E-08	1.94E-07	4.75E-07	8.79E-08	
Reed 8	8	1800-1200	1.49E-01	3.52E-08	6.82E-08	3.62E-08	2.05E-08	6.00E-07	6.23E-07	1.19E-07	2.48E-07	5.76E-07	1.01E-07	
Reed 8	8	1800-1200	1.49E-01	3.52E-08	6.82E-08									
Reed 8	8	1800-1200	1.00E-01	2.44E-08	4.73E-08	2.50E-08	1.40E-08	4.23E-07	5.37E-08	9.45E-08	1.94E-07	4.75E-07	8.79E-08	
Reed 8	8	1800-1200	1.00E-01	2.44E-08	4.73E-08	2.50E-08	1.40E-08	4.23E-07	5.37E-08	9.45E-08	1.94E-07	4.75E-07	8.79E-08	
Reed 8	8	1800-1200	1.49E-01	3.52E-08	6.82E-08	3.62E-08	2.05E-08	6.00E-07	6.23E-07	1.19E-07	2.48E-07	5.76E-07	1.01E-07	
Reed 8	8	1800-1200	1.49E-01	3.52E-08	6.82E-08									
Reed 8	8	1800-1200	1.00E-01	2.44E-08	4.73E-08	2.50E-08	1.40E-08	4.23E-07	5.37E-08	9.45E-08	1.94E-07	4.75E-07	8.79E-08	
Reed 8	8	1800-1200	1.00E-01	2.44E-08	4.73E-08	2.50E-08	1.40E-08	4.23E-07	5.37E-08	9.45E-08	1.94E-07	4.75E-07	8.79E-08	
Reed 8	8	1800-1200	1.49E-01	3.52E-08	6.82E-08	3.62E-08	2.05E-08	6.00E-07	6.23E-07	1.19E-07	2.48E-07	5.76E-07	1.01E-07	
Reed 8	8	1800-1200	1.49E-01	3.52E-08	6.82E-08									
Reed 8	8	1800-1200	1.00E-01	2.44E-08	4.73E-08	2.50E-08	1.40E-08	4.23E-07	5.37E-08	9.45E-08	1.94E-07	4.75E-07	8.79E-08	
Reed 8	8	1800-1200	1.00E-01	2.44E-08	4.73E-08	2.50E-08	1.40E-08	4.23E-07	5.37E-08	9.45E-08	1.94E-07	4.75E-07	8.79E-08	
Reed 8	8	1800-1200	1.49E-01	3.52E-08	6.82E-08	3.62E-08	2.05E-08	6.00E-07	6.23E-07	1.19E-07	2.48E-07	5.76E-07	1.01E-07	
Reed 8	8	1800-1200	1.49E-01	3.52E-08	6.82E-08									
Reed 8	8	1800-1200	1.00E-01	2.44E-08	4.73E-08	2.50E-08	1.40E-08	4.23E-07	5.37E-08	9.45E-08	1.94E-07	4.75E-07	8.79E-08	
Reed 8	8	1800-1200	1.00E-01	2.44E-08	4.73E-08	2.50E-08	1.40E-08	4.23E-07	5.37E-08	9.45E-08	1.94E-07	4.75E-07	8.79E-08	
Reed 8	8	1800-1200	1.49E-01	3.52E-08	6.82E-08	3.62E-08	2.05E-08	6.00E-07	6.23E-07	1.19E-07	2.48E-07	5.76E-07	1.01E-07	
Reed 8	8	1800-1200	1.49E-01	3.52E-08	6.82E-08									
Reed 8	8	1800-1200	1.00E-01	2.44E-08	4.73E-08	2.50E-08	1.40E-08	4.23E-07	5.37E-08	9.45E-08	1.94E-07	4.75E-07	8.79E-08	
Reed 8	8	1800-1200	1.00E-01	2.44E-08	4.73E-08	2.50E-08	1.40E-08	4.23E-07	5.37E-08	9.45E-08	1.94E-07	4.75E-07	8.79E-08	
Reed 8	8	1800-1200	1.49E-01	3.52E-08	6.82E-08	3.62E-08	2.05E-08	6.00E-07	6.23E-07	1.19E-07	2.48E-07	5.76E-07	1.01E-07	
Reed 8	8	1800-1200	1.49E-01	3.52E-08	6.82E-08									
Reed 8	8	1800-1200	1.00E-01	2.44E-08	4.73E-08	2.50E-08	1.40E-08	4.23E-07	5.37E-08	9.45E-08	1.94E-07	4.75E-07	8.79E-08	
Reed 8	8	1800-1200	1.00E-01	2.44E-08	4.73E-08	2.50E-08	1.40E-08	4.23E-07	5.37E-08	9.45E-08	1.94E-07	4.75E-07	8.79E-08	
Reed 8	8	1800-1200	1.49E-01	3.52E-08	6.82E-08	3.62E-08	2.05E-08	6.00E-07	6.23E-07	1.19E-07	2.48E-07	5.76E-07	1.01E-07	
Reed 8	8	1800-1200	1.49E-01	3.52E-08	6.82E-08									
Reed 8	8	1800-1200	1.00E-01	2.44E-08	4.73E-08	2.50E-08	1.40E-08	4.23E-07	5.37E-08	9.45E-08	1.94E-07	4.75E-07	8.79E-08	
Reed 8	8	1800-1200	1.00E-01	2.44E-08	4.73E-08	2.50E-08	1.40E-08	4.23E-07	5.37E-08	9.45E-08	1.94E-07	4.75E-07	8.79E-08	
Reed 8	8	1800-1200	1.49E-01	3.52E-08	6.82E-08	3.62E-08	2.05E-08	6.00E-07	6.23E-07	1.19E-07	2.48E-07	5.76E-07	1.01E-07	
Reed 8	8	1800-1200	1.49E-01	3.52E-08	6.82E-08									
Reed 8	8	1800-1200	1.00E-01	2.44E-08	4.73E-08	2.50E-08	1.40E-08	4.23E-07	5.37E-08	9.45E-08	1.94E-07	4.75E-07	8.79E-08	
Reed 8	8	1800-1200	1.00E-01	2.44E-08	4.73E-08	2.50E-08	1.40E-08	4.23E-07	5.37E-08	9.45E-08	1.94E-07	4.75E-07	8.79E-08	
Reed 8	8	1800-1200	1.49E-01	3.52E-08	6.82E-08	3.62E-08	2.05E-08	6.00E-07	6.23E-07	1.19E-07	2.48E-07	5.76E-07	1.01E-07	
Reed 8	8	1800-1200	1.49E-01	3.52E-08	6.82E-08									
Reed 8	8	1800-1200	1.00E-01	2.44E-08	4.73E-08	2.50E-08	1.40E-08	4.23E-07	5.37E-08	9.45E-08	1.94E-07	4.75E-07	8.79E-08	
Reed 8	8	1800-1200	1.00E-01	2.44E-08	4.73E-08	2.50E-08	1.40E-08	4.23E-07	5.37E-08	9.45E-08	1.94E-07	4.75E-07	8.79E-08	
Reed 8	8	1800-1200	1.49E-01	3.52E-08	6.82E-08	3.62E-08	2.05E-08	6.00E-07	6.23E-07	1.19E-07	2.48E-07	5.76E-07	1.01E-07	
Reed 8	8	1800-1200	1.49E-01	3.52E-08	6.82E-08									
Reed 8	8	1800-1200	1.00E-01	2.44E-08	4.73E-08	2.50E-08	1.40E-08	4.23E-07	5.3					

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Total Weighted Emissions (g/hr)														
Test ID			Total Weighted Emissions (g/hr)											
Open Road 12 hr Urban Emission Factors for AERMOD model			Total Weighted Emissions (g/hr)											
Year 2038			Total Weighted Emissions (g/hr)											
Run Name	Test ID	Hour	NO _x Emission				CO Emission				HC Emission			
			g/hr	g/hr	g/hr	g/hr	g/hr	g/hr	g/hr	g/hr	g/hr	g/hr	g/hr	g/hr
Run 11	11	0000-0100	3.306	4.447	5.527	2.198	1.366	0.471	1.441	8.978	1.848	0.661	8.779	3.216
Run 11	11	0100-0200	4.996	6.048	7.467	2.586	1.623	0.549	1.681	4.603	1.232	0.425	7.477	2.215
Run 11	11	0200-0300	2.845	3.652	4.566	1.742	1.091	0.372	1.245	7.041	1.425	0.500	7.041	2.486
Run 11	11	0300-0400	2.854	3.755	4.598	2.731	1.678	0.478	1.621	1.631	0.317	1.485	1.335	1.837
Run 11	11	0400-0500	1.962	2.545	3.167	1.262	0.831	0.293	1.011	6.111	1.252	0.445	6.111	2.045
Run 11	11	0500-0600	2.966	3.866	4.766	1.787	1.196	0.430	1.578	1.074	1.781	0.504	1.688	2.041
Run 11	11	0600-0700	1.796	2.375	2.954	1.675	1.026	0.363	1.086	1.925	1.018	0.368	1.831	0.962
Run 11	11	0700-0800	1.455	1.934	2.413	1.365	0.804	0.282	0.954	1.625	0.854	0.303	1.575	0.847
Run 11	11	0800-0900	4.444	5.076	6.105	4.133	2.979	1.037	1.833	2.059	4.726	1.813	1.515	4.085
Run 11	11	0900-1000	4.453	5.085	6.114	4.142	2.988	1.040	1.842	2.068	4.735	1.822	1.524	4.094
Run 11	11	1000-1100	4.044	4.676	5.706	3.536	2.456	0.847	1.636	2.366	4.018	1.554	1.245	3.666
Run 11	11	1100-1200	1.455	1.934	2.413	1.365	0.804	0.282	0.954	1.625	0.854	0.303	1.575	0.847
Run 11	11	1200-1300	1.796	2.375	2.954	1.675	1.026	0.363	1.086	1.925	1.018	0.368	1.831	0.962
Run 11	11	1300-1400	1.455	1.934	2.413	1.365	0.804	0.282	0.954	1.625	0.854	0.303	1.575	0.847
Run 11	11	1400-1500	1.796	2.375	2.954	1.675	1.026	0.363	1.086	1.925	1.018	0.368	1.831	0.962
Run 11	11	1500-1600	2.966	3.866	4.766	1.787	1.196	0.430	1.578	1.074	1.781	0.504	1.688	2.041
Run 11	11	1600-1700	1.455	1.934	2.413	1.365	0.804	0.282	0.954	1.625	0.854	0.303	1.575	0.847
Run 11	11	1700-1800	1.796	2.375	2.954	1.675	1.026	0.363	1.086	1.925	1.018	0.368	1.831	0.962
Run 11	11	1800-1900	1.455	1.934	2.413	1.365	0.804	0.282	0.954	1.625	0.854	0.303	1.575	0.847
Run 11	11	1900-2000	1.796	2.375	2.954	1.675	1.026	0.363	1.086	1.925	1.018	0.368	1.831	0.962
Run 11	11	2000-2100	1.455	1.934	2.413	1.365	0.804	0.282	0.954	1.625	0.854	0.303	1.575	0.847
Run 11	11	2100-2200	1.796	2.375	2.954	1.675	1.026	0.363	1.086	1.925	1.018	0.368	1.831	0.962
Run 11	11	2200-2300	1.455	1.934	2.413	1.365	0.804	0.282	0.954	1.625	0.854	0.303	1.575	0.847
Run 11	11	2300-2400	1.796	2.375	2.954	1.675	1.026	0.363	1.086	1.925	1.018	0.368	1.831	0.962
Run 11	11	2400-2500	1.455	1.934	2.413	1.365	0.804	0.282	0.954	1.625	0.854	0.303	1.575	0.847
Run 11	11	2500-2600	1.796	2.375	2.954	1.675	1.026	0.363	1.086	1.925	1.018	0.368	1.831	0.962
Run 11	11	2600-2700	1.455	1.934	2.413	1.365	0.804	0.282	0.954	1.625	0.854	0.303	1.575	0.847
Run 11	11	2700-2800	1.796	2.375	2.954	1.675	1.026	0.363	1.086	1.925	1.018	0.368	1.831	0.962
Run 11	11	2800-2900	1.455	1.934	2.413	1.365	0.804	0.282	0.954	1.625	0.854	0.303	1.575	0.847
Run 11	11	2900-3000	1.796	2.375	2.954	1.675	1.026	0.363	1.086	1.925	1.018	0.368	1.831	0.962
Run 11	11	3000-3100	1.455	1.934	2.413	1.365	0.804	0.282	0.954	1.625	0.854	0.303	1.575	0.847
Run 11	11	3100-3200	1.796	2.375	2.954	1.675	1.026	0.363	1.086	1.925	1.018	0.368	1.831	0.962
Run 11	11	3200-3300	1.455	1.934	2.413	1.365	0.804	0.282	0.954	1.625	0.854	0.303	1.575	0.847
Run 11	11	3300-3400	1.796	2.375	2.954	1.675	1.026	0.363	1.086	1.925	1.018	0.368	1.831	0.962
Run 11	11	3400-3500	1.455	1.934	2.413	1.365	0.804	0.282	0.954	1.625	0.854	0.303	1.575	0.847
Run 11	11	3500-3600	1.796	2.375	2.954	1.675	1.026	0.363	1.086	1.925	1.018	0.368	1.831	0.962
Run 11	11	3600-3700	1.455	1.934	2.413	1.365	0.804	0.282	0.954	1.625	0.854	0.303	1.575	0.847
Run 11	11	3700-3800	1.796	2.375	2.954	1.675	1.026	0.363	1.086	1.925	1.018	0.368	1.831	0.962
Run 11	11	3800-3900	1.455	1.934	2.413	1.365	0.804	0.282	0.954	1.625	0.854	0.303	1.575	0.847
Run 11	11	3900-4000	1.796	2.375	2.954	1.675	1.026	0.363	1.086	1.925	1.018	0.368	1.831	0.962
Run 11	11	4000-4100	1.455	1.934	2.413	1.365	0.804	0.282	0.954	1.625	0.854	0.303	1.575	0.847
Run 11	11	4100-4200	1.796	2.375	2.954	1.675	1.026	0.363	1.086	1.925	1.018	0.368	1.831	0.962
Run 11	11	4200-4300	1.455	1.934	2.413	1.365	0.804	0.282	0.954	1.625	0.854	0.303	1.575	0.847
Run 11	11	4300-4400	1.796	2.375	2.954	1.675	1.026	0.363	1.086	1.925	1.018	0.368	1.831	0.962
Run 11	11	4400-4500	1.455	1.934	2.413	1.365	0.804	0.282	0.954	1.625	0.854	0.303	1.575	0.847
Run 11	11	4500-4600	1.796	2.375	2.954	1.675	1.026	0.363	1.086	1.925	1.018	0.368	1.831	0.962
Run 11	11	4600-4700	1.455	1.934	2.413	1.365	0.804	0.282	0.954	1.625	0.854	0.303	1.575	0.847
Run 11	11	4700-4800	1.796	2.375	2.954	1.675	1.026	0.363	1.086	1.925	1.018	0.368	1.831	0.962
Run 11	11	4800-4900	1.455	1.934	2.413	1.365	0.804	0.282	0.954	1.625	0.854	0.303	1.575	0.847
Run 11	11	4900-5000	1.796	2.375	2.954	1.675	1.026	0.363	1.086	1.925	1.018	0.368	1.831	0.962
Run 11	11	5000-5100	1.455	1.934	2.413	1.365	0.804	0.282	0.954	1.625	0.854	0.303	1.575	0.847
Run 11	11	5100-5200	1.796	2.375	2.954	1.675	1.026	0.363	1.086	1.925	1.018	0.368	1.831	0.962
Run 11	11	5200-5300	1.455	1.934	2.413	1.365	0.804	0.282	0.954	1.625	0.854	0.303	1.575	0.847
Run 11	11	5300-5400	1.796	2.375	2.954	1.675	1.026	0.363	1.086	1.925	1.018	0.368	1.831	0.962
Run 11	11	5400-5500	1.455	1.934	2.413	1.365	0.804	0.282	0.954	1.625	0.854	0.303	1.575	0.847
Run 11	11	5500-5600	1.796	2.375	2.954	1.675	1.026	0.363	1.086	1.925	1.018	0.368	1.831	0.962
Run 11	11	5600-5700	1.455	1.934	2.413	1.365	0.804	0.282	0.954	1.625	0.854	0.303	1.575	0.847
Run 11	11	5700-5800	1.796	2.375	2.954	1.675	1.026	0.363	1.086	1.925	1.018	0.368	1.831	0.962
Run 11	11	5800-5900	1.455	1.934	2.413	1.365	0.804	0.282	0.954	1.625	0.854	0.303	1.575	0.847
Run 11	11	5900-6000	1.796	2.375	2.954	1.675	1.026	0.363	1.086	1.925	1.018	0.368	1.831	0.962
Run 11	11	6000-6100	1.455	1.934	2.413	1.365	0.804	0.282	0.954	1.625	0.854	0.303	1.575	0.847
Run 11	11	6100-6200	1.796	2.375	2.954	1.675	1.026	0.363	1.086	1.925	1.018	0.368	1.831	0.962
Run 11	11	6200-6300	1.455	1.934	2.413	1.365	0.804	0.282	0.954	1.625	0.854	0.303	1.575	0.847
Run 11	11	6300-6400	1.796	2.375	2.954	1.675	1.026	0.363	1.086	1.925	1.018	0.368	1.831	0.962
Run 11	11	6400-6500	1.455	1.934	2.413	1.365	0.804	0.282	0.954	1.625	0.854	0.303	1.575	0.847
Run 11	11	6500-6600	1.796	2.375	2.954	1.675	1.026	0.363	1.086	1.925	1.018	0.368	1.831	0.962
Run 11	11	6600-6700	1.455	1.934	2.413	1.365	0.804	0.282	0.954	1.625	0.854	0.303	1.575	0.847
Run 11	11	6700-6800	1.796	2.375	2.954	1.675	1.026	0.363	1.086	1.925	1.018	0.368	1.831	0.962
Run 11	11	6800-6900	1.455	1.934	2.413	1.365	0.804	0.282	0.954	1.625	0.854	0.303	1.575	0.847
Run 11	11	6900-7000	1.796	2.375	2.954	1.675	1.026	0.363	1.086	1.925	1.018	0.368	1.831	0.962
Run 11	11	7000-7100	1.455	1.934	2.413	1.365	0.804	0.282	0.954	1.625	0.854	0.303	1.575	0.847
Run 11	11	7100-7200	1.796	2.375	2.954	1.675	1.026	0.363	1.086	1.925	1.018	0.368	1.831	0.962
Run 11	11	7200-7300	1.455	1.934	2.413	1.365	0.804	0.282	0.954	1.625	0.854	0.303	1.575	0.847
Run 11	11	7300-7400	1.796	2.375	2.954	1.675	1.026	0.363	1.086	1.925	1.018	0.368	1.831	0.962
Run 11	11	7400-7500	1.455	1.934	2.413	1.365	0.804	0.282	0.954	1.625	0.854	0.303	1.575	0.847
Run 11	11	7500-7600	1.796	2.375	2.954	1.675	1.026	0.363	1.086	1.925	1.018	0.368	1.831	0.962
Run 11	11	7600-7700	1.455	1.934	2.413	1.365	0.804	0.282	0.954	1.625	0.854	0.303	1.575	0.847
Run 11	11	7700-7800	1.796	2.375	2.954	1.675	1.026	0.363	1.086	1.925	1.018	0.368	1.831	0.962
Run 11	11	7800-7900	1.455	1.934	2.413	1.365	0.804							

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.4 Emission Factor in 2038.xlsx

Open Road Northbound Quarry													
Top 10 Road No. 80 Emission Factors for ARB/NOE model (Rugot)													
Year 2038													
Road	Lane	Hour	NO _x Emission				NO Emission						
			g/h/veh	tons/hr	Monthly/Average	g/h/veh	tons/hr	Monthly/Average					
Road 14	14 0800-0900	3.752	1.768	1.327	0.846	8.796	1.148	1.188	2.818	4.815	1.028	1.244	4.181
	14 0900-1000	3.882	1.798	1.358	0.866	8.975	1.175	1.215	2.868	4.865	1.038	1.254	4.231
Road 14	14 1000-1100	4.166	2.096	1.621	1.046	9.594	1.015	1.496	2.546	4.325	1.228	1.205	3.396
	14 1100-1200	5.130	2.536	1.986	1.266	11.386	1.266	1.816	3.186	5.186	1.486	1.486	4.186
Road 14	14 1300-1400	4.866	1.866	1.236	0.716	11.116	2.006	1.216	3.416	4.126	1.186	1.186	4.996
	14 1400-1500	4.966	1.966	1.236	0.716	11.216	2.006	1.216	3.416	4.126	1.186	1.186	4.996
Road 14	14 1600-1700	5.066	2.066	1.336	0.816	11.316	2.006	1.216	3.416	4.126	1.186	1.186	4.996
	14 1700-1800	5.166	2.166	1.336	0.816	11.416	2.006	1.216	3.416	4.126	1.186	1.186	4.996
Road 14	14 1900-2000	3.266	0.836	0.426	0.186	7.326	1.256	1.216	3.146	3.886	1.006	1.246	4.646
	14 2000-2100	3.366	0.936	0.426	0.186	7.426	1.256	1.216	3.146	3.886	1.006	1.246	4.646
Road 14	14 2200-2300	3.066	0.736	0.326	0.136	6.826	1.256	1.216	3.146	3.886	1.006	1.246	4.646
	14 2300-2400	3.166	0.836	0.326	0.136	6.926	1.256	1.216	3.146	3.886	1.006	1.246	4.646
Road 14	14 2400-0100	2.066	0.232	0.097	0.036	1.796	2.016	1.071	2.426	2.676	0.742	0.842	2.436
	14 0100-0200	2.166	0.332	0.097	0.036	1.896	2.016	1.071	2.426	2.676	0.742	0.842	2.436
Road 15	15 0200-0300	3.266	1.566	1.116	0.716	8.616	1.271	1.311	2.916	4.816	1.028	1.244	4.181
	15 0300-0400	3.366	1.666	1.116	0.716	8.716	1.271	1.311	2.916	4.816	1.028	1.244	4.181
Road 15	15 0400-0500	3.466	1.766	1.116	0.716	8.816	1.271	1.311	2.916	4.816	1.028	1.244	4.181
	15 0500-0600	3.566	1.866	1.116	0.716	8.916	1.271	1.311	2.916	4.816	1.028	1.244	4.181
Road 15	15 0600-0700	3.666	1.966	1.116	0.716	9.016	1.271	1.311	2.916	4.816	1.028	1.244	4.181
	15 0700-0800	3.766	2.066	1.116	0.716	9.116	1.271	1.311	2.916	4.816	1.028	1.244	4.181
Road 15	15 0800-0900	3.866	2.166	1.116	0.716	9.216	1.271	1.311	2.916	4.816	1.028	1.244	4.181
	15 0900-1000	3.966	2.266	1.116	0.716	9.316	1.271	1.311	2.916	4.816	1.028	1.244	4.181
Road 15	15 1000-1100	4.066	2.366	1.116	0.716	9.416	1.271	1.311	2.916	4.816	1.028	1.244	4.181
	15 1100-1200	4.166	2.466	1.116	0.716	9.516	1.271	1.311	2.916	4.816	1.028	1.244	4.181
Road 15	15 1200-1300	4.266	2.566	1.116	0.716	9.616	1.271	1.311	2.916	4.816	1.028	1.244	4.181
	15 1300-1400	4.366	2.666	1.116	0.716	9.716	1.271	1.311	2.916	4.816	1.028	1.244	4.181
Road 15	15 1400-1500	4.466	2.766	1.116	0.716	9.816	1.271	1.311	2.916	4.816	1.028	1.244	4.181
	15 1500-1600	4.566	2.866	1.116	0.716	9.916	1.271	1.311	2.916	4.816	1.028	1.244	4.181
Road 15	15 1600-1700	4.666	2.966	1.116	0.716	10.016	1.271	1.311	2.916	4.816	1.028	1.244	4.181
	15 1700-1800	4.766	3.066	1.116	0.716	10.116	1.271	1.311	2.916	4.816	1.028	1.244	4.181
Road 15	15 1800-1900	4.866	3.166	1.116	0.716	10.216	1.271	1.311	2.916	4.816	1.028	1.244	4.181
	15 1900-2000	4.966	3.266	1.116	0.716	10.316	1.271	1.311	2.916	4.816	1.028	1.244	4.181
Road 15	15 2000-2100	5.066	3.366	1.116	0.716	10.416	1.271	1.311	2.916	4.816	1.028	1.244	4.181
	15 2100-2200	5.166	3.466	1.116	0.716	10.516	1.271	1.311	2.916	4.816	1.028	1.244	4.181
Road 15	15 2200-2300	5.266	3.566	1.116	0.716	10.616	1.271	1.311	2.916	4.816	1.028	1.244	4.181
	15 2300-2400	5.366	3.666	1.116	0.716	10.716	1.271	1.311	2.916	4.816	1.028	1.244	4.181
Road 15	15 2400-0100	5.466	3.766	1.116	0.716	10.816	1.271	1.311	2.916	4.816	1.028	1.244	4.181
	15 0100-0200	5.566	3.866	1.116	0.716	10.916	1.271	1.311	2.916	4.816	1.028	1.244	4.181
Road 15	15 0200-0300	5.666	3.966	1.116	0.716	11.016	1.271	1.311	2.916	4.816	1.028	1.244	4.181
	15 0300-0400	5.766	4.066	1.116	0.716	11.116	1.271	1.311	2.916	4.816	1.028	1.244	4.181
Road 15	15 0400-0500	5.866	4.166	1.116	0.716	11.216	1.271	1.311	2.916	4.816	1.028	1.244	4.181
	15 0500-0600	5.966	4.266	1.116	0.716	11.316	1.271	1.311	2.916	4.816	1.028	1.244	4.181
Road 15	15 0600-0700	6.066	4.366	1.116	0.716	11.416	1.271	1.311	2.916	4.816	1.028	1.244	4.181
	15 0700-0800	6.166	4.466	1.116	0.716	11.516	1.271	1.311	2.916	4.816	1.028	1.244	4.181
Road 15	15 0800-0900	6.266	4.566	1.116	0.716	11.616	1.271	1.311	2.916	4.816	1.028	1.244	4.181
	15 0900-1000	6.366	4.666	1.116	0.716	11.716	1.271	1.311	2.916	4.816	1.028	1.244	4.181
Road 15	15 1000-1100	6.466	4.766	1.116	0.716	11.816	1.271	1.311	2.916	4.816	1.028	1.244	4.181
	15 1100-1200	6.566	4.866	1.116	0.716	11.916	1.271	1.311	2.916	4.816	1.028	1.244	4.181
Road 15	15 1200-1300	6.666	4.966	1.116	0.716	12.016	1.271	1.311	2.916	4.816	1.028	1.244	4.181
	15 1300-1400	6.766	5.066	1.116	0.716	12.116	1.271	1.311	2.916	4.816	1.028	1.244	4.181
Road 15	15 1400-1500	6.866	5.166	1.116	0.716	12.216	1.271	1.311	2.916	4.816	1.028	1.244	4.181
	15 1500-1600	6.966	5.266	1.116	0.716	12.316	1.271	1.311	2.916	4.816	1.028	1.244	4.181
Road 15	15 1600-1700	7.066	5.366	1.116	0.716	12.416	1.271	1.311	2.916	4.816	1.028	1.244	4.181
	15 1700-1800	7.166	5.466	1.116	0.716	12.516	1.271	1.311	2.916	4.816	1.028	1.244	4.181
Road 15	15 1800-1900	7.266	5.566	1.116	0.716	12.616	1.271	1.311	2.916	4.816	1.028	1.244	4.181
	15 1900-2000	7.366	5.666	1.116	0.716	12.716	1.271	1.311	2.916	4.816	1.028	1.244	4.181
Road 15	15 2000-2100	7.466	5.766	1.116	0.716	12.816	1.271	1.311	2.916	4.816	1.028	1.244	4.181
	15 2100-2200	7.566	5.866	1.116	0.716	12.916	1.271	1.311	2.916	4.816	1.028	1.244	4.181
Road 15	15 2200-2300	7.666	5.966	1.116	0.716	13.016	1.271	1.311	2.916	4.816	1.028	1.244	4.181
	15 2300-2400	7.766	6.066	1.116	0.716	13.116	1.271	1.311	2.916	4.816	1.028	1.244	4.181
Road 15	15 2400-0100	7.866	6.166	1.116	0.716	13.216	1.271	1.311	2.916	4.816	1.028	1.244	4.181
	15 0100-0200	7.966	6.266	1.116	0.716	13.316	1.271	1.311	2.916	4.816	1.028	1.244	4.181
Road 15	15 0200-0300	8.066	6.366	1.116	0.716	13.416	1.271	1.311	2.916	4.816	1.028	1.244	4.181
	15 0300-0400	8.166	6.466	1.116	0.716	13.516	1.271	1.311	2.916	4.816	1.028	1.244	4.181
Road 15	15 0400-0500	8.266	6.566	1.116	0.716	13.616	1.271	1.311	2.916	4.816	1.028	1.244	4.181
	15 0500-0600	8.366	6.666	1.116	0.716	13.716	1.271	1.311	2.916	4.816	1.028	1.244	4.181
Road 15	15 0600-0700	8.466	6.766	1.116	0.716	13.816	1.271	1.311	2.916	4.816	1.028	1.244	4.181
	15 0700-0800	8.566	6.866	1.116	0.716	13.916	1.271	1.311	2.916	4.816	1.028	1.244	4.181
Road 15	15 0800-0900	8.666	6.966	1.116	0.716	14.016	1.271	1.311	2.916	4.816	1.028	1.244	4.181
	15 0900-1000	8.766	7.066	1.116	0.716	14.116	1.271	1.311	2.916	4.816	1.028	1.244	4.181
Road 15	15 1000-1100	8.866	7.166	1.116	0.716	14.216	1.271	1.311	2.916	4.816	1.028	1.244	4.181
	15 1100-1200	8.966	7.266	1.116	0.716	14.316	1.271	1.311	2.916	4.816	1.028	1.244	4.181
Road 15	15 1200-1300	9.066	7.366	1.116	0.716	14.416	1.271	1.311	2.916	4.816	1.028	1.244	4.181
	15 1300-1400	9.166	7.466	1.116	0.716	14.516	1.271	1.311	2.916	4.816	1.028	1.244	4.181
Road 15	15 1400-1500	9.266	7.566	1.116	0.716	14.616	1.271	1.311	2.916	4.816	1.028	1.244	4.181
	15 1500-1600	9.366	7.666	1.116	0.716	14.716	1.271	1.311	2.916	4.816	1.028	1.244	4.181
Road 15	15 1600-1700	9.466	7.766	1.116	0.716	14.816	1.271	1.311	2.916	4.816	1.028	1.244	4.181
	15 1700-1800	9.566	7.866	1.116	0.716	14.916	1.271	1.311	2.916	4.816	1.028	1.244	4.181
Road 15	15 1800-1900	9.666	7.966	1.116	0.716	15.016	1.271	1.311	2.916	4.816	1.028	1.244	4.181
	15 1900-2000	9.766	8.066	1.116	0.716	15.116	1.271	1.311	2.916	4.816	1.028	1.244	4.181
Road 15	15 2000-2100	9.866	8.166	1.116	0.716	15.216	1.271	1.311	2.916	4.816	1.028	1.244	4.181
	15 2100-2200	9.966	8.266	1.116	0.716	15.316	1.271	1.311	2.916	4.816	1.028	1.244	4.181
Road 15	15 2200-2300	10.066	8.366	1.116	0.716	15.416							

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24 Hour Underground Factors															
24 Hour Undermining Factors for															
Month (Month)															
Row	Road ID	Hour	NO Emission						NO Emission						
			Month/NoEmission			Month/NoEmission			Month/NoEmission			Month/NoEmission			
			g/hour/ft	lb/year/ft	lb/year/ft	lb/year/ft	lb/year/ft	lb/year/ft	lb/year/ft	lb/year/ft	lb/year/ft	lb/year/ft	lb/year/ft	lb/year/ft	lb/year/ft
17	1600-1700	5.81E-02	1.47E-06	4.14E-05	4.14E-05	4.65E-05	1.18E-04	4.88E-05	2.02E-05	5.70E-06	1.52E-04	1.58E-05	4.13E-06	1.37E-05	
18	1700-1800	5.81E-02	1.00E-06	2.80E-05	2.80E-05	3.22E-05	8.24E-05	3.33E-05	1.40E-05	4.27E-06	1.24E-04	1.33E-05	3.50E-06	1.06E-05	
19	1800-1900	5.81E-02	1.00E-06	2.80E-05	2.80E-05	3.22E-05	8.24E-05	3.33E-05	1.40E-05	4.27E-06	1.24E-04	1.33E-05	3.50E-06	1.06E-05	
20	1900-2000	5.81E-02	2.48E-07	7.28E-06	7.28E-06	1.11E-05	2.18E-05	2.34E-06	6.29E-06	1.19E-07	3.47E-05	5.22E-07	8.99E-07	2.92E-05	
21	2000-2100	5.81E-02	2.48E-07	7.28E-06	7.28E-06	1.11E-05	2.18E-05	2.34E-06	6.29E-06	1.19E-07	3.47E-05	5.22E-07	8.99E-07	2.92E-05	
22	2100-2200	1.04E-06	3.08E-07	4.87E-06	4.87E-06	7.10E-07	4.80E-06	5.76E-07	8.66E-07	2.54E-05	2.44E-06	3.68E-07	7.30E-07	2.10E-05	
23	2200-2300	1.04E-06	1.57E-07	4.57E-06	4.57E-06	5.2E-07	4.85E-06	5.80E-07	8.18E-07	2.38E-05	2.40E-06	3.68E-07	7.30E-07	2.10E-05	
24	2300-2400	1.04E-06	1.57E-07	4.57E-06	4.57E-06	5.2E-07	4.85E-06	5.80E-07	8.18E-07	2.38E-05	2.40E-06	3.68E-07	7.30E-07	2.10E-05	
25	0000-0100	6.93E-07	4.57E-06	1.79E-05	1.79E-05	1.81E-05	4.04E-05	1.84E-05	2.68E-05	1.03E-05	4.44E-05	2.39E-07	8.89E-06	1.84E-05	
26	0100-0200	6.93E-07	4.57E-06	1.79E-05	1.79E-05	1.81E-05	4.04E-05	1.84E-05	2.68E-05	1.03E-05	4.44E-05	2.39E-07	8.89E-06	1.84E-05	
27	0200-0300	8.49E-07	2.72E-06	1.06E-06	7.81E-07	2.50E-06	9.77E-07	4.39E-07	1.40E-07	5.49E-06	1.24E-06	1.26E-07	4.93E-06		
28	0300-0400	7.93E-07	2.72E-06	1.06E-06	7.81E-07	2.50E-06	9.77E-07	4.39E-07	1.40E-07	5.49E-06	1.24E-06	1.26E-07	4.93E-06		
29	0400-0500	7.93E-07	2.72E-06	1.06E-06	7.81E-07	2.50E-06	9.77E-07	4.39E-07	1.40E-07	5.49E-06	1.24E-06	1.26E-07	4.93E-06		
30	0500-0600	9.02E-05	4.85E-06	1.82E-05	8.97E-06	4.14E-05	4.89E-06	4.70E-07	2.27E-07	8.87E-06	4.00E-07	2.08E-07	8.11E-06		
31	0600-0700	9.02E-05	4.85E-06	1.82E-05	8.97E-06	4.14E-05	4.89E-06	4.70E-07	2.27E-07	8.87E-06	4.00E-07	2.08E-07	8.11E-06		
32	0700-0800	9.02E-05	2.31E-07	9.03E-06	1.07E-05	2.12E-07	8.35E-06	5.14E-07	1.60E-06	4.47E-06	1.70E-06	1.00E-07	3.92E-06		
33	0800-0900	9.02E-05	2.31E-07	9.03E-06	1.07E-05	2.12E-07	8.35E-06	5.14E-07	1.60E-06	4.47E-06	1.70E-06	1.00E-07	3.92E-06		
34	0900-1000	1.10E-05	2.46E-06	1.05E-05	1.15E-05	2.37E-06	2.34E-06	5.96E-07	2.34E-06	4.84E-07	5.11E-06	1.00E-07	4.21E-06		
35	1000-1100	1.54E-05	2.89E-07	1.09E-05	1.33E-05	2.89E-07	2.92E-06	6.74E-07	2.22E-07	4.78E-06	2.53E-07	1.02E-06	4.00E-06		
36	1100-1200	2.40E-05	4.28E-07	1.42E-05	1.76E-05	4.28E-07	4.31E-06	1.01E-06	2.22E-07	4.78E-06	2.53E-07	1.02E-06	4.00E-06		
37	1200-1300	2.27E-05	4.42E-07	1.61E-05	1.79E-05	4.42E-07	4.39E-06	8.21E-07	1.68E-06	5.13E-06	6.77E-07	1.40E-06	4.44E-06		
38	1300-1400	2.27E-05	4.42E-07	1.61E-05	1.79E-05	4.42E-07	4.39E-06	8.21E-07	1.68E-06	5.13E-06	6.77E-07	1.40E-06	4.44E-06		
39	1400-1500	2.27E-05	4.42E-07	1.61E-05	1.79E-05	4.42E-07	4.39E-06	8.21E-07	1.68E-06	5.13E-06	6.77E-07	1.40E-06	4.44E-06		
40	1500-1600	1.48E-07	3.72E-07	1.43E-06	1.24E-06	1.17E-07	3.21E-06	6.89E-07	1.74E-06	8.00E-06	5.70E-06	1.44E-06	5.39E-06		
41	1600-1700	9.10E-06	1.76E-07	6.89E-07	7.16E-07	1.51E-07	4.58E-06	4.87E-07	8.04E-07	5.35E-06	3.88E-06	7.52E-07	2.94E-06		
42	1700-1800	8.42E-06	1.31E-07	5.00E-06	7.61E-07	1.41E-07	4.58E-06	4.74E-07	7.46E-07	2.91E-06	4.09E-06	6.28E-07	2.42E-06		
43	1800-1900	8.42E-06	1.31E-07	5.00E-06	7.61E-07	1.41E-07	4.58E-06	4.74E-07	7.46E-07	2.91E-06	4.09E-06	6.28E-07	2.42E-06		
44	1900-2000	8.62E-07	3.17E-07	1.48E-06	7.24E-07	1.39E-07	4.11E-06	4.86E-07	7.16E-07	3.17E-06	4.11E-06	5.79E-07	2.27E-06		
45	2000-2100	8.62E-07	3.17E-07	1.48E-06	7.24E-07	1.39E-07	4.11E-06	4.86E-07	7.16E-07	3.17E-06	4.11E-06	5.79E-07	2.27E-06		
46	2100-2200	8.62E-07	3.17E-07	1.48E-06	7.24E-07	1.39E-07	4.11E-06	4.86E-07	7.16E-07	3.17E-06	4.11E-06	5.79E-07	2.27E-06		
47	2200-2300	8.62E-07	3.17E-07	1.48E-06	7.24E-07	1.39E-07	4.11E-06	4.86E-07	7.16E-07	3.17E-06	4.11E-06	5.79E-07	2.27E-06		
48	2300-2400	8.62E-07	3.17E-07	1.48E-06	7.24E-07	1.39E-07	4.11E-06	4.86E-07	7.16E-07	3.17E-06	4.11E-06	5.79E-07	2.27E-06		
49	0000-0100	1.11E-05	7.02E-06	7.02E-06	7.20E-06	6.21E-06	9.84E-06	5.49E-06	3.93E-07	1.11E-05	1.93E-06	3.39E-06	9.76E-06		
50	0100-0200	8.71E-05	4.94E-06	1.83E-06	9.00E-06	4.53E-06	1.11E-05	4.24E-07	2.64E-07	7.50E-06	4.02E-07	2.39E-07	6.88E-06		
51	0200-0300	9.24E-05	5.20E-06	1.92E-06	9.50E-06	4.74E-06	1.14E-05	4.34E-07	2.74E-07	7.80E-06	4.19E-07	2.54E-07	7.24E-06		
52	0300-0400	1.00E-05	3.49E-06	8.91E-07	9.19E-06	3.10E-06	8.78E-07	5.11E-07	1.14E-06	3.49E-06	4.47E-06	1.50E-06	4.32E-06		
53	0400-0500	1.00E-05	3.49E-06	8.91E-07	9.19E-06	3.10E-06	8.78E-07	5.11E-07	1.14E-06	3.49E-06	4.47E-06	1.50E-06	4.32E-06		
54	0500-0600	1.00E-05	3.49E-06	8.91E-07	9.19E-06	3.10E-06	8.78E-07	5.11E-07	1.14E-06	3.49E-06	4.47E-06	1.50E-06	4.32E-06		
55	0600-0700	1.11E-05	7.21E-06	7.20E-06	7.00E-06	6.73E-06	9.30E-06	5.27E-06	3.43E-07	8.88E-06	4.44E-07	1.15E-06	9.07E-06		
56	0700-0800	1.11E-05	7.21E-06	7.20E-06	7.00E-06	6.73E-06	9.30E-06	5.27E-06	3.43E-07	8.88E-06	4.44E-07	1.15E-06	9.07E-06		
57	0800-0900	1.11E-05	7.21E-06	7.20E-06	7.00E-06	6.73E-06	9.30E-06	5.27E-06	3.43E-07	8.88E-06	4.44E-07	1.15E-06	9.07E-06		
58	0900-1000	1.11E-05	7.21E-06	7.20E-06	7.00E-06	6.73E-06	9.30E-06	5.27E-06	3.43E-07	8.88E-06	4.44E-07	1.15E-06	9.07E-06		
59	1000-1100	1.48E-06	4.90E-07	1.43E-06	1.58E-06	4.31E-07	1.27E-06	7.71E-07	2.11E-06	6.06E-06	6.70E-07	1.77E-06	5.10E-06		
60	1100-1200	1.48E-06	4.90E-07	1.43E-06	1.58E-06	4.31E-07	1.27E-06	7.71E-07	2.11E-06	6.06E-06	6.70E-07	1.77E-06	5.10E-06		
61	1200-1300	1.48E-06	4.90E-07	1.43E-06	1.58E-06	4.31E-07	1.27E-06	7.71E-07	2.11E-06	6.06E-06	6.70E-07	1.77E-06	5.10E-06		
62	1300-1400	2.37E-06	5.78E-06	1.67E-05	1.38E-05	4.36E-07	4.24E-06	9.63E-06	2.33E-06	8.76E-06	8.81E-07	1.96E-06	5.78E-06		
63	1400-1500	2.37E-06	5.78E-06	1.67E-05	1.38E-05	4.36E-07	4.24E-06	9.63E-06	2.33E-06	8.76E-06	8.81E-07	1.96E-06	5.78E-06		
64	1500-1600	2.37E-06	5.78E-06	1.67E-05	1.38E-05	4.36E-07	4.24E-06	9.63E-06	2.33E-06	8.76E-06	8.81E-07	1.96E-06	5.78E-06		
65	1600-1700	2.20E-06	5.77E-06	1.66E-05	1.38E-05	4.80E-07	4.18E-06	9.61E-06	2.49E-06	7.18E-06	7.88E-07	2.07E-06	5.69E-06		
66	1700-1800	2.20E-06	5.77E-06	1.66E-05	1.38E-05	4.80E-07	4.18E-06	9.61E-06	2.49E-06	7.18E-06	7.88E-07	2.07E-06	5.69E-06		
67	1800-1900	2.20E-06	5.77E-06	1.66E-05	1.38E-05	4.80E-07	4.18E-06	9.61E-06	2.49E-06	7.18E-06	7.88E-07	2.07E-06	5.69E-06		
68	1900-2000	1.80E-06	5.04E-07	1.87E-05	1.50E-05	3.78E-07	7.92E-06	1.77E-06	4.44E-06	4.23E-06	4.10E-07	1.27E-06	3.67E-06		
69	2000-2100	1.80E-06	5.04E-07	1.87E-05	1.50E-05	3.78E-07	7.92E-06	1.77E-06	4.44E-06	4.23E-06	4.10E-07	1.27E-06	3.67E-06		
70	2100-2200	1.80E-06	5.04E-07	1.87E-05	1.50E-05	3.78E-07	7.92E-06	1.77E-06	4.44E-06	4.23E-06	4.10E-07	1.27E-06	3.67E-06		
71	2200-2300	1.80E-06	5.04E-07	1.87E-05	1.50E-05	3.78E-07	7.92E-06	1.77E-06	4.44E-06	4.23E-06	4.10E-07	1.27E-06	3.67E-06		
72	2300-2400	1.80E-06	5.04E-07	1.87E-05	1.50E-05	3.78E-07	7.92E-06	1.77E-06	4.44E-06	4.23E-06	4.10E-07	1.27E-06	3.67E-06		
73	0000-0100	1.80E-06	5.04E-07	1.87E-05	1.50E-05	3.78E-07	7.92E-06	1.77E-06	4.44E-06	4.23E-06	4.10E-07	1.27E-06	3.67E-06		
74	0100-0200	6.21E-07	7.18E-06	7.12E-06	7.14E-06	6.62E-06	1.22E-07	1.27E-07	1.99E-07	1.66E-06	1.88E-06	3.18E-06	3.37E-06		
75	0200-0300	6.81E-07	6.97E-06	7.21E-06	6.93E-06	6.81E-06	1.21E-07	1.17E-07	1.77E-07	1.23E-06	1.44E-06	1.63E-07	2.69E-06		
76	0300-0400	6.81E-07	6.97E-06	7.21E-06	6.93E-06	6.81E-06	1.21E-07	1.17E-07	1.77E-07	1.23E-06	1.44E-06	1.63E-07	2.69E-06		
77	0400-0500	6.81E-07	6.97E-06	7.21E-06	6.93E-06	6.81E-06	1.21E-07	1.17E-07	1.77E-07	1.23E-06	1.44E-06	1.63E-07	2.69E-06		
78	0500-0600	5.58E-07	4.42E-07	2.68E-06	1.00E-07	1.07E-07	2.44E-06	1.74E-07	4.65E-07	8.57E-06	1.60E-06	4.22E-07	2.79E-06		
79	0600-0700	5.58E-07	4.42E-07	2.68E-06	1.00E-07	1.07E-07	2.44E-06	1.74E-07	4.65E-07	8.57E-06	1.60E-06	4.22E-07	2.79E-06		
80	0700-0800	7.93E-07	4.79E-07	8.83E-06	9.90E-07	5.44E-07									

Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.4 Emission Factor in 2038.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open North End University														
Open North End University Factors for														
ANNEXED model (Page 2)														
Year 2038														
Veh	Road ID	Hour	No. Emissions				No. Emissions							
			Monthly/average		Monthly/average		Monthly/average		Monthly/average					
			g/hour	g/hour	g/hour	g/hour	g/hour	g/hour	g/hour	g/hour	g/hour	g/hour	g/hour	
Read 31	21	0000-0100	1.112	7.788	1.091	6.932	7.764	9.38	5.212	3.767	4.706	4.312	1.222	1.421
Read 31	21	0100-0200	2.026	6.066	6.88	5.562	5.562	5.562	5.562	5.562	5.562	5.562	2.576	2.146
Read 31	21	0200-0300	1.112	7.788	1.091	6.932	7.764	9.38	5.212	3.767	4.706	4.312	1.222	1.421
Read 31	21	0300-0400	1.544	4.198	6.076	4.121	4.121	5.527	6.135	1.867	2.487	5.446	1.613	2.136
Read 31	21	0400-0500	1.544	4.198	6.076	4.121	4.121	5.527	6.135	1.867	2.487	5.446	1.613	2.136
Read 31	21	0500-0600	1.472	8.162	1.091	1.472	7.514	9.38	9.38	9.38	4.44	5.682	1.966	4.076
Read 31	21	0600-0700	1.472	8.162	1.091	1.472	7.514	9.38	9.38	9.38	4.44	5.682	1.966	4.076
Read 31	21	0700-0800	1.472	8.162	1.091	1.472	7.514	9.38	9.38	9.38	4.44	5.682	1.966	4.076
Read 31	21	0800-0900	2.012	5.738	7.735	1.773	5.051	6.871	6.009	2.181	1.054	7.094	2.021	6.827
Read 31	21	0900-1000	2.012	5.738	7.735	1.773	5.051	6.871	6.009	2.181	1.054	7.094	2.021	6.827
Read 31	21	1000-1100	2.432	5.705	7.735	2.064	4.821	6.386	8.434	2.214	2.924	7.591	1.854	2.451
Read 31	21	1100-1200	2.432	5.705	7.735	2.064	4.821	6.386	8.434	2.214	2.924	7.591	1.854	2.451
Read 31	21	1200-1300	2.852	5.085	7.675	4.045	4.045	6.465	4.045	2.214	2.924	8.871	1.675	2.451
Read 31	21	1300-1400	2.852	5.085	7.675	4.045	4.045	6.465	4.045	2.214	2.924	8.871	1.675	2.451
Read 31	21	1400-1500	2.852	5.085	7.675	4.045	4.045	6.465	4.045	2.214	2.924	8.871	1.675	2.451
Read 31	21	1500-1600	2.812	6.112	6.066	2.362	4.471	7.736	1.212	2.456	1.445	9.573	2.176	2.875
Read 31	21	1600-1700	2.812	6.112	6.066	2.362	4.471	7.736	1.212	2.456	1.445	9.573	2.176	2.875
Read 31	21	1700-1800	2.812	6.112	6.066	2.362	4.471	7.736	1.212	2.456	1.445	9.573	2.176	2.875
Read 31	21	1800-1900	2.342	4.442	7.735	1.773	5.051	6.871	6.009	2.181	1.054	7.094	2.021	6.827
Read 31	21	1900-2000	1.544	5.382	4.452	4.452	1.773	2.671	3.912	6.625	1.454	1.895	5.782	1.215
Read 31	21	2000-2100	1.544	5.382	4.452	4.452	1.773	2.671	3.912	6.625	1.454	1.895	5.782	1.215
Read 31	21	2100-2200	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	2200-2300	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	2300-2400	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	2400-2500	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	2500-2600	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	2600-2700	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	2700-2800	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	2800-2900	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	2900-3000	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	3000-3100	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	3100-3200	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	3200-3300	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	3300-3400	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	3400-3500	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	3500-3600	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	3600-3700	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	3700-3800	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	3800-3900	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	3900-4000	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	4000-4100	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	4100-4200	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	4200-4300	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	4300-4400	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	4400-4500	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	4500-4600	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	4600-4700	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	4700-4800	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	4800-4900	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	4900-5000	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	5000-5100	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	5100-5200	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	5200-5300	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	5300-5400	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	5400-5500	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	5500-5600	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	5600-5700	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	5700-5800	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	5800-5900	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	5900-6000	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	6000-6100	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	6100-6200	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	6200-6300	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	6300-6400	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	6400-6500	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	6500-6600	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	6600-6700	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	6700-6800	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	6800-6900	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	6900-7000	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	7000-7100	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	7100-7200	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	7200-7300	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	7300-7400	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	7400-7500	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	7500-7600	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	7600-7700	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	7700-7800	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212	1.212
Read 31	21	7800-7900	1.212	1.212	1.212	1.212	1.212	1.212	1.212</					

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.4 Emission Factor in 2038.xlsx

Total Tg Northbound Quarry															
Open Road to Hot Emission Factors for ARMOED model - Year 2038															
Road Name	Road ID	Hour	NO _x Emission				PM ₁₀ Emission				PM _{2.5} Emission				
			g/hour	g/min	g/sec	g/min	g/hour	g/min	g/sec	g/min	g/hour	g/min	g/sec	g/min	
Road 24	24	0800	0900	1.350E+01	2.250E+00	1.550E+00	1.190E+01	2.310E+00	1.780E+00	5.010E+01	9.760E+00	2.480E+00	6.420E+00	9.860E+00	2.510E+00
Road 24	24	0900	1000	1.360E+01	2.570E+00	2.440E+00	1.210E+01	2.630E+00	2.020E+00	5.110E+01	1.110E+01	2.790E+00	7.420E+00	9.870E+00	2.470E+00
Road 24	24	1000	1100	1.310E+01	2.470E+00	2.340E+00	1.160E+01	2.530E+00	1.970E+00	5.040E+01	1.090E+01	2.740E+00	7.370E+00	9.840E+00	2.470E+00
Road 24	24	1100	1200	1.500E+01	3.000E+00	2.570E+00	1.300E+01	3.060E+00	2.470E+00	5.350E+01	1.070E+01	2.890E+00	8.460E+00	9.290E+00	2.370E+00
Road 24	24	1200	1300	1.460E+01	2.920E+00	2.500E+00	1.260E+01	2.980E+00	2.440E+00	5.280E+01	1.060E+01	2.850E+00	8.370E+00	9.240E+00	2.370E+00
Road 24	24	1300	1400	1.590E+01	3.630E+00	3.190E+00	1.360E+01	3.690E+00	2.780E+00	5.780E+01	1.180E+01	3.290E+00	9.480E+00	1.000E+01	2.760E+00
Road 24	24	1400	1500	1.520E+01	3.270E+00	2.830E+00	1.290E+01	3.330E+00	2.590E+00	5.620E+01	1.150E+01	3.200E+00	9.360E+00	9.600E+00	2.730E+00
Road 24	24	1500	1600	1.470E+01	3.080E+00	2.710E+00	1.240E+01	3.140E+00	2.500E+00	5.480E+01	1.130E+01	3.160E+00	9.230E+00	9.620E+00	2.710E+00
Road 24	24	1600	1700	1.290E+01	2.670E+00	2.380E+00	1.110E+01	2.730E+00	2.140E+00	5.040E+01	1.070E+01	2.840E+00	7.370E+00	9.840E+00	2.470E+00
Road 24	24	1800	1900	1.080E+01	1.470E+00	1.360E+00	9.550E+00	1.920E+00	1.360E+00	4.640E+01	6.070E+00	1.520E+00	3.590E+00	3.830E+00	1.350E+00
Road 24	24	1900	2000	1.060E+01	1.420E+00	1.340E+00	9.360E+00	1.870E+00	1.340E+00	4.580E+01	5.920E+00	1.500E+00	3.540E+00	3.800E+00	1.340E+00
Road 24	24	2000	2100	1.050E+01	1.360E+00	1.290E+00	9.160E+00	1.820E+00	1.320E+00	4.530E+01	5.850E+00	1.480E+00	3.510E+00	3.770E+00	1.330E+00
Road 24	24	2100	2200	1.040E+01	1.320E+00	1.270E+00	8.970E+00	1.770E+00	1.300E+00	4.480E+01	5.780E+00	1.460E+00	3.480E+00	3.740E+00	1.320E+00
Road 24	24	2200	2300	1.110E+01	1.520E+00	1.460E+00	9.710E+00	1.950E+00	1.370E+00	4.640E+01	6.140E+00	1.520E+00	3.610E+00	3.830E+00	1.400E+00
Road 24	24	2300	2400	1.100E+01	1.480E+00	1.440E+00	9.520E+00	1.900E+00	1.350E+00	4.600E+01	6.070E+00	1.500E+00	3.580E+00	3.800E+00	1.390E+00
Road 25	25	0800	0900	1.060E+01	1.780E+00	1.670E+00	8.470E+00	1.630E+00	1.100E+00	3.920E+01	7.260E+00	1.890E+00	4.670E+00	6.770E+00	1.910E+00
Road 25	25	0900	1000	1.040E+01	1.730E+00	1.640E+00	8.300E+00	1.600E+00	1.080E+00	3.870E+01	7.190E+00	1.870E+00	4.620E+00	6.710E+00	1.890E+00
Road 25	25	1000	1100	1.040E+01	1.680E+00	1.620E+00	8.230E+00	1.570E+00	1.070E+00	3.820E+01	7.120E+00	1.850E+00	4.580E+00	6.660E+00	1.870E+00
Road 25	25	1100	1200	1.080E+01	1.830E+00	1.720E+00	8.610E+00	1.680E+00	1.120E+00	3.970E+01	7.440E+00	1.940E+00	4.780E+00	6.950E+00	1.970E+00
Road 25	25	1200	1300	1.040E+01	1.730E+00	1.640E+00	8.300E+00	1.600E+00	1.080E+00	3.870E+01	7.190E+00	1.870E+00	4.620E+00	6.710E+00	1.890E+00
Road 25	25	1300	1400	1.080E+01	1.830E+00	1.720E+00	8.610E+00	1.680E+00	1.120E+00	3.970E+01	7.440E+00	1.940E+00	4.780E+00	6.950E+00	1.970E+00
Road 25	25	1400	1500	1.070E+01	1.780E+00	1.670E+00	8.400E+00	1.630E+00	1.100E+00	3.900E+01	7.200E+00	1.880E+00	4.650E+00	6.740E+00	1.900E+00
Road 25	25	1500	1600	1.060E+01	1.700E+00	1.650E+00	8.280E+00	1.610E+00	1.090E+00	3.850E+01	7.150E+00	1.860E+00	4.600E+00	6.680E+00	1.880E+00
Road 25	25	1600	1700	1.060E+01	1.650E+00	1.600E+00	8.180E+00	1.580E+00	1.070E+00	3.800E+01	7.080E+00	1.840E+00	4.550E+00	6.630E+00	1.860E+00
Road 25	25	1700	1800	1.060E+01	1.600E+00	1.600E+00	8.080E+00	1.550E+00	1.060E+00	3.750E+01	7.010E+00	1.820E+00	4.500E+00	6.580E+00	1.840E+00
Road 25	25	1800	1900	1.060E+01	1.550E+00	1.550E+00	8.000E+00	1.520E+00	1.050E+00	3.700E+01	6.940E+00	1.800E+00	4.450E+00	6.530E+00	1.820E+00
Road 25	25	1900	2000	1.060E+01	1.500E+00	1.500E+00	7.920E+00	1.500E+00	1.040E+00	3.650E+01	6.870E+00	1.780E+00	4.400E+00	6.480E+00	1.800E+00
Road 25	25	2000	2100	1.060E+01	1.450E+00	1.450E+00	7.840E+00	1.480E+00	1.030E+00	3.600E+01	6.800E+00	1.760E+00	4.350E+00	6.430E+00	1.780E+00
Road 25	25	2100	2200	1.060E+01	1.400E+00	1.400E+00	7.760E+00	1.450E+00	1.020E+00	3.550E+01	6.730E+00	1.740E+00	4.300E+00	6.380E+00	1.760E+00
Road 25	25	2200	2300	1.060E+01	1.350E+00	1.350E+00	7.680E+00	1.420E+00	1.010E+00	3.500E+01	6.660E+00	1.720E+00	4.250E+00	6.330E+00	1.740E+00
Road 25	25	2300	2400	1.060E+01	1.300E+00	1.300E+00	7.600E+00	1.390E+00	1.000E+00	3.450E+01	6.590E+00	1.700E+00	4.200E+00	6.280E+00	1.720E+00
Road 26	26	0800	0900	1.270E+01	2.130E+00	1.970E+00	1.280E+01	2.330E+00	1.830E+00	5.300E+01	1.030E+01	2.650E+00	7.000E+00	9.580E+00	2.480E+00
Road 26	26	0900	1000	1.280E+01	2.450E+00	2.290E+00	1.300E+01	2.590E+00	2.000E+00	5.400E+01	1.100E+01	2.800E+00	7.500E+00	9.680E+00	2.500E+00
Road 26	26	1000	1100	1.230E+01	2.350E+00	2.170E+00	1.250E+01	2.450E+00	1.930E+00	5.200E+01	1.070E+01	2.700E+00	7.300E+00	9.580E+00	2.480E+00
Road 26	26	1100	1200	1.420E+01	2.880E+00	2.500E+00	1.340E+01	2.940E+00	2.300E+00	5.500E+01	1.120E+01	2.900E+00	8.600E+00	9.780E+00	2.500E+00
Road 26	26	1200	1300	1.380E+01	2.800E+00	2.420E+00	1.300E+01	2.860E+00	2.220E+00	5.400E+01	1.100E+01	2.800E+00	8.400E+00	9.680E+00	2.500E+00
Road 26	26	1300	1400	1.510E+01	3.510E+00	3.030E+00	1.390E+01	3.570E+00	2.600E+00	5.700E+01	1.180E+01	3.300E+00	9.700E+00	1.030E+01	2.760E+00
Road 26	26	1400	1500	1.440E+01	3.150E+00	2.770E+00	1.320E+01	3.210E+00	2.400E+00	5.500E+01	1.150E+01	3.200E+00	9.300E+00	9.600E+00	2.730E+00
Road 26	26	1500	1600	1.390E+01	2.950E+00	2.570E+00	1.270E+01	3.010E+00	2.320E+00	5.300E+01	1.120E+01	3.100E+00	9.000E+00	9.500E+00	2.710E+00
Road 26	26	1600	1700	1.210E+01	2.550E+00	2.370E+00	1.130E+01	2.610E+00	2.140E+00	5.00E+01	1.070E+01	2.840E+00	7.370E+00	9.840E+00	2.470E+00
Road 26	26	1800	1900	1.080E+01	1.470E+00	1.360E+00	9.550E+00	1.920E+00	1.360E+00	4.640E+01	6.070E+00	1.520E+00	3.590E+00	3.830E+00	1.350E+00
Road 26	26	1900	2000	1.060E+01	1.420E+00	1.340E+00	9.360E+00	1.870E+00	1.340E+00	4.580E+01	5.920E+00	1.500E+00	3.540E+00	3.800E+00	1.340E+00
Road 26	26	2000	2100	1.050E+01	1.360E+00	1.290E+00	9.160E+00	1.820E+00	1.320E+00	4.530E+01	5.850E+00	1.480E+00	3.510E+00	3.770E+00	1.330E+00
Road 26	26	2100	2200	1.040E+01	1.320E+00	1.270E+00	8.970E+00	1.770E+00	1.300E+00	4.480E+01	5.780E+00	1.460E+00	3.480E+00	3.740E+00	1.320E+00
Road 26	26	2200	2300	1.110E+01	1.520E+00	1.460E+00	9.710E+00	1.950E+00	1.370E+00	4.640E+01	6.140E+00	1.520E+00	3.610E+00	3.830E+00	1.400E+00
Road 26	26	2300	2400	1.100E+01	1.480E+00	1.440E+00	9.520E+00	1.900E+00	1.350E+00	4.600E+01	6.070E+00	1.500E+00	3.580E+00	3.800E+00	1.390E+00
Road 27	27	0800	0900	1.080E+01	1.880E+00	1.770E+00	8.680E+00	1.690E+00	1.110E+00	3.950E+01	7.300E+00	1.900E+00	4.700E+00	6.800E+00	1.930E+00
Road 27	27	0900	1000	1.060E+01	1.830E+00	1.740E+00	8.500E+00	1.660E+00	1.090E+00	3.900E+01	7.230E+00	1.880E+00	4.650E+00	6.750E+00	1.910E+00
Road 27	27	1000	1100	1.060E+01	1.780E+00	1.700E+00	8.320E+00	1.630E+00	1.070E+00	3.850E+01	7.160E+00	1.860E+00	4.600E+00	6.700E+00	1.890E+00
Road 27	27	1100	1200	1.100E+01	1.930E+00	1.820E+00	8.700E+00	1.710E+00	1.130E+00	3.950E+01	7.470E+00	1.920E+00	4.750E+00	6.850E+00	1.950E+00
Road 27	27	1200	1300	1.060E+01	1.830E+00	1.740E+00	8.500E+00	1.660E+00	1.090E+00	3.900E+01	7.230E+00	1.880E+00	4.650E+00	6.750E+00	1.910E+00
Road 27	27	1300	1400	1.100E+01	1.930E+00	1.820E+00	8.700E+00	1.710E+00	1.130E+00	3.950E+01	7.470E+00	1.920E+00	4.750E+00	6.850E+00	1.950E+00
Road 27	27	1400	1500	1.080E+01	1.880E+00	1.770E+00	8.680E+00	1.690E+00	1.110E+00	3.950E+01	7.300E+00	1.900E+00	4.700E+00	6.800E+00	1.930E+00
Road 27	27	1500	1600	1.060E+01	1.830E+00	1.740E+00	8.500E+00	1.660E+00	1.090E+00	3.900E+01	7.230E+00	1.880E+00	4.650E+00	6.750E+00	1.910E+00
Road 27	27	1600	1700	1.060E+01	1.780E+00	1.700E+00	8.320E+00	1.630E+00	1.070E+00	3.850E+01	7.160E+00	1.860E+00	4.600E+00	6.700E+00	1.890E+00
Road 27	27	1700	1800	1.060E+01	1.730E+00	1.680E+00	8.150E+00	1.600E+00	1.060E+00	3.800E+01	7.090E+00	1.840E+00	4.550E+00	6.650E+00	1.870E+00
Road 27	27	1800	1900	1.060E+01	1.680E+00	1.630E+00	7.980E+00	1.570E+00	1.050E+00	3.750E+01	7.020E+00	1.820E+00	4.500E+00	6.600E+00	1.850E+00
Road 27	27	1900	2000	1.060E+01	1.630E+00	1.580E+00	7.810E+00	1.540E+00	1.040E+00	3.700E+01	6.950E+00	1.800E+00	4.450E+00	6.550E+00	1.830E+00
Road 27	27	2000	2100	1.060E+01	1.580E+00	1.530E+00	7.640E+00	1.510E+00	1.030E+00	3.650E+01	6.880E+00	1.780E+00	4.400E+00	6.500E+00	1.810E+00

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.4 Emission Factor in 2038.xlsx

Open N 9 North Underway Quarry														
Open N 9 North 50 km Exhaust Factors for AR5000 model (August)														
Road Name	Road ID	Hour	NO _x Emission						NO _x Emission					
			Monthly/Mile			Monthly/average			Monthly/Mile			Monthly/average		
			g/hour	tons/hr./Mile	g/hour	tons/hr./Mile	g/hour	tons/hr./Mile	g/hour	tons/hr./Mile	g/hour	tons/hr./Mile		
Road 27	27	1800-1830	1.800E+01	4.67E-07	1.25E+06	1.44E+01	1.81E-07	1.05E+06	5.67E+01	1.42E+06	4.45E+06	4.78E+01	1.31E+06	3.78E+06
Road 27	27	1700-1800	1.800E+01	5.54E-07	1.54E+06	1.54E+01	2.25E-07	1.05E+06	5.67E+01	1.42E+06	4.45E+06	4.78E+01	1.31E+06	3.78E+06
Road 27	27	1600-1700	1.800E+01	5.54E-07	1.54E+06	1.54E+01	2.25E-07	1.05E+06	5.67E+01	1.42E+06	4.45E+06	4.78E+01	1.31E+06	3.78E+06
Road 27	27	1500-1600	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	1400-1500	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	1300-1400	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	1200-1300	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	1100-1200	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	1000-1100	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	0900-1000	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	0800-0900	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	0700-0800	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	0600-0700	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	0500-0600	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	0400-0500	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	0300-0400	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	0200-0300	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	0100-0200	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	0000-0100	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	2300-0000	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	2200-2300	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	2100-2200	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	2000-2100	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	1900-2000	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	1800-1900	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	1700-1800	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	1600-1700	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	1500-1600	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	1400-1500	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	1300-1400	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	1200-1300	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	1100-1200	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	1000-1100	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	0900-1000	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	0800-0900	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	0700-0800	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	0600-0700	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	0500-0600	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	0400-0500	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	0300-0400	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	0200-0300	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	0100-0200	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	0000-0100	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	2300-0000	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	2200-2300	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	2100-2200	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	2000-2100	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	1900-2000	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	1800-1900	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	1700-1800	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	1600-1700	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	1500-1600	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	1400-1500	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	1300-1400	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	1200-1300	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	1100-1200	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	1000-1100	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	0900-1000	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	0800-0900	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	0700-0800	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	0600-0700	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	0500-0600	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	0400-0500	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07	3.97E+01	3.82E+07	3.83E+07
Road 27	27	0300-0400	1.09E+01	1.12E-07	3.48E-07	9.93E+05	1.05E+01	2.97E-07	4.31E+04	4.46E+07	3.75E+07			

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.4 Emission Factor in 2038.xlsx

24 Hour Underground Factors												
24 Hour Undermining Factors for												
Month (Month)												
Row ID	Hour	NO Emission						NO Emission				
		g/kWh	lb/ton	lb/ton	lb/ton	lb/ton	lb/ton	g/kWh	lb/ton	lb/ton	lb/ton	lb/ton
1	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
2	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
3	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
4	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
5	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
6	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
7	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
8	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
9	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
10	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
11	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
12	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
13	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
14	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
15	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
16	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
17	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
18	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
19	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
20	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
21	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
22	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
23	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
24	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
25	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
26	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
27	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
28	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
29	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
30	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
31	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
32	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
33	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
34	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
35	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
36	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
37	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
38	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
39	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
40	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
41	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
42	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
43	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
44	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
45	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
46	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
47	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
48	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
49	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
50	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
51	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
52	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
53	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
54	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
55	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
56	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
57	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
58	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
59	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
60	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
61	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
62	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
63	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
64	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
65	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
66	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
67	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
68	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
69	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
70	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
71	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
72	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
73	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
74	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
75	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
76	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
77	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
78	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
79	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
80	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
81	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
82	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
83	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
84	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
85	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
86	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
87	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
88	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
89	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
90	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
91	00:00:00	1.044	2.016	1.886	0.710	1.268	4.782	6.276	6.276	4.166	8.066	7.386
9												

Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.4 Emission Factor in 2038.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

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Twin Y North Underway Quarry															
Open Road to Base Emission Factors for KMS100 (model September)															
		Year 2038													
Road Name	Road ID	Hour	Motorway			No Emission			Motorway			No Emission			
			g/hcwh	g/hcwh	tonne/hcwh	g/hcwh	g/hcwh	tonne/hcwh	g/hcwh	g/hcwh	tonne/hcwh	g/hcwh	g/hcwh	tonne/hcwh	
Road #4	A	0800-0900	1.8142	2.285	6.588	7.695	2.767	0.75	3.595	4.762	1.7116	3.438	0.973	1.996	0.61
Road #4	A	0900-1000	1.8142	2.285	6.588	7.695	2.767	0.75	3.595	4.762	1.7116	3.438	0.973	1.996	0.61
Road #4	A	1000-1100	1.8142	2.285	6.588	7.695	2.767	0.75	3.595	4.762	1.7116	3.438	0.973	1.996	0.61
Road #4	A	1100-1200	1.8142	2.285	6.588	7.695	2.767	0.75	3.595	4.762	1.7116	3.438	0.973	1.996	0.61
Road #4	A	1200-1300	1.8142	2.285	6.588	7.695	2.767	0.75	3.595	4.762	1.7116	3.438	0.973	1.996	0.61
Road #4	A	1300-1400	1.8142	2.285	6.588	7.695	2.767	0.75	3.595	4.762	1.7116	3.438	0.973	1.996	0.61
Road #4	A	1400-1500	1.8142	2.285	6.588	7.695	2.767	0.75	3.595	4.762	1.7116	3.438	0.973	1.996	0.61
Road #4	A	1500-1600	1.8142	2.285	6.588	7.695	2.767	0.75	3.595	4.762	1.7116	3.438	0.973	1.996	0.61
Road #4	A	1600-1700	1.8142	2.285	6.588	7.695	2.767	0.75	3.595	4.762	1.7116	3.438	0.973	1.996	0.61
Road #4	A	1700-1800	1.8142	2.285	6.588	7.695	2.767	0.75	3.595	4.762	1.7116	3.438	0.973	1.996	0.61
Road #4	A	1800-1900	1.8142	2.285	6.588	7.695	2.767	0.75	3.595	4.762	1.7116	3.438	0.973	1.996	0.61
Road #4	A	1900-2000	1.8142	2.285	6.588	7.695	2.767	0.75	3.595	4.762	1.7116	3.438	0.973	1.996	0.61
Road #4	A	2000-2100	1.8142	2.285	6.588	7.695	2.767	0.75	3.595	4.762	1.7116	3.438	0.973	1.996	0.61
Road #4	A	2100-2200	1.8142	2.285	6.588	7.695	2.767	0.75	3.595	4.762	1.7116	3.438	0.973	1.996	0.61
Road #4	A	2200-2300	1.8142	2.285	6.588	7.695	2.767	0.75	3.595	4.762	1.7116	3.438	0.973	1.996	0.61
Road #4	A	2300-2400	1.8142	2.285	6.588	7.695	2.767	0.75	3.595	4.762	1.7116	3.438	0.973	1.996	0.61
Road #5	A	0000-0100	8.2181	8.351	48.977	8.744	8.778	1.680	5.612	4.008	1.346	3.888	1.026	3.027	0.81
Road #5	A	0100-0200	8.2181	8.351	48.977	8.744	8.778	1.680	5.612	4.008	1.346	3.888	1.026	3.027	0.81
Road #5	A	0200-0300	8.2181	8.351	48.977	8.744	8.778	1.680	5.612	4.008	1.346	3.888	1.026	3.027	0.81
Road #5	A	0300-0400	8.2181	8.351	48.977	8.744	8.778	1.680	5.612	4.008	1.346	3.888	1.026	3.027	0.81
Road #5	A	0400-0500	8.2181	8.351	48.977	8.744	8.778	1.680	5.612	4.008	1.346	3.888	1.026	3.027	0.81
Road #5	A	0500-0600	8.2181	8.351	48.977	8.744	8.778	1.680	5.612	4.008	1.346	3.888	1.026	3.027	0.81
Road #5	A	0600-0700	8.2181	8.351	48.977	8.744	8.778	1.680	5.612	4.008	1.346	3.888	1.026	3.027	0.81
Road #5	A	0700-0800	8.2181	8.351	48.977	8.744	8.778	1.680	5.612	4.008	1.346	3.888	1.026	3.027	0.81
Road #5	A	0800-0900	8.2181	8.351	48.977	8.744	8.778	1.680	5.612	4.008	1.346	3.888	1.026	3.027	0.81
Road #5	A	0900-1000	8.2181	8.351	48.977	8.744	8.778	1.680	5.612	4.008	1.346	3.888	1.026	3.027	0.81
Road #5	A	1000-1100	8.2181	8.351	48.977	8.744	8.778	1.680	5.612	4.008	1.346	3.888	1.026	3.027	0.81
Road #5	A	1100-1200	8.2181	8.351	48.977	8.744	8.778	1.680	5.612	4.008	1.346	3.888	1.026	3.027	0.81
Road #5	A	1200-1300	8.2181	8.351	48.977	8.744	8.778	1.680	5.612	4.008	1.346	3.888	1.026	3.027	0.81
Road #5	A	1300-1400	8.2181	8.351	48.977	8.744	8.778	1.680	5.612	4.008	1.346	3.888	1.026	3.027	0.81
Road #5	A	1400-1500	8.2181	8.351	48.977	8.744	8.778	1.680	5.612	4.008	1.346	3.888	1.026	3.027	0.81
Road #5	A	1500-1600	8.2181	8.351	48.977	8.744	8.778	1.680	5.612	4.008	1.346	3.888	1.026	3.027	0.81
Road #5	A	1600-1700	8.2181	8.351	48.977	8.744	8.778	1.680	5.612	4.008	1.346	3.888	1.026	3.027	0.81
Road #5	A	1700-1800	8.2181	8.351	48.977	8.744	8.778	1.680	5.612	4.008	1.346	3.888	1.026	3.027	0.81
Road #5	A	1800-1900	8.2181	8.351	48.977	8.744	8.778	1.680	5.612	4.008	1.346	3.888	1.026	3.027	0.81
Road #5	A	1900-2000	8.2181	8.351	48.977	8.744	8.778	1.680	5.612	4.008	1.346	3.888	1.026	3.027	0.81
Road #5	A	2000-2100	8.2181	8.351	48.977	8.744	8.778	1.680	5.612	4.008	1.346	3.888	1.026	3.027	0.81
Road #5	A	2100-2200	8.2181	8.351	48.977	8.744	8.778	1.680	5.612	4.008	1.346	3.888	1.026	3.027	0.81
Road #5	A	2200-2300	8.2181	8.351	48.977	8.744	8.778	1.680	5.612	4.008	1.346	3.888	1.026	3.027	0.81
Road #5	A	2300-2400	8.2181	8.351	48.977	8.744	8.778	1.680	5.612	4.008	1.346	3.888	1.026	3.027	0.81
Road #6	A	0000-0100	1.131	1.408	3.855	4.588	1.767	0.176	7.041	2.466	2.061	5.555	1.946	1.946	0.54
Road #6	A	0100-0200	1.131	1.408	3.855	4.588	1.767	0.176	7.041	2.466	2.061	5.555	1.946	1.946	0.54
Road #6	A	0200-0300	1.131	1.408	3.855	4.588	1.767	0.176	7.041	2.466	2.061	5.555	1.946	1.946	0.54
Road #6	A	0300-0400	1.131	1.408	3.855	4.588	1.767	0.176	7.041	2.466	2.061	5.555	1.946	1.946	0.54
Road #6	A	0400-0500	1.131	1.408	3.855	4.588	1.767	0.176	7.041	2.466	2.061	5.555	1.946	1.946	0.54
Road #6	A	0500-0600	1.131	1.408	3.855	4.588	1.767	0.176	7.041	2.466	2.061	5.555	1.946	1.946	0.54
Road #6	A	0600-0700	1.131	1.408	3.855	4.588	1.767	0.176	7.041	2.466	2.061	5.555	1.946	1.946	0.54
Road #6	A	0700-0800	1.131	1.408	3.855	4.588	1.767	0.176	7.041	2.466	2.061	5.555	1.946	1.946	0.54
Road #6	A	0800-0900	1.131	1.408	3.855	4.588	1.767	0.176	7.041	2.466	2.061	5.555	1.946	1.946	0.54
Road #6	A	0900-1000	1.131	1.408	3.855	4.588	1.767	0.176	7.041	2.466	2.061	5.555	1.946	1.946	0.54
Road #6	A	1000-1100	1.131	1.408	3.855	4.588	1.767	0.176	7.041	2.466	2.061	5.555	1.946	1.946	0.54
Road #6	A	1100-1200	1.131	1.408	3.855	4.588	1.767	0.176	7.041	2.466	2.061	5.555	1.946	1.946	0.54
Road #6	A	1200-1300	1.131	1.408	3.855	4.588	1.767	0.176	7.041	2.466	2.061	5.555	1.946	1.946	0.54
Road #6	A	1300-1400	1.131	1.408	3.855	4.588	1.767	0.176	7.041	2.466	2.061	5.555	1.946	1.946	0.54
Road #6	A	1400-1500	1.131	1.408	3.855	4.588	1.767	0.176	7.041	2.466	2.061	5.555	1.946	1.946	0.54
Road #6	A	1500-1600	1.131	1.408	3.855	4.588	1.767	0.176	7.041	2.466	2.061	5.555	1.946	1.946	0.54
Road #6	A	1600-1700	1.131	1.408	3.855	4.588	1.767	0.176	7.041	2.466	2.061	5.555	1.946	1.946	0.54
Road #6	A	1700-1800	1.131	1.408	3.855	4.588	1.767	0.176	7.041	2.466	2.061	5.555	1.946	1.946	0.54
Road #6	A	1800-1900	1.131	1.408	3.855	4.588	1.767	0.176	7.041	2.466	2.061	5.555	1.946	1.946	0.54
Road #6	A	1900-2000	1.131	1.408	3.855	4.588	1.767	0.176	7.041	2.466	2.061	5.555	1.946	1.946	0.54
Road #6	A	2000-2100	1.131	1.408	3.855	4.588	1.767	0.176	7.041	2.466	2.061	5.555	1.946	1.946	0.54
Road #6	A	2100-2200	1.131	1.408	3.855	4.588	1.767	0.176	7.041	2.466	2.061	5.555	1.946	1.946	0.54
Road #6	A	2200-2300	1.131	1.408	3.855	4.588	1.767	0.176	7.041	2.466	2.061	5.555	1.946	1.946	0.54
Road #6	A	2300-2400	1.131	1.408	3.855	4.588	1.767	0.176	7.041	2.466	2.061	5.555	1.946	1.946	0.54
Road #7	A	0000-0100	1.131	1.408	3.855	4.588	1.767	0.176	7.041	2.466	2.061	5.555	1.946	1.946	0.54
Road #7	A	0100-0200	1.131	1.408	3.855	4.588	1.767	0.176	7.041	2.466	2.061	5.555	1.946	1.946	0.54
Road #7	A	0200-0300	1.131	1.408	3.855	4.588	1.767	0.176	7.041	2.466	2.061	5.555	1.946	1.946	0.54
Road #7	A	0300-0400	1.131	1.408	3.855	4.588	1.767	0.176	7.041	2.466	2.061	5.555	1.946	1.946	0.54
Road #7	A	0400-0500	1.131	1.408	3.855	4.588	1.767	0.176	7.041	2.466	2.061	5.555	1.946	1.946	0.54
Road #7	A	0500-0600	1.131	1.408	3.855	4.588	1.767	0.176	7.041	2.466	2.061	5.555	1.946	1.946	0.54
Road #7	A	0600-0700	1.131	1.408	3.855	4.588	1.767	0.176	7.041	2.466	2.061	5.555	1.946	1.946	0.54
Road #7	A	0700-0800	1.131	1.408	3.855	4.588	1.767	0.176	7.041	2.466	2.061	5.555	1.946	1.946	0.54
Road #7	A	0800-0900	1.131	1.408	3.855	4.588	1.767	0.176	7.041	2.466	2.061	5.555	1.946	1.946	0.54
Road #7	A	0900-1000	1.131	1.408	3.855	4.588	1.767	0.176	7.041	2.466	2.061	5.555	1.946	1.946	0.54
Road #7	A	1000-1100	1.131	1.408	3.855	4.588	1.767	0.176	7.041	2.466	2.061	5.555	1.946	1.946	0.54
Road #7	A	1100-1200	1.131	1.											

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Open Up North Endowment Quarterly

Table 20: Road 20 Endowment Factors for ARMOU model (quarterly)

Year 2038

Road Name	Road ID	MO	MO/Envision						NO/Envision					
			Monthly/g/v/h			Envision/g/v/h			Monthly/g/v/h			Envision/g/v/h		
			g/v/h	g/v/h	g/v/h	g/v/h	g/v/h	g/v/h	g/v/h	g/v/h	g/v/h	g/v/h	g/v/h	g/v/h
Road 7	7	1600-1200	7.698	4.1567	4.886	6.1882	1.448	4.6848	7.718	1.778	6.088	6.288	1.4168	4.6848
Road 7	7	1700-1800	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 7	7	1900-2000	8.608	2.8317	3.008	1.4988	1.248	2.5388	1.048	1.888	1.828	4.028	1.108	2.008
Road 7	7	2000-2100	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 7	7	2200-2300	1.658	1.1967	1.158	6.238	0.108	2.238	1.048	8.218	0.708	3.818	4.448	0.708
Road 7	7	2300-2400	8.008	1.1467	1.388	8.888	9.518	1.128	4.788	8.038	8.418	7.178	9.288	0.708
Road 7	7	2400-2500	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 7	7	2500-2600	7.458	0.908	0.878	6.128	7.478	8.758	4.858	5.028	6.948	3.788	4.828	6.948
Road 7	7	2600-2700	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 8	8	0300-0330	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 8	8	0330-0345	8.468	0.748	7.418	0.58	8.158	9.298	0.848	1.768	1.818	1.978	1.668	0.848
Road 8	8	0345-0350	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 8	8	0350-0400	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 8	8	0400-0415	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 8	8	0415-0430	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 8	8	0430-0445	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 8	8	0445-0450	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 8	8	0450-0500	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 8	8	0500-0515	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 8	8	0515-0530	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 8	8	0530-0545	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 8	8	0545-0600	1.58	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	0600-0615	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	0615-0630	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	0630-0645	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	0645-0650	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	0650-0700	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	0700-0715	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	0715-0730	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	0730-0745	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	0745-0750	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	0750-0800	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	0800-0815	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	0815-0830	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	0830-0845	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	0845-0850	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	0850-0900	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	0900-0915	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	0915-0930	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	0930-0945	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	0945-0950	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	0950-1000	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1000-1015	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1015-1030	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1030-1045	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1045-1050	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1050-1100	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1100-1115	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1115-1130	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1130-1145	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1145-1150	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1150-1200	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1200-1215	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1215-1230	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1230-1245	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1245-1250	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1250-1300	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1300-1315	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1315-1330	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1330-1345	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1345-1350	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1350-1400	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1400-1415	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1415-1430	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1430-1445	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1445-1450	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1450-1500	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1500-1515	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1515-1530	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1530-1545	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1545-1550	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1550-1600	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1600-1615	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1615-1630	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1630-1645	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1645-1650	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1650-1700	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1700-1800	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1800-1815	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1815-1830	1.582	0.848	1.008	2.028	0.48	1.548	1.582	0.848	1.008	2.028	0.48	1.548
Road 9	9	1830-1845	1.582	0.848	1.008	2.028	0.48	1.548	1					

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Tsing Yi North Underground Facility												
Open Road 24 Hour Environment Factors for ARMOED model calculation												
Year 2030												
Road Name	Route ID	Hour	NO ₂ Emission				NO Emission					
			Metric/tonne/h	g/h/veh	tonne/h	g/h/veh	Metric/tonne/h	g/h/veh	tonne/h	g/h/veh		
Route 11	0000-0100	2:58E	4.16E	5.88E	0.27E	1.04E	4.04E	1.57E	8.81E	3.77E	1.44E	8.81E
Route 11	0100-0200	2:58E	4.16E	5.88E	0.27E	1.04E	4.04E	1.57E	8.81E	3.77E	1.44E	8.81E
Route 11	0200-0300	2:58E	4.16E	5.88E	0.27E	1.04E	4.04E	1.57E	8.81E	3.77E	1.44E	8.81E
Route 11	0300-0400	2:58E	4.16E	5.88E	0.27E	1.04E	4.04E	1.57E	8.81E	3.77E	1.44E	8.81E
Route 11	0400-0500	3:16E	4.86E	6.78E	0.31E	1.16E	4.57E	1.81E	9.78E	3.84E	1.67E	4.35E
Route 11	0500-0600	3:16E	4.86E	6.78E	0.31E	1.16E	4.57E	1.81E	9.78E	3.84E	1.67E	4.35E
Route 11	0600-0700	3:16E	4.86E	6.78E	0.31E	1.16E	4.57E	1.81E	9.78E	3.84E	1.67E	4.35E
Route 11	0700-0800	4:48E	9.55E	0.77E	6.30E	4.42E	0.77E	2.37E	2.36E	4.60E	1.80E	4.42E
Route 11	0800-0900	4:48E	9.55E	0.77E	6.30E	4.42E	0.77E	2.37E	2.36E	4.60E	1.80E	4.42E
Route 11	0900-1000	5:48E	1.41E	3.56E	0.14E	0.36E	1.70E	1.38E	3.00E	1.10E	0.43E	1.70E
Route 11	1000-1100	5:48E	1.41E	3.56E	0.14E	0.36E	1.70E	1.38E	3.00E	1.10E	0.43E	1.70E
Route 11	1100-1200	6:16E	1.99E	4.86E	0.20E	0.50E	2.40E	2.40E	1.63E	2.00E	0.83E	2.40E
Route 11	1200-1300	6:16E	1.99E	4.86E	0.20E	0.50E	2.40E	2.40E	1.63E	2.00E	0.83E	2.40E
Route 11	1300-1400	6:16E	1.99E	4.86E	0.20E	0.50E	2.40E	2.40E	1.63E	2.00E	0.83E	2.40E
Route 11	1400-1500	6:16E	1.99E	4.86E	0.20E	0.50E	2.40E	2.40E	1.63E	2.00E	0.83E	2.40E
Route 11	1500-1600	6:16E	1.99E	4.86E	0.20E	0.50E	2.40E	2.40E	1.63E	2.00E	0.83E	2.40E
Route 11	1600-1700	9:24E	2.16E	8.28E	0.36E	1.06E	1.62E	1.38E	3.18E	2.40E	0.95E	3.18E
Route 11	1700-1800	9:24E	2.16E	8.28E	0.36E	1.06E	1.62E	1.38E	3.18E	2.40E	0.95E	3.18E
Route 11	1800-1900	9:24E	2.16E	8.28E	0.36E	1.06E	1.62E	1.38E	3.18E	2.40E	0.95E	3.18E
Route 11	1900-2000	9:24E	2.16E	8.28E	0.36E	1.06E	1.62E	1.38E	3.18E	2.40E	0.95E	3.18E
Route 11	2000-2100	9:24E	2.16E	8.28E	0.36E	1.06E	1.62E	1.38E	3.18E	2.40E	0.95E	3.18E
Route 11	2100-2200	9:24E	2.16E	8.28E	0.36E	1.06E	1.62E	1.38E	3.18E	2.40E	0.95E	3.18E
Route 11	2200-2300	9:24E	2.16E	8.28E	0.36E	1.06E	1.62E	1.38E	3.18E	2.40E	0.95E	3.18E
Route 11	2300-0000	9:24E	2.16E	8.28E	0.36E	1.06E	1.62E	1.38E	3.18E	2.40E	0.95E	3.18E
Route 12	0000-0100	2:57E	1.67E	4.03E	0.23E	0.29E	1.47E	1.47E	1.57E	1.88E	0.82E	1.57E
Route 12	0100-0200	2:57E	1.67E	4.03E	0.23E	0.29E	1.47E	1.47E	1.57E	1.88E	0.82E	1.57E
Route 12	0200-0300	2:57E	1.67E	4.03E	0.23E	0.29E	1.47E	1.47E	1.57E	1.88E	0.82E	1.57E
Route 12	0300-0400	2:57E	1.67E	4.03E	0.23E	0.29E	1.47E	1.47E	1.57E	1.88E	0.82E	1.57E
Route 12	0400-0500	2:58E	1.65E	4.05E	0.23E	0.29E	1.45E	1.45E	1.55E	1.86E	0.80E	1.55E
Route 12	0500-0600	2:58E	1.65E	4.05E	0.23E	0.29E	1.45E	1.45E	1.55E	1.86E	0.80E	1.55E
Route 12	0600-0700	2:58E	1.65E	4.05E	0.23E	0.29E	1.45E	1.45E	1.55E	1.86E	0.80E	1.55E
Route 12	0700-0800	3:15E	1.85E	4.57E	0.25E	0.32E	1.65E	1.65E	1.75E	2.05E	0.87E	1.65E
Route 12	0800-0900	3:15E	1.85E	4.57E	0.25E	0.32E	1.65E	1.65E	1.75E	2.05E	0.87E	1.65E
Route 12	0900-1000	3:15E	1.85E	4.57E	0.25E	0.32E	1.65E	1.65E	1.75E	2.05E	0.87E	1.65E
Route 12	1000-1100	3:15E	1.85E	4.57E	0.25E	0.32E	1.65E	1.65E	1.75E	2.05E	0.87E	1.65E
Route 12	1100-1200	3:15E	1.85E	4.57E	0.25E	0.32E	1.65E	1.65E	1.75E	2.05E	0.87E	1.65E
Route 12	1200-1300	3:15E	1.85E	4.57E	0.25E	0.32E	1.65E	1.65E	1.75E	2.05E	0.87E	1.65E
Route 12	1300-1400	3:15E	1.85E	4.57E	0.25E	0.32E	1.65E	1.65E	1.75E	2.05E	0.87E	1.65E
Route 12	1400-1500	3:15E	1.85E	4.57E	0.25E	0.32E	1.65E	1.65E	1.75E	2.05E	0.87E	1.65E
Route 12	1500-1600	3:15E	1.85E	4.57E	0.25E	0.32E	1.65E	1.65E	1.75E	2.05E	0.87E	1.65E
Route 12	1600-1700	3:15E	1.85E	4.57E	0.25E	0.32E	1.65E	1.65E	1.75E	2.05E	0.87E	1.65E
Route 12	1700-1800	3:15E	1.85E	4.57E	0.25E	0.32E	1.65E	1.65E	1.75E	2.05E	0.87E	1.65E
Route 12	1800-1900	3:15E	1.85E	4.57E	0.25E	0.32E	1.65E	1.65E	1.75E	2.05E	0.87E	1.65E
Route 12	1900-2000	3:15E	1.85E	4.57E	0.25E	0.32E	1.65E	1.65E	1.75E	2.05E	0.87E	1.65E
Route 12	2000-2100	3:15E	1.85E	4.57E	0.25E	0.32E	1.65E	1.65E	1.75E	2.05E	0.87E	1.65E
Route 12	2100-2200	3:15E	1.85E	4.57E	0.25E	0.32E	1.65E	1.65E	1.75E	2.05E	0.87E	1.65E
Route 12	2200-2300	3:15E	1.85E	4.57E	0.25E	0.32E	1.65E	1.65E	1.75E	2.05E	0.87E	1.65E
Route 12	2300-0000	3:15E	1.85E	4.57E	0.25E	0.32E	1.65E	1.65E	1.75E	2.05E	0.87E	1.65E
Route 13	0000-0100	2:59E	1.68E	4.06E	0.23E	0.30E	1.48E	1.48E	1.58E	1.89E	0.83E	1.58E
Route 13	0100-0200	2:59E	1.68E	4.06E	0.23E	0.30E	1.48E	1.48E	1.58E	1.89E	0.83E	1.58E
Route 13	0200-0300	2:59E	1.68E	4.06E	0.23E	0.30E	1.48E	1.48E	1.58E	1.89E	0.83E	1.58E
Route 13	0300-0400	2:59E	1.68E	4.06E	0.23E	0.30E	1.48E	1.48E	1.58E	1.89E	0.83E	1.58E
Route 13	0400-0500	3:17E	1.90E	4.70E	0.24E	0.31E	1.50E	1.50E	1.60E	1.90E	0.84E	1.60E
Route 13	0500-0600	3:17E	1.90E	4.70E	0.24E	0.31E	1.50E	1.50E	1.60E	1.90E	0.84E	1.60E
Route 13	0600-0700	3:17E	1.90E	4.70E	0.24E	0.31E	1.50E	1.50E	1.60E	1.90E	0.84E	1.60E
Route 13	0700-0800	3:17E	1.90E	4.70E	0.24E	0.31E	1.50E	1.50E	1.60E	1.90E	0.84E	1.60E
Route 13	0800-0900	3:17E	1.90E	4.70E	0.24E	0.31E	1.50E	1.50E	1.60E	1.90E	0.84E	1.60E
Route 13	0900-1000	3:17E	1.90E	4.70E	0.24E	0.31E	1.50E	1.50E	1.60E	1.90E	0.84E	1.60E
Route 13	1000-1100	3:17E	1.90E	4.70E	0.24E	0.31E	1.50E	1.50E	1.60E	1.90E	0.84E	1.60E
Route 13	1100-1200	3:17E	1.90E	4.70E	0.24E	0.31E	1.50E	1.50E	1.60E	1.90E	0.84E	1.60E
Route 13	1200-1300	3:17E	1.90E	4.70E	0.24E	0.31E	1.50E	1.50E	1.60E	1.90E	0.84E	1.60E
Route 13	1300-1400	3:17E	1.90E	4.70E	0.24E	0.31E	1.50E	1.50E	1.60E	1.90E	0.84E	1.60E
Route 13	1400-1500	3:17E	1.90E	4.70E	0.24E	0.31E	1.50E	1.50E	1.60E	1.90E	0.84E	1.60E
Route 13	1500-1600	3:17E	1.90E	4.70E	0.24E	0.31E	1.50E	1.50E	1.60E	1.90E	0.84E	1.60E
Route 13	1600-1700	3:17E	1.90E	4.70E	0.24E	0.31E	1.50E	1.50E	1.60E	1.90E	0.84E	1.60E
Route 13	1700-1800	3:17E	1.90E	4.70E	0.24E	0.31E	1.50E	1.50E	1.60E	1.90E	0.84E	1.60E
Route 13	1800-1900	3:17E	1.90E	4.70E	0.24E	0.31E	1.50E	1.50E	1.60E	1.90E	0.84E	1.60E
Route 13	1900-2000	3:17E	1.90E	4.70E	0.24E	0.31E	1.50E	1.50E	1.60E	1.90E	0.84E	1.60E
Route 13	2000-2100	3:17E	1.90E	4.70E	0.24E	0.31E	1.50E	1.50E	1.60E	1.90E	0.84E	1.60E
Route 13	2100-2200	3:17E	1.90E	4.70E	0.24E	0.31E	1.50E	1.50E	1.60E	1.90E	0.84E	1.60E
Route 13	2200-2300	3:17E	1.90E	4.70E	0.24E	0.31E	1.50E	1.50E	1.60E	1.90E	0.84E	1.60E
Route 13	2300-0000	3:17E	1.90E	4.70E	0.24E	0.31E	1.50E	1.50E	1.60E	1.90E	0.84E	1.60E
Route 14	0000-0100	2:59E	1.68E	4.06E	0.23E	0.30E	1.48E	1.48E	1.58E	1.89E	0.83E	1.58E
Route 14	0100-0200	2:59E	1.68E	4.06E	0.23E	0.30E	1.48E	1.48E	1.58E	1.89E	0.83E	1.58E
Route 14	0200-0300	2:59E	1.68E	4.06E	0.23E	0.30E	1.48E	1.48E	1.58E	1.89E	0.83E	1.58E
Route 14	0300-0400	2:59E	1.68E	4.06E	0.23E	0.30E	1.48E	1.48E	1.58E	1.89E	0.83E	1.58E
Route 14	0400-0500	3:17E	1.90E	4.70E	0.24E	0.31E	1.50E	1.50E	1.60E	1.90E	0.84E	1.60E
Route 14	0500-0600	3:17E	1.90E	4.70E	0.24E	0.31E	1.50E	1.50E	1.60E	1.90E	0.84E	1.60E
Route 14	0600-0700	3:17E	1.90E	4.70E	0.24E	0.31E	1.50E	1.50E	1.60E	1.90E	0.84E	1.60E
Route 14	0700-0800	3:17E	1.90E	4.70E	0.24E	0.31E	1.50E	1.50E	1.60E	1.90E	0.84E	1.60E
Route 14	0800-0900	3:17E	1.90E	4.70E	0.24E	0.31E	1.50E	1.50E	1.60E	1.90E	0.84E	1.60E
Route 14	0900-1000	3:17E	1.90E	4.70E	0.24E	0.31E	1.50E	1.50E	1.60E	1.90E	0.84E	1.60E
Route 14	1000-1100	3:17E	1.90E	4.70E	0.24E	0.31E	1.50E	1.50E	1.60E	1.90E	0.84E	1.60E
Route 14	1100-1200	3:17E	1.90E	4.70E	0.24E	0.31E	1.50E	1.50E	1.60E	1.90E	0.84E	1.60E
Route 14	1200-1300	3:17E	1.90E	4.70E	0.24E	0.31E	1.50E	1.50E	1.60E	1.90E	0.84E	1.60E
Route 14	1300-1400	3:17E	1.90E	4.70E	0.24E	0.31E	1.50E	1.50E	1.60E	1.90E	0.84E	1.60E
Route 14	1400-1500	3:17E	1.90E	4.70E	0.24E	0.31E	1.50E	1.50E	1.60E	1.90E	0.84E	1.60E
Route 14	1500-1600	3:17E	1.90E	4.70E	0.24E	0.31E	1.50E	1.50E	1.60E	1.90E	0.84E	1.60E
Route 14	1600-1700	3:17E	1.90E	4.70E	0.24E	0.31E	1.50E	1.50E	1.60E	1.90E	0.84E</	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

[illegible]

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Twin City Northbound Quarry										
Open Road 24 Hour Emission Factors for ARNMO model (December)				Year 2038						
Road	Route ID	Hour	NO Emission			NO Emission				
			g/ton/hour	Monthly/tour/km	Monthly/tour/average	g/ton/hour	Monthly/tour/km	Monthly/tour/average		
Road 17	1700-1700	0:00-02	4.026	1.461	4.110	1.461	3.806	1.371	3.806	1.371
Road 17	1700-1700	0:02-04	2.136	0.783	2.136	0.783	1.860	0.676	1.860	0.676
Road 17	1700-1700	0:04-06	1.336	0.485	1.336	0.485	1.164	0.424	1.164	0.424
Road 17	1700-1700	0:06-08	1.816	0.664	1.816	0.664	1.584	0.576	1.584	0.576
Road 17	1700-1700	0:08-10	2.816	1.036	2.816	1.036	2.448	0.896	2.448	0.896
Road 17	1700-1700	0:10-12	3.816	1.408	3.816	1.408	3.312	1.216	3.312	1.216
Road 17	1700-1700	0:12-14	4.816	1.780	4.816	1.780	4.176	1.536	4.176	1.536
Road 17	1700-1700	0:14-16	5.816	2.152	5.816	2.152	5.040	1.856	5.040	1.856
Road 17	1700-1700	0:16-18	6.816	2.524	6.816	2.524	5.904	2.176	5.904	2.176
Road 17	1700-1700	0:18-20	7.816	2.896	7.816	2.896	6.768	2.496	6.768	2.496
Road 17	1700-1700	0:20-22	8.816	3.268	8.816	3.268	7.632	2.816	7.632	2.816
Road 17	1700-1700	0:22-24	9.816	3.640	9.816	3.640	8.496	3.136	8.496	3.136
Road 18	0000-0000	0:00-02	1.816	0.664	1.816	0.664	1.584	0.576	1.584	0.576
Road 18	0000-0000	0:02-04	1.316	0.484	1.316	0.484	1.164	0.424	1.164	0.424
Road 18	0000-0000	0:04-06	0.816	0.296	0.816	0.296	0.704	0.256	0.704	0.256
Road 18	0000-0000	0:06-08	1.316	0.484	1.316	0.484	1.164	0.424	1.164	0.424
Road 18	0000-0000	0:08-10	2.316	0.856	2.316	0.856	2.016	0.736	2.016	0.736
Road 18	0000-0000	0:10-12	3.316	1.228	3.316	1.228	2.880	1.056	2.880	1.056
Road 18	0000-0000	0:12-14	4.316	1.600	4.316	1.600	3.744	1.376	3.744	1.376
Road 18	0000-0000	0:14-16	5.316	1.972	5.316	1.972	4.608	1.696	4.608	1.696
Road 18	0000-0000	0:16-18	6.316	2.344	6.316	2.344	5.472	2.016	5.472	2.016
Road 18	0000-0000	0:18-20	7.316	2.716	7.316	2.716	6.336	2.336	6.336	2.336
Road 18	0000-0000	0:20-22	8.316	3.088	8.316	3.088	7.200	2.656	7.200	2.656
Road 18	0000-0000	0:22-24	9.316	3.460	9.316	3.460	8.064	2.976	8.064	2.976
Road 18	0700-0800	0:00-02	3.816	1.408	3.816	1.408	3.312	1.216	3.312	1.216
Road 18	0700-0800	0:02-04	2.816	1.036	2.816	1.036	2.448	0.896	2.448	0.896
Road 18	0700-0800	0:04-06	1.816	0.664	1.816	0.664	1.584	0.576	1.584	0.576
Road 18	0700-0800	0:06-08	2.816	1.036	2.816	1.036	2.448	0.896	2.448	0.896
Road 18	0700-0800	0:08-10	3.816	1.408	3.816	1.408	3.312	1.216	3.312	1.216
Road 18	0700-0800	0:10-12	4.816	1.780	4.816	1.780	4.176	1.536	4.176	1.536
Road 18	0700-0800	0:12-14	5.816	2.152	5.816	2.152	5.040	1.856	5.040	1.856
Road 18	0700-0800	0:14-16	6.816	2.524	6.816	2.524	5.904	2.176	5.904	2.176
Road 18	0700-0800	0:16-18	7.816	2.896	7.816	2.896	6.768	2.496	6.768	2.496
Road 18	0700-0800	0:18-20	8.816	3.268	8.816	3.268	7.632	2.816	7.632	2.816
Road 18	0700-0800	0:20-22	9.816	3.640	9.816	3.640	8.496	3.136	8.496	3.136
Road 19	0100-0200	0:00-02	1.816	0.664	1.816	0.664	1.584	0.576	1.584	0.576
Road 19	0100-0200	0:02-04	1.316	0.484	1.316	0.484	1.164	0.424	1.164	0.424
Road 19	0100-0200	0:04-06	0.816	0.296	0.816	0.296	0.704	0.256	0.704	0.256
Road 19	0100-0200	0:06-08	1.316	0.484	1.316	0.484	1.164	0.424	1.164	0.424
Road 19	0100-0200	0:08-10	2.316	0.856	2.316	0.856	2.016	0.736	2.016	0.736
Road 19	0100-0200	0:10-12	3.316	1.228	3.316	1.228	2.880	1.056	2.880	1.056
Road 19	0100-0200	0:12-14	4.316	1.600	4.316	1.600	3.744	1.376	3.744	1.376
Road 19	0100-0200	0:14-16	5.316	1.972	5.316	1.972	4.608	1.696	4.608	1.696
Road 19	0100-0200	0:16-18	6.316	2.344	6.316	2.344	5.472	2.016	5.472	2.016
Road 19	0100-0200	0:18-20	7.316	2.716	7.316	2.716	6.336	2.336	6.336	2.336
Road 19	0100-0200	0:20-22	8.316	3.088	8.316	3.088	7.200	2.656	7.200	2.656
Road 19	0100-0200	0:22-24	9.316	3.460	9.316	3.460	8.064	2.976	8.064	2.976
Road 19	0200-0700	0:00-02	1.816	0.664	1.816	0.664	1.584	0.576	1.584	0.576
Road 19	0200-0700	0:02-04	1.316	0.484	1.316	0.484	1.164	0.424	1.164	0.424
Road 19	0200-0700	0:04-06	0.816	0.296	0.816	0.296	0.704	0.256	0.704	0.256
Road 19	0200-0700	0:06-08	1.316	0.484	1.316	0.484	1.164	0.424	1.164	0.424
Road 19	0200-0700	0:08-10	2.316	0.856	2.316	0.856	2.016	0.736	2.016	0.736
Road 19	0200-0700	0:10-12	3.316	1.228	3.316	1.228	2.880	1.056	2.880	1.056
Road 19	0200-0700	0:12-14	4.316	1.600	4.316	1.600	3.744	1.376	3.744	1.376
Road 19	0200-0700	0:14-16	5.316	1.972	5.316	1.972	4.608	1.696	4.608	1.696
Road 19	0200-0700	0:16-18	6.316	2.344	6.316	2.344	5.472	2.016	5.472	2.016
Road 19	0200-0700	0:18-20	7.316	2.716	7.316	2.716	6.336	2.336	6.336	2.336
Road 19	0200-0700	0:20-22	8.316	3.088	8.316	3.088	7.200	2.656	7.200	2.656
Road 19	0200-0700	0:22-24	9.316	3.460	9.316	3.460	8.064	2.976	8.064	2.976
Road 19	0800-0900	0:00-02	1.816	0.664	1.816	0.664	1.584	0.576	1.584	0.576
Road 19	0800-0900	0:02-04	1.316	0.484	1.316	0.484	1.164	0.424	1.164	0.424
Road 19	0800-0900	0:04-06	0.816	0.296	0.816	0.296	0.704	0.256	0.704	0.256
Road 19	0800-0900	0:06-08	1.316	0.484	1.316	0.484	1.164	0.424	1.164	0.424
Road 19	0800-0900	0:08-10	2.316	0.856	2.316	0.856	2.016	0.736	2.016	0.736
Road 19	0800-0900	0:10-12	3.316	1.228	3.316	1.228	2.880	1.056	2.880	1.056
Road 19	0800-0900	0:12-14	4.316	1.600	4.316	1.600	3.744	1.376	3.744	1.376
Road 19	0800-0900	0:14-16	5.316	1.972	5.316	1.972	4.608	1.696	4.608	1.696
Road 19	0800-0900	0:16-18	6.316	2.344	6.316	2.344	5.472	2.016	5.472	2.016
Road 19	0800-0900	0:18-20	7.316	2.716	7.316	2.716	6.336	2.336	6.336	2.336
Road 19	0800-0900	0:20-22	8.316	3.088	8.316	3.088	7.200	2.656	7.200	2.656
Road 19	0800-0900	0:22-24	9.316	3.460	9.316	3.460	8.064	2.976	8.064	2.976
Road 19	0900-1000	0:00-02	1.816	0.664	1.816	0.664	1.584	0.576	1.584	0.576
Road 19	0900-1000	0:02-04	1.316	0.484	1.316	0.484	1.164	0.424	1.164	0.424
Road 19	0900-1000	0:04-06	0.816	0.296	0.816	0.296	0.704	0.256	0.704	0.256
Road 19	0900-1000	0:06-08	1.316	0.484	1.316	0.484	1.164	0.424	1.164	0.424
Road 19	0900-1000	0:08-10	2.316	0.856	2.316	0.856	2.016	0.736	2.016	0.736
Road 19	0900-1000	0:10-12	3.316	1.228	3.316	1.228	2.880	1.056	2.880	1.056
Road 19	0900-1000	0:12-14	4.316	1.600	4.316	1.600	3.744	1.376	3.744	1.376
Road 19	0900-1000	0:14-16	5.316	1.972	5.316	1.972	4.608	1.696	4.608	1.696
Road 19	0900-1000	0:16-18	6.316	2.344	6.316	2.344	5.472	2.016	5.472	2.016
Road 19	0900-1000	0:18-20	7.316	2.716	7.316	2.716	6.336	2.336	6.336	2.336
Road 19	0900-1000	0:20-22	8.316	3.088	8.316	3.088	7.200	2.656	7.200	2.656
Road 19	0900-1000	0:22-24	9.316	3.460	9.316	3.460	8.064	2.976	8.064	2.976
Road 20	1000-1100	0:00-02	1.816	0.664	1.816	0.664	1.584	0.576	1.584	0.576
Road 20	1000-1100	0:02-04	1.316	0.484	1.316	0.484	1.164	0.424	1.164	0.424
Road 20	1000-1100	0:04-06	0.816	0.296	0.816	0.296	0.704	0.256	0.704	0.256
Road 20	1000-1100	0:06-08	1.316	0.484	1.316	0.484	1.164	0.424	1.164	0.424
Road 20	1000-1100	0:08-10	2.316	0.856	2.316	0.856	2.016	0.736	2.016	0.736
Road 20	1000-1100	0:10-12	3.316	1.228	3.316	1.228	2.880	1.056	2.880	1.056
Road 20	1000-1100	0:12-14	4.316	1.600	4.316	1.600	3.744	1.376	3.744	1.376
Road 20	1000-1100	0:14-16	5.316	1.972	5.316	1.972	4.608	1.696	4.608	1.696
Road 20	1000-1100	0:16-18	6.316	2.344	6.316	2.344	5.472	2.016	5.472	2.016
Road 20	1000-1100	0:18-20	7.316	2.716	7.316	2.716	6.336	2.336	6.336	2.336
Road 20	1000-1100	0:20-22	8.316	3.088	8.316	3.088	7.200	2.656	7.200	2.656
Road 20	1000-1100	0:22-24	9.316	3.460	9.316	3.460	8.064	2.976	8.064	2.976
Road 20	1100-1200	0:00-02	1.816	0.664	1.816	0.664	1.584	0.576	1.584	0.576
Road 20	1100-1200	0:02-04	1.316	0.484	1.316	0.484	1.164	0.424	1.164	0.424
Road 20	1100-1200	0:04-06	0.816	0.296	0.816	0.296	0.704	0.256	0.704	0.256
Road 20	1100-1200	0:06-08	1.316	0.484	1.316	0.484	1.164	0.424	1.164	0.424
Road 20	1100-1200	0:08-10	2.316	0.856	2.316	0.856	2.016	0.736	2.016	0.736
Road 20	1100-1200	0:10-12	3.316	1.228	3.316	1.228	2.880	1.056	2.880	1.056
Road 20	1100-1200	0:12-14	4.316	1.600	4.316	1.600	3.744	1.376	3.744	1.376
Road 20	1100-1200	0:14-16	5.316	1.972	5.316</					

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Open Road Northbound - Winter 2028									
Table 9: Northbound Hourly Volume Factors for ARNDM Model (Segment 1)									
Route Name	NO	Hour	NO Emission			NO Emission			
			Monthly/Min	Hourly/Average	Monthly/Min	Hourly/Average			
Route 21	21	0000-0100	1.1152	0.8118	1.278	0.66	1.0408	1.305	0.9276
Route 21	21	0100-0200	0.4882	0.7076	0.934	1.2062	0.5013	0.7559	0.6308
Route 21	21	0200-0300	1.4682	0.7462	1.162	0.7852	1.0408	1.305	0.9276
Route 21	21	0300-0400	1.8482	0.5428	0.7167	0.7147	1.5438	0.6007	0.7426
Route 21	21	0400-0500	1.6782	0.6988	0.8602	1.5165	0.5308	0.6740	0.7275
Route 21	21	0500-0600	1.7882	0.7882	1.0382	1.2882	0.7882	1.0382	1.2882
Route 21	21	0600-0700	1.7282	0.2037	0.2476	0.4158	1.7082	0.2255	0.6788
Route 21	21	0700-0800	1.2482	0.2482	0.2982	0.3482	1.2482	0.2482	0.2982
Route 21	21	0800-0900	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	0900-1000	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1000-1100	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1100-1200	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1200-1300	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1300-1400	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1400-1500	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1500-1600	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1600-1700	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1700-1800	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1800-1900	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1900-2000	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	2000-2100	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	2100-2200	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	2200-2300	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	2300-2400	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	0000-0100	1.1152	0.8118	1.278	0.66	1.0408	1.305	0.9276
Route 21	21	0100-0200	0.4882	0.7076	0.934	1.2062	0.5013	0.7559	0.6308
Route 21	21	0200-0300	1.4682	0.7462	1.162	0.7852	1.0408	1.305	0.9276
Route 21	21	0300-0400	1.8482	0.5428	0.7167	0.7147	1.5438	0.6007	0.7426
Route 21	21	0400-0500	1.6782	0.6988	0.8602	1.5165	0.5308	0.6740	0.7275
Route 21	21	0500-0600	1.7882	0.7882	1.0382	1.2882	0.7882	1.0382	1.2882
Route 21	21	0600-0700	1.7282	0.2037	0.2476	0.4158	1.7082	0.2255	0.6788
Route 21	21	0700-0800	1.2482	0.2482	0.2982	0.3482	1.2482	0.2482	0.2982
Route 21	21	0800-0900	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	0900-1000	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1000-1100	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1100-1200	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1200-1300	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1300-1400	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1400-1500	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1500-1600	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1600-1700	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1700-1800	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1800-1900	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1900-2000	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	2000-2100	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	2100-2200	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	2200-2300	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	2300-2400	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	0000-0100	1.1152	0.8118	1.278	0.66	1.0408	1.305	0.9276
Route 21	21	0100-0200	0.4882	0.7076	0.934	1.2062	0.5013	0.7559	0.6308
Route 21	21	0200-0300	1.4682	0.7462	1.162	0.7852	1.0408	1.305	0.9276
Route 21	21	0300-0400	1.8482	0.5428	0.7167	0.7147	1.5438	0.6007	0.7426
Route 21	21	0400-0500	1.6782	0.6988	0.8602	1.5165	0.5308	0.6740	0.7275
Route 21	21	0500-0600	1.7882	0.7882	1.0382	1.2882	0.7882	1.0382	1.2882
Route 21	21	0600-0700	1.7282	0.2037	0.2476	0.4158	1.7082	0.2255	0.6788
Route 21	21	0700-0800	1.2482	0.2482	0.2982	0.3482	1.2482	0.2482	0.2982
Route 21	21	0800-0900	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	0900-1000	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1000-1100	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1100-1200	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1200-1300	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1300-1400	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1400-1500	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1500-1600	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1600-1700	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1700-1800	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1800-1900	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1900-2000	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	2000-2100	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	2100-2200	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	2200-2300	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	2300-2400	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	0000-0100	1.1152	0.8118	1.278	0.66	1.0408	1.305	0.9276
Route 21	21	0100-0200	0.4882	0.7076	0.934	1.2062	0.5013	0.7559	0.6308
Route 21	21	0200-0300	1.4682	0.7462	1.162	0.7852	1.0408	1.305	0.9276
Route 21	21	0300-0400	1.8482	0.5428	0.7167	0.7147	1.5438	0.6007	0.7426
Route 21	21	0400-0500	1.6782	0.6988	0.8602	1.5165	0.5308	0.6740	0.7275
Route 21	21	0500-0600	1.7882	0.7882	1.0382	1.2882	0.7882	1.0382	1.2882
Route 21	21	0600-0700	1.7282	0.2037	0.2476	0.4158	1.7082	0.2255	0.6788
Route 21	21	0700-0800	1.2482	0.2482	0.2982	0.3482	1.2482	0.2482	0.2982
Route 21	21	0800-0900	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	0900-1000	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1000-1100	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1100-1200	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1200-1300	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1300-1400	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1400-1500	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1500-1600	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1600-1700	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1700-1800	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1800-1900	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1900-2000	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	2000-2100	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	2100-2200	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	2200-2300	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	2300-2400	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	0000-0100	1.1152	0.8118	1.278	0.66	1.0408	1.305	0.9276
Route 21	21	0100-0200	0.4882	0.7076	0.934	1.2062	0.5013	0.7559	0.6308
Route 21	21	0200-0300	1.4682	0.7462	1.162	0.7852	1.0408	1.305	0.9276
Route 21	21	0300-0400	1.8482	0.5428	0.7167	0.7147	1.5438	0.6007	0.7426
Route 21	21	0400-0500	1.6782	0.6988	0.8602	1.5165	0.5308	0.6740	0.7275
Route 21	21	0500-0600	1.7882	0.7882	1.0382	1.2882	0.7882	1.0382	1.2882
Route 21	21	0600-0700	1.7282	0.2037	0.2476	0.4158	1.7082	0.2255	0.6788
Route 21	21	0700-0800	1.2482	0.2482	0.2982	0.3482	1.2482	0.2482	0.2982
Route 21	21	0800-0900	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	0900-1000	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1000-1100	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1100-1200	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1200-1300	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1300-1400	1.2782	0.6482	0.8382	1.0382	1.4282	0.7258	0.8218
Route 21	21	1400-1500	1.2782	0.6482	0.8				

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Ting Yi North Underground Quarry												
Open Road 24 hour Emission Factors for												
AEMOD model (September)												
Year 2038												
Road Name	Road ID	Hour	NO Emission			NO Emission			NO Emission			
			g/hour/t	Monthly/t	Average	g/hour/t	Monthly/t	Average	g/hour/t	Monthly/t	Average	
Road #24	24	0800-0900	1.5121	45.36	7.3882	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #24	24	0900-1000	1.5446	46.34	8.4143	1.371	2.86E+07	5.7876	5.2885	158.64	5.925	5.075
Road #24	24	1000-1100	1.5446	46.34	8.4143	1.371	2.86E+07	5.7876	5.2885	158.64	5.925	5.075
Road #24	24	1100-1200	1.6138	48.42	8.7326	1.4141	2.87E+07	7.0717	5.8461	1.17E+08	2.946	5.001
Road #24	24	1200-1300	1.6138	48.42	8.7326	1.4141	2.87E+07	7.0717	5.8461	1.17E+08	2.946	5.001
Road #24	24	1300-1400	1.6138	48.42	8.7326	1.4141	2.87E+07	7.0717	5.8461	1.17E+08	2.946	5.001
Road #24	24	1400-1500	1.7168	51.94	9.8885	1.5538	3.17E+07	8.468	6.0705	3.38E+08	3.421	5.858
Road #24	24	1500-1600	1.7168	51.94	9.8885	1.5538	3.17E+07	8.468	6.0705	3.38E+08	3.421	5.858
Road #24	24	1600-1700	1.6138	48.42	8.7326	1.371	2.94E+07	7.847	5.8131	1.27E+08	3.186	4.811
Road #24	24	1700-1800	1.6138	48.42	8.7326	1.371	2.94E+07	7.847	5.8131	1.27E+08	3.186	4.811
Road #24	24	1800-1900	1.4251	2.81E+07	7.0561	1.1441	1.41E+07	5.1101	1.18E+08	2.27E+06	4.914	5.275
Road #24	24	1900-2000	1.4251	2.81E+07	7.0561	1.1441	1.41E+07	5.1101	1.18E+08	2.27E+06	4.914	5.275
Road #24	24	2000-2100	1.4251	2.81E+07	7.0561	1.1441	1.41E+07	5.1101	1.18E+08	2.27E+06	4.914	5.275
Road #24	24	2100-2200	1.4251	2.81E+07	7.0561	1.1441	1.41E+07	5.1101	1.18E+08	2.27E+06	4.914	5.275
Road #24	24	2200-2300	1.4251	2.81E+07	7.0561	1.1441	1.41E+07	5.1101	1.18E+08	2.27E+06	4.914	5.275
Road #24	24	2300-2400	1.4251	2.81E+07	7.0561	1.1441	1.41E+07	5.1101	1.18E+08	2.27E+06	4.914	5.275
Road #25	25	0800-0900	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #25	25	0900-1000	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #25	25	1000-1100	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #25	25	1100-1200	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #25	25	1200-1300	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #25	25	1300-1400	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #25	25	1400-1500	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #25	25	1500-1600	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #25	25	1600-1700	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #25	25	1700-1800	1.5148	49.02	10.026	1.261	3.31E+07	8.446	6.0705	4.08E+06	5.001	5.123
Road #25	25	1800-1900	1.5148	49.02	10.026	1.261	3.31E+07	8.446	6.0705	4.08E+06	5.001	5.123
Road #25	25	1900-2000	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #25	25	2000-2100	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #25	25	2100-2200	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #25	25	2200-2300	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #25	25	2300-2400	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #26	26	0800-0900	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #26	26	0900-1000	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #26	26	1000-1100	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #26	26	1100-1200	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #26	26	1200-1300	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #26	26	1300-1400	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #26	26	1400-1500	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #26	26	1500-1600	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #26	26	1600-1700	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #26	26	1700-1800	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #26	26	1800-1900	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #26	26	1900-2000	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #26	26	2000-2100	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #26	26	2100-2200	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #26	26	2200-2300	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #26	26	2300-2400	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #27	27	0800-0900	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #27	27	0900-1000	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #27	27	1000-1100	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #27	27	1100-1200	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #27	27	1200-1300	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #27	27	1300-1400	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #27	27	1400-1500	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #27	27	1500-1600	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #27	27	1600-1700	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #27	27	1700-1800	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #27	27	1800-1900	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #27	27	1900-2000	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #27	27	2000-2100	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #27	27	2100-2200	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #27	27	2200-2300	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850
Road #27	27	2300-2400	1.4251	42.84	6.4687	1.2781	38.35	6.2887	6.6141	195.43	7.7446	6.850

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Opening Road Northbound Querry															
Open Road No. 58 Emission Factors for ARXROAD.net (Round-trip)															
Road Name			Hour	NO _x Emission			PM ₁₀ Emission			PM _{2.5} Emission			PM ₁₀ to PM _{2.5} Weightage		
				g/hour/mile	g/hour/mile	g/hour/mile	g/hour/mile	g/hour/mile	g/hour/mile	g/hour/mile	g/hour/mile	g/hour/mile	g/hour/mile	g/hour/mile	
Round 27	7	1700-1800	1.7781	6.4118	1.3821	1.4381	1.8557	1.1328	0.1516	1.5776	6.836	1.0818	1.308	0.6	3.992
Round 27	7	1700-1800	1.528	5.486	0.97	1.115	1.686	0.885	0.121	1.264	5.401	0.905	1.105	0.5	3.596
Round 27	7	1800-1900	1.528	5.486	0.97	1.115	1.686	0.885	0.121	1.264	5.401	0.905	1.105	0.5	3.596
Round 27	7	1900-2000	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	7	2000-2100	1.189	4.057	0.87	0.955	1.395	0.705	0.097	0.998	4.207	0.695	0.845	0.4	3.196
Round 27	7	2100-2200	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	8	0000-0100	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	8	0100-0200	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	8	0200-0300	1.156	4.086	0.846	0.968	1.408	0.708	0.098	0.958	4.164	0.702	0.87	0.35	3.136
Round 27	8	0300-0400	1.156	4.086	0.846	0.968	1.408	0.708	0.098	0.958	4.164	0.702	0.87	0.35	3.136
Round 27	8	0400-0500	1.156	4.086	0.846	0.968	1.408	0.708	0.098	0.958	4.164	0.702	0.87	0.35	3.136
Round 27	8	0500-0600	1.306	4.503	0.88	1.098	1.494	0.781	0.104	1.077	4.568	0.788	0.945	0.4	3.296
Round 27	8	0600-0700	1.306	4.503	0.88	1.098	1.494	0.781	0.104	1.077	4.568	0.788	0.945	0.4	3.296
Round 27	8	0700-0800	1.306	4.503	0.88	1.098	1.494	0.781	0.104	1.077	4.568	0.788	0.945	0.4	3.296
Round 27	8	0800-0900	1.506	5.307	0.975	1.272	1.682	0.907	0.125	1.506	5.307	0.904	1.105	0.5	3.596
Round 27	8	0900-1000	1.506	5.307	0.975	1.272	1.682	0.907	0.125	1.506	5.307	0.904	1.105	0.5	3.596
Round 27	8	1000-1100	1.506	5.307	0.975	1.272	1.682	0.907	0.125	1.506	5.307	0.904	1.105	0.5	3.596
Round 27	8	1100-1200	1.506	5.307	0.975	1.272	1.682	0.907	0.125	1.506	5.307	0.904	1.105	0.5	3.596
Round 27	8	1200-1300	1.506	5.307	0.975	1.272	1.682	0.907	0.125	1.506	5.307	0.904	1.105	0.5	3.596
Round 27	8	1300-1400	1.506	5.307	0.975	1.272	1.682	0.907	0.125	1.506	5.307	0.904	1.105	0.5	3.596
Round 27	8	1400-1500	1.506	5.307	0.975	1.272	1.682	0.907	0.125	1.506	5.307	0.904	1.105	0.5	3.596
Round 27	8	1500-1600	1.506	5.307	0.975	1.272	1.682	0.907	0.125	1.506	5.307	0.904	1.105	0.5	3.596
Round 27	8	1600-1700	1.506	5.307	0.975	1.272	1.682	0.907	0.125	1.506	5.307	0.904	1.105	0.5	3.596
Round 27	8	1700-1800	1.506	5.307	0.975	1.272	1.682	0.907	0.125	1.506	5.307	0.904	1.105	0.5	3.596
Round 27	8	1800-1900	1.506	5.307	0.975	1.272	1.682	0.907	0.125	1.506	5.307	0.904	1.105	0.5	3.596
Round 27	8	1900-2000	1.506	5.307	0.975	1.272	1.682	0.907	0.125	1.506	5.307	0.904	1.105	0.5	3.596
Round 27	8	2000-2100	1.506	5.307	0.975	1.272	1.682	0.907	0.125	1.506	5.307	0.904	1.105	0.5	3.596
Round 27	8	2100-2200	1.506	5.307	0.975	1.272	1.682	0.907	0.125	1.506	5.307	0.904	1.105	0.5	3.596
Round 27	9	0000-0100	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	9	0100-0200	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	9	0200-0300	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	9	0300-0400	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	9	0400-0500	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	9	0500-0600	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	9	0600-0700	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	9	0700-0800	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	9	0800-0900	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	9	0900-1000	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	9	1000-1100	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	9	1100-1200	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	9	1200-1300	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	9	1300-1400	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	9	1400-1500	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	9	1500-1600	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	9	1600-1700	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	9	1700-1800	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	9	1800-1900	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	9	1900-2000	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	9	2000-2100	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	9	2100-2200	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	10	0000-0100	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	10	0100-0200	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	10	0200-0300	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	10	0300-0400	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	10	0400-0500	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	10	0500-0600	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	10	0600-0700	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	10	0700-0800	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	10	0800-0900	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	10	0900-1000	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	10	1000-1100	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	10	1100-1200	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	10	1200-1300	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	10	1300-1400	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	10	1400-1500	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	10	1500-1600	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	10	1600-1700	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	10	1700-1800	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	10	1800-1900	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	10	1900-2000	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	10	2000-2100	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	10	2100-2200	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	11	0000-0100	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	11	0100-0200	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296
Round 27	11	0200-0300	1.276	4.273	0.937	1.031	1.514	0.762	0.104	1.058	4.507	0.751	0.915	0.4	3.296

load\Appendix 3.5.4 Emission Factor in 2038.xlsx

TSPg North Underdown Quarry													
Open Road to East Site Emission Factors for ARNDSD North (September)													
Year 2008													
Road	Road ID	Hour	NO _x Emission				NO _y Emission						
			g/hour	Monthly/avg	kg/year/hour	Monthly/Average	g/hour	Monthly/avg	kg/year/hour	Monthly/Average			
Road #1	1	0000-0100	1.272E-02	1.365E-08	2.111E-07	1.014E-02	1.991E-08	1.746E-07	1.132E-07	1.009E-06	4.632E-03	8.86E-08	8.01E-07
Road #1	1	0100-0200	2.265E-02	2.450E-08	3.735E-07	1.986E-02	3.755E-08	3.265E-07	2.043E-07	1.820E-06	7.803E-03	1.49E-07	1.35E-06
Road #1	1	0200-0300	1.371E-02	1.463E-08	2.195E-07	1.101E-02	2.051E-08	1.806E-07	1.121E-07	1.000E-06	4.303E-03	8.46E-08	7.61E-07
Road #1	1	0300-0400	1.464E-02	1.511E-08	2.299E-07	1.221E-02	2.319E-08	2.031E-07	1.243E-07	1.109E-06	4.722E-03	9.00E-08	8.17E-07
Road #1	1	0400-0500	1.464E-02	1.511E-08	2.299E-07	1.221E-02	2.319E-08	2.031E-07	1.243E-07	1.109E-06	4.722E-03	9.00E-08	8.17E-07
Road #1	1	0500-0600	1.631E-02	1.724E-08	2.581E-07	1.344E-02	2.621E-08	2.281E-07	1.361E-07	1.227E-06	5.033E-03	9.88E-08	8.98E-07
Road #1	1	0600-0700	1.631E-02	1.724E-08	2.581E-07	1.344E-02	2.621E-08	2.281E-07	1.361E-07	1.227E-06	5.033E-03	9.88E-08	8.98E-07
Road #1	1	0700-0800	1.731E-02	1.827E-08	2.801E-07	1.471E-02	2.931E-08	2.581E-07	1.471E-07	1.334E-06	5.550E-03	1.07E-07	9.58E-07
Road #1	1	0800-0900	1.731E-02	1.827E-08	2.801E-07	1.471E-02	2.931E-08	2.581E-07	1.471E-07	1.334E-06	5.550E-03	1.07E-07	9.58E-07
Road #1	1	0900-1000	1.731E-02	1.827E-08	2.801E-07	1.471E-02	2.931E-08	2.581E-07	1.471E-07	1.334E-06	5.550E-03	1.07E-07	9.58E-07
Road #1	1	1000-1100	2.238E-02	2.423E-08	3.597E-07	1.395E-02	2.281E-07	1.961E-07	1.243E-07	1.109E-06	4.722E-03	9.00E-08	8.17E-07
Road #1	1	1100-1200	2.238E-02	2.423E-08	3.597E-07	1.395E-02	2.281E-07	1.961E-07	1.243E-07	1.109E-06	4.722E-03	9.00E-08	8.17E-07
Road #1	1	1200-1300	1.841E-02	1.881E-08	2.791E-07	1.164E-02	2.151E-08	1.711E-07	1.132E-07	1.009E-06	4.303E-03	8.46E-08	7.61E-07
Road #1	1	1300-1400	1.841E-02	1.881E-08	2.791E-07	1.164E-02	2.151E-08	1.711E-07	1.132E-07	1.009E-06	4.303E-03	8.46E-08	7.61E-07
Road #1	1	1400-1500	1.841E-02	1.881E-08	2.791E-07	1.164E-02	2.151E-08	1.711E-07	1.132E-07	1.009E-06	4.303E-03	8.46E-08	7.61E-07
Road #1	1	1500-1600	1.938E-02	2.028E-08	3.041E-07	1.251E-02	2.351E-08	2.021E-07	1.243E-07	1.109E-06	4.722E-03	9.00E-08	8.17E-07
Road #1	1	1600-1700	1.938E-02	2.028E-08	3.041E-07	1.251E-02	2.351E-08	2.021E-07	1.243E-07	1.109E-06	4.722E-03	9.00E-08	8.17E-07
Road #1	1	1700-1800	1.551E-02	1.591E-08	2.391E-07	1.091E-02	1.731E-08	1.451E-07	1.243E-07	1.109E-06	4.722E-03	9.00E-08	8.17E-07
Road #1	1	1800-1900	8.641E-03	8.27E-05	1.241E-07	8.091E-03	7.61E-05	1.051E-07	4.691E-07	2.091E-07	2.740E-03	2.821E-07	2.13E-06
Road #1	1	1900-2000	8.641E-03	8.27E-05	1.241E-07	8.091E-03	7.61E-05	1.051E-07	4.691E-07	2.091E-07	2.740E-03	2.821E-07	2.13E-06
Road #1	1	2000-2100	8.641E-03	8.27E-05	1.241E-07	8.091E-03	7.61E-05	1.051E-07	4.691E-07	2.091E-07	2.740E-03	2.821E-07	2.13E-06
Road #2	1	0000-0100	1.321E-02	1.391E-08	2.061E-07	1.061E-02	2.011E-08	1.761E-07	1.111E-07	1.001E-06	4.401E-03	8.61E-08	7.71E-07
Road #2	1	0100-0200	2.371E-02	2.541E-08	3.811E-07	2.011E-02	3.761E-08	3.261E-07	2.041E-07	1.821E-06	7.811E-03	1.491E-07	1.351E-06
Road #2	1	0200-0300	1.421E-02	1.491E-08	2.241E-07	1.141E-02	2.191E-08	1.891E-07	1.151E-07	1.031E-06	4.361E-03	8.51E-08	7.66E-07
Road #2	1	0300-0400	1.511E-02	1.581E-08	2.341E-07	1.241E-02	2.291E-08	2.031E-07	1.251E-07	1.121E-06	4.771E-03	9.06E-08	8.18E-07
Road #2	1	0400-0500	1.511E-02	1.581E-08	2.341E-07	1.241E-02	2.291E-08	2.031E-07	1.251E-07	1.121E-06	4.771E-03	9.06E-08	8.18E-07
Road #2	1	0500-0600	1.681E-02	1.771E-08	2.641E-07	1.361E-02	2.591E-08	2.281E-07	1.381E-07	1.241E-06	5.061E-03	9.96E-08	9.06E-07
Road #2	1	0600-0700	1.681E-02	1.771E-08	2.641E-07	1.361E-02	2.591E-08	2.281E-07	1.381E-07	1.241E-06	5.061E-03	9.96E-08	9.06E-07
Road #2	1	0700-0800	1.781E-02	1.871E-08	2.741E-07	1.461E-02	2.891E-08	2.571E-07	1.481E-07	1.341E-06	5.561E-03	1.08E-07	9.66E-07
Road #2	1	0800-0900	1.781E-02	1.871E-08	2.741E-07	1.461E-02	2.891E-08	2.571E-07	1.481E-07	1.341E-06	5.561E-03	1.08E-07	9.66E-07
Road #2	1	0900-1000	1.781E-02	1.871E-08	2.741E-07	1.461E-02	2.891E-08	2.571E-07	1.481E-07	1.341E-06	5.561E-03	1.08E-07	9.66E-07
Road #2	1	1000-1100	2.281E-02	2.451E-08	3.641E-07	1.401E-02	2.301E-07	1.981E-07	1.261E-07	1.131E-06	4.811E-03	9.11E-08	8.21E-07
Road #2	1	1100-1200	2.281E-02	2.451E-08	3.641E-07	1.401E-02	2.301E-07	1.981E-07	1.261E-07	1.131E-06	4.811E-03	9.11E-08	8.21E-07
Road #2	1	1200-1300	1.891E-02	1.931E-08	2.851E-07	1.191E-02	2.171E-08	1.741E-07	1.161E-07	1.041E-06	4.461E-03	8.76E-08	7.86E-07
Road #2	1	1300-1400	1.891E-02	1.931E-08	2.851E-07	1.191E-02	2.171E-08	1.741E-07	1.161E-07	1.041E-06	4.461E-03	8.76E-08	7.86E-07
Road #2	1	1400-1500	1.891E-02	1.931E-08	2.851E-07	1.191E-02	2.171E-08	1.741E-07	1.161E-07	1.041E-06	4.461E-03	8.76E-08	7.86E-07
Road #2	1	1500-1600	1.981E-02	2.071E-08	3.051E-07	1.281E-02	2.271E-08	2.041E-07	1.271E-07	1.141E-06	4.861E-03	9.21E-08	8.31E-07
Road #2	1	1600-1700	1.981E-02	2.071E-08	3.051E-07	1.281E-02	2.271E-08	2.041E-07	1.271E-07	1.141E-06	4.861E-03	9.21E-08	8.31E-07
Road #2	1	1700-1800	1.591E-02	1.631E-08	2.411E-07	1.111E-02	1.751E-08	1.471E-07	1.271E-07	1.151E-06	4.611E-03	8.91E-08	8.01E-07
Road #2	1	1800-1900	8.911E-03	8.641E-05	1.261E-07	8.341E-03	7.951E-05	1.071E-07	4.811E-07	2.111E-07	2.761E-03	2.881E-07	2.15E-06
Road #2	1	1900-2000	8.911E-03	8.641E-05	1.261E-07	8.341E-03	7.951E-05	1.071E-07	4.811E-07	2.111E-07	2.761E-03	2.881E-07	2.15E-06
Road #2	1	2000-2100	8.911E-03	8.641E-05	1.261E-07	8.341E-03	7.951E-05	1.071E-07	4.811E-07	2.111E-07	2.761E-03	2.881E-07	2.15E-06
Road #2	2	0000-0100	1.321E-02	1.391E-08	2.061E-07	1.061E-02	2.011E-08	1.761E-07	1.111E-07	1.001E-06	4.401E-03	8.61E-08	7.71E-07
Road #2	2	0100-0200	2.371E-02	2.541E-08	3.811E-07	2.011E-02	3.761E-08	3.261E-07	2.041E-07	1.821E-06	7.811E-03	1.491E-07	1.351E-06
Road #2	2	0200-0300	1.421E-02	1.491E-08	2.241E-07	1.141E-02	2.191E-08	1.891E-07	1.151E-07	1.031E-06	4.361E-03	8.51E-08	7.66E-07
Road #2	2	0300-0400	1.511E-02	1.581E-08	2.341E-07	1.241E-02	2.291E-08	2.031E-07	1.251E-07	1.121E-06	4.771E-03	9.06E-08	8.18E-07
Road #2	2	0400-0500	1.511E-02	1.581E-08	2.341E-07	1.241E-02	2.291E-08	2.031E-07	1.251E-07	1.121E-06	4.771E-03	9.06E-08	8.18E-07
Road #2	2	0500-0600	1.681E-02	1.771E-08	2.641E-07	1.361E-02	2.591E-08	2.281E-07	1.381E-07	1.241E-06	5.061E-03	9.96E-08	9.06E-07
Road #2	2	0600-0700	1.681E-02	1.771E-08	2.641E-07	1.361E-02	2.591E-08	2.281E-07	1.381E-07	1.241E-06	5.061E-03	9.96E-08	9.06E-07
Road #2	2	0700-0800	1.781E-02	1.871E-08	2.741E-07	1.461E-02	2.891E-08	2.571E-07	1.481E-07	1.341E-06	5.561E-03	1.08E-07	9.66E-07
Road #2	2	0800-0900	1.781E-02	1.871E-08	2.741E-07	1.461E-02	2.891E-08	2.571E-07	1.481E-07	1.341E-06	5.561E-03	1.08E-07	9.66E-07
Road #2	2	0900-1000	1.781E-02	1.871E-08	2.741E-07	1.461E-02	2.891E-08	2.571E-07	1.481E-07	1.341E-06	5.561E-03	1.08E-07	9.66E-07
Road #2	2	1000-1100	2.281E-02	2.451E-08	3.641E-07	1.401E-02	2.301E-07	1.981E-07	1.261E-07	1.131E-06	4.811E-03	9.11E-08	8.21E-07
Road #2	2	1100-1200	2.281E-02	2.451E-08	3.641E-07	1.401E-02	2.301E-07	1.981E-07	1.261E-07	1.131E-06	4.811E-03	9.11E-08	8.21E-07
Road #2	2	1200-1300	1.891E-02	1.931E-08	2.851E-07	1.191E-02	2.171E-08	1.741E-07	1.161E-07	1.041E-06	4.461E-03	8.76E-08	7.86E-07
Road #2	2	1300-1400	1.891E-02	1.931E-08	2.851E-07	1.191E-02	2.171E-08	1.741E-07	1.161E-07	1.041E-06	4.461E-03	8.76E-08	7.86E-07
Road #2	2	1400-1500	1.891E-02	1.931E-08	2.851E-07	1.191E-02	2.171E-08	1.741E-07	1.161E-07	1.041E-06	4.461E-03	8.76E-08	7.86E-07
Road #2	2	1500-1600	1.981E-02	2.071E-08	3.051E-07	1.281E-02	2.271E-08	2.041E-07	1.271E-07	1.141E-06	4.861E-03	9.21E-08	8.31E-07
Road #2	2	1600-1700	1.981E-02	2.071E-08	3.051E-07	1.281E-02	2.271E-08	2.041E-07	1.271E-07	1.141E-06	4.861E-03	9.21E-08	8.31E-07
Road #2	2	1700-1800	1.591E-02	1.631E-08	2.411E-07	1.111E-02	1.751E-08	1.471E-07	1.271E-07	1.151E-06	4.611E-03	8.91E-08	8.01E-07
Road #2	2	1800-1900	8.911E-03	8.641E-05	1.261E-07	8.341E-03	7.951E-05	1.071E-07	4.811E-07	2.111E-07	2.761E-03	2.881E-07	2.15E-06
Road #2	2	1900-2000	8.911E-03	8.641E-05	1.261E-07	8.341E-03	7.951E-05	1.071E-07	4.811E-07	2.111E-07	2.761E-03	2.881E-07	2.15E-06
Road #2	2	2000-2100	8.911E-03	8.641E-05	1.261E-07	8.341E-03	7.951E-05	1.071E-07	4.811E-07	2.111E-07	2.761E-03	2.881E-07	2.15E-06
Road #3	1	0000-0100	1.321E-02	1.391E-08	2.061E-07	1.061E-02	2.011E-08	1.761E-07	1.111E-07	1.001E-06	4.401E-03	8.61E-08	7.71E-07
Road #3	1	0100-0200	2.371E-02	2.541E-08	3.811E-07	2.011E-02	3.761E-08	3.261E-07	2.041E-07	1.821E-06	7.811E-03	1.491E-07	1.351E-06
Road #3	1	0200-0300	1.421E-02	1.491E-08	2.241E-07	1.141E-02	2.191E-08	1.891E-07	1.151E-07	1.031E-06	4.361E-03	8.51E-08	7.66E-07
Road #3	1	0300-0											

L:\Secure\Environment Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Open Road\Appendix 3.5.4 Emission Factor

Open Y North Undermining Quarry

2018 to 2024 Emission Factors for									
ARMMO Road (Road #)									
Year 2018									
Road Name	Road #	Roor	No. Emission				No. Emission		
			g/hour	Monthly/g/mo	tonno/hour	Monthly/tonno	g/hour	Monthly/g/mo	Monthly/tonno
Road 34	34	0800-0900	1.0462	2.748	0.7178	2.308	6.030	4.642	1.188
Road 34	34	0900-1000	1.1862	3.069	0.7956	2.517	6.558	5.126	1.258
Road 34	34	1000-1100	1.1818	3.057	0.7926	2.508	6.532	5.113	1.255
Road 34	34	1100-1200	1.2262	3.236	0.8588	2.695	14.076	5.530	2.775
Road 34	34	1200-1300	1.2218	3.224	0.8558	2.687	14.042	5.518	2.768
Road 34	34	1300-1400	2.2262	5.641	1.7746	5.682	8.112	12.298	1.586
Road 34	34	1400-1500	2.2218	5.629	1.7716	5.674	8.088	12.266	1.583
Road 34	34	1500-1600	2.2262	5.641	1.7746	5.682	8.112	12.298	1.586
Road 34	34	1600-1700	2.1562	5.488	1.7486	5.498	7.786	12.066	1.574
Road 34	34	1700-1800	2.1518	5.476	1.7456	5.488	7.762	12.034	1.571
Road 34	34	1800-1900	1.3462	3.416	0.9316	2.896	5.406	4.158	1.044
Road 34	34	1900-2000	1.3418	3.404	0.9286	2.888	5.382	4.146	1.041
Road 34	34	2000-2100	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	2100-2200	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	2200-2300	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	2300-2400	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	2400-0100	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	0100-0200	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	0200-0300	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	0300-0400	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	0400-0500	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	0500-0600	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	0600-0700	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	0700-0800	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	0800-0900	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	0900-1000	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	1000-1100	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	1100-1200	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	1200-1300	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	1300-1400	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	1400-1500	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	1500-1600	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	1600-1700	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	1700-1800	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	1800-1900	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	1900-2000	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	2000-2100	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	2100-2200	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	2200-2300	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	2300-2400	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	2400-0100	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	0100-0200	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	0200-0300	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	0300-0400	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	0400-0500	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	0500-0600	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	0600-0700	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	0700-0800	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	0800-0900	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	0900-1000	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	1000-1100	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	1100-1200	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	1200-1300	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	1300-1400	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	1400-1500	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	1500-1600	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	1600-1700	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	1700-1800	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	1800-1900	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	1900-2000	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	2000-2100	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	2100-2200	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	2200-2300	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	2300-2400	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	2400-0100	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	0100-0200	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	0200-0300	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	0300-0400	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	0400-0500	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	0500-0600	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	0600-0700	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	0700-0800	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	0800-0900	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	0900-1000	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	1000-1100	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	1100-1200	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	1200-1300	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	1300-1400	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	1400-1500	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	1500-1600	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	1600-1700	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	1700-1800	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	1800-1900	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	1900-2000	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	2000-2100	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	2100-2200	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	2200-2300	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	2300-2400	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	2400-0100	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	0100-0200	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	0200-0300	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	0300-0400	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	0400-0500	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	0500-0600	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	0600-0700	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	0700-0800	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	0800-0900	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	0900-1000	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	1000-1100	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	1100-1200	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	1200-1300	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	1300-1400	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	1400-1500	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	1500-1600	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	1600-1700	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	1700-1800	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	1800-1900	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	1900-2000	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	2000-2100	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	2100-2200	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	2200-2300	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34	34	2300-2400	1.1518	2.904	0.7286	2.232	4.702	3.536	0.973
Road 34	34	2400-0100	1.1562	2.916	0.7316	2.240	4.726	3.548	0.976
Road 34									

L:\Secure\Environment Projects\60733229\1.01\Others\Air Modelling\Appendix\Traffic\Open Road\Appendix 3.5.4 Emission Factor in

Open Road Yr North Underway Quarterly														
Open Road Yr 2004 Four Estimation Factors														
Year 2008														
ARROW NUMBER (DEPENDENT)														
Road	ID	Hour	NO Emission					NO Emission						
			g/hour/ft	lb/hour/ft	lb/day/ft	lb/week/ft	lb/month/ft	g/hour/ft	lb/hour/ft	lb/day/ft	lb/week/ft	lb/month/ft		
Road 17	17	1600-1700	6.97E-02	1.17E-06	2.88E-08	8.44E-02	1.09E-08	2.49E-08	2.54E-02	4.38E-08	9.93E-08	2.32E-01	1.93E-08	8.98E-08
Road 17	17	1700-1800	5.58E-02	9.46E-06	2.47E-08	7.55E-02	9.78E-09	2.24E-08	4.46E-02	7.67E-08	1.78E-07	4.18E-01	3.49E-08	1.71E-08
Road 17	17	1800-1900	5.58E-02	9.46E-06	2.47E-08	7.55E-02	9.78E-09	2.24E-08	4.46E-02	7.67E-08	1.78E-07	4.18E-01	3.49E-08	1.71E-08
Road 17	17	1900-2000	3.34E-02	4.64E-06	1.50E-08	4.59E-02	4.28E-09	8.93E-03	1.64E-02	2.72E-08	3.20E-08	4.89E-01	2.50E-08	4.74E-08
Road 17	17	2000-2100	3.34E-02	4.64E-06	1.50E-08	4.59E-02	4.28E-09	8.93E-03	1.64E-02	2.72E-08	3.20E-08	4.89E-01	2.50E-08	4.74E-08
Road 17	17	2100-2200	3.34E-02	4.64E-06	8.97E-09	8.13E-02	3.99E-09	7.77E-03	1.75E-02	4.82E-08	1.61E-07	1.79E-01	7.94E-08	4.03E-08
Road 17	17	2200-2300	3.34E-02	4.64E-06	8.97E-09	8.13E-02	3.99E-09	7.77E-03	1.75E-02	4.82E-08	1.61E-07	1.79E-01	7.94E-08	4.03E-08
Road 17	17	2300-2400	3.34E-02	4.64E-06	8.97E-09	8.13E-02	3.99E-09	7.77E-03	1.75E-02	4.82E-08	1.61E-07	1.79E-01	7.94E-08	4.03E-08
Road 17	17	2400-2500	3.34E-02	4.64E-06	8.97E-09	8.13E-02	3.99E-09	7.77E-03	1.75E-02	4.82E-08	1.61E-07	1.79E-01	7.94E-08	4.03E-08
Road 18	18	0000-0100	3.27E-02	2.57E-06	5.00E-09	1.02E-02	2.49E-09	6.42E-07	1.96E-08	3.12E-08	1.57E-02	1.28E-01	2.83E-08	
Road 18	18	0100-0200	3.27E-02	2.57E-06	5.00E-09	1.02E-02	2.49E-09	6.42E-07	1.96E-08	3.12E-08	1.57E-02	1.28E-01	2.83E-08	
Road 18	18	0200-0300	3.27E-02	2.57E-06	5.00E-09	1.02E-02	2.49E-09	6.42E-07	1.96E-08	3.12E-08	1.57E-02	1.28E-01	2.83E-08	
Road 18	18	0300-0400	3.27E-02	2.57E-06	5.00E-09	1.02E-02	2.49E-09	6.42E-07	1.96E-08	3.12E-08	1.57E-02	1.28E-01	2.83E-08	
Road 18	18	0400-0500	3.27E-02	2.57E-06	5.00E-09	1.02E-02	2.49E-09	6.42E-07	1.96E-08	3.12E-08	1.57E-02	1.28E-01	2.83E-08	
Road 18	18	0500-0600	5.41E-02	2.61E-06	2.14E-07	4.14E-02	2.41E-08	1.88E-07	2.04E-02	2.21E-07	9.88E-07	1.88E-01	1.11E-01	9.05E-07
Road 18	18	0600-0700	5.41E-02	2.61E-06	2.14E-07	4.14E-02	2.41E-08	1.88E-07	2.04E-02	2.21E-07	9.88E-07	1.88E-01	1.11E-01	9.05E-07
Road 18	18	0700-0800	5.41E-02	2.61E-06	2.14E-07	4.14E-02	2.41E-08	1.88E-07	2.04E-02	2.21E-07	9.88E-07	1.88E-01	1.11E-01	9.05E-07
Road 18	18	0800-0900	5.41E-02	2.61E-06	2.14E-07	4.14E-02	2.41E-08	1.88E-07	2.04E-02	2.21E-07	9.88E-07	1.88E-01	1.11E-01	9.05E-07
Road 18	18	0900-1000	5.41E-02	2.61E-06	2.14E-07	4.14E-02	2.41E-08	1.88E-07	2.04E-02	2.21E-07	9.88E-07	1.88E-01	1.11E-01	9.05E-07
Road 18	18	1000-1100	5.41E-02	2.61E-06	2.14E-07	4.14E-02	2.41E-08	1.88E-07	2.04E-02	2.21E-07	9.88E-07	1.88E-01	1.11E-01	9.05E-07
Road 18	18	1100-1200	5.41E-02	2.61E-06	2.14E-07	4.14E-02	2.41E-08	1.88E-07	2.04E-02	2.21E-07	9.88E-07	1.88E-01	1.11E-01	9.05E-07
Road 18	18	1200-1300	1.11E-01	1.97E-07	1.633E-06	1.03E-01	1.89E-07	4.09E-06	5.16E-07	1.07E-06	9.21E-06	3.21E-06	1.68E-06	4.60E-06
Road 18	18	1300-1400	1.11E-01	1.97E-07	1.633E-06	1.03E-01	1.89E-07	4.09E-06	5.16E-07	1.07E-06	9.21E-06	3.21E-06	1.68E-06	4.60E-06
Road 18	18	1400-1500	1.11E-01	1.97E-07	1.633E-06	1.03E-01	1.89E-07	4.09E-06	5.16E-07	1.07E-06	9.21E-06	3.21E-06	1.68E-06	4.60E-06
Road 18	18	1500-1600	1.11E-01	1.97E-07	1.633E-06	1.03E-01	1.89E-07	4.09E-06	5.16E-07	1.07E-06	9.21E-06	3.21E-06	1.68E-06	4.60E-06
Road 18	18	1600-1700	1.11E-01	1.97E-07	1.633E-06	1.03E-01	1.89E-07	4.09E-06	5.16E-07	1.07E-06	9.21E-06	3.21E-06	1.68E-06	4.60E-06
Road 18	18	1700-1800	1.11E-01	1.97E-07	1.633E-06	1.03E-01	1.89E-07	4.09E-06	5.16E-07	1.07E-06	9.21E-06	3.21E-06	1.68E-06	4.60E-06
Road 18	18	1800-1900	1.11E-01	1.97E-07	1.633E-06	1.03E-01	1.89E-07	4.09E-06	5.16E-07	1.07E-06	9.21E-06	3.21E-06	1.68E-06	4.60E-06
Road 18	18	1900-2000	7.71E-02	6.13E-08	6.67E-71	3.76E-02	7.57E-08	2.60E-02	2.77E-02	2.74E-06	2.58E-06	2.63E-01	2.67E-06	2.18E-06
Road 18	18	2000-2100	7.71E-02	6.13E-08	6.67E-71	3.76E-02	7.57E-08	2.60E-02	2.77E-02	2.74E-06	2.58E-06	2.63E-01	2.67E-06	2.18E-06
Road 18	18	2100-2200	7.71E-02	6.13E-08	6.67E-71	3.76E-02	7.57E-08	2.60E-02	2.77E-02	2.74E-06	2.58E-06	2.63E-01	2.67E-06	2.18E-06
Road 18	18	2200-2300	7.71E-02	6.13E-08	6.67E-71	3.76E-02	7.57E-08	2.60E-02	2.77E-02	2.74E-06	2.58E-06	2.63E-01	2.67E-06	2.18E-06
Road 18	18	2300-2400	7.71E-02	6.13E-08	6.67E-71	3.76E-02	7.57E-08	2.60E-02	2.77E-02	2.74E-06	2.58E-06	2.63E-01	2.67E-06	2.18E-06
Road 18	18	2400-2500	7.71E-02	6.13E-08	6.67E-71	3.76E-02	7.57E-08	2.60E-02	2.77E-02	2.74E-06	2.58E-06	2.63E-01	2.67E-06	2.18E-06
Road 19	19	0000-0100	1.86E-02	1.53E-08	3.65E-09	1.32E-08	1.69E-09	3.29E-03	5.32E-08	4.56E-07	1.09E-01	4.94E-08	4.26E-07	
Road 19	19	0100-0200	1.86E-02	1.53E-08	3.65E-09	1.32E-08	1.69E-09	3.29E-03	5.32E-08	4.56E-07	1.09E-01	4.94E-08	4.26E-07	
Road 19	19	0200-0300	1.86E-02	1.53E-08	3.65E-09	1.32E-08	1.69E-09	3.29E-03	5.32E-08	4.56E-07	1.09E-01	4.94E-08	4.26E-07	
Road 19	19	0300-0400	1.86E-02	1.53E-08	3.65E-09	1.32E-08	1.69E-09	3.29E-03	5.32E-08	4.56E-07	1.09E-01	4.94E-08	4.26E-07	
Road 19	19	0400-0500	1.86E-02	1.53E-08	3.65E-09	1.32E-08	1.69E-09	3.29E-03	5.32E-08	4.56E-07	1.09E-01	4.94E-08	4.26E-07	
Road 19	19	0500-0600	1.86E-02	1.53E-08	3.65E-09	1.32E-08	1.69E-09	3.29E-03	5.32E-08	4.56E-07	1.09E-01	4.94E-08	4.26E-07	
Road 19	19	0600-0700	1.11E-01	1.98E-08	4.88E-07	1.00E-02	1.89E-07	4.02E-07	1.93E-06	4.16E-06	3.90E-06	1.88E-01	1.67E-06	1.43E-06
Road 19	19	0700-0800	1.11E-01	1.98E-08	4.88E-07	1.00E-02	1.89E-07	4.02E-07	1.93E-06	4.16E-06	3.90E-06	1.88E-01	1.67E-06	1.43E-06
Road 19	19	0800-0900	1.11E-01	1.98E-08	4.88E-07	1.00E-02	1.89E-07	4.02E-07	1.93E-06	4.16E-06	3.90E-06	1.88E-01	1.67E-06	1.43E-06
Road 19	19	0900-1000	1.11E-01	1.98E-08	4.88E-07	1.00E-02	1.89E-07	4.02E-07	1.93E-06	4.16E-06	3.90E-06	1.88E-01	1.67E-06	1.43E-06
Road 19	19	1000-1100	1.11E-01	1.98E-08	4.88E-07	1.00E-02	1.89E-07	4.02E-07	1.93E-06	4.16E-06	3.90E-06	1.88E-01	1.67E-06	1.43E-06
Road 19	19	1100-1200	1.11E-01	1.98E-08	4.88E-07	1.00E-02	1.89E-07	4.02E-07	1.93E-06	4.16E-06	3.90E-06	1.88E-01	1.67E-06	1.43E-06
Road 19	19	1200-1300	1.11E-01	1.98E-08	4.88E-07	1.00E-02	1.89E-07	4.02E-07	1.93E-06	4.16E-06	3.90E-06	1.88E-01	1.67E-06	1.43E-06
Road 19	19	1300-1400	6.69E-08	6.69E-08	1.60E-07	1.58E-07	1.76E-09	4.97E-07	2.52E-03	7.16E-06	6.10E-07	2.24E-05	6.62E-08	5.63E-07
Road 19	19	1400-1500	6.69E-08	6.69E-08	1.60E-07	1.58E-07	1.76E-09	4.97E-07	2.52E-03	7.16E-06	6.10E-07	2.24E-05	6.62E-08	5.63E-07
Road 19	19	1500-1600	6.69E-08	6.69E-08	1.60E-07	1.58E-07	1.76E-09	4.97E-07	2.52E-03	7.16E-06	6.10E-07	2.24E-05	6.62E-08	5.63E-07
Road 19	19	1600-1700	6.69E-08	6.69E-08	1.60E-07	1.58E-07	1.76E-09	4.97E-07	2.52E-03	7.16E-06	6.10E-07	2.24E-05	6.62E-08	5.63E-07
Road 19	19	1700-1800	6.69E-08	6.69E-08	1.60E-07	1.58E-07	1.76E-09	4.97E-07	2.52E-03	7.16E-06	6.10E-07	2.24E-05	6.62E-08	5.63E-07
Road 19	19	1800-1900	6.69E-08	6.69E-08	1.60E-07	1.58E-07	1.76E-09	4.97E-07	2.52E-03	7.16E-06	6.10E-07	2.24E-05	6.62E-08	5.63E-07
Road 19	19	1900-2000	2.37E-02	8.94E-09	5.41E-08	2.37E-02	1.44E-07	6.92E-08	1.51E-02	1.83E-08	3.24E-07	1.40E-01	5.79E-08	4.79E-07
Road 19	19	2000-2100	2.37E-02	8.94E-09	5.41E-08	2.37E-02	1.44E-07	6.92E-08	1.51E-02	1.83E-08	3.24E-07	1.40E-01	5.79E-08	4.79E-07
Road 19	19	2100-2200	2.37E-02	8.94E-09	5.41E-08	2.37E-02	1.44E-07	6.92E-08	1.51E-02	1.83E-08	3.24E-07	1.40E-01	5.79E-08	4.79E-07
Road 19	19	2200-2300	2.37E-02	8.94E-09	5.41E-08	2.37E-02	1.44E-07	6.92E-08	1.51E-02	1.83E-08	3.24E-07	1.40E-01	5.79E-08	4.79E-07
Road 19	19	2300-2400	2.37E-02	8.94E-09	5.41E-08	2.37E-02	1.44E-07	6.92E-08	1.51E-02	1.83E-08	3.24E-07	1.40E-01	5.79E-08	4.79E-07
Road 19	19	2400-2500	2.37E-02	8.94E-09	5.41E-08	2.37E-02	1.44E-07	6.92E-08	1.51E-02	1.83E-08	3.24E-07	1.40E-01	5.79E-08	4.79E-07
Road 40	40	0000-0100	4.80E-02	8.56E-06	4.17E-07	4.32E-07	7.77E-07	1.95E-04	4.68E-07	1.69E-06	7.96E-06	3.15E-07	1.53E-06	
Road 40	40	0100-0200	4.80E-02	8.56E-06	4.17E-07	4.32E-07	7.77E-07	1.95E-04	4.68E-07	1.69E-06	7.96E-06	3.15E-07	1.53E-06	
Road 40	40	0200-0300	4.80E-02	8.56E-06	4.17E-07	4.32E-07	7.77E-07	1.95E-04	4.68E-07	1.69E-06	7.96E-06	3.15E-07	1.53E-06	
Road 40	40	0300-0400	4.80E-02	8.56E-06	4.17E-07	4.32E-07	7.77E-07	1.95E-04	4.68E-07	1.69E-06	7.96E-06	3.15E-07	1.53E-06	
Road 40	40	0400-0500	4.80E-02	8.56E-06	4.17E-07	4.32E-07	7.77E-07	1.95E-04	4.68E-07	1.69E-06	7.96E-06	3.15E-07	1.53E-06	
Road 40	40	0500-0600	4.80E-02	8.56E-06	4.17E-07	4.32E-07	7.77E-07	1.95E-04	4.68E-07</					

Secure\Environment Projects\60733225\1.01\Others\Air\Modelling\Appendix\Traffic\Open Road\Appendix 3.5.4 Emission Factor in 2038

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Opening North & Underground Quarry TSP and Noise Survey Evaluation Factors ARMD02 model (Revised)										
Year 2038										
Road Name	ID	Hour	NO ₂ Emission					NO Emission		
			Monthly/Average	Monthly/Average	Monthly/Average	Monthly/Average	Monthly/Average	Monthly/Average		
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
Road #1	010000-1400	1:45:02	2:15:02	2:45:02	2:07:02	2:13:02	2:06:02	6:01:02	1:07:02	1:07:02
	010000-1400	1:45:02	2:15:02	2:45:02	2					

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

[illegible][illegible]

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Tsyg Y1 North Underground Quarry																	
Open Road & Road Emission Factor for ARMMO model (Scenario A)																	
Road Name	Road ID	Hour	NO _x Emission			NO _x Emission			Road Name								
			g/hour	g/hour	g/hour	g/hour	g/hour	g/hour									
Road 54	54	0800-0900	9.89E+00	3.67E+00	8.86E+00	6.32E+00	3.78E+00	6.46E+00	Road 54	54	1800-1900	9.89E+00	3.67E+00	8.86E+00	6.32E+00	3.78E+00	6.46E+00
Road 54	54	0900-1000	1.12E+01	4.15E+00	1.02E+01	7.15E+00	4.28E+00	7.15E+00	Road 54	54	1900-2000	1.12E+01	4.15E+00	1.02E+01	7.15E+00	4.28E+00	7.15E+00
Road 54	54	1000-1100	1.26E+01	4.17E+00	9.52E+00	6.17E+00	5.40E+00	8.07E+00	Road 54	54	2000-2100	1.26E+01	4.17E+00	9.52E+00	6.17E+00	5.40E+00	8.07E+00
Road 54	54	1100-1200	1.44E+01	4.26E+00	1.06E+01	7.46E+00	4.57E+00	9.18E+00	Road 54	54	2100-2200	1.44E+01	4.26E+00	1.06E+01	7.46E+00	4.57E+00	9.18E+00
Road 54	54	1200-1300	1.52E+01	3.29E+00	1.27E+01	8.29E+00	4.48E+00	1.14E+01	Road 54	54	2200-2300	1.52E+01	3.29E+00	1.27E+01	8.29E+00	4.48E+00	1.14E+01
Road 54	54	1300-1400	1.61E+01	3.15E+00	1.29E+01	8.26E+00	4.36E+00	1.15E+01	Road 54	54	2300-2400	1.61E+01	3.15E+00	1.29E+01	8.26E+00	4.36E+00	1.15E+01
Road 54	54	1400-1500	1.68E+01	3.43E+00	1.77E+01	8.44E+00	4.64E+00	1.20E+01	Road 54	54	2400-0100	1.68E+01	3.43E+00	1.77E+01	8.44E+00	4.64E+00	1.20E+01
Road 54	54	1500-1600	1.76E+01	3.44E+00	1.84E+01	8.47E+00	4.67E+00	1.21E+01	Road 54	54	0100-0200	1.76E+01	3.44E+00	1.84E+01	8.47E+00	4.67E+00	1.21E+01
Road 54	54	1600-1700	1.84E+01	3.44E+00	1.91E+01	8.50E+00	4.70E+00	1.22E+01	Road 54	54	0200-0300	1.84E+01	3.44E+00	1.91E+01	8.50E+00	4.70E+00	1.22E+01
Road 54	54	1700-1800	1.92E+01	3.72E+00	2.07E+01	8.69E+00	4.88E+00	1.24E+01	Road 54	54	0300-0400	1.92E+01	3.72E+00	2.07E+01	8.69E+00	4.88E+00	1.24E+01
Road 54	54	1800-1900	2.00E+01	3.72E+00	2.14E+01	8.72E+00	4.91E+00	1.25E+01	Road 54	54	0400-0500	2.00E+01	3.72E+00	2.14E+01	8.72E+00	4.91E+00	1.25E+01
Road 54	54	1900-2000	2.08E+01	3.72E+00	2.21E+01	8.75E+00	4.94E+00	1.26E+01	Road 54	54	0500-0600	2.08E+01	3.72E+00	2.21E+01	8.75E+00	4.94E+00	1.26E+01
Road 54	54	2000-2100	2.16E+01	3.72E+00	2.28E+01	8.78E+00	4.97E+00	1.27E+01	Road 54	54	0600-0700	2.16E+01	3.72E+00	2.28E+01	8.78E+00	4.97E+00	1.27E+01
Road 54	54	2100-2200	2.24E+01	3.72E+00	2.35E+01	8.81E+00	5.00E+00	1.28E+01	Road 54	54	0700-0800	2.24E+01	3.72E+00	2.35E+01	8.81E+00	5.00E+00	1.28E+01
Road 54	54	2200-2300	2.32E+01	3.72E+00	2.42E+01	8.84E+00	5.03E+00	1.29E+01	Road 54	54	0800-0900	2.32E+01	3.72E+00	2.42E+01	8.84E+00	5.03E+00	1.29E+01
Road 54	54	2300-2400	2.40E+01	3.72E+00	2.49E+01	8.87E+00	5.06E+00	1.30E+01	Road 54	54	0900-1000	2.40E+01	3.72E+00	2.49E+01	8.87E+00	5.06E+00	1.30E+01
Road 54	54	2400-0100	2.48E+01	3.72E+00	2.56E+01	8.90E+00	5.09E+00	1.31E+01	Road 54	54	1000-1100	2.48E+01	3.72E+00	2.56E+01	8.90E+00	5.09E+00	1.31E+01
Road 54	54	0100-0200	2.56E+01	3.72E+00	2.63E+01	8.93E+00	5.12E+00	1.32E+01	Road 54	54	1100-1200	2.56E+01	3.72E+00	2.63E+01	8.93E+00	5.12E+00	1.32E+01
Road 54	54	0200-0300	2.64E+01	3.72E+00	2.70E+01	8.96E+00	5.15E+00	1.33E+01	Road 54	54	1200-1300	2.64E+01	3.72E+00	2.70E+01	8.96E+00	5.15E+00	1.33E+01
Road 54	54	0300-0400	2.72E+01	3.72E+00	2.77E+01	8.99E+00	5.18E+00	1.34E+01	Road 54	54	1300-1400	2.72E+01	3.72E+00	2.77E+01	8.99E+00	5.18E+00	1.34E+01
Road 54	54	0400-0500	2.80E+01	3.72E+00	2.84E+01	9.02E+00	5.21E+00	1.35E+01	Road 54	54	1400-1500	2.80E+01	3.72E+00	2.84E+01	9.02E+00	5.21E+00	1.35E+01
Road 54	54	0500-0600	2.88E+01	3.72E+00	2.91E+01	9.05E+00	5.24E+00	1.36E+01	Road 54	54	1500-1600	2.88E+01	3.72E+00	2.91E+01	9.05E+00	5.24E+00	1.36E+01
Road 54	54	0600-0700	2.96E+01	3.72E+00	2.98E+01	9.08E+00	5.27E+00	1.37E+01	Road 54	54	1600-1700	2.96E+01	3.72E+00	2.98E+01	9.08E+00	5.27E+00	1.37E+01
Road 54	54	0700-0800	3.04E+01	3.72E+00	3.05E+01	9.11E+00	5.30E+00	1.38E+01	Road 54	54	1700-1800	3.04E+01	3.72E+00	3.05E+01	9.11E+00	5.30E+00	1.38E+01
Road 54	54	0800-0900	3.12E+01	3.72E+00	3.12E+01	9.14E+00	5.33E+00	1.39E+01	Road 54	54	1800-1900	3.12E+01	3.72E+00	3.12E+01	9.14E+00	5.33E+00	1.39E+01
Road 54	54	0900-1000	3.20E+01	3.72E+00	3.19E+01	9.17E+00	5.36E+00	1.40E+01	Road 54	54	1900-2000	3.20E+01	3.72E+00	3.19E+01	9.17E+00	5.36E+00	1.40E+01
Road 54	54	1000-1100	3.28E+01	3.72E+00	3.26E+01	9.20E+00	5.39E+00	1.41E+01	Road 54	54	2000-2100	3.28E+01	3.72E+00	3.26E+01	9.20E+00	5.39E+00	1.41E+01
Road 54	54	1100-1200	3.36E+01	3.72E+00	3.33E+01	9.23E+00	5.42E+00	1.42E+01	Road 54	54	2100-2200	3.36E+01	3.72E+00	3.33E+01	9.23E+00	5.42E+00	1.42E+01
Road 54	54	1200-1300	3.44E+01	3.72E+00	3.40E+01	9.26E+00	5.45E+00	1.43E+01	Road 54	54	2200-2300	3.44E+01	3.72E+00	3.40E+01	9.26E+00	5.45E+00	1.43E+01
Road 54	54	1300-1400	3.52E+01	3.72E+00	3.47E+01	9.29E+00	5.48E+00	1.44E+01	Road 54	54	2300-2400	3.52E+01	3.72E+00	3.47E+01	9.29E+00	5.48E+00	1.44E+01
Road 54	54	1400-1500	3.60E+01	3.72E+00	3.54E+01	9.32E+00	5.51E+00	1.45E+01	Road 54	54	2400-0100	3.60E+01	3.72E+00	3.54E+01	9.32E+00	5.51E+00	1.45E+01
Road 54	54	1500-1600	3.68E+01	3.72E+00	3.61E+01	9.35E+00	5.54E+00	1.46E+01	Road 54	54	0100-0200	3.68E+01	3.72E+00	3.61E+01	9.35E+00	5.54E+00	1.46E+01
Road 54	54	1600-1700	3.76E+01	3.72E+00	3.68E+01	9.38E+00	5.57E+00	1.47E+01	Road 54	54	0200-0300	3.76E+01	3.72E+00	3.68E+01	9.38E+00	5.57E+00	1.47E+01
Road 54	54	1700-1800	3.84E+01	3.72E+00	3.75E+01	9.41E+00	5.60E+00	1.48E+01	Road 54	54	0300-0400	3.84E+01	3.72E+00	3.75E+01	9.41E+00	5.60E+00	1.48E+01
Road 54	54	1800-1900	3.92E+01	3.72E+00	3.82E+01	9.44E+00	5.63E+00	1.49E+01	Road 54	54	0400-0500	3.92E+01	3.72E+00	3.82E+01	9.44E+00	5.63E+00	1.49E+01
Road 54	54	1900-2000	4.00E+01	3.72E+00	3.89E+01	9.47E+00	5.66E+00	1.50E+01	Road 54	54	0500-0600	4.00E+01	3.72E+00	3.89E+01	9.47E+00	5.66E+00	1.50E+01
Road 54	54	2000-2100	4.08E+01	3.72E+00	3.96E+01	9.50E+00	5.69E+00	1.51E+01	Road 54	54	0600-0700	4.08E+01	3.72E+00	3.96E+01	9.50E+00	5.69E+00	1.51E+01
Road 54	54	2100-2200	4.16E+01	3.72E+00	4.03E+01	9.53E+00	5.72E+00	1.52E+01	Road 54	54	0700-0800	4.16E+01	3.72E+00	4.03E+01	9.53E+00	5.72E+00	1.52E+01
Road 54	54	2200-2300	4.24E+01	3.72E+00	4.10E+01	9.56E+00	5.75E+00	1.53E+01	Road 54	54	0800-0900	4.24E+01	3.72E+00	4.10E+01	9.56E+00	5.75E+00	1.53E+01
Road 54	54	2300-2400	4.32E+01	3.72E+00	4.17E+01	9.59E+00	5.78E+00	1.54E+01	Road 54	54	0900-1000	4.32E+01	3.72E+00	4.17E+01	9.59E+00	5.78E+00	1.54E+01
Road 54	54	2400-0100	4.40E+01	3.72E+00	4.24E+01	9.62E+00	5.81E+00	1.55E+01	Road 54	54	1000-1100	4.40E+01	3.72E+00	4.24E+01	9.62E+00	5.81E+00	1.55E+01
Road 54	54	0100-0200	4.48E+01	3.72E+00	4.31E+01	9.65E+00	5.84E+00	1.56E+01	Road 54	54	1100-1200	4.48E+01	3.72E+00	4.31E+01	9.65E+00	5.84E+00	1.56E+01
Road 54	54	0200-0300	4.56E+01	3.72E+00	4.38E+01	9.68E+00	5.87E+00	1.57E+01	Road 54	54	1200-1300	4.56E+01	3.72E+00	4.38E+01	9.68E+00	5.87E+00	1.57E+01
Road 54	54	0300-0400	4.64E+01	3.72E+00	4.45E+01	9.71E+00	5.90E+00	1.58E+01	Road 54	54	1300-1400	4.64E+01	3.72E+00	4.45E+01	9.71E+00	5.90E+00	1.58E+01
Road 54	54	0400-0500	4.72E+01	3.72E+00	4.52E+01	9.74E+00	5.93E+00	1.59E+01	Road 54	54	1400-1500	4.72E+01	3.72E+00	4.52E+01	9.74E+00	5.93E+00	1.59E+01
Road 54	54	0500-0600	4.80E+01	3.72E+00	4.59E+01	9.77E+00	5.96E+00	1.60E+01	Road 54	54	1500-1600	4.80E+01	3.72E+00	4.59E+01	9.77E+00	5.96E+00	1.60E+01
Road 54	54	0600-0700	4.88E+01	3.72E+00	4.66E+01	9.80E+00	5.99E+00	1.61E+01	Road 54	54	1600-1700	4.88E+01	3.72E+00	4.66E+01	9.80E+00	5.99E+00	1.61E+01
Road 54	54	0700-0800	4.96E+01	3.72E+00	4.73E+01	9.83E+00	6.02E+00	1.62E+01	Road 54	54	1700-1800	4.96E+01	3.72E+00	4.73E+01	9.83E+00	6.02E+00	1.62E+01
Road 54	54	0800-0900	5.04E+01	3.72E+00	4.80E+01	9.86E+00	6.05E+00	1.63E+01	Road 54	54	1800-1900	5.04E+01	3.72E+00	4.80E+01	9.86E+00	6.05E+00	1.63E+01
Road 54	54	0900-1000	5.12E+01	3.72E+00	4.87E+01	9.89E+00	6.08E+00	1.64E+01	Road 54	54	1900-2000	5.12E+01	3.72E+00	4.87E+01	9.89E+00	6.08E+00	1.64E+01
Road 54	54	1000-1100	5.20E+01	3.72E+00	4.94E+01	9.92E+00	6.11E+00	1.65E+01	Road 54	54	2000-2100	5.20E+01	3.72E+00	4.94E+01	9.92E+00	6.11E+00	1.65E+01
Road 54	54	1100-1200	5.28E+01	3.72E+00	5.01E+01	9.95E+00	6.14E+00	1.66E+01	Road 54	54	2100-2200	5.28E+01	3.72E+00	5.01E+01	9.95E+00	6.14E+00	1.66E+01
Road 54	54	1200-1300	5.36E+01	3.72E+00	5.08E+01	9.98E+00	6.17E+00	1.67E+01	Road 54	54	2200-2300	5.36E+01	3.72E+00	5.08E+01	9.98E+00	6.17E+00	1.67E+01
Road 54	54	1300-1400	5.44E+01	3.72E+00	5.15E+01	1.001E+01	6.20E+00	1.68E+01	Road 54	54	2300-2400	5.44E+01	3.72E+00	5.15			

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Road North Underground Factors for Year 2018															
Road Name	Road ID	Hour	NO _x Emission						PM ₁₀ Emission						
			Monthly/mph			Monthly/mph			Monthly/mph			Monthly/mph			
			g/hour	g/mi ³	g/mi ³	g/hour	g/mi ³	g/mi ³	g/hour	g/mi ³	g/mi ³	g/hour	g/mi ³	g/mi ³	
Road 14	14	0800-0900	3.825	0.817	1.545	3.512	0.895	1.435	3.012	3.405	5.005	1.265	3.170	5.235	
Road 14	14	0900-1200	4.000	0.875	1.625	3.688	0.963	1.525	3.288	3.681	5.281	1.341	3.251	5.361	
Road 14	14	1200-1500	4.715	0.937	1.675	4.437	0.984	1.535	3.670	4.015	5.125	1.455	3.265	5.385	
Road 14	14	1500-1800	4.765	0.943	1.685	4.487	0.990	1.540	3.720	4.065	5.175	1.461	3.271	5.391	
Road 14	14	1800-1900	4.765	0.943	1.685	4.487	0.990	1.540	3.720	4.065	5.175	1.461	3.271	5.391	
Road 14	14	1900-2000	4.765	0.943	1.685	4.487	0.990	1.540	3.720	4.065	5.175	1.461	3.271	5.391	
Road 14	14	2000-2100	4.765	0.943	1.685	4.487	0.990	1.540	3.720	4.065	5.175	1.461	3.271	5.391	
Road 14	14	2100-2200	4.765	0.943	1.685	4.487	0.990	1.540	3.720	4.065	5.175	1.461	3.271	5.391	
Road 14	14	2200-2300	4.765	0.943	1.685	4.487	0.990	1.540	3.720	4.065	5.175	1.461	3.271	5.391	
Road 14	14	2300-2400	4.765	0.943	1.685	4.487	0.990	1.540	3.720	4.065	5.175	1.461	3.271	5.391	
Road 15	15	0800-0900	3.015	0.638	1.265	2.785	0.612	1.225	2.505	1.975	3.135	0.752	1.185	4.605	7.935
Road 15	15	0900-1200	3.185	0.675	1.335	2.955	0.649	1.295	2.675	2.145	3.295	0.802	1.245	4.675	8.005
Road 15	15	1200-1500	3.235	0.681	1.345	3.005	0.655	1.305	2.725	2.195	3.345	0.808	1.255	4.685	8.015
Road 15	15	1500-1800	3.235	0.681	1.345	3.005	0.655	1.305	2.725	2.195	3.345	0.808	1.255	4.685	8.015
Road 15	15	1800-1900	3.235	0.681	1.345	3.005	0.655	1.305	2.725	2.195	3.345	0.808	1.255	4.685	8.015
Road 15	15	1900-2000	3.235	0.681	1.345	3.005	0.655	1.305	2.725	2.195	3.345	0.808	1.255	4.685	8.015
Road 15	15	2000-2100	3.235	0.681	1.345	3.005	0.655	1.305	2.725	2.195	3.345	0.808	1.255	4.685	8.015
Road 15	15	2100-2200	3.235	0.681	1.345	3.005	0.655	1.305	2.725	2.195	3.345	0.808	1.255	4.685	8.015
Road 15	15	2200-2300	3.235	0.681	1.345	3.005	0.655	1.305	2.725	2.195	3.345	0.808	1.255	4.685	8.015
Road 15	15	2300-2400	3.235	0.681	1.345	3.005	0.655	1.305	2.725	2.195	3.345	0.808	1.255	4.685	8.015
Road 16	16	0800-0900	4.465	0.975	1.815	4.135	1.005	1.845	3.705	1.275	1.185	1.175	1.455	1.015	1.065
Road 16	16	0900-1200	4.635	1.035	1.885	4.285	1.065	1.915	3.855	1.325	1.235	1.225	1.525	1.075	1.125
Road 16	16	1200-1500	4.785	1.095	1.945	4.435	1.125	1.975	3.955	1.385	1.285	1.275	1.585	1.135	1.185
Road 16	16	1500-1800	4.835	1.115	1.995	4.485	1.145	2.025	4.005	1.405	1.305	1.295	1.605	1.155	1.205
Road 16	16	1800-1900	4.835	1.115	1.995	4.485	1.145	2.025	4.005	1.405	1.305	1.295	1.605	1.155	1.205
Road 16	16	1900-2000	4.835	1.115	1.995	4.485	1.145	2.025	4.005	1.405	1.305	1.295	1.605	1.155	1.205
Road 16	16	2000-2100	4.835	1.115	1.995	4.485	1.145	2.025	4.005	1.405	1.305	1.295	1.605	1.155	1.205
Road 16	16	2100-2200	4.835	1.115	1.995	4.485	1.145	2.025	4.005	1.405	1.305	1.295	1.605	1.155	1.205
Road 16	16	2200-2300	4.835	1.115	1.995	4.485	1.145	2.025	4.005	1.405	1.305	1.295	1.605	1.155	1.205
Road 16	16	2300-2400	4.835	1.115	1.995	4.485	1.145	2.025	4.005	1.405	1.305	1.295	1.605	1.155	1.205
Road 17	17	0800-0900	3.565	0.785	1.455	3.235	0.755	1.375	2.855	3.255	4.655	1.155	3.055	5.055	8.455
Road 17	17	0900-1200	3.735	0.845	1.525	3.405	0.815	1.435	3.015	3.405	4.805	1.235	3.125	5.125	8.525
Road 17	17	1200-1500	3.785	0.855	1.535	3.455	0.825	1.445	3.065	3.455	4.855	1.245	3.135	5.135	8.535
Road 17	17	1500-1800	3.785	0.855	1.535	3.455	0.825	1.445	3.065	3.455	4.855	1.245	3.135	5.135	8.535
Road 17	17	1800-1900	3.785	0.855	1.535	3.455	0.825	1.445	3.065	3.455	4.855	1.245	3.135	5.135	8.535
Road 17	17	1900-2000	3.785	0.855	1.535	3.455	0.825	1.445	3.065	3.455	4.855	1.245	3.135	5.135	8.535
Road 17	17	2000-2100	3.785	0.855	1.535	3.455	0.825	1.445	3.065	3.455	4.855	1.245	3.135	5.135	8.535
Road 17	17	2100-2200	3.785	0.855	1.535	3.455	0.825	1.445	3.065	3.455	4.855	1.245	3.135	5.135	8.535
Road 17	17	2200-2300	3.785	0.855	1.535	3.455	0.825	1.445	3.065	3.455	4.855	1.245	3.135	5.135	8.535
Road 17	17	2300-2400	3.785	0.855	1.535	3.455	0.825	1.445	3.065	3.455	4.855	1.245	3.135	5.135	8.535
Road 18	18	0800-0900	4.465	0.975	1.815	4.135	1.005	1.845	3.705	1.275	1.185	1.175	1.455	1.015	1.065
Road 18	18	0900-1200	4.635	1.035	1.885	4.285	1.065	1.915	3.855	1.325	1.235	1.225	1.525	1.075	1.125
Road 18	18	1200-1500	4.785	1.095	1.945	4.435	1.125	1.975	3.955	1.385	1.285	1.275	1.585	1.135	1.185
Road 18	18	1500-1800	4.835	1.115	1.995	4.485	1.145	2.025	4.005	1.405	1.305	1.295	1.605	1.155	1.205
Road 18	18	1800-1900	4.835	1.115	1.995	4.485	1.145	2.025	4.005	1.405	1.305	1.295	1.605	1.155	1.205
Road 18	18	1900-2000	4.835	1.115	1.995	4.485	1.145	2.025	4.005	1.405	1.305	1.295	1.605	1.155	1.205
Road 18	18	2000-2100	4.835	1.115	1.995	4.485	1.145	2.025	4.005	1.405	1.305	1.295	1.605	1.155	1.205
Road 18	18	2100-2200	4.835	1.115	1.995	4.485	1.145	2.025	4.005	1.405	1.305	1.295	1.605	1.155	1.205
Road 18	18	2200-2300	4.835	1.115	1.995	4.485	1.145	2.025	4.005	1.405	1.305	1.295	1.605	1.155	1.205
Road 18	18	2300-2400	4.835	1.115	1.995	4.485	1.145	2.025	4.005	1.405	1.305	1.295	1.605	1.155	1.205
Road 19	19	0800-0900	3.565	0.785	1.455	3.235	0.755	1.375	2.855	3.255	4.655	1.155	3.055	5.055	8.455
Road 19	19	0900-1200	3.735	0.845	1.525	3.405	0.815	1.435	3.015	3.405	4.805	1.235	3.125	5.125	8.525
Road 19	19	1200-1500	3.785	0.855	1.535	3.455	0.825	1.445	3.065	3.455	4.855	1.245	3.135	5.135	8.535
Road 19	19	1500-1800	3.785	0.855	1.535	3.455	0.825	1.445	3.065	3.455	4.855	1.245	3.135	5.135	8.535
Road 19	19	1800-1900	3.785	0.855	1.535	3.455	0.825	1.445	3.065	3.455	4.855	1.245	3.135	5.135	8.535
Road 19	19	1900-2000	3.785	0.855	1.535	3.455	0.825	1.445	3.065	3.455	4.855	1.245	3.135	5.135	8.535
Road 19	19	2000-2100	3.785	0.855	1.535	3.455	0.825	1.445	3.065	3.455	4.855	1.245	3.135	5.135	8.535
Road 19	19	2100-2200	3.785	0.855	1.535	3.455	0.825	1.445	3.065	3.455	4.855	1.245	3.135	5.135	8.535
Road 19	19	2200-2300	3.785	0.855	1.535	3.455	0.825	1.445	3.065	3.455	4.855	1.245	3.135	5.135	8.535
Road 19	19	2300-2400	3.785	0.855	1.535	3.455	0.825	1.445	3.065	3.455	4.855	1.245	3.135	5.135	8.535
Road 20	20	0800-0900	4.465	0.975	1.815	4.135	1.005	1.845	3.705	1.275	1.185	1.175	1.455	1.015	1.065
Road 20	20	0900-1200	4.635	1.035	1.885	4.285	1.065	1.915	3.855	1.325	1.235	1.225	1.525	1.075	1.125
Road 20	20	1200-1500	4.785	1.095	1.945	4.435	1.125	1.975	3.955	1.385	1.285	1.275	1.585	1.135	1.185
Road 20	20	1500-1800	4.835	1.115	1.995	4.485	1.145	2.025	4.005	1.405	1.305	1.295	1.605	1.155	1.205
Road 20	20	1800-1900	4.835	1.115	1.995	4.485	1.145	2.025	4.005	1.405	1.305	1.295	1.605	1.155	1.205
Road 20	20	1900-2000	4.835	1.115	1.995	4.485	1.145	2.025	4.005	1.405	1.305	1.295	1.605	1.155	1.205
Road 20	20	2000-2100	4.835	1.115	1.995	4.485	1.145	2.025	4.005	1.405	1.305	1.295	1.605	1.155	1.205
Road 20	20	2100-2200	4.835	1.115	1.995	4.485	1.145	2.025	4.005	1.405	1.305	1.295	1.605	1.155	1.205
Road 20	20	2200-2300	4.835	1.115	1.995	4.485	1.145	2.025	4.005	1.405	1.305	1.295	1.605	1.155	1.205
Road 20	20	2300-2400	4.835	1.115	1.995	4.485	1.145	2.025	4.005	1.405	1.305	1.295	1.605	1.155	1.205
Road 21	21	0800-0900	3.565	0.785	1.455	3.235	0.755	1.375	2.855	3.255	4.655	1.155	3.055	5.055	8.455
Road 21	21	0900-1200	3.735	0.845	1.525	3.405	0.815	1.435	3.015	3.405	4.805	1.235	3.125	5.125	8.525
Road 21	21	1200-1500	3.785	0.855	1.535	3.455	0.825	1.445	3.065	3.455	4.855	1.245	3.135	5.135	8.535
Road 21	21	1500-1800	3.785	0.855	1.535	3.455	0.825	1.445	3.065	3.455</					

Table 10: Top 20 UK Underground Quays Open Road 24 Hour Emission Factors for 2000/01 Year														
Road Name	Road ID	Hour	NO _x Emission				NO ₂ Emission							
			g/kWh/m ³	g/kWh/m ³	g/kWh/m ³	g/kWh/m ³	g/kWh/m ³	g/kWh/m ³	g/kWh/m ³	g/kWh/m ³				
Road 17	1600-1200	1200	6.015	1.502	6.522	0.551	1.438	4.185	2.215	5.675	0.664	2.064	5.245	0.565
		1800	2.885	0.708	3.085	0.265	0.685	1.935	1.035	2.655	0.305	0.965	2.405	0.265
Road 17	1700-1200	1200	6.015	1.502	6.522	0.551	1.438	4.185	2.215	5.675	0.664	2.064	5.245	0.565
		1800	2.885	0.708	3.085	0.265	0.685	1.935	1.035	2.655	0.305	0.965	2.405	0.265
Road 17	1800-1200	1200	6.015	1.502	6.522	0.551	1.438	4.185	2.215	5.675	0.664	2.064	5.245	0.565
		1800	2.885	0.708	3.085	0.265	0.685	1.935	1.035	2.655	0.305	0.965	2.405	0.265
Road 17	1900-1200	1200	6.015	1.502	6.522	0.551	1.438	4.185	2.215	5.675	0.664	2.064	5.245	0.565
		1800	2.885	0.708	3.085	0.265	0.685	1.935	1.035	2.655	0.305	0.965	2.405	0.265
Road 17	2000-1200	1200	6.015	1.502	6.522	0.551	1.438	4.185	2.215	5.675	0.664	2.064	5.245	0.565
		1800	2.885	0.708	3.085	0.265	0.685	1.935	1.035	2.655	0.305	0.965	2.405	0.265
Road 17	2100-1200	1200	6.015	1.502	6.522	0.551	1.438	4.185	2.215	5.675	0.664	2.064	5.245	0.565
		1800	2.885	0.708	3.085	0.265	0.685	1.935	1.035	2.655	0.305	0.965	2.405	0.265
Road 17	2200-1200	1200	6.015	1.502	6.522	0.551	1.438	4.185	2.215	5.675	0.664	2.064	5.245	0.565
		1800	2.885	0.708	3.085	0.265	0.685	1.935	1.035	2.655	0.305	0.965	2.405	0.265
Road 18	0100-0300	0300	4.074	0.986	5.060	0.840	0.637	1.475	0.454	2.747	0.176	0.480	1.488	0.117
		0400	3.423	0.839	4.262	0.715	0.542	1.267	0.385	2.342	0.146	0.392	1.257	0.103
Road 18	0200-0300	0300	4.074	0.986	5.060	0.840	0.637	1.475	0.454	2.747	0.176	0.480	1.488	0.117
		0400	3.423	0.839	4.262	0.715	0.542	1.267	0.385	2.342	0.146	0.392	1.257	0.103
Road 18	0300-0400	0400	3.423	0.839	4.262	0.715	0.542	1.267	0.385	2.342	0.146	0.392	1.257	0.103
		0500	2.788	0.688	3.476	0.585	0.440	1.050	0.307	1.927	0.115	0.312	1.045	0.085
Road 18	0400-0500	0500	2.788	0.688	3.476	0.585	0.440	1.050	0.307	1.927	0.115	0.312	1.045	0.085
		0600	2.136	0.539	2.675	0.440	0.336	0.814	0.226	1.539	0.087	0.240	0.808	0.066
Road 18	0500-0600	0600	2.136	0.539	2.675	0.440	0.336	0.814	0.226	1.539	0.087	0.240	0.808	0.066
		0700	1.486	0.390	1.876	0.295	0.229	0.589	0.159	1.090	0.060	0.172	0.579	0.044
Road 18	0600-0700	0700	1.486	0.390	1.876	0.295	0.229	0.589	0.159	1.090	0.060	0.172	0.579	0.044
		0800	0.836	0.202	1.038	0.160	0.125	0.340	0.093	0.600	0.033	0.090	0.330	0.025
Road 18	0700-0800	0800	0.836	0.202	1.038	0.160	0.125	0.340	0.093	0.600	0.033	0.090	0.330	0.025
		0900	0.186	0.045	0.231	0.035	0.027	0.070	0.020	0.130	0.005	0.013	0.045	0.003
Road 18	0800-0900	0900	0.186	0.045	0.231	0.035	0.027	0.070	0.020	0.130	0.005	0.013	0.045	0.003
		1000	0.136	0.033	0.169	0.025	0.019	0.050	0.014	0.090	0.003	0.008	0.033	0.002
Road 18	0900-1000	1000	0.136	0.033	0.169	0.025	0.019	0.050	0.014	0.090	0.003	0.008	0.033	0.002
		1100	0.086	0.021	0.107	0.015	0.011	0.030	0.008	0.050	0.002	0.005	0.021	0.001
Road 18	1000-1100	1100	0.086	0.021	0.107	0.015	0.011	0.030	0.008	0.050	0.002	0.005	0.021	0.001
		1200	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
Road 18	1100-1200	1200	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
		1300	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
Road 18	1200-1300	1300	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
		1400	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
Road 18	1300-1400	1400	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
		1500	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
Road 18	1400-1500	1500	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
		1600	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
Road 18	1500-1600	1600	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
		1700	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
Road 18	1600-1700	1700	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
		1800	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
Road 18	1700-1800	1800	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
		1900	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
Road 18	1800-1900	1900	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
		2000	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
Road 18	1900-2000	2000	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
		2100	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
Road 18	2000-2100	2100	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
		2200	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
Road 18	2100-2200	2200	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
		2300	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
Road 18	2200-2300	2300	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
		2400	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
Road 18	2300-2400	2400	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
		2500	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
Road 18	2400-2500	2500	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
		2600	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
Road 18	2500-2600	2600	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
		2700	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
Road 18	2600-2700	2700	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
		2800	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
Road 18	2700-2800	2800	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
		2900	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
Road 18	2800-2900	2900	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
		3000	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
Road 18	2900-3000	3000	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
		3100	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
Road 18	3000-3100	3100	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
		3200	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
Road 18	3100-3200	3200	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
		3300	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
Road 18	3200-3300	3300	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
		3400	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
Road 18	3300-3400	3400	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
		3500	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
Road 18	3400-3500	3500	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
		3600	0.036	0.009	0.045	0.006	0.004	0.010	0.002	0.020	0.001	0.002	0.009	0.000
Road 18	3500-3600	3600	0.036											

[illegible][illegible]

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

[illegible]

Top 10 US North Underground County															
Open Road 24 Hour Emission Factors for															
Year 2038															
Road Name	Road ID	Hour	NO _x Emission					NM Emission							
			g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour		
Rept 01	00000-0200	1	2.502	2.438	2.172	0.144	2.208	1.937	0.058	1.137	1.002	5.316	1.031	9.714	0.07
Rept 01	00000-0200	2	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 01	00000-0200	3	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 01	00000-0200	4	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 01	00000-0200	5	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 01	00000-0200	6	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 01	00000-0200	7	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 01	00000-0200	8	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 01	00000-0200	9	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 01	00000-0200	10	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 01	00000-0200	11	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 01	00000-0200	12	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 01	00000-0200	13	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 01	00000-0200	14	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 01	00000-0200	15	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 01	00000-0200	16	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 01	00000-0200	17	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 01	00000-0200	18	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 01	00000-0200	19	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 01	00000-0200	20	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 01	00000-0200	21	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 01	00000-0200	22	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 01	00000-0200	23	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 01	00000-0200	24	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 02	00000-0200	1	2.502	2.438	2.172	0.144	2.208	1.937	0.058	1.137	1.002	5.316	1.031	9.714	0.07
Rept 02	00000-0200	2	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 02	00000-0200	3	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 02	00000-0200	4	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 02	00000-0200	5	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 02	00000-0200	6	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 02	00000-0200	7	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 02	00000-0200	8	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 02	00000-0200	9	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 02	00000-0200	10	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 02	00000-0200	11	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 02	00000-0200	12	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 02	00000-0200	13	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 02	00000-0200	14	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 02	00000-0200	15	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 02	00000-0200	16	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 02	00000-0200	17	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 02	00000-0200	18	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 02	00000-0200	19	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 02	00000-0200	20	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 02	00000-0200	21	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 02	00000-0200	22	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 02	00000-0200	23	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 02	00000-0200	24	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 03	00000-0200	1	2.502	2.438	2.172	0.144	2.208	1.937	0.058	1.137	1.002	5.316	1.031	9.714	0.07
Rept 03	00000-0200	2	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 03	00000-0200	3	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 03	00000-0200	4	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 03	00000-0200	5	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 03	00000-0200	6	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 03	00000-0200	7	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 03	00000-0200	8	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 03	00000-0200	9	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 03	00000-0200	10	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 03	00000-0200	11	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 03	00000-0200	12	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 03	00000-0200	13	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 03	00000-0200	14	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 03	00000-0200	15	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 03	00000-0200	16	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 03	00000-0200	17	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 03	00000-0200	18	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 03	00000-0200	19	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 03	00000-0200	20	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 03	00000-0200	21	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 03	00000-0200	22	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 03	00000-0200	23	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 03	00000-0200	24	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.335	1.335	1.335	0.07
Rept 04	00000-0200	1	2.502	2.438	2.172	0.144	2.208	1.937	0.058	1.137	1.002	5.316	1.031	9.714	0.07
Rept 04	00000-0200	2	1.335	1.335	1.335	0.078	1.335	1.335	1.335	1.335	1.335	1.			

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Open Top 24 Hour Underground Factors for OSHA 3024 model (non-ventilated)														
Year 2008			NO ₂ Emission						NO _x Emission					
Read Name	Read ID	Hour	Monthly/metric/avg			Monthly/metric/avg			Monthly/metric/avg			Monthly/metric/avg		
			g/h/m ³	g/d/m ³	tonne/hour	g/h/m ³	g/d/m ³	tonne/hour	g/h/m ³	g/d/m ³	tonne/hour	g/h/m ³	g/d/m ³	tonne/hour
Read 37	300017000	7	6.985	1.185	2.708	6.732	1.135	2.625	2.552	4.335	8.975	2.445	4.115	9.415
Read 37	300017000	8	6.995	1.185	2.708	6.732	1.135	2.625	2.552	4.335	8.975	2.445	4.115	9.415
Read 37	300017000	9	6.995	1.185	2.708	6.732	1.135	2.625	2.552	4.335	8.975	2.445	4.115	9.415
Read 37	300018000	10	7.242	1.240	2.848	6.978	1.192	2.848	3.508	5.988	11.725	3.155	5.545	13.045
Read 37	300018000	11	7.242	1.240	2.848	6.978	1.192	2.848	3.508	5.988	11.725	3.155	5.545	13.045
Read 37	300018000	12	7.242	1.240	2.848	6.978	1.192	2.848	3.508	5.988	11.725	3.155	5.545	13.045
Read 37	300020000	13	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	14	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	15	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	16	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	17	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	18	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	19	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	20	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	21	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	22	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	23	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	24	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	25	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	26	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	27	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	28	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	29	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	30	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	31	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	32	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	33	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	34	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	35	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	36	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	37	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	38	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	39	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	40	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	41	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	42	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	43	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	44	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	45	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	46	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	47	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	48	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	49	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	50	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	51	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	52	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	53	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	54	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	55	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	56	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	57	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	58	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	59	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	60	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	61	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	62	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	63	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	64	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	65	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	66	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	67	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	68	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	69	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	70	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	71	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	72	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	73	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	74	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	75	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	76	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	77	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	78	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	79	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	80	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	81	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	82	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	83	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	84	3.748	0.635	1.305	3.565	0.595	1.375	1.835	3.125	6.385	1.885	3.385	7.885
Read 37	300020000	85	3.7											

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open North Wind Emission Factor															
Open Road 24 Hour Emission Factors for ATMS001 Road (Row ID)															
Year 2018			NO _x Emission						NO ₂ Emission						
Road Name	Road ID	Hour	Monthly/tonnage			Monthly/tonnage			Monthly/tonnage			Monthly/tonnage			
			g/km/hr	ton/hr	ton/ton	g/km/hr	ton/hr	ton/ton	g/km/hr	ton/hr	ton/ton	g/km/hr	ton/hr	ton/ton	
Road 44	44	0800-0900	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	0900-1000	0.976	0.014	2.40E-05	1.488	0.011	2.02E-07	1.48E-06	4.76E-02	3.24E-06	8.40E-06	5.92E-07	1.20E-06	7.65E-08
Road 44	44	1000-1100	0.976	0.014	2.40E-05	1.488	0.011	2.02E-07	1.48E-06	4.76E-02	3.24E-06	8.40E-06	5.92E-07	1.20E-06	7.65E-08
Road 44	44	1100-1200	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	1200-1300	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	1300-1400	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	1400-1500	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	1500-1600	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	1600-1700	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	1700-1800	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	1800-1900	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	1900-2000	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	2000-2100	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	2100-2200	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	2200-2300	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	2300-2400	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	0000-0100	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	0100-0200	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	0200-0300	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	0300-0400	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	0400-0500	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	0500-0600	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	0600-0700	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	0700-0800	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	0800-0900	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	0900-1000	0.976	0.014	2.40E-05	1.488	0.011	2.02E-07	1.48E-06	4.76E-02	3.24E-06	8.40E-06	5.92E-07	1.20E-06	7.65E-08
Road 44	44	1000-1100	0.976	0.014	2.40E-05	1.488	0.011	2.02E-07	1.48E-06	4.76E-02	3.24E-06	8.40E-06	5.92E-07	1.20E-06	7.65E-08
Road 44	44	1100-1200	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	1200-1300	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	1300-1400	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	1400-1500	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	1500-1600	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	1600-1700	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	1700-1800	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	1800-1900	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	1900-2000	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	2000-2100	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	2100-2200	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	2200-2300	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	2300-2400	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	0000-0100	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	0100-0200	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	0200-0300	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	0300-0400	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	0400-0500	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	0500-0600	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	0600-0700	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	0700-0800	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	0800-0900	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	0900-1000	0.976	0.014	2.40E-05	1.488	0.011	2.02E-07	1.48E-06	4.76E-02	3.24E-06	8.40E-06	5.92E-07	1.20E-06	7.65E-08
Road 44	44	1000-1100	0.976	0.014	2.40E-05	1.488	0.011	2.02E-07	1.48E-06	4.76E-02	3.24E-06	8.40E-06	5.92E-07	1.20E-06	7.65E-08
Road 44	44	1100-1200	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	1200-1300	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	1300-1400	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	1400-1500	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	1500-1600	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	1600-1700	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	1700-1800	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	1800-1900	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	1900-2000	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	2000-2100	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	2100-2200	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	2200-2300	1.175	0.017	2.88E-05	1.768	0.013	2.44E-07	1.63E-06	5.13E-02	3.54E-06	9.54E-06	6.68E-07	1.36E-06	8.38E-08
Road 44	44	2300-2400	1.175	0.017	2.88E-05										

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Top & North End Underlayment Quarry														
Quarry #24 - South End Ventilation Factors for AR2002 (mod. Dec 1998)														
Year 2008														
Road Name	Doc #	Hour	NO _x Emission				NO _x Emission							
			Monthly/avg	Monthly/avg	Monthly/avg	Monthly/avg	Monthly/avg	Monthly/avg	Monthly/avg	Monthly/avg				
Road 1700	1700	1800	1.895	0.12	5.146	1.708	0.11	4.620	0.295	0.234	7.242	0.61	1.975	0.5
		1830	1.747	0.11	4.847	1.573	0.10	4.345	0.276	0.224	6.944	0.58	1.856	0.45
		1900	1.424	0.085	4.065	1.272	0.078	3.384	0.245	0.196	6.482	0.455	1.593	0.38
Road 1800	1800	1800	1.895	0.12	5.146	1.708	0.11	4.620	0.295	0.234	7.242	0.61	1.975	0.5
		1830	1.747	0.11	4.847	1.573	0.10	4.345	0.276	0.224	6.944	0.58	1.856	0.45
		1900	1.424	0.085	4.065	1.272	0.078	3.384	0.245	0.196	6.482	0.455	1.593	0.38
Road 1900	1900	1800	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1830	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1900	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
Road 2000	2000	1800	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1830	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1900	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
Road 2100	2100	1800	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1830	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1900	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
Road 2200	2200	1800	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1830	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1900	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
Road 2300	2300	1800	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1830	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1900	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
Road 2400	2400	1800	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1830	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1900	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
Road 2500	2500	1800	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1830	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1900	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
Road 2600	2600	1800	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1830	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1900	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
Road 2700	2700	1800	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1830	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1900	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
Road 2800	2800	1800	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1830	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1900	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
Road 2900	2900	1800	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1830	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1900	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
Road 3000	3000	1800	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1830	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1900	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
Road 3100	3100	1800	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1830	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1900	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
Road 3200	3200	1800	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1830	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1900	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
Road 3300	3300	1800	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1830	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1900	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
Road 3400	3400	1800	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1830	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1900	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
Road 3500	3500	1800	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1830	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1900	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
Road 3600	3600	1800	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1830	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1900	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
Road 3700	3700	1800	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1830	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1900	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
Road 3800	3800	1800	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1830	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1900	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
Road 3900	3900	1800	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1830	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1900	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
Road 4000	4000	1800	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1830	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1900	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
Road 4100	4100	1800	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1830	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1900	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
Road 4200	4200	1800	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1830	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1900	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
Road 4300	4300	1800	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1830	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1900	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
Road 4400	4400	1800	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1830	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1900	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
Road 4500	4500	1800	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.096
		1830	0.849	0.037	2.116	0.675	0.023	1.161	0.101	0.112	1.394	0.055	0.747	0.0

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

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1-1 Secure Environment Projects (60723738) 1-01 Other (Air Modeling) Appendix Traffic Open Road Appendix 3.5.4 Emission Factor in 2029.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Top 24 Hour Underground Quarry						
Tape Run 14 North Emission Factors for						
AIRMED model (December)						
Year 2038						
Run name	Read ID	hour	NO _x Emission			
			Monthly/Hours	Monthly/Hours	Monthly/Hours	Monthly/Hours
			lb/hr	lb/day	lb/month	lb/yr
Read 14	00000000	1	1.988	0.07	1.426	3.431E+01
Read 14	00000000	2	4.502	0.16	3.167	5.409E+01
Read 14	00000000	3	1.523	0.05	1.091	2.619E+01
Read 14	00000000	4	4.832	0.17	1.406	4.396E+01
Read 14	00000000	5	1.744	0.06	1.296	3.194E+01
Read 14	00000000	6	1.181	0.04	0.856	2.096E+01
Read 14	00000000	7	3.373	0.12	1.706	6.714E+01
Read 14	00000000	8	1.855	0.07	1.342	3.284E+01
Read 14	00000000	9	6.914	0.25	1.706	6.714E+01
Read 14	00000000	10	1.744	0.06	1.296	3.194E+01
Read 14	00000000	11	3.442	0.12	1.706	6.714E+01
Read 14	00000000	12	2.713	0.10	0.978	2.449E+01
Read 14	00000000	13	1.315	0.05	0.978	2.449E+01
Read 14	00000000	14	2.438	0.09	0.761	2.176E+01
Read 14	00000000	15	1.315	0.05	0.978	2.449E+01
Read 14	00000000	16	2.552	0.09	1.486	3.796E+01
Read 15	00000000	1	3.211	0.11	2.517	2.889E+01
Read 15	00000000	2	1.113	0.04	0.804	1.945E+01
Read 15	00000000	3	4.772	0.17	4.776	4.411E+01
Read 15	00000000	4	1.772	0.07	1.438	4.800E+01
Read 15	00000000	5	4.293	0.16	4.818	5.413E+01
Read 15	00000000	6	1.113	0.04	0.804	1.945E+01
Read 15	00000000	7	5.222	0.19	5.222	4.740E+01
Read 15	00000000	8	1.772	0.07	1.438	4.800E+01
Read 15	00000000	9	1.540	0.05	1.540	5.003E+01
Read 15	00000000	10	1.540	0.05	1.540	5.003E+01
Read 15	00000000	11	3.912	0.14	2.827	1.431E+02
Read 15	00000000	12	5.995	0.22	2.947	1.545E+02
Read 15	00000000	13	7.138	0.26	4.871	6.644E+01
Read 15	00000000	14	1.540	0.05	1.540	5.003E+01
Read 15	00000000	15	7.222	0.26	5.761	5.634E+01
Read 15	00000000	16	1.540	0.05	1.540	5.003E+01
Read 15	00000000	17	8.023	0.29	5.371	6.339E+01
Read 15	00000000	18	1.540	0.05	1.540	5.003E+01
Read 15	00000000	19	5.675	0.20	4.888	4.624E+01
Read 15	00000000	20	1.744	0.06	1.296	3.194E+01
Read 15	00000000	21	2.713	0.10	1.486	2.449E+01
Read 15	00000000	22	1.315	0.05	0.978	2.449E+01
Read 15	00000000	23	2.438	0.09	1.486	2.449E+01
Read 16	00000000	1	9.522	0.34	4.804	8.044E+01
Read 16	00000000	2	1.011	0.04	0.804	8.991E+01
Read 16	00000000	3	1.235	0.04	0.804	8.991E+01
Read 16	00000000	4	1.238	0.05	1.738	7.728E+01
Read 16	00000000	5	1.763	0.06	1.763	1.114E+02
Read 16	00000000	6	1.292	0.05	1.348	1.176E+02
Read 16	00000000	7	1.333	0.05	1.294	1.138E+02
Read 16	00000000	8	1.763	0.06	1.763	1.114E+02
Read 16	00000000	9	2.023	0.08	1.936	1.338E+02
Read 16	00000000	10	1.763	0.06	1.763	1.114E+02
Read 16	00000000	11	2.996	0.10	3.851	4.118E+01
Read 16	00000000	12	1.523	0.05	1.188	1.906E+01
Read 16	00000000	13	1.924	0.07	1.936	1.776E+01
Read 16	00000000	14	1.523	0.05	1.188	1.906E+01
Read 16	00000000	15	3.768	0.13	3.881	2.486E+01
Read 16	00000000	16	1.523	0.05	1.188	1.906E+01
Read 16	00000000	17	3.808	0.14	3.817	2.713E+01
Read 16	00000000	18	1.523	0.05	1.188	1.906E+01
Read 16	00000000	19	1.540	0.05	1.540	5.003E+01
Read 16	00000000	20	1.540	0.05	1.540	5.003E+01
Read 16	00000000	21	2.023	0.08	1.936	1.338E+02
Read 16	00000000	22	1.540	0.05	1.540	5.003E+01
Read 16	00000000	23	1.540	0.05	1.540	5.003E+01
Read 17	00000000	1	1.136	0.04	1.738	7.728E+01
Read 17	00000000	2	1.071	0.04	1.071	3.013E+01
Read 17	00000000	3	2.775	0.10	1.071	3.013E+01
Read 17	00000000	4	2.000	0.07	1.276	3.909E+01
Read 17	00000000	5	2.023	0.08	1.936	1.338E+02
Read 17	00000000	6	1.136	0.04	1.678	1.876E+01
Read 17	00000000	7	1.225	0.04	1.096	1.056E+01
Read 17	00000000	8	1.113	0.04	1.096	1.056E+01
Read 17	00000000	9	1.403	0.05	1.148	1.056E+01
Read 17	00000000	10	1.403	0.05	1.148	1.056E+01
Read 17	00000000	11	1.403	0.05	1.148	1.056E+01
Read 17	00000000	12	1.403	0.05	1.148	1.056E+01
Read 17	00000000	13	1.403	0.05	1.148	1.056E+01
Read 17	00000000	14	1.403	0.05	1.148	1.056E+01
Read 17	00000000	15	1.403	0.05	1.148	1.056E+01
Read 17	00000000	16	1.403	0.05	1.148	1.056E+01
Read 17	00000000	17	1.403	0.05	1.148	1.056E+01
Read 17	00000000	18	1.403	0.05	1.148	1.056E+01
Read 17	00000000	19	1.403	0.05	1.148	1.056E+01
Read 17	00000000	20	1.403	0.05	1.148	1.056E+01
Read 17	00000000	21	1.403	0.05	1.148	1.056E+01
Read 17	00000000	22	1.403	0.05	1.148	1.056E+01
Read 17	00000000	23	1.403	0.05	1.148	1.056E+01

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Tep N' North Underdomination Quarry						
Open Road 24 hour Emission Factors for						
ARMSed model (Emission)						
Year 2038						
Average	Route Name	Model	Doc ID	Hour	g/mile ² /hr	Monthly/tour/mile ²
4.46E-05	Route 17	17	1800-0200	1	6.36E-07	1.64E-06
5.21E-05	Route 17	17	1700-1800	4	4.56E-07	4.20E-06
4.46E-05	Route 17	17	1800-0200	1	6.36E-07	1.64E-06
4.57E-05	Route 17	17	1900-2000	1	5.10E-07	1.02E-07
7.86E-05	Route 17	17	2000-2100	1	1.94E-06	2.65E-07
7.86E-05	Route 17	17	2100-2200	1	1.94E-06	2.65E-07
9.31E-05	Route 17	17	2200-2300	1	3.31E-06	1.88E-07
9.31E-05	Route 17	17	2300-2400	1	3.31E-06	1.88E-07
7.86E-05	Route 18	18	0000-0100	1	8.68E-07	4.93E-07
7.86E-05	Route 18	18	0100-0200	1	8.68E-07	4.93E-07
5.00E-05	Route 18	18	0200-0300	1	1.11E-07	1.58E-08
7.47E-05	Route 18	18	0300-0400	1	1.23E-07	1.51E-08
7.47E-05	Route 18	18	0400-0500	1	1.23E-07	1.51E-08
2.68E-05	Route 18	18	0500-0600	1	1.29E-07	6.72E-08
2.68E-05	Route 18	18	0600-0700	1	1.29E-07	6.72E-08
1.92E-05	Route 18	18	0700-0800	1	4.43E-08	3.01E-07
1.92E-05	Route 18	18	0800-0900	1	4.43E-08	3.01E-07
1.92E-05	Route 18	18	0900-1000	1	1.81E-07	1.71E-07
1.18E-05	Route 18	18	1000-1100	1	1.79E-07	2.62E-07
1.18E-05	Route 18	18	1100-1200	1	1.79E-07	2.62E-07
1.12E-05	Route 18	18	1200-1300	1	3.78E-07	3.86E-07
1.12E-05	Route 18	18	1300-1400	1	2.43E-07	3.13E-07
1.23E-05	Route 18	18	1400-1500	1	2.43E-07	3.13E-07
7.71E-06	Route 18	18	1500-1600	1	2.22E-07	1.02E-07
7.71E-06	Route 18	18	1600-1700	1	2.22E-07	1.02E-07
2.84E-06	Route 18	18	1700-1800	1	3.78E-07	3.86E-07
7.33E-06	Route 18	18	1800-1900	1	1.29E-07	2.34E-07
2.95E-06	Route 18	18	1900-2000	1	1.52E-07	2.15E-07
2.95E-06	Route 18	18	2000-2100	1	1.08E-07	1.66E-07
2.95E-06	Route 18	18	2100-2200	1	1.08E-07	1.66E-07
1.53E-05	Route 18	18	2200-2300	1	1.04E-07	1.51E-07
1.53E-05	Route 18	18	2300-2400	1	1.04E-07	1.51E-07
1.56E-05	Route 19	19	0000-0100	1	1.76E-07	1.68E-07
1.40E-05	Route 19	19	0100-0200	1	1.13E-07	8.42E-08
1.13E-05	Route 19	19	0200-0300	1	1.13E-07	1.13E-07
1.13E-05	Route 19	19	0300-0400	1	1.13E-07	1.13E-07
4.59E-06	Route 19	19	0400-0500	1	1.88E-07	5.17E-08
4.59E-06	Route 19	19	0500-0600	1	1.88E-07	5.17E-08
3.36E-06	Route 19	19	0600-0700	1	1.73E-07	2.22E-07
3.36E-06	Route 19	19	0700-0800	1	1.73E-07	2.22E-07
1.02E-05	Route 19	19	0800-0900	1	1.64E-07	1.64E-07
1.02E-05	Route 19	19	0900-1000	1	1.61E-07	1.61E-07
3.79E-06	Route 19	19	1000-1100	1	2.43E-07	2.43E-07
4.56E-06	Route 19	19	1100-1200	1	2.55E-07	4.16E-07
4.56E-06	Route 19	19	1200-1300	1	2.55E-07	4.16E-07
1.04E-06	Route 19	19	1300-1400	1	2.76E-07	6.76E-07
1.09E-06	Route 19	19	1400-1500	1	2.76E-07	6.76E-07
1.09E-06	Route 19	19	1500-1600	1	2.46E-07	4.81E-07
2.06E-06	Route 19	19	1600-1700	1	2.64E-07	8.83E-07
2.06E-06	Route 19	19	1700-1800	1	2.64E-07	8.83E-07</

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Twin T North Underdown Quarry					
Open Road 24 hour Emission Factors for					
AERMOD model					
Year 2038					
Average	Road Name	Road ID	Hour	g/kWh	Monthly tonne/kWh
4.07E-06	Road 31	31	0000-0100	1.19E-02	9.75E-08
4.07E-06	Road 31	31	0100-0200	1.43E-02	1.81E-08
4.12E-06	Road 31	31	0200-0300	1.43E-02	1.81E-08
4.49E-06	Road 31	31	0300-0400	1.59E-02	1.22E-08
4.20E-06	Road 31	31	0400-0500	1.68E-02	1.43E-08
4.20E-06	Road 31	31	0500-0600	1.68E-02	1.43E-08
4.62E-06	Road 31	31	0600-0700	1.84E-02	2.04E-08
4.61E-06	Road 31	31	0700-0800	1.84E-02	2.04E-08
4.61E-06	Road 31	31	0800-0900	1.83E-02	1.45E-07
4.71E-06	Road 31	31	0900-1000	2.11E-02	5.11E-08
4.71E-06	Road 31	31	1000-1100	2.11E-02	1.31E-07
4.86E-06	Road 31	31	1100-1200	2.31E-02	1.42E-07
4.86E-06	Road 31	31	1200-1300	2.31E-02	1.42E-07
4.86E-06	Road 31	31	1300-1400	1.96E-02	0.88E-08
4.86E-06	Road 31	31	1400-1500	1.96E-02	1.08E-08
4.86E-06	Road 31	31	1500-1600	1.95E-02	1.31E-08
4.86E-06	Road 31	31	1600-1700	1.95E-02	1.07E-07
4.86E-06	Road 31	31	1700-1800	1.95E-02	1.07E-07
4.86E-06	Road 31	31	1800-1900	1.50E-02	6.70E-08
4.86E-06	Road 31	31	1900-2000	1.51E-02	7.78E-08
4.86E-06	Road 31	31	2000-2100	1.51E-02	7.78E-08
4.86E-06	Road 31	31	2100-2200	1.85E-02	8.63E-08
4.86E-06	Road 31	31	2200-2300	1.85E-02	8.63E-08
4.86E-06	Road 31	31	2300-2400	1.85E-02	8.63E-08
4.86E-06	Road 32	32	0000-0100	1.47E-02	1.68E-08
4.86E-06	Road 32	32	0100-0200	1.47E-02	1.68E-08
4.86E-06	Road 32	32	0200-0300	1.23E-02	8.61E-08
4.86E-06	Road 32	32	0300-0400	1.23E-02	8.61E-08
4.86E-06	Road 32	32	0400-0500	1.98E-02	1.08E-08
4.86E-06	Road 32	32	0500-0600	1.98E-02	1.08E-08
4.86E-06	Road 32	32	0600-0700	1.46E-02	1.26E-07
4.86E-06	Road 32	32	0700-0800	1.46E-02	1.26E-07
4.86E-06	Road 32	32	0800-0900	1.46E-02	1.26E-07
4.86E-06	Road 32	32	0900-1000	1.98E-02	5.93E-07
4.86E-06	Road 32	32	1000-1100	2.04E-02	1.46E-07
4.86E-06	Road 32	32	1100-1200	2.04E-02	1.46E-07
4.86E-06	Road 32	32	1200-1300	1.85E-02	3.87E-07
4.86E-06	Road 32	32	1300-1400	1.85E-02	3.87E-07
4.86E-06	Road 32	32	1400-1500	1.85E-02	4.26E-07
4.86E-06	Road 32	32	1500-1600	1.85E-02	4.26E-07
4.86E-06	Road 32	32	1600-1700	1.76E-02	1.44E-07
4.86E-06	Road 32	32	1700-1800	1.51E-02	6.43E-08
4.86E-06	Road 32	32	1800-1900	1.51E-02	6.43E-08
4.86E-06	Road 32	32	1900-2000	1.85E-02	7.01E-07
4.86E-06	Road 32	32	2000-2100	1.85E-02	7.01E-07
4.86E-06	Road 32	32	2100-2200	1.76E-02	6.95E-08
4.86E-06	Road 32	32	2200-2300	1.76E-02	6.95E-08
4.86E-06	Road 32	32	2300-2400	1.76E-02	6.95E-08

1.3 Secured Environment: Projects\60722278\1.01\Other\1.4\Modelling\Appendix\Traffic\OpenRoads\Appendix 3.5.4 Emission Exter in 2038.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Yr North Underground Factors

Open Road 24 Hour Endurance Factors for KERBSIDE model (Round 2)															
Road Name	ID	Hour	NO _x Emission				NO _x Emission								
			Monthly/average		Monthly/average		Monthly/average		Monthly/average						
			g/h/m ²	g/h/m ²	g/h/m ²	g/h/m ²	g/h/m ²	g/h/m ²	g/h/m ²	g/h/m ²	g/h/m ²	g/h/m ²	g/h/m ²		
Road 34	14	0800-0900	1.138	0.777	7.811	1.037	2.708	7.081	0.674	1.531	0.868	4.818	1.300	3.485	
Road 34	14	0900-1000	1.288	2.761	2.442	1.242	2.465	3.795	1.252	1.585	0.555	1.202	1.405	1.205	
Road 34	14	1000-1100	1.288	2.761	2.442	1.242	2.465	3.795	1.252	1.585	0.555	1.202	1.405	1.205	
Road 34	14	1100-1200	1.395	2.461	0.747	8.446	3.242	2.237	8.851	0.605	1.171	1.064	5.505	1.011	2.605
Road 34	14	1200-1300	1.395	2.461	0.747	8.446	3.242	2.237	8.851	0.605	1.171	1.064	5.505	1.011	2.605
Road 34	14	1300-1400	1.395	2.461	0.747	8.446	3.242	2.237	8.851	0.605	1.171	1.064	5.505	1.011	2.605
Road 34	14	1400-1500	1.288	2.761	2.442	1.242	2.465	3.795	1.252	1.585	0.555	1.202	1.405	1.205	
Road 34	14	1500-1600	1.288	2.761	2.442	1.242	2.465	3.795	1.252	1.585	0.555	1.202	1.405	1.205	
Road 34	14	1600-1700	2.285	3.767	3.895	2.003	3.405	8.785	6.295	1.380	0.605	7.123	1.225	3.185	
Road 34	14	1700-1800	2.285	3.767	3.895	2.003	3.405	8.785	6.295	1.380	0.605	7.123	1.225	3.185	
Road 34	14	1800-1900	2.285	3.767	3.895	2.003	3.405	8.785	6.295	1.380	0.605	7.123	1.225	3.185	
Road 34	14	1900-2000	1.438	2.517	0.727	1.282	2.111	6.041	3.886	1.062	0.775	5.144	2.247	2.417	
Road 34	14	2000-2100	1.438	2.517	0.727	1.282	2.111	6.041	3.886	1.062	0.775	5.144	2.247	2.417	
Road 34	14	2100-2200	1.385	1.761	1.565	1.111	1.235	3.358	0.951	6.517	0.705	6.133	1.655	1.485	
Road 34	14	2200-2300	1.185	1.217	1.335	1.052	1.144	2.986	0.895	6.387	1.675	5.050	5.455	1.485	
Road 34	14	2300-2400	1.185	1.217	1.335	1.052	1.144	2.986	0.895	6.387	1.675	5.050	5.455	1.485	
Road 34	14	2400-0100	1.185	1.217	1.335	1.052	1.144	2.986	0.895	6.387	1.675	5.050	5.455	1.485	
Road 34	14	2500-0000	1.798	1.017	2.686	1.166	9.232	2.441	6.074	4.847	1.371	5.212	1.647	1.095	
Road 34	14	0000-0100	1.798	1.017	2.686	1.166	9.232	2.441	6.074	4.847	1.371	5.212	1.647	1.095	
Road 34	14	0100-0200	1.798	1.017	2.686	1.166	9.232	2.441	6.074	4.847	1.371	5.212	1.647	1.095	
Road 34	14	0200-0300	4.876	4.118	0.103	4.403	1.775	9.196	4.424	1.127	9.971	1.201	0.001	2.617	
Road 34	14	0300-0400	5.735	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	0400-0500	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	0500-0600	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	0600-0700	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	0700-0800	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	0800-0900	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	0900-1000	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	1000-1100	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	1100-1200	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	1200-1300	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	1300-1400	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	1400-1500	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	1500-1600	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	1600-1700	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	1700-1800	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	1800-1900	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	1900-2000	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	2000-2100	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	2100-2200	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	2200-2300	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	2300-2400	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	2400-0100	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	2500-0000	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	0000-0100	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	0100-0200	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	0200-0300	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	0300-0400	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	0400-0500	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	0500-0600	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	0600-0700	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	0700-0800	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	0800-0900	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	0900-1000	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	1000-1100	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	1100-1200	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	1200-1300	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	1300-1400	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	1400-1500	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	1500-1600	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	1600-1700	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	1700-1800	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	1800-1900	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	1900-2000	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	2000-2100	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	2100-2200	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	2200-2300	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	2300-2400	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	2400-0100	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	2500-0000	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	0000-0100	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	0100-0200	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	0200-0300	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	0300-0400	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	0400-0500	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	0500-0600	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	0600-0700	6.742	3.098	3.725	5.162	3.405	8.782	5.881	1.167	6.087	1.375	9.715	2.746	
Road 34	14	0700													

Open Road 2 Hour Emission Factors for ARMOBILE model (Document)															
Year 2038															
Road Name	ID	Hour	NOx Emission				PM10/PM2.5 Emission				NO2 Emission				
			g/km/hr	lb/hr	Monthly/vehicle	Monthly/road	g/km/hr	lb/hr	Monthly/vehicle	Monthly/road	g/km/hr	lb/hr	Monthly/vehicle	Monthly/road	
Road 37	37	1600-1700	1.176	0.118	3.774	6.812	0.158	2.616	2.681	0.133	1.067	2.446	4.196	9.626	
Road 37	37	1700-1800	1.176	0.118	3.774	6.812	0.158	2.616	2.681	0.133	1.067	2.446	4.196	9.626	
Road 37	37	1800-1900	1.176	0.118	3.774	6.812	0.158	2.616	2.681	0.133	1.067	2.446	4.196	9.626	
Road 37	37	1900-2000	4.802	0.481	15.392	33.82	0.879	1.959	1.980	0.246	2.651	4.633	2.766	13.888	
Road 37	37	2000-2100	1.176	0.118	3.774	6.812	0.158	2.616	2.681	0.133	1.067	2.446	4.196	9.626	
Road 37	37	2100-2200	1.176	0.118	3.774	6.812	0.158	2.616	2.681	0.133	1.067	2.446	4.196	9.626	
Road 37	37	2200-2300	1.176	0.118	3.774	6.812	0.158	2.616	2.681	0.133	1.067	2.446	4.196	9.626	
Road 37	37	2300-2400	1.176	0.118	3.774	6.812	0.158	2.616	2.681	0.133	1.067	2.446	4.196	9.626	
Road 38	38	0000-0100	4.033	0.404	13.067	29.43	0.588	0.737	2.108	0.333	2.071	0.913	2.899	1.888	
Road 38	38	0100-0200	1.176	0.118	3.774	6.812	0.158	2.616	2.681	0.133	1.067	2.446	4.196	9.626	
Road 38	38	0200-0300	4.686	0.276	2.268	4.242	0.162	2.116	2.111	0.365	1.171	0.158	2.096	1.236	1.011
Road 38	38	0300-0400	2.766	0.276	2.268	4.242	0.162	2.116	2.111	0.365	1.171	0.158	2.096	1.236	1.011
Road 38	38	0400-0500	2.766	0.276	2.268	4.242	0.162	2.116	2.111	0.365	1.171	0.158	2.096	1.236	1.011
Road 38	38	0500-0600	5.926	0.256	2.132	4.242	0.246	0.602	2.576	0.286	2.096	2.376	2.206	1.086	0.866
Road 38	38	0600-0700	1.176	0.118	3.774	6.812	0.158	2.616	2.681	0.133	1.067	2.446	4.196	9.626	
Road 38	38	0700-0800	6.466	0.246	2.206	4.162	0.576	2.086	2.831	0.116	0.946	0.616	1.086	8.866	0.66
Road 38	38	0800-0900	1.176	0.118	3.774	6.812	0.158	2.616	2.681	0.133	1.067	2.446	4.196	9.626	
Road 38	38	0900-1000	7.866	0.431	8.116	7.412	0.776	2.676	2.556	0.966	1.066	2.716	3.126	9.866	0.66
Road 38	38	1000-1100	8.326	0.311	7.276	7.926	3.176	2.556	3.011	0.306	0.846	2.892	1.126	9.166	0.66
Road 38	38	1100-1200	1.176	0.118	3.774	6.812	0.158	2.616	2.681	0.133	1.067	2.446	4.196	9.626	
Road 38	38	1200-1300	1.176	0.118	3.774	6.812	0.158	2.616	2.681	0.133	1.067	2.446	4.196	9.626	
Road 38	38	1300-1400	1.176	0.118	3.774	6.812	0.158	2.616	2.681	0.133	1.067	2.446	4.196	9.626	
Road 38	38	1400-1500	1.176	0.118	3.774	6.812	0.158	2.616	2.681	0.133	1.067	2.446	4.196	9.626	
Road 38	38	1500-1600	2.216	0.246	2.076	1.636	0.246	1.196	1.986	0.816	0.816	1.776	0.746	6.296	0.66
Road 38	38	1600-1700	1.176	0.118	3.774	6.812	0.158	2.616	2.681	0.133	1.067	2.446	4.196	9.626	
Road 38	38	1700-1800	0.086	0.020	1.026	1.044	0.236	0.586	3.761	0.702	0.576	0.486	1.596	5.406	0.66
Road 38	38	1800-1900	1.176	0.118	3.774	6.812	0.158	2.616	2.681	0.133	1.067	2.446	4.196	9.626	
Road 38	38	1900-2000	7.866	0.431	8.116	7.412	0.776	2.676	2.556	0.966	1.066	2.716	3.126	9.866	0.66
Road 38	38	2000-2100	8.076	0.311	7.736	8.056	3.486	2.586	3.046	0.336	0.866	2.936	1.156	9.306	0.66
Road 38	38	2100-2200	1.176	0.118	3.774	6.812	0.158	2.616	2.681	0.133	1.067	2.446	4.196	9.626	
Road 38	38	2200-2300	4.776	0.706	4.776	4.776	1.506	4.426	4.821	0.246	1.816	0.966	4.446	2.036	1.646
Road 38	38	2300-2400	1.176	0.118	3.774	6.812	0.158	2.616	2.681	0.133	1.067	2.446	4.196	9.626	
Road 39	39	0000-0100	0.011	0.001	0.011	0.011	0.001	0.001	0.011	0.001	0.011	0.001	0.011	0.001	0.011
Road 39	39	0100-0200	1.046	0.106	3.446	6.946	0.126	0.846	1.486	0.446	0.846	2.286	1.546	4.506	0.61
Road 39	39	0200-0300	1.046	0.106	3.446	6.946	0.126	0.846	1.486	0.446	0.846	2.286	1.546	4.506	0.61
Road 39	39	0300-0400	1.046	0.106	3.446	6.946	0.126	0.846	1.486	0.446	0.846	2.286	1.546	4.506	0.61
Road 39	39	0400-0500	1.046	0.106	3.446	6.946	0.126	0.846	1.486	0.446	0.846	2.286	1.546	4.506	0.61
Road 39	39	0500-0600	1.046	0.106	3.446	6.946	0.126	0.846	1.486	0.446	0.846	2.286	1.546	4.506	0.61
Road 39	39	0600-0700	1.046	0.106	3.446	6.946	0.126	0.846	1.486	0.446	0.846	2.286	1.546	4.506	0.61
Road 39	39	0700-0800	1.046	0.106	3.446	6.946	0.126	0.846	1.486	0.446	0.846	2.286	1.546	4.506	0.61
Road 39	39	0800-0900	1.046	0.106	3.446	6.946	0.126	0.846	1.486	0.446	0.846	2.286	1.546	4.506	0.61
Road 39	39	0900-1000	1.046	0.106	3.446	6.946	0.126	0.846	1.486	0.446	0.846	2.286	1.546	4.506	0.61
Road 39	39	1000-1100	1.046	0.106	3.446	6.946	0.126	0.846	1.486	0.446	0.846	2.286	1.546	4.506	0.61
Road 39	39	1100-1200	1.046	0.106	3.446	6.946	0.126	0.846	1.486	0.446	0.846	2.286	1.546	4.506	0.61
Road 39	39	1200-1300	1.046	0.106	3.446	6.946	0.126	0.846	1.486	0.446	0.846	2.286	1.546	4.506	0.61
Road 39	39	1300-1400	1.046	0.106	3.446	6.946	0.126	0.846	1.486	0.446	0.846	2.286	1.546	4.506	0.61
Road 39	39	1400-1500	1.046	0.106	3.446	6.946	0.126	0.846	1.486	0.446	0.846	2.286	1.546	4.506	0.61
Road 39	39	1500-1600	1.046	0.106	3.446	6.946	0.126	0.846	1.486	0.446	0.846	2.286	1.546	4.506	0.61
Road 39	39	1600-1700	1.046	0.106	3.446	6.946	0.126	0.846	1.486	0.446	0.846	2.286	1.546	4.506	0.61
Road 39	39	1700-1800	1.046	0.106	3.446	6.946	0.126	0.846	1.486	0.446	0.846	2.286	1.546	4.506	0.61
Road 39	39	1800-1900	1.046	0.106	3.446	6.946	0.126	0.846	1.486	0.446	0.846	2.286	1.546	4.506	0.61
Road 39	39	1900-2000	1.046	0.106	3.446	6.946	0.126	0.846	1.486	0.446	0.846	2.286	1.546	4.506	0.61
Road 39	39	2000-2100	1.046	0.106	3.446	6.946	0.126	0.846	1.486	0.446	0.846	2.286	1.546	4.506	0.61
Road 39	39	2100-2200	1.046	0.106	3.446	6.946	0.126	0.846	1.486	0.446	0.846	2.286	1.546	4.506	0.61
Road 39	39	2200-2300	1.046	0.106	3.446	6.946	0.126	0.846	1.486	0.446	0.846	2.286	1.546	4.506	0.61
Road 39	39	2300-2400	1.046	0.106	3.446	6.946	0.126	0.846	1.486	0.446	0.846	2.286	1.546	4.506	0.61
Road 40	40	0000-0100	1.136	0.116	3.636	7.136	0.136	0.836	1.436	0.136	0.836	2.136	1.436	4.236	0.61
Road 40	40	0100-0200	1.136	0.116	3.636	7.136	0.136	0.836	1.436	0.136	0.836	2.136	1.436	4.236	0.61
Road 40	40	0200-0300	1.136	0.116	3.636	7.136	0.136	0.836	1.436	0.136	0.836	2.136	1.436	4.236	0.61
Road 40	40	0300-0400	1.136	0.116	3.636	7.136	0.136	0.836	1.436	0.136	0.836	2.136	1.436	4.236	0.61
Road 40	40	0400-0500	1.136	0.116	3.636	7.136	0.136	0.836	1.436	0.136	0.836	2.136	1.436	4.236	0.61
Road 40	40	0500-0600	1.136	0.116	3.636	7.136	0.136	0.836	1.436	0.136	0.836	2.136	1.436	4.236	0.61
Road 40	40	0600-0700	1.136	0.116	3.636	7.136	0.136	0.836	1.436	0.136	0.836	2.136	1.436	4.236	0.61
Road 40	40	0700-0800	1.136	0.116	3.636	7.136	0.136	0.836	1.436	0.136	0.836	2.136	1.436	4.236	0.61
Road 40	40	0800-0900	1.136	0.116	3.636	7.136	0.136	0.836	1.436	0.136	0.836	2.136	1.436	4.236	0.61
Road 40	40	0900-1000	1.136	0.116	3.636	7.136	0.136	0.836	1.436	0.136	0.836	2.136	1.436	4.236	0.61
Road 40	40	1000-1100	1.136	0.116	3.636	7.136	0.136	0.836	1.436	0.136	0.836	2.136	1.436	4.236	0.61
Road 40	40	1100-1200	1.136	0.116	3.636	7.136	0.136	0.836	1.436	0.136	0.836	2.136	1.436	4.236	0.61
Road 40	40	1200-1300	1.136	0.116	3.636	7.136	0.136	0.836	1.436	0.136	0.836	2.136	1.436	4.236	0.61
Road 40	40	1300-1400	1.136	0.116	3.636	7.136	0.136	0.836	1.436	0.136	0.836	2.136	1.436	4.236	0.61
Road 40	40	1400-1500	1.136	0.116	3.636	7.136	0.136	0.836	1.436	0.136	0.836	2.136	1.436	4.236	0.61
Road 40	40	1500-1600	1.136	0.116	3.636	7.136	0.136	0.836	1.436	0.136	0.836	2.136	1.436	4.236	0.61
Road 40	40	1600-1700	1.136	0.116	3.636	7.136	0.136	0.836	1.436	0.136	0.836	2.136	1.436	4.236	0.61
Road 40	40	1700-1800	1.136	0.116	3.636	7.136	0.136	0.836	1.436	0.136	0.836	2.136	1.436	4.236	0.61
Road 40	40	1800-1900	1.136	0.116	3.636	7.136	0.136	0.836	1.436	0.136	0.836	2.136	1.436	4.236	0.61
Road 40	40	1900-2000	1.136	0.116	3.636	7.136	0.136	0.836	1.436	0.1					

[illegible]

Open Road 24 Hour Emission Factors for g/ADMD mile (percentages)										
			NO _x Emission				NO ₂ Emission			
Route Name	Route ID	Hour	Monthly/Average	Monthly/Average	Monthly/Average	Monthly/Average	Monthly/Average	Monthly/Average	Monthly/Average	
			g/ADMD mile	g/ADMD mile	g/ADMD mile	g/ADMD mile	g/ADMD mile	g/ADMD mile	g/ADMD mile	
Route 44	44	0800-0900	1.046	1.031	0.77	1.876	9.418	2.748	1.096	5.882
Route 44	44	0900-1000	1.081	1.067	0.79	1.908	9.662	2.804	1.126	6.004
Route 44	44	1000-1100	1.116	1.102	0.81	1.940	9.906	2.860	1.156	6.126
Route 44	44	1100-1200	1.248	1.233	0.87	2.088	11.242	3.242	1.316	6.586
Route 44	44	1200-1300	1.562	1.547	1.03	2.402	13.586	3.922	1.576	7.046
Route 44	44	1300-1400	1.516	1.501	1.00	2.334	13.130	3.826	1.526	6.946
Route 44	44	1400-1500	1.384	1.369	0.92	2.186	12.066	3.502	1.406	6.406
Route 44	44	1500-1600	1.252	1.237	0.84	2.038	10.992	3.178	1.286	5.866
Route 44	44	1600-1700	1.120	1.105	0.76	1.890	9.918	2.854	1.156	5.426
Route 44	44	1700-1800	1.084	1.069	0.74	1.854	9.554	2.790	1.120	5.286
Route 44	44	1800-1900	1.048	1.033	0.72	1.818	9.190	2.726	1.084	5.146
Route 44	44	1900-2000	1.012	0.997	0.70	1.782	8.826	2.662	1.048	4.986
Route 44	44	2000-2100	0.976	0.961	0.68	1.746	8.462	2.598	1.012	4.826
Route 44	44	2100-2200	0.940	0.925	0.66	1.710	8.098	2.534	0.976	4.666
Route 44	44	2200-2300	0.904	0.889	0.64	1.674	7.734	2.470	0.940	4.506
Route 44	44	2300-2400	0.868	0.853	0.62	1.638	7.370	2.406	0.904	4.346
Route 44	44	0800-0900	1.046	1.031	0.77	1.876	9.418	2.748	1.096	5.882
Route 44	44	0900-1000	1.081	1.067	0.79	1.908	9.662	2.804	1.126	6.004
Route 44	44	1000-1100	1.116	1.102	0.81	1.940	9.906	2.860	1.156	6.126
Route 44	44	1100-1200	1.248	1.233	0.87	2.088	11.242	3.242	1.316	6.586
Route 44	44	1200-1300	1.562	1.547	1.03	2.402	13.586	3.922	1.576	7.046
Route 44	44	1300-1400	1.516	1.501	1.00	2.334	13.130	3.826	1.526	6.946
Route 44	44	1400-1500	1.384	1.369	0.92	2.186	12.066	3.502	1.406	6.406
Route 44	44	1500-1600	1.252	1.237	0.84	2.038	10.992	3.178	1.286	5.866
Route 44	44	1600-1700	1.120	1.105	0.76	1.890	9.918	2.854	1.156	5.426
Route 44	44	1700-1800	1.084	1.069	0.74	1.854	9.554	2.790	1.120	5.286
Route 44	44	1800-1900	1.048	1.033	0.72	1.818	9.190	2.726	1.084	5.146
Route 44	44	1900-2000	1.012	0.997	0.70	1.782	8.826	2.662	1.048	4.986
Route 44	44	2000-2100	0.976	0.961	0.68	1.746	8.462	2.598	1.012	4.826
Route 44	44	2100-2200	0.940	0.925	0.66	1.710	8.098	2.534	0.976	4.666
Route 44	44	2200-2300	0.904	0.889	0.64	1.674	7.734	2.470	0.940	4.506
Route 44	44	2300-2400	0.868	0.853	0.62	1.638	7.370	2.406	0.904	4.346
Route 44	44	0800-0900	1.046	1.031	0.77	1.876	9.418	2.748	1.096	5.882
Route 44	44	0900-1000	1.081	1.067	0.79	1.908	9.662	2.804	1.126	6.004
Route 44	44	1000-1100	1.116	1.102	0.81	1.940	9.906	2.860	1.156	6.126
Route 44	44	1100-1200	1.248	1.233	0.87	2.088	11.242	3.242	1.316	6.586
Route 44	44	1200-1300	1.562	1.547	1.03	2.402	13.586	3.922	1.576	7.046
Route 44	44	1300-1400	1.516	1.501	1.00	2.334	13.130	3.826	1.526	6.946
Route 44	44	1400-1500	1.384	1.369	0.92	2.186	12.066	3.502	1.406	6.406
Route 44	44	1500-1600	1.252	1.237	0.84	2.038	10.992	3.178	1.286	5.866
Route 44	44	1600-1700	1.120	1.105	0.76	1.890	9.918	2.854	1.156	5.426
Route 44	44	1700-1800	1.084	1.069	0.74	1.854	9.554	2.790	1.120	5.286
Route 44	44	1800-1900	1.048	1.033	0.72	1.818	9.190	2.726	1.084	5.146
Route 44	44	1900-2000	1.012	0.997	0.70	1.782	8.826	2.662	1.048	4.986
Route 44	44	2000-2100	0.976	0.961	0.68	1.746	8.462	2.598	1.012	4.826
Route 44	44	2100-2200	0.940	0.925	0.66	1.710	8.098	2.534	0.976	4.666
Route 44	44	2200-2300	0.904	0.889	0.64	1.674	7.734	2.470	0.940	4.506
Route 44	44	2300-2400	0.868	0.853	0.62	1.638	7.370	2.406	0.904	4.346
Route 44	44	0800-0900	1.046	1.031	0.77	1.876	9.418	2.748	1.096	5.882
Route 44	44	0900-1000	1.081	1.067	0.79	1.908	9.662	2.804	1.126	6.004
Route 44	44	1000-1100	1.116	1.102	0.81	1.940	9.906	2.860	1.156	6.126
Route 44	44	1100-1200	1.248	1.233	0.87	2.088	11.242	3.242	1.316	6.586
Route 44	44	1200-1300	1.562	1.547	1.03	2.402	13.586	3.922	1.576	7.046
Route 44	44	1300-1400	1.516	1.501	1.00	2.334	13.130	3.826	1.526	6.946
Route 44	44	1400-1500	1.384	1.369	0.92	2.186	12.066	3.502	1.406	6.406
Route 44	44	1500-1600	1.252	1.237	0.84	2.038	10.992	3.178	1.286	5.866
Route 44	44	1600-1700	1.120	1.105	0.76	1.890	9.918	2.854	1.156	5.426
Route 44	44	1700-1800	1.084	1.069	0.74	1.854	9.554	2.790	1.120	5.286
Route 44	44	1800-1900	1.048	1.033	0.72	1.818	9.190	2.726	1.084	5.146
Route 44	44	1900-2000	1.012	0.997	0.70	1.782	8.826	2.662	1.048	4.986
Route 44	44	2000-2100	0.976	0.961	0.68	1.746	8.462	2.598	1.012	4.826
Route 44	44	2100-2200	0.940	0.925	0.66	1.710	8.098	2.534	0.976	4.666
Route 44	44	2200-2300	0.904	0.889	0.64	1.674	7.734	2.470	0.940	4.506
Route 44	44	2300-2400	0.868	0.853	0.62	1.638	7.370	2.406	0.904	4.346
Route 44	44	0800-0900	1.046	1.031	0.77	1.876	9.418	2.748	1.096	5.882
Route 44	44	0900-1000	1.081	1.067	0.79	1.908	9.662	2.804	1.126	6.004
Route 44	44	1000-1100	1.116	1.102	0.81	1.940	9.906	2.860	1.156	6.126
Route 44	44	1100-1200	1.248	1.233	0.87	2.088	11.242	3.242	1.316	6.586
Route 44	44	1200-1300	1.562	1.547	1.03	2.402	13.586	3.922	1.576	7.046
Route 44	44	1300-1400	1.516	1.501	1.00	2.334	13.130	3.826	1.526	6.946
Route 44	44	1400-1500	1.384	1.369	0.92	2.186	12.066	3.502	1.406	6.406
Route 44	44	1500-1600	1.252	1.237	0.84	2.038	10.992	3.178	1.286	5.866
Route 44	44	1600-1700	1.120	1.105	0.76	1.890	9.918	2.854	1.156	5.426
Route 44	44	1700-1800	1.084	1.069	0.74	1.854	9.554	2.790	1.120	5.286
Route 44	44	1800-1900	1.048	1.033	0.72	1.818	9.190	2.726	1.084	5.146
Route 44	44	1900-2000	1.012	0.997	0.70	1.782	8.826	2.662	1.048	4.986
Route 44	44	2000-2100	0.976	0.961	0.68	1.746	8.462	2.598	1.012	4.826
Route 44	44	2100-2200	0.940	0.925	0.66	1.710	8.098	2.534	0.976	4.666
Route 44	44	2200-2300	0.904	0.889	0.64	1.674	7.734	2.470	0.940	4.506
Route 44	44	2300-2400	0.868	0.853	0.62	1.638	7.370	2.406	0.904	4.346
Route 44	44	0800-0900	1.046	1.031	0.77	1.876	9.418	2.748	1.096	5.882
Route 44	44	0900-1000	1.081	1.067	0.79	1.908	9.662	2.804	1.126	6.004
Route 44	44	1000-1100	1.116	1.102	0.81	1.940	9.906	2.860	1.156	6.126
Route 44	44	1100-1200	1.248	1.233	0.87	2.088	11.242	3.242	1.316	6.586
Route 44	44	1200-1300	1.562	1.547	1.03	2.402	13.586	3.922	1.576	7.046
Route 44	44	1300-1400	1.516	1.501	1.00	2.334	13.130	3.826	1.526	6.946
Route 44	44	1400-1500	1.384	1.369	0.92	2.186	12.066	3.502	1.406	6.406
Route 44	44	1500-1600	1.252	1.237	0.84	2.038	10.992	3.178	1.286	5.866
Route 44	44	1600-1700	1.120	1.105	0.76	1.890	9.918	2.854	1.156	5.426
Route 44	44	1700-1800	1.084	1.069	0.74	1.854	9.554	2.790	1.120	5.286
Route 44	44	1800-1900	1.048	1.033	0.72	1.818	9.190	2.726	1.084	5.146
Route 44	44	1900-2000	1.012	0.997	0.70	1.782	8.826	2.662	1.048	4.986
Route 44	44	2000-2100	0.976	0.961	0.68	1.746	8.462	2.598	1.012	4.826
Route 44	44	2100-2200	0.940	0.925	0.66	1.710	8.098	2.534	0.976	4.666
Route 44	44	2200-2300	0.904	0.889	0.64	1.674	7.734	2.470	0.940	4.506
Route 44	44	2300-2400	0.868	0.853	0.62	1.638	7.370	2.406	0.904	4.346
Route 44	44	0800-0900	1.046	1.031	0.77	1.876	9.418	2.748	1.096	5.882
Route 44	44	0900-1000	1.081	1.067	0.79	1.908	9.662	2.804	1.126	6.004
Route 44	44	1000-1100	1.116	1.102	0.81	1.940	9.906	2.860	1.156	6.126
Route 44	44	1100-1200	1.248	1.233	0.87	2.088	11.242	3.242	1.316	6.586
Route 44	44	1200-1300	1.562	1.547	1.03	2.402	13.586	3.922	1.576	7.046
Route 44	44	1300-1400	1.516	1.501	1.00	2.334	13.130	3.826	1.526	6.946
Route 44	44	1400-1500	1.384	1.369	0.92	2.186	12.066	3.502	1.406	6.406
Route 44	44	1500-1600	1.252	1.237	0.84	2.038	10.992	3.178	1.286	5.866
Route 44	44	1600-1700	1.120	1.105	0.76	1.890	9.918	2.854	1.156	5.426
Route 44	44	1700-1800	1.084	1.069	0.74	1.854	9.554	2.790	1.120	5.286
Route 44	44	1800-1900	1.048	1.033	0.72	1.818	9.190	2.726	1.084	5.146
Route 44										

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Top 24 Hour Underground Factors for
KERNOB Model (ID #)

Year 2008														
Route Number		Route ID		NO _x Emission				NO _x Emission						
		Hour	Monthly/Average			Monthly/Average			Monthly/Average					
			g/h/mi	g/h/mi	g/h/mi	g/h/mi	g/h/mi	g/h/mi	g/h/mi	g/h/mi	g/h/mi			
Route 47	47	1600-1700	2,846.0	5,446.0	1,700	2,514	4,688.0	1,538	1,191.0	2,398.0	7,146.0	1,999.0	6,208.0	
Route 47	47	1800-1900	2,628.0	5,026.0	1,676	2,453.0	4,526.0	1,506	1,156.0	2,306.0	7,122.0	1,853.0	6,125.0	
Route 47	47	1900-2000	2,628.0	5,026.0	1,676	2,453.0	4,526.0	1,506	1,156.0	2,306.0	7,122.0	1,853.0	6,125.0	
Route 47	47	2000-2100	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	2100-2200	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	2200-2300	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	2300-2400	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	2400-2500	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	2500-2600	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	2600-2700	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	2700-2800	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	2800-2900	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	2900-3000	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	3000-3100	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	3100-3200	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	3200-3300	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	3300-3400	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	3400-3500	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	3500-3600	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	3600-3700	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	3700-3800	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	3800-3900	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	3900-4000	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	4000-4100	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	4100-4200	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	4200-4300	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	4300-4400	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	4400-4500	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	4500-4600	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	4600-4700	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	4700-4800	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	4800-4900	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	4900-5000	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	5000-5100	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	5100-5200	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	5200-5300	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	5300-5400	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	5400-5500	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	5500-5600	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	5600-5700	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	5700-5800	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	5800-5900	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	5900-6000	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	6000-6100	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	6100-6200	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	6200-6300	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	6300-6400	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	6400-6500	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	6500-6600	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	6600-6700	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	6700-6800	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	6800-6900	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	6900-7000	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	7000-7100	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	7100-7200	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	7200-7300	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	7300-7400	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	7400-7500	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	7500-7600	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	7600-7700	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	7700-7800	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	7800-7900	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	7900-8000	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	8000-8100	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	8100-8200	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	8200-8300	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	8300-8400	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3,801.0
Route 47	47	8400-8500	1,278.0	2,427.0	770.0	1,000.0	2,196.0	6,866.0	2,221.0	1,451.0	4,521.0	6,621.0	1,221.0	3

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open 24 Hr Underground Quarry															
Total Peak 24 Hour Emission Factors for ARMDAQ model (hour)															
Road Name	Road ID	Distance (miles)	NOx Emission						PM Emission						
			Monthly/Average		Monthly/Average		Monthly/Average		Monthly/Average		Monthly/Average				
			g/min/hr	lb/hr	g/min/hr	lb/hr	g/min/hr	lb/hr	g/min/hr	lb/hr	g/min/hr	lb/hr			
Road #4	SA	0800-0800	1.0661	1.3687	0.032	0.78	1.637	0.316	0.371	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	1000-1000	2.205	2.81	0.117	0.83	1.503	0.291	0.423	0.465	1.606	0.761	1.606	1.265	
Road #4	SA	1200-1200	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	1400-1400	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	1600-1600	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	1800-1800	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	2000-2000	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	2200-2200	1.051	1.371	0.035	0.45	9.498	1.786	1.466	4.241	0.977	1.821	0.432	1.71	1.611
Road #4	SA	2400-2400	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	2600-2600	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	2800-2800	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	3000-3000	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	3200-3200	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	3400-3400	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	3600-3600	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	3800-3800	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	4000-4000	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	4200-4200	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	4400-4400	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	4600-4600	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	4800-4800	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	5000-5000	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	5200-5200	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	5400-5400	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	5600-5600	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	5800-5800	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	6000-6000	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	6200-6200	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	6400-6400	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	6600-6600	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	6800-6800	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	7000-7000	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	7200-7200	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	7400-7400	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	7600-7600	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	7800-7800	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	8000-8000	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	8200-8200	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	8400-8400	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	8600-8600	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	8800-8800	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	9000-9000	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	9200-9200	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	9400-9400	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	9600-9600	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	9800-9800	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	10000-10000	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	10200-10200	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	10400-10400	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	10600-10600	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	10800-10800	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	11000-11000	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	11200-11200	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	11400-11400	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	11600-11600	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	11800-11800	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	12000-12000	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	12200-12200	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	12400-12400	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	12600-12600	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	12800-12800	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	13000-13000	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	13200-13200	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	13400-13400	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	13600-13600	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	13800-13800	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	14000-14000	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	14200-14200	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	14400-14400	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	14600-14600	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	14800-14800	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	15000-15000	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	15200-15200	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	15400-15400	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	15600-15600	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	15800-15800	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	16000-16000	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	16200-16200	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	16400-16400	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621	1.344	1.061	
Road #4	SA	16600-16600	1.111	1.417	0.037	0.26	1.374	0.263	0.374	0.416	1.381	0.621			

[illegible]

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Tsing Yi North Underground Quarry														
Open Road 24 hour Emission Factors for AERMOD model (Summary)														
Year 2043														
Road Name	Road ID	Hour	NO _x Emission			NO Emission			PM _{2.5} Emission			PM ₁₀ Emission		
			g/h/m ²	g/h/m ²	tonnes/year	g/h/m ²	g/h/m ²	tonnes/year	g/h/m ²	g/h/m ²	tonnes/year	g/h/m ²	g/h/m ²	tonnes/year
Road 1	1	0000-0100	4.36	4.36	1.27	3.98	4.36	1.27	1.07	1.07	0.31	1.16	1.16	0.34
Road 1	1	0100-0200	4.79	4.79	1.39	4.40	4.79	1.39	1.13	1.13	0.34	1.22	1.22	0.36
Road 1	1	0200-0300	5.73	5.73	1.67	5.17	5.73	1.67	1.35	1.35	0.40	1.46	1.46	0.42
Road 1	1	0300-0400	6.66	6.66	1.93	6.00	6.66	1.93	1.55	1.55	0.47	1.66	1.66	0.49
Road 1	1	0400-0500	7.61	7.61	2.22	6.86	7.61	2.22	1.77	1.77	0.54	1.88	1.88	0.56
Road 1	1	0500-0600	8.56	8.56	2.50	7.71	8.56	2.50	2.00	2.00	0.61	2.11	2.11	0.63
Road 1	1	0600-0700	9.51	9.51	2.78	8.66	9.51	2.78	2.25	2.25	0.68	2.36	2.36	0.70
Road 1	1	0700-0800	10.46	10.46	3.06	9.51	10.46	3.06	2.50	2.50	0.75	2.61	2.61	0.77
Road 1	1	0800-0900	11.41	11.41	3.34	10.46	11.41	3.34	2.75	2.75	0.82	2.86	2.86	0.84
Road 1	1	0900-1000	12.36	12.36	3.62	11.41	12.36	3.62	3.00	3.00	0.89	3.11	3.11	0.91
Road 1	1	1000-1100	13.31	13.31	3.90	12.36	13.31	3.90	3.25	3.25	0.96	3.36	3.36	0.98
Road 1	1	1100-1200	14.26	14.26	4.18	13.31	14.26	4.18	3.50	3.50	1.03	3.61	3.61	1.05
Road 1	1	1200-1300	15.21	15.21	4.46	14.26	15.21	4.46	3.75	3.75	1.10	3.86	3.86	1.12
Road 1	1	1300-1400	16.16	16.16	4.74	15.21	16.16	4.74	4.00	4.00	1.17	4.11	4.11	1.19
Road 1	1	1400-1500	17.11	17.11	5.02	16.16	17.11	5.02	4.25	4.25	1.24	4.36	4.36	1.26
Road 1	1	1500-1600	18.06	18.06	5.30	17.11	18.06	5.30	4.50	4.50	1.31	4.61	4.61	1.33
Road 1	1	1600-1700	19.01	19.01	5.58	18.06	19.01	5.58	4.75	4.75	1.38	4.86	4.86	1.40
Road 1	1	1700-1800	19.96	19.96	5.86	19.01	19.96	5.86	5.00	5.00	1.45	4.96	4.96	1.42
Road 1	1	1800-1900	20.91	20.91	6.14	19.96	20.91	6.14	5.25	5.25	1.52	5.06	5.06	1.49
Road 1	1	1900-2000	21.86	21.86	6.42	20.91	21.86	6.42	5.50	5.50	1.59	5.16	5.16	1.56
Road 1	1	2000-2100	22.81	22.81	6.70	21.86	22.81	6.70	5.75	5.75	1.66	5.26	5.26	1.63
Road 1	1	2100-2200	23.76	23.76	6.98	22.81	23.76	6.98	6.00	6.00	1.73	5.36	5.36	1.70
Road 1	1	2200-2300	24.71	24.71	7.26	23.76	24.71	7.26	6.25	6.25	1.80	5.46	5.46	1.77
Road 1	1	2300-2400	25.66	25.66	7.54	24.71	25.66	7.54	6.50	6.50	1.87	5.56	5.56	1.84
Road 1	1	2400-0100	26.61	26.61	7.82	25.66	26.61	7.82	6.75	6.75	1.94	5.66	5.66	1.91
Road 1	1	0100-0200	27.56	27.56	8.10	26.61	27.56	8.10	7.00	7.00	2.01	5.76	5.76	1.98
Road 1	1	0200-0300	28.51	28.51	8.38	27.56	28.51	8.38	7.25	7.25	2.08	5.86	5.86	2.05
Road 1	1	0300-0400	29.46	29.46	8.66	28.51	29.46	8.66	7.50	7.50	2.15	5.96	5.96	2.12
Road 1	1	0400-0500	30.41	30.41	8.94	29.46	30.41	8.94	7.75	7.75	2.22	6.06	6.06	2.19
Road 1	1	0500-0600	31.36	31.36	9.22	30.41	31.36	9.22	8.00	8.00	2.29	6.16	6.16	2.26
Road 1	1	0600-0700	32.31	32.31	9.50	31.36	32.31	9.50	8.25	8.25	2.36	6.26	6.26	2.33
Road 1	1	0700-0800	33.26	33.26	9.78	32.31	33.26	9.78	8.50	8.50	2.43	6.36	6.36	2.40
Road 1	1	0800-0900	34.21	34.21	10.06	33.26	34.21	10.06	8.75	8.75	2.50	6.46	6.46	2.47
Road 1	1	0900-1000	35.16	35.16	10.34	34.21	35.16	10.34	9.00	9.00	2.57	6.56	6.56	2.54
Road 1	1	1000-1100	36.11	36.11	10.62	35.16	36.11	10.62	9.25	9.25	2.64	6.66	6.66	2.61
Road 1	1	1100-1200	37.06	37.06	10.90	36.11	37.06	10.90	9.50	9.50	2.71	6.76	6.76	2.68
Road 1	1	1200-1300	38.01	38.01	11.18	37.06	38.01	11.18	9.75	9.75	2.78	6.86	6.86	2.75
Road 1	1	1300-1400	38.96	38.96	11.46	38.01	38.96	11.46	10.00	10.00	2.85	6.96	6.96	2.82
Road 1	1	1400-1500	39.91	39.91	11.74	38.96	39.91	11.74	10.25	10.25	2.92	7.06	7.06	2.89
Road 1	1	1500-1600	40.86	40.86	12.02	39.91	40.86	12.02	10.50	10.50	3.00	7.16	7.16	2.96
Road 1	1	1600-1700	41.81	41.81	12.30	40.86	41.81	12.30	10.75	10.75	3.07	7.26	7.26	3.03
Road 1	1	1700-1800	42.76	42.76	12.58	41.81	42.76	12.58	11.00	11.00	3.14	7.36	7.36	3.10
Road 1	1	1800-1900	43.71	43.71	12.86	42.76	43.71	12.86	11.25	11.25	3.21	7.46	7.46	3.17
Road 1	1	1900-2000	44.66	44.66	13.14	43.71	44.66	13.14	11.50	11.50	3.28	7.56	7.56	3.24
Road 1	1	2000-2100	45.61	45.61	13.42	44.66	45.61	13.42	11.75	11.75	3.35	7.66	7.66	3.31
Road 1	1	2100-2200	46.56	46.56	13.70	45.61	46.56	13.70	12.00	12.00	3.42	7.76	7.76	3.38
Road 1	1	2200-2300	47.51	47.51	13.98	46.56	47.51	13.98	12.25	12.25	3.49	7.86	7.86	3.45
Road 1	1	2300-2400	48.46	48.46	14.26	47.51	48.46	14.26	12.50	12.50	3.56	7.96	7.96	3.52
Road 1	1	2400-0100	49.41	49.41	14.54	48.46	49.41	14.54	12.75	12.75	3.63	8.06	8.06	3.59
Road 1	1	0100-0200	50.36	50.36	14.82	49.41	50.36	14.82	13.00	13.00	3.70	8.16	8.16	3.66
Road 1	1	0200-0300	51.31	51.31	15.10	50.36	51.31	15.10	13.25	13.25	3.77	8.26	8.26	3.73
Road 1	1	0300-0400	52.26	52.26	15.38	51.31	52.26	15.38	13.50	13.50	3.84	8.36	8.36	3.80
Road 1	1	0400-0500	53.21	53.21	15.66	52.26	53.21	15.66	13.75	13.75	3.91	8.46	8.46	3.87
Road 1	1	0500-0600	54.16	54.16	15.94	53.21	54.16	15.94	14.00	14.00	3.98	8.56	8.56	3.94
Road 1	1	0600-0700	55.11	55.11	16.22	54.16	55.11	16.22	14.25	14.25	4.05	8.66	8.66	4.01
Road 1	1	0700-0800	56.06	56.06	16.50	55.11	56.06	16.50	14.50	14.50	4.12	8.76	8.76	4.08
Road 1	1	0800-0900	57.01	57.01	16.78	56.06	57.01	16.78	14.75	14.75	4.19	8.86	8.86	4.15
Road 1	1	0900-1000	57.96	57.96	17.06	57.01	57.96	17.06	15.00	15.00	4.26	8.96	8.96	4.22
Road 1	1	1000-1100	58.91	58.91	17.34	57.96	58.91	17.34	15.25	15.25	4.33	9.06	9.06	4.29
Road 1	1	1100-1200	59.86	59.86	17.62	58.91	59.86	17.62	15.50	15.50	4.40	9.16	9.16	4.36
Road 1	1	1200-1300	60.81	60.81	17.90	59.86	60.81	17.90	15.75	15.75	4.47	9.26	9.26	4.43
Road 1	1	1300-1400	61.76	61.76	18.18	60.81	61.76	18.18	16.00	16.00	4.54	9.36	9.36	4.50
Road 1	1	1400-1500	62.71	62.71	18.46	61.76	62.71	18.46	16.25	16.25	4.61	9.46	9.46	4.57
Road 1	1	1500-1600	63.66	63.66	18.74	62.71	63.66	18.74	16.50	16.50	4.68	9.56	9.56	4.64
Road 1	1	1600-1700	64.61	64.61	19.02	63.66	64.61	19.02	16.75	16.75	4.75	9.66	9.66	4.71
Road 1	1	1700-1800	65.56	65.56	19.30	64.61	65.56	19.30	17.00	17.00	4.82	9.76	9.76	4.78
Road 1	1	1800-1900	66.51	66.51	19.58	65.56	66.51	19.58	17.25	17.25	4.89	9.86	9.86	4.85
Road 1	1	1900-2000	67.46	67.46	19.86	66.51	67.46	19.86	17.50	17.50	4.96	9.96	9.96	4.92
Road 1	1	2000-2100	68.41	68.41	20.14	67.46	68.41	20.14	17.75	17.75	5.03	10.06	10.06	5.00
Road 1	1	2100-2200	69.36	69.36	20.42	68.41	69.36	20.42	18.00	18.00	5.10	10.16	10.16	5.07
Road 1	1	2200-2300	70.31	70.31	20.70	69.36	70.31	20.70	18.25	18.25	5.17	10.26	10.26	5.14
Road 1	1	2300-2400	71.26	71.26	20.98	70.31	71.26	20.98	18.50	18.50	5.24	10.36	10.36	5.21
Road 1	1	2400-0100	72.21	72.21	21.26	71.26	72.21	21.26	18.75	18.75	5.31	10.46	10.46	5.28
Road 1	1	0100-0200	73.16	73.16	21.54	72.21	73.16	21.54	19.00	19.00	5.38	10.56	10.56	5.35
Road 1	1	0200-0300	74.11	74.11	21.82	73.16	74.11	21.82	19.25	19.25	5.45	10.66	10.66	5.42
Road 1	1	0300-0400	75.06	75.06	22.10	74.11	75.06	22.10	19.50	19.50	5.52	10.7		

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Year 24 hour Emission Factors for AENMO model (Summary)																		
Road Name	Road ID	Hour	NO _x Emission				NO ₂ Emission				PM ₁₀ Emission				PM _{2.5} Emission			
			Annual/tour		Annual/tour		Annual/tour		Annual/tour		Annual/tour		Annual/tour		Annual/tour			
			g/min/veh	g/min/veh	g/min/veh	g/min/veh	g/min/veh	g/min/veh	g/min/veh	g/min/veh	g/min/veh	g/min/veh	g/min/veh	g/min/veh	g/min/veh	g/min/veh		
Road 46	46	0800-0900	7.5805	8.0908	5.4804	4.1407	4.6807	4.1703	2.8203	3.1904	1.9804	1.3604	1.8604	1.3604	1.8604	1.3604		
Road 46	46	0900-1000	7.5805	8.0908	5.4804	4.1407	4.1307	2.8403	2.1203	2.1903	1.4403	2.3503	3.8103	2.3503	3.8103	2.3503		
Road 46	46	1000-1100	9.0909	9.7309	6.7309	5.3704	6.0203	3.8607	2.5803	2.4603	2.0103	1.5403	2.6703	2.3103	1.5804	2.6703		
Road 46	46	1100-1200	8.6009	9.1109	6.2109	4.8404	4.3503	3.0807	2.4403	2.3103	1.2904	2.5103	2.0703	1.4004	2.0703	1.4004		
Road 46	46	1200-1300	1.1709	1.2609	0.8309	0.5704	0.5403	0.4007	0.4003	0.4003	0.3603	0.3603	0.3603	0.3603	0.3603	0.3603		
Road 46	46	1300-1400	1.1809	1.2307	0.8704	0.5104	0.5103	0.3707	0.3903	0.3603	0.2404	0.3503	0.3903	0.2704	0.3503	0.3903		
Road 46	46	1400-1500	1.1809	1.2407	0.9104	0.5404	0.5403	0.4007	0.4003	0.3603	0.2404	0.3503	0.3903	0.2704	0.3503	0.3903		
Road 46	46	1500-1600	1.1809	1.2407	0.9104	0.5404	0.5403	0.4007	0.4003	0.3603	0.2404	0.3503	0.3903	0.2704	0.3503	0.3903		
Road 46	46	1600-1700	1.1809	1.2407	0.9104	0.5404	0.5403	0.4007	0.4003	0.3603	0.2404	0.3503	0.3903	0.2704	0.3503	0.3903		
Road 46	46	1700-1800	8.3409	8.1909	5.7909	4.0804	4.0903	6.1207	4.1503	2.6803	3.3004	2.2403	2.4603	3.5904	2.4603	3.5904		
Road 46	46	1800-1900	5.5809	5.5809	3.5809	2.5809	2.5809	3.5809	2.5803	2.5803	1.5803	1.5803	1.5803	1.5803	1.5803	1.5803		
Road 46	46	1900-2000	5.0609	5.0609	3.0609	2.0609	2.0609	3.0609	2.0603	2.0603	1.0603	1.0603	1.0603	1.0603	1.0603	1.0603		
Road 46	46	2000-2100	4.9009	4.7809	3.2404	3.4903	3.4903	3.8607	2.2603	1.1203	0.8403	1.1903	1.3503	1.1903	1.3503	1.1903		
Road 46	46	2100-2200	4.3409	4.2209	2.8404	2.3503	2.3503	2.6707	2.2103	1.1303	0.8603	1.2103	1.2603	1.2103	1.2603	1.2103		
Road 46	46	2200-2300	4.3809	4.2609	2.8804	2.3903	2.3903	2.7107	2.1603	1.0703	0.8003	1.1603	1.2103	1.1603	1.2103	1.1603		
Road 46	46	2300-2400	4.7809	4.1809	2.2904	3.4903	2.4707	2.6707	2.1203	1.1303	0.8603	1.0903	1.3203	1.0903	1.3203	1.0903		
Road 47	47	0800-0900	7.3809	7.0609	4.2609	3.8103	4.0807	3.0203	3.0403	1.9903	2.2303	1.4703	2.1303	1.4703	2.1303	1.4703		
Road 47	47	0900-1000	8.5009	8.5009	5.5009	4.5009	4.5009	4.5009	3.5003	3.5003	2.5003	2.5003	2.5003	2.5003	2.5003	2.5003		
Road 47	47	1000-1100	8.6509	8.6509	5.6509	4.6509	4.6509	4.6509	3.6503	3.6503	2.6503	2.6503	2.6503	2.6503	2.6503	2.6503		
Road 47	47	1100-1200	8.6509	8.6509	5.6509	4.6509	4.6509	4.6509	3.6503	3.6503	2.6503	2.6503	2.6503	2.6503	2.6503	2.6503		
Road 47	47	1200-1300	8.6509	8.6509	5.6509	4.6509	4.6509	4.6509	3.6503	3.6503	2.6503	2.6503	2.6503	2.6503	2.6503	2.6503		
Road 47	47	1300-1400	8.6509	8.6509	5.6509	4.6509	4.6509	4.6509	3.6503	3.6503	2.6503	2.6503	2.6503	2.6503	2.6503	2.6503		
Road 47	47	1400-1500	8.6509	8.6509	5.6509	4.6509	4.6509	4.6509	3.6503	3.6503	2.6503	2.6503	2.6503	2.6503	2.6503	2.6503		
Road 47	47	1500-1600	8.6509	8.6509	5.6509	4.6509	4.6509	4.6509	3.6503	3.6503	2.6503	2.6503	2.6503	2.6503	2.6503	2.6503		
Road 47	47	1600-1700	8.6509	8.6509	5.6509	4.6509	4.6509	4.6509	3.6503	3.6503	2.6503	2.6503	2.6503	2.6503	2.6503	2.6503		
Road 47	47	1700-1800	8.6509	8.6509	5.6509	4.6509	4.6509	4.6509	3.6503	3.6503	2.6503	2.6503	2.6503	2.6503	2.6503	2.6503		
Road 47	47	1800-1900	8.6509	8.6509	5.6509	4.6509	4.6509	4.6509	3.6503	3.6503	2.6503	2.6503	2.6503	2.6503	2.6503	2.6503		
Road 47	47	1900-2000	8.6509	8.6509	5.6509	4.6509	4.6509	4.6509	3.6503	3.6503	2.6503	2.6503	2.6503	2.6503	2.6503	2.6503		
Road 47	47	2000-2100	8.6509	8.6509	5.6509	4.6509	4.6509	4.6509	3.6503	3.6503	2.6503	2.6503	2.6503	2.6503	2.6503	2.6503		
Road 47	47	2100-2200	8.6509	8.6509	5.6509	4.6509	4.6509	4.6509	3.6503	3.6503	2.6503	2.6503	2.6503	2.6503	2.6503	2.6503		
Road 47	47	2200-2300	8.6509	8.6509	5.6509	4.6509	4.6509	4.6509	3.6503	3.6503	2.6503	2.6503	2.6503	2.6503	2.6503	2.6503		
Road 47	47	2300-2400	8.6509	8.6509	5.6509	4.6509	4.6509	4.6509	3.6503	3.6503	2.6503	2.6503	2.6503	2.6503	2.6503	2.6503		
Road 48	48	0800-0900	7.7609	7.1809	4.0809	3.5903	3.8607	3.0403	3.0603	1.9403	2.1803	1.4103	1.8103	1.5003	1.5203	1.5003		
Road 48	48	0900-1000	7.7609	7.1809	4.0809	3.5903	3.8607	3.0403	3.0603	1.9403	2.1803	1.4103	1.8103	1.5003	1.5203	1.5003		
Road 48	48	1000-1100	9.1409	9.4609	6.4609	5.1103	5.7103	3.6207	2.4103	2.2803	1.8303	1.3603	2.4903	2.1203	1.3603	2.4903		
Road 48	48	1100-1200	8.7509	9.0709	6.0709	4.7203	4.2303	3.0607	2.4203	2.2903	1.2704	2.4903	2.0503	1.3804	2.0503	1.3804		
Road 48	48	1200-1300	1.2909	1.3809	0.9509	0.6204	0.5903	0.4507	0.4503	0.4503	0.4103	0.4103	0.4103	0.4103	0.4103	0.4103		
Road 48	48	1300-1400	1.3009	1.3907	0.9604	0.6304	0.6303	0.4607	0.4603	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203		
Road 48	48	1400-1500	1.3009	1.3907	0.9604	0.6304	0.6303	0.4607	0.4603	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203		
Road 48	48	1500-1600	1.3009	1.3907	0.9604	0.6304	0.6303	0.4607	0.4603	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203		
Road 48	48	1600-1700	1.3009	1.3907	0.9604	0.6304	0.6303	0.4607	0.4603	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203		
Road 48	48	1700-1800	1.3009	1.3907	0.9604	0.6304	0.6303	0.4607	0.4603	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203		
Road 48	48	1800-1900	1.3009	1.3907	0.9604	0.6304	0.6303	0.4607	0.4603	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203		
Road 48	48	1900-2000	1.3009	1.3907	0.9604	0.6304	0.6303	0.4607	0.4603	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203		
Road 48	48	2000-2100	1.3009	1.3907	0.9604	0.6304	0.6303	0.4607	0.4603	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203		
Road 48	48	2100-2200	1.3009	1.3907	0.9604	0.6304	0.6303	0.4607	0.4603	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203		
Road 48	48	2200-2300	1.3009	1.3907	0.9604	0.6304	0.6303	0.4607	0.4603	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203		
Road 48	48	2300-2400	1.3009	1.3907	0.9604	0.6304	0.6303	0.4607	0.4603	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203		
Road 49	49	0800-0900	7.7609	7.1809	4.0809	3.5903	3.8607	3.0403	3.0603	1.9403	2.1803	1.4103	1.8103	1.5003	1.5203	1.5003		
Road 49	49	0900-1000	7.7609	7.1809	4.0809	3.5903	3.8607	3.0403	3.0603	1.9403	2.1803	1.4103	1.8103	1.5003	1.5203	1.5003		
Road 49	49	1000-1100	9.1409	9.4609	6.4609	5.1103	5.7103	3.6207	2.4103	2.2803	1.8303	1.3603	2.4903	2.1203	1.3603	2.4903		
Road 49	49	1100-1200	8.7509	9.0709	6.0709	4.7203	4.2303	3.0607	2.4203	2.2903	1.2704	2.4903	2.0503	1.3804	2.0503	1.3804		
Road 49	49	1200-1300	1.2909	1.3809	0.9509	0.6204	0.5903	0.4507	0.4503	0.4503	0.4103	0.4103	0.4103	0.4103	0.4103	0.4103		
Road 49	49	1300-1400	1.3009	1.3907	0.9604	0.6304	0.6303	0.4607	0.4603	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203		
Road 49	49	1400-1500	1.3009	1.3907	0.9604	0.6304	0.6303	0.4607	0.4603	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203		
Road 49	49	1500-1600	1.3009	1.3907	0.9604	0.6304	0.6303	0.4607	0.4603	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203		
Road 49	49	1600-1700	1.3009	1.3907	0.9604	0.6304	0.6303	0.4607	0.4603	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203		
Road 49	49	1700-1800	1.3009	1.3907	0.9604	0.6304	0.6303	0.4607	0.4603	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203		
Road 49	49	1800-1900	1.3009	1.3907	0.9604	0.6304	0.6303	0.4607	0.4603	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203		
Road 49	49	1900-2000	1.3009	1.3907	0.9604	0.6304	0.6303	0.4607	0.4603	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203		
Road 49	49	2000-2100	1.3009	1.3907	0.9604	0.6304	0.6303	0.4607	0.4603	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203		
Road 49	49	2100-2200	1.3009	1.3907	0.9604	0.6304	0.6303	0.4607	0.4603	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203		
Road 49	49	2200-2300	1.3009	1.3907	0.9604	0.6304	0.6303	0.4607	0.4603	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203		
Road 49	49	2300-2400	1.3009	1.3907	0.9604	0.6304	0.6303	0.4607	0.4603	0.4203	0.4203	0.4203	0.4203	0.4203	0.4203			

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Year 24 hour Emission Factors for AENMO model (Summary)											
Road Name	Road ID	Hour	NO _x Emission		NO ₂ Emission		PM ₁₀ Emission		PM _{2.5} Emission		
			Annual/t/ha	g/min/ha	Annual/t/ha	g/min/ha	Annual/t/ha	g/min/ha	Annual/t/ha	g/min/ha	
Road 103	1000	1800	1.16	0.22	1.58	0.30	2.18	0.42	0.43	0.08	
Road 103	1600	1800	8.50	1.62	1.18	0.23	1.88	0.35	0.36	0.07	
Road 103	1800	1800	6.51	1.27	0.77	0.16	1.32	0.25	0.26	0.05	
Road 103	1800	1800	5.71	1.11	0.61	0.13	1.22	0.23	0.24	0.05	
Road 103	1800	2100	4.98	0.95	0.52	0.11	1.05	0.20	0.21	0.04	
Road 103	2100	2100	4.36	0.85	0.45	0.10	0.91	0.18	0.19	0.04	
Road 103	2200	2200	4.30	0.84	0.44	0.10	0.90	0.18	0.19	0.04	
Road 103	2300	2300	4.85	0.94	0.50	0.11	1.01	0.20	0.21	0.04	
Road 104	0000	0100	8.21	1.59	1.88	0.47	5.01	0.77	2.21	0.41	
Road 104	0000	0200	8.88	1.67	2.08	0.52	5.55	0.82	2.48	0.44	
Road 104	0000	0300	8.51	1.62	1.98	0.50	5.35	0.79	2.40	0.43	
Road 104	0300	0400	10.03	1.95	2.31	0.56	6.22	0.92	2.81	0.51	
Road 104	0400	0500	10.92	2.14	2.54	0.62	7.28	1.05	3.04	0.55	
Road 104	0500	0600	11.50	2.29	2.74	0.67	7.88	1.15	3.24	0.59	
Road 104	0600	0700	12.16	2.46	2.93	0.72	8.50	1.25	3.45	0.63	
Road 104	0700	0800	12.90	2.63	3.12	0.78	9.16	1.37	3.67	0.68	
Road 104	0800	0900	13.60	2.81	3.31	0.84	9.84	1.49	3.90	0.72	
Road 104	0900	1000	14.30	3.00	3.50	0.90	10.54	1.62	4.13	0.77	
Road 104	1000	1100	15.05	3.20	3.71	0.96	11.26	1.75	4.36	0.82	
Road 104	1100	1200	15.80	3.41	3.93	1.02	11.99	1.88	4.59	0.87	
Road 104	1200	1300	16.55	3.63	4.15	1.08	12.73	2.01	4.82	0.92	
Road 104	1300	1400	17.30	3.85	4.37	1.14	13.47	2.14	5.05	0.97	
Road 104	1400	1500	18.05	4.07	4.59	1.20	14.21	2.27	5.28	1.02	
Road 104	1500	1600	18.80	4.29	4.81	1.26	14.95	2.40	5.51	1.07	
Road 104	1600	1700	19.55	4.51	5.03	1.32	15.69	2.53	5.74	1.12	
Road 104	1700	1800	20.30	4.73	5.25	1.38	16.43	2.66	5.97	1.17	
Road 104	1800	1900	21.05	4.95	5.47	1.44	17.17	2.79	6.20	1.22	
Road 104	1900	2000	21.80	5.17	5.69	1.50	17.91	2.92	6.43	1.27	
Road 104	2000	2100	22.55	5.39	5.91	1.56	18.65	3.05	6.66	1.32	
Road 104	2100	2200	23.30	5.61	6.13	1.62	19.39	3.18	6.89	1.37	
Road 104	2200	2300	24.05	5.83	6.35	1.68	20.13	3.31	7.12	1.42	
Road 104	2300	2400	24.80	6.05	6.57	1.74	20.87	3.44	7.35	1.47	
Road 104	2400	2500	25.55	6.27	6.79	1.80	21.61	3.57	7.58	1.52	
Road 104	2500	2600	26.30	6.49	7.01	1.86	22.35	3.70	7.81	1.57	
Road 104	2600	2700	27.05	6.71	7.23	1.92	23.09	3.83	8.04	1.62	
Road 104	2700	2800	27.80	6.93	7.45	1.98	23.83	3.96	8.27	1.67	
Road 104	2800	2900	28.55	7.15	7.67	2.04	24.57	4.09	8.50	1.72	
Road 104	2900	3000	29.30	7.37	7.89	2.10	25.31	4.22	8.73	1.77	
Road 104	3000	3100	30.05	7.59	8.11	2.16	26.05	4.35	8.96	1.82	
Road 104	3100	3200	30.80	7.81	8.33	2.22	26.79	4.48	9.19	1.87	
Road 104	3200	3300	31.55	8.03	8.55	2.28	27.53	4.61	9.42	1.92	
Road 104	3300	3400	32.30	8.25	8.77	2.34	28.27	4.74	9.65	1.97	
Road 104	3400	3500	33.05	8.47	8.99	2.40	29.01	4.87	9.88	2.02	
Road 104	3500	3600	33.80	8.69	9.21	2.46	29.75	5.00	10.11	2.07	
Road 104	3600	3700	34.55	8.91	9.43	2.52	30.49	5.13	10.34	2.12	
Road 104	3700	3800	35.30	9.13	9.65	2.58	31.23	5.26	10.57	2.17	
Road 104	3800	3900	36.05	9.35	9.87	2.64	31.97	5.39	10.80	2.22	
Road 104	3900	4000	36.80	9.57	10.09	2.70	32.71	5.52	11.03	2.27	
Road 104	4000	4100	37.55	9.79	10.31	2.76	33.45	5.65	11.26	2.32	
Road 104	4100	4200	38.30	10.01	10.53	2.82	34.19	5.78	11.49	2.37	
Road 104	4200	4300	39.05	10.23	10.75	2.88	34.93	5.91	11.72	2.42	
Road 104	4300	4400	39.80	10.45	10.97	2.94	35.67	6.04	11.95	2.47	
Road 104	4400	4500	40.55	10.67	11.19	3.00	36.41	6.17	12.18	2.52	
Road 104	4500	4600	41.30	10.89	11.41	3.06	37.15	6.30	12.41	2.57	
Road 104	4600	4700	42.05	11.11	11.63	3.12	37.89	6.43	12.64	2.62	
Road 104	4700	4800	42.80	11.33	11.85	3.18	38.63	6.56	12.87	2.67	
Road 104	4800	4900	43.55	11.55	12.07	3.24	39.37	6.69	13.10	2.72	
Road 104	4900	5000	44.30	11.77	12.29	3.30	40.11	6.82	13.33	2.77	
Road 104	5000	5100	45.05	11.99	12.51	3.36	40.85	6.95	13.56	2.82	
Road 104	5100	5200	45.80	12.21	12.73	3.42	41.59	7.08	13.79	2.87	
Road 104	5200	5300	46.55	12.43	12.95	3.48	42.33	7.21	14.02	2.92	
Road 104	5300	5400	47.30	12.65	13.17	3.54	43.07	7.34	14.25	2.97	
Road 104	5400	5500	48.05	12.87	13.39	3.60	43.81	7.47	14.48	3.02	
Road 104	5500	5600	48.80	13.09	13.61	3.66	44.55	7.60	14.71	3.07	
Road 104	5600	5700	49.55	13.31	13.83	3.72	45.29	7.73	14.94	3.12	
Road 104	5700	5800	50.30	13.53	14.05	3.78	46.03	7.86	15.17	3.17	
Road 104	5800	5900	51.05	13.75	14.27	3.84	46.77	7.99	15.40	3.22	
Road 104	5900	6000	51.80	13.97	14.49	3.90	47.51	8.12	15.63	3.27	
Road 104	6000	6100	52.55	14.19	14.71	3.96	48.25	8.25	15.86	3.32	
Road 104	6100	6200	53.30	14.41	14.93	4.02	48.99	8.38	16.09	3.37	
Road 104	6200	6300	54.05	14.63	15.15	4.08	49.73	8.51	16.32	3.42	
Road 104	6300	6400	54.80	14.85	15.37	4.14	50.47	8.64	16.55	3.47	
Road 104	6400	6500	55.55	15.07	15.59	4.20	51.21	8.77	16.78	3.52	
Road 104	6500	6600	56.30	15.29	15.81	4.26	51.95	8.90	17.01	3.57	
Road 104	6600	6700	57.05	15.51	16.03	4.32	52.69	9.03	17.24	3.62	
Road 104	6700	6800	57.80	15.73	16.25	4.38	53.43	9.16	17.47	3.67	
Road 104	6800	6900	58.55	15.95	16.47	4.44	54.17	9.29	17.70	3.72	
Road 104	6900	7000	59.30	16.17	16.69	4.50	54.91	9.42	17.93	3.77	
Road 104	7000	7100	60.05	16.39	16.91	4.56	55.65	9.55	18.16	3.82	
Road 104	7100	7200	60.80	16.61	17.13	4.62	56.39	9.68	18.39	3.87	
Road 104	7200	7300	61.55	16.83	17.35	4.68	57.13	9.81	18.62	3.92	
Road 104	7300	7400	62.30	17.05	17.57	4.74	57.87	9.94	18.85	3.97	
Road 104	7400	7500	63.05	17.27	17.79	4.80	58.61	10.07	19.08	4.02	
Road 104	7500	7600	63.80	17.49	18.01	4.86	59.35	10.20	19.31	4.07	
Road 104	7600	7700	64.55	17.71	18.23	4.92	60.09	10.33	19.54	4.12	
Road 104	7700	7800	65.30	17.93	18.45	4.98	60.83	10.46	19.77	4.17	
Road 104	7800	7900	66.05	18.15	18.67	5.04	61.57	10.59	20.00	4.22	
Road 104	7900	8000	66.80	18.37	18.89	5.10	62.31	10.72	20.23	4.27	
Road 104	8000	8100	67.55	18.59	19.11	5.16	63.05	10.85	20.46	4.32	
Road 104	8100	8200	68.30	18.81	19.33	5.22	63.79	10.98	20.69	4.37	
Road 104	8200	8300	69.05	19.03	19.55	5.28	64.53	11.11	20.92	4.42	
Road 104	8300	8400	69.80	19.25	19.77	5.34	65.27	11.24	21.15	4.47	
Road 104	8400	8500	70.55	19.47	19.99	5.40	66.01	11.37	21.38	4.52	
Road 104	8500	8600	71.30	19.69	20.21	5.46	66.75	11.50	21.61	4.57	
Road 104	8600	8700	72.05	19.91	20.43	5.52	67.49	11.63	21.84	4.62	
Road 104	8700	8800	72.80	20.13	20.65	5.58	68.23	11.76	22.07	4.67	
Road 104	8800	8900	73.55	20.35	20.87	5.64	68.97	11.89	22.30	4.72	
Road 104	8900	9000	74.30	20.57	21.09	5.70	69.71	12.02	22.53	4.77	
Road 104	9000	9100	75.05	20.79	21.31	5.76	70.45	12.15	22.76	4.82	
Road 104	9100	9200	75.80	21.01	21.53	5.82	71.19	12.28	22.99	4.87	
Road 104	9200	9300	76.55	21.23	21.75	5.88	71.93	12.41	23.22	4.92	
Road 104	9300	9400	77.30	21.45	21.97	5.94	72.67	12.54	23.45	4.97	
Road 104	9400	9500	78.05	21.67	22.19	6.00	73.41	12.67	23.68	5.02	
Road 104	9500	9600	78.80	21.89	22.41	6.06	74.15	12.80	23.91	5.07	
Road 104	9600	9700	79.55	22.11	22.63	6.12	74.89	12.93	24.14	5.12	
Road 104	9700	9800	80.30	22.33	22.85	6.18	75.63	13.06	24.37	5.17	
Road 104	9800	9900	81.05	22.55	23.07	6.24	76.37	13.19	24.60	5.22	
Road 104	9900	10000	81.80	22.77	23.29	6.30	77.11	13.32	24.83	5.27	
Road 104	10000	10100	82.55	22.99	23.51	6.36	77.85	13.45	25.06	5.32	
Road 104	10100	10200	83.30	23.21	23.73	6.42	78.59	13.58	25.29	5.37	
Road 104	10200	10300	84.05	23.43	23.95	6.48	79.33	13.71	25.52	5.42	
Road 104	10300	10400	84.80	23.65	24.17	6.54	80.07	13.84	25.75	5.47	
Road 104	10400	10500	85.55	23.87	24.39	6.60	80.81	13.97			

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Top 24 Hour Emission Factors per AENMO model (Summary)										
Year 2003			NO ₂ Emission				PM _{2.5} Emission			
Route Name	Read ID	Hour	Annual/ton		Annual/ton		Annual/ton		Annual/ton	
			g/min	g/min/hr	g/min	g/min/hr	g/min	g/min/hr	g/min	g/min/hr
Read 52	52	0000-0100	4.765e-04	1.705e-08	3.177e-05	1.737e-08	6.168e-08	1.155e-04	9.438e-08	6.298e-08
Read 52	52	0100-0200	4.638e-04	1.702e-08	2.451e-05	1.696e-08	4.477e-08	8.919e-08	9.361e-08	6.265e-08
Read 52	52	0200-0300	6.060e-04	2.121e-08	3.177e-05	1.707e-08	4.096e-08	7.645e-08	9.396e-08	6.298e-08
Read 52	52	0300-0400	6.060e-04	2.121e-08	3.177e-05	1.707e-08	4.096e-08	7.645e-08	9.396e-08	6.298e-08
Read 52	52	0400-0500	6.060e-04	2.121e-08	3.177e-05	1.707e-08	4.096e-08	7.645e-08	9.396e-08	6.298e-08
Read 52	52	0500-0600	4.846e-04	2.556e-08	4.776e-05	1.767e-08	9.258e-08	1.738e-04	9.552e-08	6.048e-08
Read 52	52	0600-0700	1.030e-04	6.060e-08	1.161e-04	1.821e-08	2.499e-08	4.096e-08	1.102e-08	2.173e-08
Read 52	52	0700-0800	1.171e-04	6.951e-08	1.312e-04	2.057e-08	2.850e-08	4.776e-08	1.255e-08	2.499e-08
Read 52	52	0800-0900	1.530e-04	9.630e-08	1.681e-04	2.596e-08	6.116e-08	1.157e-08	1.978e-08	3.661e-08
Read 52	52	0900-1000	5.488e-04	1.929e-07	5.804e-04	1.906e-07	7.725e-07	1.366e-06	9.348e-08	6.515e-08
Read 52	52	1000-1100	1.548e-04	9.630e-08	1.681e-04	2.596e-08	6.116e-08	1.157e-08	1.978e-08	3.661e-08
Read 52	52	1100-1200	5.820e-04	1.898e-07	5.541e-04	2.095e-07	6.967e-07	1.277e-06	1.035e-06	6.265e-08
Read 52	52	1200-1300	5.950e-04	2.017e-07	3.751e-04	1.004e-07	6.898e-07	1.296e-06	1.042e-06	3.498e-08
Read 52	52	1300-1400	5.890e-04	2.006e-07	4.918e-04	2.126e-07	8.052e-07	1.511e-06	1.028e-06	7.225e-08
Read 52	52	1400-1500	6.040e-04	2.121e-07	5.113e-04	2.121e-07	7.845e-07	1.511e-06	1.028e-06	7.225e-08
Read 52	52	1500-1600	5.400e-04	2.121e-07	4.918e-04	2.126e-07	8.052e-07	1.511e-06	1.028e-06	7.225e-08
Read 52	52	1600-1700	5.010e-04	2.017e-07	3.811e-04	1.004e-07	6.725e-07	1.277e-06	1.035e-06	3.498e-08
Read 52	52	1700-1800	5.010e-04	2.017e-07	3.811e-04	1.004e-07	6.725e-07	1.277e-06	1.035e-06	3.498e-08
Read 52	52	1800-1900	4.160e-04	9.566e-08	1.794e-04	1.750e-08	4.022e-08	7.525e-08	8.098e-08	1.862e-08
Read 52	52	1900-2000	3.960e-04	9.566e-08	1.124e-04	1.605e-08	2.424e-07	4.533e-07	7.951e-08	1.202e-08
Read 52	52	2000-2100	3.960e-04	9.566e-08	1.124e-04	1.605e-08	2.424e-07	4.533e-07	7.951e-08	1.202e-08
Read 52	52	2100-2200	3.910e-04	8.848e-08	9.506e-05	1.626e-08	2.700e-07	3.744e-07	1.738e-08	2.845e-08
Read 52	52	2200-2300	4.040e-04	9.708e-08	8.758e-05	1.605e-08	1.738e-07	3.244e-07	8.838e-08	1.707e-08
Read 52	52	2300-2400	4.040e-04	9.708e-08	8.758e-05	1.605e-08	1.738e-07	3.244e-07	8.838e-08	1.707e-08
Read 53	53	0000-0100	6.620e-05	6.620e-09	2.586e-06	2.586e-09	5.736e-09	9.111e-09	4.806e-09	4.806e-09
Read 53	53	0100-0200	6.570e-05	6.620e-09	1.718e-06	2.431e-09	7.212e-09	6.111e-09	4.042e-09	3.270e-09
Read 53	53	0200-0300	6.820e-05	2.046e-08	1.718e-06	2.431e-09	7.212e-09	6.111e-09	4.042e-09	3.270e-09
Read 53	53	0300-0400	7.045e-05	2.121e-08	1.718e-06	2.431e-09	7.212e-09	6.111e-09	4.042e-09	3.270e-09
Read 53	53	0400-0500	7.230e-05	2.186e-08	1.341e-06	2.556e-09	5.566e-09	4.724e-09	1.096e-09	2.021e-09
Read 53	53	0500-0600	7.740e-05	2.308e-08	2.571e-06	2.722e-09	9.040e-09	1.121e-08	4.431e-09	3.230e-09
Read 53	53	0600-0700	8.690e-05	2.658e-08	2.629e-06	2.629e-09	1.029e-08	1.186e-08	4.629e-09	4.188e-09
Read 53	53	0700-0800	9.740e-05	2.760e-08	1.495e-06	3.386e-09	6.121e-09	5.196e-09	1.279e-09	1.986e-09
Read 53	53	0800-0900	9.540e-05	1.95e-07	1.650e-06	4.834e-09	7.01e-09	5.995e-09	1.268e-09	2.004e-09
Read 53	53	0900-1000	1.181e-05	1.181e-08	1.650e-06	4.834e-09	7.01e-09	5.995e-09	1.268e-09	2.004e-09
Read 53	53	1000-1100	1.170e-05	2.217e-07	1.871e-06	8.898e-09	7.64e-09	6.48e-09	1.152e-09	2.251e-09
Read 53	53	1100-1200	1.110e-05	2.076e-07	1.771e-06	3.886e-09	7.212e-09	6.111e-09	4.042e-09	2.786e-09
Read 53	53	1200-1300	9.790e-06	2.360e-07	1.951e-06	3.356e-09	7.87e-09	6.68e-09	1.062e-09	2.124e-09
Read 53	53	1300-1400	9.710e-06	2.360e-07	1.951e-06	3.356e-09	7.87e-09	6.68e-09	1.062e-09	2.124e-09
Read 53	53	1400-1500	9.690e-06	2.506e-07	2.121e-06	3.887e-09	7.899e-09	6.681e-09	1.274e-09	2.166e-09
Read 53	53	1500-1600	8.970e-06	2.284e-07	2.081e-06	3.901e-09	7.641e-09	6.481e-09	1.268e-09	2.004e-09
Read 53	53	1600-1700	9.110e-06	2.360e-07	2.081e-06	3.901e-09	7.641e-09	6.481e-09	1.268e-09	2.004e-09
Read 53	53	1700-1800	7.070e-06	1.841e-07	1.644e-06	2.811e-09	7.717e-09	6.545e-09	8.841e-09	1.908e-09
Read 53	53	1800-1900	7.260e-06	1.961e-07	1.156e-06	2.105e-09	5.496e-09	6.631e-09	6.738e-09	1.861e-09
Read 53	53	1900-2000	7.440e-06	2.121e-07	1.156e-06	2.105e-09	5.496e-09	6.631e-09	6.738e-09	1.861e-09
Read 53	53	2000-2100	4.570e-07	7.035e-08	5.984e-06	1.935e-09	2.927e-09	2.488e-09	6.738e-09	1.861e-09
Read 53	53	2100-2200	4.500e-07	6.959e-08	5.891e-06	1.898e-09	2.927e-09	2.488e-09	6.111e-09	4.042e-09
Read 53	53	2200-2300	4.500e-07	6.959e-08	5.891e-06	1.898e-09	2.927e-09	2.488e-09	6.111e-09	4.042e-09
Read 53	53	2300-2400	4.700e-07	6.959e-08	4.441e-06	1.833e-09	2.700e-09	1.725e-09	6.111e-09	4.042e-09
Read 54	54	0000-0100	5.110e-05	4.566e-08	3.584e-06	1.926e-09	1.371e-09	1.433e-09	7.381e-09	5.486e-09
Read 54	54	0100-0200	5.130e-05	2.076e-08	2.554e-06	1.926e-09	1.371e-09	1.433e-09	7.381e-09	5.486e-09
Read 54	54	0200-0300	5.430e-05	2.121e-08	2.554e-06	1.926e-09	1.371e-09	1.433e-09	7.381e-09	5.486e-09
Read 54	54	0300-0400	5.440e-05	2.186e-08	1.616e-06	2.021e-09	7.308e-09	6.074e-09	7.871e-09	2.841e-09
Read 54	54	0400-0500	5.920e-05	2.240e-08	2.008e-06	2.185e-08	8.838e-09	7.373e-09	8.386e-09	2.808e-09
Read 54	54	0500-0600	6.440e-05	2.308e-08	2.440e-06	2.240e-08	9.121e-09	7.899e-09	8.386e-09	2.808e-09
Read 54	54	0600-0700	7.340e-05	2.161e-07	9.651e-06	2.666e-09	4.198e-09	3.498e-09	1.148e-09	1.121e-09
Read 54	54	0700-0800	8.350e-05	2.786e-07	2.271e-06	2.988e-09	9.878e-09	8.101e-09	1.031e-09	1.274e-09
Read 54	54	0800-0900	8.450e-05	2.786e-07	2.271e-06	2.988e-09	9.878e-09	8.101e-09	1.031e-09	1.274e-09
Read 54	54	0900-1000	9.210e-05	3.327e-07	2.767e-06	4.041e-09	1.226e-09	1.022e-09	1.088e-09	3.231e-09
Read 54	54	1000-1100	1.020e-05	3.414e-07	3.841e-06	1.206e-09	1.026e-09	9.954e-09	1.152e-09	3.414e-09
Read 54	54	1100-1200	1.010e-05	3.186e-07	2.641e-06	1.136e-09	9.971e-09	1.142e-09	1.152e-09	2.996e-09
Read 54	54	1200-1300	1.290e-05	3.186e-07	2.641e-06	1.136e-09	9.971e-09	1.142e-09	1.152e-09	2.996e-09
Read 54	54	1300-1400	1.270e-05	2.955e-07	2.451e-06	1.434e-09	1.066e-09	1.092e-09	3.176e-09	2.641e-09
Read 54	54	1400-1500	1.240e-05	2.401e-07	2.505e-06	4.250e-09	1.066e-09	8.601e-09	3.176e-09	2.401e-09
Read 54	54	1500-1600	1.120e-05	2.186e-07	2.361e-06	4.250e-09	1.066e-09	8.601e-09	3.176e-09	2.186e-09
Read 54	54	1600-1700	1.180e-05	2.841e-07	2.361e-06	4.115e-09	9.988e-09	8.301e-09	1.274e-09	2.841e-09
Read 54	54	1700-1800	1.270e-05	2.276e-07	1.884e-06	3.846e-09	8.897e-09	7.433e-09	1.142e-09	2.655e-09
Read 54	54	1800-1900	1.270e-05	2.276e-07	1.884e-06	3.846e-09	8.897e-09	7.433e-09	1.142e-09	2.655e-09
Read 54	54	1900-2000	7.590e-05	1.016e-07	8.841e-06	2.846e-09	1.891e-09	3.244e-09	9.071e-09	3.114e-09
Read 54	54	2000-2100	7.590e-05	1.016e-07	8.841e-06	2.846e-09	1.891e-09	3.244e-09	9.071e-09	3.114e-09

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

North Sea Underground Quantity													
Year 2043													
ERMMO model (Summary)		NO ₂ Emission				NO _x Emission				PM ₁₀ Emission		PM _{2.5} Emission	
Row	ID	Annual/Unit	Annual/Unit	Annual/Unit	Annual/Unit	Annual/Unit	Annual/Unit	Annual/Unit	Annual/Unit	Annual/Unit	Annual/Unit	Annual/Unit	Annual/Unit
		g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh
54	2100-2100-4	6.912	6.912	7.552	6.912	7.552	6.912	7.552	6.912	7.552	6.912	7.552	6.912
54	2100-2100-2	6.996	6.996	7.696	6.996	7.696	6.996	7.696	6.996	7.696	6.996	7.696	6.996
54	2100-2100-1	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-3	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-4	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-5	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-6	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-7	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-8	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-9	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-10	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-11	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-12	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-13	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-14	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-15	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-16	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-17	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-18	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-19	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-20	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-21	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-22	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-23	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-24	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-25	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-26	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-27	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-28	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-29	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-30	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-31	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-32	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-33	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-34	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-35	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-36	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-37	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-38	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-39	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-40	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-41	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-42	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-43	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-44	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-45	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-46	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-47	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-48	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-49	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-50	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-51	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-52	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-53	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-54	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-55	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-56	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-57	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-58	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-59	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-60	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-61	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-62	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-63	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-64	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-65	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-66	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-67	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-68	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-69	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-70	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-71	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-72	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-73	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-74	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-75	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-76	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-77	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-78	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-79	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-80	7.384	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384	7.696	7.384
54	2100-2100-81	7.384	7.384	7.696									

Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.4 Emission Factor in 2043.xlsx

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for Year 2012[illegible]

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.4 Emission Factor in 2043.xlsx

North Underground Quarry
and 24 hour Emission Factors for Year 2063

[illegible]

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open North End Union Quarry															
Open Road 2 hour Emission Factors for ANTIMONY and ARSENIC															
Year 2043															
Road Name	Road ID	Hour	NO _x Emission						PM ₁₀ Emission						Notes
			g/min/hr	g/hr	g/min/hr	g/hr	g/min/hr	g/hr	g/min/hr	g/hr	g/min/hr	g/hr			
Road 1	1000	1200	2.386	9.8067	4.206	13.414	3.718	13.98	1.5781	6.1908	2.018	4.025	1.4787	6.2104	
		1500	4.674	1.2719	1.0505	1.0505	1.0505	1.0505	1.0505	1.0505	1.0505	1.0505	1.0505	1.0505	
Road 2	1000	1200	4.680	6.9007	2.9743	2.9743	2.9743	1.183	1.0505	1.4786	1.408	2.788	9.500	4.2894	
		1500	4.680	6.9007	2.9743	2.9743	2.9743	1.183	1.0505	1.4786	1.408	2.788	9.500	4.2894	
Road 3	1000	1200	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
		1500	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
Road 4	1000	1200	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
		1500	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
Road 5	1000	1200	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
		1500	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
Road 6	1000	1200	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
		1500	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
Road 7	1000	1200	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
		1500	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
Road 8	1000	1200	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
		1500	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
Road 9	1000	1200	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
		1500	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
Road 10	1000	1200	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
		1500	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
Road 11	1000	1200	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
		1500	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
Road 12	1000	1200	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
		1500	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
Road 13	1000	1200	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
		1500	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
Road 14	1000	1200	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
		1500	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
Road 15	1000	1200	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
		1500	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
Road 16	1000	1200	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
		1500	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
Road 17	1000	1200	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
		1500	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
Road 18	1000	1200	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
		1500	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
Road 19	1000	1200	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
		1500	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
Road 20	1000	1200	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
		1500	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
Road 21	1000	1200	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
		1500	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
Road 22	1000	1200	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
		1500	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
Road 23	1000	1200	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
		1500	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
Road 24	1000	1200	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
		1500	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
Road 25	1000	1200	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
		1500	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
Road 26	1000	1200	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
		1500	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
Road 27	1000	1200	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
		1500	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
Road 28	1000	1200	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
		1500	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
Road 29	1000	1200	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
		1500	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
Road 30	1000	1200	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
		1500	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
Road 31	1000	1200	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
		1500	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
Road 32	1000	1200	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
		1500	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
Road 33	1000	1200	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
		1500	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
Road 34	1000	1200	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
		1500	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
Road 35	1000	1200	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
		1500	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
Road 36	1000	1200	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
		1500	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
Road 37	1000	1200	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
		1500	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
Road 38	1000	1200	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
		1500	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
Road 39	1000	1200	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
		1500	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	
Road 40	1000	1200	1.586	1.5467	1.5467	1.5467	1.5467	1.536	4.5252	9.5377	0.878	1.5467	1.5467	1.5467	

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Tsing Yi North Underground Quarry															
Open Road to West Extension Factors for AERMOD model (km/hr)															
Year 2041															
			NO _x Emission									NO _x Emission			
Road Name	Road ID	Hour	g/h/vwhe	g/m ² /h	tonne/hr	g/h/vwhe	g/m ² /h	tonne/hr	g/h/vwhe	g/m ² /h	tonne/hr	g/h/vwhe	g/m ² /h	tonne/hr	
Road 11	11	0000-0100	1.9732	4.087	2.086	4.44	1.326	0.747	2.273	0.408	1.056	1.467	4.883	3.668	4.295
Road 11	11	0100-0200	2.0349	4.209	2.165	4.591	1.375	0.783	2.383	0.428	1.106	1.534	5.058	3.889	4.588
Road 11	11	0200-0300	2.0965	4.298	2.286	4.748	1.424	0.810	2.493	0.448	1.155	1.577	5.283	4.118	4.742
Road 11	11	0300-0400	2.1581	4.387	2.407	4.905	1.473	0.837	2.603	0.468	1.204	1.620	5.508	4.347	4.900
Road 11	11	0400-0500	2.6512	5.324	2.938	5.736	1.434	0.807	2.296	0.460	1.132	1.521	5.536	4.347	4.939
Road 11	11	0500-0600	2.8238	5.805	3.248	6.156	1.334	0.748	2.123	0.427	1.048	1.445	5.898	4.278	4.885
Road 11	11	0600-0700	3.4451	7.021	3.959	7.511	1.234	0.689	1.950	0.404	1.000	1.388	6.558	4.189	4.756
Road 11	11	0700-0800	4.0580	8.236	4.577	8.735	1.140	0.630	1.804	0.383	0.945	1.303	7.883	4.254	4.783
Road 11	11	0800-0900	4.6710	9.451	5.108	9.936	1.046	0.571	1.658	0.362	0.890	1.218	8.943	4.325	4.810
Road 11	11	0900-1000	4.9162	10.066	5.366	10.625	0.946	0.512	1.512	0.341	0.835	1.133	9.613	4.397	4.844
Road 11	11	1000-1100	5.1614	10.681	5.624	11.214	0.846	0.453	1.366	0.320	0.780	1.048	10.283	4.469	4.877
Road 11	11	1100-1200	5.4066	11.296	5.882	11.803	0.746	0.394	1.220	0.299	0.725	0.963	11.047	4.541	4.910
Road 11	11	1200-1300	5.6518	11.911	6.140	12.392	0.646	0.335	1.074	0.278	0.670	0.878	11.811	4.613	4.942
Road 11	11	1300-1400	5.8970	12.526	6.398	12.981	0.546	0.276	0.928	0.257	0.615	0.792	12.575	4.685	4.973
Road 11	11	1400-1500	6.1422	13.141	6.656	13.570	0.446	0.217	0.782	0.236	0.552	0.706	13.339	4.757	5.004
Road 11	11	1500-1600	6.3874	13.756	6.914	14.159	0.346	0.158	0.636	0.215	0.489	0.620	14.103	4.829	5.035
Road 11	11	1600-1700	6.6326	14.371	7.172	14.748	0.246	0.099	0.490	0.194	0.426	0.534	14.867	4.901	5.066
Road 11	11	1700-1800	6.8778	14.986	7.430	15.337	0.146	0.040	0.344	0.173	0.363	0.448	15.631	4.973	5.097
Road 11	11	1800-1900	7.1230	15.601	7.688	15.926	0.046	0.001	0.198	0.152	0.300	0.390	16.395	5.045	5.128
Road 11	11	1900-2000	7.3682	16.216	7.946	16.515	0.046	0.001	0.198	0.152	0.300	0.390	17.159	5.117	5.159
Road 11	11	2000-2100	7.6134	16.831	8.204	17.104	0.046	0.001	0.198	0.152	0.300	0.390	17.923	5.189	5.190
Road 11	11	2100-2200	7.8586	17.446	8.462	17.693	0.046	0.001	0.198	0.152	0.300	0.390	18.687	5.261	5.221
Road 11	11	2200-2300	8.1038	18.061	8.720	18.282									
Road 12	12	0000-0100	2.2141	4.417	2.276	4.726	1.264	0.690	2.675	0.437	1.073	1.503	5.083	4.318	4.774
Road 12	12	0100-0200	2.3181	4.631	2.419	5.040	1.313	0.717	2.813	0.457	1.122	1.562	5.368	4.450	4.949
Road 12	12	0200-0300	2.3816	4.737	2.481	5.178	1.362	0.744	2.951	0.477	1.171	1.621	5.653	4.582	5.028
Road 12	12	0300-0400	2.4451	4.843	2.543	5.316	1.411	0.771	3.089	0.497	1.220	1.680	5.938	4.714	5.107
Road 12	12	0400-0500	2.7141	5.417	2.776	4.914	1.297	0.629	2.796	0.436	1.073	1.482	5.298	4.446	4.894
Road 12	12	0500-0600	2.9831	5.991	3.037	6.326	1.183	0.570	2.503	0.405	1.022	1.403	5.658	4.372	4.843
Road 12	12	0600-0700	3.2521	6.565	3.289	6.737	1.069	0.511	2.210	0.374	0.969	1.324	5.018	4.299	4.704
Road 12	12	0700-0800	3.5211	6.847	3.562	7.148	0.955	0.452	1.917	0.343	0.880	1.245	4.368	4.206	4.611
Road 12	12	0800-0900	3.7901	7.421	3.815	7.559	0.841	0.393	1.624	0.312	0.791	1.166	3.618	4.113	4.514
Road 12	12	0900-1000	4.0591	7.995	4.089	7.970	0.727	0.334	1.331	0.281	0.702	1.087	2.868	4.019	4.420
Road 12	12	1000-1100	4.3281	8.569	4.362	8.381	0.613	0.275	1.038	0.250	0.613	0.908	2.118	3.926	4.321
Road 12	12	1100-1200	4.5971	9.143	4.635	8.792	0.500	0.216	0.745	0.229	0.524	0.829	1.368	3.837	4.232
Road 12	12	1200-1300	4.8661	9.717	4.926	9.203	0.386	0.157	0.452	0.208	0.435	0.750	0.568	3.748	4.143
Road 12	12	1300-1400	5.1351	10.291	5.197	9.614	0.272	0.098	0.259	0.187	0.346	0.601	0.299	3.659	4.054
Road 12	12	1400-1500	5.4041	10.865	5.468	10.025	0.158	0.039	0.166	0.166	0.264	0.502	0.130	3.570	3.965
Road 12	12	1500-1600	5.6731	11.439	5.739	10.436	0.044	0.002	0.073	0.073	0.101	0.255	0.021	3.481	3.876
Road 12	12	1600-1700	5.9421	12.013	6.000	10.847	0.044	0.002	0.073	0.073	0.101	0.255	0.021	3.392	3.787
Road 12	12	1700-1800	6.2111	12.587	6.260	11.258	0.044	0.002	0.073	0.073	0.101	0.255	0.021	3.303	3.698
Road 12	12	1800-1900	6.4801	13.161	6.519	11.669	0.044	0.002	0.073	0.073	0.101	0.255	0.021	3.214	3.609
Road 12	12	1900-2000	6.7491	13.735	6.778	12.080	0.044	0.002	0.073	0.073	0.101	0.255	0.021	3.125	3.520
Road 12	12	2000-2100	7.0181	14.309	7.027	12.491	0.044	0.002	0.073	0.073	0.101	0.255	0.021	3.036	3.431
Road 12	12	2100-2200	7.2871	14.883	7.286	12.902	0.044	0.002	0.073	0.073	0.101	0.255	0.021	2.947	3.342
Road 12	12	2200-2300	7.5561	15.457	7.555	13.313	0.044	0.002	0.073	0.073	0.101	0.255	0.021	2.858	3.253
Road 13	13	0000-0100	2.4551	4.910	2.512	5.366	1.264	0.690	2.675	0.437	1.073	1.503	5.083	4.318	4.774
Road 13	13	0100-0200	2.5591	5.124	2.633	5.680	1.313	0.717	2.813	0.457	1.122	1.562	5.368	4.450	4.949
Road 13	13	0200-0300	2.6226	5.230	2.695	5.818	1.362	0.744	2.951	0.477	1.171	1.621	5.653	4.582	5.028
Road 13	13	0300-0400	2.6861	5.336	2.757	5.956	1.411	0.771	3.089	0.497	1.220	1.680	5.938	4.714	5.107
Road 13	13	0400-0500	2.9551	5.910	3.014	6.367	1.297	0.629	2.796	0.436	1.073	1.482	5.298	4.446	4.894
Road 13	13	0500-0600	3.2241	6.484	3.277	6.778	1.183	0.570	2.503	0.405	1.022	1.403	5.658	4.372	4.843
Road 13	13	0600-0700	3.4931	7.058	3.539	7.189	1.069	0.511	2.210	0.374	0.969	1.324	5.018	4.299	4.704
Road 13	13	0700-0800	3.7621	7.632	3.790	7.600	0.955	0.452	1.917	0.343	0.880	1.245	4.368	4.206	4.611
Road 13	13	0800-0900	4.0311	8.206	4.068	8.011	0.841	0.393	1.624	0.312	0.791	1.166	3.618	4.113	4.514
Road 13	13	0900-1000	4.3001	8.780	4.320	8.422	0.727	0.334	1.331	0.281	0.702	1.087	2.868	4.019	4.420
Road 13	13	1000-1100	4.5691	9.354	4.589	8.833	0.613	0.275	1.038	0.250	0.613	0.908	2.118	3.926	4.321
Road 13	13	1100-1200	4.8381	9.928	4.854	9.244	0.500	0.216	0.745	0.229	0.524	0.829	1.368	3.837	4.232
Road 13	13	1200-1300	5.1071	10.502	5.123	9.655	0.386	0.157	0.452	0.208	0.435	0.750	0.568	3.748	4.143
Road 13	13	1300-1400	5.3761	11.076	5.397	10.066	0.272	0.098	0.259	0.187	0.346	0.601	0.299	3.659	4.054
Road 13	13	1400-1500	5.6451	11.650	5.668	10.477	0.158	0.039	0.166	0.166	0.264	0.502	0.130	3.570	3.965
Road 13	13	1500-1600	5.9141	12.224	5.939	10.888	0.044	0.002	0.073	0.073	0.101	0.255	0.021	3.481	3.876
Road 13	13	1600-1700	6.1831	12.798	6.209	11.299	0.044	0.002	0.073	0.073	0.101	0.255	0.021	3.392	3.787
Road 13	13	1700-1800	6.4521	13.372	6.473	11.710	0.044	0.002	0.073	0.073	0.101	0.255	0.021	3.303	3.698
Road 13	13	1800-1900	6.7211	13.946	6.742	12.121	0.044	0.002	0.073	0.073	0.101	0.255	0.021	3.214	3.609
Road 13	13	1900-2000	6.9901	14.520	6.991	12.532	0.044	0.002	0.073	0.073	0.101	0.255	0.021	3.125	3.520
Road 13	13	2000-2100	7.2591	15.094	7.260	12.943	0.044	0.002	0.073	0.073	0.101	0.255	0.021	3.036	3.431
Road 13	13	2100-2200	7.5281	15.668	7.529	13.354	0.044	0.002	0.073	0.073	0.101	0.255	0.021	2.947	3.342
Road 13	13	2200-2300	7.7971	16.242	7.798	13.765	0.044	0.002	0.073	0.073	0.101	0.255	0.021	2.858	3.253
Road 14	14	0000-0100	2.6961	5.392	2.758	5.936	1.264	0.690	2.675	0.437	1.073	1.503	5.083	4.318	4.774
Road 14	14	0100-0200	2.8001	5.606	2.864	6.250	1.313	0.717	2.813	0.457	1.122	1.562	5.368	4.450	4.949
Road 14	14	0200-0300	2.8636	5.712	2.926	6.388	1.362	0.744	2.951	0.477	1.171	1.621	5.653	4.582	5.028
Road 14	14	0300-0400	2.9271	5.818	2.988	6.526	1.411	0.771	3.089	0.497	1.220	1.680	5.938	4.714	5.107
Road 14	14	0400-0500	3.1961												

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Open Yr North Under Factors Using Data to Assess Emission Rates for AP-42 model (Table 2)														
Year 2003														
Road Name	Road ID	Hour	NO _x Emission					NO ₂ Emission						
			Mon/Thu/Sat	g/hour	g/mi ³	Mon/Thu/Sat	g/hour	g/mi ³	Mon/Thu/Sat	g/hour	g/mi ³	g/hour		
Road 14	14	0800-0900	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	0900-1000	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	1000-1100	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	1100-1200	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	1200-1300	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	1300-1400	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	1400-1500	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	1500-1600	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	1600-1700	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	1700-1800	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	1800-1900	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	1900-2000	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	2000-2100	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	2100-2200	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	2200-2300	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	2300-2400	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	2400-2500	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	2500-2600	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	2600-2700	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	2700-2800	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	2800-2900	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	2900-3000	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	3000-3100	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	3100-3200	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	3200-3300	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	3300-3400	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	3400-3500	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	3500-3600	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	3600-3700	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	3700-3800	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	3800-3900	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	3900-4000	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	4000-4100	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	4100-4200	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	4200-4300	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	4300-4400	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	4400-4500	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	4500-4600	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	4600-4700	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	4700-4800	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	4800-4900	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	4900-5000	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	5000-5100	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	5100-5200	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	5200-5300	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	5300-5400	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	5400-5500	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	5500-5600	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	5600-5700	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	5700-5800	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	5800-5900	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	5900-6000	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	6000-6100	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	6100-6200	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	6200-6300	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	6300-6400	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	6400-6500	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	6500-6600	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	6600-6700	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	6700-6800	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	6800-6900	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	6900-7000	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	7000-7100	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	7100-7200	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	7200-7300	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	7300-7400	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	7400-7500	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	7500-7600	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	7600-7700	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	7700-7800	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	7800-7900	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	7900-8000	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	8000-8100	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	8100-8200	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	8200-8300	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	8300-8400	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	8400-8500	1110.0	8.886	0.718	1145.0	3.318	2.684	0.027	4.196	2.614	4.058	7.238	0.04
Road 14	14	8500-8600	1110.0	8.886	0.718	1145.0	3.318	2.684	0.02					

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Open Road 24 hour Emission Factors for ANIMATED Model (hours)														
Route name	Road to	Hwy	NO _x Emissions						NO ₂ Emissions					
			Morning (6:00-9:00)			Evening (3:00-6:00)			Morning (6:00-9:00)			Evening (3:00-6:00)		
			g/vh/mph	g/vh	tonnes/hour	g/vh/mph	g/vh	tonnes/hour	g/vh/mph	g/vh	tonnes/hour	g/vh/mph	g/vh	tonnes/hour
17	1600-1200	2.296	0.141	1.512	0.132	1.138	5.476	2.451	0.141	1.496	0.986	7.151	0.818	2.044
17	1700-1800	1.615	0.137	1.453	0.128	1.095	4.965	2.242	0.137	1.447	0.978	7.115	0.812	1.968
17	1800-1900	0.866	0.071	0.757	0.065	0.608	2.788	1.283	0.071	0.748	0.471	3.411	0.318	0.782
17	1900-2000	0.484	0.039	0.417	0.036	0.298	1.388	0.621	0.039	0.412	0.258	1.859	0.176	0.442
17	2000-2100	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	2100-2200	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	2200-2300	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	2300-2400	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	2400-2500	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	2500-2600	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	2600-2700	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	2700-2800	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	2800-2900	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	2900-3000	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	3000-3100	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	3100-3200	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	3200-3300	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	3300-3400	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	3400-3500	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	3500-3600	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	3600-3700	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	3700-3800	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	3800-3900	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	3900-4000	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	4000-4100	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	4100-4200	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	4200-4300	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	4300-4400	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	4400-4500	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	4500-4600	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	4600-4700	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	4700-4800	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	4800-4900	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	4900-5000	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	5000-5100	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	5100-5200	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	5200-5300	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	5300-5400	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	5400-5500	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	5500-5600	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	5600-5700	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	5700-5800	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	5800-5900	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	5900-6000	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	6000-6100	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	6100-6200	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	6200-6300	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	6300-6400	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	6400-6500	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	6500-6600	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	6600-6700	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	6700-6800	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	6800-6900	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	6900-7000	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	7000-7100	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	7100-7200	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	7200-7300	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	7300-7400	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	7400-7500	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	7500-7600	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	7600-7700	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	7700-7800	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	7800-7900	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	7900-8000	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	8000-8100	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	8100-8200	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	8200-8300	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	8300-8400	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	8400-8500	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	8500-8600	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	8600-8700	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	8700-8800	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	8800-8900	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	8900-9000	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	9000-9100	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	9100-9200	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	9200-9300	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264
17	9300-9400	0.315	0.025	0.266	0.023	0.187	0.869	0.402	0.025	0.261	0.162	1.186	0.104	0.264

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Road 10 Year Extension Factors for ARXND0 model (km/hr)														
Year 2043														
Road Name	Road ID	Hour	Northbound						Eastbound					
			g/h/v/hr	g/h/v	tonne/hr	g/h/v	g/h/v	tonne/hr	g/h/v/hr	g/h/v	tonne/hr	g/h/v		
Northbound														
Row 21	21	0000-0100	1,155.0	7,412.6	3,558.4	1,155.0	3,518.0	1,706.8	5,298.2	4,242.0	2,052.0	2,868.8	1,928.9	8,319.0
Row 21	21	0100-0200	1,368.0	8,592.0	4,056.0	1,368.0	4,056.0	2,052.0	6,156.0	5,040.0	2,448.0	3,360.0	2,240.0	9,504.0
Row 21	21	0200-0300	1,440.0	9,144.0	4,368.0	1,440.0	4,368.0	2,160.0	6,480.0	5,280.0	2,592.0	3,504.0	2,384.0	9,984.0
Row 21	21	0300-0400	1,440.0	9,144.0	4,368.0	1,440.0	4,368.0	2,160.0	6,480.0	5,280.0	2,592.0	3,504.0	2,384.0	9,984.0
Row 21	21	0400-0500	1,440.0	9,144.0	4,368.0	1,440.0	4,368.0	2,160.0	6,480.0	5,280.0	2,592.0	3,504.0	2,384.0	9,984.0
Row 21	21	0500-0600	1,496.0	9,732.0	4,624.0	1,496.0	4,624.0	2,272.0	6,816.0	5,568.0	2,736.0	3,648.0	2,472.0	10,272.0
Row 21	21	0600-0700	1,496.0	9,732.0	4,624.0	1,496.0	4,624.0	2,272.0	6,816.0	5,568.0	2,736.0	3,648.0	2,472.0	10,272.0
Row 21	21	0700-0800	1,496.0	9,732.0	4,624.0	1,496.0	4,624.0	2,272.0	6,816.0	5,568.0	2,736.0	3,648.0	2,472.0	10,272.0
Row 21	21	0800-0900	1,496.0	9,732.0	4,624.0	1,496.0	4,624.0	2,272.0	6,816.0	5,568.0	2,736.0	3,648.0	2,472.0	10,272.0
Row 21	21	0900-1000	1,496.0	9,732.0	4,624.0	1,496.0	4,624.0	2,272.0	6,816.0	5,568.0	2,736.0	3,648.0	2,472.0	10,272.0
Row 21	21	1000-1100	1,496.0	9,732.0	4,624.0	1,496.0	4,624.0	2,272.0	6,816.0	5,568.0	2,736.0	3,648.0	2,472.0	10,272.0
Row 21	21	1100-1200	1,496.0	9,732.0	4,624.0	1,496.0	4,624.0	2,272.0	6,816.0	5,568.0	2,736.0	3,648.0	2,472.0	10,272.0
Row 21	21	1200-1300	2,448.0	15,552.0	7,296.0	2,448.0	7,296.0	3,648.0	10,944.0	8,832.0	4,128.0	5,664.0	3,840.0	15,360.0
Row 21	21	1300-1400	2,448.0	15,552.0	7,296.0	2,448.0	7,296.0	3,648.0	10,944.0	8,832.0	4,128.0	5,664.0	3,840.0	15,360.0
Row 21	21	1400-1500	2,448.0	15,552.0	7,296.0	2,448.0	7,296.0	3,648.0	10,944.0	8,832.0	4,128.0	5,664.0	3,840.0	15,360.0
Row 21	21	1500-1600	2,448.0	15,552.0	7,296.0	2,448.0	7,296.0	3,648.0	10,944.0	8,832.0	4,128.0	5,664.0	3,840.0	15,360.0
Row 21	21	1600-1700	2,448.0	15,552.0	7,296.0	2,448.0	7,296.0	3,648.0	10,944.0	8,832.0	4,128.0	5,664.0	3,840.0	15,360.0
Row 21	21	1700-1800	2,448.0	15,552.0	7,296.0	2,448.0	7,296.0	3,648.0	10,944.0	8,832.0	4,128.0	5,664.0	3,840.0	15,360.0
Row 21	21	1800-1900	2,448.0	15,552.0	7,296.0	2,448.0	7,296.0	3,648.0	10,944.0	8,832.0	4,128.0	5,664.0	3,840.0	15,360.0
Row 21	21	1900-2000	2,448.0	15,552.0	7,296.0	2,448.0	7,296.0	3,648.0	10,944.0	8,832.0	4,128.0	5,664.0	3,840.0	15,360.0
Row 21	21	2000-2100	2,448.0	15,552.0	7,296.0	2,448.0	7,296.0	3,648.0	10,944.0	8,832.0	4,128.0	5,664.0	3,840.0	15,360.0
Row 21	21	2100-2200	2,448.0	15,552.0	7,296.0	2,448.0	7,296.0	3,648.0	10,944.0	8,832.0	4,128.0	5,664.0	3,840.0	15,360.0
Eastbound														
Row 22	22	0000-0100	1,155.0	7,412.6	3,558.4	1,155.0	3,518.0	1,706.8	5,298.2	4,242.0	2,052.0	2,868.8	1,928.9	8,319.0
Row 22	22	0100-0200	1,368.0	8,592.0	4,056.0	1,368.0	4,056.0	2,052.0	6,156.0	5,040.0	2,448.0	3,360.0	2,240.0	9,504.0
Row 22	22	0200-0300	1,440.0	9,144.0	4,368.0	1,440.0	4,368.0	2,160.0	6,480.0	5,280.0	2,592.0	3,504.0	2,384.0	9,984.0
Row 22	22	0300-0400	1,440.0	9,144.0	4,368.0	1,440.0	4,368.0	2,160.0	6,480.0	5,280.0	2,592.0	3,504.0	2,384.0	9,984.0
Row 22	22	0400-0500	1,440.0	9,144.0	4,368.0	1,440.0	4,368.0	2,160.0	6,480.0	5,280.0	2,592.0	3,504.0	2,384.0	9,984.0
Row 22	22	0500-0600	1,496.0	9,732.0	4,624.0	1,496.0	4,624.0	2,272.0	6,816.0	5,568.0	2,736.0	3,648.0	2,472.0	10,272.0
Row 22	22	0600-0700	1,496.0	9,732.0	4,624.0	1,496.0	4,624.0	2,272.0	6,816.0	5,568.0	2,736.0	3,648.0	2,472.0	10,272.0
Row 22	22	0700-0800	1,496.0	9,732.0	4,624.0	1,496.0	4,624.0	2,272.0	6,816.0	5,568.0	2,736.0	3,648.0	2,472.0	10,272.0
Row 22	22	0800-0900	1,496.0	9,732.0	4,624.0	1,496.0	4,624.0	2,272.0	6,816.0	5,568.0	2,736.0	3,648.0	2,472.0	10,272.0
Row 22	22	0900-1000	1,496.0	9,732.0	4,624.0	1,496.0	4,624.0	2,272.0	6,816.0	5,568.0	2,736.0	3,648.0	2,472.0	10,272.0
Row 22	22	1000-1100	1,496.0	9,732.0	4,624.0	1,496.0	4,624.0	2,272.0	6,816.0	5,568.0	2,736.0	3,648.0	2,472.0	10,272.0
Row 22	22	1100-1200	1,496.0	9,732.0	4,624.0	1,496.0	4,624.0	2,272.0	6,816.0	5,568.0	2,736.0	3,648.0	2,472.0	10,272.0
Row 22	22	1200-1300	2,448.0	15,552.0	7,296.0	2,448.0	7,296.0	3,648.0	10,944.0	8,832.0	4,128.0	5,664.0	3,840.0	15,360.0
Row 22	22	1300-1400	2,448.0	15,552.0	7,296.0	2,448.0	7,296.0	3,648.0	10,944.0	8,832.0	4,128.0	5,664.0	3,840.0	15,360.0
Row 22	22	1400-1500	2,448.0	15,552.0	7,296.0	2,448.0	7,296.0	3,648.0	10,944.0	8,832.0	4,128.0	5,664.0	3,840.0	15,360.0
Row 22	22	1500-1600	2,448.0	15,552.0	7,296.0	2,448.0	7,296.0	3,648.0	10,944.0	8,832.0	4,128.0	5,664.0	3,840.0	15,360.0
Row 22	22	1600-1700	2,448.0	15,552.0	7,296.0	2,448.0	7,296.0	3,648.0	10,944.0	8,832.0	4,128.0	5,664.0	3,840.0	15,360.0
Row 22	22	1700-1800	2,448.0	15,552.0	7,296.0	2,448.0	7,296.0	3,648.0	10,944.0	8,832.0	4,128.0	5,664.0	3,840.0	15,360.0
Row 22	22	1800-1900	2,448.0	15,552.0	7,296.0	2,448.0	7,296.0	3,648.0	10,944.0	8,832.0	4,128.0	5,664.0	3,840.0	15,360.0
Row 22	22	1900-2000	2,448.0	15,552.0	7,296.0	2,448.0	7,296.0	3,648.0	10,944.0	8,832.0	4,128.0	5,664.0	3,840.0	15,360.0
Row 22	22	2000-2100	2,448.0	15,552.0	7,296.0	2,448.0	7,296.0	3,648.0	10,944.0	8,832.0	4,128.0	5,664.0	3,840.0	15,360.0
Row 22	22	2100-2200	2,448.0	15,552.0	7,296.0	2,448.0	7,296.0	3,648.0	10,944.0	8,832.0	4,128.0	5,664.0	3,840.0	15,360.0
Southbound														
Row 23	23	0000-0100	1,155.0	7,412.6	3,558.4	1,155.0	3,518.0	1,706.8	5,298.2	4,242.0	2,052.0	2,868.8	1,928.9	8,319.0
Row 23	23	0100-0200	1,368.0	8,592.0	4,056.0	1,368.0	4,056.0	2,052.0	6,156.0	5,040.0	2,448.0	3,360.0	2,240.0	9,504.0
Row 23	23	0200-0300	1,440.0	9,144.0	4,368.0	1,440.0	4,368.0	2,160.0	6,480.0	5,280.0	2,592.0	3,504.0	2,384.0	9,984.0
Row 23	23	0300-0400	1,440.0	9,144.0	4,368.0	1,440.0	4,368.0	2,160.0	6,480.0	5,280.0	2,592.0	3,504.0	2,384.0	9,984.0
Row 23	23	0400-0500	1,440.0	9,144.0	4,368.0	1,440.0	4,368.0	2,160.0	6,480.0	5,280.0	2,592.0	3,504.0	2,384.0	9,984.0
Row 23	23	0500-0600	1,496.0	9,732.0	4,624.0	1,496.0	4,624.0	2,272.0	6,816.0	5,568.0	2,736.0	3,648.0	2,472.0	10,272.0
Row 23	23	0600-0700	1,496.0	9,732.0	4,624.0	1,496.0	4,624.0	2,272.0	6,816.0	5,568.0	2,736.0	3,648.0	2,472.0	10,272.0
Row 23	23	0700-0800	1,496.0	9,732.0	4,624.0	1,496.0	4,624.0	2,272.0	6,816.0	5,568.0	2,736.0	3,648.0	2,472.0	10,272.0
Row 23	23	0800-0900	1,496.0	9,732.0	4,624.0	1,496.0	4,624.0	2,272.0	6,816.0	5,568.0	2,736.0	3,648.0	2,472.0	10,272.0
Row 23	23	0900-1000	1,496.0	9,732.0	4,624.0	1,496.0	4,624.0	2,272.0	6,816.0	5,568.0	2,736.0	3,648.0	2,472.0	10,272.0
Row 23	23	1000-1100	1,496.0	9,732.0	4,624.0	1,496.0	4,624.0	2,272.0	6,816.0	5,568.0	2,736.0	3,648.0	2,472.0	10,272.0
Row 23	23	1100-1200	1,496.0	9,732.0	4,624.0	1,496.0	4,624.0	2,272.0	6,816.0	5,568.0	2,736.0	3,648.0	2,472.0	10,272.0
Row 23	23	1200-1300	2,448.0	15,552.0	7,296.0	2,448.0	7,296.0	3,648.0	10,944.0	8,832.0	4,128.0	5,664.0	3,840.0	15,360.0
Row 23	23	1300-1400	2,448.0	15,552.0	7,296.0	2,448.0	7,296.0	3,648.0	10,944.0	8,832.0	4,128.0	5,664.0	3,840.0	15,360.0
Row 23	23	1400-1500	2,448.0	15,552.0	7,296.0	2,448.0	7,296.0	3,648.0	10,944.0	8,832.0	4,128.0	5,664.0	3,840.0	15,360.0
Row 23	23	1500-1600	2,448.0	15,552.0	7,296.0	2,448.0	7,296.0	3,648.0	10,944.0	8,832.0	4,128.0	5,664.0	3,840.0	15,360.0
Row 23	23	1600-1700	2,448.0	15,552.0	7,296.0	2,448.0	7,296.0	3,648.0	10,944.0	8,832.0	4,128.0	5,664.0	3,840.0	15,360.0
Row 23	23	1700-1800	2,448.0	15,552.0	7,296.0	2,448.0	7,296.0	3,648.0	10,944.0	8,832.0	4,128.0	5,664.0	3,840.0	15,360.0
Row 23	23	1800-1900	2,448.0	15,552.0	7,296.0	2,448.0	7,296.0	3,648.0	10,944.0	8,832.0	4,128.0	5,664.0	3,840.0	15,360.0
Row 23	23	1900-2000	2,448.0	15,552.0	7,296.0	2,448.0	7,296.0	3,648.0	10,944.0	8,832.0	4,128.0	5,664.0	3,840.0	15,360.0
Row 23	23	2000-2100	2,448.0	15,552.0	7,296.0	2,448.0	7,296.0	3,648.0	10,944.0	8,832.0	4,128.0	5,664.0	3,840.0	15,360.0
Row 23	23	2100-2200	2,448.0	15,552.0	7,296.0	2,448.0	7,296.0	3,648.0	10,944.0	8,832.0	4,128.0	5,664.0	3,840.0	15,360.0
Westbound														
Row 24	24	0000-0100	1,155.0	7,412.6	3,558.4	1,155.0	3,518.0	1,706.8	5,298.2	4,242.0	2,052.0	2,868.8	1,928.9	8,319.0
Row 24	24	0100-0200	1,368.0	8,592.0	4,056.0	1,368.0	4,056.0	2,0						

L:\Secure\Environment Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Open Road\Appendix 3.5.4 Emission Factor In 2043.xlsx

Tsing Yi North Underground Quarry														
Open Road to North Exit Emission Factors for ARMEDD model (t/year)														
			NO _x Emission						NO Emission					
Road Name	Road ID	Hour	g/hvwh	g/m ³	tonne/hvwh	g/hvwh	g/m ³	tonne/hvwh	g/hvwh	g/m ³	tonne/hvwh	g/hvwh	g/m ³	tonne/hvwh
Road 24	24	0800-0900	1.268	0.417	2.338	4.558	0.6207	0.214	5.1111	1.155	0.609	3.225	2.568	2.355
Road 24	24	0900-1000	1.268	0.417	2.338	4.558	0.6207	0.214	5.1111	1.155	0.609	3.225	2.568	2.355
Road 24	24	1000-1100	1.133	2.446	2.087	2.033	0.474	0.162	3.842	1.133	0.313	1.261	4.020	1.748
Road 24	24	1100-1200	1.133	2.446	2.087	2.033	0.474	0.162	3.842	1.133	0.313	1.261	4.020	1.748
Road 24	24	1200-1300	1.431	1.261	2.525	4.048	0.7707	0.888	6.211	1.261	0.364	1.141	4.441	2.511
Road 24	24	1300-1400	1.431	1.261	2.525	4.048	0.7707	0.888	6.211	1.261	0.364	1.141	4.441	2.511
Road 24	24	1400-1500	1.431	1.261	2.525	4.048	0.7707	0.888	6.211	1.261	0.364	1.141	4.441	2.511
Road 24	24	1500-1600	1.365	0.373	2.834	4.048	1.1710	0.703	6.248	1.365	0.485	1.305	3.188	2.913
Road 24	24	1600-1700	1.365	0.373	2.834	4.048	1.1710	0.703	6.248	1.365	0.485	1.305	3.188	2.913
Road 24	24	1700-1800	1.181	1.261	2.287	2.088	4.631	0.514	8.344	1.181	0.446	1.041	1.214	2.247
Road 24	24	1800-1900	1.021	1.389	1.888	4.214	0.5717	0.244	3.226	1.021	1.117	0.631	1.444	1.566
Road 24	24	1900-2000	1.021	1.389	1.888	4.214	0.5717	0.244	3.226	1.021	1.117	0.631	1.444	1.566
Road 24	24	2000-2100	1.431	1.261	2.525	4.048	0.7707	0.244	4.047	1.431	1.325	0.734	1.088	1.785
Road 24	24	2100-2200	1.431	1.261	2.525	4.048	0.7707	0.244	4.047	1.431	1.325	0.734	1.088	1.785
Road 24	24	2200-2300	1.431	1.261	2.525	4.048	0.7707	0.244	4.047	1.431	1.325	0.734	1.088	1.785
Road 24	24	2300-2400	1.431	1.261	2.525	4.048	0.7707	0.244	4.047	1.431	1.325	0.734	1.088	1.785
Road 25	25	0800-0900	1.016	4.508	1.488	4.188	0.731	1.421	0.71	4.744	2.074	0.704	1.741	6.811
Road 25	25	0900-1000	1.016	4.508	1.488	4.188	0.731	1.421	0.71	4.744	2.074	0.704	1.741	6.811
Road 25	25	1000-1100	1.016	4.508	1.488	4.188	0.731	1.421	0.71	4.744	2.074	0.704	1.741	6.811
Road 25	25	1100-1200	1.016	4.508	1.488	4.188	0.731	1.421	0.71	4.744	2.074	0.704	1.741	6.811
Road 25	25	1200-1300	1.016	4.508	1.488	4.188	0.731	1.421	0.71	4.744	2.074	0.704	1.741	6.811
Road 25	25	1300-1400	1.016	4.508	1.488	4.188	0.731	1.421	0.71	4.744	2.074	0.704	1.741	6.811
Road 25	25	1400-1500	1.016	4.508	1.488	4.188	0.731	1.421	0.71	4.744	2.074	0.704	1.741	6.811
Road 25	25	1500-1600	1.016	4.508	1.488	4.188	0.731	1.421	0.71	4.744	2.074	0.704	1.741	6.811
Road 25	25	1600-1700	1.016	4.508	1.488	4.188	0.731	1.421	0.71	4.744	2.074	0.704	1.741	6.811
Road 25	25	1700-1800	1.016	4.508	1.488	4.188	0.731	1.421	0.71	4.744	2.074	0.704	1.741	6.811
Road 25	25	1800-1900	1.016	4.508	1.488	4.188	0.731	1.421	0.71	4.744	2.074	0.704	1.741	6.811
Road 25	25	1900-2000	1.016	4.508	1.488	4.188	0.731	1.421	0.71	4.744	2.074	0.704	1.741	6.811
Road 25	25	2000-2100	1.016	4.508	1.488	4.188	0.731	1.421	0.71	4.744	2.074	0.704	1.741	6.811
Road 25	25	2100-2200	1.016	4.508	1.488	4.188	0.731	1.421	0.71	4.744	2.074	0.704	1.741	6.811
Road 25	25	2200-2300	1.016	4.508	1.488	4.188	0.731	1.421	0.71	4.744	2.074	0.704	1.741	6.811
Road 25	25	2300-2400	1.016	4.508	1.488	4.188	0.731	1.421	0.71	4.744	2.074	0.704	1.741	6.811
Road 26	26	0800-0900	1.268	0.417	2.338	4.558	0.6207	0.214	5.1111	1.155	0.609	3.225	2.568	2.355
Road 26	26	0900-1000	1.268	0.417	2.338	4.558	0.6207	0.214	5.1111	1.155	0.609	3.225	2.568	2.355
Road 26	26	1000-1100	1.133	2.446	2.087	2.033	0.474	0.162	3.842	1.133	0.313	1.261	4.020	1.748
Road 26	26	1100-1200	1.133	2.446	2.087	2.033	0.474	0.162	3.842	1.133	0.313	1.261	4.020	1.748
Road 26	26	1200-1300	1.431	1.261	2.525	4.048	0.7707	0.888	6.211	1.261	0.364	1.141	4.441	2.511
Road 26	26	1300-1400	1.431	1.261	2.525	4.048	0.7707	0.888	6.211	1.261	0.364	1.141	4.441	2.511
Road 26	26	1400-1500	1.431	1.261	2.525	4.048	0.7707	0.888	6.211	1.261	0.364	1.141	4.441	2.511
Road 26	26	1500-1600	1.365	0.373	2.834	4.048	1.1710	0.703	6.248	1.365	0.485	1.305	3.188	2.913
Road 26	26	1600-1700	1.365	0.373	2.834	4.048	1.1710	0.703	6.248	1.365	0.485	1.305	3.188	2.913
Road 26	26	1700-1800	1.181	1.261	2.287	2.088	4.631	0.514	8.344	1.181	0.446	1.041	1.214	2.247
Road 26	26	1800-1900	1.021	1.389	1.888	4.214	0.5717	0.244	3.226	1.021	1.117	0.631	1.444	1.566
Road 26	26	1900-2000	1.021	1.389	1.888	4.214	0.5717	0.244	3.226	1.021	1.117	0.631	1.444	1.566
Road 26	26	2000-2100	1.431	1.261	2.525	4.048	0.7707	0.244	4.047	1.431	1.325	0.734	1.088	1.785
Road 26	26	2100-2200	1.431	1.261	2.525	4.048	0.7707	0.244	4.047	1.431	1.325	0.734	1.088	1.785
Road 26	26	2200-2300	1.431	1.261	2.525	4.048	0.7707	0.244	4.047	1.431	1.325	0.734	1.088	1.785
Road 26	26	2300-2400	1.431	1.261	2.525	4.048	0.7707	0.244	4.047	1.431	1.325	0.734	1.088	1.785
Road 27	27	0800-0900	1.016	4.508	1.488	4.188	0.731	1.421	0.71	4.744	2.074	0.704	1.741	6.811
Road 27	27	0900-1000	1.016	4.508	1.488	4.188	0.731	1.421	0.71	4.744	2.074	0.704	1.741	6.811
Road 27	27	1000-1100	1.016	4.508	1.488	4.188	0.731	1.421	0.71	4.744	2.074	0.704	1.741	6.811
Road 27	27	1100-1200	1.016	4.508	1.488	4.188	0.731	1.421	0.71	4.744	2.074	0.704	1.741	6.811
Road 27	27	1200-1300	1.016	4.508	1.488	4.188	0.731	1.421	0.71	4.744	2.074	0.704	1.741	6.811
Road 27	27	1300-1400	1.016	4.508	1.488	4.188	0.731	1.421	0.71	4.744	2.074	0.704	1.741	6.811
Road 27	27	1400-1500	1.016	4.508	1.488	4.188	0.731	1.421	0.71	4.744	2.074	0.704	1.741	6.811
Road 27	27	1500-1600	1.016	4.508	1.488	4.188	0.731	1.421	0.71	4.744	2.074	0.704	1.741	6.811
Road 27	27	1600-1700	1.016	4.508	1.488	4.188	0.731	1.421	0.71	4.744	2.074	0.704	1.741	6.811
Road 27	27	1700-1800	1.016	4.508	1.488	4.188	0.731	1.421	0.71	4.744	2.074	0.704	1.741	6.811
Road 27	27	1800-1900	1.016	4.508	1.488	4.188	0.731	1.421	0.71	4.744	2.074	0.704	1.741	6.811
Road 27	27	1900-2000	1.016	4.508	1.488	4.188	0.731	1.421	0.71	4.744	2.074	0.704	1.741	6.811
Road 27	27	2000-2100	1.016	4.508	1.488	4.188	0.731	1.421	0.71	4.744	2.074	0.704	1.741	6.811
Road 27	27	2100-2200	1.016	4.508	1.488	4.188	0.731	1.421	0.71	4.744	2.074	0.704	1.741	6.811
Road 27	27	2200-2300	1.016	4.508	1.488	4.188	0.731	1.421	0.71	4.744	2.074	0.704	1.741	6.811
Road 27	27	2300-2400	1.016	4.508	1.488	4.188	0.731	1.421	0.71	4.744	2.074	0.704	1.741	6.811
Road 28	28	0800-0900	1.268	0.417	2.338	4.558	0.6207	0.214	5.1111	1.155	0.609	3.225	2.568	2.355
Road 28	28	0900-1000	1.268	0.417	2.338	4.558	0.6207	0.214	5.1111	1.155	0.609	3.225	2.568	2.355
Road 28	28	1000-1100	1.133	2.446	2.087	2.033	0.474	0.162	3.842	1.133	0.313	1.261	4.020	1.748
Road 28	28	1100-1200	1.133	2.446	2.087	2.033	0.474	0.162	3.842	1.133	0.313	1.261	4.020	1.748
Road 28	28	1200-1300	1.431	1.261	2.525	4.048	0.7707	0.888	6.211	1.261	0.364	1.141	4.441	2.511
Road 28	28	1300-1400	1.431	1.261	2.525	4.048	0.7707	0.888	6.211	1.261	0.364	1.141	4.441	2.511
Road 28	28	1400-1500	1.431	1.261	2.525	4.048	0.7707	0.888	6.211	1.261	0.364	1.141	4.441	2.511
Road 28	28	1500-1600	1.365	0.373	2.834	4.048	1.1710	0.703	6.248	1.365	0.485	1.305	3.188	2.913
Road 28	28	1600-1700	1.365	0.373	2.834	4.048	1.1710	0.703	6.248	1.365	0.485	1.305	3.188	2.913
Road 28	28	1700-1800	1.181	1.261	2.287	2.088	4.631	0.514	8.344	1.181	0.446	1.041	1.214	2.247
Road 28	28	1800-1900	1.021	1.389	1.888	4.214	0.5717	0.244	3.226	1.021	1.117	0.631	1.444	1.566
Road 28	28	1900-2000	1.021	1.389	1.888	4.214	0.5717	0.244	3.226	1.021	1.117	0.631	1.444	1.566
Road 28	28	2000-2100	1.431	1.261	2.525	4.048	0.7707	0.244	4.047	1.431	1.325	0.734	1.088	1.785
Road 28	28	2100-2200	1.431	1.261	2.525	4.048	0.7707	0.244	4.047	1.431	1.325	0.734	1.088	1.785
Road 28	28	2200-2300	1.431	1.261	2.525	4.048	0.7707	0.244	4.047	1.431	1.325			

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Open Yr North Under Foundation

Split Day 24 Hour Emission Factors for ARMO model (January)

Year 2004

Road Name	Road ID	Hour	NO _x Emission						NO ₂ Emission			
			Metric tons/hr			g/min/hr			Metric tons/hr			
			g/min/hr	g/min ²	g/min ³	g/min/hr	g/min/hr	g/min/hr	g/min/hr	g/min ²	g/min ³	
			tonnes/hr	tonnes/hr ²	tonnes/hr ³	tonnes/hr	tonnes/hr	tonnes/hr	tonnes/hr	tonnes/hr ²	tonnes/hr ³	
Road 27	27	1800-1700	1.44103	3.76107	4.93204	5.00671	1.7738	1.0483	6.51432	1.88463	1.14408	2.84448
Road 27	27	1700-1600	1.37021	3.51107	4.68107	4.75107	1.69107	0.99107	6.17107	1.79107	1.10107	2.74107
Road 27	27	1600-1500	1.30001	3.41107	4.58107	4.68107	1.62107	0.92107	6.08107	1.74107	1.07107	2.67107
Road 27	27	1500-1400	1.08011	3.01107	4.13107	4.03107	1.42107	0.79107	5.14107	1.48107	0.91107	2.28107
Road 27	27	1400-1300	0.81011	2.26107	3.08107	3.08107	1.11107	0.61107	4.04107	1.11107	0.69107	1.71107
Road 27	27	1300-1200	0.76011	2.16107	2.98107	2.98107	1.06107	0.58107	3.94107	1.06107	0.65107	1.61107
Road 27	27	1200-1100	0.71011	2.06107	2.88107	2.88107	1.01107	0.53107	3.84107	1.01107	0.60107	1.51107
Road 27	27	1100-1000	0.66011	1.96107	2.78107	2.78107	0.96107	0.48107	3.74107	0.96107	0.55107	1.41107
Road 27	27	1000-0900	0.61011	1.86107	2.68107	2.68107	0.91107	0.43107	3.64107	0.91107	0.50107	1.31107
Road 28	28	0100-0900	7.71011	8.94018	1.14614	4.14214	2.94614	0.69149	4.91149	1.84214	0.72214	2.10149
Road 28	28	0900-1000	8.38018	4.39618	0.60618	4.35618	2.72918	0.47618	5.63188	2.27618	0.19818	2.44618
Road 28	28	1000-1100	8.81018	4.31618	0.55618	4.31618	2.67918	0.44618	5.58188	2.22618	0.18818	2.39618
Road 28	28	1100-1200	9.54018	4.08618	0.50618	4.08618	2.54818	0.41618	5.43188	2.17618	0.17818	2.30618
Road 28	28	1200-1300	10.27018	3.85618	0.45618	3.85618	2.41718	0.38618	5.28188	2.12618	0.16818	2.21618
Road 28	28	1300-1400	10.80018	3.62618	0.40618	3.62618	2.28618	0.35618	5.12188	2.07618	0.15818	2.12618
Road 28	28	1400-1500	10.86018	3.49618	0.37618	3.49618	2.15618	0.32618	4.96188	2.02618	0.14818	2.03618
Road 28	28	1500-1600	10.92018	3.36618	0.34618	3.36618	2.02618	0.29618	4.80188	1.97618	0.13818	1.94618
Road 28	28	1600-1700	10.98018	3.23618	0.31618	3.23618	1.89618	0.26618	4.64188	1.92618	0.12818	1.85618
Road 28	28	1700-1800	11.04018	3.10618	0.28618	3.10618	1.76618	0.23618	4.48188	1.87618	0.11818	1.76618
Road 28	28	1800-1900	11.10018	2.97618	0.25618	2.97618	1.63618	0.20618	4.32188	1.82618	0.10818	1.67618
Road 28	28	1900-2000	11.16018	2.84618	0.22618	2.84618	1.50618	0.17618	4.16188	1.77618	0.09818	1.57618
Road 29	29	0100-0900	8.11018	4.29618	0.57618	4.25618	2.67918	0.44618	5.58188	2.22618	0.18818	2.39618
Road 29	29	0900-1000	8.54018	4.21618	0.52618	4.21618	2.62918	0.43618	5.53188	2.17618	0.17818	2.34618
Road 29	29	1000-1100	9.07018	4.03618	0.47618	4.03618	2.54818	0.41618	5.43188	2.12618	0.16818	2.29618
Road 29	29	1100-1200	9.60018	3.85618	0.42618	3.85618	2.46718	0.39618	5.33188	2.07618	0.15818	2.24618
Road 29	29	1200-1300	10.13018	3.67618	0.37618	3.67618	2.38618	0.36618	5.23188	2.02618	0.14818	2.19618
Road 29	29	1300-1400	10.66018	3.49618	0.32618	3.49618	2.30618	0.33618	5.13188	1.97618	0.13818	2.14618
Road 29	29	1400-1500	10.79018	3.36618	0.29618	3.36618	2.17618	0.30618	4.98188	1.92618	0.12818	2.09618
Road 29	29	1500-1600	10.92018	3.23618	0.26618	3.23618	2.04618	0.27618	4.83188	1.87618	0.11818	2.04618
Road 29	29	1600-1700	11.05018	3.10618	0.23618	3.10618	1.91618	0.24618	4.68188	1.82618	0.10818	1.99618
Road 29	29	1700-1800	11.18018	2.97618	0.20618	2.97618	1.78618	0.21618	4.53188	1.77618	0.09818	1.94618
Road 29	29	1800-1900	11.31018	2.84618	0.17618	2.84618	1.65618	0.18618	4.38188	1.72618	0.08818	1.89618
Road 29	29	1900-2000	11.44018	2.71618	0.14618	2.71618	1.52618	0.15618	4.23188	1.67618	0.07818	1.84618
Road 30	30	0100-0900	8.11018	4.29618	0.57618	4.25618	2.67918	0.44618	5.58188	2.22618	0.18818	2.39618
Road 30	30	0900-1000	8.54018	4.21618	0.52618	4.21618	2.62918	0.43618	5.53188	2.17618	0.17818	2.34618
Road 30	30	1000-1100	9.07018	4.03618	0.47618	4.03618	2.54818	0.41618	5.43188	2.12618	0.16818	2.29618
Road 30	30	1100-1200	9.60018	3.85618	0.42618	3.85618	2.46718	0.39618	5.33188	2.07618	0.15818	2.24618
Road 30	30	1200-1300	10.13018	3.67618	0.37618	3.67618	2.38618	0.36618	5.23188	2.02618	0.14818	2.19618
Road 30	30	1300-1400	10.66018	3.49618	0.32618	3.49618	2.30618	0.33618	5.13188	1.97618	0.13818	2.14618
Road 30	30	1400-1500	10.79018	3.36618	0.29618	3.36618	2.17618	0.30618	4.98188	1.92618	0.12818	2.09618
Road 30	30	1500-1600	10.92018	3.23618	0.26618	3.23618	2.04618	0.27618	4.83188	1.87618	0.11818	2.04618
Road 30	30	1600-1700	11.05018	3.10618	0.23618	3.10618	1.91618	0.24618	4.68188	1.82618	0.10818	1.99618
Road 30	30	1700-1800	11.18018	2.97618	0.20618	2.97618	1.78618	0.21618	4.53188	1.77618	0.09818	1.94618
Road 30	30	1800-1900	11.31018	2.84618	0.17618	2.84618	1.65618	0.18618	4.38188	1.72618	0.08818	1.89618
Road 30	30	1900-2000	11.44018	2.71618	0.14618	2.71618	1.52618	0.15618	4.23188	1.67618	0.07818	1.84618
Road 31	31	0100-0900	8.11018	4.29618	0.57618	4.25618	2.67918	0.44618	5.58188	2.22618	0.18818	2.39618
Road 31	31	0900-1000	8.54018	4.21618	0.52618	4.21618	2.62918	0.43618	5.53188	2.17618	0.17818	2.34618
Road 31	31	1000-1100	9.07018	4.03618	0.47618	4.03618	2.54818	0.41618	5.43188	2.12618	0.16818	2.29618
Road 31	31	1100-1200	9.60018	3.85618	0.42618	3.85618	2.46718	0.39618	5.33188	2.07618	0.15818	2.24618
Road 31	31	1200-1300	10.13018	3.67618	0.37618	3.67618	2.38618	0.36618	5.23188	2.02618	0.14818	2.19618
Road 31	31	1300-1400	10.66018	3.49618	0.32618	3.49618	2.30618	0.33618	5.13188	1.97618	0.13818	2.14618
Road 31	31	1400-1500	10.79018	3.36618	0.29618	3.36618	2.17618	0.30618	4.98188	1.92618	0.12818	2.09618
Road 31	31	1500-1600	10.92018	3.23618	0.26618	3.23618	2.04618	0.27618	4.83188	1.87618	0.11818	2.04618
Road 31	31	1600-1700	11.05018	3.10618	0.23618	3.10618	1.91618	0.24618	4.68188	1.82618	0.10818	1.99618
Road 31	31	1700-1800	11.18018	2.97618	0.20618	2.97618	1.78618	0.21618	4.53188	1.77618	0.09818	1.94618
Road 31	31	1800-1900	11.31018	2.84618	0.17618	2.84618	1.65618	0.18618	4.38188	1.72618	0.08818	1.89618
Road 31	31	1900-2000	11.44018	2.71618	0.14618	2.71618	1.52618	0.15618	4.23188	1.67618	0.07818	1.84618

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Open Road 24 Hour Emission Factors (ANMM model based) Year 2003														
Route Name	Road to	Flow	NO _x Emissions						NO _x Emissions					
			g/min/hr	g/hr	tonnes/hr	g/min/hr	g/hr	tonnes/hr	g/min/hr	g/hr	tonnes/hr	g/min/hr	g/hr	tonnes/hr
Route 31	0000-0100	8.88	0.1778	5.798	0.424	8.808	28.84	5.532	0.798	3.454	0.488	1.458	1.806	0.5
Route 31	0100-0200	8.66	0.1732	5.624	0.412	8.592	28.27	5.368	0.782	3.352	0.478	1.434	1.770	0.49
Route 31	0200-0300	8.04	0.1618	5.298	0.478	8.478	27.43	5.144	0.768	3.198	0.478	2.878	1.778	0.5118
Route 31	0300-0400	8.04	0.1618	5.298	0.478	8.478	27.43	5.144	0.768	3.198	0.478	2.878	1.778	0.5118
Route 31	0400-0500	1.178	0.0208	3.318	0.228	4.548	1.488	0.336	0.548	1.814	0.308	2.838	0.2398	0.06
Route 31	0500-0600	1.178	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	0600-0700	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	0700-0800	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	0800-0900	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	0900-1000	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	1000-1100	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	1100-1200	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	1200-1300	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	1300-1400	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	1400-1500	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	1500-1600	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	1600-1700	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	1700-1800	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	1800-1900	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	1900-2000	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	2000-2100	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	2100-2200	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	2200-2300	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	2300-2400	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	2400-0100	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	0100-0200	8.66	0.1732	5.624	0.412	8.592	28.27	5.368	0.782	3.352	0.478	1.434	1.770	0.49
Route 31	0200-0300	8.04	0.1618	5.298	0.478	8.478	27.43	5.144	0.768	3.198	0.478	2.878	1.778	0.5118
Route 31	0300-0400	8.04	0.1618	5.298	0.478	8.478	27.43	5.144	0.768	3.198	0.478	2.878	1.778	0.5118
Route 31	0400-0500	1.178	0.0208	3.318	0.228	4.548	1.488	0.336	0.548	1.814	0.308	2.838	0.2398	0.06
Route 31	0500-0600	1.178	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	0600-0700	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	0700-0800	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	0800-0900	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	0900-1000	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	1000-1100	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	1100-1200	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	1200-1300	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	1300-1400	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	1400-1500	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	1500-1600	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	1600-1700	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	1700-1800	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	1800-1900	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	1900-2000	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	2000-2100	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	2100-2200	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	2200-2300	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	2300-2400	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	2400-0100	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	0100-0200	8.66	0.1732	5.624	0.412	8.592	28.27	5.368	0.782	3.352	0.478	1.434	1.770	0.49
Route 31	0200-0300	8.04	0.1618	5.298	0.478	8.478	27.43	5.144	0.768	3.198	0.478	2.878	1.778	0.5118
Route 31	0300-0400	8.04	0.1618	5.298	0.478	8.478	27.43	5.144	0.768	3.198	0.478	2.878	1.778	0.5118
Route 31	0400-0500	1.178	0.0208	3.318	0.228	4.548	1.488	0.336	0.548	1.814	0.308	2.838	0.2398	0.06
Route 31	0500-0600	1.178	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	0600-0700	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	0700-0800	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	0800-0900	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	0900-1000	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	1000-1100	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	1100-1200	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	1200-1300	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	1300-1400	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	1400-1500	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	1500-1600	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	1600-1700	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	1700-1800	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	1800-1900	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	1900-2000	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	2000-2100	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	2100-2200	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	2200-2300	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	2300-2400	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	2400-0100	1.398	0.1808	4.848	3.388	8.278	2.708	6.428	3.028	3.318	3.438	2.388	1.728	0.06
Route 31	0100-0200	8.66	0.1732	5.624	0.412	8.592	28.27	5.368	0.782	3.352	0.478	1.434	1.770	0.49
Route 31	0200-0300	8.04	0.1618	5.298	0.478	8.478	27.43	5.144	0.768	3.198	0.478	2.878	1.778	0.5118
Route 31	0300-0400	8.04	0.1618	5.298	0.478	8.478	27.43	5.144	0.768	3.198	0.478	2.878	1.778	0.5118
Route 31	0400-0500	1.178	0.0208	3.318	0.228	4.548	1.488	0.336	0.548	1.814	0.308	2.838	0.2398	0.06
Route 31	0500-0600	1.178	0.1808	4.848	3.388	8.278	2.708							

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Top 24 Hour Underground Query															
Open Top 24 Hour Evision Factors for ANNULAR (Inner) Wells															
Year 2043															
Road Name	Road ID	Year	NO Emission						NO Emission						
			g/h/v/mph	g/h/m	g/h/v/mph	g/h/mph	g/h/v/mph	g/h/mph	g/h/v/mph	g/h/mph	g/h/v/mph	g/h/mph			
34	8800	2000	1.036	2.071	1.882	3.892	4.026	9.568	4.746	1.2146	0.726	2.1418	3.978	1.519	
34	8800	2000	1.138	2.276	2.083	4.256	4.390	10.500	5.250	1.3375	0.799	2.3545	4.275	1.666	
34	1000	1300	1.046	1.917	1.824	3.828	3.962	9.408	4.704	1.2026	0.718	2.1322	3.918	1.484	
34	1000	1300	1.150	2.120	1.934	4.182	4.316	10.300	5.150	1.3237	0.789	2.3450	4.225	1.650	
34	1200	1300	1.046	2.071	2.055	3.796	3.930	9.417	4.685	1.2138	0.717	2.1430	3.935	1.504	
34	1200	1300	1.150	2.276	2.468	4.390	4.524	10.500	5.280	1.3372	0.798	2.3558	4.280	1.666	
34	1400	1300	1.046	2.071	2.055	3.796	3.930	9.417	4.685	1.2138	0.717	2.1430	3.935	1.504	
34	1400	1300	1.150	2.276	2.468	4.390	4.524	10.500	5.280	1.3372	0.798	2.3558	4.280	1.666	
34	1700	1300	1.446	2.747	2.240	4.892	5.026	11.900	6.826	1.0406	0.616	1.9101	3.441	1.414	
34	1700	1300	1.550	3.000	2.240	5.496	5.630	13.400	7.450	1.1620	0.687	2.1127	3.745	1.566	
34	2000	1300	1.446	2.747	1.715	4.328	4.462	10.900	6.436	0.9376	0.546	1.8308	3.033	1.496	
34	2000	1300	1.550	3.000	1.715	4.932	5.066	12.400	7.040	1.0590	0.617	2.0135	3.337	1.648	
34	2000	2200	1.446	2.747	8.334	8.334	16.668	16.668	4.478	8.937	5.0157	3.131	1.8705	2.474	2.314
34	2000	2200	1.550	3.000	8.334	8.334	16.668	16.668	4.978	9.937	5.5167	3.431	2.0735	2.774	2.566
34	2200	1300	1.446	2.747	1.715	4.328	4.462	10.900	6.436	0.9376	0.546	1.8308	3.033	1.496	
34	2200	1300	1.550	3.000	1.715	4.932	5.066	12.400	7.040	1.0590	0.617	2.0135	3.337	1.648	
34	2200	1800	1.446	2.747	8.334	8.334	16.668	16.668	4.478	8.937	5.0157	3.131	1.8705	2.474	2.314
34	2200	1800	1.550	3.000	8.334	8.334	16.668	16.668	4.978	9.937	5.5167	3.431	2.0735	2.774	2.566
34	2400	1300	1.446	2.747	1.715	4.328	4.462	10.900	6.436	0.9376	0.546	1.8308	3.033	1.496	
34	2400	1300	1.550	3.000	1.715	4.932	5.066	12.400	7.040	1.0590	0.617	2.0135	3.337	1.648	
34	2400	1800	1.446	2.747	8.334	8.334	16.668	16.668	4.478	8.937	5.0157	3.131	1.8705	2.474	2.314
34	2400	1800	1.550	3.000	8.334	8.334	16.668	16.668	4.978	9.937	5.5167	3.431	2.0735	2.774	2.566
34	2600	1300	2.908	5.816	3.135	8.862	9.072	22.512	11.256	1.4327	0.960	2.7105	4.940	1.986	
34	2600	1300	3.112	6.231	3.239	9.666	9.876	24.432	12.216	1.5541	1.032	2.9131	5.354	2.138	
34	2800	1300	3.416	6.847	3.539	10.660	10.870	26.976	13.488	1.6755	1.113	3.1157	5.768	2.290	
34	2800	1300	3.620	7.463	3.843	11.664	11.874	29.520	14.760	1.7969	1.194	3.3183	6.180	2.442	
34	3000	1300	3.722	7.698	3.945	12.076	12.286	30.432	15.216	1.8392	1.226	3.3652	6.310	2.485	
34	3200	1300	3.824	7.933	4.047	12.488	12.698	31.344	15.672	1.8815	1.258	3.4121	6.440	2.528	
34	3400	1300	3.926	8.168	4.149	12.900	13.110	32.256	16.128	1.9238	1.289	3.4590	6.570	2.570	
34	3600	1300	4.028	8.403	4.251	13.312	13.522	33.168	16.584	1.9661	1.321	3.5059	6.700	2.613	
34	3800	1300	4.130	8.638	4.353	13.724	13.934	34.080	17.040	2.0084	1.353	3.5528	6.830	2.655	
34	4000	1300	4.232	8.873	4.455	14.136	14.346	34.992	17.496	2.0507	1.385	3.5997	6.960	2.698	
34	4200	1300	4.334	9.108	4.557	14.548	14.758	35.904	17.952	2.0930	1.417	3.6466	7.090	2.740	
34	4400	1300	4.436	9.343	4.659	14.960	15.170	36.816	18.408	2.1353	1.449	3.6935	7.220	2.783	
34	4600	1300	4.538	9.578	4.761	15.372	15.582	37.728	18.864	2.1776	1.481	3.7404	7.350	2.825	
34	4800	1300	4.640	9.813	4.863	15.784	15.994	38.640	19.320	2.2199	1.513	3.7873	7.480	2.868	
34	5000	1300	4.742	10.048	4.965	16.196	16.406	39.552	19.776	2.2622	1.545	3.8342	7.610	2.910	
34	5200	1300	4.844	10.283	5.067	16.608	16.818	40.464	20.232	2.3045	1.577	3.8811	7.740	2.953	
34	5400	1300	4.946	10.518	5.169	17.020	17.230	41.376	20.688	2.3468	1.609	3.9280	7.870	2.995	
34	5600	1300	5.048	10.753	5.271	17.432	17.642	42.288	21.144	2.3891	1.641	3.9749	8.000	3.038	
34	5800	1300	5.150	10.988	5.373	17.844	18.054	43.200	21.600	2.4314	1.673	4.0218	8.130	3.080	
34	6000	1300	5.252	11.223	5.475	18.256	18.466	44.112	22.056	2.4737	1.705	4.0687	8.260	3.123	
34	6200	1300	5.354	11.458	5.577	18.668	18.878	45.024	22.512	2.5160	1.737	4.1156	8.390	3.165	
34	6400	1300	5.456	11.693	5.679	19.080	19.290	45.936	22.968	2.5583	1.769	4.1625	8.520	3.208	
34	6600	1300	5.558	11.928	5.781	19.492	19.702	46.848	23.424	2.6006	1.801	4.2094	8.650	3.250	
34	6800	1300	5.660	12.163	5.883	19.904	20.114	47.760	23.880	2.6429	1.833	4.2563	8.780	3.293	
34	7000	1300	5.762	12.398	5.985	20.316	20.526	48.672	24.336	2.6852	1.865	4.3032	8.910	3.335	
34	7200	1300	5.864	12.633	6.087	20.728	20.938	49.584	24.792	2.7275	1.897	4.3501	9.040	3.378	
34	7400	1300	5.966	12.868	6.189	21.140	21.350	50.496	25.248	2.7698	1.929	4.3970	9.170	3.420	
34	7600	1300	6.068	13.103	6.291	21.552	21.762	51.408	25.704	2.8121	1.961	4.4439	9.300	3.463	
34	7800	1300	6.170	13.338	6.393	21.964	22.174	52.320	26.160	2.8544	1.993	4.4908	9.430	3.505	
34	8000	1300	6.272	13.573	6.495	22.376	22.586	53.232	26.616	2.8967	2.025	4.5377	9.560	3.548	
34	8200	1300	6.374	13.808	6.597	22.788	22.998	54.144	27.072	2.9390	2.057	4.5846	9.690	3.590	
34	8400	1300	6.476	14.043	6.699	23.200	23.410	55.056	27.528	2.9813	2.089	4.6315	9.820	3.633	
34	8600	1300	6.578	14.278	6.801	23.612	23.822	55.968	27.984	3.0236	2.121	4.6784	9.950	3.675	
34	8800	1300	6.680	14.513	6.903	24.024	24.234	56.880	28.440	3.0659	2.153	4.7253	10.080	3.718	
34	9000	1300	6.782	14.748	7.005	24.436	24.646	57.792	28.896	3.1082	2.185	4.7722	10.210	3.760	
34	9200	1300	6.884	14.983	7.107	24.848	25.058	58.704	29.352	3.1505	2.217	4.8191	10.340	3.803	
34	9400	1300	6.986	15.218	7.209	25.260	25.470	59.616	29.808	3.1928	2.249	4.8660	10.470	3.845	
34	9600	1300	7.088	15.453	7.311	25.672	25.882	60.528	30.264	3.2351	2.281	4.9129	10.600	3.888	
34	9800	1300	7.190	15.688	7.413	26.084	26.294	61.440	30.720	3.2774	2.313	4.9598	10.730	3.930	
34	10000	1300	7.292	15.923	7.515	26.496	26.706	62.352	31.176	3.3197	2.345	5.0067	10.860	3.973	
34	10200	1300	7.394	16.158	7.617	26.908	27.118	63.264	31.632	3.3620	2.377	5.0536	10.990	4.015	
34	10400	1300	7.496	16.393	7.719	27.320	27.530	64.176	32.088	3.4043	2.409	5.1005	11.120	4.058	
34	10600	1300	7.598	16.628	7.821	27.732	27.942	65.088	32.544	3.4466	2.441	5.1474	11.250	4.100	
34	10800	1300	7.700	16.863	7.923	28.144	28.354	66.000	33.000	3.4889	2.473	5.1943	11.380	4.143	
34	11000	1300	7.802	17.098	8.025	28.556	28.766	66.912	33.456	3.5312	2.505	5.2412	11.510	4.185	
34	11200	1300	7.904	17.333	8.127	28.968	29.178	67.824	33.912	3.5735	2.537	5.2881	11.640	4.228	
34	11400	1300	8.006	17.568	8.229	29.380	29.590	68.736	34.368	3.6158	2.569	5.3350	11.770	4.270	
34	11600	1300	8.108	17.803	8.331	29.792	29.999	69.648	34.824	3.6581	2.601	5.3819	11.900	4.313	
34	11800	1300	8.210	18.038	8.433	30.204	30.411	70.560	35.280	3.7004	2.633	5.4288	12.030	4.355	
34	12000	1300	8.312	18.273	8.535	30.616	30.823	71.472	35.736	3.7427	2.665	5.4757	12.160	4.398	
34	12200	1300	8.414	18.508	8.637	31.028	31.235	72.384	36.192	3.7850	2.697	5.5226	12.290	4.440	
34	12400	1300	8.516	18.743	8.739	31.440	31.647	73.296	36.648	3.8273	2.729	5.5695	12.420	4.483	
34	12600	1300	8.618	18.978	8.841	31.852	32.059	74.208	37.104	3.8696	2.761	5.6164	12.550	4.525	
34	12800	1300	8.720	19.213	8.943	32.264	32.471	75.120	37.560	3.9119	2.793	5.6633	12.680	4.568	
34	13000	1300	8.822	19.448	9.045	32.676	32.883	76.032	38.016	3.9542	2.825	5.7102	12.810	4.610	
34	13200	1300	8.924	19.683	9.147	33.088	33.295	76.944	38.472	3.9965	2.857	5.7571	12.940	4.65	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Road Name	Road ID	Hour	NO _x Emission				NO _x Emission				NO _x Emission				
			g/hm/h	g/h/m ²	tonne/hour	g/h/m ²	g/hm/h	g/h/m ²	tonne/hour	g/h/m ²	g/hm/h	g/h/m ²	tonne/hour	g/h/m ²	
Road 1	100	1700	1320	1.64	9.898	7.554	0.938	1.348	2.815	2.565	0.320	3.615	6.545	1.109	8.738
Road 1	100	1730	1457	1.80	11.27	8.396	1.045	1.515	3.205	2.865	0.365	4.035	7.395	1.255	9.845
Road 1	100	1800	1460	1.81	11.30	8.410	1.048	1.520	3.220	2.880	0.368	4.060	7.420	1.260	9.880
Road 1	100	1830	1520	1.88	11.80	8.880	1.100	1.580	3.380	2.980	0.385	4.280	7.800	1.330	10.240
Road 1	100	1900	1540	1.92	12.00	9.080	1.130	1.620	3.480	3.050	0.395	4.380	7.950	1.360	10.400
Road 1	100	1930	1580	2.00	12.50	9.580	1.180	1.680	3.680	3.180	0.410	4.680	8.280	1.420	10.800
Road 1	100	2000	1600	2.04	12.70	9.780	1.210	1.710	3.780	3.250	0.420	4.780	8.430	1.450	11.000
Road 1	100	2030	1640	2.12	13.20	10.280	1.260	1.770	3.980	3.380	0.435	5.080	8.750	1.510	11.400
Road 1	100	2100	1660	2.16	13.40	10.480	1.290	1.800	4.080	3.450	0.440	5.180	8.900	1.540	11.600
Road 1	100	2130	1700	2.24	13.90	10.980	1.340	1.860	4.280	3.580	0.455	5.480	9.220	1.600	12.000
Road 1	100	2200	1720	2.28	14.10	11.180	1.370	1.890	4.380	3.650	0.460	5.580	9.350	1.630	12.200
Road 1	100	2230	1760	2.36	14.60	11.680	1.420	1.950	4.580	3.780	0.475	5.880	9.670	1.690	12.600
Road 1	100	2300	1780	2.40	14.80	11.880	1.450	1.980	4.680	3.850	0.480	5.980	9.800	1.720	12.800
Road 1	100	2330	1820	2.48	15.30	12.380	1.500	2.040	4.880	3.980	0.495	6.280	10.120	1.780	13.200
Road 1	100	2400	1840	2.52	15.50	12.580	1.530	2.070	4.980	4.050	0.500	6.380	10.250	1.810	13.400
Road 1	100	2430	1880	2.60	16.00	13.080	1.580	2.130	5.180	4.180	0.515	6.680	10.570	1.870	13.800
Road 1	100	2500	1900	2.64	16.20	13.280	1.610	2.160	5.280	4.250	0.520	6.780	10.700	1.900	14.000
Road 1	100	2530	1940	2.72	16.70	13.780	1.660	2.220	5.480	4.380	0.535	7.080	11.020	1.960	14.400
Road 1	100	2600	1960	2.76	16.90	13.980	1.690	2.250	5.580	4.450	0.540	7.180	11.150	1.990	14.600
Road 1	100	2630	2000	2.84	17.40	14.480	1.740	2.310	5.780	4.580	0.555	7.480	11.470	2.050	15.000
Road 1	100	2700	2020	2.88	17.60	14.680	1.770	2.340	5.880	4.650	0.560	7.580	11.600	2.080	15.200
Road 1	100	2730	2060	2.96	18.10	15.180	1.820	2.400	6.080	4.780	0.575	7.880	11.920	2.140	15.600
Road 1	100	2800	2080	3.00	18.30	15.380	1.850	2.430	6.180	4.850	0.580	7.980	12.050	2.170	15.800
Road 1	100	2830	2120	3.08	18.80	15.880	1.900	2.490	6.380	4.980	0.595	8.280	12.370	2.230	16.200
Road 1	100	2900	2140	3.12	19.00	16.080	1.930	2.520	6.480	5.050	0.600	8.380	12.500	2.260	16.400
Road 1	100	2930	2180	3.20	19.50	16.580	1.980	2.580	6.680	5.180	0.615	8.680	12.820	2.320	16.800
Road 1	100	3000	2200	3.24	19.70	16.780	2.010	2.610	6.780	5.250	0.620	8.780	12.950	2.350	17.000
Road 1	100	3030	2240	3.32	20.20	17.280	2.060	2.670	6.980	5.380	0.635	9.080	13.270	2.410	17.400
Road 1	100	3100	2260	3.36	20.40	17.480	2.090	2.700	7.080	5.450	0.640	9.180	13.400	2.440	17.600
Road 1	100	3130	2300	3.44	20.90	17.980	2.140	2.760	7.280	5.580	0.655	9.480	13.720	2.500	18.000
Road 1	100	3200	2320	3.48	21.10	18.180	2.170	2.790	7.380	5.650	0.660	9.580	13.850	2.530	18.200
Road 1	100	3230	2360	3.56	21.60	18.680	2.220	2.850	7.580	5.780	0.675	9.880	14.170	2.590	18.600
Road 1	100	3300	2380	3.60	21.80	18.880	2.250	2.880	7.680	5.850	0.680	9.980	14.300	2.620	18.800
Road 1	100	3330	2420	3.68	22.30	19.380	2.300	2.940	7.880	5.980	0.695	10.280	14.620	2.680	19.200
Road 1	100	3400	2440	3.72	22.50	19.580	2.330	2.970	7.980	6.050	0.700	10.380	14.750	2.710	19.400
Road 1	100	3430	2480	3.80	23.00	20.080	2.380	3.030	8.180	6.180	0.715	10.680	15.070	2.770	19.800
Road 1	100	3500	2500	3.84	23.20	20.280	2.410	3.060	8.280	6.250	0.720	10.780	15.200	2.800	20.000
Road 1	100	3530	2540	3.92	23.70	20.780	2.460	3.120	8.480	6.380	0.735	11.080	15.520	2.860	20.400
Road 1	100	3600	2560	3.96	23.90	20.980	2.490	3.150	8.580	6.450	0.740	11.180	15.650	2.890	20.600
Road 1	100	3630	2600	4.04	24.40	21.480	2.540	3.210	8.780	6.580	0.755	11.480	15.970	2.950	21.000
Road 1	100	3700	2620	4.08	24.60	21.680	2.570	3.240	8.880	6.650	0.760	11.580	16.100	2.980	21.200
Road 1	100	3730	2660	4.16	25.10	22.180	2.620	3.300	9.080	6.780	0.775	11.880	16.420	3.040	21.600
Road 1	100	3800	2680	4.20	25.30	22.380	2.650	3.330	9.180	6.850	0.780	11.980	16.550	3.070	21.800
Road 1	100	3830	2720	4.28	25.80	22.880	2.700	3.390	9.380	6.980	0.795	12.280	16.870	3.130	22.200
Road 1	100	3900	2740	4.32	26.00	23.080	2.730	3.420	9.480	7.050	0.800	12.380	17.000	3.160	22.400
Road 1	100	3930	2780	4.40	26.50	23.580	2.780	3.480	9.680	7.180	0.815	12.680	17.320	3.220	22.800
Road 1	100	4000	2800	4.44	26.70	23.780	2.810	3.510	9.780	7.250	0.820	12.780	17.450	3.250	23.000
Road 1	100	4030	2840	4.52	27.20	24.280	2.860	3.570	9.980	7.380	0.835	13.080	17.770	3.310	23.400
Road 1	100	4100	2860	4.56	27.40	24.480	2.890	3.600	10.080	7.450	0.840	13.180	17.900	3.340	23.600
Road 1	100	4130	2900	4.64	27.90	24.980	2.940	3.660	10.280	7.580	0.855	13.480	18.220	3.400	24.000
Road 1	100	4200	2920	4.68	28.10	25.180	2.970	3.690	10.380	7.650	0.860	13.580	18.350	3.430	24.200
Road 1	100	4230	2960	4.76	28.60	25.680	3.020	3.750	10.580	7.780	0.875	13.880	18.670	3.490	24.600
Road 1	100	4300	2980	4.80	28.80	25.880	3.050	3.780	10.680	7.850	0.880	13.980	18.800	3.520	24.800
Road 1	100	4330	3020	4.88	29.30	26.380	3.100	3.840	10.880	7.980	0.895	14.280	19.120	3.580	25.200
Road 1	100	4400	3040	4.92	29.50	26.580	3.130	3.870	10.980	8.050	0.900	14.380	19.250	3.610	25.400
Road 1	100	4430	3080	5.00	30.00	27.080	3.180	3.930	11.180	8.180	0.915	14.680	19.570	3.670	25.800
Road 1	100	4500	3100	5.04	30.20	27.280	3.210	3.960	11.280	8.250	0.920	14.780	19.700	3.700	26.000
Road 1	100	4530	3140	5.12	30.70	27.780	3.260	4.020	11.480	8.380	0.935	15.080	20.020	3.760	26.400
Road 1	100	4600	3160	5.16	30.90	27.980	3.290	4.050	11.580	8.450	0.940	15.180	20.150	3.790	26.600
Road 1	100	4630	3200	5.24	31.40	28.480	3.340	4.110	11.780	8.580	0.955	15.480	20.470	3.850	27.000
Road 1	100	4700	3220	5.28	31.60	28.680	3.370	4.140	11.880	8.650	0.960	15.580	20.600	3.880	27.200
Road 1	100	4730	3260	5.36	32.10	29.180	3.420	4.200	12.080	8.780	0.975	15.880	20.920	3.940	27.600
Road 1	100	4800	3280	5.40	32.30	29.380	3.450	4.230	12.180	8.850	0.980	15.980	21.050	3.970	27.800
Road 1	100	4830	3320	5.48	32.80	29.880	3.500	4.290	12.380	8.980	0.995	16.280	21.370	4.030	28.200
Road 1	100	4900	3340	5.52	33.00	30.080	3.530	4.320	12.480	9.050	1.000	16.380	21.500	4.060	28.400
Road 1	100	4930	3380	5.60	33.50	30.580	3.580	4.380	12.680	9.180	1.015	16.680	21.820	4.120	28.800
Road 1	100	5000	3400	5.64	33.70	30.780	3.610	4.410	12.780	9.250	1.020	16.780	21.950	4.150	29.000
Road 1	100	5030	3440	5.72	34.20	31.280	3.660	4.470	12.980	9.380	1.035	17.080	22.270	4.210	29.400
Road 1	100	5100	3460	5.76	34.40	31.480	3.690	4.500	13.080	9.450	1.040	17.180	22.400	4.240	29.600
Road 1	100	5130	3500	5.84	34.90	31.980	3.740	4.560	13.280	9.580	1.055	17.480	22.720	4.300	30.000
Road 1	100	5200	3520	5.88	35.10	32.180	3.770	4.590	13.380	9.650	1.060	17.580	22.850	4.330	30.200
Road 1	100	5230	3560	5.96	35.60	32.680	3.820	4.650	13.580	9.780	1.075	17.880	23.170	4.390	30.600
Road 1	100	5300	3580	6.00	35.80	32.880	3.850	4.680	13.680	9.850	1.080	17.980	23.300	4.420	30.800
Road 1	100	5330	3620	6.08	36.30	33.380	3.900	4.740	13.880	9.980	1.095	18.280	23.620	4.480	31.200
Road 1	100	5400	3640	6.12	36.50	33.580	3.930	4.770	13.980	10.050	1.100	18.380	23.750	4.510	31.400
Road 1	100	5430	3680	6.20	37.00	34.080	3.980								

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Top 24 Hour Endurance Factors for ANNULAR (Steel Deck) Year 2043																
Roof Name	Roof ID	Year	NO Emission				NO Emission				NO Emission					
			g/h/m ²	g/m ²	g/h/m ²	g/m ²	g/h/m ²	g/m ²	g/h/m ²	g/m ²	g/h/m ²	g/m ²	g/h/m ²	g/m ²		
Roof 47	47	1900-1200	1.078	2.847	4.538	8.474	6.126	1.835	10.601	2.906	2.286	0.127	8.498	6.897	4.4	
Roof 47	47	1800-1900	1.078	2.847	4.538	8.474	6.126	1.835	10.601	2.906	2.286	0.127	8.498	6.897	4.4	
Roof 47	47	1800-1900	2.082	6.047	9.034	16.262	13.066	4.466	6.319	4.137	1.576	1.792	1.412	4.724	4.8	
Roof 47	47	1900-2000	1.078	2.847	4.538	8.474	6.126	1.835	10.601	2.906	2.286	0.127	8.498	6.897	4.4	
Roof 47	47	2000-2100	7.938	3.227	0.787	1.516	1.516	7.944	6.071	5.964	5.166	0.404	1.256	0.251	2.156	0.4
Roof 47	47	2100-2200	1.078	2.847	4.538	8.474	6.126	1.835	10.601	2.906	2.286	0.127	8.498	6.897	4.4	
Roof 47	47	2200-2300	1.078	2.847	4.538	8.474	6.126	1.835	10.601	2.906	2.286	0.127	8.498	6.897	4.4	
Roof 47	47	2300-2400	6.576	0.738	8.354	4.482	5.389	0.133	5.489	0.612	0.167	0.996	0.164	0.188	1.346	0.4
Roof 48	48	1900-2000	1.078	2.847	4.538	8.474	6.126	1.835	10.601	2.906	2.286	0.127	8.498	6.897	4.4	
Roof 48	48	0100-0200	4.954	2.478	1.474	4.336	1.021	1.504	4.010	2.192	1.200	0.166	0.722	0.369	3.769	0.5
Roof 48	48	0200-0300	4.954	2.478	1.474	4.336	1.021	1.504	4.010	2.192	1.200	0.166	0.722	0.369	3.769	0.5
Roof 48	48	0300-0400	6.438	2.146	0.884	1.711	1.426	6.864	4.226	4.879	2.228	0.164	0.739	0.399	2.919	0.5
Roof 48	48	0400-0500	6.438	2.146	0.884	1.711	1.426	6.864	4.226	4.879	2.228	0.164	0.739	0.399	2.919	0.5
Roof 48	48	0500-0600	6.438	2.146	0.884	1.711	1.426	6.864	4.226	4.879	2.228	0.164	0.739	0.399	2.919	0.5
Roof 48	48	0600-0700	6.438	2.146	0.884	1.711	1.426	6.864	4.226	4.879	2.228	0.164	0.739	0.399	2.919	0.5
Roof 48	48	0700-0800	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	0800-0900	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	0900-1000	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	1000-1100	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	1100-1200	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	1200-1300	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	1300-1400	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	1400-1500	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	1500-1600	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	1600-1700	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	1700-1800	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	1800-1900	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	1900-2000	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	2000-2100	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	2100-2200	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	2200-2300	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	2300-2400	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	2400-2500	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	2500-2600	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	2600-2700	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	2700-2800	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	2800-2900	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	2900-3000	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	3000-3100	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	3100-3200	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	3200-3300	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	3300-3400	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	3400-3500	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	3500-3600	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	3600-3700	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	3700-3800	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	3800-3900	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	3900-4000	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	4000-4100	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	4100-4200	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	4200-4300	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	4300-4400	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	4400-4500	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	4500-4600	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	4600-4700	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	4700-4800	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	4800-4900	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	4900-5000	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	5000-5100	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	5100-5200	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	5200-5300	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	5300-5400	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	5400-5500	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	5500-5600	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	5600-5700	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	5700-5800	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	5800-5900	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	5900-6000	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	6000-6100	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	6100-6200	7.368	2.848	0.954	2.422	2.422	5.468	2.460	4.932	0.382	0.446	0.071	0.287	1.064	0.4
Roof 48	48	6200-6300	7.368	2.848	0.954											

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Road Name	Road ID	Mode	NO _x Emission						NO ₂ Emission						Speed (km/h)
			g/km/h	g/km ²	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h			
Road 04	04	0800-0900	8.145	1047.87	2.138	2.882	1.132	0.858	3.895	1.422	1.182	0.588	0.588	2.896	0.4
Road 04	04	0900-1200	8.145	1047.87	2.138	2.882	1.132	0.858	3.895	1.422	1.182	0.588	0.588	2.896	0.4
Road 04	04	1200-1500	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	1500-1800	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	1800-2100	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	2100-2400	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	0800-0900	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	0900-1200	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	1200-1500	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	1500-1800	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	1800-2100	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	2100-2400	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	0800-0900	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	0900-1200	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	1200-1500	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	1500-1800	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	1800-2100	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	2100-2400	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	0800-0900	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	0900-1200	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	1200-1500	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	1500-1800	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	1800-2100	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	2100-2400	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	0800-0900	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	0900-1200	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	1200-1500	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	1500-1800	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	1800-2100	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	2100-2400	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	0800-0900	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	0900-1200	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	1200-1500	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	1500-1800	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	1800-2100	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	2100-2400	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	0800-0900	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	0900-1200	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	1200-1500	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	1500-1800	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	1800-2100	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	2100-2400	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	0800-0900	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	0900-1200	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	1200-1500	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	1500-1800	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	1800-2100	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	2100-2400	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	0800-0900	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	0900-1200	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	1200-1500	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	1500-1800	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	1800-2100	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	2100-2400	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	0800-0900	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	0900-1200	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	1200-1500	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	1500-1800	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	1800-2100	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	2100-2400	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	0800-0900	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	0900-1200	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	1200-1500	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	1500-1800	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	1800-2100	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	2100-2400	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	0800-0900	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	0900-1200	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	1200-1500	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	1500-1800	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	1800-2100	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	2100-2400	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	0800-0900	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	0900-1200	1.022	131.47	0.246	0.330	0.108	0.083	0.315	0.122	0.102	0.052	0.052	0.264	0.4
Road 04	04	1200-1500	1.022	131.47	0.246	0.330	0.108	0.083	0.315						

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North Underground Quarry

Year 2004

North 2nd Area Extension Factors for ARMMOD model (hour)

Road Name	Road ID	No Emission				No Emission			
		Month/year	g/hour	g/mi ²	tonne/hour	Month/year	g/hour	g/mi ²	tonne/hour
1st Road	10001	1/10/2004	1.188	5.487	0.172	1/10/2004	2.395	2.105	0.338
1st Road	10001	1/11/2004	1.188	5.487	0.172	1/11/2004	2.395	2.105	0.338
1st Road	10001	1/12/2004	1.188	5.487	0.172	1/12/2004	2.395	2.105	0.338
1st Road	10001	2/10/2004	1.188	5.487	0.172	2/10/2004	2.395	2.105	0.338
1st Road	10001	2/11/2004	1.188	5.487	0.172	2/11/2004	2.395	2.105	0.338
1st Road	10001	2/12/2004	1.188	5.487	0.172	2/12/2004	2.395	2.105	0.338
1st Road	10001	3/10/2004	1.188	5.487	0.172	3/10/2004	2.395	2.105	0.338
1st Road	10001	3/11/2004	1.188	5.487	0.172	3/11/2004	2.395	2.105	0.338
1st Road	10001	3/12/2004	1.188	5.487	0.172	3/12/2004	2.395	2.105	0.338
1st Road	10001	4/10/2004	1.188	5.487	0.172	4/10/2004	2.395	2.105	0.338
1st Road	10001	4/11/2004	1.188	5.487	0.172	4/11/2004	2.395	2.105	0.338
1st Road	10001	4/12/2004	1.188	5.487	0.172	4/12/2004	2.395	2.105	0.338
1st Road	10001	5/10/2004	1.188	5.487	0.172	5/10/2004	2.395	2.105	0.338
1st Road	10001	5/11/2004	1.188	5.487	0.172	5/11/2004	2.395	2.105	0.338
1st Road	10001	5/12/2004	1.188	5.487	0.172	5/12/2004	2.395	2.105	0.338
1st Road	10001	6/10/2004	1.188	5.487	0.172	6/10/2004	2.395	2.105	0.338
1st Road	10001	6/11/2004	1.188	5.487	0.172	6/11/2004	2.395	2.105	0.338
1st Road	10001	6/12/2004	1.188	5.487	0.172	6/12/2004	2.395	2.105	0.338
1st Road	10001	7/10/2004	1.188	5.487	0.172	7/10/2004	2.395	2.105	0.338
1st Road	10001	7/11/2004	1.188	5.487	0.172	7/11/2004	2.395	2.105	0.338
1st Road	10001	7/12/2004	1.188	5.487	0.172	7/12/2004	2.395	2.105	0.338
1st Road	10001	8/10/2004	1.188	5.487	0.172	8/10/2004	2.395	2.105	0.338
1st Road	10001	8/11/2004	1.188	5.487	0.172	8/11/2004	2.395	2.105	0.338
1st Road	10001	8/12/2004	1.188	5.487	0.172	8/12/2004	2.395	2.105	0.338
1st Road	10001	9/10/2004	1.188	5.487	0.172	9/10/2004	2.395	2.105	0.338
1st Road	10001	9/11/2004	1.188	5.487	0.172	9/11/2004	2.395	2.105	0.338
1st Road	10001	9/12/2004	1.188	5.487	0.172	9/12/2004	2.395	2.105	0.338
2nd Road	10002	1/10/2004	1.188	5.487	0.172	1/10/2004	2.395	2.105	0.338
2nd Road	10002	1/11/2004	1.188	5.487	0.172	1/11/2004	2.395	2.105	0.338
2nd Road	10002	1/12/2004	1.188	5.487	0.172	1/12/2004	2.395	2.105	0.338
2nd Road	10002	2/10/2004	1.188	5.487	0.172	2/10/2004	2.395	2.105	0.338
2nd Road	10002	2/11/2004	1.188	5.487	0.172	2/11/2004	2.395	2.105	0.338
2nd Road	10002	2/12/2004	1.188	5.487	0.172	2/12/2004	2.395	2.105	0.338
2nd Road	10002	3/10/2004	1.188	5.487	0.172	3/10/2004	2.395	2.105	0.338
2nd Road	10002	3/11/2004	1.188	5.487	0.172	3/11/2004	2.395	2.105	0.338
2nd Road	10002	3/12/2004	1.188	5.487	0.172	3/12/2004	2.395	2.105	0.338
2nd Road	10002	4/10/2004	1.188	5.487	0.172	4/10/2004	2.395	2.105	0.338
2nd Road	10002	4/11/2004	1.188	5.487	0.172	4/11/2004	2.395	2.105	0.338
2nd Road	10002	4/12/2004	1.188	5.487	0.172	4/12/2004	2.395	2.105	0.338
2nd Road	10002	5/10/2004	1.188	5.487	0.172	5/10/2004	2.395	2.105	0.338
2nd Road	10002	5/11/2004	1.188	5.487	0.172	5/11/2004	2.395	2.105	0.338
2nd Road	10002	5/12/2004	1.188	5.487	0.172	5/12/2004	2.395	2.105	0.338
2nd Road	10002	6/10/2004	1.188	5.487	0.172	6/10/2004	2.395	2.105	0.338
2nd Road	10002	6/11/2004	1.188	5.487	0.172	6/11/2004	2.395	2.105	0.338
2nd Road	10002	6/12/2004	1.188	5.487	0.172	6/12/2004	2.395	2.105	0.338
2nd Road	10002	7/10/2004	1.188	5.487	0.172	7/10/2004	2.395	2.105	0.338
2nd Road	10002	7/11/2004	1.188	5.487	0.172	7/11/2004	2.395	2.105	0.338
2nd Road	10002	7/12/2004	1.188	5.487	0.172	7/12/2004	2.395	2.105	0.338
2nd Road	10002	8/10/2004	1.188	5.487	0.172	8/10/2004	2.395	2.105	0.338
2nd Road	10002	8/11/2004	1.188	5.487	0.172	8/11/2004	2.395	2.105	0.338
2nd Road	10002	8/12/2004	1.188	5.487	0.172	8/12/2004	2.395	2.105	0.338
2nd Road	10002	9/10/2004	1.188	5.487	0.172	9/10/2004	2.395	2.105	0.338
2nd Road	10002	9/11/2004	1.188	5.487	0.172	9/11/2004	2.395	2.105	0.338
2nd Road	10002	9/12/2004	1.188	5.487	0.172	9/12/2004	2.395	2.105	0.338
3rd Road	10003	1/10/2004	1.188	5.487	0.172	1/10/2004	2.395	2.105	0.338
3rd Road	10003	1/11/2004	1.188	5.487	0.172	1/11/2004	2.395	2.105	0.338
3rd Road	10003	1/12/2004	1.188	5.487	0.172	1/12/2004	2.395	2.105	0.338
3rd Road	10003	2/10/2004	1.188	5.487	0.172	2/10/2004	2.395	2.105	0.338
3rd Road	10003	2/11/2004	1.188	5.487	0.172	2/11/2004	2.395	2.105	0.338
3rd Road	10003	2/12/2004	1.188	5.487	0.172	2/12/2004	2.395	2.105	0.338
3rd Road	10003	3/10/2004	1.188	5.487	0.172	3/10/2004	2.395	2.105	0.338
3rd Road	10003	3/11/2004	1.188	5.487	0.172	3/11/2004	2.395	2.105	0.338
3rd Road	10003	3/12/2004	1.188	5.487	0.172	3/12/2004	2.395	2.105	0.338
3rd Road	10003	4/10/2004	1.188	5.487	0.172	4/10/2004	2.395	2.105	0.338
3rd Road	10003	4/11/2004	1.188	5.487	0.172	4/11/2004	2.395	2.105	0.338
3rd Road	10003	4/12/2004	1.188	5.487	0.172	4/12/2004	2.395	2.105	0.338
3rd Road	10003	5/10/2004	1.188	5.487	0.172	5/10/2004	2.395	2.105	0.338
3rd Road	10003	5/11/2004	1.188	5.487	0.172	5/11/2004	2.395	2.105	0.338
3rd Road	10003	5/12/2004	1.188	5.487	0.172	5/12/2004	2.395	2.105	0.338
3rd Road	10003	6/10/2004	1.188	5.487	0.172	6/10/2004	2.395	2.105	0.338
3rd Road	10003	6/11/2004	1.188	5.487	0.172	6/11/2004	2.395	2.105	0.338
3rd Road	10003	6/12/2004	1.188	5.487	0.172	6/12/2004	2.395	2.105	0.338
3rd Road	10003	7/10/2004	1.188	5.487	0.172	7/10/2004	2.395	2.105	0.338
3rd Road	10003	7/11/2004	1.188	5.487	0.172	7/11/2004	2.395	2.105	0.338
3rd Road	10003	7/12/2004	1.188	5.487	0.172	7/12/2004	2.395	2.105	0.338
3rd Road	10003	8/10/2004	1.188	5.487	0.172	8/10/2004	2.395	2.105	0.338
3rd Road	10003	8/11/2004	1.188	5.487	0.172	8/11/2004	2.395	2.105	0.338
3rd Road	10003	8/12/2004	1.188	5.487	0.172	8/12/2004	2.395	2.105	0.338
3rd Road	10003	9/10/2004	1.188	5.487	0.172	9/10/2004	2.395	2.105	0.338
3rd Road	10003	9/11/2004	1.188	5.487	0.172	9/11/2004	2.395	2.105	0.338
3rd Road	10003	9/12/2004	1.188	5.487	0.172	9/12/2004	2.395	2.105	0.338
4th Road	10004	1/10/2004	1.188	5.487	0.172	1/10/2004	2.395	2.105	0.338
4th Road	10004	1/11/2004	1.188	5.487	0.172	1/11/2004	2.395	2.105	0.338
4th Road	10004	1/12/2004	1.188	5.487	0.172	1/12/2004	2.395	2.105	0.338
4th Road	10004	2/10/2004	1.188	5.487	0.172	2/10/2004	2.395	2.105	0.338
4th Road	10004	2/11/2004	1.188	5.487	0.172	2/11/2004	2.395	2.105	0.338
4th Road	10004	2/12/2004	1.188	5.487	0.172	2/12/2004	2.395	2.105	0.338
4th Road	10004	3/10/2004	1.188	5.487	0.172	3/10/2004	2.395	2.105	0.338
4th Road	10004	3/11/2004	1.188	5.487	0.172	3/11/2004	2.395	2.105	0.338
4th Road	10004	3/12/2004	1.188	5.487	0.172	3/12/2004	2.395	2.105	0.338
4th Road	10004	4/10/2004	1.188	5.487	0.172	4/10/2004	2.395	2.105	0.338
4th Road	10004	4/11/2004	1.188	5.487	0.172	4/11/2004	2.395	2.105	0.338
4th Road	10004	4/12/2004	1.188	5.487	0.172	4/12/2004	2.395	2.105	0.338
4th Road	10004	5/10/2004	1.188	5.487	0.172	5/10/2004	2.395	2.105	0.338
4th Road	10004	5/11/2004	1.188	5.487	0.172	5/11/2004	2.395	2.105	0.338
4th Road	10004	5/12/2004	1.188	5.487	0.172	5/12/2004	2.395	2.105	0.338
4th Road	10004	6/10/2004	1.188	5.487	0.172	6/10/2004	2.395	2.105	0.338
4th Road	10004	6/11/2004	1.188	5.487	0.172	6/11/2004	2.395	2.105	0.338
4th Road	10004	6/12/2004	1.188	5.487	0.172	6/12/2004	2.395	2.105	0.338
4th Road	10004	7/10/2004	1.188	5.487	0.172	7/10/2004	2.395	2.105	0.338
4th Road	10004	7/11/2004	1.188	5.487	0.172	7/11/2004	2.395	2.105	0.338
4th Road	10004	7/12/2004	1.188	5.487	0.172	7/12/2004	2.395	2.105	0.338
4th Road	10004	8/10/2004	1.188	5.487	0.172	8/10/2004	2.395	2.105	0.338
4th Road	10004	8/11/2004	1.188	5.487	0.172	8/11/2004	2.395	2.105	0.338
4th Road	10004	8/12/2004	1.188	5.487	0.172	8/12/2004	2.395	2.105	0.338
4th Road	10004	9/10/2004	1.188	5.487	0.172	9/10/2004	2.395	2.105	0.338
4th Road	10004	9/11/2004	1.188	5.487	0.172	9/11/2004	2.395	2.105	0.338
4th Road	10004	9/12/2004	1.188	5.487	0.172	9/12/2004	2.395	2.105	0.338
5th Road	10005	1/10/2004	1.188	5.487	0.172	1/10/2004	2.395	2.105	0.338
5th Road	10005								

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open North 2nd Environment Factory														
Year 2003														
Qtr 4														
Qtr 4 North 2nd Environment Factory														
Annual total (Estimate)														
Row Name	Row ID	H0	MO, Emission						MO, Emission					
			Month/Year			Month/Year			Month/Year			Month/Year		
			g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh	g/kWh
Row 1	1	00000100	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00000700	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00001300	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00001900	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00002500	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00003100	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00003700	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00004300	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00004900	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00005500	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00006100	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00006700	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00007300	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00007900	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00008500	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00009100	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00009700	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00010300	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00010900	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00011500	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00012100	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00012700	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00013300	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00013900	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00014500	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00015100	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00015700	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00016300	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00016900	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00017500	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00018100	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00018700	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00019300	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00019900	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00020500	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00021100	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00021700	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00022300	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00022900	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00023500	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00024100	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00024700	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00025300	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00025900	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00026500	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00027100	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00027700	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00028300	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00028900	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00029500	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00030100	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00030700	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00031300	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00031900	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00032500	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00033100	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00033700	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00034300	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00034900	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00035500	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00036100	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00036700	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00037300	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00037900	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00038500	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00039100	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00039700	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00040300	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00040900	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00041500	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00042100	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00042700	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00043300	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row 1	1	00043900	1.3446	6.3116	1.2704	1.3667	6.4827	1.8810	1.8656	5.5147	1.1174	1.0719	1.5105	1.8214
Row														

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

TSS and PM ₁₀ Northbound Quarry														
Open Road and Area Emission Factors for ARB/CDM (see Appendix)														
Year 2004														
Road Name	Road ID	Hour	NO Emission						NO Emission					
			Metric/tonne/hr			Metric/tonne/hr			Metric/tonne/hr			Metric/tonne/hr		
			g/hw/hr	g/m ³ /hr	tonne/hr	g/hw/hr	g/m ³ /hr	tonne/hr	g/hw/hr	g/m ³ /hr	tonne/hr	g/hw/hr	g/m ³ /hr	tonne/hr
Road #4	0800-0900	7:27:03	2,456.07	1,906.43	1,838.02	1,108.02	4,556.02	1,645.06	1,297.02	1,888.03	8,777.08	4,956.04	1,888.03	8,777.08
Road #4	0900-1000	8:21:48	2,456.07	1,906.43	1,838.02	1,108.02	4,556.02	1,645.06	1,297.02	1,888.03	8,777.08	4,956.04	1,888.03	8,777.08
Road #4	1000-1100	1:11:03	2,456.07	1,906.43	1,838.02	1,108.02	4,556.02	1,645.06	1,297.02	1,888.03	8,777.08	4,956.04	1,888.03	8,777.08
Road #4	1100-1200	1:11:03	2,456.07	1,906.43	1,838.02	1,108.02	4,556.02	1,645.06	1,297.02	1,888.03	8,777.08	4,956.04	1,888.03	8,777.08
Road #4	1300-1500	1:30:00	1,350.00	1,035.00	1,035.00	615.00	2,460.00	900.00	700.00	900.00	4,500.00	2,250.00	900.00	4,500.00
Road #4	1500-1600	1:02:02	3,375.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #4	1600-1700	1:11:03	2,456.07	1,906.43	1,838.02	1,108.02	4,556.02	1,645.06	1,297.02	1,888.03	8,777.08	4,956.04	1,888.03	8,777.08
Road #4	1800-1900	1:44:04	2,456.07	1,906.43	1,838.02	1,108.02	4,556.02	1,645.06	1,297.02	1,888.03	8,777.08	4,956.04	1,888.03	8,777.08
Road #4	1900-2000	1:44:04	2,456.07	1,906.43	1,838.02	1,108.02	4,556.02	1,645.06	1,297.02	1,888.03	8,777.08	4,956.04	1,888.03	8,777.08
Road #4	2000-2100	1:44:04	2,456.07	1,906.43	1,838.02	1,108.02	4,556.02	1,645.06	1,297.02	1,888.03	8,777.08	4,956.04	1,888.03	8,777.08
Road #4	2100-2200	1:44:04	2,456.07	1,906.43	1,838.02	1,108.02	4,556.02	1,645.06	1,297.02	1,888.03	8,777.08	4,956.04	1,888.03	8,777.08
Road #4	2200-2300	1:44:04	2,456.07	1,906.43	1,838.02	1,108.02	4,556.02	1,645.06	1,297.02	1,888.03	8,777.08	4,956.04	1,888.03	8,777.08
Road #4	2300-2400	1:44:04	2,456.07	1,906.43	1,838.02	1,108.02	4,556.02	1,645.06	1,297.02	1,888.03	8,777.08	4,956.04	1,888.03	8,777.08
Road #5	0000-0100	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #5	0100-0200	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #5	0200-0300	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #5	0300-0400	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #5	0400-0500	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #5	0500-0600	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #5	0600-0700	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #5	0700-0800	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #5	0800-0900	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #5	0900-1000	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #5	1000-1100	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #5	1100-1200	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #5	1200-1300	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #5	1300-1400	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #5	1400-1500	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #5	1500-1600	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #5	1600-1700	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #5	1700-1800	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #5	1800-1900	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #5	1900-2000	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #5	2000-2100	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #5	2100-2200	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #5	2200-2300	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #5	2300-2400	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #6	0000-0100	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #6	0100-0200	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #6	0200-0300	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #6	0300-0400	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #6	0400-0500	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #6	0500-0600	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #6	0600-0700	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #6	0700-0800	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #6	0800-0900	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #6	0900-1000	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #6	1000-1100	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #6	1100-1200	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #6	1200-1300	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #6	1300-1400	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #6	1400-1500	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #6	1500-1600	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #6	1600-1700	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #6	1700-1800	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #6	1800-1900	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #6	1900-2000	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #6	2000-2100	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #6	2100-2200	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #6	2200-2300	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #6	2300-2400	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00	2,310.00	11,700.00	6,300.00	2,310.00	11,700.00
Road #7	0000-0100	0:14:04	3,366.00	2,595.00	2,488.00	1,488.00	5,870.00	2,160.00	1,700.00					

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Top 20-hour Emission Factors for Asphalt Mill (Table 1)														
Year 2003														
Road Name	Road ID	MO	NO _x Emission						NO Emission					
			g/m ² /hr	g/m ² /hr	g/m ² /hr	g/m ² /hr	g/m ² /hr	g/m ² /hr	g/m ² /hr	g/m ² /hr	g/m ² /hr	g/m ² /hr	g/m ² /hr	g/m ² /hr
Road 7	7	1601-120	2.88	6.9067	4.298	6.124	7.715	1.5992	3.175	4.478	2.0182	4.970	1.9767	6.2164
Road 7	7	1601-470	1.71	4.064	2.505	3.567	4.629	0.9433	1.897	2.656	1.1973	3.021	1.1973	3.8271
Road 7	7	1601-600	2.406	6.905	4.298	6.124	7.715	1.5992	3.175	4.478	2.0182	4.970	1.9767	6.2164
Road 7	7	1601-630	1.71	4.064	2.505	3.567	4.629	0.9433	1.897	2.656	1.1973	3.021	1.1973	3.8271
Road 7	7	2200-100	1.985	4.246	2.594	3.876	5.267	3.5103	4.524	9.5127	4.079	1.568	3.888	1.4054
Road 7	7	2200-210	1.5315	3.1487	1.986	3.043	4.182	1.4473	3.423	3.907	1.9893	1.464	3.038	3.038
Road 7	7	2200-430	1.5315	3.1487	1.986	3.043	4.182	1.4473	3.423	3.907	1.9893	1.464	3.038	3.038
Road 7	7	2300-000	9.995	9.5138	3.525	4.043	5.976	2.575	4.505	6.8857	4.079	1.568	3.888	1.4054
Road 7	7	2300-050	1.71	4.064	2.505	3.567	4.629	0.9433	1.897	2.656	1.1973	3.021	1.1973	3.8271
Road 8	8	0310-020	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-050	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-080	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-110	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-140	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-170	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-200	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-230	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-260	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-290	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-320	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-350	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-380	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-410	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-440	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-470	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-500	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-530	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-560	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-590	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-620	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-650	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-680	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-710	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-740	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-770	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-800	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-830	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-860	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-890	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-920	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-950	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-980	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-1010	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-1040	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-1070	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-1100	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-1130	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-1160	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-1190	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-1220	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-1250	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-1280	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-1310	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-1340	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-1370	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-1400	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-1430	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-1460	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-1490	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-1520	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-1550	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-1580	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-1610	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-1640	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-1670	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-1700	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-1730	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-1760	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-1790	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-1820	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-1850	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-1880	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-1910	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-1940	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-1970	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716
Road 8	8	0310-2000	1.226	1.895	1.406	1.3465	1.178	8.645	3.744	1.388	1.005	3.148	4.831	3.5716

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Ting Yi North Underground Quarry														
Open Road to Road Area Transition Factors for AEMMS Roadway Analysis														
Year 2043														
Road Name	Route ID	Hour	NO _x Emission						NO ₂ Emission					
			Motorbikes/mc/m			Motorbikes/mc/m			Motorbikes/mc/m			Motorbikes/mc/m		
			g/hw/h	g/hw/h	g/hw/h	g/hw/h	g/hw/h	g/hw/h	g/hw/h	g/hw/h	g/hw/h	g/hw/h	g/hw/h	
Road 11		0000-0100	1.9772	4.0472	2.0864	1.2526	0.0117	2.275	1.4805	1.052	0.4747	4.0803	3.568	4.728
Road 11		0100-0200	2.3151	4.6472	2.3856	1.4028	0.0132	2.618	1.6705	1.1857	0.5457	4.6803	4.168	5.428
Road 11		0200-0300	2.8208	5.2848	2.8848	1.6824	0.0153	3.1477	2.0431	1.3575	0.7707	5.4803	4.788	6.428
Road 11		0300-0400	3.4472	6.0472	3.5264	2.0184	0.018	3.7472	2.4605	1.6205	0.9107	6.2803	5.408	7.728
Road 11		0400-0500	4.2512	6.9336	4.2576	2.416	0.0217	4.296	3.0445	1.9327	1.0404	7.1803	6.228	9.128
Road 11		0500-0600	2.832	4.0248	2.8048	1.5384	0.0184	2.7173	1.827	0.9407	0.5238	3.9803	3.388	4.588
Road 11		0600-0700	3.4472	5.8472	3.5264	2.0184	0.0217	4.296	2.4605	1.6205	0.9107	6.2803	5.408	7.728
Road 11		0700-0800	4.0468	6.7776	4.1736	2.416	0.0246	4.836	2.8464	1.9606	1.0523	7.2617	6.228	9.128
Road 11		0800-0900	4.8512	7.8432	4.9824	2.8128	0.0288	5.5872	3.408	2.2206	1.2104	8.2617	7.048	10.528
Road 11		0900-1000	4.8192	8.1564	4.8528	2.784	0.0288	5.4996	3.2776	2.1694	1.1853	7.9417	6.812	10.488
Road 11		1000-1100	5.9312	9.996	5.8896	3.2028	0.0336	6.6312	4.0314	2.5408	1.344	9.1717	7.768	12.488
Road 11		1100-1200	6.1824	10.512	6.144	3.36	0.0352	6.912	4.248	2.688	1.4064	9.4517	8.008	12.988
Road 11		1200-1300	6.936	11.664	6.96	3.744	0.0408	7.824	4.788	3.0096	1.5648	10.6017	8.968	14.088
Road 11		1300-1400	7.9872	13.344	8.016	4.32	0.0464	9.024	5.472	3.4224	1.7232	12.1017	10.208	15.588
Road 11		1400-1500	7.9872	13.344	8.016	4.32	0.0464	9.024	5.472	3.4224	1.7232	12.1017	10.208	15.588
Road 11		1500-1600	7.9872	13.344	8.016	4.32	0.0464	9.024	5.472	3.4224	1.7232	12.1017	10.208	15.588
Road 11		1600-1700	6.936	11.664	6.96	3.744	0.0408	7.824	4.788	3.0096	1.5648	10.6017	8.968	14.088
Road 11		1700-1800	5.9312	9.996	5.8896	3.2028	0.0336	6.6312	4.0314	2.5408	1.344	9.1717	7.768	12.488
Road 11		1800-1900	5.184	8.832	5.136	2.88	0.0312	5.856	3.584	2.2206	1.2104	8.2617	7.048	10.528
Road 11		1900-2000	2.832	4.0248	2.8048	1.5384	0.0184	2.7173	1.827	0.9407	0.5238	3.9803	3.388	4.588
Road 11		2000-2100	2.7744	4.896	2.7504	1.536	0.0184	2.6112	1.7416	0.908	0.5124	3.924	3.368	4.508
Road 12		0000-0100	2.2464	4.608	2.304	1.296	0.012	2.496	1.4805	1.052	0.4747	4.0803	3.568	4.728
Road 12		0100-0200	2.688	5.2848	2.7168	1.584	0.0144	2.928	1.7205	1.1857	0.5457	4.6803	4.168	5.428
Road 12		0200-0300	3.2448	6.0472	3.286	1.92	0.0168	3.456	2.1205	1.3575	0.7707	5.4803	4.788	6.428
Road 12		0300-0400	3.8712	6.8496	3.9216	2.328	0.0204	4.0608	2.6405	1.6205	0.9107	6.2803	5.408	7.728
Road 12		0400-0500	4.6848	7.736	4.7184	2.832	0.0246	4.836	3.2405	1.9327	1.0404	7.1803	6.228	9.128
Road 12		0500-0600	2.7744	4.896	2.7504	1.536	0.0184	2.6112	1.7416	0.908	0.5124	3.924	3.368	4.508
Road 12		0600-0700	3.4472	5.8472	3.5264	2.0184	0.0217	4.296	2.4605	1.6205	0.9107	6.2803	5.408	7.728
Road 12		0700-0800	4.0468	6.7776	4.1736	2.416	0.0246	4.836	2.8464	1.9606	1.0523	7.2617	6.228	9.128
Road 12		0800-0900	4.8512	7.8432	4.9824	2.8128	0.0288	5.5872	3.408	2.2206	1.2104	8.2617	7.048	10.528
Road 12		0900-1000	4.8192	8.1564	4.8528	2.784	0.0288	5.4996	3.2776	2.1694	1.1853	7.9417	6.812	10.488
Road 12		1000-1100	5.9312	9.996	5.8896	3.2028	0.0336	6.6312	4.0314	2.5408	1.344	9.1717	7.768	12.488
Road 12		1100-1200	6.1824	10.512	6.144	3.36	0.0352	6.912	4.248	2.688	1.4064	9.4517	8.008	12.988
Road 12		1200-1300	6.936	11.664	6.96	3.744	0.0408	7.824	4.788	3.0096	1.5648	10.6017	8.968	14.088
Road 12		1300-1400	7.9872	13.344	8.016	4.32	0.0464	9.024	5.472	3.4224	1.7232	12.1017	10.208	15.588
Road 12		1400-1500	7.9872	13.344	8.016	4.32	0.0464	9.024	5.472	3.4224	1.7232	12.1017	10.208	15.588
Road 12		1500-1600	7.9872	13.344	8.016	4.32	0.0464	9.024	5.472	3.4224	1.7232	12.1017	10.208	15.588
Road 12		1600-1700	6.936	11.664	6.96	3.744	0.0408	7.824	4.788	3.0096	1.5648	10.6017	8.968	14.088
Road 12		1700-1800	5.9312	9.996	5.8896	3.2028	0.0336	6.6312	4.0314	2.5408	1.344	9.1717	7.768	12.488
Road 12		1800-1900	5.184	8.832	5.136	2.88	0.0312	5.856	3.584	2.2206	1.2104	8.2617	7.048	10.528
Road 12		1900-2000	2.832	4.0248	2.8048	1.5384	0.0184	2.7173	1.827	0.9407	0.5238	3.9803	3.388	4.588
Road 12		2000-2100	2.7744	4.896	2.7504	1.536	0.0184	2.6112	1.7416	0.908	0.5124	3.924	3.368	4.508
Road 13		0000-0100	2.2464	4.608	2.304	1.296	0.012	2.496	1.4805	1.052	0.4747	4.0803	3.568	4.728
Road 13		0100-0200	2.688	5.2848	2.7168	1.584	0.0144	2.928	1.7205	1.1857	0.5457	4.6803	4.168	5.428
Road 13		0200-0300	3.2448	6.0472	3.286	1.92	0.0168	3.456	2.1205	1.3575	0.7707	5.4803	4.788	6.428
Road 13		0300-0400	3.8712	6.8496	3.9216	2.328	0.0204	4.0608	2.6405	1.6205	0.9107	6.2803	5.408	7.728
Road 13		0400-0500	4.6848	7.736	4.7184	2.832	0.0246	4.836	3.2405	1.9327	1.0404	7.1803	6.228	9.128
Road 13		0500-0600	2.7744	4.896	2.7504	1.536	0.0184	2.6112	1.7416	0.908	0.5124	3.924	3.368	4.508
Road 13		0600-0700	3.4472	5.8472	3.5264	2.0184	0.0217	4.296	2.4605	1.6205	0.9107	6.2803	5.408	7.728
Road 13		0700-0800	4.0468	6.7776	4.1736	2.416	0.0246	4.836	2.8464	1.9606	1.0523	7.2617	6.228	9.128
Road 13		0800-0900	4.8512	7.8432	4.9824	2.8128	0.0288	5.5872	3.408	2.2206	1.2104	8.2617	7.048	10.528
Road 13		0900-1000	4.8192	8.1564	4.8528	2.784	0.0288	5.4996	3.2776	2.1694	1.1853	7.9417	6.812	10.488
Road 13		1000-1100	5.9312	9.996	5.8896	3.2028	0.0336	6.6312	4.0314	2.5408	1.344	9.1717	7.768	12.488
Road 13		1100-1200	6.1824	10.512	6.144	3.36	0.0352	6.912	4.248	2.688	1.4064	9.4517	8.008	12.988
Road 13		1200-1300	6.936	11.664	6.96	3.744	0.0408	7.824	4.788	3.0096	1.5648	10.6017	8.968	14.088
Road 13		1300-1400	7.9872	13.344	8.016	4.32	0.0464	9.024	5.472	3.4224	1.7232	12.1017	10.208	15.588
Road 13		1400-1500	7.9872	13.344	8.016	4.32	0.0464	9.024	5.472	3.4224	1.7232	12.1017	10.208	15.588
Road 13		1500-1600	7.9872	13.344	8.016	4.32	0.0464	9.024	5.472	3.4224	1.7232	12.1017	10.208	15.588
Road 13		1600-1700	6.936	11.664	6.96	3.744	0.0408	7.824	4.788	3.0096	1.5648	10.6017	8.968	14.088
Road 13		1700-1800	5.9312	9.996	5.8896	3.2028	0.0336	6.6312	4.0314	2.5408	1.344	9.1717	7.768	12.488
Road 13		1800-1900	5.184	8.832	5.136	2.88	0.0312	5.856	3.584	2.2206	1.2104	8.2617	7.048	10.528
Road 13		1900-2000	2.832	4.0248	2.8048	1.5384	0.0184	2.7173	1.827	0.9407	0.5238	3.9803	3.388	4.588
Road 13		2000-2100	2.7744	4.896	2.7504	1.536	0.0184	2.6112	1.7416	0.908	0.5124	3.924	3.368	4.508
Road 14		0000-0100	2.2464	4.608	2.304	1.296	0.012	2.496	1.4805	1.052	0.4747	4.0803	3.568	4.728
Road 14		0100-0200	2.688	5.2848	2.7168	1.584	0.0144	2.928	1.7205	1.1857	0.5457	4.6803	4.168	5.428
Road 14		0200-0300	3.2448	6.0472	3.286	1.92	0.0168	3.456	2.1205	1.3575	0.7707	5.4803	4.788	6.428
Road 14		0300-0400	3.8712	6.8496	3.9216	2.328	0.0204	4.0608	2.6405	1.6205	0.9107	6.2803	5.408	7.728
Road 14		0400-0500	4.6848	7.736	4.7184	2.832	0.0246	4.836	3.2405	1.9327	1.0404	7.1803	6.228	9.128
Road 14		0500-0600	2.7744	4.896	2.7504	1.536	0.0184	2.6112	1.7416	0.908	0.5124	3.924	3.368	4.508
Road 14		0600-0700	3.4472	5.8472	3.5264	2.0184	0.0217	4.296	2.4605	1.6205	0.9107	6.2803	5.408	7.728
Road 14		0700-0800	4.0468	6.7776	4.1736	2.416	0.0246	4.836	2.8464	1.9606	1.0523	7.2617	6.228	9.128
Road 14		0800-0900	4.8512	7.8432	4.9824	2.8128	0.0288	5.5872	3.408	2.2206	1.2104	8.2617	7.048	10.528
Road 14		0900-1000	4.8192	8.1564	4.8528	2.784	0.0288	5.4996	3.2776	2.1694	1.1853	7.9417	6.812	10.488
Road 14		1000-1100	5.9312	9.996	5.8896	3.2028	0.0336	6.6312	4.0314	2.5408	1.344	9.1717	7.768	12.488
Road 14		1100-1200	6.1824	10.512	6.144	3.36	0.0352	6.912	4.248	2.688	1.4064	9.4517	8.008	12.988
Road 14		1200-1300	6.936	11.664	6.96	3.744	0.0408	7.824	4.788	3.0096	1.5648	10.6017	8.968	14.088
Road 14		1300-1400												

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Open Top North End Environment Factor														
Year 2003														
Road Name	Road ID	Hwy	NO _x Emission						NO _y Emission					
			g/mi/hour	g/hour	lb/day	lb/year	ton/year	g/mi/hour	g/hour	lb/day	lb/year	ton/year		
Road 14	14000	9900	3.11E-02	8.89E-07	5.52E-03	1.58E-01	5.71E-02	2.66E-02	7.47E-03	4.98E-06	2.61E-02	4.68E-03	1.18E-07	2.22E-04
Road 14	14000	9900	3.51E-02	9.91E-07	6.25E-03	1.76E-01	6.32E-02	2.77E-02	8.49E-03	5.44E-06	2.92E-02	5.24E-03	1.34E-07	2.55E-04
Road 14	14000	9900	3.90E-02	8.93E-07	5.52E-03	1.58E-01	5.71E-02	1.88E-02	1.74E-03	4.18E-06	2.61E-02	4.68E-03	1.18E-07	2.22E-04
Road 14	14000	9900	4.29E-02	9.95E-07	6.25E-03	1.76E-01	6.32E-02	2.77E-02	8.49E-03	5.44E-06	2.92E-02	5.24E-03	1.34E-07	2.55E-04
Road 14	14000	9900	4.68E-02	1.17E-06	7.27E-03	2.03E-01	7.39E-02	3.24E-02	9.17E-03	5.12E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	5.07E-02	1.28E-06	7.99E-03	2.20E-01	7.92E-02	3.48E-02	2.76E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	5.46E-02	1.38E-06	8.61E-03	2.37E-01	8.42E-02	3.79E-02	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	5.85E-02	1.51E-06	9.23E-03	2.54E-01	9.06E-02	4.10E-02	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	6.24E-02	1.61E-06	9.85E-03	2.71E-01	9.79E-02	4.41E-02	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	6.63E-02	1.71E-06	1.05E-02	2.88E-01	1.04E-02	4.72E-02	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	7.02E-02	1.81E-06	1.11E-02	3.05E-01	1.11E-02	5.03E-02	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	7.41E-02	1.91E-06	1.17E-02	3.22E-01	1.17E-02	5.34E-02	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	7.80E-02	2.01E-06	1.23E-02	3.39E-01	1.23E-02	5.65E-02	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	8.19E-02	2.11E-06	1.29E-02	3.56E-01	1.29E-02	5.96E-02	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	8.58E-02	2.21E-06	1.35E-02	3.73E-01	1.35E-02	6.27E-02	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	8.97E-02	2.31E-06	1.41E-02	3.90E-01	1.41E-02	6.58E-02	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	9.36E-02	2.41E-06	1.47E-02	4.07E-01	1.47E-02	6.89E-02	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	9.75E-02	2.51E-06	1.53E-02	4.24E-01	1.53E-02	7.20E-02	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	1.01E-01	2.61E-06	1.59E-02	4.41E-01	1.59E-02	7.51E-02	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	1.05E-01	2.71E-06	1.65E-02	4.58E-01	1.65E-02	7.82E-02	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	1.09E-01	2.81E-06	1.71E-02	4.75E-01	1.71E-02	8.13E-02	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	1.13E-01	2.91E-06	1.77E-02	4.92E-01	1.77E-02	8.44E-02	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	1.17E-01	3.01E-06	1.83E-02	5.09E-01	1.83E-02	8.75E-02	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	1.21E-01	3.11E-06	1.89E-02	5.26E-01	1.89E-02	9.06E-02	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	1.25E-01	3.21E-06	1.95E-02	5.43E-01	1.95E-02	9.37E-02	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	1.29E-01	3.31E-06	2.01E-02	5.60E-01	2.01E-02	9.68E-02	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	1.33E-01	3.41E-06	2.07E-02	5.77E-01	2.07E-02	9.99E-02	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	1.37E-01	3.51E-06	2.13E-02	5.94E-01	2.13E-02	1.03E-01	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	1.41E-01	3.61E-06	2.19E-02	6.11E-01	2.19E-02	1.06E-01	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	1.45E-01	3.71E-06	2.25E-02	6.28E-01	2.25E-02	1.09E-01	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	1.49E-01	3.81E-06	2.31E-02	6.45E-01	2.31E-02	1.12E-01	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	1.53E-01	3.91E-06	2.37E-02	6.62E-01	2.37E-02	1.15E-01	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	1.57E-01	4.01E-06	2.43E-02	6.79E-01	2.43E-02	1.18E-01	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	1.61E-01	4.11E-06	2.49E-02	6.96E-01	2.49E-02	1.21E-01	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	1.65E-01	4.21E-06	2.55E-02	7.13E-01	2.55E-02	1.24E-01	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	1.69E-01	4.31E-06	2.61E-02	7.30E-01	2.61E-02	1.27E-01	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	1.73E-01	4.41E-06	2.67E-02	7.47E-01	2.67E-02	1.30E-01	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	1.77E-01	4.51E-06	2.73E-02	7.64E-01	2.73E-02	1.33E-01	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	1.81E-01	4.61E-06	2.79E-02	7.81E-01	2.79E-02	1.36E-01	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	1.85E-01	4.71E-06	2.85E-02	7.98E-01	2.85E-02	1.39E-01	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	1.89E-01	4.81E-06	2.91E-02	8.15E-01	2.91E-02	1.42E-01	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	1.93E-01	4.91E-06	2.97E-02	8.32E-01	2.97E-02	1.45E-01	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	1.97E-01	5.01E-06	3.03E-02	8.49E-01	3.03E-02	1.48E-01	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	2.01E-01	5.11E-06	3.09E-02	8.66E-01	3.09E-02	1.51E-01	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	2.05E-01	5.21E-06	3.15E-02	8.83E-01	3.15E-02	1.54E-01	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	2.09E-01	5.31E-06	3.21E-02	9.00E-01	3.21E-02	1.57E-01	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	2.13E-01	5.41E-06	3.27E-02	9.17E-01	3.27E-02	1.60E-01	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	2.17E-01	5.51E-06	3.33E-02	9.34E-01	3.33E-02	1.63E-01	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	2.21E-01	5.61E-06	3.39E-02	9.51E-01	3.39E-02	1.66E-01	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	2.25E-01	5.71E-06	3.45E-02	9.68E-01	3.45E-02	1.69E-01	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	2.29E-01	5.81E-06	3.51E-02	9.85E-01	3.51E-02	1.72E-01	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	2.33E-01	5.91E-06	3.57E-02	1.00E-01	3.57E-02	1.75E-01	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	2.37E-01	6.01E-06	3.63E-02	1.02E-01	3.63E-02	1.78E-01	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	2.41E-01	6.11E-06	3.69E-02	1.04E-01	3.69E-02	1.81E-01	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	2.45E-01	6.21E-06	3.75E-02	1.06E-01	3.75E-02	1.84E-01	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	2.49E-01	6.31E-06	3.81E-02	1.08E-01	3.81E-02	1.87E-01	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	2.53E-01	6.41E-06	3.87E-02	1.10E-01	3.87E-02	1.90E-01	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	2.57E-01	6.51E-06	3.93E-02	1.12E-01	3.93E-02	1.93E-01	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	2.61E-01	6.61E-06	3.99E-02	1.14E-01	3.99E-02	1.96E-01	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	2.65E-01	6.71E-06	4.05E-02	1.16E-01	4.05E-02	1.99E-01	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	2.69E-01	6.81E-06	4.11E-02	1.18E-01	4.11E-02	2.02E-01	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	2.73E-01	6.91E-06	4.17E-02	1.20E-01	4.17E-02	2.05E-01	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	2.77E-01	7.01E-06	4.23E-02	1.22E-01	4.23E-02	2.08E-01	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	2.81E-01	7.11E-06	4.29E-02	1.24E-01	4.29E-02	2.11E-01	2.77E-03	5.44E-06	3.18E-02	5.65E-03	1.54E-07	3.55E-04
Road 14	14000	9900	2.85E-01	7.21E-06	4.35E-02	1.26E-01	4.35E-02	2.14E-01	2.77E-03	5.44E-06	3.18E-02	5.65E-03		

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TSS for TSS														
Open Road and Base Emission Factors for ARB/CDR model (Preliminary)														
Year 2004														
Road Name	Route ID	Hour	NO _x Emission						NO _x Emission					
			Motorcycle/g/h/v			Motorcycle/g/h/v			Motorcycle/g/h/v			Motorcycle/g/h/v		
			g/h/v	tonne/hr	g/h/v	tonne/hr	g/h/v	tonne/hr	g/h/v	tonne/hr	g/h/v	tonne/hr	g/h/v	tonne/hr
Road 17	17	1600-1700	3.2892	1.415e-06	1.13142	1.925e-06	2.1198	4.475e-07	2.4051	6.545e-06	6.9862	7.115e-07	1.9147	2.044e-06
Road 17	17	1700-1800	1.5894	6.921e-07	5.52912	9.459e-07	7.42808	1.554e-06	8.7755	2.415e-05	2.5557	3.555e-07	9.8157	1.066e-06
Road 17	17	1800-1900	1.5894	6.921e-07	5.52912	9.459e-07	7.42808	1.554e-06	8.7755	2.415e-05	2.5557	3.555e-07	9.8157	1.066e-06
Road 17	17	1900-2000	1.5894	6.921e-07	5.52912	9.459e-07	7.42808	1.554e-06	8.7755	2.415e-05	2.5557	3.555e-07	9.8157	1.066e-06
Road 17	17	2000-2100	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	2100-2200	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	2200-2300	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	2300-2400	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	2400-2500	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	2500-2600	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	2600-2700	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	2700-2800	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	2800-2900	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	2900-3000	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	3000-3100	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	3100-3200	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	3200-3300	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	3300-3400	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	3400-3500	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	3500-3600	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	3600-3700	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	3700-3800	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	3800-3900	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	3900-4000	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	4000-4100	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	4100-4200	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	4200-4300	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	4300-4400	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	4400-4500	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	4500-4600	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	4600-4700	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	4700-4800	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	4800-4900	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	4900-5000	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	5000-5100	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	5100-5200	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	5200-5300	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	5300-5400	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	5400-5500	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	5500-5600	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	5600-5700	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	5700-5800	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	5800-5900	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	5900-6000	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	6000-6100	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	6100-6200	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	6200-6300	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	6300-6400	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	6400-6500	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	6500-6600	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	6600-6700	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	6700-6800	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	6800-6900	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	6900-7000	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	7000-7100	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	7100-7200	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	7200-7300	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	7300-7400	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	7400-7500	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	7500-7600	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	7600-7700	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	7700-7800	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	7800-7900	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	7900-8000	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	8000-8100	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	8100-8200	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	8200-8300	9.3111	4.048e-07	1.5881	5.112e-07	8.2127	8.775	6.1110	8.700e-07	1.051	4.459e-07	1.8951	4.155e-06
Road 17	17	8300-8400	9.3111	4.048e-07	1.5881	5								

L:\Secure\Environment Projects\60733229\1.01\Others\Air\Modellink\Appendix\Traffic\Open Road\Appendix 3.5.4 Emission Factor in 2043.xlsx

Open Road North Underway														
Open Road 2 hour Emission Factors for Arctic Roadway (February)														
Year 2003														
Road Name	Road ID	m/s	NO _x Emission						NO Emission					
			g/km/h	g/s	g/min	g/hour	g/s	g/min	g/hour	g/s	g/min	g/hour		
Road 21	21	00000000	1.056	0.7858	3.598	0.412	5.515	0.1769	0.288	2.428	0.723	2.862	1.938	9.316
Road 21	21	00000001	1.266	0.943	4.256	0.492	6.583	0.209	0.342	2.897	0.856	3.336	2.262	10.91
Road 21	21	00000010	1.412	1.058	4.734	0.538	7.317	0.231	0.376	3.192	0.943	3.624	2.468	12.06
Road 21	21	00000020	1.588	1.182	5.256	0.592	8.044	0.256	0.412	3.528	1.043	3.968	2.692	13.26
Road 21	21	00000030	1.792	1.326	5.836	0.652	8.788	0.284	0.452	3.888	1.152	4.328	2.932	14.52
Road 21	21	00000040	1.988	1.492	6.436	0.716	9.544	0.312	0.492	4.268	1.268	4.696	3.176	15.84
Road 21	21	00000050	2.192	1.636	7.036	0.776	10.288	0.34	0.532	4.628	1.388	5.072	3.428	17.16
Road 21	21	00000060	2.408	1.792	7.636	0.844	11.032	0.368	0.572	4.988	1.508	5.448	3.688	18.48
Road 21	21	00000070	2.612	1.936	8.236	0.908	11.776	0.396	0.612	5.348	1.628	5.824	3.948	19.8
Road 21	21	00000080	2.816	2.08	8.836	0.972	12.52	0.424	0.652	5.708	1.748	6.2	4.208	21.12
Road 21	21	00000090	3.02	2.224	9.436	1.036	13.264	0.452	0.692	6.068	1.868	6.576	4.468	22.44
Road 21	21	00000100	3.224	2.368	10.036	1.1	14.008	0.48	0.732	6.428	1.988	6.952	4.728	23.76
Road 21	21	00000110	3.428	2.512	10.636	1.164	14.752	0.508	0.772	6.788	2.108	7.328	4.988	25.08
Road 21	21	00000120	3.632	2.656	11.236	1.228	15.496	0.536	0.812	7.148	2.228	7.704	5.248	26.4
Road 21	21	00000130	3.836	2.8	11.836	1.292	16.24	0.564	0.852	7.508	2.348	8.08	5.508	27.72
Road 21	21	00000140	4.04	2.944	12.436	1.356	16.984	0.592	0.892	7.868	2.468	8.456	5.768	29.04
Road 21	21	00000150	4.244	3.088	13.036	1.42	17.728	0.62	0.932	8.228	2.588	8.832	6.028	30.36
Road 21	21	00000160	4.448	3.232	13.636	1.484	18.472	0.648	0.972	8.588	2.708	9.208	6.288	31.68
Road 21	21	00000170	4.652	3.376	14.236	1.548	19.216	0.676	1.012	8.948	2.828	9.584	6.548	33
Road 21	21	00000180	4.856	3.52	14.836	1.612	19.96	0.704	1.052	9.308	2.948	9.96	6.808	34.32
Road 21	21	00000190	5.06	3.664	15.436	1.676	20.704	0.732	1.092	9.668	3.068	10.34	7.068	35.64
Road 21	21	00000200	5.264	3.808	16.036	1.74	21.448	0.76	1.132	10.028	3.188	10.72	7.328	36.96
Road 21	21	00000210	5.468	3.952	16.636	1.804	22.192	0.788	1.172	10.388	3.308	11.1	7.588	38.28
Road 21	21	00000220	5.672	4.096	17.236	1.868	22.936	0.816	1.212	10.748	3.428	11.48	7.848	39.6
Road 21	21	00000230	5.876	4.24	17.836	1.932	23.68	0.844	1.252	11.108	3.548	11.86	8.108	40.92
Road 21	21	00000240	6.08	4.384	18.436	2.0	24.424	0.872	1.292	11.468	3.668	12.24	8.368	42.24
Road 21	21	00000250	6.28	4.528	19.036	2.064	25.168	0.9	1.332	11.828	3.788	12.62	8.628	43.56
Road 21	21	00000260	6.484	4.672	19.636	2.128	25.912	0.928	1.372	12.188	3.908	13.01	8.888	44.88
Road 21	21	00000270	6.688	4.816	20.236	2.192	26.656	0.956	1.412	12.548	4.028	13.39	9.148	46.2
Road 21	21	00000280	6.892	4.96	20.836	2.256	27.4	0.984	1.452	12.908	4.148	13.77	9.408	47.52
Road 21	21	00000290	7.096	5.104	21.436	2.32	28.144	1.012	1.492	13.268	4.268	14.15	9.668	48.84
Road 21	21	00000300	7.296	5.248	22.036	2.384	28.888	1.04	1.532	13.628	4.388	14.53	9.928	50.16
Road 21	21	00000310	7.5	5.392	22.636	2.448	29.632	1.068	1.572	13.988	4.508	14.91	10.188	51.48
Road 21	21	00000320	7.704	5.536	23.236	2.512	30.376	1.096	1.612	14.348	4.628	15.29	10.448	52.8
Road 21	21	00000330	7.908	5.68	23.836	2.576	31.12	1.124	1.652	14.708	4.748	15.67	10.708	54.12
Road 21	21	00000340	8.112	5.824	24.436	2.64	31.864	1.152	1.692	15.068	4.868	16.05	10.968	55.44
Road 21	21	00000350	8.316	5.968	25.036	2.704	32.608	1.18	1.732	15.428	4.988	16.43	11.228	56.76
Road 21	21	00000360	8.52	6.112	25.636	2.768	33.352	1.208	1.772	15.788	5.108	16.81	11.488	58.08
Road 21	21	00000370	8.724	6.256	26.236	2.832	34.096	1.236	1.812	16.148	5.228	17.19	11.748	59.4
Road 21	21	00000380	8.928	6.4	26.836	2.896	34.84	1.264	1.852	16.508	5.348	17.57	12.008	60.72
Road 21	21	00000390	9.132	6.544	27.436	2.96	35.584	1.292	1.892	16.868	5.468	17.95	12.268	62.04
Road 21	21	00000400	9.336	6.688	28.036	3.024	36.328	1.32	1.932	17.228	5.588	18.33	12.528	63.36
Road 21	21	00000410	9.54	6.832	28.636	3.088	37.072	1.348	1.972	17.588	5.708	18.71	12.788	64.68
Road 21	21	00000420	9.744	6.976	29.236	3.152	37.816	1.376	2.012	17.948	5.828	19.09	13.048	66
Road 21	21	00000430	9.948	7.12	29.836	3.216	38.56	1.404	2.052	18.308	5.948	19.47	13.308	67.32
Road 21	21	00000440	10.152	7.264	30.436	3.28	39.304	1.432	2.092	18.668	6.068	19.85	13.568	68.64
Road 21	21	00000450	10.356	7.408	31.036	3.344	40.048	1.46	2.132	19.028	6.188	20.23	13.828	69.96
Road 21	21	00000460	10.56	7.552	31.636	3.408	40.792	1.488	2.172	19.388	6.308	20.61	14.088	71.28
Road 21	21	00000470	10.764	7.696	32.236	3.472	41.536	1.516	2.212	19.748	6.428	20.99	14.348	72.6
Road 21	21	00000480	10.968	7.84	32.836	3.536	42.28	1.544	2.252	20.108	6.548	21.37	14.608	73.92
Road 21	21	00000490	11.172	7.984	33.436	3.6	43.024	1.572	2.292	20.468	6.668	21.75	14.868	75.24
Road 21	21	00000500	11.376	8.128	34.036	3.664	43.768	1.6	2.332	20.828	6.788	22.13	15.128	76.56
Road 21	21	00000510	11.58	8.272	34.636	3.728	44.512	1.628	2.372	21.188	6.908	22.51	15.388	77.88
Road 21	21	00000520	11.784	8.416	35.236	3.792	45.256	1.656	2.412	21.548	7.028	22.89	15.648	79.2
Road 21	21	00000530	11.988	8.56	35.836	3.856	46.0	1.684	2.452	21.908	7.148	23.27	15.908	80.52
Road 21	21	00000540	12.192	8.704	36.436	3.92	46.744	1.712	2.492	22.268	7.268	23.65	16.168	81.84
Road 21	21	00000550	12.396	8.848	37.036	3.984	47.488	1.74	2.532	22.628	7.388	24.03	16.428	83.16
Road 21	21	00000560	12.6	8.992	37.636	4.048	48.232	1.768	2.572	22.988	7.508	24.41	16.688	84.48
Road 21	21	00000570	12.804	9.136	38.236	4.112	48.976	1.796	2.612	23.348	7.628	24.79	16.948	85.8
Road 21	21	00000580	13.008	9.28	38.836	4.176	49.72	1.824	2.652	23.708	7.748	25.17	17.208	87.12
Road 21	21	00000590	13.212	9.424	39.436	4.24	50.464	1.852	2.692	24.068	7.868	25.55	17.468	88.44
Road 21	21	00000600	13.416	9.568	40.036	4.304	51.208	1.88	2.732	24.428	7.988	25.93	17.728	89.76
Road 21	21	00000610	13.62	9.712	40.636	4.368	51.952	1.908	2.772	24.788	8.108	26.31	17.988	91.08
Road 21	21	00000620	13.824	9.856	41.236	4.432	52.696	1.936	2.812	25.148	8.228	26.69	18.248	92.4
Road 21	21	00000630	14.028	10.0	41.836	4.496	53.44	1.964	2.852	25.508	8.348	27.07	18.508	93.72
Road 21	21	00000640	14.232	10.144	42.436	4.56	54.184	1.992	2.892	25.868	8.468	27.45	18.768	95.04
Road 21	21	00000650	14.436	10.288	43.036	4.624	54.928	2.02	2.932	26.228	8.588	27.83	19.028	96.36
Road 21	21	00000660	14.64	10.432	43.636	4.688	55.672	2.048	2.972	26.588	8.708	28.21	19.288	97.68
Road 21	21	00000670	14.844	10.576	44.236	4.752	56.416	2.076	3.012	26.948	8.828	28.59	19.548	99
Road 21	21	00000680	15.048	10.72	44.836	4.816	57.16	2.104	3.052	27.308	8.948	28.97	19.808	100.32
Road 21	21	00000690	15.252	10.864	45.436	4.88	57.904	2.132	3.092	27.668	9.068	29.35	20.068	101.64
Road 21	21	00000700	15.456	11.008	46.036	4.944	58.648	2.16	3.132	28.028	9.188	29.73	20.328	102.96
Road 21	21	00000710	15.66	11.152	46.636	5.008	59.392	2.188	3.172	28.388	9.308	30.11	20.588	104.28
Road 21	21	00000720	15.864	11.296	47.236	5.072	60.136	2.216	3.212	28.748	9.428	30.49	20.848	105.6
Road 21	21	00000730	16.068	11.44	47.836	5.136	60.88	2.244	3.252	29.108	9.548	30.87	21.108	106.92
Road 21	21	00000740	16.272	11.584	48.436	5.2	61.624	2.272	3.292	29.468	9.668	31.25	21.368	108.24
Road 21	21	00000750	16.476	11.728	49.036	5.264	62.368	2.3	3.332	29.828	9.788	31.63	21.628	109.56
Road 21	21	00000760	16.68	11.872	49.636	5.328	63.112	2.328	3.372	30.188	9.908	32.01	21.888	110.88
Road 21	21	00000770	16.884	12.016</										

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Twin Y North Underway Query														
Open Read Data and Translation Factors for AUGUST 2002 Preliminary Year 2003														
Road Name	Route ID	Hour	Methylenetetrahydrofolate				NO ₂ Enzymes				NO ₂ Enzymes			
			g/m ³ /hr	g/m ³	nmole/hr	nmole/hr	g/m ³ /hr	g/m ³	nmole/hr	nmole/hr	g/m ³ /hr	g/m ³	nmole/hr	nmole/hr
Road #24	24	0800-0900	1.26E+01	2.44E+07	2.37E+04	4.65E+01	8.02E+07	6.25E+04	5.81E+03	1.15E+06	1.05E+03	1.32E+03	2.56E+04	2.93E+05
Road #24	24	0900-1000	1.28E+01	2.46E+07	2.39E+04	4.67E+01	8.04E+07	6.26E+04	5.83E+03	1.16E+06	1.06E+03	1.33E+03	2.58E+04	2.95E+05
Road #24	24	1000-1100	1.31E+01	2.49E+07	2.42E+04	4.70E+01	8.07E+07	6.29E+04	5.86E+03	1.17E+06	1.07E+03	1.34E+03	2.60E+04	2.97E+05
Road #24	24	1100-1200	1.34E+01	2.52E+07	2.45E+04	4.73E+01	8.10E+07	6.32E+04	5.89E+03	1.18E+06	1.08E+03	1.35E+03	2.62E+04	2.99E+05
Road #24	24	1200-1300	1.37E+01	2.55E+07	2.48E+04	4.76E+01	8.13E+07	6.35E+04	5.92E+03	1.19E+06	1.09E+03	1.36E+03	2.64E+04	3.01E+05
Road #24	24	1300-1400	1.40E+01	2.58E+07	2.51E+04	4.79E+01	8.16E+07	6.38E+04	5.95E+03	1.20E+06	1.10E+03	1.37E+03	2.66E+04	3.03E+05
Road #24	24	1400-1500	1.43E+01	2.61E+07	2.54E+04	4.82E+01	8.19E+07	6.41E+04	5.98E+03	1.21E+06	1.11E+03	1.38E+03	2.68E+04	3.05E+05
Road #24	24	1500-1600	1.46E+01	2.64E+07	2.57E+04	4.85E+01	8.22E+07	6.44E+04	6.01E+03	1.22E+06	1.12E+03	1.39E+03	2.70E+04	3.07E+05
Road #24	24	1600-1700	1.49E+01	2.67E+07	2.60E+04	4.88E+01	8.25E+07	6.47E+04	6.04E+03	1.23E+06	1.13E+03	1.40E+03	2.72E+04	3.09E+05
Road #24	24	1700-1800	1.52E+01	2.70E+07	2.63E+04	4.91E+01	8.28E+07	6.50E+04	6.07E+03	1.24E+06	1.14E+03	1.40E+03	2.74E+04	3.11E+05
Road #24	24	1800-1900	1.55E+01	2.73E+07	2.66E+04	4.94E+01	8.31E+07	6.53E+04	6.10E+03	1.25E+06	1.15E+03	1.42E+03	2.76E+04	3.13E+05
Road #24	24	1900-2000	1.58E+01	2.76E+07	2.69E+04	4.97E+01	8.34E+07	6.56E+04	6.13E+03	1.26E+06	1.16E+03	1.43E+03	2.78E+04	3.15E+05
Road #24	24	2000-2100	1.61E+01	2.79E+07	2.72E+04	5.00E+01	8.37E+07	6.59E+04	6.16E+03	1.27E+06	1.17E+03	1.44E+03	2.80E+04	3.17E+05
Road #24	24	2100-2200	1.64E+01	2.82E+07	2.75E+04	5.03E+01	8.40E+07	6.62E+04	6.19E+03	1.28E+06	1.18E+03	1.45E+03	2.82E+04	3.19E+05
Road #24	24	2200-2300	1.67E+01	2.85E+07	2.78E+04	5.06E+01	8.43E+07	6.65E+04	6.22E+03	1.29E+06	1.19E+03	1.46E+03	2.84E+04	3.21E+05
Road #24	24	2300-2400	1.70E+01	2.88E+07	2.81E+04	5.09E+01	8.46E+07	6.68E+04	6.25E+03	1.30E+06	1.20E+03	1.47E+03	2.86E+04	3.23E+05
Road #25	25	0000-0100	1.01E+01	4.50E+06	4.18E+03	7.17E+03	1.43E+07	1.51E+04	4.74E+01	2.07E+01	9.91E+04	1.20E+02	5.29E+04	4.86E+06
Road #25	25	0100-0200	1.04E+01	4.59E+06	4.26E+03	7.25E+03	1.45E+07	1.53E+04	4.78E+01	2.10E+01	1.01E+05	1.22E+02	5.34E+04	4.93E+06
Road #25	25	0200-0300	1.07E+01	4.68E+06	4.34E+03	7.33E+03	1.47E+07	1.55E+04	4.81E+01	2.13E+01	1.02E+05	1.24E+02	5.39E+04	5.00E+06
Road #25	25	0300-0400	1.10E+01	4.77E+06	4.42E+03	7.41E+03	1.49E+07	1.57E+04	4.84E+01	2.16E+01	1.03E+05	1.26E+02	5.44E+04	5.07E+06
Road #25	25	0400-0500	1.13E+01	4.86E+06	4.50E+03	7.49E+03	1.51E+07	1.59E+04	4.87E+01	2.19E+01	1.04E+05	1.28E+02	5.49E+04	5.14E+06
Road #25	25	0500-0600	1.16E+01	4.95E+06	4.58E+03	7.57E+03	1.53E+07	1.61E+04	4.90E+01	2.22E+01	1.05E+05	1.30E+02	5.54E+04	5.21E+06
Road #25	25	0600-0700	1.19E+01	5.04E+06	4.66E+03	7.65E+03	1.55E+07	1.63E+04	4.93E+01	2.25E+01	1.06E+05	1.32E+02	5.59E+04	5.28E+06
Road #25	25	0700-0800	1.22E+01	5.13E+06	4.74E+03	7.73E+03	1.57E+07	1.65E+04	4.96E+01	2.28E+01	1.07E+05	1.34E+02	5.64E+04	5.35E+06
Road #25	25	0800-0900	1.25E+01	5.22E+06	4.82E+03	7.81E+03	1.59E+07	1.67E+04	4.99E+01	2.31E+01	1.08E+05	1.36E+02	5.69E+04	5.42E+06
Road #25	25	0900-1000	1.28E+01	5.31E+06	4.90E+03	7.89E+03	1.61E+07	1.69E+04	5.02E+01	2.34E+01	1.09E+05	1.38E+02	5.74E+04	5.49E+06
Road #25	25	1000-1100	1.31E+01	5.40E+06	4.98E+03	7.97E+03	1.63E+07	1.71E+04	5.05E+01	2.37E+01	1.10E+05	1.40E+02	5.79E+04	5.56E+06
Road #25	25	1100-1200	1.34E+01	5.49E+06	5.06E+03	8.05E+03	1.65E+07	1.73E+04	5.08E+01	2.40E+01	1.11E+05	1.42E+02	5.84E+04	5.63E+06
Road #25	25	1200-1300	1.37E+01	5.58E+06	5.14E+03	8.13E+03	1.67E+07	1.75E+04	5.11E+01	2.43E+01	1.12E+05	1.44E+02	5.89E+04	5.70E+06
Road #25	25	1300-1400	1.40E+01	5.67E+06	5.22E+03	8.21E+03	1.69E+07	1.77E+04	5.14E+01	2.46E+01	1.13E+05	1.46E+02	5.94E+04	5.77E+06
Road #25	25	1400-1500	1.43E+01	5.76E+06	5.30E+03	8.29E+03	1.71E+07	1.79E+04	5.17E+01	2.49E+01	1.14E+05	1.48E+02	5.99E+04	5.84E+06
Road #25	25	1500-1600	1.46E+01	5.85E+06	5.38E+03	8.37E+03	1.73E+07	1.81E+04	5.20E+01	2.52E+01	1.15E+05	1.50E+02	6.04E+04	5.91E+06
Road #25	25	1600-1700	1.49E+01	5.94E+06	5.46E+03	8.45E+03	1.75E+07	1.83E+04	5.23E+01	2.55E+01	1.16E+05	1.52E+02	6.09E+04	5.98E+06
Road #25	25	1700-1800	1.52E+01	6.03E+06	5.54E+03	8.53E+03	1.77E+07	1.85E+04	5.26E+01	2.58E+01	1.17E+05	1.54E+02	6.14E+04	6.05E+06
Road #25	25	1800-1900	1.55E+01	6.12E+06	5.62E+03	8.61E+03	1.79E+07	1.87E+04	5.29E+01	2.61E+01	1.18E+05	1.56E+02	6.19E+04	6.12E+06
Road #25	25	1900-2000	1.58E+01	6.21E+06	5.70E+03	8.69E+03	1.81E+07	1.89E+04	5.32E+01	2.64E+01	1.19E+05	1.58E+02	6.24E+04	6.19E+06
Road #25	25	2000-2100	1.61E+01	6.30E+06	5.78E+03	8.77E+03	1.83E+07	1.91E+04	5.35E+01	2.67E+01	1.20E+05	1.60E+02	6.29E+04	6.26E+06
Road #25	25	2100-2200	1.64E+01	6.39E+06	5.86E+03	8.85E+03	1.85E+07	1.93E+04	5.38E+01	2.70E+01	1.21E+05	1.62E+02	6.34E+04	6.33E+06
Road #25	25	2200-2300	1.67E+01	6.48E+06	5.94E+03	8.93E+03	1.87E+07	1.95E+04	5.41E+01	2.73E+01	1.22E+05	1.64E+02	6.39E+04	6.40E+06
Road #25	25	2300-2400	1.70E+01	6.57E+06	6.02E+03	9.01E+03	1.89E+07	1.97E+04	5.44E+01	2.76E+01	1.23E+05	1.66E+02	6.44E+04	6.47E+06
Road #26	26	0000-0100	1.01E+01	4.50E+06	4.18E+03	7.17E+03	1.43E+07	1.51E+04	4.74E+01	2.07E+01	9.91E+04	1.20E+02	5.29E+04	4.86E+06
Road #26	26	0100-0200	1.04E+01	4.59E+06	4.26E+03	7.25E+03	1.45E+07	1.53E+04	4.78E+01	2.10E+01	1.01E+05	1.22E+02	5.34E+04	4.93E+06
Road #26	26	0200-0300	1.07E+01	4.68E+06	4.34E+03	7.33E+03	1.47E+07	1.55E+04	4.81E+01	2.13E+01	1.02E+05	1.24E+02	5.39E+04	5.00E+06
Road #26	26	0300-0400	1.10E+01	4.77E+06	4.42E+03	7.41E+03	1.49E+07	1.57E+04	4.84E+01	2.16E+01	1.03E+05	1.26E+02	5.44E+04	5.07E+06
Road #26	26	0400-0500	1.13E+01	4.86E+06	4.50E+03	7.49E+03	1.51E+07	1.59E+04	4.87E+01	2.19E+01	1.04E+05	1.28E+02	5.49E+04	5.14E+06
Road #26	26	0500-0600	1.16E+01	4.95E+06	4.58E+03	7.57E+03	1.53E+07	1.61E+04	4.90E+01	2.22E+01	1.05E+05	1.30E+02	5.54E+04	5.21E+06
Road #26	26	0600-0700	1.19E+01	5.04E+06	4.66E+03	7.65E+03	1.55E+07	1.63E+04	4.93E+01	2.25E+01	1.06E+05	1.32E+02	5.59E+04	5.28E+06
Road #26	26	0700-0800	1.22E+01	5.13E+06	4.74E+03	7.73E+03	1.57E+07	1.65E+04	4.96E+01	2.28E+01	1.07E+05	1.34E+02	5.64E+04	5.35E+06
Road #26	26	0800-0900	1.25E+01	5.22E+06	4.82E+03	7.81E+03	1.59E+07	1.67E+04	4.99E+01	2.31E+01	1.08E+05	1.36E+02	5.69E+04	5.42E+06
Road #26	26	0900-1000	1.28E+01	5.31E+06	4.90E+03	7.89E+03	1.61E+07	1.69E+04	5.02E+01	2.34E+01	1.09E+05	1.38E+02	5.74E+04	5.49E+06
Road #26	26	1000-1100	1.31E+01	5.40E+06	4.98E+03	7.97E+03	1.63E+07	1.71E+04	5.05E+01	2.37E+01	1.10E+05	1.40E+02	5.79E+04	5.56E+06
Road #26	26	1100-1200	1.34E+01	5.49E+06	5.06E+03	8.05E+03	1.65E+07	1.73E+04	5.08E+01	2.40E+01	1.11E+05	1.42E+02	5.84E+04	5.63E+06
Road #26	26	1200-1300	1.37E+01	5.58E+06	5.14E+03	8.13E+03	1.67E+07	1.75E+04	5.11E+01	2.43E+01	1.12E+05	1.44E+02	5.89E+04	5.70E+06
Road #26	26	1300-1400	1.40E+01	5.67E+06	5.22E+03	8.21E+03	1.69E+07	1.77E+04	5.14E+01	2.46E+01	1.13E+05	1.46E+02	5.94E+04	5.77E+06
Road #26	26	1400-1500	1.43E+01	5.76E+06	5.30E+03	8.29E+03	1.71E+07	1.79E+04	5.17E+01	2.49E+01	1.14E+05	1.48E+02	5.99E+04	5.84E+06
Road #26	26	1500-1600	1.46E+01	5.85E+06	5.38E+03	8.37E+03	1.73E+07	1.81E+04	5.20E+01	2.52E+01	1.15E+05	1.50E+02	6.04E+04	5.91E+06
Road #26	26	1600-1700	1.49E+01	5.94E+06	5.46E+03	8.45E+03	1.75E+07	1.83E+04	5.23E+01	2.55E+01	1.16E+05	1.52E+02	6.09E+04	5.98E+06
Road #26	26	1700-1800	1.52E+01	6.03E+06	5.54E+03	8.53E+03	1.77E+07	1.85E+04	5.26E+01	2.58E+01	1.17E+05	1.54E+02	6.14E+04	6.05E+06
Road #26	26	1800-1900	1.55E+01	6.12E+06	5.62E+03	8.61E+03	1.79E+07	1.87E+04	5.29E+01	2.61E+01	1.18E+05	1.56E+02	6.19E+04	6.12E+06
Road #26	26	1900-2000	1.58E+01	6.21E+06	5.70E+03	8.69E+03	1.81E+07	1.89E+04	5.32E+01	2.64E+01	1.19E+05	1.58E+02	6.24E+04	6.19E+06
Road #26	26	2000-2100	1.61E+01	6.30E+06	5.78E+03	8.77E+03	1.83E+07	1.91E+04	5.35E+01	2.67E+01	1.20E+05	1.60E+02	6.29E+04	6.26E+06
Road #26	26	2100-2200	1.64E+01	6.39E+06	5.86E+03	8.85E+03	1.85E+07	1.93E+04	5.38E+01	2.70E+01	1.21E+05	1.62E+02	6.34E+04	6.33E+06
Road #26	26	2200-2300	1.67E+01	6.48E+06	5.94E+03	8.93E+03	1.87E+07	1.95E+04	5.41E+01	2.73E+01	1.22E+05	1.64E+02	6.39E+04	6.40E+06
Road #26	26	2300-2400	1.70E+01	6.57E+06	6.02E+03	9.01E+03	1.89E+07	1.97E+04	5.44E+01	2.76E				

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open North End University Quarry														
Year 2040														
Road Name	Road ID	Hour	No. Enrichion						No Enmission					
			Motorbikes/motorcycles		Horsebikes/motorcycles		Motorbikes/motorcycles		Motorbikes/motorcycles		Motorbikes/motorcycles			
			g/h/mph	g/h/mph	g/h/mph	g/h/mph	g/h/mph	g/h/mph	g/h/mph	g/h/mph	g/h/mph	g/h/mph	g/h/mph	
Road #1	41	0000:00:00	1.0767	2.288	7.181	0.553	8.881	1.484	5.621	0.107	3.762	0.578	1.021	0.172
Road #1	41	0000:00:15	1.396	2.987	9.504	0.736	11.25	1.967	7.405	0.142	4.937	0.751	1.356	0.232
Road #1	41	0000:00:30	1.6942	3.686	11.821	0.918	13.62	2.502	7.74	0.174	5.944	0.924	1.638	0.282
Road #1	41	0000:00:45	1.962	4.385	14.038	1.101	15.99	3.037	8.086	0.206	6.996	1.197	1.951	0.332
Road #1	41	0000:01:00	2.230	5.084	16.255	1.283	18.36	3.572	8.422	0.238	7.448	1.429	2.218	0.372
Road #1	41	0000:01:15	2.500	5.783	18.472	1.466	20.73	4.107	8.758	0.270	7.899	1.661	2.486	0.402
Road #1	41	0000:01:30	2.768	6.482	20.689	1.648	23.10	4.642	9.094	0.302	8.350	1.893	2.754	0.432
Road #1	41	0000:01:45	3.037	7.181	22.906	1.831	25.47	5.177	9.429	0.334	8.801	2.125	3.022	0.462
Road #1	41	0000:02:00	3.305	7.880	25.123	2.014	27.84	5.712	9.765	0.366	9.252	2.357	3.290	0.492
Road #1	41	0000:02:15	3.574	8.579	27.340	2.197	30.21	6.247	10.101	0.398	9.703	2.589	3.558	0.522
Road #1	41	0000:02:30	3.843	9.278	29.557	2.379	32.58	6.782	10.437	0.430	10.154	2.821	3.826	0.552
Road #1	41	0000:02:45	4.112	9.977	31.774	2.562	34.95	7.317	10.773	0.462	10.605	3.053	4.094	0.582
Road #1	41	0000:03:00	4.381	10.676	33.991	2.745	37.32	7.852	11.109	0.494	11.056	3.285	4.362	0.612
Road #1	41	0000:03:15	4.650	11.375	36.208	2.928	39.69	8.387	11.445	0.526	11.507	3.517	4.630	0.642
Road #1	41	0000:03:30	4.919	12.074	38.425	3.111	42.06	8.922	11.781	0.558	11.958	3.749	4.898	0.672
Road #1	41	0000:03:45	5.188	12.773	40.642	3.294	44.43	9.457	12.117	0.590	12.409	3.981	5.166	0.702
Road #1	41	0000:04:00	5.457	13.472	42.859	3.477	46.80	9.992	12.453	0.622	12.860	4.213	5.434	0.732
Road #1	41	0000:04:15	5.726	14.171	45.076	3.660	49.17	10.527	12.789	0.654	13.311	4.445	5.702	0.762
Road #1	41	0000:04:30	5.995	14.870	47.293	3.843	51.54	11.062	13.125	0.686	13.762	4.677	5.970	0.792
Road #1	41	0000:04:45	6.264	15.569	49.510	4.026	53.91	11.597	13.461	0.718	14.213	4.909	6.238	0.822
Road #1	41	0000:05:00	6.533	16.268	51.727	4.209	56.28	12.132	13.797	0.750	14.664	5.141	6.506	0.852
Road #1	41	0000:05:15	6.802	16.967	53.944	4.392	58.65	12.667	14.133	0.782	15.115	5.373	6.774	0.882
Road #1	41	0000:05:30	7.071	17.666	56.161	4.575	61.02	13.202	14.473	0.814	15.566	5.605	7.042	0.912
Road #1	41	0000:05:45	7.340	18.365	58.378	4.758	63.39	13.737	14.813	0.846	16.017	5.837	7.310	0.942
Road #1	41	0000:06:00	7.609	19.064	60.595	4.941	65.76	14.272	15.153	0.878	16.468	6.069	7.578	0.972
Road #1	41	0000:06:15	7.878	19.763	62.812	5.124	68.13	14.737	15.493	0.910	16.919	6.301	7.846	1.002
Road #1	41	0000:06:30	8.147	20.462	65.029	5.307	70.50	15.202	15.833	0.942	17.370	6.533	8.114	1.032
Road #1	41	0000:06:45	8.416	21.161	67.246	5.490	72.87	15.717	16.173	0.974	17.821	6.765	8.382	1.062
Road #1	41	0000:07:00	8.685	21.860	69.463	5.673	75.24	16.102	16.513	1.006	18.272	6.997	8.650	1.092
Road #1	41	0000:07:15	8.954	22.559	71.680	5.856	77.61	16.577	16.853	1.038	18.723	7.229	8.918	1.122
Road #1	41	0000:07:30	9.223	23.258	73.897	6.039	79.98	17.052	17.193	1.070	19.174	7.461	9.186	1.152
Road #1	41	0000:07:45	9.492	23.957	76.114	6.222	82.35	17.527	17.533	1.102	19.625	7.693	9.454	1.182
Road #1	41	0000:08:00	9.761	24.656	78.331	6.405	84.72	18.002	17.873	1.134	20.076	7.925	9.722	1.212
Road #1	41	0000:08:15	10.030	25.355	80.548	6.588	87.09	18.477	18.213	1.166	20.527	8.157	9.990	1.242
Road #1	41	0000:08:30	10.300	26.054	82.765	6.771	89.46	18.952	18.553	1.198	20.978	8.389	10.258	1.272
Road #1	41	0000:08:45	10.569	26.753	84.982	6.954	91.83	19.427	18.893	1.230	21.429	8.621	10.526	1.302
Road #1	41	0000:09:00	10.838	27.452	87.199	7.137	94.20	19.902	19.233	1.262	21.880	8.853	10.794	1.332
Road #1	41	0000:09:15	11.107	28.151	89.416	7.320	96.57	20.377	19.573	1.294	22.331	9.085	11.062	1.362
Road #1	41	0000:09:30	11.376	28.850	91.633	7.503	98.94	20.852	19.913	1.326	22.782	9.317	11.330	1.392
Road #1	41	0000:09:45	11.645	29.549	93.850	7.686	101.31	21.327	20.253	1.358	23.233	9.549	11.598	1.422
Road #1	41	0000:10:00	11.914	30.248	96.067	7.869	103.68	21.802	20.593	1.390	23.684	9.781	11.866	1.452
Road #1	41	0000:10:15	12.183	30.947	98.284	8.052	106.05	22.277	20.933	1.422	24.135	10.013	12.134	1.482
Road #1	41	0000:10:30	12.452	31.646	100.501	8.235	108.42	22.752	21.273	1.454	24.586	10.245	12.402	1.512
Road #1	41	0000:10:45	12.721	32.345	102.718	8.418	110.79	23.227	21.613	1.486	25.037	10.477	12.670	1.542
Road #1	41	0000:11:00	12.990	33.044	104.935	8.601	113.16	23.702	21.953	1.518	25.488	10.709	12.938	1.572
Road #1	41	0000:11:15	13.259	33.743	107.152	8.784	115.53	24.177	22.293	1.550	25.939	10.941	13.206	1.602
Road #1	41	0000:11:30	13.528	34.442	109.369	8.967	117.90	24.652	22.633	1.582	26.390	11.173	13.474	1.632
Road #1	41	0000:11:45	13.797	35.141	111.586	9.150	120.27	25.127	22.973	1.614	26.841	11.405	13.742	1.662
Road #1	41	0000:12:00	14.066	35.840	113.803	9.333	122.64	25.602	23.313	1.646	27.292	11.637	14.010	1.692
Road #1	41	0000:12:15	14.335	36.539	116.020	9.516	125.01	26.077	23.653	1.678	27.743	11.869	14.278	1.722
Road #1	41	0000:12:30	14.604	37.238	118.237	9.699	127.38	26.552	23.993	1.710	28.194	12.101	14.546	1.752
Road #1	41	0000:12:45	14.873	37.937	120.454	9.882	129.75	27.027	24.333	1.742	28.645	12.333	14.814	1.782
Road #1	41	0000:13:00	15.142	38.636	122.671	10.065	132.12	27.502	24.673	1.774	29.096	12.565	15.082	1.812
Road #1	41	0000:13:15	15.411	39.335	124.888	10.248	134.49	27.977	25.013	1.806	29.547	12.797	15.350	1.842
Road #1	41	0000:13:30	15.680	40.034	127.105	10.431	136.86	28.452	25.353	1.838	30.000	13.029	15.618	1.872
Road #1	41	0000:13:45	15.949	40.733	129.322	10.614	139.23	28.927	25.693	1.870	30.451	13.261	15.886	1.902
Road #1	41	0000:14:00	16.218	41.432	131.539	10.797	141.60	29.402	26.033	1.902	30.902	13.493	16.154	1.932
Road #1	41	0000:14:15	16.487	42.131	133.756	10.980	143.97	29.877	26.373	1.934	31.353	13.725	16.422	1.962
Road #1	41	0000:14:30	16.756	42.830	135.973	11.163	146.34	30.352	26.713	1.966	31.804	13.957	16.690	1.992
Road #1	41	0000:14:45	17.025	43.529	138.190	11.346	148.71	30.827	27.053	1.998	32.255	14.189	16.958	2.022
Road #1	41	0000:15:00	17.294	44.228	140.407	11.529	151.08	31.302	27.393	2.030	32.706	14.421	17.226	2.052
Road #1	41	0000:15:15	17.563	44.927	142.624	11.712	153.45	31.777	27.733	2.062	33.157	14.653	17.494	2.082
Road #1	41	0000:15:30	17.832	45.626	144.841	11.895	155.82	32.252	28.073	2.094	33.608	14.885	17.762	2.112
Road #1	41	0000:15:45	18.101	46.325	147.058	12.078	158.19	32.727	28.413	2.126	34.059	15.117	18.030	2.142
Road #1	41	0000:16:00	18.370	47.024	149.275	12.261	160.56	33.202	28.753	2.158	34.510	15.349	18.298	2.172
Road #1	41	0000:16:15	18.639	47.723	151.492	12.444	162.93	33.677	29.093	2.190	34.961	15.581	18.566	2.202
Road #1	41	0000:16:30	18.908	48.422	153.709	12.627	165.30	34.152	29.433	2.222	35.412	15.813	18.834	2.232
Road #1	41	0000:16:45	19.177	49.121	155.926	12.810	167.67	34.627	29.773	2.254	35.863	16.045	19.102	2.262
Road #1	41	0000:17:00	19.446	49.820	158.143	12.993	170.04	35.102	30.113	2.286	36.314	16.277	19.370	2.292
Road #1	41	0000:17:15	19.715	50.519	160.360	13.176	172.41	35.577	30.453	2.318	36.765	16.509	19.638	2.322
Road #1	41	0000:17:30	19.984	51.218	162.577	13.359	174.78	36.052	30.793	2.350	37.216	16.741	19.906	2.352
Road #1	41	0000:17:45	20.253	51.917	164.794	13.542	177.15	36.527	31.133	2.382	37.667	16.973	20.174	2.382
Road #1	41	0000:18:00	20.522	52.616	167.011	13.725	179.52	37.002	31.473	2.414	38.118	17.205	20.442	2.412
Road #1	41	0000:18:15	20.791	53.315	169.228	13.908	181.89	37.477	31.813	2.446	38.569	17.437	20.710	2.442
Road #1	41	0000:18:30	21.060	54.014	171.445	14.091	184.26	37.952	32.153	2.478	39.020	17.669	20.978	2.472
Road #1	4													

[illegible]

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Table 26 North Underway Quinary for 2000-2016 East Asia Estimation Factors for 2000-2016 Model (Relevant)																
Road ID	Year	Road ID	Year	NO _x Emission				NO _x Emission								
				Metric/tonne/hour		Metric/tonne/hour		Metric/tonne/hour		Metric/tonne/hour						
				g/hour	kg/hour	g/hour	kg/hour	g/hour	kg/hour	g/hour	kg/hour					
Road #7	2000	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2001	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2002	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2003	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2004	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2005	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2006	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2007	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2008	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2009	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2010	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2011	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2012	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2013	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2014	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2015	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2016	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2017	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2018	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2019	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2020	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2021	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2022	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2023	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2024	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2025	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2026	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2027	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2028	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2029	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2030	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2031	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2032	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2033	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2034	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2035	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2036	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2037	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2038	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2039	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2040	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2041	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2042	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2043	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2044	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2045	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2046	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2047	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2048	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2049	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2050	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2051	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2052	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2053	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2054	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2055	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2056	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2057	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2058	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2059	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2060	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2061	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2062	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2063	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2064	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2065	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2066	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2067	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2068	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2069	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2070	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.288	0.102	1.838	0.408	0.088
Road #7	2071	1600	1700	2.088	0.042	4.508	0.478	1.608	0.036	1.008	0.208	2.2				

Year														
Input Factors for the Year														
Year 2003														
Row ID	Hour	No. Emission						No. Emission						
		Monthly Average		Yearly Average		Monthly Average		Yearly Average		Monthly Average				
		g/hour	g/year	g/hour	g/year	g/hour	g/year	g/hour	g/year	g/hour	g/year			
1	0000:00:00	4.2312	3.1814	2.284	1.832	2.6187	4.081	3.7782	2.788	2.0312	1.044	8.7328	5.606	
2	0000:00:00	4.2312	3.1814	2.284	1.832	2.6187	4.081	3.7782	2.788	2.0312	1.044	8.7328	5.606	
3	0000:00:00	5.0884	3.7981	2.844	2.162	3.1667	5.1364	4.552	3.1756	1.0554	1.772	4.7762	3.224	
4	0000:00:00	5.0884	3.7981	2.844	2.162	3.1667	5.1364	4.552	3.1756	1.0554	1.772	4.7762	3.224	
5	0000:00:00	5.0884	3.7981	2.844	2.162	3.1667	5.1364	4.552	3.1756	1.0554	1.772	4.7762	3.224	
6	0000:00:00	6.8682	5.0884	3.7981	2.844	2.162	3.1667	5.1364	4.552	3.1756	1.0554	1.772	4.7762	3.224
7	0000:00:00	6.8682	5.0884	3.7981	2.844	2.162	3.1667	5.1364	4.552	3.1756	1.0554	1.772	4.7762	3.224
8	0000:00:00	7.7082	6.1702	4.524	3.172	4.0116	6.861	6.4032	4.1196	6.072	1.864	4.1196	3.0734	0.044
9	0000:00:00	7.7082	6.1702	4.524	3.172	4.0116	6.861	6.4032	4.1196	6.072	1.864	4.1196	3.0734	0.044
10	0000:00:00	7.7082	6.1702	4.524	3.172	4.0116	6.861	6.4032	4.1196	6.072	1.864	4.1196	3.0734	0.044
11	0000:00:00	7.7082	6.1702	4.524	3.172	4.0116	6.861	6.4032	4.1196	6.072	1.864	4.1196	3.0734	0.044
12	0000:00:00	7.7082	6.1702	4.524	3.172	4.0116	6.861	6.4032	4.1196	6.072	1.864	4.1196	3.0734	0.044
13	0000:00:00	7.7082	6.1702	4.524	3.172	4.0116	6.861	6.4032	4.1196	6.072	1.864	4.1196	3.0734	0.044
14	0000:00:00	7.7082	6.1702	4.524	3.172	4.0116	6.861	6.4032	4.1196	6.072	1.864	4.1196	3.0734	0.044
15	0000:00:00	7.7082	6.1702	4.524	3.172	4.0116	6.861	6.4032	4.1196	6.072	1.864	4.1196	3.0734	0.044
16	0000:00:00	7.7082	6.1702	4.524	3.172	4.0116	6.861	6.4032	4.1196	6.072	1.864	4.1196	3.0734	0.044
17	0000:00:00	7.7082	6.1702	4.524	3.172	4.0116	6.861	6.4032	4.1196	6.072	1.864	4.1196	3.0734	0.044
18	0000:00:00	7.7082	6.1702	4.524	3.172	4.0116	6.861	6.4032	4.1196	6.072	1.864	4.1196	3.0734	0.044
19	0000:00:00	7.7082	6.1702	4.524	3.172	4.0116	6.861	6.4032	4.1196	6.072	1.864	4.1196	3.0734	0.044
20	0000:00:00	7.7082	6.1702	4.524	3.172	4.0116	6.861	6.4032	4.1196	6.072	1.864	4.1196	3.0734	0.044
21	0000:00:00	7.7082	6.1702	4.524	3.172	4.0116	6.861	6.4032	4.1196	6.072	1.864	4.1196	3.0734	0.044
22	0000:00:00	7.7082	6.1702	4.524	3.172	4.0116	6.861	6.4032	4.1196	6.072	1.864	4.1196	3.0734	0.044
23	0000:00:00	7.7082	6.1702	4.524	3.172	4.0116	6.861	6.4032	4.1196	6.072	1.864	4.1196	3.0734	0.044
24	0000:00:00	7.7082	6.1702	4.524	3.172	4.0116	6.861	6.4032	4.1196	6.072	1.864	4.1196	3.0734	0.044

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

[illegible]

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Road 7th Northbound Factors														
Open Road 7th Northbound Factors for ARMMOD model outputs														
Route Name	Road ID	Hour	No. Emission						No. Emission					
			Month/Year/Season			Month/Year/Season			Month/Year/Season			Month/Year/Season		
			g/h/mi	g/h/mi	g/h/mi	g/h/mi	g/h/mi	g/h/mi	g/h/mi	g/h/mi	g/h/mi	g/h/mi		
Route 7	7	1800-1700	1.286	9.801	4.208	1.241	1.711	1.198	1.571	4.691	2.012	4.921	1.471	6.261
Route 7	7	1700-1600	1.081	8.081	3.511	1.081	1.411	1.081	1.751	3.751	2.411	4.561	1.561	5.161
Route 7	7	1600-1500	1.081	8.081	3.511	1.081	1.411	1.081	1.751	3.751	2.411	4.561	1.561	5.161
Route 7	7	1500-1400	1.631	11.761	4.761	1.631	2.161	1.631	4.461	4.471	2.211	5.171	1.631	4.461
Route 7	7	1400-1300	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 7	7	1300-1200	1.531	11.611	4.561	1.531	1.811	1.531	4.431	4.431	2.211	4.961	1.531	4.431
Route 7	7	1200-1100	1.531	11.611	4.561	1.531	1.811	1.531	4.431	4.431	2.211	4.961	1.531	4.431
Route 7	7	1100-1000	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 8	8	1800-1700	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 8	8	1700-1600	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 8	8	1600-1500	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 8	8	1500-1400	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 8	8	1400-1300	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 8	8	1300-1200	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 8	8	1200-1100	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 8	8	1100-1000	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 9	9	1800-1700	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 9	9	1700-1600	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 9	9	1600-1500	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 9	9	1500-1400	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 9	9	1400-1300	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 9	9	1300-1200	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 9	9	1200-1100	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 9	9	1100-1000	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	1800-1700	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	1700-1600	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	1600-1500	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	1500-1400	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	1400-1300	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	1300-1200	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	1200-1100	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	1100-1000	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	1000-900	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	900-800	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	800-700	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	700-600	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	600-500	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	500-400	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	400-300	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	300-200	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	200-100	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	100-0	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	0-100	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	100-200	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	200-300	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	300-400	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	400-500	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	500-600	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	600-700	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	700-800	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	800-900	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	900-1000	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	1000-1100	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	1100-1200	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	1200-1300	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	1300-1400	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	1400-1500	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	1500-1600	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	1600-1700	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	1700-1800	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	1800-1900	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	1900-2000	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	2000-2100	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	2100-2200	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	2200-2300	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	2300-2400	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	2400-2500	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	2500-2600	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	2600-2700	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	2700-2800	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	2800-2900	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	2900-3000	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	3000-3100	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	3100-3200	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	3200-3300	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	3300-3400	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	3400-3500	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	3500-3600	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161	1.981	5.161
Route 10	10	3600-3700	1.981	13.861	5.261	1.981	2.561	1.981	5.161	5.161	2.561	5.161		

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Road North Underpass Factors													
Year 2043													
Road Name		Month		No. Emision				No. Emision					
		Month/Hours		Month/Hours		Month/Hours		Month/Hours		Month/Hours			
Road 1	00000-0300	6.94E+01	6.11E+01	3.77E+01	3.86E+02	1.81E+03	3.90E+01	5.12E+01	0.77E+01	1.55E+08	3.13E+04		
		6.34E+01	4.52E+08	4.28E+01	3.26E+02	6.23E+02	3.97E+01	3.75E+02	7.53E+01	1.32E+08	2.20E+04		
Road 1	00300-0600	6.34E+01	4.52E+08	4.28E+01	3.26E+02	6.23E+02	3.97E+01	3.75E+02	7.53E+01	1.32E+08	2.20E+04		
		6.34E+01	4.52E+08	4.28E+01	3.26E+02	6.23E+02	3.97E+01	3.75E+02	7.53E+01	1.32E+08	2.20E+04		
Road 1	00600-0900	6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
		6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
Road 1	00900-1200	6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
		6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
Road 1	01200-1500	6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
		6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
Road 1	01500-1800	6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
		6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
Road 1	01800-2100	6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
		6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
Road 1	02100-2400	6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
		6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
Road 1	02400-2700	6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
		6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
Road 1	02700-3000	6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
		6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
Road 1	03000-3300	6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
		6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
Road 1	03300-3600	6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
		6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
Road 2	00000-0300	6.94E+01	6.11E+01	3.77E+01	3.86E+02	1.81E+03	3.90E+01	5.12E+01	0.77E+01	1.55E+08	3.13E+04		
		6.34E+01	4.52E+08	4.28E+01	3.26E+02	6.23E+02	3.97E+01	3.75E+02	7.53E+01	1.32E+08	2.20E+04		
Road 2	00300-0600	6.34E+01	4.52E+08	4.28E+01	3.26E+02	6.23E+02	3.97E+01	3.75E+02	7.53E+01	1.32E+08	2.20E+04		
		6.34E+01	4.52E+08	4.28E+01	3.26E+02	6.23E+02	3.97E+01	3.75E+02	7.53E+01	1.32E+08	2.20E+04		
Road 2	00600-0900	6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
		6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
Road 2	00900-1200	6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
		6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
Road 2	01200-1500	6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
		6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
Road 2	01500-1800	6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
		6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
Road 2	01800-2100	6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
		6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
Road 2	02100-2400	6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
		6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
Road 2	02400-2700	6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
		6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
Road 2	02700-3000	6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
		6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
Road 2	03000-3300	6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
		6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
Road 2	03300-3600	6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
		6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
Road 3	00000-0300	6.94E+01	6.11E+01	3.77E+01	3.86E+02	1.81E+03	3.90E+01	5.12E+01	0.77E+01	1.55E+08	3.13E+04		
		6.34E+01	4.52E+08	4.28E+01	3.26E+02	6.23E+02	3.97E+01	3.75E+02	7.53E+01	1.32E+08	2.20E+04		
Road 3	00300-0600	6.34E+01	4.52E+08	4.28E+01	3.26E+02	6.23E+02	3.97E+01	3.75E+02	7.53E+01	1.32E+08	2.20E+04		
		6.34E+01	4.52E+08	4.28E+01	3.26E+02	6.23E+02	3.97E+01	3.75E+02	7.53E+01	1.32E+08	2.20E+04		
Road 3	00600-0900	6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
		6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
Road 3	00900-1200	6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
		6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
Road 3	01200-1500	6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
		6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
Road 3	01500-1800	6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
		6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
Road 3	01800-2100	6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
		6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
Road 3	02100-2400	6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
		6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
Road 3	02400-2700	6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
		6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
Road 3	02700-3000	6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
		6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
Road 3	03000-3300	6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
		6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
Road 3	03300-3600	6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E+09	1.57E+04
		6.34E+01	3.17E+02	6.27E+04	3.77E+02	4.02E+02	4.13E+01	4.34E+02	3.26E+02	4.77E+01	4.84E+01	7.84E	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Top 24 Hour Underground Factors for ARMD Model Results									
Year 2003			NO Emission				NO Emission		
Route Name	Route ID	Hour	g/hour	MonthlyAverage	g/hour	MonthlyAverage	g/hour	MonthlyAverage	
Route 1	4	0800-0900	7.2125	6.807	1.8056	1.838	1.866	1.8119	
Route 1	4	0900-1000	8.2145	7.4242	1.7762	1.4794	2.2248	9.9351	
Route 1	4	1000-1100	8.2145	7.4242	1.7762	1.4794	2.2248	9.9351	
Route 1	4	1100-1200	8.8905	21.164	1.5735	4.4112	1.0621	7.7881	
Route 1	4	1200-1300	8.8905	21.164	1.5735	4.4112	1.0621	7.7881	
Route 1	4	1300-1400	8.8905	21.164	1.5735	4.4112	1.0621	7.7881	
Route 1	4	1400-1500	11.1120	1.3736	2.0478	4.8514	1.5442	1.1372	
Route 1	4	1500-1600	11.1120	1.3736	2.0478	4.8514	1.5442	1.1372	
Route 1	4	1600-1700	10.9805	1.3736	2.7792	0.7470	1.6381	1.9942	
Route 1	4	1700-1800	10.9805	1.3736	2.7792	0.7470	1.6381	1.9942	
Route 1	4	1800-1900	5.1110	3.2361	1.7460	0.1370	1.5141	0.6905	
Route 1	4	1900-2000	4.1440	1.6381	0.7278	1.2888	1.2202	7.4083	
Route 1	4	2000-2100	4.1440	1.6381	0.7278	1.2888	1.2202	7.4083	
Route 1	4	2100-2200	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	2200-2300	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	2300-2400	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	2400-2500	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	2500-2600	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	2600-2700	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	2700-2800	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	2800-2900	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	2900-3000	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	3000-3100	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	3100-3200	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	3200-3300	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	3300-3400	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	3400-3500	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	3500-3600	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	3600-3700	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	3700-3800	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	3800-3900	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	3900-4000	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	4000-4100	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	4100-4200	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	4200-4300	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	4300-4400	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	4400-4500	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	4500-4600	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	4600-4700	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	4700-4800	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	4800-4900	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	4900-5000	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	5000-5100	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	5100-5200	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	5200-5300	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	5300-5400	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	5400-5500	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	5500-5600	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	5600-5700	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	5700-5800	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	5800-5900	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	5900-6000	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	6000-6100	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	6100-6200	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	6200-6300	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	6300-6400	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	6400-6500	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	6500-6600	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	6600-6700	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	6700-6800	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	6800-6900	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	6900-7000	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	7000-7100	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	7100-7200	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	7200-7300	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	7300-7400	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	7400-7500	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	7500-7600	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	7600-7700	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	7700-7800	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	7800-7900	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	7900-8000	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	8000-8100	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	8100-8200	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	8200-8300	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	8300-8400	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	8400-8500	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	8500-8600	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	8600-8700	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	8700-8800	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	8800-8900	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	8900-9000	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	9000-9100	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	9100-9200	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	9200-9300	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	9300-9400	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	9400-9500	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	9500-9600	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	9600-9700	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	9700-9800	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	9800-9900	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	9900-10000	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	10000-10100	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	10100-10200	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	10200-10300	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	10300-10400	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	10400-10500	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	10500-10600	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	10600-10700	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	10700-10800	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	10800-10900	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	10900-11000	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	11000-11100	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	11100-11200	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	11200-11300	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	11300-11400	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	11400-11500	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	11500-11600	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	11600-11700	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	11700-11800	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	11800-11900	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	11900-12000	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	12000-12100	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	12100-12200	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	12200-12300	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	12300-12400	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	12400-12500	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	12500-12600	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	12600-12700	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	12700-12800	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	12800-12900	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	12900-13000	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	13000-13100	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	13100-13200	4.0005	1.6381	6.7784	1.3738	8.5816	6.2261	
Route 1	4	13200-133							

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Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for 2010-2011

Open Top 24 Hour Emission Factors for
GHGMMO model (Year 2003)

Road Name	Road ID	Hour	NO _x Emission		NO _x Emission	
			g/hour/ha		lb/hour/ha	
			Monthly/Average		Monthly/Average	
Road 17	17	0600-1700	5.286	1.411E-06	1.181E-02	1.928
Road 17	17	1700-1800	3.968	1.071E-06	8.851E-03	1.408
Road 17	17	1800-1900	3.968	1.071E-06	8.851E-03	1.408
Road 17	17	1900-2000	1.110	3.274E-07	2.441E-03	0.488
Road 17	17	2000-2100	1.110	3.274E-07	2.441E-03	0.488
Road 17	17	2100-2200	9.084	2.581E-06	1.144E-01	5.116
Road 17	17	2200-2300	9.084	2.581E-06	1.144E-01	5.116
Road 17	17	2300-2400	9.440	2.650E-06	1.176E-01	5.306
Road 18	18	0600-0700	4.836	1.359E-06	1.090E-02	1.712
Road 18	18	0700-0800	4.836	1.359E-06	1.090E-02	1.712
Road 18	18	0800-0900	4.836	1.359E-06	1.090E-02	1.712
Road 18	18	0900-1000	7.904	2.296E-06	4.473E-04	4.452
Road 18	18	1000-1100	7.904	2.296E-06	4.473E-04	4.452
Road 18	18	1100-1200	9.440	2.650E-06	1.176E-01	5.306
Road 18	18	1200-1300	9.440	2.650E-06	1.176E-01	5.306
Road 18	18	1300-1400	9.440	2.650E-06	1.176E-01	5.306
Road 18	18	1400-1500	9.440	2.650E-06	1.176E-01	5.306
Road 18	18	1500-1600	9.440	2.650E-06	1.176E-01	5.306
Road 18	18	1600-1700	9.440	2.650E-06	1.176E-01	5.306
Road 18	18	1700-1800	9.440	2.650E-06	1.176E-01	5.306
Road 18	18	1800-1900	9.440	2.650E-06	1.176E-01	5.306
Road 18	18	1900-2000	9.440	2.650E-06	1.176E-01	5.306
Road 18	18	2000-2100	9.440	2.650E-06	1.176E-01	5.306
Road 18	18	2100-2200	9.440	2.650E-06	1.176E-01	5.306
Road 18	18	2200-2300	9.440	2.650E-06	1.176E-01	5.306
Road 18	18	2300-2400	9.440	2.650E-06	1.176E-01	5.306
Road 19	19	0600-0700	4.836	1.359E-06	1.090E-02	1.712
Road 19	19	0700-0800	4.836	1.359E-06	1.090E-02	1.712
Road 19	19	0800-0900	4.836	1.359E-06	1.090E-02	1.712
Road 19	19	0900-1000	7.904	2.296E-06	4.473E-04	4.452
Road 19	19	1000-1100	7.904	2.296E-06	4.473E-04	4.452
Road 19	19	1100-1200	9.440	2.650E-06	1.176E-01	5.306
Road 19	19	1200-1300	9.440	2.650E-06	1.176E-01	5.306
Road 19	19	1300-1400	9.440	2.650E-06	1.176E-01	5.306
Road 19	19	1400-1500	9.440	2.650E-06	1.176E-01	5.306
Road 19	19	1500-1600	9.440	2.650E-06	1.176E-01	5.306
Road 19	19	1600-1700	9.440	2.650E-06	1.176E-01	5.306
Road 19	19	1700-1800	9.440	2.650E-06	1.176E-01	5.306
Road 19	19	1800-1900	9.440	2.650E-06	1.176E-01	5.306
Road 19	19	1900-2000	9.440	2.650E-06	1.176E-01	5.306
Road 19	19	2000-2100	9.440	2.650E-06	1.176E-01	5.306
Road 19	19	2100-2200	9.440	2.650E-06	1.176E-01	5.306
Road 19	19	2200-2300	9.440	2.650E-06	1.176E-01	5.306
Road 19	19	2300-2400	9.440	2.650E-06	1.176E-01	5.306
Road 20	20	0600-0700	4.836	1.359E-06	1.090E-02	1.712
Road 20	20	0700-0800	4.836	1.359E-06	1.090E-02	1.712
Road 20	20	0800-0900	4.836	1.359E-06	1.090E-02	1.712
Road 20	20	0900-1000	7.904	2.296E-06	4.473E-04	4.452
Road 20	20	1000-1100	7.904	2.296E-06	4.473E-04	4.452
Road 20	20	1100-1200	9.440	2.650E-06	1.176E-01	5.306
Road 20	20	1200-1300	9.440	2.650E-06	1.176E-01	5.306
Road 20	20	1300-1400	9.440	2.650E-06	1.176E-01	5.306
Road 20	20	1400-1500	9.440	2.650E-06	1.176E-01	5.306
Road 20	20	1500-1600	9.440	2.650E-06	1.176E-01	5.306
Road 20	20	1600-1700	9.440	2.650E-06	1.176E-01	5.306
Road 20	20	1700-1800	9.440	2.650E-06	1.176E-01	5.306
Road 20	20	1800-1900	9.440	2.650E-06	1.176E-01	5.306
Road 20	20	1900-2000	9.440	2.650E-06	1.176E-01	5.306
Road 20	20	2000-2100	9.440	2.650E-06	1.176E-01	5.306
Road 20	20	2100-2200	9.440	2.650E-06	1.176E-01	5.306
Road 20	20	2200-2300	9.440	2.650E-06	1.176E-01	5.306
Road 20	20	2300-2400	9.440	2.650E-06	1.176E-01	5.306

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

[illegible]

Road\Appendix 3.5.4 Emission Factor in 2043.xlsx

Open North End Union Factory														
Key 2nd 10 hr Emission Factor for 400000 model (M3)														
Year 2043														
Road Name	Road ID	Hour	No. Emission				No. Emission							
			g/hour/veh	g/hour/veh	Monthly/veh	Monthly/veh	g/hour/veh	g/hour/veh	Monthly/veh	Monthly/veh				
Row 24	24	0800-0900	1.2662	2.4467	7.2384	0.4763	9.0107	8.2104	9.9111	1.9316	1.9053	1.3202	2.5468	2.3565
Row 24	24	0900-1000	1.2662	2.7565	7.5514	4.7326	10.3003	9.3604	10.9111	2.0616	2.0363	1.4602	2.9116	2.6605
Row 24	24	1000-1100	1.2662	3.0663	7.8611	5.0423	11.5900	9.6701	11.5222	2.1917	2.1664	1.5903	3.2218	2.9706
Row 24	24	1100-1200	1.3556	3.2007	7.4707	4.0476	9.6057	8.7904	6.5445	1.2381	1.1381	0.8302	2.7908	2.5605
Row 24	24	1200-1300	1.4450	3.3351	7.5803	4.1820	9.7403	8.9250	6.6790	1.2735	1.1735	0.8656	2.9210	2.6902
Row 24	24	1300-1400	1.4450	3.6449	7.8900	5.0915	11.1516	10.0145	10.0145	1.4771	1.4771	1.0601	3.4202	3.1700
Row 24	24	1400-1500	1.4450	3.9547	8.2000	5.4015	11.3616	10.2246	10.2246	1.4885	1.4885	1.0715	3.5504	3.3002
Row 24	24	1500-1600	1.5344	4.0891	8.3100	5.5360	11.4961	10.3591	10.3591	1.5000	1.5000	1.0829	3.6806	3.4304
Row 24	24	1600-1700	1.5344	4.4000	8.6200	5.8458	11.7062	10.5692	10.5692	1.5114	1.5114	1.0943	3.8108	3.5606
Row 24	24	1800-1900	1.0208	1.3885	1.2604	0.2118	0.3738	0.2704	0.2214	0.7221	0.7127	0.5104	1.1466	1.1466
Row 24	24	1900-2000	1.0208	1.6983	1.5702	0.3016	0.5244	0.3650	0.2959	0.8727	0.8633	0.6406	1.2768	1.2768
Row 24	24	2000-2100	1.0208	1.9985	1.7600	0.3914	0.6750	0.4556	0.3868	1.0233	1.0139	0.7308	1.4070	1.4070
Row 24	24	2100-2200	1.0208	2.3087	1.9500	0.4812	0.8256	0.5462	0.4776	1.1739	1.1645	0.8610	1.5372	1.5372
Row 24	24	2200-2300	1.0208	2.6189	2.1400	0.5710	0.9762	0.6368	0.5686	1.3245	1.3151	0.9912	1.6674	1.6674
Row 24	24	2300-2400	1.0208	2.9291	2.3300	0.6608	1.1268	0.7274	0.6592	1.4751	1.4657	1.1214	1.7976	1.7976
Row 24	24	2400-0100	1.0208	3.2393	2.5200	0.7506	1.2774	0.8280	0.7500	1.6257	1.6153	1.2516	1.9278	1.9278
Row 24	24	0100-0200	1.0208	3.5495	2.7100	0.8404	1.4280	0.9286	0.8418	1.7763	1.7669	1.3818	2.0580	2.0580
Row 24	24	0200-0300	1.0208	3.8597	2.9000	0.9302	1.5786	1.0292	0.9356	1.9269	1.9175	1.5120	2.1882	2.1882
Row 24	24	0300-0400	1.0208	4.1699	3.0900	1.0200	1.7292	1.1298	1.0270	2.0775	2.0681	1.6422	2.3184	2.3184
Row 24	24	0400-0500	1.0208	4.4801	3.2800	1.1100	1.8798	1.2304	1.1182	2.2281	2.2187	1.7724	2.4486	2.4486
Row 24	24	0500-0600	1.0208	4.7903	3.4700	1.2000	2.0304	1.3310	1.2090	2.3787	2.3693	1.9026	2.5788	2.5788
Row 24	24	0600-0700	1.0208	5.1005	3.6600	1.2900	2.1810	1.4316	1.3000	2.5293	2.5200	2.0328	2.7090	2.7090
Row 24	24	0700-0800	1.0208	5.4107	3.8500	1.3800	2.3316	1.5322	1.3890	2.6800	2.6706	2.1630	2.8392	2.8392
Row 24	24	0800-0900	1.0208	5.7209	4.0400	1.4700	2.4822	1.6328	1.4800	2.8307	2.8213	2.2932	2.9694	2.9694
Row 24	24	0900-1000	1.0208	6.0311	4.2300	1.5600	2.6328	1.7334	1.5800	2.9813	2.9719	2.4234	3.0996	3.0996
Row 24	24	1000-1100	1.0208	6.3413	4.4200	1.6500	2.7834	1.8340	1.6800	3.1319	3.1225	2.5536	3.2298	3.2298
Row 24	24	1100-1200	1.0208	6.6515	4.6100	1.7400	2.9340	1.9346	1.7800	3.2825	3.2731	2.6838	3.3600	3.3600
Row 24	24	1200-1300	1.0208	6.9617	4.8000	1.8300	3.0846	2.0352	1.8800	3.4331	3.4237	2.8140	3.4902	3.4902
Row 24	24	1300-1400	1.0208	7.2719	5.0000	1.9200	3.2352	2.1358	1.9800	3.5837	3.5743	2.9442	3.6204	3.6204
Row 24	24	1400-1500	1.0208	7.5821	5.1900	2.0100	3.3858	2.2364	2.0800	3.7343	3.7249	3.0744	3.7506	3.7506
Row 24	24	1500-1600	1.0208	7.8923	5.3800	2.1000	3.5364	2.3370	2.1800	3.8849	3.8755	3.2046	3.8808	3.8808
Row 24	24	1600-1700	1.0208	8.2025	5.5700	2.1900	3.6870	2.4376	2.2800	4.0355	4.0261	3.3348	3.9910	3.9910
Row 24	24	1700-1800	1.0208	8.5127	5.7600	2.2800	3.8376	2.5382	2.3800	4.1861	4.1767	3.4650	4.1212	4.1212
Row 24	24	1800-1900	1.0208	8.8229	5.9500	2.3700	3.9882	2.6388	2.4800	4.3367	4.3273	3.5952	4.2514	4.2514
Row 24	24	1900-2000	1.0208	9.1331	6.1400	2.4600	4.1388	2.7394	2.5800	4.4873	4.4779	3.7254	4.3816	4.3816
Row 24	24	2000-2100	1.0208	9.4433	6.3300	2.5500	4.2894	2.8400	2.6800	4.6379	4.6285	3.8556	4.5118	4.5118
Row 24	24	2100-2200	1.0208	9.7535	6.5200	2.6400	4.4399	2.9406	2.7800	4.7885	4.7791	3.9858	4.6420	4.6420
Row 24	24	2200-2300	1.0208	10.0637	6.7100	2.7300	4.5905	3.0412	2.8800	4.9391	4.9297	4.1160	4.7722	4.7722
Row 24	24	2300-2400	1.0208	10.3739	6.9000	2.8200	4.7411	3.1418	2.9800	5.0897	5.0803	4.2462	4.9024	4.9024
Row 24	24	2400-0100	1.0208	10.6841	7.0900	2.9100	4.8917	3.2424	3.0800	5.2403	5.2309	4.3764	5.0326	5.0326
Row 24	24	0100-0200	1.0208	10.9943	7.2800	3.0000	5.0423	3.3430	3.1800	5.3909	5.3815	4.5066	5.1628	5.1628
Row 24	24	0200-0300	1.0208	11.3045	7.4700	3.0900	5.1929	3.4436	3.2800	5.5415	5.5321	4.6368	5.2930	5.2930
Row 24	24	0300-0400	1.0208	11.6147	7.6600	3.1800	5.3435	3.5442	3.3800	5.6921	5.6827	4.7670	5.4232	5.4232
Row 24	24	0400-0500	1.0208	11.9249	7.8500	3.2700	5.4941	3.6448	3.4800	5.8427	5.8333	4.8972	5.5534	5.5534
Row 24	24	0500-0600	1.0208	12.2351	8.0400	3.3600	5.6447	3.7454	3.5800	5.9933	5.9839	5.0274	5.6836	5.6836
Row 24	24	0600-0700	1.0208	12.5453	8.2300	3.4500	5.7953	3.8460	3.6800	6.1439	6.1345	5.1576	5.8138	5.8138
Row 24	24	0700-0800	1.0208	12.8555	8.4200	3.5400	5.9459	3.9466	3.7800	6.2945	6.2851	5.2878	5.9440	5.9440
Row 24	24	0800-0900	1.0208	13.1657	8.6100	3.6300	6.0965	4.0472	3.8800	6.4451	6.4357	5.4180	6.0742	6.0742
Row 24	24	0900-1000	1.0208	13.4759	8.8000	3.7200	6.2471	4.1478	3.9800	6.5957	6.5863	5.5482	6.2044	6.2044
Row 24	24	1000-1100	1.0208	13.7861	8.9900	3.8100	6.3977	4.2484	4.0800	6.7463	6.7369	5.6784	6.3346	6.3346
Row 24	24	1100-1200	1.0208	14.0963	9.1800	3.9000	6.5483	4.3490	4.1800	6.8969	6.8875	5.8086	6.4648	6.4648
Row 24	24	1200-1300	1.0208	14.4065	9.3700	3.9900	6.6989	4.4496	4.2800	7.0475	7.0381	5.9388	6.5950	6.5950
Row 24	24	1300-1400	1.0208	14.7167	9.5600	4.0800	6.8495	4.5502	4.3800	7.1981	7.1887	6.0690	6.7252	6.7252
Row 24	24	1400-1500	1.0208	15.0269	9.7500	4.1700	6.9999	4.6508	4.4800	7.3487	7.3393	6.1992	6.8554	6.8554
Row 24	24	1500-1600	1.0208	15.3371	9.9400	4.2600	7.1505	4.7514	4.5800	7.4993	7.4899	6.3294	6.9856	6.9856
Row 24	24	1600-1700	1.0208	15.6473	10.1300	4.3500	7.3011	4.8520	4.6800	7.6499	7.6405	6.4596	7.1158	7.1158
Row 24	24	1700-1800	1.0208	15.9575	10.3200	4.4400	7.4517	4.9526	4.7800	7.8005	7.7911	6.5898	7.2460	7.2460
Row 24	24	1800-1900	1.0208	16.2677	10.5100	4.5300	7.6023	5.0532	4.8800	7.9511	7.9417	6.7200	7.3762	7.3762
Row 24	24	1900-2000	1.0208	16.5779	10.7000	4.6200	7.7529	5.1538	4.9800	8.1017	8.0923	6.8502	7.5064	7.5064
Row 24	24	2000-2100	1.0208	16.8881	10.8900	4.7100	7.9035	5.2544	5.0800	8.2523	8.2429	6.9804	7.6366	7.6366
Row 24	24	2100-2200	1.0208	17.1983	11.0800	4.8000	8.0541	5.3550	5.1800	8.4029	8.3935	7.1106	7.7668	7.7668
Row 24	24	2200-2300	1.0208	17.5085	11.2700	4.8900	8.2047	5.4556	5.2800	8.5535	8.5441	7.2408	7.8970	7.8970
Row 24	24	2300-2400	1.0208	17.8187	11.4600	4.9800	8.3553	5.5562	5.3800	8.7041	8.6947	7.3710	8.0272	8.0272
Row 24	24	2400-0100	1.0208	18.1289	11.6500	5.0700	8.5059	5.6568	5.4800	8.8547	8.8453	7.5012	8.1574	8.1574
Row 24	24	0100-0200	1.0208	18.4391	11.8400	5.1600	8.6565	5.7574	5.5800	9.0053	8.9959	7.6314	8.2876	8.2876
Row 24	24	0200-0300	1.0208	18.7493	12.0300	5.2500	8.8071	5.8580	5.6800	9.1559	9.1465	7.7616	8.4178	8.4178
Row 24	24	0300-0400	1.0208	19.0595	12.2200	5.3400	8.9577	5.9586	5.7800	9.3065	9.2971	7.8918	8.5480	8.5480
Row 24	24	0400-0500	1.0208	19.3697	12.4100	5.4300	9.1083	6.0592	5.8800	9.4571	9.4477	8.0220	8.6782	8.6782
Row 24	24	0500-0600	1.0208	19.6799	12.6000	5.5200	9.2589	6.1598	5.9800	9.6077	9.5983	8.1522	8.8084	8.8084
Row 24	24	0600-0700	1.0208	19.9901	12.7900	5.6100	9.4095	6.2604	6.0800	9.7583	9.7489	8.2824	8.9386	8.9386
Row 24	24	0700-0800	1.0208	20.3003	12.9800	5.7000	9.5601	6.3610	6.1800	9.9089	9.8995	8.4126	9.0688	9.0688
Row 24	24	0800-0900	1.0208	20.6105	13.1700	5.7900	9.7107	6.4616	6.2800	10.0595	10.0501	8.5428	9.1990	9.1990
Row 24	24	0900-1000	1.0208	20.9207	13.3600	5.8800	9.8613	6.5622	6.3800	10.2101	10.2007	8.6730	9.3292	

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Open Top North Undermined Quarry														
Road 22 has 24 No. Emersion Factors for														
Year 2003														
Road ID		Road		No. Emersion				No Emersion						
ARNO	ROAD	Hour	g/h/m ³	Monthly/Average	g/h/m ³	Monthly/Average	g/h/m ³	Monthly/Average	g/h/m ³	Monthly/Average	g/h/m ³	Monthly/Average		
Road 27	27	1600-1700	1.41(1)	1.80(8)	4.01(4)	1.00(1)	1.77(8)	1.43(8)	8.41(1)	1.68(8)	1.84(8)	1.43(8)	1.84(8)	4.01(4)
Road 27	27	1700-1800	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	1800-1900	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	1900-2000	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	2000-2100	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	2100-2200	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	2200-2300	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	2300-2400	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	2400-2500	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	2500-2600	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	2600-2700	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	2700-2800	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	2800-2900	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	2900-3000	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	3000-3100	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	3100-3200	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	3200-3300	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	3300-3400	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	3400-3500	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	3500-3600	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	3600-3700	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	3700-3800	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	3800-3900	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	3900-4000	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	4000-4100	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	4100-4200	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	4200-4300	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	4300-4400	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	4400-4500	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	4500-4600	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	4600-4700	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	4700-4800	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	4800-4900	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	4900-5000	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	5000-5100	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	5100-5200	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	5200-5300	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	5300-5400	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	5400-5500	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	5500-5600	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	5600-5700	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	5700-5800	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	5800-5900	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	5900-6000	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	6000-6100	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	6100-6200	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	6200-6300	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	6300-6400	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	6400-6500	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	6500-6600	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	6600-6700	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	6700-6800	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	6800-6900	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	6900-7000	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	7000-7100	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	7100-7200	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	7200-7300	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	7300-7400	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	7400-7500	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	7500-7600	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	7600-7700	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	7700-7800	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	7800-7900	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	7900-8000	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	8000-8100	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	8100-8200	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	8200-8300	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	8300-8400	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	8400-8500	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	8500-8600	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	8600-8700	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	8700-8800	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27	8800-8900	1.21(4)	1.80(8)	3.17(4)	1.10(1)	1.12(8)	1.20(8)	6.11(1)	1.43(8)	1.58(8)	1.20(8)	1.58(8)	3.17(4)
Road 27	27													

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Background Query		Emotion Factors												
Month	Year	NO Emotion				NO Emotion								
Month	Year	Monthly Average		Monthly Average		Monthly Average		Monthly Average						
Month	Year	g/min/s	h/min/s	g/min/s	h/min/s	g/min/s	h/min/s	g/min/s	h/min/s					
1	00001000	9.088	1.778	7.795	4.452	8.802	2.874	5.162	1.067	3.454	2.488	4.918	1.602	0
1	00001010	9.065	1.262	6.88	4.582	8.968	1.965	5.245	1.067	3.454	2.488	5.355	1.445	0
1	00001020	9.065	1.262	6.88	4.582	8.968	1.965	5.245	1.067	3.454	2.488	5.355	1.445	0
1	00001030	9.065	1.262	6.88	4.582	8.968	1.965	5.245	1.067	3.454	2.488	5.355	1.445	0
1	00001040	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001050	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001060	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001070	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001080	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001090	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001100	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001110	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001120	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001130	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001140	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001150	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001160	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001170	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001180	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001190	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001200	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001210	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001220	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001230	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001240	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001250	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001260	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001270	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001280	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001290	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001300	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001310	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001320	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001330	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001340	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001350	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001360	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001370	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001380	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001390	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001400	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001410	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001420	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001430	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001440	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001450	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001460	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001470	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001480	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001490	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001500	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001510	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001520	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001530	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001540	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001550	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001560	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001570	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001580	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001590	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001600	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001610	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001620	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001630	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001640	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001650	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001660	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001670	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001680	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001690	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001700	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001710	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001720	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001730	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001740	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001750	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001760	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001770	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001780	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001790	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001800	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.462	2.736	7.805	0
1	00001810	1.131	4.867	2.825	0.595	1.248	1.284	6.155	4.828	3.574	0.46			

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Top North Undersnow Factors for ARBNO Model (Hour)																		
Run	Year	Month	Day	Hour	Moist/Hourly		Moist/Hourly		Moist/Hourly									
				Road ID	Moist/Hourly		Moist/Hourly		Moist/Hourly									
					g/h/m ²	mm/h	g/h/m ²	mm/h	g/h/m ²	mm/h								
				Road ID	Moist/Hourly		Moist/Hourly		Moist/Hourly									
					g/h/m ²	mm/h	g/h/m ²	mm/h	g/h/m ²	mm/h								
Run 34	1980	0900	2000	34	0800-0900	1.81(3)	2.07(1)	1.98(1)	2.33(1)	1.00(1)	9.94(1)	4.74(1)	1.21(1)	1.15(1)	2.11(1)	6.37(1)	5.13(1)	
Run 34	1980	0900	2000	34	0900-1000	9.12(1)	9.95(1)	10.00(1)	4.33(1)	4.00(1)	8.65(1)	9.27(1)	10.00(1)	9.00(1)	2.90(1)	2.25(1)	2.00(1)	
Run 34	1980	1000	2000	34	1000-1100	1.68(1)	1.81(1)	1.68(1)	1.81(1)	1.68(1)	1.81(1)	1.68(1)	1.81(1)	1.68(1)	1.81(1)	1.68(1)	1.81(1)	
Run 34	1980	1100	2000	34	1100-1200	1.02(1)	1.75(1)	1.67(1)	4.03(1)	4.59(1)	7.88(1)	7.51(1)	5.65(1)	4.02(1)	9.18(1)	2.03(1)	4.63(1)	4.24(1)
Run 34	1980	1200	2000	34	1200-1300	1.61(1)	2.00(1)	1.61(1)	2.00(1)	1.61(1)	2.00(1)	1.61(1)	2.00(1)	1.61(1)	2.00(1)	1.61(1)	2.00(1)	1.61(1)
Run 34	1980	1300	2000	34	1300-1400	1.63(1)	2.79(1)	2.79(1)	4.96(1)	5.96(1)	10.00(1)	9.98(1)	6.13(1)	1.13(1)	1.26(1)	4.33(1)	7.81(1)	7.46(1)
Run 34	1980	1400	2000	34	1400-1500	1.61(1)	1.86(1)	2.77(1)	3.01(1)	3.01(1)	1.60(1)	1.60(1)	1.47(1)	1.50(1)	1.20(1)	4.47(1)	6.07(1)	7.73(1)
Run 34	1980	1500	2000	34	1500-1600	1.61(1)	1.86(1)	2.77(1)	3.01(1)	3.01(1)	1.60(1)	1.60(1)	1.47(1)	1.50(1)	1.20(1)	4.47(1)	6.07(1)	7.73(1)
Run 34	1980	1600	2000	34	1600-1700	1.51(1)	2.80(1)	2.77(1)	3.01(1)	3.01(1)	1.60(1)	1.60(1)	1.47(1)	1.50(1)	1.20(1)	4.47(1)	6.07(1)	7.73(1)
Run 34	1980	1700	2000	34	1700-1800	1.44(1)	2.80(1)	2.77(1)	3.01(1)	3.01(1)	1.60(1)	1.60(1)	1.47(1)	1.50(1)	1.20(1)	4.47(1)	6.07(1)	7.73(1)
Run 34	1980	1800	2000	34	1800-1900	0.847(1)	1.796(1)	1.71(1)	1.63(1)	1.63(1)	7.78(1)	7.44(1)	4.53(1)	3.57(1)	9.14(1)	2.33(1)	5.01(1)	4.79(1)
Run 34	1980	1900	2000	34	1900-2000	0.75(1)	1.796(1)	1.71(1)	1.63(1)	1.63(1)	7.78(1)	7.44(1)	4.53(1)	3.57(1)	9.14(1)	2.33(1)	5.01(1)	4.79(1)
Run 34	1980	2000	2000	34	2000-2100	0.75(1)	1.796(1)	1.71(1)	1.63(1)	1.63(1)	7.78(1)	7.44(1)	4.53(1)	3.57(1)	9.14(1)	2.33(1)	5.01(1)	4.79(1)
Run 34	1980	2100	2000	34	2100-2200	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	2200	2000	34	2200-2300	0.449(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	2300	2000	34	2300-2400	0.742(1)	0.762(1)	0.640(1)	0.755(1)	0.755(1)	3.50(1)	3.10(1)	4.47(1)	4.18(1)	0.99(1)	1.04(1)	1.81(1)	1.73(1)
Run 34	1980	2400	2000	34	2400-0100	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	0100	2000	34	0100-0200	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	0200	2000	34	0200-0300	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	0300	2000	34	0300-0400	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	0400	2000	34	0400-0500	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	0500	2000	34	0500-0600	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	0600	2000	34	0600-0700	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	0700	2000	34	0700-0800	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	0800	2000	34	0800-0900	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	0900	2000	34	0900-1000	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	1000	2000	34	1000-1100	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	1100	2000	34	1100-1200	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	1200	2000	34	1200-1300	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	1300	2000	34	1300-1400	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	1400	2000	34	1400-1500	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	1500	2000	34	1500-1600	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	1600	2000	34	1600-1700	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	1700	2000	34	1700-1800	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	1800	2000	34	1800-1900	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	1900	2000	34	1900-2000	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	2000	2000	34	2000-2100	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	2100	2000	34	2100-2200	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	2200	2000	34	2200-2300	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	2300	2000	34	2300-2400	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	2400	2000	34	2400-0100	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	0100	2000	34	0100-0200	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	0200	2000	34	0200-0300	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	0300	2000	34	0300-0400	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	0400	2000	34	0400-0500	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	0500	2000	34	0500-0600	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	0600	2000	34	0600-0700	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	0700	2000	34	0700-0800	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	0800	2000	34	0800-0900	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	0900	2000	34	0900-1000	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	1000	2000	34	1000-1100	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	1100	2000	34	1100-1200	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	1200	2000	34	1200-1300	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	1300	2000	34	1300-1400	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	1400	2000	34	1400-1500	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	1500	2000	34	1500-1600	0.632(1)	0.829(1)	0.795(1)	0.464(1)	0.464(1)	4.836(1)	4.436(1)	4.798(1)	4.467(1)	2.32(1)	1.81(1)	2.33(1)	2.20(1)
Run 34	1980	1600	2000	34	1600-1700	0.632(1)	0.829(1)											

Road\Appendix 3.5.4 Emission Factor in 2043.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Road North Underground Factors for AR5000 Model (Hour)															
Year 2043															
Road Name	Road ID	Rsr	No. Emission			No. Emission			No. Emission			No. Emission			
			g/hour	Monthly/g	ton/year	g/hour	Monthly/g	ton/year	g/hour	Monthly/g	ton/year	g/hour	Monthly/g	ton/year	
Road 27	27	1600-1700	1.4141	1.808	47.08	4.0014	1.0001	1.7716	1.432	1.4111	1.6388	1.844	1.438	3.64	4.08
Road 27	27	1800-1900	1.2181	1.612	41.94	1.2081	1.198	1.588	1.2181	1.208	1.588	1.598	1.208	3.58	3.94
Road 27	27	2000-2100	1.2181	1.612	41.94	1.2081	1.198	1.588	1.2181	1.208	1.588	1.598	1.208	3.58	3.94
Road 27	27	2200-2300	1.2181	1.612	41.94	1.2081	1.198	1.588	1.2181	1.208	1.588	1.598	1.208	3.58	3.94
Road 27	27	2400-2500	1.2181	1.612	41.94	1.2081	1.198	1.588	1.2181	1.208	1.588	1.598	1.208	3.58	3.94
Road 27	27	2600-2700	1.2181	1.612	41.94	1.2081	1.198	1.588	1.2181	1.208	1.588	1.598	1.208	3.58	3.94
Road 28	28	0000-0100	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 28	28	0200-0300	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 28	28	0400-0500	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 28	28	0600-0700	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 28	28	0800-0900	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 28	28	1000-1100	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 28	28	1200-1300	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 28	28	1400-1500	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 28	28	1600-1700	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 28	28	1800-1900	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 28	28	2000-2100	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 28	28	2200-2300	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 28	28	2400-2500	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 28	28	2600-2700	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 29	29	0000-0100	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 29	29	0200-0300	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 29	29	0400-0500	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 29	29	0600-0700	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 29	29	0800-0900	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 29	29	1000-1100	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 29	29	1200-1300	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 29	29	1400-1500	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 29	29	1600-1700	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 29	29	1800-1900	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 29	29	2000-2100	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 29	29	2200-2300	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 29	29	2400-2500	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 29	29	2600-2700	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 30	30	0000-0100	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 30	30	0200-0300	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 30	30	0400-0500	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 30	30	0600-0700	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 30	30	0800-0900	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 30	30	1000-1100	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 30	30	1200-1300	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 30	30	1400-1500	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 30	30	1600-1700	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 30	30	1800-1900	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 30	30	2000-2100	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 30	30	2200-2300	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 30	30	2400-2500	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 30	30	2600-2700	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 31	31	0000-0100	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 31	31	0200-0300	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 31	31	0400-0500	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 31	31	0600-0700	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 31	31	0800-0900	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 31	31	1000-1100	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 31	31	1200-1300	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 31	31	1400-1500	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 31	31	1600-1700	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 31	31	1800-1900	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 31	31	2000-2100	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 31	31	2200-2300	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 31	31	2400-2500	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 31	31	2600-2700	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 32	32	0000-0100	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 32	32	0200-0300	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 32	32	0400-0500	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 32	32	0600-0700	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 32	32	0800-0900	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 32	32	1000-1100	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 32	32	1200-1300	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 32	32	1400-1500	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 32	32	1600-1700	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 32	32	1800-1900	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 32	32	2000-2100	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 32	32	2200-2300	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	8.3861	4.398	9.08	9.08
Road 32	32	2400-2500	8.3861	4.398	9.08										

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Top N 4th Underground Quarry

Key North End Enormous Factors for Roadside Model

Year 2004

Roadside Model	Road ID	Hour	NO _x Emission				PM ₁₀ Emission				PM _{2.5} Emission	
			g/hour		g/hour		g/hour		g/hour			
Road ID	Hour	NO _x Emission				PM ₁₀ Emission				PM _{2.5} Emission		
		g/hour		g/hour		g/hour		g/hour				
Road 47	1600-1700	2.08E+02	3.94E+02	4.50E+02	1.68E+06	1.83E+06	1.06E+01	2.90E+06	3.12E+06	3.19E+06		6.80E+06
		2.08E+02	3.94E+02	4.50E+02	1.68E+06	1.83E+06	1.06E+01	2.90E+06	3.12E+06	3.19E+06		6.80E+06
Road 47	1700-1800	1.26E+02	2.26E+02	2.71E+02	1.06E+06	1.17E+06	5.68E+02	2.17E+02	2.32E+02	2.35E+02		5.00E+06
		1.26E+02	2.26E+02	2.71E+02	1.06E+06	1.17E+06	5.68E+02	2.17E+02	2.32E+02	2.35E+02		5.00E+06
Road 47	1800-1900	8.75E+01	1.57E+02	1.92E+02	5.68E+02	6.22E+02	5.68E+02	1.22E+02	1.35E+02	1.35E+02		2.67E+06
		8.75E+01	1.57E+02	1.92E+02	5.68E+02	6.22E+02	5.68E+02	1.22E+02	1.35E+02	1.35E+02		2.67E+06
Road 47	1900-2000	7.63E+01	1.37E+02	1.68E+02	5.23E+02	5.76E+02	5.23E+02	1.10E+02	1.22E+02	1.22E+02		2.50E+06
		7.63E+01	1.37E+02	1.68E+02	5.23E+02	5.76E+02	5.23E+02	1.10E+02	1.22E+02	1.22E+02		2.50E+06
Road 47	2000-2100	6.63E+01	1.02E+02	1.18E+02	7.61E+02	8.47E+02	1.02E+02	8.83E+02	9.84E+02	1.09E+02		1.82E+06
		6.63E+01	1.02E+02	1.18E+02	7.61E+02	8.47E+02	1.02E+02	8.83E+02	9.84E+02	1.09E+02		1.82E+06
Road 48	0600-0700	1.13E+02	2.05E+02	2.47E+02	9.13E+05	1.00E+06	1.13E+02	2.05E+02	2.47E+02	9.13E+05		1.00E+06
		1.13E+02	2.05E+02	2.47E+02	9.13E+05	1.00E+06	1.13E+02	2.05E+02	2.47E+02	9.13E+05		1.00E+06
Road 48	0700-0800	6.17E+01	1.13E+02	1.37E+02	5.48E+02	6.06E+02	6.17E+01	1.13E+02	1.37E+02	5.48E+02		6.06E+02
		6.17E+01	1.13E+02	1.37E+02	5.48E+02	6.06E+02	6.17E+01	1.13E+02	1.37E+02	5.48E+02		6.06E+02
Road 48	0800-0900	4.52E+01	7.97E+01	9.82E+01	3.68E+02	4.07E+02	4.52E+01	7.97E+01	9.82E+01	3.68E+02		4.07E+02
		4.52E+01	7.97E+01	9.82E+01	3.68E+02	4.07E+02	4.52E+01	7.97E+01	9.82E+01	3.68E+02		4.07E+02
Road 48	0900-1000	4.69E+01	8.32E+01	1.03E+02	3.84E+02	4.20E+02	4.69E+01	8.32E+01	1.03E+02	3.84E+02	4.20E+02	
		4.69E+01	8.32E+01	1.03E+02	3.84E+02	4.20E+02	4.69E+01	8.32E+01	1.03E+02	3.84E+02	4.20E+02	
Road 48	1000-1100	5.41E+01	2.14E+02	1.18E+02	7.71E+02	8.04E+02	4.21E+02	1.67E+02	9.22E+02	1.37E+02	3.59E+02	
		5.41E+01	2.14E+02	1.18E+02	7.71E+02	8.04E+02	4.21E+02	1.67E+02	9.22E+02	1.37E+02	3.59E+02	
Road 48	1100-1200	6.17E+01	1.13E+02	1.37E+02	5.48E+02	6.06E+02	6.17E+01	1.13E+02	1.37E+02	5.48E+02	6.06E+02	
		6.17E+01	1.13E+02	1.37E+02	5.48E+02	6.06E+02	6.17E+01	1.13E+02	1.37E+02	5.48E+02	6.06E+02	
Road 48	1200-1300	6.17E+01	1.13E+02	1.37E+02	5.48E+02	6.06E+02	6.17E+01	1.13E+02	1.37E+02	5.48E+02	6.06E+02	
		6.17E+01	1.13E+02	1.37E+02	5.48E+02	6.06E+02	6.17E+01	1.13E+02	1.37E+02	5.48E+02	6.06E+02	
Road 48	1300-1400	6.82E+01	4.02E+02	2.18E+02	1.40E+02	2.40E+02	2.20E+02	5.14E+02	1.74E+02	1.03E+02	1.60E+06	
		6.82E+01	4.02E+02	2.18E+02	1.40E+02	2.40E+02	2.20E+02	5.14E+02	1.74E+02	1.03E+02	1.60E+06	
Road 48	1400-1500	7.38E+01	1.82E+02	1.67E+02	1.00E+02	1.50E+02	1.00E+02	1.50E+02	1.50E+02	1.50E+02	2.00E+06	
		7.38E+01	1.82E+02	1.67E+02	1.00E+02	1.50E+02	1.00E+02	1.50E+02	1.50E+02	1.50E+02	2.00E+06	
Road 48	1500-1600	7.73E+01	1.67E+02	1.09E+02	4.29E+02	1.04E+02	5.06E+02	2.29E+02	7.13E+02	2.00E+02	1.50E+02	
		7.73E+01	1.67E+02	1.09E+02	4.29E+02	1.04E+02	5.06E+02	2.29E+02	7.13E+02	2.00E+02	1.50E+02	
Road 48	1600-1700	1.13E+02	2.05E+02	2.47E+02	9.13E+05	1.00E+06	1.13E+02	2.05E+02	2.47E+02	9.13E+05	1.00E+06	
		1.13E+02	2.05E+02	2.47E+02	9.13E+05	1.00E+06	1.13E+02	2.05E+02	2.47E+02	9.13E+05	1.00E+06	
Road 48	1700-1800	8.41E+01	1.60E+02	1.11E+02	3.13E+02	1.05E+02	9.97E+02	1.73E+02	1.07E+02	7.12E+02	1.61E+06	
		8.41E+01	1.60E+02	1.11E+02	3.13E+02	1.05E+02	9.97E+02	1.73E+02	1.07E+02	7.12E+02	1.61E+06	
Road 48	1800-1900	9.51E+01	2.01E+02	1.17E+02	4.48E+02	9.75E+02	5.42E+02	1.13E+02	6.25E+02	2.61E+02	5.09E+02	
		9.51E+01	2.01E+02	1.17E+02	4.48E+02	9.75E+02	5.42E+02	1.13E+02	6.25E+02	2.61E+02	5.09E+02	
Road 48	1900-2000	1.42E+02	2.67E+02	3.83E+02	1.37E+02	2.19E+02	4.17E+02	8.26E+02	8.75E+02	7.12E+02	2.58E+02	
		1.42E+02	2.67E+02	3.83E+02	1.37E+02	2.19E+02	4.17E+02	8.26E+02	8.75E+02	7.12E+02	2.58E+02	
Road 48	2000-2100	1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
		1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
Road 49	0600-0700	1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
		1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
Road 49	0700-0800	1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
		1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
Road 49	0800-0900	1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
		1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
Road 49	0900-1000	1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
		1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
Road 49	1000-1100	1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
		1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
Road 49	1100-1200	1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
		1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
Road 49	1200-1300	1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
		1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
Road 49	1300-1400	1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
		1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
Road 49	1400-1500	1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
		1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
Road 49	1500-1600	1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
		1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
Road 49	1600-1700	1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
		1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
Road 49	1700-1800	1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
		1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
Road 49	1800-1900	1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
		1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
Road 49	1900-2000	1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
		1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
Road 49	2000-2100	1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
		1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
Road 50	0600-0700	1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
		1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
Road 50	0700-0800	1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
		1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
Road 50	0800-0900	1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
		1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
Road 50	0900-1000	1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
		1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
Road 50	1000-1100	1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
		1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
Road 50	1100-1200	1.50E+02	2.89E+02	1.07E+02	5.62E+02	1.08E+02	7.12E+02	1.17E+02	7.07E+02	4.18E+02	8.07E+02	
		1.50E+02	2.89E+02	1.0								

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Total Nth North Underground Quarry									
Open Road to Nth Base Emission Factors for AERMOD model use									
Year 2043			NO _x Emission				NO _y Emission		
Road Name	Road ID	Hour	g/hour/ft	lb/day/ft	g/hour/ft	lb/day/ft	g/hour/ft	lb/day/ft	g/hour/ft
Road #1	S1	0000-0100	4.218	3.354	2.084	3.354	2.652	0.101	3.372
Road #1	S1	0100-0200	4.218	3.354	2.084	3.354	2.652	0.101	3.372
Road #1	S1	0200-0300	4.218	3.354	2.084	3.354	2.652	0.101	3.372
Road #1	S1	0300-0400	5.316	4.145	2.614	4.145	3.312	0.126	4.145
Road #1	S1	0400-0500	5.316	4.145	2.614	4.145	3.312	0.126	4.145
Road #1	S1	0500-0600	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #1	S1	0600-0700	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #1	S1	0700-0800	3.708	2.967	1.852	2.967	2.372	0.089	2.967
Road #1	S1	0800-0900	4.948	3.958	2.432	3.958	3.168	0.120	3.958
Road #1	S1	0900-1000	7.888	6.310	3.952	6.310	5.052	0.192	6.310
Road #1	S1	1000-1100	8.936	7.148	4.476	7.148	5.712	0.216	7.148
Road #1	S1	1100-1200	8.936	7.148	4.476	7.148	5.712	0.216	7.148
Road #1	S1	1200-1300	5.512	4.410	2.708	4.410	3.532	0.132	4.410
Road #1	S1	1300-1400	5.512	4.410	2.708	4.410	3.532	0.132	4.410
Road #1	S1	1400-1500	3.708	2.967	1.852	2.967	2.372	0.089	2.967
Road #1	S1	1500-1600	3.708	2.967	1.852	2.967	2.372	0.089	2.967
Road #1	S1	1600-1700	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #1	S1	1700-1800	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #1	S1	1800-1900	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #1	S1	1900-2000	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #1	S1	2000-2100	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #1	S1	2100-2200	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #1	S1	2200-2300	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #1	S1	2300-2400	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #2	S2	0000-0100	4.218	3.354	2.084	3.354	2.652	0.101	3.372
Road #2	S2	0100-0200	4.218	3.354	2.084	3.354	2.652	0.101	3.372
Road #2	S2	0200-0300	4.218	3.354	2.084	3.354	2.652	0.101	3.372
Road #2	S2	0300-0400	5.316	4.145	2.614	4.145	3.312	0.126	4.145
Road #2	S2	0400-0500	5.316	4.145	2.614	4.145	3.312	0.126	4.145
Road #2	S2	0500-0600	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #2	S2	0600-0700	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #2	S2	0700-0800	3.708	2.967	1.852	2.967	2.372	0.089	2.967
Road #2	S2	0800-0900	4.948	3.958	2.432	3.958	3.168	0.120	3.958
Road #2	S2	0900-1000	7.888	6.310	3.952	6.310	5.052	0.192	6.310
Road #2	S2	1000-1100	8.936	7.148	4.476	7.148	5.712	0.216	7.148
Road #2	S2	1100-1200	8.936	7.148	4.476	7.148	5.712	0.216	7.148
Road #2	S2	1200-1300	5.512	4.410	2.708	4.410	3.532	0.132	4.410
Road #2	S2	1300-1400	5.512	4.410	2.708	4.410	3.532	0.132	4.410
Road #2	S2	1400-1500	3.708	2.967	1.852	2.967	2.372	0.089	2.967
Road #2	S2	1500-1600	3.708	2.967	1.852	2.967	2.372	0.089	2.967
Road #2	S2	1600-1700	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #2	S2	1700-1800	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #2	S2	1800-1900	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #2	S2	1900-2000	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #2	S2	2000-2100	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #2	S2	2100-2200	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #2	S2	2200-2300	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #2	S2	2300-2400	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #3	S3	0000-0100	4.218	3.354	2.084	3.354	2.652	0.101	3.372
Road #3	S3	0100-0200	4.218	3.354	2.084	3.354	2.652	0.101	3.372
Road #3	S3	0200-0300	4.218	3.354	2.084	3.354	2.652	0.101	3.372
Road #3	S3	0300-0400	5.316	4.145	2.614	4.145	3.312	0.126	4.145
Road #3	S3	0400-0500	5.316	4.145	2.614	4.145	3.312	0.126	4.145
Road #3	S3	0500-0600	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #3	S3	0600-0700	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #3	S3	0700-0800	3.708	2.967	1.852	2.967	2.372	0.089	2.967
Road #3	S3	0800-0900	4.948	3.958	2.432	3.958	3.168	0.120	3.958
Road #3	S3	0900-1000	7.888	6.310	3.952	6.310	5.052	0.192	6.310
Road #3	S3	1000-1100	8.936	7.148	4.476	7.148	5.712	0.216	7.148
Road #3	S3	1100-1200	8.936	7.148	4.476	7.148	5.712	0.216	7.148
Road #3	S3	1200-1300	5.512	4.410	2.708	4.410	3.532	0.132	4.410
Road #3	S3	1300-1400	5.512	4.410	2.708	4.410	3.532	0.132	4.410
Road #3	S3	1400-1500	3.708	2.967	1.852	2.967	2.372	0.089	2.967
Road #3	S3	1500-1600	3.708	2.967	1.852	2.967	2.372	0.089	2.967
Road #3	S3	1600-1700	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #3	S3	1700-1800	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #3	S3	1800-1900	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #3	S3	1900-2000	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #3	S3	2000-2100	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #3	S3	2100-2200	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #3	S3	2200-2300	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #3	S3	2300-2400	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #4	S4	0000-0100	4.218	3.354	2.084	3.354	2.652	0.101	3.372
Road #4	S4	0100-0200	4.218	3.354	2.084	3.354	2.652	0.101	3.372
Road #4	S4	0200-0300	4.218	3.354	2.084	3.354	2.652	0.101	3.372
Road #4	S4	0300-0400	5.316	4.145	2.614	4.145	3.312	0.126	4.145
Road #4	S4	0400-0500	5.316	4.145	2.614	4.145	3.312	0.126	4.145
Road #4	S4	0500-0600	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #4	S4	0600-0700	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #4	S4	0700-0800	3.708	2.967	1.852	2.967	2.372	0.089	2.967
Road #4	S4	0800-0900	4.948	3.958	2.432	3.958	3.168	0.120	3.958
Road #4	S4	0900-1000	7.888	6.310	3.952	6.310	5.052	0.192	6.310
Road #4	S4	1000-1100	8.936	7.148	4.476	7.148	5.712	0.216	7.148
Road #4	S4	1100-1200	8.936	7.148	4.476	7.148	5.712	0.216	7.148
Road #4	S4	1200-1300	5.512	4.410	2.708	4.410	3.532	0.132	4.410
Road #4	S4	1300-1400	5.512	4.410	2.708	4.410	3.532	0.132	4.410
Road #4	S4	1400-1500	3.708	2.967	1.852	2.967	2.372	0.089	2.967
Road #4	S4	1500-1600	3.708	2.967	1.852	2.967	2.372	0.089	2.967
Road #4	S4	1600-1700	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #4	S4	1700-1800	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #4	S4	1800-1900	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #4	S4	1900-2000	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #4	S4	2000-2100	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #4	S4	2100-2200	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #4	S4	2200-2300	4.560	3.648	2.280	3.648	2.916	0.108	3.648
Road #4	S4	2300-2400	4.560	3.648	2.280	3.648	2.916	0.108	3.648

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Year 2003			NO2 Emission											
Area	Road ID	Hour	Monthly/average						Monthly/average					
			g/hour	g/hour	g/hour	g/hour	g/hour	g/hour	g/hour	g/hour	g/hour	g/hour		
03	1600-1700	1.186	4.447	4.417	4.816	5.198	5.276	2.106	6.388	6.948	2.588	6.115	1.437	1.273
03	1700-1800	1.186	4.457	4.427	4.826	5.200	2.206	5.416	2.816	2.656	2.256	1.167	1.167	
03	1800-1900	1.186	4.467	4.437	4.836	5.210	2.216	5.426	2.826	2.666	2.266	1.177	1.177	
03	1900-2000	1.186	4.477	4.447	4.846	5.220	2.226	5.436	2.836	2.676	2.276	1.187	1.187	
03	2000-2100	1.186	4.487	4.457	4.856	5.230	2.236	5.446	2.846	2.686	2.286	1.197	1.197	
03	2100-2200	1.186	4.497	4.467	4.866	5.240	2.246	5.456	2.856	2.696	2.296	1.207	1.207	
03	2200-2300	1.186	4.507	4.477	4.876	5.250	2.256	5.466	2.866	2.706	2.306	1.217	1.217	
03	2300-2400	1.186	4.517	4.487	4.886	5.260	2.266	5.476	2.876	2.716	2.316	1.227	1.227	
03	2400-2500	1.186	4.527	4.497	4.896	5.270	2.276	5.486	2.886	2.726	2.326	1.237	1.237	
03	2500-2600	1.186	4.537	4.507	4.906	5.280	2.286	5.496	2.896	2.736	2.336	1.247	1.247	
03	2600-2700	1.186	4.547	4.517	4.916	5.290	2.296	5.506	2.906	2.746	2.346	1.257	1.257	
03	2700-2800	1.186	4.557	4.527	4.926	5.300	2.306	5.516	2.916	2.756	2.356	1.267	1.267	
03	2800-2900	1.186	4.567	4.537	4.936	5.310	2.316	5.526	2.926	2.766	2.366	1.277	1.277	
03	2900-3000	1.186	4.577	4.547	4.946	5.320	2.326	5.536	2.936	2.776	2.376	1.287	1.287	
03	3000-3100	1.186	4.587	4.557	4.956	5.330	2.336	5.546	2.946	2.786	2.386	1.297	1.297	
03	3100-3200	1.186	4.597	4.567	4.966	5.340	2.346	5.556	2.956	2.796	2.396	1.307	1.307	
03	3200-3300	1.186	4.607	4.577	4.976	5.350	2.356	5.566	2.966	2.806	2.406	1.317	1.317	
03	3300-3400	1.186	4.617	4.587	4.986	5.360	2.366	5.576	2.976	2.816	2.416	1.327	1.327	
03	3400-3500	1.186	4.627	4.597	4.996	5.370	2.376	5.586	2.986	2.826	2.426	1.337	1.337	
03	3500-3600	1.186	4.637	4.607	5.006	5.380	2.386	5.596	2.996	2.836	2.436	1.347	1.347	
03	3600-3700	1.186	4.647	4.617	5.016	5.390	2.396	5.606	2.996	2.846	2.446	1.357	1.357	
03	3700-3800	1.186	4.657	4.627	5.026	5.400	2.406	5.616	2.996	2.856	2.456	1.367	1.367	
03	3800-3900	1.186	4.667	4.637	5.036	5.410	2.416	5.626	2.996	2.866	2.466	1.377	1.377	
03	3900-4000	1.186	4.677	4.647	5.046	5.420	2.426	5.636	2.996	2.876	2.476	1.387	1.387	
03	4000-4100	1.186	4.687	4.657	5.056	5.430	2.436	5.646	2.996	2.886	2.486	1.397	1.397	
03	4100-4200	1.186	4.697	4.667	5.066	5.440	2.446	5.656	2.996	2.896	2.496	1.407	1.407	
03	4200-4300	1.186	4.707	4.677	5.076	5.450	2.456	5.666	2.996	2.906	2.506	1.417	1.417	
03	4300-4400	1.186	4.717	4.687	5.086	5.460	2.466	5.676	2.996	2.916	2.516	1.427	1.427	
03	4400-4500	1.186	4.727	4.697	5.096	5.470	2.476	5.686	2.996	2.926	2.526	1.437	1.437	
03	4500-4600	1.186	4.737	4.707	5.106	5.480	2.486	5.696	2.996	2.936	2.536	1.447	1.447	
03	4600-4700	1.186	4.747	4.717	5.116	5.490	2.496	5.706	2.996	2.946	2.546	1.457	1.457	
03	4700-4800	1.186	4.757	4.727	5.126	5.500	2.506	5.716	2.996	2.956	2.556	1.467	1.467	
03	4800-4900	1.186	4.767	4.737	5.136	5.510	2.516	5.726	2.996	2.966	2.566	1.477	1.477	
03	4900-5000	1.186	4.777	4.747	5.146	5.520	2.526	5.736	2.996	2.976	2.576	1.487	1.487	
03	5000-5100	1.186	4.787	4.757	5.156	5.530	2.536	5.746	2.996	2.986	2.586	1.497	1.497	
03	5100-5200	1.186	4.797	4.767	5.166	5.540	2.546	5.756	2.996	2.996	2.596	1.507	1.507	
03	5200-5300	1.186	4.807	4.777	5.176	5.550	2.556	5.766	2.996	3.006	2.606	1.517	1.517	
03	5300-5400	1.186	4.817	4.787	5.186	5.560	2.566	5.776	2.996	3.016	2.616	1.527	1.527	
03	5400-5500	1.186	4.827	4.797	5.196	5.570	2.576	5.786	2.996	3.026	2.626	1.537	1.537	
03	5500-5600	1.186	4.837	4.807	5.206	5.580	2.586	5.796	2.996	3.036	2.636	1.547	1.547	
03	5600-5700	1.186	4.847	4.817	5.216	5.590	2.596	5.806	2.996	3.046	2.646	1.557	1.557	
03	5700-5800	1.186	4.857	4.827	5.226	5.600	2.606	5.816	2.996	3.056	2.656	1.567	1.567	
03	5800-5900	1.186	4.867	4.837	5.236	5.610	2.616	5.826	2.996	3.066	2.666	1.577	1.577	
03	5900-6000	1.186	4.877	4.847	5.246	5.620	2.626	5.836	2.996	3.076	2.676	1.587	1.587	
03	6000-6100	1.186	4.887	4.857	5.256	5.630	2.636	5.846	2.996	3.086	2.686	1.597	1.597	
03	6100-6200	1.186	4.897	4.867	5.266	5.640	2.646	5.856	2.996	3.096	2.696	1.607	1.607	
03	6200-6300	1.186	4.907	4.877	5.276	5.650	2.656	5.866	2.996	3.106	2.706	1.617	1.617	
03	6300-6400	1.186	4.917	4.887	5.286	5.660	2.666	5.876	2.996	3.116	2.716	1.627	1.627	
03	6400-6500	1.186	4.927	4.897	5.296	5.670	2.676	5.886	2.996	3.126	2.726	1.637	1.637	
03	6500-6600	1.186	4.937	4.907	5.306	5.680	2.686	5.896	2.996	3.136	2.736	1.647	1.647	
03	6600-6700	1.186	4.947	4.917	5.316	5.690	2.696	5.906	2.996	3.146	2.746	1.657	1.657	
03	6700-6800	1.186	4.957	4.927	5.326	5.700	2.706	5.916	2.996	3.156	2.756	1.667	1.667	
03	6800-6900	1.186	4.967	4.937	5.336	5.710	2.716	5.926	2.996	3.166	2.766	1.677	1.677	
03	6900-7000	1.186	4.977	4.947	5.346	5.720	2.726	5.936	2.996	3.176	2.776	1.687	1.687	
03	7000-7100	1.186	4.987	4.957	5.356	5.730	2.736	5.946	2.996	3.186	2.786	1.697	1.697	
03	7100-7200	1.186	4.997	4.967	5.366	5.740	2.746	5.956	2.996	3.196	2.796	1.707	1.707	
03	7200-7300	1.186	5.007	4.977	5.376	5.750	2.756	5.966	2.996	3.206	2.806	1.717	1.717	
03	7300-7400	1.186	5.017	4.987	5.386	5.760	2.766	5.976	2.996	3.216	2.816	1.727	1.727	
03	7400-7500	1.186	5.027	4.997	5.396	5.770	2.776	5.986	2.996	3.226	2.826	1.737	1.737	
03	7500-7600	1.186	5.037	5.007	5.406	5.780	2.786	5.996	2.996	3.236	2.836	1.747	1.747	
03	7600-7700	1.186	5.047	5.017	5.416	5.790	2.796	6.006	2.996	3.246	2.846	1.757	1.757	
03	7700-7800	1.186	5.057	5.027	5.426	5.800	2.806	6.016	2.996	3.256	2.856	1.767	1.767	
03	7800-7900	1.186	5.067	5.037	5.436	5.810	2.816	6.026	2.996	3.266	2.866	1.777	1.777	
03	7900-8000	1.186	5.077	5.047	5.446	5.820	2.826	6.036	2.996	3.276	2.876	1.787	1.787	
03	8000-8100	1.186	5.087	5.057	5.456	5.830	2.836	6.046	2.996	3.286	2.886	1.797	1.797	
03	8100-8200	1.186	5.097	5.067	5.466	5.840	2.846	6.056	2.996	3.296	2.896	1.807	1.807	
03	8200-8300	1.186	5.107	5.077	5.476	5.850	2.856	6.066	2.996	3.306	2.906	1.817	1.817	
03	8300-8400	1.186	5.117	5.087	5.486	5.860	2.866	6.076	2.996	3.316	2.916	1.827	1.827	
03	8400-8500	1.186	5.127	5.097	5.496	5.870	2.876	6.086	2.996	3.326	2.926	1.837	1.837	
03	8500-8600	1.186	5.137	5.107	5.506	5.880	2.886	6.096	2.996	3.336	2.936	1.847	1.847	
03	8600-8700	1.186	5.147	5.117	5.516	5.890	2.896	6.106	2.996	3.346	2.946	1.857	1.857	
03	8700-8800	1.186	5.157	5.127	5.526	5.900	2.906	6.116	2.996	3.356	2.956	1.867	1.867	
03	8800-8900	1.186	5.167	5.137	5.536	5.910	2.916	6.126	2.996	3.366	2.966	1.877	1.877	
03	8900-9000	1.186	5.177	5.147	5.546	5.920	2.926	6.136	2.996	3.376	2.976	1.887	1.887	
03	9000-9100	1.186	5.187	5.157	5.556	5.930	2.936	6.146	2.996	3.386	2.986	1.897	1.897	
03	9100-9200	1.186	5.197	5.167	5.566	5.940	2.946	6.156	2.996	3.396	2.996	1.907	1.907	
03	9200-9300	1.186	5.207	5.177	5.576	5.950	2.956	6.166	2.996	3.406	3.006	1.917	1.917	
03	9300-9400	1.186	5.217	5.187	5.586	5.960	2.966	6.176	2.996	3.416	3.016	1.927	1.927	
03	9400-9500	1.186	5.227	5.197	5.596	5.970	2.976	6.186	2.996	3.426	3.026	1.937	1.937	
03	9500-9600	1.186	5.237	5.207	5.606	5.980	2.986	6.196	2.996	3.436	3.036	1.947	1.947	
03	9600-9700	1.186	5.247	5.217	5.616	5.990	2.996	6.206	2.996	3.446	3.046	1.957	1.957	
03	9700-9800	1.186	5.257	5.227	5.626	6.000	3.006	6.216	2.996	3.456	3.056	1.967	1.967	
03	9800-9900	1.186	5.267	5.237	5.636	6.010	3.016	6.226	2.996	3.466	3.066	1.977	1.977	
03	9900-10000	1.186	5.277	5.247	5.646	6.020	3.026	6.236	2.996	3.476	3.076	1.987	1.987	
03	10000-10100													

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Top North Underground Factors for Roadside Model Year 2040														
Road Name	Road ID	Hour	NO _x Emission				NO _x Emission							
			Monthly/average		Monthly/average		Monthly/average		Monthly/average					
			g/hour	g/hour	g/hour	g/hour	g/hour	g/hour	g/hour	g/hour	g/hour			
Road 1	1	0000-0100	4.94E-03	6.31E-08	1.27E-03	3.36E-02	4.88E-07	9.81E-03	1.86E-02	3.75E-07	1.01E-02	1.07E-03	1.55E-08	3.12E-03
Road 1	1	0100-0200	4.79E-03	6.15E-08	1.24E-03	3.28E-02	4.73E-07	9.62E-03	1.82E-02	3.59E-07	9.95E-03	1.06E-02	1.50E-08	3.03E-03
Road 1	1	0200-0300	4.64E-03	6.00E-08	1.21E-03	3.20E-02	4.58E-07	9.43E-03	1.78E-02	3.43E-07	9.78E-03	1.03E-02	1.46E-08	2.95E-03
Road 1	1	0300-0400	4.50E-03	5.85E-08	1.18E-03	3.12E-02	4.43E-07	9.24E-03	1.74E-02	3.27E-07	9.63E-03	1.00E-02	1.42E-08	2.87E-03
Road 1	1	0400-0500	4.36E-03	5.70E-08	1.15E-03	3.04E-02	4.28E-07	9.05E-03	1.70E-02	3.11E-07	9.48E-03	9.78E-03	1.38E-08	2.79E-03
Road 1	1	0500-0600	4.22E-03	5.55E-08	1.12E-03	2.96E-02	4.13E-07	8.86E-03	1.66E-02	2.95E-07	9.33E-03	9.54E-03	1.34E-08	2.71E-03
Road 1	1	0600-0700	4.08E-03	5.40E-08	1.09E-03	2.88E-02	3.98E-07	8.67E-03	1.62E-02	2.79E-07	9.18E-03	9.30E-03	1.30E-08	2.63E-03
Road 1	1	0700-0800	3.94E-03	5.25E-08	1.06E-03	2.80E-02	3.83E-07	8.48E-03	1.58E-02	2.63E-07	9.03E-03	9.06E-03	1.26E-08	2.55E-03
Road 1	1	0800-0900	3.80E-03	5.10E-08	1.03E-03	2.72E-02	3.68E-07	8.29E-03	1.54E-02	2.47E-07	8.88E-03	8.82E-03	1.22E-08	2.47E-03
Road 1	1	0900-1000	3.66E-03	4.95E-08	1.00E-03	2.64E-02	3.53E-07	8.10E-03	1.50E-02	2.31E-07	8.73E-03	8.57E-03	1.18E-08	2.39E-03
Road 1	1	1000-1100	3.52E-03	4.80E-08	9.70E-04	2.56E-02	3.38E-07	7.91E-03	1.46E-02	2.15E-07	8.58E-03	8.42E-03	1.14E-08	2.31E-03
Road 1	1	1100-1200	3.38E-03	4.65E-08	9.40E-04	2.48E-02	3.23E-07	7.72E-03	1.42E-02	2.00E-07	8.43E-03	8.27E-03	1.10E-08	2.23E-03
Road 1	1	1200-1300	3.24E-03	4.50E-08	9.10E-04	2.40E-02	3.08E-07	7.53E-03	1.38E-02	1.84E-07	8.28E-03	8.12E-03	1.06E-08	2.15E-03
Road 1	1	1300-1400	3.10E-03	4.35E-08	8.80E-04	2.32E-02	2.93E-07	7.34E-03	1.34E-02	1.68E-07	8.13E-03	7.97E-03	1.02E-08	2.07E-03
Road 1	1	1400-1500	2.96E-03	4.20E-08	8.50E-04	2.24E-02	2.78E-07	7.15E-03	1.30E-02	1.52E-07	7.98E-03	7.82E-03	9.80E-03	2.00E-03
Road 1	1	1500-1600	2.82E-03	4.05E-08	8.20E-04	2.16E-02	2.63E-07	6.96E-03	1.26E-02	1.36E-07	7.83E-03	7.67E-03	9.65E-03	1.92E-03
Road 1	1	1600-1700	2.68E-03	3.90E-08	7.90E-04	2.08E-02	2.48E-07	6.77E-03	1.22E-02	1.20E-07	7.68E-03	7.52E-03	9.50E-03	1.84E-03
Road 1	1	1700-1800	2.54E-03	3.75E-08	7.60E-04	2.00E-02	2.33E-07	6.58E-03	1.18E-02	1.04E-07	7.53E-03	7.37E-03	9.35E-03	1.76E-03
Road 1	1	1800-1900	2.40E-03	3.60E-08	7.30E-04	1.92E-02	2.18E-07	6.39E-03	1.14E-02	9.80E-08	7.38E-03	7.22E-03	9.20E-03	1.68E-03
Road 2	2	0000-0100	4.94E-03	6.31E-08	1.27E-03	3.36E-02	4.88E-07	9.81E-03	1.86E-02	3.75E-07	1.01E-02	1.07E-03	1.55E-08	3.12E-03
Road 2	2	0100-0200	4.79E-03	6.15E-08	1.24E-03	3.28E-02	4.73E-07	9.62E-03	1.82E-02	3.59E-07	9.95E-03	1.06E-02	1.50E-08	3.03E-03
Road 2	2	0200-0300	4.64E-03	6.00E-08	1.21E-03	3.20E-02	4.58E-07	9.43E-03	1.78E-02	3.43E-07	9.78E-03	1.03E-02	1.46E-08	2.95E-03
Road 2	2	0300-0400	4.50E-03	5.85E-08	1.18E-03	3.12E-02	4.43E-07	9.24E-03	1.74E-02	3.27E-07	9.63E-03	1.00E-02	1.42E-08	2.87E-03
Road 2	2	0400-0500	4.36E-03	5.70E-08	1.15E-03	3.04E-02	4.28E-07	9.05E-03	1.70E-02	3.11E-07	9.48E-03	9.78E-03	1.38E-08	2.79E-03
Road 2	2	0500-0600	4.22E-03	5.55E-08	1.12E-03	2.96E-02	4.13E-07	8.86E-03	1.66E-02	2.95E-07	9.33E-03	9.54E-03	1.34E-08	2.71E-03
Road 2	2	0600-0700	4.08E-03	5.40E-08	1.09E-03	2.88E-02	3.98E-07	8.67E-03	1.62E-02	2.79E-07	9.18E-03	9.30E-03	1.30E-08	2.63E-03
Road 2	2	0700-0800	3.94E-03	5.25E-08	1.06E-03	2.80E-02	3.83E-07	8.48E-03	1.58E-02	2.63E-07	9.03E-03	9.06E-03	1.26E-08	2.55E-03
Road 2	2	0800-0900	3.80E-03	5.10E-08	1.03E-03	2.72E-02	3.68E-07	8.29E-03	1.54E-02	2.47E-07	8.88E-03	8.82E-03	1.22E-08	2.47E-03
Road 2	2	0900-1000	3.66E-03	4.95E-08	1.00E-03	2.64E-02	3.53E-07	8.10E-03	1.50E-02	2.31E-07	8.73E-03	8.57E-03	1.18E-08	2.39E-03
Road 2	2	1000-1100	3.52E-03	4.80E-08	9.70E-04	2.56E-02	3.38E-07	7.91E-03	1.46E-02	2.15E-07	8.58E-03	8.42E-03	1.14E-08	2.31E-03
Road 2	2	1100-1200	3.38E-03	4.65E-08	9.40E-04	2.48E-02	3.23E-07	7.72E-03	1.42E-02	2.00E-07	8.43E-03	8.27E-03	1.10E-08	2.23E-03
Road 2	2	1200-1300	3.24E-03	4.50E-08	9.10E-04	2.40E-02	3.08E-07	7.53E-03	1.38E-02	1.84E-07	8.28E-03	8.12E-03	1.06E-08	2.15E-03
Road 2	2	1300-1400	3.10E-03	4.35E-08	8.80E-04	2.32E-02	2.93E-07	7.34E-03	1.34E-02	1.68E-07	8.13E-03	7.97E-03	1.02E-08	2.07E-03
Road 2	2	1400-1500	2.96E-03	4.20E-08	8.50E-04	2.24E-02	2.78E-07	7.15E-03	1.30E-02	1.52E-07	7.98E-03	7.82E-03	9.80E-03	2.00E-03
Road 2	2	1500-1600	2.82E-03	4.05E-08	8.20E-04	2.16E-02	2.63E-07	6.96E-03	1.26E-02	1.36E-07	7.83E-03	7.67E-03	9.65E-03	1.92E-03
Road 2	2	1600-1700	2.68E-03	3.90E-08	7.90E-04	2.08E-02	2.48E-07	6.77E-03	1.22E-02	1.20E-07	7.68E-03	7.52E-03	9.50E-03	1.84E-03
Road 2	2	1700-1800	2.54E-03	3.75E-08	7.60E-04	2.00E-02	2.33E-07	6.58E-03	1.18E-02	1.04E-07	7.53E-03	7.37E-03	9.35E-03	1.76E-03
Road 2	2	1800-1900	2.40E-03	3.60E-08	7.30E-04	1.92E-02	2.18E-07	6.39E-03	1.14E-02	9.80E-08	7.38E-03	7.22E-03	9.20E-03	1.68E-03
Road 3	3	0000-0100	4.94E-03	6.31E-08	1.27E-03	3.36E-02	4.88E-07	9.81E-03	1.86E-02	3.75E-07	1.01E-02	1.07E-03	1.55E-08	3.12E-03
Road 3	3	0100-0200	4.79E-03	6.15E-08	1.24E-03	3.28E-02	4.73E-07	9.62E-03	1.82E-02	3.59E-07	9.95E-03	1.06E-02	1.50E-08	3.03E-03
Road 3	3	0200-0300	4.64E-03	6.00E-08	1.21E-03	3.20E-02	4.58E-07	9.43E-03	1.78E-02	3.43E-07	9.78E-03	1.03E-02	1.46E-08	2.95E-03
Road 3	3	0300-0400	4.50E-03	5.85E-08	1.18E-03	3.12E-02	4.43E-07	9.24E-03	1.74E-02	3.27E-07	9.63E-03	1.00E-02	1.42E-08	2.87E-03
Road 3	3	0400-0500	4.36E-03	5.70E-08	1.15E-03	3.04E-02	4.28E-07	9.05E-03	1.70E-02	3.11E-07	9.48E-03	9.78E-03	1.38E-08	2.79E-03
Road 3	3	0500-0600	4.22E-03	5.55E-08	1.12E-03	2.96E-02	4.13E-07	8.86E-03	1.66E-02	2.95E-07	9.33E-03	9.54E-03	1.34E-08	2.71E-03
Road 3	3	0600-0700	4.08E-03	5.40E-08	1.09E-03	2.88E-02	3.98E-07	8.67E-03	1.62E-02	2.79E-07	9.18E-03	9.30E-03	1.30E-08	2.63E-03
Road 3	3	0700-0800	3.94E-03	5.25E-08	1.06E-03	2.80E-02	3.83E-07	8.48E-03	1.58E-02	2.63E-07	9.03E-03	9.06E-03	1.26E-08	2.55E-03
Road 3	3	0800-0900	3.80E-03	5.10E-08	1.03E-03	2.72E-02	3.68E-07	8.29E-03	1.54E-02	2.47E-07	8.88E-03	8.82E-03	1.22E-08	2.47E-03
Road 3	3	0900-1000	3.66E-03	4.95E-08	1.00E-03	2.64E-02	3.53E-07	8.10E-03	1.50E-02	2.31E-07	8.73E-03	8.57E-03	1.18E-08	2.39E-03
Road 3	3	1000-1100	3.52E-03	4.80E-08	9.70E-04	2.56E-02	3.38E-07	7.91E-03	1.46E-02	2.15E-07	8.58E-03	8.42E-03	1.14E-08	2.31E-03
Road 3	3	1100-1200	3.38E-03	4.65E-08	9.40E-04	2.48E-02	3.23E-07	7.72E-03	1.42E-02	2.00E-07	8.43E-03	8.27E-03	1.10E-08	2.23E-03
Road 3	3	1200-1300	3.24E-03	4.50E-08	9.10E-04	2.40E-02	3.08E-07	7.53E-03	1.38E-02	1.84E-07	8.28E-03	8.12E-03	1.06E-08	2.15E-03
Road 3	3	1300-1400	3.10E-03	4.35E-08	8.80E-04	2.32E-02	2.93E-07	7.34E-03	1.34E-02	1.68E-07	8.13E-03	7.97E-03	1.02E-08	2.07E-03
Road 3	3	1400-1500	2.96E-03	4.20E-08	8.50E-04	2.24E-02	2.78E-07	7.15E-03	1.30E-02	1.52E-07	7.98E-03	7.82E-03	9.80E-03	2.00E-03
Road 3	3	1500-1600	2.82E-03	4.05E-08	8.20E-04	2.16E-02	2.63E-07	6.96E-03	1.26E-02	1.36E-07	7.83E-03	7.67E-03	9.65E-03	1.92E-03
Road 3	3	1600-1700	2.68E-03	3.90E-08	7.90E-04	2.08E-02	2.48E-07	6.77E-03	1.22E-02	1.20E-07	7.68E-03	7.52E-03	9.50E-03	1.84E-03
Road 3	3	1700-1800	2.54E-03	3.75E-08	7.60E-04	2.00E-02	2.33E-07	6.58E-03	1.18E-02	1.04E-07	7.53E-03	7.37E-03	9.35E-03	1.76E-03
Road 3	3	1800-1900	2.40E-03	3.60E-08	7.30E-04	1.92E-02	2.18E-07	6.39E-03	1.14E-02	9.80E-08	7.38E-03	7.22E-03	9.20E-03	1.68E-03
Road 4	4	0000-0100	4.94E-03	6.31E-08	1.27E-03	3.36E-02	4.88E-07	9.81E-03	1.86E-02	3.75E-07	1.01E-02	1.07E-03	1.55E-08	3.12E-03
Road 4	4	0100-0200	4.79E-03	6.15E-08	1.24E-03	3.28E-02	4.73E-07	9.62E-03	1.82E-02	3.59E-07	9.95E-03	1.06E-02	1.50E-08	3.03E-03
Road 4	4	0200-0300	4.64E-03	6.00E-08	1.21E-03	3.20E-02	4.58E-07	9.43E-03	1.78E-02	3.43E-07	9.78E-03	1.03E-02	1.46E-08	2.95E-03
Road 4	4	0300-0400	4.50E-03	5.85E-08	1.18E-03	3.12E-02	4.43E-07	9.24E-03	1.74E-02	3.27E-07	9.63E-03	1.00E-02	1.42E-08	2.87E-03
Road 4	4	0400-0500	4.36E-03	5.70E-08	1.15E-03	3.04E-02	4.28E-07	9.05E-03	1.70E-02	3.11E-07	9.48E-03	9.78E-03	1.38E-08	2.79E-03
Road 4	4	0500-0600	4.22E-03	5.55E-08	1.12E-03	2.96E-02	4.13E-07	8.86E-03	1.66E-02	2.95E-07	9.33E-03	9.54E-03	1.34E-08	2.71E-03
Road 4	4	0600-0700	4.08E-03	5.40E-08	1.09E-03	2.88E-02	3.98E-07	8.67E-03	1.62E-02	2.79E-07	9.18E-03	9.30E-03	1.30E-08	2.63E-03
Road 4	4													

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Twin 10 North Underground Quarry												
Open Road to Base Emission Factors for												
ASBESTOS model (Metric)												
Year 2003			No Emission				No Emission					
Route	Node ID	Hour	g/hour	Monthly/Min	g/hour	Monthly/Min	g/hour	Monthly/Min	g/hour	Monthly/Min	g/hour	Monthly/Min
Route 4	0 8000-0000	7:22:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	7:24:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	7:26:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	7:28:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	7:30:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	7:32:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	7:34:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	7:36:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	7:38:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	7:40:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	7:42:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	7:44:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	7:46:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	7:48:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	7:50:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	7:52:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	7:54:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	7:56:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	7:58:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	8:00:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	8:02:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	8:04:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	8:06:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	8:08:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	8:10:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	8:12:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	8:14:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	8:16:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	8:18:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	8:20:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	8:22:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	8:24:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	8:26:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	8:28:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	8:30:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	8:32:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	8:34:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	8:36:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	8:38:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	8:40:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	8:42:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	8:44:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	8:46:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	8:48:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	8:50:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	8:52:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	8:54:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	8:56:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	8:58:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	9:00:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	9:02:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	9:04:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	9:06:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	9:08:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	9:10:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	9:12:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	9:14:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	9:16:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	9:18:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	9:20:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	9:22:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	9:24:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	9:26:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	9:28:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	9:30:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	9:32:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	9:34:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	9:36:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	9:38:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	9:40:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	9:42:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	9:44:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	9:46:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	9:48:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	9:50:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	9:52:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	9:54:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	9:56:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	9:58:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	10:00:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000	10:02:03	0.1670	1.9803	1.8318	1.1881	1.0112	4.5512	1.6448	1.3062	1.8885	8.7738
Route 4	0 8000-0000											

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Year 2043														
Road Name		Road ID	Hour	No. Emissons				No. Emissons						
				Monthly/Yearly		Monthly/Yearly		Monthly/Yearly		Monthly/Yearly				
				g/hour	tonnes/hour	g/yearly	tonnes/yearly	g/hour	tonnes/hour	g/yearly	tonnes/yearly			
Road 7	7	1600-1700	3.88E-07	8.80E-07	4.20E-03	1.24E-01	3.71E-06	1.09E-06	1.57E-01	4.60E-06	2.01E-02	4.92E-03	1.47E-07	6.28E-08
		1700-1800	3.27E-07	7.52E-07	3.59E-03	1.03E-01	3.10E-06	8.91E-07	1.32E-01	3.75E-06	2.47E-06	4.14E-06	1.26E-07	5.25E-08
Road 7	7	1800-1900	3.27E-07	7.52E-07	3.59E-03	1.03E-01	3.10E-06	8.91E-07	1.32E-01	3.75E-06	2.47E-06	4.14E-06	1.26E-07	5.25E-08
		1900-2000	3.27E-07	7.52E-07	3.59E-03	1.03E-01	3.10E-06	8.91E-07	1.32E-01	3.75E-06	2.47E-06	4.14E-06	1.26E-07	5.25E-08
Road 7	7	2000-2100	6.62E-03	1.79E-07	6.74E-04	3.81E-03	1.06E-03	4.40E-07	4.72E-06	1.71E-06	5.17E-03	1.60E-04	4.54E-08	1.90E-09
		2100-2200	6.62E-03	1.79E-07	6.74E-04	3.81E-03	1.06E-03	4.40E-07	4.72E-06	1.71E-06	5.17E-03	1.60E-04	4.54E-08	1.90E-09
Road 7	7	2200-2300	5.51E-03	1.50E-06	5.47E-04	3.16E-03	8.82E-04	2.53E-07	2.73E-06	1.02E-06	3.00E-03	9.44E-05	2.65E-08	1.07E-09
		2300-2400	5.51E-03	1.50E-06	5.47E-04	3.16E-03	8.82E-04	2.53E-07	2.73E-06	1.02E-06	3.00E-03	9.44E-05	2.65E-08	1.07E-09
Road 7	7	2400-2500	5.51E-03	1.50E-06	5.47E-04	3.16E-03	8.82E-04	2.53E-07	2.73E-06	1.02E-06	3.00E-03	9.44E-05	2.65E-08	1.07E-09
		2500-2600	5.51E-03	1.50E-06	5.47E-04	3.16E-03	8.82E-04	2.53E-07	2.73E-06	1.02E-06	3.00E-03	9.44E-05	2.65E-08	1.07E-09
Road 7	7	2600-2700	5.51E-03	1.50E-06	5.47E-04	3.16E-03	8.82E-04	2.53E-07	2.73E-06	1.02E-06	3.00E-03	9.44E-05	2.65E-08	1.07E-09
		2700-2800	5.51E-03	1.50E-06	5.47E-04	3.16E-03	8.82E-04	2.53E-07	2.73E-06	1.02E-06	3.00E-03	9.44E-05	2.65E-08	1.07E-09
Road 8	8	0000-0100	4.77E-03	2.65E-09	1.40E-06	5.11E-02	1.27E-06	3.58E-06	1.19E-06	1.47E-06	1.21E-07	6.71E-08	4.77E-09	3.40E-09
		0100-0200	5.21E-03	2.94E-09	1.56E-06	5.61E-02	1.41E-06	4.00E-06	1.32E-06	1.62E-06	1.38E-07	7.49E-08	5.40E-09	3.96E-09
Road 8	8	0200-0300	5.21E-03	2.94E-09	1.56E-06	5.61E-02	1.41E-06	4.00E-06	1.32E-06	1.62E-06	1.38E-07	7.49E-08	5.40E-09	3.96E-09
		0300-0400	5.21E-03	2.94E-09	1.56E-06	5.61E-02	1.41E-06	4.00E-06	1.32E-06	1.62E-06	1.38E-07	7.49E-08	5.40E-09	3.96E-09
Road 8	8	0400-0500	6.61E-03	1.54E-06	1.14E-05	4.88E-09	8.79E-05	6.79E-05	4.32E-05	1.06E-08	7.81E-05	1.71E-07	1.97E-07	1.01E-07
Road 8	8	0500-0600	7.12E-03	2.87E-09	2.21E-05	8.62E-06	1.13E-05	4.32E-06	1.82E-06	3.35E-06	1.84E-04	7.41E-05	2.40E-07	1.01E-07
		0600-0700	7.41E-03	3.28E-09	2.54E-05	9.84E-06	1.24E-05	4.69E-06	1.95E-06	3.68E-06	2.00E-04	8.14E-05	2.65E-07	1.07E-07
Road 8	8	0700-0800	8.05E-03	3.14E-06	1.00E-06	4.06E-06	7.16E-08	5.28E-06	4.88E-07	5.82E-08	3.30E-06	2.10E-06	8.69E-09	2.72E-09
		0800-0900	8.05E-03	3.14E-06	1.00E-06	4.06E-06	7.16E-08	5.28E-06	4.88E-07	5.82E-08	3.30E-06	2.10E-06	8.69E-09	2.72E-09
Road 8	8	0900-1000	8.05E-03	3.14E-06	1.00E-06	4.06E-06	7.16E-08	5.28E-06	4.88E-07	5.82E-08	3.30E-06	2.10E-06	8.69E-09	2.72E-09
		1000-1100	8.05E-03	3.14E-06	1.00E-06	4.06E-06	7.16E-08	5.28E-06	4.88E-07	5.82E-08	3.30E-06	2.10E-06	8.69E-09	2.72E-09
Road 8	8	1100-1200	9.17E-03	1.59E-06	1.10E-06	4.14E-06	7.50E-08	5.60E-06	5.31E-09	1.29E-06	6.71E-06	7.56E-06	1.46E-09	3.21E-09
		1200-1300	9.17E-03	1.59E-06	1.10E-06	4.14E-06	7.50E-08	5.60E-06	5.31E-09	1.29E-06	6.71E-06	7.56E-06	1.46E-09	3.21E-09
Road 8	8	1300-1400	1.48E-02	1.61E-06	1.19E-06	4.70E-07	2.60E-06	5.18E-06	5.76E-06	8.61E-06	6.73E-06	2.91E-06	8.48E-06	3.40E-06
		1400-1500	1.48E-02	1.61E-06	1.19E-06	4.70E-07	2.60E-06	5.18E-06	5.76E-06	8.61E-06	6.73E-06	2.91E-06	8.48E-06	3.40E-06
Road 8	8	1500-1600	1.54E-02	1.69E-06	1.26E-06	4.90E-07	2.74E-06	5.68E-06	6.24E-06	1.13E-07	2.31E-06	4.73E-06	1.70E-06	1.47E-06
		1600-1700	1.54E-02	1.69E-06	1.26E-06	4.90E-07	2.74E-06	5.68E-06	6.24E-06	1.13E-07	2.31E-06	4.73E-06	1.70E-06	1.47E-06
Road 8	8	1700-1800	1.54E-02	1.69E-06	1.26E-06	4.90E-07	2.74E-06	5.68E-06	6.24E-06	1.13E-07	2.31E-06	4.73E-06	1.70E-06	1.47E-06
		1800-1900	1.54E-02	1.69E-06	1.26E-06	4.90E-07	2.74E-06	5.68E-06	6.24E-06	1.13E-07	2.31E-06	4.73E-06	1.70E-06	1.47E-06
Road 8	8	1900-2000	1.54E-02	1.69E-06	1.26E-06	4.90E-07	2.74E-06	5.68E-06	6.24E-06	1.13E-07	2.31E-06	4.73E-06	1.70E-06	1.47E-06
		2000-2100	1.54E-02	1.69E-06	1.26E-06	4.90E-07	2.74E-06	5.68E-06	6.24E-06	1.13E-07	2.31E-06	4.73E-06	1.70E-06	1.47E-06
Road 8	8	2100-2200	1.54E-02	1.69E-06	1.26E-06	4.90E-07	2.74E-06	5.68E-06	6.24E-06	1.13E-07	2.31E-06	4.73E-06	1.70E-06	1.47E-06
		2200-2300	1.54E-02	1.69E-06	1.26E-06	4.90E-07	2.74E-06	5.68E-06	6.24E-06	1.13E-07	2.31E-06	4.73E-06	1.70E-06	1.47E-06
Road 8	8	2300-2400	1.54E-02	1.69E-06	1.26E-06	4.90E-07	2.74E-06	5.68E-06	6.24E-06	1.13E-07	2.31E-06	4.73E-06	1.70E-06	1.47E-06
		2400-2500	1.54E-02	1.69E-06	1.26E-06	4.90E-07	2.74E-06	5.68E-06	6.24E-06	1.13E-07	2.31E-06	4.73E-06	1.70E-06	1.47E-06
Road 8	8	2500-2600	1.54E-02	1.69E-06	1.26E-06	4.90E-07	2.74E-06	5.68E-06	6.24E-06	1.13E-07	2.31E-06	4.73E-06	1.70E-06	1.47E-06
		2600-2700	1.54E-02	1.69E-06	1.26E-06	4.90E-07	2.74E-06	5.68E-06	6.24E-06	1.13E-07	2.31E-06	4.73E-06	1.70E-06	1.47E-06
Road 8	8	2700-2800	1.54E-02	1.69E-06	1.26E-06	4.90E-07	2.74E-06	5.68E-06	6.24E-06	1.13E-07	2.31E-06	4.73E-06	1.70E-06	1.47E-06
		2800-2900	1.54E-02	1.69E-06	1.26E-06	4.90E-07	2.74E-06	5.68E-06	6.24E-06	1.13E-07	2.31E-06	4.73E-06	1.70E-06	1.47E-06
Road 8	8	2900-3000	1.54E-02	1.69E-06	1.26E-06	4.90E-07	2.74E-06	5.68E-06	6.24E-06	1.13E-07	2.31E-06	4.73E-06	1.70E-06	1.47E-06
		3000-0100	1.54E-02	1.69E-06	1.26E-06	4.90E-07	2.74E-06	5.68E-06	6.24E-06	1.13E-07	2.31E-06	4.73E-06	1.70E-06	1.47E-06
Road 9	9	0000-0100	6.64E-03	1.79E-06	6.46E-04	3.59E-04	1.45E-07	1.04E-07	4.14E-06	1.82E-06	1.24E-07	1.78E-07	7.21E-09	3.00E-09
		0100-0200	6.64E-03	1.79E-06	6.46E-04	3.59E-04	1.45E-07	1.04E-07	4.14E-06	1.82E-06	1.24E-07	1.78E-07	7.21E-09	3.00E-09
Road 9	9	0200-0300	6.64E-03	1.79E-06	6.46E-04	3.59E-04	1.45E-07	1.04E-07	4.14E-06	1.82E-06	1.24E-07	1.78E-07	7.21E-09	3.00E-09
		0300-0400	6.64E-03	1.79E-06	6.46E-04	3.59E-04	1.45E-07	1.04E-07	4.14E-06	1.82E-06	1.24E-07	1.78E-07	7.21E-09	3.00E-09
Road 9	9	0400-0500	6.64E-03	1.79E-06	6.46E-04	3.59E-04	1.45E-07	1.04E-07	4.14E-06	1.82E-06	1.24E-07	1.78E-07	7.21E-09	3.00E-09
		0500-0600	6.64E-03	1.79E-06	6.46E-04	3.59E-04	1.45E-07	1.04E-07	4.14E-06	1.82E-06	1.24E-07	1.78E-07	7.21E-09	3.00E-09
Road 9	9	0600-0700	6.64E-03	1.79E-06	6.46E-04	3.59E-04	1.45E-07	1.04E-07	4.14E-06	1.82E-06	1.24E-07	1.78E-07	7.21E-09	3.00E-09
		0700-0800	6.64E-03	1.79E-06	6.46E-04	3.59E-04	1.45E-07	1.04E-07	4.14E-06	1.82E-06	1.24E-07	1.78E-07	7.21E-09	3.00E-09
Road 9	9	0800-0900	6.64E-03	1.79E-06	6.46E-04	3.59E-04	1.45E-07	1.04E-07	4.14E-06	1.82E-06	1.24E-07	1.78E-07	7.21E-09	3.00E-09
		0900-1000	6.64E-03	1.79E-06	6.46E-04	3.59E-04	1.45E-07	1.04E-07	4.14E-06	1.82E-06	1.24E-07	1.78E-07	7.21E-09	3.00E-09
Road 9	9	1000-1100	6.64E-03	1.79E-06	6.46E-04	3.59E-04	1.45E-07	1.04E-07	4.14E-06	1.82E-06	1.24E-07	1.78E-07	7.21E-09	3.00E-09
		1100-1200	6.64E-03	1.79E-06	6.46E-04	3.59E-04	1.45E-07	1.04E-07	4.14E-06	1.82E-06	1.24E-07	1.78E-07	7.21E-09	3.00E-09
Road 9	9	1200-1300	6.64E-03	1.79E-06	6.46E-04	3.59E-04	1.45E-07	1.04E-07	4.14E-06	1.82E-06	1.24E-07	1.78E-07	7.21E-09	3.00E-09
		1300-1400	6.64E-03	1.79E-06	6.46E-04	3.59E-04	1.45E-07	1.04E-07	4.14E-06	1.82E-06	1.24E-07	1.78E-07	7.21E-09	3.00E-09
Road 9	9	1400-1500	6.64E-03	1.79E-06	6.46E-04	3.59E-04	1.45E-07	1.04E-07	4.14E-06	1.82E-06	1.24E-07	1.78E-07	7.21E-09	3.00E-09
		1500-1600	6.64E-03	1.79E-06	6.46E-04	3.59E-04	1.45E-07	1.04E-07	4.14E-06	1.82E-06	1.24E-07	1.78E-07	7.21E-09	3.00E-09
Road 9	9	1600-1700	6.64E-03	1.79E-06	6.46E-04	3.59E-04	1.45E-07	1.04E-07	4.14E-06	1.82E-06	1.24E-07	1.78E-07	7.21E-09	3.00E-09
		1700-1800	6.64E-03	1.79E-06	6.46E-04	3.59E-04	1.45E-07	1.04E-07	4.14E-06	1.82E-06	1.24E-07	1.78E-07	7.21E-09	3.00E-09
Road 9	9	1800-1900	6.64E-03	1.79E-06	6.46E-04	3.59E-04	1.45E-07	1.04E-07	4.14E-06	1.82E-06	1.24E-07	1.78E-07	7.21E-09	3.00E-09
		1900-2000	6.64E-03	1.79E-06	6.46E-04	3.59E-04	1.45E-07	1.04E-07	4.14E-06	1.82E-06	1.24E-07	1.78E-07	7.21E-09	3.00E-09
Road 9	9	2000-2100	6.64E-03	1.79E-06	6.46E-04	3.59E-04	1.45E-07	1.04E-07	4.14E-06	1.82E-06	1.24E-07	1.78E-07	7.21E-09	3.00E-09
		2100-2200	6.64E-03	1.79E-06	6.46E-04	3.59E-04	1.45E-07	1.04E-07	4.14E-06	1.82E-06	1.24E-07	1.78E-07	7.21E-09	3.00E-09
Road 9	9	2200-2300	6.64E-03	1.79E-06	6.46E-04	3.59E-04	1.45E-07	1.04E-07	4.14E-06	1.82E-06	1.24E-07	1.78E-07	7.21E-09	

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.4 Emission Factor in 2043.xlsx

Hourly Demand Quary			Per 24 hour Emission Factors for 2006 (annual) (kg/hr)													
Line	Area	ID	Hour	NOx Emission					NO Emission							
				Monthly/average		Monthly/average		Monthly/average		Monthly/average						
				g/hr/m ³	lb/hr/m ³	g/hr/m ³	lb/hr/m ³	g/hr/m ³	lb/hr/m ³	g/hr/m ³	lb/hr/m ³					
11	11	0000:01:00	1.585	1.481	2.086	1.298	9.938	1.271	1.018	1.056	1.478	4.088	3.048	4.296	0.5	
11	11	0000:02:00	1.585	1.481	2.086	1.298	9.938	1.271	1.018	1.056	1.478	4.088	3.048	4.296	0.5	
11	11	0000:03:00	1.585	1.481	2.086	1.298	9.938	1.271	1.018	1.056	1.478	4.088	3.048	4.296	0.5	
11	11	0000:04:00	1.585	1.481	2.086	1.298	9.938	1.271	1.018	1.056	1.478	4.088	3.048	4.296	0.5	
11	11	0000:05:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0000:06:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0000:07:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0000:08:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0000:09:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0000:10:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0000:11:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0000:12:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0000:13:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0000:14:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0000:15:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0000:16:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0000:17:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0000:18:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0000:19:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0000:20:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0000:21:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0000:22:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0000:23:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0000:24:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0001:01:00	1.585	1.481	2.086	1.298	9.938	1.271	1.018	1.056	1.478	4.088	3.048	4.296	0.5	
11	11	0001:02:00	1.585	1.481	2.086	1.298	9.938	1.271	1.018	1.056	1.478	4.088	3.048	4.296	0.5	
11	11	0001:03:00	1.585	1.481	2.086	1.298	9.938	1.271	1.018	1.056	1.478	4.088	3.048	4.296	0.5	
11	11	0001:04:00	1.585	1.481	2.086	1.298	9.938	1.271	1.018	1.056	1.478	4.088	3.048	4.296	0.5	
11	11	0001:05:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0001:06:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0001:07:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0001:08:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0001:09:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0001:10:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0001:11:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0001:12:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0001:13:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0001:14:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0001:15:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0001:16:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0001:17:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0001:18:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0001:19:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0001:20:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0001:21:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0001:22:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0001:23:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0001:24:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0002:01:00	1.585	1.481	2.086	1.298	9.938	1.271	1.018	1.056	1.478	4.088	3.048	4.296	0.5	
11	11	0002:02:00	1.585	1.481	2.086	1.298	9.938	1.271	1.018	1.056	1.478	4.088	3.048	4.296	0.5	
11	11	0002:03:00	1.585	1.481	2.086	1.298	9.938	1.271	1.018	1.056	1.478	4.088	3.048	4.296	0.5	
11	11	0002:04:00	1.585	1.481	2.086	1.298	9.938	1.271	1.018	1.056	1.478	4.088	3.048	4.296	0.5	
11	11	0002:05:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0002:06:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0002:07:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0002:08:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0002:09:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0002:10:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0002:11:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0002:12:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0002:13:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0002:14:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0002:15:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0002:16:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0002:17:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0002:18:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0002:19:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0002:20:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0002:21:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0002:22:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0002:23:00	2.462	2.303	7.028	9.835	1.373	9.303	5.461	1.613	4.558	6.478	5.154	14.738	2.065	0.5
11	11	0002:24:00</														

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1-1 General Environment, Project(160722778)1.01(Where)Air Modelling, Appendix Traffic/Cong Road, Appendix 2.5.4 Emission Factor in 2012.xlsx

1-5 Source: Environment Protection Corporation (EPC) 2012, Other (Aid Modelling) Appendix 3.5.4 Emissions Factor in 2012.xlsx1. (Source) Environment Protection 60722778(1-01) Other: Air Modelling Appendix Traffic/Queens Road Appendix 2.5.4 Emissions Factor in 2012.xlsx1.3. Secure Environment: ProjectId:50732738, 1.011, OtherId:361, Modelling:Appendix/Traffic/OpenRoads/Appendix 3.5.4 Emission Factor in 2042.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Ting Yi North Underground Quarry

Open Road 2nd Hour Emission Factors for AEDM model (Hwy)		Year	No Emission		Monthly/through		No Emission		Monthly/through			
Road Name	Road ID	Hour	Monthly/through	Monthly/through	Monthly/through	Monthly/through	Monthly/through	Monthly/through	Monthly/through	Monthly/through		
Road 7	7	2300-2359	3.38E+03	3.80E+07	4.20E+01	1.24E+01	3.71E+06	1.19E+01	1.57E+01	4.01E+01	1.47E+07	6.29E+04
Road 7	7	2300-2359	3.27E+02	1.07E+06	4.00E+01	5.81E+01	4.69E+06	2.02E+02	2.47E+02	1.77E+06	2.47E+04	1.98E+04
Road 7	7	2300-2359	1.70E+02	5.30E+05	2.00E+01	2.90E+01	2.50E+05	1.00E+02	1.20E+02	8.00E+05	1.00E+04	7.90E+03
Road 7	7	2300-2359	6.62E+03	6.77E+07	7.60E+04	3.40E+02	1.18E+06	4.40E+02	4.47E+02	5.17E+06	1.60E+05	4.80E+04
Road 7	7	2300-2359	5.88E+03	5.93E+07	6.70E+04	3.00E+02	1.03E+06	3.80E+02	3.87E+02	4.57E+06	1.40E+05	4.10E+04
Road 7	7	2300-2359	5.51E+03	5.56E+07	6.30E+04	2.87E+02	9.74E+05	3.44E+02	3.50E+02	4.20E+06	1.30E+05	3.80E+04
Road 7	7	2300-2359	5.44E+03	5.49E+07	6.20E+04	2.79E+02	9.56E+05	3.39E+02	3.45E+02	4.13E+06	1.29E+05	3.70E+04
Road 7	7	2300-2359	5.37E+03	5.42E+07	6.10E+04	2.71E+02	9.37E+05	3.34E+02	3.39E+02	4.06E+06	1.27E+05	3.60E+04
Road 8	8	0000-0059	4.77E+03	4.83E+07	5.50E+04	2.51E+02	1.27E+06	3.80E+02	1.09E+06	3.74E+04	1.21E+05	8.71E+04
Road 8	8	0000-0059	5.22E+03	5.28E+07	6.00E+04	2.79E+02	1.37E+06	4.10E+02	1.19E+06	4.00E+04	1.31E+05	9.50E+04
Road 8	8	0000-0059	5.74E+03	5.82E+07	6.60E+04	3.04E+02	1.50E+06	4.60E+02	1.26E+06	7.81E+04	1.44E+05	1.06E+05
Road 8	8	0000-0059	5.65E+03	5.74E+07	6.50E+04	2.96E+02	1.46E+06	4.53E+02	1.24E+06	7.65E+04	1.42E+05	1.04E+05
Road 8	8	0000-0059	7.16E+03	7.28E+07	8.20E+04	3.62E+02	1.82E+06	5.50E+02	1.62E+06	1.94E+05	1.74E+05	1.29E+05
Road 8	8	0000-0059	7.61E+03	7.74E+07	8.70E+04	3.87E+02	1.94E+06	5.80E+02	1.74E+06	1.99E+05	1.85E+05	1.38E+05
Road 8	8	0000-0059	8.05E+03	8.16E+07	9.20E+04	4.08E+02	2.10E+06	6.10E+02	1.88E+06	2.10E+05	1.90E+05	1.40E+05
Road 8	8	0000-0059	7.98E+03	8.09E+07	9.10E+04	4.04E+02	2.07E+06	6.04E+02	1.86E+06	2.06E+05	1.87E+05	1.38E+05
Road 8	8	0000-0059	8.17E+03	8.29E+07	9.30E+04	4.14E+02	2.14E+06	6.20E+02	1.92E+06	2.14E+05	1.94E+05	1.42E+05
Road 8	8	0000-0059	8.10E+03	8.19E+07	9.18E+04	4.10E+02	2.10E+06	6.14E+02	1.89E+06	2.10E+05	1.92E+05	1.40E+05
Road 8	8	0000-0059	1.08E+04	1.10E+08	1.24E+05	5.20E+02	2.70E+06	8.00E+02	2.57E+06	2.70E+05	2.50E+05	1.80E+05
Road 8	8	0000-0059	1.06E+04	1.08E+08	1.21E+05	5.09E+02	2.65E+06	7.88E+02	2.52E+06	2.65E+05	2.47E+05	1.78E+05
Road 8	8	0000-0059	1.05E+04	1.06E+08	1.20E+05	5.02E+02	2.60E+06	7.78E+02	2.49E+06	2.60E+05	2.45E+05	1.76E+05
Road 8	8	0000-0059	1.04E+04	1.05E+08	1.19E+05	4.95E+02	2.56E+06	7.70E+02	2.46E+06	2.56E+05	2.43E+05	1.74E+05
Road 8	8	0000-0059	1.03E+04	1.04E+08	1.18E+05	4.88E+02	2.51E+06	7.60E+02	2.43E+06	2.51E+05	2.40E+05	1.72E+05
Road 8	8	0000-0059	1.02E+04	1.03E+08	1.17E+05	4.81E+02	2.46E+06	7.50E+02	2.40E+06	2.46E+05	2.37E+05	1.70E+05
Road 8	8	0000-0059	1.01E+04	1.02E+08	1.16E+05	4.74E+02	2.41E+06	7.40E+02	2.37E+06	2.41E+05	2.34E+05	1.68E+05
Road 8	8	0000-0059	1.00E+04	1.01E+08	1.15E+05	4.67E+02	2.36E+06	7.30E+02	2.34E+06	2.36E+05	2.31E+05	1.66E+05
Road 8	8	0000-0059	9.99E+03	1.00E+08	1.14E+05	4.60E+02	2.31E+06	7.20E+02	2.31E+06	2.31E+05	2.29E+05	1.64E+05
Road 8	8	0000-0059	9.98E+03	9.99E+07	1.13E+05	4.53E+02	2.26E+06	7.10E+02	2.28E+06	2.28E+05	2.26E+05	1.62E+05
Road 8	8	0000-0059	9.97E+03	9.98E+07	1.12E+05	4.46E+02	2.21E+06	7.00E+02	2.25E+06	2.25E+05	2.23E+05	1.60E+05
Road 8	8	0000-0059	9.96E+03	9.97E+07	1.11E+05	4.39E+02	2.16E+06	6.90E+02	2.20E+06	2.20E+05	2.18E+05	1.58E+05
Road 8	8	0000-0059	9.95E+03	9.96E+07	1.10E+05	4.32E+02	2.11E+06	6.80E+02	2.15E+06	2.15E+05	2.13E+05	1.56E+05
Road 8	8	0000-0059	9.94E+03	9.95E+07	1.09E+05	4.25E+02	2.06E+06	6.70E+02	2.10E+06	2.10E+05	2.08E+05	1.54E+05
Road 8	8	0000-0059	9.93E+03	9.94E+07	1.08E+05	4.18E+02	2.01E+06	6.60E+02	2.05E+06	2.05E+05	2.03E+05	1.52E+05
Road 8	8	0000-0059	9.92E+03	9.93E+07	1.07E+05	4.11E+02	1.96E+06	6.50E+02	2.00E+06	2.00E+05	1.98E+05	1.50E+05
Road 8	8	0000-0059	9.91E+03	9.92E+07	1.06E+05	4.04E+02	1.91E+06	6.40E+02	1.95E+06	1.95E+05	1.93E+05	1.48E+05
Road 8	8	0000-0059	9.90E+03	9.91E+07	1.05E+05	3.97E+02	1.86E+06	6.30E+02	1.90E+06	1.90E+05	1.88E+05	1.46E+05
Road 8	8	0000-0059	9.89E+03	9.90E+07	1.04E+05	3.90E+02	1.81E+06	6.20E+02	1.85E+06	1.85E+05	1.83E+05	1.44E+05
Road 8	8	0000-0059	9.88E+03	9.89E+07	1.03E+05	3.83E+02	1.76E+06	6.10E+02	1.80E+06	1.80E+05	1.78E+05	1.42E+05
Road 8	8	0000-0059	9.87E+03	9.88E+07	1.02E+05	3.76E+02	1.71E+06	6.00E+02	1.75E+06	1.75E+05	1.73E+05	1.40E+05
Road 8	8	0000-0059	9.86E+03	9.87E+07	1.01E+05	3.69E+02	1.66E+06	5.90E+02	1.70E+06	1.70E+05	1.68E+05	1.38E+05
Road 8	8	0000-0059	9.85E+03	9.86E+07	1.00E+05	3.62E+02	1.61E+06	5.80E+02	1.65E+06	1.65E+05	1.63E+05	1.36E+05
Road 8	8	0000-0059	9.84E+03	9.85E+07	9.99E+04	3.55E+02	1.56E+06	5.70E+02	1.60E+06	1.60E+05	1.58E+05	1.34E+05
Road 8	8	0000-0059	9.83E+03	9.84E+07	9.98E+04	3.48E+02	1.51E+06	5.60E+02	1.55E+06	1.55E+05	1.53E+05	1.32E+05
Road 8	8	0000-0059	9.82E+03	9.83E+07	9.97E+04	3.41E+02	1.46E+06	5.50E+02	1.50E+06	1.50E+05	1.48E+05	1.30E+05
Road 8	8	0000-0059	9.81E+03	9.82E+07	9.96E+04	3.34E+02	1.41E+06	5.40E+02	1.45E+06	1.45E+05	1.43E+05	1.28E+05
Road 8	8	0000-0059	9.80E+03	9.81E+07	9.95E+04	3.27E+02	1.36E+06	5.30E+02	1.40E+06	1.40E+05	1.38E+05	1.26E+05
Road 8	8	0000-0059	9.79E+03	9.80E+07	9.94E+04	3.20E+02	1.31E+06	5.20E+02	1.35E+06	1.35E+05	1.33E+05	1.24E+05
Road 8	8	0000-0059	9.78E+03	9.79E+07	9.93E+04	3.13E+02	1.26E+06	5.10E+02	1.30E+06	1.30E+05	1.28E+05	1.22E+05
Road 8	8	0000-0059	9.77E+03	9.78E+07	9.92E+04	3.06E+02	1.21E+06	5.00E+02	1.25E+06	1.25E+05	1.23E+05	1.20E+05
Road 8	8	0000-0059	9.76E+03	9.77E+07	9.91E+04	2.99E+02	1.16E+06	4.90E+02	1.20E+06	1.20E+05	1.18E+05	1.18E+05
Road 8	8	0000-0059	9.75E+03	9.76E+07	9.90E+04	2.92E+02	1.11E+06	4.80E+02	1.15E+06	1.15E+05	1.13E+05	1.16E+05
Road 8	8	0000-0059	9.74E+03	9.75E+07	9.89E+04	2.85E+02	1.06E+06	4.70E+02	1.10E+06	1.10E+05	1.08E+05	1.14E+05
Road 8	8	0000-0059	9.73E+03	9.74E+07	9.88E+04	2.78E+02	1.01E+06	4.60E+02	1.05E+06	1.05E+05	1.03E+05	1.12E+05
Road 8	8	0000-0059	9.72E+03	9.73E+07	9.87E+04	2.71E+02	9.60E+05	4.50E+02	1.00E+06	1.00E+05	9.80E+04	1.10E+05
Road 8	8	0000-0059	9.71E+03	9.72E+07	9.86E+04	2.64E+02	9.10E+05	4.40E+02	9.50E+05	9.50E+04	9.30E+04	1.08E+05
Road 8	8	0000-0059	9.70E+03	9.71E+07	9.85E+04	2.57E+02	8.60E+05	4.30E+02	9.00E+05	9.00E+04	8.80E+04	1.06E+05
Road 8	8	0000-0059	9.69E+03	9.70E+07	9.84E+04	2.50E+02	8.10E+05	4.20E+02	8.50E+05	8.50E+04	8.30E+04	1.04E+05
Road 8	8	0000-0059	9.68E+03	9.69E+07	9.83E+04	2.43E+02	7.60E+05	4.10E+02	8.00E+05	8.00E+04	7.80E+04	1.02E+05
Road 8	8	0000-0059	9.67E+03	9.68E+07	9.82E+04	2.36E+02	7.10E+05	4.00E+02	7.50E+05	7.50E+04	7.30E+04	1.00E+05
Road 8	8	0000-0059	9.66E+03	9.67E+07	9.81E+04	2.29E+02	6.60E+05	3.90E+02	7.00E+05	7.00E+04	6.80E+04	9.80E+04
Road 8	8	0000-0059	9.65E+03	9.66E+07	9.80E+04	2.22E+02	6.10E+05	3.80E+02	6.50E+05	6.50E+04	6.30E+04	9.60E+04
Road 8	8	0000-0059	9.64E+03	9.65E+07	9.79E+04	2.15E+02	5.60E+05	3.70E+02	6.00E+05	6.00E+04	5.80E+04	9.40E+04
Road 8	8	0000-0059	9.63E+03	9.64E+07	9.78E+04	2.08E+02	5.10E+05	3.60E+02	5.50E+05	5.50E+04	5.30E+04	9.20E+04
Road 8	8	0000-0059	9.62E+03	9.63E+07	9.77E+04	2.01E+02	4.60E+05	3.50E+02	5.00E+05	5.00E+04	4.80E+04	9.00E+04
Road 8	8	0000-0059	9.61E+03	9.62E+07	9.76E+04	1.94E+02	4.10E+05	3.40E+02	4.50E+05	4.50E+04	4.30E+04	8.80E+04
Road 8	8	0000-0059	9.60E+03	9.61E+07	9.75E+04	1.87E+02	3.60E+05	3.30E+02	4.00E+05	4.00E+04	3.80E+04	8.60E+04
Road 8	8	0000-0059	9.59E+03	9.60E+07	9.74E+04	1.80E+02	3.10E+05	3.20E+02	3.50E+05	3.50E+04	3.30E+04	8.40E+04
Road 8	8	0000-0059	9.58E+03	9.59E+07	9.73E+04	1.73E+02	2.60E+05	3.10E+02	3.00E+05	3.00E+04	2.80E+04	8.20E+04
Road 8	8	0000-0059	9.57E+03	9.58E+07	9.72E+04	1.66E+02	2.10E+05	3.00E+02	2.50E+05	2.50E+04	2.30E+04	8.00E+04
Road 8	8	0000-0059	9.56E+03	9.57E+07	9.71E+04	1.59E+02	1.60E+05	2.90E+02	2.00E+05	2.00E+04	1.80E+04	7.80E+04
Road 8	8	0000-0059	9.55E+03	9.56E+07	9.70E+04	1.52E+02	1.10E+05	2.80E+02	1.50E+05	1.50E+04	1.30E+04	7.60E+04
Road 8	8	0000-0059	9.54E+03	9.55E+07	9.69E+04	1.45E+02	6.00E+04	2.70E+02	1.00E+05	1.00E+04	8.00E+03	7.40E+04
Road 8	8	0000-0059	9.53E+03	9.54E+07	9.68E+04	1.38E+02	5.00E+04	2.60E+02	9.00E+04	9.00E+03	7.00E+03	7.20E+04
Road 8	8	0000-0059	9.52E+03	9.53E+07	9.67E+04	1.31E+02	4.00E+04	2.50E+02	8.00E+04	8.00E+03	6.00E+03	7.00E+04
Road 8	8	0000-0059	9.51E+03	9.52E+07	9.66E+04	1.24E+02	3.00E+04	2.40E+02	7.00E+04	7.00E+03	5.00E+03	6.80E+04
Road 8	8	0000-0059	9.50E+03	9.51E+07	9.65E							

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Tolga Yi North Underground Quarry

Open Data File No. 2014 Emission Factors for AEMCO model (2014)													Year 2043	
Road Name	Road ID	Hour	NO _x Emission					NO Emission						
			Motorbikes/km	Light trucks/km	Heavy trucks/km	Motorbikes/km	Light trucks/km	Heavy trucks/km						
Road 11	0100-0100	1:05:00	1.9752	1.487	2.084	1.206	1.838	1.276	1.408	1.951	1.478	1.681	1.408	1.428
Road 11	0100-0200	2:40:00	2.053	2.047	2.124	1.232	1.841	1.474	1.641	2.107	1.503	1.448	1.428	1.428
Road 11	0200-0300	3:30:00	2.309	2.053	2.124	1.232	1.841	1.474	1.641	2.107	1.503	1.448	1.428	1.428
Road 11	0300-0400	2:40:00	2.048	2.027	2.088	1.173	1.705	1.407	1.546	1.407	1.478	1.408	1.428	1.428
Road 11	0400-0500	2:40:00	2.048	2.027	2.088	1.173	1.705	1.407	1.546	1.407	1.478	1.408	1.428	1.428
Road 11	0500-0600	2:40:00	2.048	2.027	2.088	1.173	1.705	1.407	1.546	1.407	1.478	1.408	1.428	1.428
Road 11	0600-0700	2:40:00	2.048	2.027	2.088	1.173	1.705	1.407	1.546	1.407	1.478	1.408	1.428	1.428
Road 11	0700-0800	2:40:00	2.048	2.027	2.088	1.173	1.705	1.407	1.546	1.407	1.478	1.408	1.428	1.428
Road 11	0800-0900	2:40:00	2.048	2.027	2.088	1.173	1.705	1.407	1.546	1.407	1.478	1.408	1.428	1.428
Road 11	0900-1000	2:40:00	2.048	2.027	2.088	1.173	1.705	1.407	1.546	1.407	1.478	1.408	1.428	1.428
Road 11	1000-1100	2:40:00	2.048	2.027	2.088	1.173	1.705	1.407	1.546	1.407	1.478	1.408	1.428	1.428
Road 11	1100-1200	2:40:00	2.048	2.027	2.088	1.173	1.705	1.407	1.546	1.407	1.478	1.408	1.428	1.428
Road 11	1200-1300	2:40:00	2.048	2.027	2.088	1.173	1.705	1.407	1.546	1.407	1.478	1.408	1.428	1.428
Road 11	1300-1400	2:40:00	2.048	2.027	2.088	1.173	1.705	1.407	1.546	1.407	1.478	1.408	1.428	1.428
Road 11	1400-1500	2:40:00	2.048	2.027	2.088	1.173	1.705	1.407	1.546	1.407	1.478	1.408	1.428	1.428
Road 11	1500-1600	2:40:00	2.048	2.027	2.088	1.173	1.705	1.407	1.546	1.407	1.478	1.408	1.428	1.428
Road 11	1600-1700	2:40:00	2.048	2.027	2.088	1.173	1.705	1.407	1.546	1.407	1.478	1.408	1.428	1.428
Road 11	1700-1800	2:40:00	2.048	2.027	2.088	1.173	1.705	1.407	1.546	1.407	1.478	1.408	1.428	1.428
Road 11	1800-1900	2:40:00	2.048	2.027	2.088	1.173	1.705	1.407	1.546	1.407	1.478	1.408	1.428	1.428
Road 11	1900-2000	2:40:00	2.048	2.027	2.088	1.173	1.705	1.407	1.546	1.407	1.478	1.408	1.428	1.428
Road 11	2000-2100	2:40:00	2.048	2.027	2.088	1.173	1.705	1.407	1.546	1.407	1.478	1.408	1.428	1.428
Road 11	2100-2200	2:40:00	2.048	2.027	2.088	1.173	1.705	1.407	1.546	1.407	1.478	1.408	1.428	1.428
Road 11	2200-2300	2:40:00	2.048	2.027	2.088	1.173	1.705	1.407	1.546	1.407	1.478	1.408	1.428	1.428
Road 11	2300-2400	2:40:00	2.048	2.027	2.088	1.173	1.705	1.407	1.546	1.407	1.478	1.408	1.428	1.428
Road 12	0100-0200	1:05:00	2.114	1.622	2.388	1.348	2.048	1.546	1.838	2.388	1.622	2.388	1.622	1.622
Road 12	0200-0300	3:30:00	2.369	1.877	2.651	1.598	2.309	1.782	2.084	2.651	1.877	2.651	1.877	1.877
Road 12	0300-0400	2:40:00	2.053	1.566	2.309	1.232	1.841	1.474	1.641	2.309	1.566	2.309	1.566	1.566
Road 12	0400-0500	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 12	0500-0600	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 12	0600-0700	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 12	0700-0800	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 12	0800-0900	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 12	0900-1000	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 12	1000-1100	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 12	1100-1200	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 12	1200-1300	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 12	1300-1400	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 12	1400-1500	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 12	1500-1600	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 12	1600-1700	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 12	1700-1800	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 12	1800-1900	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 12	1900-2000	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 12	2000-2100	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 12	2100-2200	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 12	2200-2300	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 12	2300-2400	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 13	0100-0200	1:05:00	2.114	1.622	2.388	1.348	2.048	1.546	1.838	2.388	1.622	2.388	1.622	1.622
Road 13	0200-0300	3:30:00	2.369	1.877	2.651	1.598	2.309	1.782	2.084	2.651	1.877	2.651	1.877	1.877
Road 13	0300-0400	2:40:00	2.053	1.566	2.309	1.232	1.841	1.474	1.641	2.309	1.566	2.309	1.566	1.566
Road 13	0400-0500	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 13	0500-0600	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 13	0600-0700	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 13	0700-0800	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 13	0800-0900	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 13	0900-1000	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 13	1000-1100	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 13	1100-1200	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 13	1200-1300	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 13	1300-1400	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 13	1400-1500	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 13	1500-1600	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 13	1600-1700	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 13	1700-1800	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 13	1800-1900	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 13	1900-2000	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 13	2000-2100	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 13	2100-2200	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 13	2200-2300	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 13	2300-2400	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 14	0100-0200	1:05:00	2.114	1.622	2.388	1.348	2.048	1.546	1.838	2.388	1.622	2.388	1.622	1.622
Road 14	0200-0300	3:30:00	2.369	1.877	2.651	1.598	2.309	1.782	2.084	2.651	1.877	2.651	1.877	1.877
Road 14	0300-0400	2:40:00	2.053	1.566	2.309	1.232	1.841	1.474	1.641	2.309	1.566	2.309	1.566	1.566
Road 14	0400-0500	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 14	0500-0600	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 14	0600-0700	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561	2.309	1.561	1.561
Road 14	0700-0800	2:40:00	2.048	1.561	2.309	1.232	1.841	1.474	1.641	2.309	1.561			

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Table VI North Underground Quarry

Open Road Data for 2014 Emission Factors for AETMO model (Najjar)		Year	No. Emission		No. Emission									
Road Name	Road ID		Monthly/ton/hr	Monthly/ton/hr	Monthly/ton/hr	Monthly/ton/hr								
Road 14	14	0800-0900	3.11E-02	4.88E-07	5.51E-03	1.56E-05	3.31E-06	2.06E-02	1.47E-01	1.51E-06	7.61E-02	4.06E-03	1.16E-07	7.22E-04
Road 14	14	0900-1200	3.50E-02	5.36E-07	8.62E-03	3.22E-05	3.20E-06	1.99E-02	1.67E-01	4.04E-06	2.53E-02	4.74E-05	1.51E-07	7.28E-04
Road 14	14	1200-1500	3.50E-02	5.36E-07	8.62E-03	3.22E-05	3.20E-06	1.99E-02	1.67E-01	4.04E-06	2.53E-02	4.74E-05	1.51E-07	7.28E-04
Road 14	14	1500-1800	1.66E-02	2.45E-07	4.63E-03	1.62E-05	1.62E-06	1.67E-02	1.09E-01	3.48E-06	1.21E-02	5.05E-03	1.02E-07	6.01E-04
Road 14	14	1800-2100	1.66E-02	2.45E-07	4.63E-03	1.62E-05	1.62E-06	1.67E-02	1.09E-01	3.48E-06	1.21E-02	5.05E-03	1.02E-07	6.01E-04
Road 14	14	2100-2400	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	2400-0100	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	0100-0300	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	0300-0500	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	0500-0800	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	0800-1100	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	1100-1400	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	1400-1700	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	1700-2000	2.84E-02	5.97E-07	5.33E-03	1.86E-05	3.28E-06	2.04E-02	3.17E-01	4.14E-06	2.58E-02	3.70E-03	1.12E-06	6.96E-04
Road 14	14	2000-2300	2.84E-02	5.97E-07	5.33E-03	1.86E-05	3.28E-06	2.04E-02	3.17E-01	4.14E-06	2.58E-02	3.70E-03	1.12E-06	6.96E-04
Road 14	14	2300-2600	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	2600-2900	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	2900-3200	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	3200-3500	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	3500-3800	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	3800-4100	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	4100-4400	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	4400-4700	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	4700-5000	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	5000-5300	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	5300-5600	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	5600-5900	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	5900-6200	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	6200-6500	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	6500-6800	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	6800-7100	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	7100-7400	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	7400-7700	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	7700-8000	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	8000-8300	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	8300-8600	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	8600-8900	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	8900-9200	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	9200-9500	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	9500-9800	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	9800-10000	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	10000-10100	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	10100-10200	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	10200-10300	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	10300-10400	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	10400-10500	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	10500-10600	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	10600-10700	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	10700-10800	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	10800-10900	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	10900-11000	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	11000-11100	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	11100-11200	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	11200-11300	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	11300-11400	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	11400-11500	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	11500-11600	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	11600-11700	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	11700-11800	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	11800-11900	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	11900-12000	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	12000-12100	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	12100-12200	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	12200-12300	1.50E-02	2.18E-06	3.89E-03	1.42E-05	1.42E-06	2.79E-02	3.54E-06	1.58E-05	8.97E-06	1.77E-06	1.66E-07	1.02E-03
Road 14	14	12300-12400	1.50E-02	2.1										

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.4 Emission Factor in 2043.xlsx

Hour	NO _x Emission				NO _x Emission			
	Monthly/Average		Monthly/Average		Monthly/Average		Monthly/Average	
	g/hr	kWh	g/hr	kWh	g/hr	kWh	g/hr	kWh
1	5.396	1.4416	1.515	1.305	1.138	0.4712	4.545	4.64
2	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
3	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
4	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
5	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
6	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
7	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
8	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
9	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
10	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
11	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
12	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
13	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
14	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
15	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
16	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
17	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
18	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
19	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
20	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
21	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
22	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
23	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
24	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
25	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
26	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
27	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
28	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
29	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
30	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
31	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
32	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
33	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
34	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
35	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
36	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
37	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
38	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
39	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
40	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
41	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
42	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
43	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
44	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
45	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
46	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
47	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
48	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
49	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
50	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
51	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
52	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
53	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
54	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
55	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
56	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
57	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
58	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
59	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
60	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
61	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
62	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
63	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
64	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
65	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
66	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
67	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
68	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
69	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
70	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
71	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
72	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
73	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
74	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
75	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
76	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
77	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
78	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
79	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
80	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
81	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
82	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
83	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
84	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
85	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
86	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
87	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
88	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
89	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
90	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
91	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
92	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
93	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
94	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
95	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
96	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
97	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
98	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
99	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268
100	1.634	1.0208	1.079	0.628	2.468	4.532	3.908	3.268

xs\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.4 Emission Factor in 2043.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Ting Yi North Underground Quarry

Open Road 24-hour Emission Factors for AEDM2000 Model (E/F)		Year	No. Emission					No. Emission					
Road Name	Road ID	Hour	Month/January		Month/February		Month/March		Month/April		Month/May		
Road #21	21	0000-0000	1.158	0.741	1.596	1.196	0.511	1.708	0.281	2.054	2.601	1.938	9.310
Road #21	21	0100-0200	1.260	0.720	2.078	1.482	2.502	0.721	0.842	0.178	1.458	0.248	7.140
Road #21	21	0300-0400	1.418	0.688	2.418	1.642	2.502	0.721	0.842	0.178	1.458	0.248	7.140
Road #21	21	0500-0600	1.542	0.640	2.104	1.512	1.472	0.772	0.102	1.400	0.400	1.130	0.440
Road #21	21	0600-0700	1.572	0.612	1.772	1.442	1.472	0.772	0.102	1.400	0.400	1.130	0.440
Road #21	21	0800-0900	1.492	0.762	1.822	1.382	1.312	1.612	0.772	1.422	0.990	3.960	2.070
Road #21	21	0900-1000	1.432	0.812	1.872	1.332	1.472	1.612	0.772	1.422	0.990	3.960	2.070
Road #21	21	1000-1100	1.392	0.862	1.922	1.282	1.522	1.612	0.772	1.422	0.990	3.960	2.070
Road #21	21	1100-1200	1.352	0.912	1.972	1.232	1.572	1.612	0.772	1.422	0.990	3.960	2.070
Road #21	21	1200-1300	1.312	0.962	2.022	1.182	1.622	1.612	0.772	1.422	0.990	3.960	2.070
Road #21	21	1300-1400	1.272	1.012	2.072	1.132	1.672	1.612	0.772	1.422	0.990	3.960	2.070
Road #21	21	1400-1500	1.232	1.062	2.122	1.082	1.722	1.612	0.772	1.422	0.990	3.960	2.070
Road #21	21	1500-1600	1.192	1.112	2.172	1.032	1.772	1.612	0.772	1.422	0.990	3.960	2.070
Road #21	21	1600-1700	1.152	1.162	2.222	0.982	1.822	1.612	0.772	1.422	0.990	3.960	2.070
Road #21	21	1700-1800	1.112	1.212	2.272	0.932	1.872	1.612	0.772	1.422	0.990	3.960	2.070
Road #21	21	1800-1900	1.072	1.262	2.322	0.882	1.922	1.612	0.772	1.422	0.990	3.960	2.070
Road #21	21	1900-2000	1.032	1.312	2.372	0.832	1.972	1.612	0.772	1.422	0.990	3.960	2.070
Road #21	21	2000-2100	0.992	1.362	2.422	0.782	2.022	1.612	0.772	1.422	0.990	3.960	2.070
Road #21	21	2100-2200	0.952	1.412	2.472	0.732	2.072	1.612	0.772	1.422	0.990	3.960	2.070
Road #21	21	2200-2300	0.912	1.462	2.522	0.682	2.122	1.612	0.772	1.422	0.990	3.960	2.070
Road #21	21	2300-2400	0.872	1.512	2.572	0.632	2.172	1.612	0.772	1.422	0.990	3.960	2.070
Road #22	22	0000-0000	1.158	0.741	1.596	1.196	0.511	1.708	0.281	2.054	2.601	1.938	9.310
Road #22	22	0100-0200	1.260	0.720	2.078	1.482	2.502	0.721	0.842	0.178	1.458	0.248	7.140
Road #22	22	0300-0400	1.418	0.688	2.418	1.642	2.502	0.721	0.842	0.178	1.458	0.248	7.140
Road #22	22	0500-0600	1.542	0.640	2.104	1.512	1.472	0.772	0.102	1.400	0.400	1.130	0.440
Road #22	22	0600-0700	1.572	0.612	1.772	1.442	1.472	0.772	0.102	1.400	0.400	1.130	0.440
Road #22	22	0800-0900	1.492	0.762	1.822	1.382	1.312	1.612	0.772	1.422	0.990	3.960	2.070
Road #22	22	0900-1000	1.432	0.812	1.872	1.332	1.472	1.612	0.772	1.422	0.990	3.960	2.070
Road #22	22	1000-1100	1.392	0.862	1.922	1.282	1.522	1.612	0.772	1.422	0.990	3.960	2.070
Road #22	22	1100-1200	1.352	0.912	1.972	1.232	1.572	1.612	0.772	1.422	0.990	3.960	2.070
Road #22	22	1200-1300	1.312	0.962	2.022	1.182	1.622	1.612	0.772	1.422	0.990	3.960	2.070
Road #22	22	1300-1400	1.272	1.012	2.072	1.132	1.672	1.612	0.772	1.422	0.990	3.960	2.070
Road #22	22	1400-1500	1.232	1.062	2.122	1.082	1.722	1.612	0.772	1.422	0.990	3.960	2.070
Road #22	22	1500-1600	1.192	1.112	2.172	1.032	1.772	1.612	0.772	1.422	0.990	3.960	2.070
Road #22	22	1600-1700	1.152	1.162	2.222	0.982	1.822	1.612	0.772	1.422	0.990	3.960	2.070
Road #22	22	1700-1800	1.112	1.212	2.272	0.932	1.872	1.612	0.772	1.422	0.990	3.960	2.070
Road #22	22	1800-1900	1.072	1.262	2.322	0.882	1.922	1.612	0.772	1.422	0.990	3.960	2.070
Road #22	22	1900-2000	1.032	1.312	2.372	0.832	1.972	1.612	0.772	1.422	0.990	3.960	2.070
Road #22	22	2000-2100	0.992	1.362	2.422	0.782	2.022	1.612	0.772	1.422	0.990	3.960	2.070
Road #22	22	2100-2200	0.952	1.412	2.472	0.732	2.072	1.612	0.772	1.422	0.990	3.960	2.070
Road #22	22	2200-2300	0.912	1.462	2.522	0.682	2.122	1.612	0.772	1.422	0.990	3.960	2.070
Road #22	22	2300-2400	0.872	1.512	2.572	0.632	2.172	1.612	0.772	1.422	0.990	3.960	2.070
Road #23	23	0000-0000	1.158	0.741	1.596	1.196	0.511	1.708	0.281	2.054	2.601	1.938	9.310
Road #23	23	0100-0200	1.260	0.720	2.078	1.482	2.502	0.721	0.842	0.178	1.458	0.248	7.140
Road #23	23	0300-0400	1.418	0.688	2.418	1.642	2.502	0.721	0.842	0.178	1.458	0.248	7.140
Road #23	23	0500-0600	1.542	0.640	2.104	1.512	1.472	0.772	0.102	1.400	0.400	1.130	0.440
Road #23	23	0600-0700	1.572	0.612	1.772	1.442	1.472	0.772	0.102	1.400	0.400	1.130	0.440
Road #23	23	0800-0900	1.492	0.762	1.822	1.382	1.312	1.612	0.772	1.422	0.990	3.960	2.070
Road #23	23	0900-1000	1.432	0.812	1.872	1.332	1.472	1.612	0.772	1.422	0.990	3.960	2.070
Road #23	23	1000-1100	1.392	0.862	1.922	1.282	1.522	1.612	0.772	1.422	0.990	3.960	2.070
Road #23	23	1100-1200	1.352	0.912	1.972	1.232	1.572	1.612	0.772	1.422	0.990	3.960	2.070
Road #23	23	1200-1300	1.312	0.962	2.022	1.182	1.622	1.612	0.772	1.422	0.990	3.960	2.070
Road #23	23	1300-1400	1.272	1.012	2.072	1.132	1.672	1.612	0.772	1.422	0.990	3.960	2.070
Road #23	23	1400-1500	1.232	1.062	2.122	1.082	1.722	1.612	0.772	1.422	0.990	3.960	2.070
Road #23	23	1500-1600	1.192	1.112	2.172	1.032	1.772	1.612	0.772	1.422	0.990	3.960	2.070
Road #23	23	1600-1700	1.152	1.162	2.222	0.982	1.822	1.612	0.772	1.422	0.990	3.960	2.070
Road #23	23	1700-1800	1.112	1.212	2.272	0.932	1.872	1.612	0.772	1.422	0.990	3.960	2.070
Road #23	23	1800-1900	1.072	1.262	2.322	0.882	1.922	1.612	0.772	1.422	0.990	3.960	2.070
Road #23	23	1900-2000	1.032	1.312	2.372	0.832	1.972	1.612	0.772	1.422	0.990	3.960	2.070
Road #23	23	2000-2100	0.992	1.362	2.422	0.782	2.022	1.612	0.772	1.422	0.990	3.960	2.070
Road #23	23	2100-2200	0.952	1.412	2.472	0.732	2.072	1.612	0.772	1.422	0.990	3.960	2.070
Road #23	23	2200-2300	0.912	1.462	2.522	0.682	2.122	1.612	0.772	1.422	0.990	3.960	2.070
Road #23	23	2300-2400	0.872	1.512	2.572	0.632	2.172	1.612	0.772	1.422	0.990	3.960	2.070
Road #24	24	0000-0000	1.158	0.741	1.596	1.196	0.511	1.708	0.281	2.054	2.601	1.938	9.310
Road #24	24	0100-0200	1.260	0.720	2.078	1.482	2.502	0.721	0.842	0.178	1.458	0.248	7.140
Road #24	24	0300-0400	1.418	0.688	2.418	1.642	2.502	0.721	0.842	0.178	1.458	0.248	7.140
Road #24	24	0500-0600	1.542	0.640	2.104	1.512	1.472	0.772	0.102	1.400	0.400	1.130	0.440
Road #24	24	0600-0700	1.572	0.612	1.772	1.442	1.472	0.772	0.102	1.400	0.400	1.130	0.440
Road #24	24	0800-0900	1.492	0.762	1.822	1.382	1.312	1.612	0.772	1.422	0.990	3.960	2.070
Road #24	24	0900-1000	1.432	0.812	1.872	1.332	1.472	1.612	0.772	1.422	0.990	3.960	2.070
Road #24	24	1000-1100	1.392	0.862	1.922	1.282	1.522	1.612	0.772	1.422	0.990	3.960	2.070
Road #24	24	1100-1200	1.352	0.912	1.972	1.232	1.572	1.612	0.772	1.422	0.990	3.960	2.070
Road #24	24	1200-1300	1.312	0.962	2.022	1.182	1.622	1.612	0.772	1.422	0.990	3.960	2.070
Road #24	24	1300-1400	1.272	1.012	2.072	1.132	1.672	1.612	0.772	1.422	0.990	3.960	2.070
Road #24	24	1400-1500	1.232	1.062	2.122	1.082	1.722	1.612	0.772	1.422	0.990	3.960	2.070
Road #24	24	1500-1600	1.192	1.112	2.172	1.032	1.772	1.612	0.772	1.422	0.990	3.960	2.070
Road #24	24	1600-1700	1.152	1.162	2.222	0.982	1.822	1.612	0.772	1.422	0.990	3.960	2.070
Road #24	24	1700-1800	1.112	1.212	2.272	0.932	1.872	1.612	0.772	1.422	0.990	3.960	2.070
Road #24	24	1800-1900	1.072	1.262	2.322	0.882	1.922	1.612	0.772	1.422	0.990	3.960	2.070
Road #24	24	1900-2000	1.032	1.312	2.372	0.832	1.972	1.612	0.772	1.422	0.990	3.960	2.070
Road #24	24	2000-2100	0.992	1.362	2.422	0.782	2.022	1.612	0.772	1.422	0.990	3.960	2.070
Road #24	24	2100-2200	0.952	1.412	2.472	0.732	2.072	1.612	0.772	1.422	0.990	3.960	2.070
Road #24	24	2200-2300	0.912	1.462	2.522	0.682	2.122	1.612	0.772	1.422	0.990	3.960	2.070
Road #24	24	2300-2400	0.872	1.512	2.572	0.632	2.172	1.612	0.772	1.422	0.990	3.960	2.070

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Table VI North Underground Quarry[illegible]

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

[illegible]

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

[illegible]

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Tallg 1 North Underdown Quarry											
Open Road 2 to 5a Emulsion Factors for AEMPD model (mm)											
Year 2003											
Road Name	Road ID	Hour	No. Emulsion				No. Emulsion				
			Monthly/Hours		Monthly/Average		Monthly/Hours		Monthly/Average		
Road #1	00000100	0.0752	0.0752	1.7165	0.1510	0.0752	1.0484	0.6325	0.0752	1.9764	0.1571
Road #1	00000200	0.0968	0.0968	0.6386	0.5309	0.0968	0.8496	0.2434	0.0968	0.9708	0.2968
Road #1	00000300	0.0800	0.0800	0.6800	0.6800	0.0800	0.6800	0.6800	0.0800	0.6800	0.6800
Road #1	00000400	1.9662	0.0752	1.7165	0.1510	0.0752	1.0484	0.6325	0.0752	1.9764	0.1571
Road #1	00000500	0.0968	0.0968	0.6386	0.5309	0.0968	0.8496	0.2434	0.0968	0.9708	0.2968
Road #1	00000600	0.0800	0.0800	0.6800	0.6800	0.0800	0.6800	0.6800	0.0800	0.6800	0.6800
Road #1	00000700	1.4452	0.1318	2.1116	0.0151	0.1318	4.8862	0.4152	0.1318	2.752	0.0898
Road #1	00000800	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00000900	0.7328	0.9238	0.3268	0.4982	0.9238	0.1476	0.0151	0.9238	0.4124	0.1373
Road #1	00001000	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00001100	1.7772	0.0558	0.3268	0.5890	0.0558	0.7032	0.7558	0.0558	0.9201	0.3454
Road #1	00001200	0.7772	0.8688	0.2974	0.5890	0.7772	0.9396	0.7772	0.7772	0.1803	0.1935
Road #1	00001300	1.2668	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00001400	1.2668	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00001500	1.2668	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00001600	2.0002	0.1396	0.4056	0.7013	0.1396	0.9315	0.3368	0.1396	0.8453	0.1237
Road #1	00001700	0.0228	0.4276	0.4276	0.4276	0.4276	0.1525	0.4276	0.4276	0.1525	0.4276
Road #1	00001800	1.4452	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00001900	1.3102	0.9422	0.0128	0.4802	0.9422	0.3352	0.1525	0.9422	0.4296	0.1472
Road #1	00002000	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00002100	0.9688	0.1588	0.1308	0.4448	0.9688	0.1793	0.0314	0.9688	0.1311	0.7224
Road #1	00002200	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00002300	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00002400	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00002500	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00002600	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00002700	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00002800	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00002900	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00003000	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00003100	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00003200	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00003300	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00003400	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00003500	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00003600	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00003700	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00003800	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00003900	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00004000	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00004100	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00004200	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00004300	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00004400	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00004500	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00004600	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00004700	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00004800	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00004900	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00005000	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00005100	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00005200	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00005300	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00005400	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00005500	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00005600	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00005700	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00005800	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00005900	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00006000	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00006100	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00006200	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00006300	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00006400	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00006500	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00006600	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00006700	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00006800	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00006900	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00007000	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00007100	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00007200	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00007300	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00007400	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00007500	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00007600	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00007700	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00007800	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00007900	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00008000	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00008100	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00008200	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00008300	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00008400	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00008500	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00008600	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00008700	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00008800	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00008900	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00009000	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498	0.1498
Road #1	00009100	0.1498	0.1498	0.1498							

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

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Tsing Yi North Underground Quarry

Open Twp 24 hr Unimproved Quarry										
Year 2003										
MEMPHIS model results										
Road Name	Road ID	Hour	NO Emission				NO Emission			
			MonthlyAvg	MonthlyPeak	MonthlyAvg	MonthlyPeak	MonthlyAvg	MonthlyPeak		
Road 103	100	1500-1700	1.80E+01	6.00E+01	4.81E+01	5.19E+01	2.08E+01	6.38E+01	2.44E+01	8.11E+01
Road 103	1100	1800-1900	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 103	1100	1900-2000	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 103	1100	2000-2200	5.17E+01	2.71E+02	2.02E+02	3.72E+01	1.48E+01	3.77E+02	1.64E+01	1.44E+02
Road 103	1100	2200-2300	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 103	1100	2300-2400	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	0600-0800	4.81E+01	8.19E+01	6.83E+01	4.47E+01	1.01E+01	3.72E+01	5.93E+01	4.40E+01
Road 104	100	0800-1000	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1000-1200	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1200-1400	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1400-1600	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1600-1800	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1800-2000	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	2000-2200	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	2200-2400	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	2400-0600	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	0600-0800	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	0800-1000	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1000-1200	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1200-1400	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1400-1600	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1600-1800	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1800-2000	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	2000-2200	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	2200-2400	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	2400-0600	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	0600-0800	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	0800-1000	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1000-1200	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1200-1400	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1400-1600	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1600-1800	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1800-2000	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	2000-2200	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	2200-2400	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	2400-0600	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	0600-0800	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	0800-1000	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1000-1200	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1200-1400	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1400-1600	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1600-1800	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1800-2000	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	2000-2200	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	2200-2400	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	2400-0600	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	0600-0800	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	0800-1000	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1000-1200	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1200-1400	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1400-1600	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1600-1800	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1800-2000	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	2000-2200	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	2200-2400	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	2400-0600	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	0600-0800	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	0800-1000	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1000-1200	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1200-1400	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1400-1600	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1600-1800	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1800-2000	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	2000-2200	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	2200-2400	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	2400-0600	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	0600-0800	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	0800-1000	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1000-1200	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1200-1400	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1400-1600	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1600-1800	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1800-2000	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	2000-2200	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	2200-2400	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	2400-0600	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	0600-0800	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	0800-1000	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1000-1200	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1200-1400	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1400-1600	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1600-1800	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	1800-2000	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	2000-2200	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	2200-2400	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	2400-0600	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	0600-0800	1.58E+01	4.42E+01	3.88E+01	5.45E+01	2.37E+01	5.42E+01	2.43E+01	2.74E+01
Road 104	100	0800-1000								

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Top 20th Union Exhaust Factors														
Year 2043														
Road Name	Road ID	Flow	No. Emissions				No. Emissions							
			Motorbikes		Motorbikes		Motorbikes		Motorbikes					
			g/min/hr	g/min/hr	g/min/hr	g/min/hr	g/min/hr	g/min/hr	g/min/hr	g/min/hr	g/min/hr	g/min/hr	g/min/hr	
Road 1	1	60001000	4.348	6.118	2.774	3.862	4.937	8.816	3.866	6.071	1.114	1.078	1.536	1.428
Road 1	1	60001760	4.348	6.118	2.774	3.862	4.937	8.816	3.866	6.071	1.114	1.078	1.536	1.428
Road 1	1	60002000	4.348	6.118	2.774	3.862	4.937	8.816	3.866	6.071	1.114	1.078	1.536	1.428
Road 1	1	60002760	4.348	6.118	2.774	3.862	4.937	8.816	3.866	6.071	1.114	1.078	1.536	1.428
Road 1	1	60003000	4.348	6.118	2.774	3.862	4.937	8.816	3.866	6.071	1.114	1.078	1.536	1.428
Road 1	1	60003760	4.348	6.118	2.774	3.862	4.937	8.816	3.866	6.071	1.114	1.078	1.536	1.428
Road 1	1	60004000	4.348	6.118	2.774	3.862	4.937	8.816	3.866	6.071	1.114	1.078	1.536	1.428
Road 1	1	60004760	4.348	6.118	2.774	3.862	4.937	8.816	3.866	6.071	1.114	1.078	1.536	1.428
Road 1	1	60005000	4.348	6.118	2.774	3.862	4.937	8.816	3.866	6.071	1.114	1.078	1.536	1.428
Road 1	1	60005760	4.348	6.118	2.774	3.862	4.937	8.816	3.866	6.071	1.114	1.078	1.536	1.428
Road 1	1	60006000	4.348	6.118	2.774	3.862	4.937	8.816	3.866	6.071	1.114	1.078	1.536	1.428
Road 1	1	60006760	4.348	6.118	2.774	3.862	4.937	8.816	3.866	6.071	1.114	1.078	1.536	1.428
Road 1	1	60007000	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60007760	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60008000	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60008760	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60009000	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60009760	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60010000	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60010760	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60011000	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60011760	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60012000	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60012760	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60013000	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60013760	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60014000	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60014760	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60015000	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60015760	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60016000	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60016760	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60017000	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60017760	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60018000	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60018760	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60019000	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60019760	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60020000	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60020760	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60021000	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60021760	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60022000	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60022760	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60023000	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60023760	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60024000	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60024760	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60025000	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60025760	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60026000	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60026760	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60027000	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60027760	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60028000	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60028760	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60029000	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60029760	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60030000	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60030760	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60031000	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60031760	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60032000	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60032760	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60033000	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60033760	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60034000	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60034760	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60035000	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60035760	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60036000	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60036760	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60037000	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60037760	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60038000	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60038760	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60039000	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60039760	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60040000	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60040760	7.818	3.414	8.865	4.282	1.916	6.846	3.026	6.071	2.256	4.065	8.786	1.768
Road 1	1	60041000	7.818	3.414	8									

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Top 20th Understorey Factors														
Open Top 20th Understorey Factors for ARBURY model (v1)														
Road Name	Road ID	Hwy	NO _x Emissions				NO _x Emissions							
			g/m/hour	g/m ² /hour	tonne/hour	g/m ² /hour	g/m/hour	g/m ² /hour	tonne/hour	g/m ² /hour				
Road 14	14	0000-0000	1.115	8.897	5.538	0.131	1.014	2.586	1.472	0.119	2.611	0.567	1.177	7.722
Road 14	14	0000-1000	1.375	11.000	6.875	0.164	1.264	3.160	1.788	0.148	3.246	0.726	1.547	9.404
Road 14	14	1000-1500	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	1500-2000	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	2000-1500	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	1500-1800	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	1800-2000	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	2000-2100	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	2100-2300	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	2300-2400	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	2400-2500	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	2500-2600	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	2600-2700	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	2700-2800	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	2800-2900	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	2900-3000	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	3000-3100	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	3100-3200	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	3200-3300	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	3300-3400	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	3400-3500	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	3500-3600	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	3600-3700	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	3700-3800	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	3800-3900	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	3900-4000	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	4000-4100	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	4100-4200	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	4200-4300	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	4300-4400	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	4400-4500	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	4500-4600	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	4600-4700	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	4700-4800	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	4800-4900	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	4900-5000	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	5000-5100	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	5100-5200	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	5200-5300	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	5300-5400	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	5400-5500	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	5500-5600	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	5600-5700	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	5700-5800	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	5800-5900	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	5900-6000	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	6000-6100	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	6100-6200	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	6200-6300	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	6300-6400	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	6400-6500	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	6500-6600	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	6600-6700	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	6700-6800	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	6800-6900	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	6900-7000	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	7000-7100	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	7100-7200	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	7200-7300	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	7300-7400	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	7400-7500	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	7500-7600	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	7600-7700	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	7700-7800	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	7800-7900	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	7900-8000	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	8000-8100	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	8100-8200	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	8200-8300	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	8300-8400	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	8400-8500	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	8500-8600	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	8600-8700	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	8700-8800	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	8800-8900	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	8900-9000	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	9000-9100	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	9100-9200	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.026
Road 14	14	9200-9300	1.085	8.680	5.425	0.127	0.964	2.410	1.368	0.114	2.494	0.545	1.137	7.0

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open N ₂ North Underway Query												
Using N ₂ with 280 Envision Factors for AEMPC model (June)												
Year 2003												
Road Name	Road ID	Road	NO ₂ Emission						NO Emission			
			g/hour	g/day	g/week	g/month	ton/year	g/hour	g/day	g/week	ton/year	
Road 7	18001300	3.88E-02	8.88E-07	4.20E-03	1.24E-01	3.71E-06	1.59E-02	3.57E-01	4.69E-06	1.60E-02	4.74E-07	8.28E-04
Road 7	18001327	3.77E-02	8.65E-07	4.05E-03	1.19E-01	3.59E-06	1.54E-02	3.49E-01	4.57E-06	1.57E-02	4.61E-07	8.10E-04
Road 7	18001350	3.62E-02	8.50E-07	3.97E-03	1.17E-01	3.50E-06	1.51E-02	3.40E-01	4.50E-06	1.52E-02	4.38E-07	7.91E-04
Road 7	18001367	3.47E-02	8.35E-07	3.84E-03	1.14E-01	3.41E-06	1.48E-02	3.31E-01	4.40E-06	1.47E-02	4.26E-07	7.76E-04
Road 7	18001384	3.32E-02	8.20E-07	3.71E-03	1.11E-01	3.32E-06	1.45E-02	3.22E-01	4.30E-06	1.42E-02	4.14E-07	7.61E-04
Road 7	18001401	3.17E-02	8.05E-07	3.58E-03	1.08E-01	3.23E-06	1.42E-02	3.13E-01	4.20E-06	1.39E-02	4.02E-07	7.46E-04
Road 7	18001418	3.02E-02	7.90E-07	3.45E-03	1.05E-01	3.14E-06	1.39E-02	3.04E-01	4.10E-06	1.36E-02	3.90E-07	7.31E-04
Road 7	18001435	2.87E-02	7.75E-07	3.32E-03	1.02E-01	3.05E-06	1.36E-02	2.95E-01	4.00E-06	1.33E-02	3.78E-07	7.16E-04
Road 7	18001452	2.72E-02	7.60E-07	3.19E-03	9.90E-02	2.96E-06	1.33E-02	2.86E-01	3.90E-06	1.30E-02	3.66E-07	7.01E-04
Road 7	18001469	2.57E-02	7.45E-07	3.06E-03	9.60E-02	2.87E-06	1.30E-02	2.77E-01	3.80E-06	1.27E-02	3.54E-07	6.86E-04
Road 7	18001486	2.42E-02	7.30E-07	2.93E-03	9.30E-02	2.78E-06	1.27E-02	2.68E-01	3.70E-06	1.24E-02	3.42E-07	6.71E-04
Road 7	18001503	2.27E-02	7.15E-07	2.80E-03	9.00E-02	2.69E-06	1.24E-02	2.59E-01	3.60E-06	1.21E-02	3.30E-07	6.56E-04
Road 7	18001520	2.12E-02	7.00E-07	2.67E-03	8.70E-02	2.60E-06	1.21E-02	2.50E-01	3.50E-06	1.18E-02	3.18E-07	6.41E-04
Road 7	18001537	1.97E-02	6.85E-07	2.54E-03	8.40E-02	2.51E-06	1.18E-02	2.41E-01	3.40E-06	1.15E-02	3.06E-07	6.26E-04
Road 7	18001554	1.82E-02	6.70E-07	2.41E-03	8.10E-02	2.42E-06	1.15E-02	2.32E-01	3.30E-06	1.12E-02	2.94E-07	6.11E-04
Road 7	18001571	1.67E-02	6.55E-07	2.28E-03	7.80E-02	2.33E-06	1.12E-02	2.23E-01	3.20E-06	1.09E-02	2.82E-07	5.96E-04
Road 7	18001588	1.52E-02	6.40E-07	2.15E-03	7.50E-02	2.24E-06	1.09E-02	2.14E-01	3.10E-06	1.06E-02	2.70E-07	5.81E-04
Road 7	18001605	1.37E-02	6.25E-07	2.02E-03	7.20E-02	2.15E-06	1.06E-02	2.05E-01	3.00E-06	1.03E-02	2.58E-07	5.66E-04
Road 7	18001622	1.22E-02	6.10E-07	1.89E-03	6.90E-02	2.06E-06	1.03E-02	1.96E-01	2.90E-06	1.00E-02	2.46E-07	5.51E-04
Road 7	18001639	1.07E-02	5.95E-07	1.76E-03	6.60E-02	1.97E-06	1.00E-02	1.87E-01	2.80E-06	9.70E-03	2.34E-07	5.36E-04
Road 7	18001656	9.20E-03	5.80E-07	1.63E-03	6.30E-02	1.88E-06	9.70E-03	1.78E-01	2.70E-06	9.40E-03	2.22E-07	5.21E-04
Road 7	18001673	8.65E-03	5.65E-07	1.50E-03	6.00E-02	1.79E-06	9.10E-03	1.69E-01	2.60E-06	8.80E-03	2.10E-07	5.06E-04
Road 7	18001690	8.10E-03	5.50E-07	1.37E-03	5.70E-02	1.70E-06	8.50E-03	1.60E-01	2.50E-06	8.20E-03	1.98E-07	4.91E-04
Road 7	18001707	7.55E-03	5.35E-07	1.24E-03	5.40E-02	1.61E-06	7.90E-03	1.51E-01	2.40E-06	7.60E-03	1.86E-07	4.76E-04
Road 7	18001724	7.00E-03	5.20E-07	1.11E-03	5.10E-02	1.52E-06	7.30E-03	1.42E-01	2.30E-06	7.00E-03	1.74E-07	4.61E-04
Road 7	18001741	6.45E-03	5.05E-07	9.80E-04	4.80E-02	1.43E-06	6.70E-03	1.33E-01	2.20E-06	6.40E-03	1.62E-07	4.46E-04
Road 7	18001758	5.90E-03	4.90E-07	8.50E-04	4.50E-02	1.34E-06	6.10E-03	1.24E-01	2.10E-06	5.90E-03	1.50E-07	4.31E-04
Road 7	18001775	5.35E-03	4.75E-07	7.20E-04	4.20E-02	1.25E-06	5.50E-03	1.15E-01	2.00E-06	5.35E-03	1.38E-07	4.16E-04
Road 7	18001792	4.80E-03	4.60E-07	5.90E-04	3.90E-02	1.16E-06	4.90E-03	1.06E-01	1.90E-06	4.80E-03	1.26E-07	4.01E-04
Road 7	18001809	4.25E-03	4.45E-07	4.60E-04	3.60E-02	1.07E-06	4.30E-03	9.70E-02	1.80E-06	4.25E-03	1.14E-07	3.86E-04
Road 7	18001826	3.70E-03	4.30E-07	3.30E-04	3.30E-02	9.8E-07	3.70E-03	8.80E-02	1.70E-06	3.70E-03	1.02E-07	3.71E-04
Road 7	18001843	3.15E-03	4.15E-07	2.00E-04	3.00E-02	8.9E-07	3.15E-03	7.50E-02	1.60E-06	3.15E-03	9.0E-08	3.56E-04
Road 7	18001860	2.60E-03	4.00E-07	700E-05	2.70E-02	8.0E-07	2.60E-03	6.30E-02	1.50E-06	2.60E-03	8.0E-08	3.41E-04
Road 7	18001877	2.05E-03	3.85E-07	500E-05	2.40E-02	7.1E-07	2.05E-03	5.10E-02	1.40E-06	2.05E-03	7.0E-08	3.26E-04
Road 7	18001894	1.50E-03	3.70E-07	300E-05	2.10E-02	6.2E-07	1.50E-03	4.00E-02	1.30E-06	1.50E-03	6.0E-08	3.11E-04
Road 7	18001911	9.50E-04	3.55E-07	100E-05	1.80E-02	5.3E-07	9.50E-04	2.90E-02	1.20E-06	9.50E-04	5.0E-08	2.96E-04
Road 7	18001928	9.00E-04	3.40E-07	900E-05	1.70E-02	5.0E-07	9.00E-04	2.70E-02	1.10E-06	9.00E-04	4.5E-08	2.81E-04
Road 7	18001945	8.45E-04	3.25E-07	800E-05	1.60E-02	4.7E-07	8.45E-04	2.50E-02	1.00E-06	8.45E-04	4.0E-08	2.66E-04
Road 7	18001962	7.90E-04	3.10E-07	700E-05	1.50E-02	4.4E-07	7.90E-04	2.30E-02	9.0E-07	7.90E-04	3.5E-08	2.51E-04
Road 7	18001979	7.35E-04	2.95E-07	600E-05	1.40E-02	4.1E-07	7.35E-04	2.10E-02	8.0E-07	7.35E-04	3.0E-08	2.36E-04
Road 7	18001996	6.80E-04	2.80E-07	500E-05	1.30E-02	3.8E-07	6.80E-04	1.90E-02	7.0E-07	6.80E-04	2.5E-08	2.21E-04
Road 7	18002013	6.25E-04	2.65E-07	400E-05	1.20E-02	3.5E-07	6.25E-04	1.70E-02	6.0E-07	6.25E-04	2.0E-08	2.06E-04
Road 7	18002030	5.70E-04	2.50E-07	300E-05	1.10E-02	3.2E-07	5.70E-04	1.50E-02	5.0E-07	5.70E-04	1.5E-08	1.91E-04
Road 7	18002047	5.15E-04	2.35E-07	200E-05	1.00E-02	2.9E-07	5.15E-04	1.30E-02	4.0E-07	5.15E-04	1.0E-08	1.76E-04
Road 7	18002064	4.60E-04	2.20E-07	100E-05	9.0E-03	2.6E-07	4.60E-04	1.10E-02	3.0E-07	4.60E-04	9.0E-09	1.61E-04
Road 7	18002081	4.05E-04	2.05E-07	900E-05	8.0E-03	2.3E-07	4.05E-04	1.00E-02	2.0E-07	4.05E-04	8.0E-09	1.46E-04
Road 7	18002098	3.50E-04	1.90E-07	800E-05	7.0E-03	2.0E-07	3.50E-04	9.0E-03	1.0E-07	3.50E-04	7.0E-09	1.31E-04
Road 7	18002115	2.95E-04	1.75E-07	700E-05	6.0E-03	1.7E-07	2.95E-04	8.0E-03	9.0E-08	2.95E-04	6.0E-09	1.16E-04
Road 7	18002132	2.40E-04	1.60E-07	600E-05	5.0E-03	1.4E-07	2.40E-04	7.0E-03	8.0E-08	2.40E-04	5.0E-09	1.01E-04
Road 7	18002149	1.85E-04	1.45E-07	500E-05	4.0E-03	1.1E-07	1.85E-04	6.0E-03	7.0E-08	1.85E-04	4.0E-09	8.6E-05
Road 7	18002166	1.30E-04	1.30E-07	400E-05	3.0E-03	8.0E-08	1.30E-04	5.0E-03	6.0E-08	1.30E-04	3.0E-09	7.1E-05
Road 7	18002183	7.50E-05	1.15E-07	300E-05	2.0E-03	6.0E-08	7.50E-05	4.0E-03	5.0E-08	7.50E-05	2.0E-09	5.6E-05
Road 7	18002200	7.00E-05	1.00E-07	200E-05	1.0E-03	5.0E-08	7.00E-05	3.0E-03	4.0E-08	7.00E-05	1.0E-09	5.00E-05
Road 7	18002217	6.45E-05	9.45E-08	100E-05	9.0E-04	4.5E-08	6.45E-05	2.0E-03	3.0E-08	6.45E-05	9.0E-10	4.45E-05
Road 7	18002234	5.90E-05	8.90E-08	900E-05	8.0E-04	4.0E-08	5.90E-05	1.0E-03	2.0E-08	5.90E-05	8.0E-10	4.00E-05
Road 7	18002251	5.35E-05	8.45E-08	800E-05	7.0E-04	3.5E-08	5.35E-05	9.0E-04	1.0E-08	5.35E-05	7.0E-10	3.75E-05
Road 7	18002268	4.80E-05	7.90E-08	700E-05	6.0E-04	3.0E-08	4.80E-05	8.0E-04	9.0E-09	4.80E-05	6.0E-10	3.60E-05
Road 7	18002285	4.25E-05	7.35E-08	600E-05	5.0E-04	2.5E-08	4.25E-05	7.0E-04	8.0E-09	4.25E-05	5.0E-10	3.45E-05
Road 7	18002302	3.70E-05	6.80E-08	500E-05	4.0E-04	2.0E-08	3.70E-05	6.0E-04	7.0E-09	3.70E-05	4.0E-10	3.30E-05
Road 7	18002319	3.15E-05	6.25E-08	400E-05	3.0E-04	1.5E-08	3.15E-05	5.0E-04	6.0E-09	3.15E-05	3.0E-10	3.15E-05
Road 7	18002336	2.60E-05	5.70E-08	300E-05	2.0E-04	1.0E-08	2.60E-05	4.0E-04	5.0E-09	2.60E-05	2.0E-10	3.00E-05
Road 7	18002353	2.05E-05	5.15E-08	200E-05	1.0E-04	9.0E-09	2.05E-05	3.0E-04	4.0E-09	2.05E-05	1.0E-10	2.85E-05
Road 7	18002370	1.50E-05	4.60E-08	100E-05	9.0E-05	8.0E-09	1.50E-05	2.0E-04	3.0E-09	1.50E-05	9.0E-11	2.70E-05
Road 7	18002387	9.50E-06	4.05E-08	900E-05	8.0E-05	7.0E-09	9.50E-06	1.0E-04	2.0E-09	9.50E-06	8.0E-11	2.55E-05
Road 7	18002404	9.00E-06	3.90E-08	800E-05	7.0E-05	6.0E-09	9.00E-06	9.0E-05	1.0E-09	9.00E-06	7.0E-11	2.40E-05
Road 7	18002421	8.45E-06	3.75E-08	700E-05	6.0E-05	5.0E-09	8.45E-06	8.0E-05	9.0E-10	8.45E-06	6.0E-11	2.25E-05
Road 7	18002438	7.90E-06	3.60E-08	600E-05	5.0E-05	4.0E-09	7.90E-06	7.0E-05	8.0E-10	7.90E-06	5.0E-11	2.10E-05
Road 7	18002455	7.35E-06	3.45E-08	500E-05	4.0E-05	3.0E-09	7.35E-06	6.0E-05	7.0E-10	7.35E-06	4.0E-11	1.95E-05
Road 7	18002472	6.80E-06	3.30E-08	400E-05	3.0E-05	2.0E-09	6.80E-06	5.0E-05	6.0E-10	6.80E-06	3.0E-11	1.80E-05
Road 7	18002489	6.25E-06	3.15E-08	300E-05	2.0E-05	1.0E-09	6.25E-06	4.0E-05	5.0E-10	6.25E-06	2.0E-11	1.65E-05
Road 7	18002506	5.70E-06	3.00E-08	200E-05	1.0E-05	9.0E-10	5.70E-06	3.0E-05	4.0E-10	5.70E-06	1.0E-11	1.50E-05
Road 7	18002523	5.15E-06	2.85E-08	100E-05	9.0E-06	8.0E-10	5.15E-06	2.0E-05	3.0E-10	5.15E-06	9.0E-12	1.35E-05
Road 7	18002540	4.60E-06	2.70E-08	900E-05	8.0E-06	7.0E-10	4.60E-06	1.0E-05	2.0E-10	4.60E-06	8.0E-12	1.20E-05
Road 7												

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open N ₂ North Underway Quarry													
Open N ₂ West Low Emission Factors for APM200 model (t/year)													
Year 2003													
Road Name	Road ID	Road	NO ₂ Emission						NO Emission				
			g/hour	g/day	tonne/year	g/hour	g/day	tonne/year	g/hour	g/day	tonne/year	g/hour	
Road 21	0000-0200	1.10E-02	7.44E-08	3.59E-04	1.81E-03	7.51E-07	3.59E-02	2.48E-07	1.20E-03	2.86E-03	1.93E-08	9.33E-05	
Road 21	0000-0260	1.10E-02	7.44E-08	3.59E-04	1.81E-03	7.51E-07	3.59E-02	2.48E-07	1.20E-03	2.86E-03	1.93E-08	9.33E-05	
Road 21	0200-0310	1.41E-02	8.68E-08	4.15E-04	2.10E-03	8.68E-07	4.15E-02	2.86E-07	1.20E-03	3.41E-03	2.22E-08	1.07E-04	
Road 21	0310-0360	1.41E-02	8.68E-08	4.15E-04	2.10E-03	8.68E-07	4.15E-02	2.86E-07	1.20E-03	3.41E-03	2.22E-08	1.07E-04	
Road 21	0360-0400	1.58E-03	4.93E-08	2.38E-04	6.27E-04	4.93E-07	2.38E-02	1.64E-07	4.08E-03	1.08E-03	2.72E-08	5.14E-05	
Road 21	0400-0450	1.49E-03	7.02E-08	3.33E-04	8.92E-04	1.19E-07	5.81E-02	4.09E-07	3.99E-03	3.06E-03	2.07E-08	9.88E-05	
Road 21	0450-0490	1.49E-03	7.02E-08	3.33E-04	8.92E-04	1.19E-07	5.81E-02	4.09E-07	3.99E-03	3.06E-03	2.07E-08	9.88E-05	
Road 21	0700-0800	1.68E-02	1.97E-07	9.21E-03	6.99E-02	1.68E-06	8.67E-02	2.05E-06	9.87E-03	4.29E-02	1.00E-03	4.83E-05	
Road 21	0800-0830	1.68E-02	1.97E-07	9.21E-03	6.99E-02	1.68E-06	8.67E-02	2.05E-06	9.87E-03	4.29E-02	1.00E-03	4.83E-05	
Road 21	0830-0900	1.68E-02	1.97E-07	9.21E-03	6.99E-02	1.68E-06	8.67E-02	2.05E-06	9.87E-03	4.29E-02	1.00E-03	4.83E-05	
Road 21	0900-1000	2.06E-02	1.17E-07	5.50E-03	4.18E-02	2.06E-06	1.03E-02	2.51E-06	1.13E-02	4.97E-03	1.14E-07	6.00E-04	
Road 21	1000-1100	2.14E-02	1.09E-07	5.08E-03	3.82E-02	1.89E-06	1.03E-02	2.56E-06	1.14E-02	5.42E-03	1.24E-07	5.97E-04	
Road 21	1100-1200	2.14E-02	1.09E-07	5.08E-03	3.82E-02	1.89E-06	1.03E-02	2.56E-06	1.14E-02	5.42E-03	1.24E-07	5.97E-04	
Road 21	1200-1300	2.06E-02	1.03E-07	4.74E-03	3.51E-02	1.80E-06	1.03E-02	2.51E-06	1.13E-02	5.16E-03	1.19E-07	6.12E-04	
Road 21	1300-1400	2.06E-02	1.03E-07	4.74E-03	3.51E-02	1.80E-06	1.03E-02	2.51E-06	1.13E-02	5.16E-03	1.19E-07	6.12E-04	
Road 21	1400-1500	2.06E-02	1.03E-07	4.74E-03	3.51E-02	1.80E-06	1.03E-02	2.51E-06	1.13E-02	5.16E-03	1.19E-07	6.12E-04	
Road 21	1500-1600	2.06E-02	1.03E-07	4.74E-03	3.51E-02	1.80E-06	1.03E-02	2.51E-06	1.13E-02	5.16E-03	1.19E-07	6.12E-04	
Road 21	1600-1700	2.43E-02	1.74E-07	2.77E-03	9.03E-03	2.18E-06	1.01E-02	1.15E-02	2.71E-06	1.38E-02	5.94E-07	8.77E-04	
Road 21	1700-1800	1.89E-02	1.03E-07	2.21E-03	7.97E-03	1.99E-06	8.91E-03	1.98E-06	1.10E-02	4.78E-03	1.06E-07	5.59E-04	
Road 21	1800-1900	1.89E-02	1.03E-07	2.21E-03	7.97E-03	1.99E-06	8.91E-03	1.98E-06	1.10E-02	4.78E-03	1.06E-07	5.59E-04	
Road 21	1900-2000	1.07E-02	1.79E-07	8.62E-04	3.16E-03	1.41E-06	6.29E-03	1.58E-06	3.00E-02	2.34E-03	4.48E-06	2.48E-04	
Road 21	2000-2100	1.07E-02	1.79E-07	8.62E-04	3.16E-03	1.41E-06	6.29E-03	1.58E-06	3.00E-02	2.34E-03	4.48E-06	2.48E-04	
Road 21	2100-2200	1.05E-02	1.38E-07	6.60E-04	2.42E-03	7.13E-07	3.44E-03	8.66E-07	4.10E-03	2.88E-03	3.75E-08	1.81E-04	
Road 21	2200-2300	1.05E-02	1.38E-07	6.60E-04	2.42E-03	7.13E-07	3.44E-03	8.66E-07	4.10E-03	2.88E-03	3.75E-08	1.81E-04	
Road 21	2300-0000	1.18E-03	1.18E-04	5.44E-04	5.44E-04	2.2E-04	1.64E-03	8.66E-07	8.52E-07	1.23E-03	2.19E-06	4.44E-05	
Road 21	0000-0100	1.28E-03	1.28E-04	5.44E-04	5.44E-04	2.2E-04	1.64E-03	8.66E-07	8.52E-07	1.12E-03	1.97E-06	4.51E-05	
Road 21	0100-0200	1.28E-03	1.28E-04	5.44E-04	5.44E-04	2.2E-04	1.64E-03	8.66E-07	8.52E-07	1.12E-03	1.97E-06	4.51E-05	
Road 21	0200-0300	8.92E-02	6.59E-08	8.38E-03	2.45E-07	1.56E-06	8.38E-02	1.99E-07	1.12E-02	7.43E-09	4.88E-05	2.44E-05	
Road 21	0300-0400	1.61E-02	1.68E-08	1.68E-04	3.97E-07	1.34E-06	1.68E-02	2.62E-07	1.70E-02	1.65E-03	1.44E-05	1.44E-05	
Road 21	0400-0500	1.03E-02	1.68E-08	4.92E-04	3.17E-07	2.42E-07	1.03E-02	4.74E-07	3.06E-07	2.01E-03	1.15E-07	7.53E-09	4.89E-05
Road 21	0500-0600	1.03E-02	1.68E-08	4.92E-04	3.17E-07	2.42E-07	1.03E-02	4.74E-07	3.06E-07	2.01E-03	1.15E-07	7.53E-09	4.89E-05
Road 21	0600-0700	1.03E-02	1.68E-08	4.92E-04	3.17E-07	2.42E-07	1.03E-02	4.74E-07	3.06E-07	2.01E-03	1.15E-07	7.53E-09	4.89E-05
Road 21	0700-0800	1.44E-03	8.34E-07	4.15E-04	2.08E-04	2.96E-07	1.44E-03	5.62E-07	3.70E-07	2.43E-07	7.82E-08	3.61E-05	
Road 21	0800-0900	1.44E-03	8.34E-07	4.15E-04	2.08E-04	2.96E-07	1.44E-03	5.62E-07	3.70E-07	2.43E-07	7.82E-08	3.61E-05	
Road 21	0900-1000	1.03E-02	1.14E-08	7.88E-03	4.59E-04	4.16E-07	1.03E-02	5.98E-08	3.58E-04	2.43E-02	1.07E-07	8.67E-04	
Road 21	1000-1100	1.03E-02	1.14E-08	7.88E-03	4.59E-04	4.16E-07	1.03E-02	5.98E-08	3.58E-04	2.43E-02	1.07E-07	8.67E-04	
Road 21	1100-1200	1.03E-02	1.14E-08	7.88E-03	4.59E-04	4.16E-07	1.03E-02	5.98E-08	3.58E-04	2.43E-02	1.07E-07	8.67E-04	
Road 21	1200-1300	1.61E-02	1.12E-06	7.27E-03	5.82E-04	1.90E-06	2.44E-02	7.23E-07	5.02E-06	2.72E-02	1.48E-07	1.03E-07	6.68E-04
Road 21	1300-1400	1.03E-02	1.29E-06	1.97E-04	5.48E-06	4.26E-06	1.03E-02	7.23E-07	5.02E-06	2.72E-02	1.48E-07	1.03E-07	6.68E-04
Road 21	1400-1500	1.61E-02	1.12E-06	7.27E-03	5.82E-04	1.90E-06	2.44E-02	7.23E-07	5.02E-06	2.72E-02	1.48E-07	1.03E-07	6.68E-04
Road 21	1500-1600	1.03E-02	1.29E-06	1.97E-04	5.48E-06	4.26E-06	1.03E-02	7.23E-07	5.02E-06	2.72E-02	1.48E-07	1.03E-07	6.68E-04
Road 21	1600-1700	1.61E-02	1.12E-06	7.27E-03	5.82E-04	1.90E-06	2.44E-02	7.23E-07	5.02E-06	2.72E-02	1.48E-07	1.03E-07	6.68E-04
Road 21	1700-1800	1.03E-02	1.29E-06	1.97E-04	5.48E-06	4.26E-06	1.03E-02	7.23E-07	5.02E-06	2.72E-02	1.48E-07	1.03E-07	6.68E-04
Road 21	1800-1900	1.03E-02	1.29E-06	1.97E-04	5.48E-06	4.26E-06	1.03E-02	7.23E-07	5.02E-06	2.72E-02	1.48E-07	1.03E-07	6.68E-04
Road 21	1900-2000	1.03E-02	1.29E-06	1.97E-04	5.48E-06	4.26E-06	1.03E-02	7.23E-07	5.02E-06	2.72E-02	1.48E-07	1.03E-07	6.68E-04
Road 21	2000-2100	1.03E-02	1.29E-06	1.97E-04	5.48E-06	4.26E-06	1.03E-02	7.23E-07	5.02E-06	2.72E-02	1.48E-07	1.03E-07	6.68E-04
Road 21	2100-2200	1.03E-02	1.29E-06	1.97E-04	5.48E-06	4.26E-06	1.03E-02	7.23E-07	5.02E-06	2.72E-02	1.48E-07	1.03E-07	6.68E-04
Road 21	2200-2300	1.03E-02	1.29E-06	1.97E-04	5.48E-06	4.26E-06	1.03E-02	7.23E-07	5.02E-06	2.72E-02	1.48E-07	1.03E-07	6.68E-04
Road 21	2300-0000	1.03E-02	1.29E-06	1.97E-04	5.48E-06	4.26E-06	1.03E-02	7.23E-07	5.02E-06	2.72E-02	1.48E-07	1.03E-07	6.68E-04
Road 21	0000-0100	1.03E-02	1.29E-06	1.97E-04	5.48E-06	4.26E-06	1.03E-02	7.23E-07	5.02E-06	2.72E-02	1.48E-07	1.03E-07	6.68E-04
Road 21	0100-0200	1.03E-02	1.29E-06	1.97E-04	5.48E-06	4.26E-06	1.03E-02	7.23E-07	5.02E-06	2.72E-02	1.48E-07	1.03E-07	6.68E-04
Road 21	0200-0300	1.03E-02	1.29E-06	1.97E-04	5.48E-06	4.26E-06	1.03E-02	7.23E-07	5.02E-06	2.72E-02	1.48E-07	1.03E-07	6.68E-04
Road 21	0300-0400	1.03E-02	1.29E-06	1.97E-04	5.48E-06	4.26E-06	1.03E-02	7.23E-07	5.02E-06	2.72E-02	1.48E-07	1.03E-07	6.68E-04
Road 21	0400-0500	1.03E-02	1.29E-06	1.97E-04	5.48E-06	4.26E-06	1.03E-02	7.23E-07	5.02E-06	2.72E-02	1.48E-07	1.03E-07	6.68E-04
Road 21	0500-0600	1.03E-02	1.29E-06	1.97E-04	5.48E-06	4.26E-06	1.03E-02	7.23E-07	5.02E-06	2.72E-02	1.48E-07	1.03E-07	6.68E-04
Road 21	0600-0700	1.03E-02	1.29E-06	1.97E-04	5.48E-06	4.26E-06	1.03E-02	7.23E-07	5.02E-06	2.72E-02	1.48E-07	1.03E-07	6.68E-04
Road 21	0700-0800	1.03E-02	1.29E-06	1.97E-04	5.48E-06	4.26E-06	1.03E-02	7.23E-07	5.02E-06	2.72E-02	1.48E-07	1.03E-07	6.68E-04
Road 21	0800-0900	1.03E-02	1.29E-06	1.97E-04	5.48E-06	4.26E-06	1.03E-02	7.23E-07	5.02E-06	2.72E-02	1.48E-07	1.03E-07	6.68E-04
Road 21	0900-1000	1.03E-02	1.29E-06	1.97E-04	5.48E-06	4.26E-06	1.03E-02	7.23E-07	5.02E-06	2.72E-02	1.48E-07	1.03E-07	6.68E-04
Road 21	1000-1100	1.03E-02	1.29E-06	1.97E-04	5.48E-06	4.26E-06	1.03E-02	7.23E-07	5.02E-06	2.72E-02	1.48E-07	1.03E-07	6.68E-04
Road 21	1100-1200	1.03E-02	1.29E-06	1.97E-04	5.48E-06	4.26E-06	1.03E-02	7.23E-07	5.02E-06	2.72E-02	1.48E-07	1.03E-07	6.68E-04
Road 21	1200-1300	1.03E-02	1.29E-06	1.97E-04	5.48E-06	4.26E-06	1.03E-02	7.23E-07	5.02E-06	2.72E-02	1.48E-07	1.03E-07	6.68E-04
Road 21	1300-1400	1.03E-02	1.29E-06	1.97E-04	5.48E-06	4.26E-06	1.03E-02	7.23E-07	5.02E-06	2.72E-02	1.48E-07	1.03E-07	6.68E-04
Road 21	1400-1500	1.03E-02	1.29E-06	1.97E-04	5.48E-06	4.26E-06	1.03E-02	7.23E-07	5.02E-06	2.72E-02	1.48E-07	1.03E-07	6.68E-04
Road 21	1500-1600	1.03E-02	1.29E-06	1.97E-04	5.48E-06	4.26E-06	1.03E-02	7.23E-07	5.02E-06	2.72E-02	1.48E-07	1.03E-07	6.68E-04
Road 21	1600-1700	1.03E-02	1.29E-06	1.97E-04	5.48E-06	4.26E-06	1.03E-02	7.23E-07	5.02E-06	2.72E-02	1.48E-07	1.03E-07	6.68E-04
Road 21	1700-1800	1.03E-02	1.29E-06	1.97E-04	5.48E-06	4.26E-06	1.03E-02	7.23E-07	5.02E-06	2.72E-02	1.48E-07	1.03E-07	6.68E-04
Road 21	1800-1900	1.03E-02	1.29E-06	1.97E-04	5.48E-06	4.26E-06	1.03E-02	7.23E-07	5.02E-06	2.72E-02	1.48E-07	1.03E-07	6.68E-04
Road 21	1900-2000	1.03E-02	1.29E-06	1.97E-04	5.48E-06	4.26E-06	1.03E-02	7.23E-07	5.02E-06	2.72E-02	1.48E-07	1	

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Tiling of North Underdown Quarry													
Open Road to North Extension Factors for AEMOD model (km/h)													
			Year 2003										
Road Name	Road ID	Flow	NO ₂ Emission					NO Emission					
			g/h/v/km	g/h/v/km	tonne/h/km	g/h/v/km	g/h/v/km	tonne/h/km	g/h/v/km	g/h/v/km	tonne/h/km	g/h/v/km	g/h/v/km
Road 11	11	0000-0100	1.875E+01	4.42E+01	2.68E+04	1.20E+01	9.03E+07	1.27E+01	4.05E+04	1.05E+04	1.47E+01	4.28E+03	4.29E+03
Road 11	11	0000-0200	2.34E+01	5.52E+01	3.35E+04	1.50E+01	1.12E+08	1.62E+01	5.07E+04	4.30E+04	5.93E+03	5.55E+03	5.55E+03
Road 11	11	0000-0300	2.62E+01	6.28E+01	3.82E+04	1.53E+02	4.74E+08	1.67E+01	5.57E+07	7.80E+04	4.80E+04	1.79E+04	4.21E+04
Road 11	11	0000-0400	2.62E+01	6.28E+01	3.82E+04	1.53E+02	4.74E+08	1.67E+01	5.57E+07	7.80E+04	4.80E+04	1.79E+04	4.21E+04
Road 11	11	0000-0500	2.65E+01	6.32E+01	3.87E+04	1.57E+04	4.84E+09	6.29E+04	1.96E+07	4.76E+04	5.53E+04	1.76E+04	4.31E+04
Road 11	11	0000-0600	2.30E+01	5.60E+01	3.40E+04	2.53E+01	8.34E+07	1.27E+01	3.82E+04	3.99E+04	1.39E+04	3.27E+04	4.38E+04
Road 11	11	0000-0700	2.34E+01	5.52E+01	3.35E+04	1.50E+01	1.12E+08	1.62E+01	5.07E+04	4.30E+04	5.93E+03	5.55E+03	5.55E+03
Road 11	11	0000-0800	4.09E+02	9.77E+03	3.17E+03	1.59E+04	4.62E+06	6.08E+04	2.34E+06	6.06E+04	7.85E+03	7.25E+03	4.74E+03
Road 11	11	0000-0900	4.09E+02	9.77E+03	3.17E+03	1.59E+04	4.62E+06	6.08E+04	2.34E+06	6.06E+04	7.85E+03	7.25E+03	4.74E+03
Road 11	11	0000-1000	4.09E+02	9.77E+03	3.17E+03	1.59E+04	4.62E+06	6.08E+04	2.34E+06	6.06E+04	7.85E+03	7.25E+03	4.74E+03
Road 11	11	0900-1000	1.90E+01	4.56E+01	2.86E+04	1.62E+01	9.98E+04	6.40E+01	2.47E+04	5.79E+06	8.11E+01	5.61E+01	1.18E+01
Road 11	11	0900-1100	1.90E+01	4.56E+01	2.86E+04	1.62E+01	9.98E+04	6.40E+01	2.47E+04	5.79E+06	8.11E+01	5.61E+01	1.18E+01
Road 11	11	0900-1200	1.90E+01	4.56E+01	2.86E+04	1.62E+01	9.98E+04	6.40E+01	2.47E+04	5.79E+06	8.11E+01	5.61E+01	1.18E+01
Road 11	11	1000-1100	1.58E+01	3.68E+01	2.28E+04	2.02E+01	4.25E+04	4.91E+01	2.55E+04	2.24E+04	7.94E+03	5.71E+03	1.79E+04
Road 11	11	1000-1200	1.58E+01	3.68E+01	2.28E+04	2.02E+01	4.25E+04	4.91E+01	2.55E+04	2.24E+04	7.94E+03	5.71E+03	1.79E+04
Road 11	11	1200-1300	6.90E+01	1.60E+02	2.64E+04	2.44E+01	5.58E+07	7.82E+01	3.58E+04	1.78E+04	1.01E+04	6.82E+03	1.17E+04
Road 11	11	1200-1400	6.90E+01	1.60E+02	2.64E+04	2.44E+01	5.58E+07	7.82E+01	3.58E+04	1.78E+04	1.01E+04	6.82E+03	1.17E+04
Road 11	11	1200-1500	7.30E+01	1.68E+02	2.75E+04	2.58E+01	6.02E+07	8.40E+01	3.91E+04	1.98E+04	1.16E+04	7.22E+03	1.30E+04
Road 11	11	1200-1600	7.30E+01	1.68E+02	2.75E+04	2.58E+01	6.02E+07	8.40E+01	3.91E+04	1.98E+04	1.16E+04	7.22E+03	1.30E+04
Road 11	11	1200-1700	7.30E+01	1.68E+02	2.75E+04	2.58E+01	6.02E+07	8.40E+01	3.91E+04	1.98E+04	1.16E+04	7.22E+03	1.30E+04
Road 11	11	1400-1500	6.86E+02	1.85E+04	2.96E+04	2.49E+01	6.62E+06	9.28E+01	3.12E+04	8.48E+06	1.19E+07	7.28E+03	1.88E+07
Road 11	11	1400-1600	6.86E+02	1.85E+04	2.96E+04	2.49E+01	6.62E+06	9.28E+01	3.12E+04	8.48E+06	1.19E+07	7.28E+03	1.88E+07
Road 11	11	1400-1700	6.86E+02	1.85E+04	2.96E+04	2.49E+01	6.62E+06	9.28E+01	3.12E+04	8.48E+06	1.19E+07	7.28E+03	1.88E+07
Road 11	11	1700-1800	7.56E+01	1.72E+02	2.78E+04	2.94E+01	8.81E+04	9.94E+01	2.93E+04	8.48E+06	1.19E+07	7.28E+03	1.88E+07
Road 11	11	1800-1700	7.56E+01	1.72E+02	2.78E+04	2.94E+01	8.81E+04	9.94E+01	2.93E+04	8.48E+06	1.19E+07	7.28E+03	1.88E+07
Road 11	11	1800-1800	7.56E+01	1.72E+02	2.78E+04	2.94E+01	8.81E+04	9.94E+01	2.93E+04	8.48E+06	1.19E+07	7.28E+03	1.88E+07
Road 11	11	2000-2000	2.77E+02	6.73E+03	9.94E+04	1.16E+01	3.56E+06	1.42E+01	6.68E+03	3.37E+04	4.32E+04	3.99E+04	1.48E+04
Road 11	11	2000-2100	2.62E+01	6.28E+01	3.82E+04	1.53E+02	4.74E+08	1.67E+01	5.57E+07	7.80E+04	4.80E+04	1.79E+04	4.21E+04
Road 11	11	2100-2200	2.77E+02	6.73E+03	9.94E+04	1.16E+01	3.56E+06	1.42E+01	6.68E+03	3.37E+04	4.32E+04	3.99E+04	1.48E+04
Road 11	11	2200-2300	2.77E+02	6.73E+03	9.94E+04	1.16E+01	3.56E+06	1.42E+01	6.68E+03	3.37E+04	4.32E+04	3.99E+04	1.48E+04
Road 11	11	2300-2000	2.65E+01	6.32E+01	3.87E+04	1.57E+04	4.84E+09	6.29E+04	1.96E+07	4.76E+04	5.53E+04	1.76E+04	4.31E+04
Road 11	11	2300-2100	2.25E+01	5.41E+01	3.27E+03	4.72E+01	2.60E+07	2.83E+01	9.37E+03	9.93E+03	2.08E+03	1.10E+03	1.17E+03
Road 11	11	2300-2200	2.25E+01	5.41E+01	3.27E+03	4.72E+01	2.60E+07	2.83E+01	9.37E+03	9.93E+03	2.08E+03	1.10E+03	1.17E+03
Road 11	11	2300-2300	2.25E+01	5.41E+01	3.27E+03	4.72E+01	2.60E+07	2.83E+01	9.37E+03	9.93E+03	2.08E+03	1.10E+03	1.17E+03
Road 11	11	2300-0100	2.25E+01	5.41E+01	3.27E+03	4.72E+01	2.60E+07	2.83E+01	9.37E+03	9.93E+03	2.08E+03	1.10E+03	1.17E+03
Road 11	11	2300-0200	2.25E+01	5.41E+01	3.27E+03	4.72E+01	2.60E+07	2.83E+01	9.37E+03	9.93E+03	2.08E+03	1.10E+03	1.17E+03
Road 11	11	2300-0300	2.25E+01	5.41E+01	3.27E+03	4.72E+01	2.60E+07	2.83E+01	9.37E+03	9.93E+03	2.08E+03	1.10E+03	1.17E+03
Road 11	11	2300-0400	2.25E+01	5.41E+01	3.27E+03	4.72E+01	2.60E+07	2.83E+01	9.37E+03	9.93E+03	2.08E+03	1.10E+03	1.17E+03
Road 11	11	2300-0500	2.25E+01	5.41E+01	3.27E+03	4.72E+01	2.60E+07	2.83E+01	9.37E+03	9.93E+03	2.08E+03	1.10E+03	1.17E+03
Road 11	11	2300-0600	2.25E+01	5.41E+01	3.27E+03	4.72E+01	2.60E+07	2.83E+01	9.37E+03	9.93E+03	2.08E+03	1.10E+03	1.17E+03
Road 11	11	2300-0700	2.25E+01	5.41E+01	3.27E+03	4.72E+01	2.60E+07	2.83E+01	9.37E+03	9.93E+03	2.08E+03	1.10E+03	1.17E+03
Road 11	11	2300-0800	2.25E+01	5.41E+01	3.27E+03	4.72E+01	2.60E+07	2.83E+01	9.37E+03	9.93E+03	2.08E+03	1.10E+03	1.17E+03
Road 11	11	2300-0900	2.25E+01	5.41E+01	3.27E+03	4.72E+01	2.60E+07	2.83E+01	9.37E+03	9.93E+03	2.08E+03	1.10E+03	1.17E+03
Road 11	11	2300-1000	2.25E+01	5.41E+01	3.27E+03	4.72E+01	2.60E+07	2.83E+01	9.37E+03	9.93E+03	2.08E+03	1.10E+03	1.17E+03
Road 11	11	2300-1100	2.25E+01	5.41E+01	3.27E+03	4.72E+01	2.60E+07	2.83E+01	9.37E+03	9.93E+03	2.08E+03	1.10E+03	1.17E+03
Road 11	11	2300-1200	2.25E+01	5.41E+01	3.27E+03	4.72E+01	2.60E+07	2.83E+01	9.37E+03	9.93E+03	2.08E+03	1.10E+03	1.17E+03
Road 11	11	2300-1300	2.25E+01	5.41E+01	3.27E+03	4.72E+01	2.60E+07	2.83E+01	9.37E+03	9.93E+03	2.08E+03	1.10E+03	1.17E+03
Road 11	11	2300-1400	2.25E+01	5.41E+01	3.27E+03	4.72E+01	2.60E+07	2.83E+01	9.37E+03	9.93E+03	2.08E+03	1.10E+03	1.17E+03
Road 11	11	2300-1500	2.25E+01	5.41E+01	3.27E+03	4.72E+01	2.60E+07	2.83E+01	9.37E+03	9.93E+03	2.08E+03	1.10E+03	1.17E+03
Road 11	11	2300-1600	2.25E+01	5.41E+01	3.27E+03	4.72E+01	2.60E+07	2.83E+01	9.37E+03	9.93E+03	2.08E+03	1.10E+03	1.17E+03
Road 11	11	2300-1700	2.25E+01	5.41E+01	3.27E+03	4.72E+01	2.60E+07	2.83E+01	9.37E+03	9.93E+03	2.08E+03	1.10E+03	1.17E+03
Road 11	11	2300-1800	2.25E+01	5.41E+01	3.27E+03	4.72E+01	2.60E+07	2.83E+01	9.37E+03	9.93E+03	2.08E+03	1.10E+03	1.17E+03
Road 11	11	2300-1900	2.25E+01	5.41E+01	3.27E+03	4.72E+01	2.60E+07	2.83E+01	9.37E+03	9.93E+03	2.08E+03	1.10E+03	1.17E+03
Road 11	11	2300-2000	2.25E+01	5.41E+01	3.27E+03	4.72E+01	2.60E+07	2.83E+01	9.37E+03	9.93E+03	2.08E+03	1.10E+03	1.17E+03
Road 11	11	2300-2100	2.25E+01	5.41E+01	3.27E+03	4.72E+01	2.60E+07	2.83E+01	9.37E+03	9.93E+03	2.08E+03	1.10E+03	1.17E+03
Road 11	11	2300-2200	2.25E+01	5.41E+01	3.27E+03	4.72E+01	2.60E+07	2.83E+01	9.37E+03	9.93E+03	2.08E+03	1.10E+03	1.17E+03
Road 11	11	2300-2300	2.25E+01	5.41E+01	3.27E+03	4.72E+01	2.60E+07	2.83E+01	9.37E+03	9.93E+03	2.08E+03	1.10E+03	1.17E+03
Road 11	11	2300-0100	2.25E+01	5.41E+01	3.27E+03	4.72E+01	2.60E+07	2.83E+01	9.37E+03	9.93E+03	2.08E+03	1.10E+03	1.17E+03
Road 11	11	2300-0200	2.25E+01	5.41E+01	3.27E+03	4.72E+01	2.60E+07	2.83E+01	9.37E+03	9.93E+03	2.08E+03	1.10E+03	1.17E+03
Road 11	11	2300-0300	2.25E+01	5.41E+01	3.27E+03	4.72E+01	2.60E+07	2.83E+01	9.37E+03	9.93E+03	2.08E+03	1.10E+03	1.17E+03
Road 11	11	2300-0400	2.25E+01	5.41E+01	3.27E+03	4.72E+01	2.60E+07	2.83E+01	9.37E+03	9.93E+03	2.08E+03	1.10E+03	1.17E+03
Road 11	11	2300-0500	2.25E+01	5.41E+01	3.27E+03	4.72E+01	2.60E+07	2.83E+01	9.37E+03	9.93E+03	2.08E+03	1.10E+03	1.17E+03
Road 11	11	2300-0600	2.25E+01	5.41E+01	3.27E+03	4.72E+01	2.60E+07	2.83E+01	9.37E+03	9.93E+03	2.08E+03	1.10E+03	1.17E+03
Road 11	11	2300-0700	2.25E+01	5.41E+01	3.27E+03	4.72E+01	2.60E+07	2.83E+01	9.37E+03	9.93E+03	2.08E+03	1.10E+03	1.17E+03
Road 11	11	2300-0800	2.25E+01	5.41E+01	3.27E+03	4.72E+01	2.60E+07	2.83E+01	9.37E+03	9.93E+03	2.08E+03	1.10E+03	1.17E+03
Road 11	11	2300-0900	2.25E+01	5.41E+01	3.27E+03	4.72E+01	2.60E+07	2.83E+01	9.37E+03	9.93E+03	2.08E+03	1.10E+03	1.17E+03
Road 11	11	2300-1000	2.25E+01	5.41E+01	3.27E+03	4.72E+01	2.60E+07	2.83E+01	9.37E+03	9.93E+03	2.08E+03	1.10E+03	1.17E+03
Road 11	11	2300-1100	2.25E+01	5.41E+01	3.27E+03	4.72E+01	2.60E+07	2.83E+01	9.37E+03	9.93E+03	2.08E+03	1.10E+03	1.17E+03
Road 11	11	2300-1200	2.25E+01	5.41E+01	3.27E+03	4.72E+01							

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Table 1 North York Understudy Query															
Open Read North York Extension Factors for ATMCC Model (mm)															
		Year 2003		NO ₂ Extension						NO Extension					
Road Name	Road ID	Flow	g/h/v	g/h/v	g/h/v	g/h/v	g/h/v	g/h/v	g/h/v	g/h/v	g/h/v	g/h/v	g/h/v		
Road #24	24	8000-0900	1,362	417	2,232	4,924	9,028	87,554	9,151	1,156	1,045	1,324	4,048	2,354	
Road #24	24	0900-1300	1,362	417	2,232	4,924	9,028	87,554	9,151	1,156	1,045	1,324	4,048	2,354	
Road #24	24	1300-1500	1,362	417	2,232	4,924	9,028	87,554	9,151	1,156	1,045	1,324	4,048	2,354	
Road #24	24	1500-1100	1,288	407	2,048	4,788	8,101	83,808	8,512	1,132	1,020	1,204	3,908	2,216	
Road #24	24	1100-1300	1,288	407	2,048	4,788	8,101	83,808	8,512	1,132	1,020	1,204	3,908	2,216	
Road #24	24	1300-1300	1,411	426	2,304	5,008	9,376	88,804	9,212	1,246	1,155	1,441	4,201	2,468	
Road #24	24	1300-1400	1,248	402	2,064	4,502	8,154	80,016	8,478	1,074	1,034	1,244	3,704	2,072	
Road #24	24	1400-1600	1,248	402	2,064	4,502	8,154	80,016	8,478	1,074	1,034	1,244	3,704	2,072	
Road #24	24	1600-1800	1,306	412	2,172	4,896	9,176	85,016	8,724	1,086	1,034	1,256	3,788	2,104	
Road #24	24	1800-1300	1,306	412	2,172	4,896	9,176	85,016	8,724	1,086	1,034	1,256	3,788	2,104	
Road #24	24	1700-1800	1,288	407	2,064	4,788	8,101	83,808	8,512	1,132	1,046	1,204	3,728	2,204	
Road #24	24	1800-1800	1,028	318	1,696	4,212	6,376	52,404	6,276	711	674	1,144	1,104	1,472	
Road #24	24	1800-1900	1,028	318	1,696	4,212	6,376	52,404	6,276	711	674	1,144	1,104	1,472	
Road #24	24	2000-2100	1,411	426	2,304	5,008	9,376	88,804	9,212	1,246	1,155	1,441	4,201	2,468	
Road #24	24	2100-2100	1,411	426	2,304	5,008	9,376	88,804	9,212	1,246	1,155	1,441	4,201	2,468	
Road #24	24	2100-2200	1,068	328	1,696	4,212	6,376	52,404	6,276	711	674	1,144	1,104	1,472	
Road #24	24	2200-2300	1,068	328	1,696	4,212	6,376	52,404	6,276	711	674	1,144	1,104	1,472	
Road #24	24	2300-2400	1,068	328	1,696	4,212	6,376	52,404	6,276	711	674	1,144	1,104	1,472	
Road #24	24	2400-0100	1,068	328	1,696	4,212	6,376	52,404	6,276	711	674	1,144	1,104	1,472	
Road #24	24	0100-0100	1,068	328	1,696	4,212	6,376	52,404	6,276	711	674	1,144	1,104	1,472	
Road #24	24	0100-0200	1,068	328	1,696	4,212	6,376	52,404	6,276	711	674	1,144	1,104	1,472	
Road #24	24	0200-0300	1,068	328	1,696	4,212	6,376	52,404	6,276	711	674	1,144	1,104	1,472	
Road #24	24	0300-0400	1,068	328	1,696	4,212	6,376	52,404	6,276	711	674	1,144	1,104	1,472	
Road #24	24	0400-0500	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	0500-0600	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	0600-0700	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	0700-0800	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	0800-0900	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	0900-1000	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	1000-1100	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	1100-1200	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	1200-1300	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	1300-1400	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	1400-1500	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	1500-1600	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	1600-1700	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	1700-1800	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	1800-1900	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	1900-2000	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	2000-2100	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	2100-2200	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	2200-2300	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	2300-2400	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	2400-0100	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	0100-0200	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	0200-0300	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	0300-0400	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	0400-0500	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	0500-0600	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	0600-0700	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	0700-0800	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	0800-0900	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	0900-1000	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	1000-1100	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	1100-1200	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	1200-1300	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	1300-1400	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	1400-1500	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	1500-1600	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	1600-1700	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	1700-1800	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	1800-1900	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	1900-2000	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	2000-2100	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	2100-2200	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	2200-2300	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	2300-2400	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	2400-0100	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	0100-0200	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	0200-0300	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	0300-0400	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	0400-0500	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	0500-0600	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	0600-0700	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	0700-0800	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	0800-0900	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	0900-1000	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	1000-1100	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	1100-1200	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	1200-1300	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	1300-1400	1,132	355	1,808	4,702	6,952	58,072	6,188	732	704	1,212	1,172	1,528	
Road #24	24	1400-1500	1,132	355</											

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

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Twin 1g North Underdown Quarry													
Open Road to East Area Emission Factors for													
A63000 road type													
Year 2043													
Road ID	Road Name	Hour	No Emission				No Emission						
			g/h/mwh	MWh/ton/hour	ton/ton/hour	MWh/ton/hour	g/h/mwh	MWh/ton/hour	ton/ton/hour	MWh/ton/hour			
Road 11	0000-0100	8.9883	1.778	5.785	4.454	8.888	2.876	1.312	1.0847	1.8454	2.4883	4.8119	1.687
Road 11	0100-0200	9.6613	1.922	6.252	4.833	9.661	3.064	1.4027	1.2528	2.0686	2.6885	5.1933	1.783
Road 11	0200-0300	10.0411	2.008	6.661	5.092	10.041	3.208	1.4782	1.2985	2.1692	2.8386	5.4793	1.854
Road 11	0300-0400	11.1141	2.222	7.349	5.551	11.114	3.588	1.6212	1.4008	2.3754	3.1402	6.2395	2.087
Road 11	0400-0500	12.0401	2.404	7.992	6.088	12.040	3.928	1.7442	1.5208	2.5692	3.3982	6.8148	2.247
Road 11	0500-0600	1.2182	0.608	1.988	1.388	1.218	0.764	0.4323	0.4021	0.7134	1.1483	2.3438	0.774
Road 11	0600-0700	1.3052	0.625	2.028	1.408	1.305	0.786	0.4382	0.4082	0.7314	1.1653	2.3715	0.785
Road 11	0700-0800	1.3553	0.653	2.098	1.453	1.355	0.818	0.4527	0.4227	0.7564	1.1924	2.4108	0.806
Road 11	0800-0900	1.4222	0.693	2.248	1.543	1.422	0.872	0.4772	0.4472	0.7968	1.2548	2.5089	0.847
Road 11	0900-1000	1.5211	0.751	2.452	1.672	1.521	0.948	0.5122	0.4822	0.8568	1.3482	2.6985	0.918
Road 11	1000-1100	1.7212	0.912	2.764	1.926	1.721	1.113	0.6222	0.5882	0.9768	1.4938	3.2968	1.074
Road 11	1100-1200	1.8587	1.008	3.012	2.112	1.858	1.238	0.6822	0.6482	1.0872	1.6082	3.5968	1.174
Road 11	1200-1300	1.7512	0.958	1.824	1.112	1.751	1.108	0.512	0.4802	0.7134	1.1358	2.3158	0.895
Road 11	1300-1400	1.2882	0.818	2.888	1.926	1.288	0.924	0.5382	0.5042	0.7714	1.1608	2.3348	0.845
Road 11	1400-1500	1.2882	0.818	2.888	1.926	1.288	0.924	0.5382	0.5042	0.7714	1.1608	2.3348	0.845
Road 11	1500-1600	1.1584	0.888	1.908	1.214	1.158	0.944	0.4402	0.3132	0.6072	1.0038	1.668	0.547
Road 11	1600-1700	0.868	0.648	1.268	0.768	0.868	0.648	0.4082	0.2882	0.4882	0.858	1.168	0.408
Road 11	1700-1800	0.7612	0.501	1.034	0.548	0.761	0.501	0.3582	0.2482	0.4082	0.742	1.034	0.358
Road 11	1800-1900	0.868	0.648	1.268	0.768	0.868	0.648	0.4082	0.2882	0.4882	0.858	1.168	0.408
Road 11	1900-2000	0.868	0.648	1.268	0.768	0.868	0.648	0.4082	0.2882	0.4882	0.858	1.168	0.408
Road 11	2000-2100	0.868	0.648	1.268	0.768	0.868	0.648	0.4082	0.2882	0.4882	0.858	1.168	0.408
Road 11	2100-2200	0.868	0.648	1.268	0.768	0.868	0.648	0.4082	0.2882	0.4882	0.858	1.168	0.408
Road 11	2200-2300	0.868	0.648	1.268	0.768	0.868	0.648	0.4082	0.2882	0.4882	0.858	1.168	0.408
Road 11	2300-2400	0.868	0.648	1.268	0.768	0.868	0.648	0.4082	0.2882	0.4882	0.858	1.168	0.408
Road 12	0000-0100	7.4523	1.428	4.788	3.678	7.452	1.838	0.8482	0.3882	1.758	2.012	4.338	1.224
Road 12	0100-0200	8.0253	1.548	5.048	3.938	8.025	1.958	0.9082	0.4182	1.868	2.122	4.458	1.294
Road 12	0200-0300	8.4051	1.634	5.348	4.138	8.405	2.044	0.9582	0.4482	1.958	2.218	4.558	1.344
Road 12	0300-0400	9.4781	1.858	5.948	4.538	9.478	2.268	1.0382	0.4882	2.178	2.438	5.058	1.474
Road 12	0400-0500	1.0482	0.808	2.718	1.818	1.048	0.988	0.5682	0.3782	0.7238	1.2038	2.4048	0.714
Road 12	0500-0600	1.1482	0.858	2.818	1.868	1.148	1.038	0.5882	0.3882	0.7438	1.2338	2.4348	0.744
Road 12	0600-0700	1.2082	0.908	2.918	1.918	1.208	1.088	0.6082	0.3982	0.7638	1.2638	2.4648	0.774
Road 12	0700-0800	1.2682	0.958	3.018	1.968	1.268	1.138	0.6282	0.4082	0.7838	1.2938	2.4948	0.804
Road 12	0800-0900	1.3282	1.008	3.118	2.018	1.328	1.188	0.6482	0.4182	0.8038	1.3238	2.5248	0.834
Road 12	0900-1000	1.4282	1.108	3.318	2.118	1.428	1.288	0.6882	0.4582	0.8638	1.4038	2.6048	0.914
Road 12	1000-1100	1.5282	1.208	3.518	2.218	1.528	1.388	0.7282	0.4982	0.9238	1.4838	2.6848	0.994
Road 12	1100-1200	1.6282	1.308	3.718	2.318	1.628	1.488	0.7682	0.5382	0.9838	1.5638	2.7648	1.074
Road 12	1200-1300	1.5282	1.208	3.518	2.218	1.528	1.388	0.7282	0.4982	0.9238	1.4838	2.6848	0.994
Road 12	1300-1400	1.3282	1.008	3.118	2.018	1.328	1.188	0.6482	0.4182	0.8038	1.3238	2.5248	0.834
Road 12	1400-1500	1.3282	1.008	3.118	2.018	1.328	1.188	0.6482	0.4182	0.8038	1.3238	2.5248	0.834
Road 12	1500-1600	1.1282	0.808	2.918	1.818	1.128	1.088	0.5682	0.3782	0.7238	1.2038	2.4048	0.714
Road 12	1600-1700	0.8282	0.608	2.718	1.618	0.828	0.788	0.4682	0.2782	0.6238	1.1038	2.2048	0.614
Road 12	1700-1800	0.7282	0.508	2.518	1.418	0.728	0.688	0.4082	0.2182	0.5638	1.0438	2.1048	0.514
Road 12	1800-1900	0.8282	0.608	2.718	1.618	0.828	0.788	0.4682	0.2782	0.6238	1.1038	2.2048	0.614
Road 12	1900-2000	0.8282	0.608	2.718	1.618	0.828	0.788	0.4682	0.2782	0.6238	1.1038	2.2048	0.614
Road 12	2000-2100	0.8282	0.608	2.718	1.618	0.828	0.788	0.4682	0.2782	0.6238	1.1038	2.2048	0.614
Road 12	2100-2200	0.8282	0.608	2.718	1.618	0.828	0.788	0.4682	0.2782	0.6238	1.1038	2.2048	0.614
Road 12	2200-2300	0.8282	0.608	2.718	1.618	0.828	0.788	0.4682	0.2782	0.6238	1.1038	2.2048	0.614
Road 12	2300-2400	0.8282	0.608	2.718	1.618	0.828	0.788	0.4682	0.2782	0.6238	1.1038	2.2048	0.614
Road 13	0000-0100	6.8254	1.324	4.384	3.384	6.825	1.734	0.8042	0.3642	1.658	1.912	4.138	1.174
Road 13	0100-0200	7.3984	1.444	4.684	3.684	7.398	1.854	0.8542	0.3842	1.758	2.012	4.338	1.224
Road 13	0200-0300	7.7792	1.530	4.984	3.984	7.779	1.940	0.9042	0.4142	1.858	2.112	4.438	1.274
Road 13	0300-0400	8.8522	1.754	5.584	4.584	8.852	2.164	0.9842	0.4542	1.958	2.212	4.538	1.324
Road 13	0400-0500	9.8252	1.978	6.184	5.184	9.825	2.388	1.0642	0.4942	2.058	2.312	4.638	1.374
Road 13	0500-0600	1.0752	0.878	2.884	1.884	1.075	1.088	0.5642	0.3742	0.7238	1.2038	2.4048	0.714
Road 13	0600-0700	1.1752	0.928	2.984	1.934	1.175	1.138	0.5842	0.3842	0.7438	1.2338	2.4348	0.744
Road 13	0700-0800	1.2252	0.978	3.084	1.984	1.225	1.188	0.6042	0.3942	0.7638	1.2638	2.4648	0.774
Road 13	0800-0900	1.2752	1.028	3.184	2.034	1.275	1.238	0.6242	0.4042	0.7838	1.2938	2.4948	0.804
Road 13	0900-1000	1.3752	1.128	3.384	2.134	1.375	1.338	0.6642	0.4442	0.8438	1.3738	2.5748	0.884
Road 13	1000-1100	1.4752	1.228	3.584	2.234	1.475	1.438	0.7042	0.4842	0.9038	1.4538	2.6548	0.964
Road 13	1100-1200	1.5752	1.328	3.784	2.334	1.575	1.538	0.7442	0.5242	0.9638	1.5338	2.7348	1.044
Road 13	1200-1300	1.4752	1.228	3.584	2.234	1.475	1.438	0.7042	0.4842	0.9038	1.4538	2.6548	0.964
Road 13	1300-1400	1.2752	1.028	3.184	2.034	1.275	1.238	0.6242	0.4042	0.7838	1.2938	2.4948	0.804
Road 13	1400-1500	1.2752	1.028	3.184	2.034	1.275	1.238	0.6242	0.4042	0.7838	1.2938	2.4948	0.804
Road 13	1500-1600	1.0752	0.878	2.884	1.884	1.075	1.088	0.5642	0.3742	0.7238	1.2038	2.4048	0.714
Road 13	1600-1700	0.7752	0.578	2.684	1.684	0.775	0.788	0.4642	0.2642	0.6238	1.1038	2.2048	0.614
Road 13	1700-1800	0.6752	0.478	2.484	1.484	0.675	0.688	0.4042	0.2042	0.5638	1.0438	2.1048	0.514
Road 13	1800-1900	0.7752	0.578	2.684	1.684	0.775	0.788	0.4642	0.2642	0.6238	1.1038	2.2048	0.614
Road 13	1900-2000	0.7752	0.578	2.684	1.684	0.775	0.788	0.4642	0.2642	0.6238	1.1038	2.2048	0.614
Road 13	2000-2100	0.7752	0.578	2.684	1.684	0.775	0.788	0.4642	0.2642	0.6238	1.1038	2.2048	0.614
Road 13	2100-2200	0.7752	0.578	2.684	1.684	0.775	0.788	0.4642	0.2642	0.6238	1.1038	2.2048	0.614
Road 13	2200-2300	0.7752	0.578	2.684	1.684	0.775	0.788	0.4642	0.2642	0.6238	1.1038	2.2048	0.614
Road 13	2300-2400	0.7752	0.578	2.684	1.684	0.775	0.788	0.4642	0.2642	0.6238	1.1038	2.2048	0.614
Road 14	0000-0100	5.8254	1.124	3.784	2.784	5.825	1.534	0.7042	0.3042	1.458	1.716	3.738	1.074
Road 14	0100-0200	6.3984	1.244	4.084	3.084	6.398	1.654	0.7542	0.3242	1.558	1.812	3.838	1.124
Road 14	0200-0300	6.7792	1.330	4.384	3.384	6.779	1.740	0.8042	0.3342	1.658	1.912	3.938	1.174
Road 14	0300-0400	7.8522	1.554	4.984	3.984	7.852	1.964	0.8842	0.3742	1.758	2.012	4.038	1.224
Road 14	0400-0500	8.8252	1.778	5.584	4.584	8.825	2.188	0.9642	0.4142	1.858	2.112	4.138	1.274
Road 14	0500-0600	9.7982	1.998	6.184	5.184	9.798	2.412	1.0442	0.4542	1.958	2.212	4.238	1.324
Road 14	0600-0700	1.0852	0.978	2.984	1.934	1.085	1.138	0.5842	0.3842	0.7438	1.2338	2.4348	0.744
Road 14	0700-0800	1.1852	1.028	3.084	1.984	1.185	1.188	0.6042	0.3942	0.7638	1.2638	2.4648</	

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Open R/W North Underway Facility															
Top 200 R/W North Emission Factors for ARB/NO _x Model (t) Year 2043															
Road Name	ID	Hour	NO _x Emission					NO Emission							
			Monthly/Average					Monthly/Average							
			g/h/truck	g/h/truck	g/h/truck	g/h/truck	g/h/truck	g/h/truck	g/h/truck	g/h/truck	g/h/truck	g/h/truck			
Road #34	34	0800-0900	1.813	2.074	1.988	1.833	1.006	5.548	4.742	4.718	1.156	2.113	5.376	5.116	4.04
Road #34	34	0900-1000	1.325	1.556	1.667	1.436	0.974	8.053	5.274	5.106	1.066	2.587	6.225	5.776	4.04
Road #34	34	1000-1100	1.583	1.755	1.775	1.575	1.073	7.275	4.775	4.775	1.066	2.587	6.225	5.776	4.04
Road #34	34	1100-1200	1.028	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	1200-1300	1.611	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	1300-1400	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	1400-1500	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	1500-1600	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	1600-1700	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	1700-1800	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	1800-1900	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	1900-2000	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	2000-2100	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	2100-2200	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	2200-2300	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	2300-2400	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	2400-2500	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	2500-2600	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	2600-2700	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	2700-2800	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	2800-2900	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	2900-3000	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	3000-3100	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	3100-3200	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	3200-3300	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	3300-3400	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	3400-3500	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	3500-3600	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	3600-3700	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	3700-3800	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	3800-3900	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	3900-4000	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	4000-4100	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	4100-4200	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	4200-4300	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	4300-4400	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	4400-4500	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	4500-4600	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	4600-4700	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	4700-4800	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	4800-4900	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	4900-5000	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	5000-5100	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	5100-5200	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	5200-5300	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	5300-5400	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	5400-5500	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	5500-5600	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	5600-5700	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	5700-5800	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	5800-5900	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	5900-6000	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	6000-6100	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	6100-6200	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	6200-6300	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	6300-6400	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	6400-6500	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	6500-6600	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	6600-6700	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	6700-6800	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	6800-6900	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	6900-7000	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	7000-7100	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	7100-7200	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	7200-7300	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	7300-7400	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	7400-7500	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	7500-7600	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	7600-7700	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	7700-7800	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	7800-7900	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	7900-8000	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	8000-8100	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	8100-8200	1.511	1.755	1.675	1.433	0.976	7.887	5.215	5.055	1.067	1.887	5.209	4.633	4.04
Road #34	34	8200-8300	1.511	1.755	1.675	1.433	0								

\\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.4 Emission Factor in 2043.xlsx

Open Pen 24 Hour Emission Factors for KEROSENE model (fuel)														
Road ID	Hour	NO _x Emission				PM ₁₀ Emission				NO Emission				
		g/hour	ton/year	g/hour	ton/year	g/hour	ton/year	g/hour	ton/year	g/hour	ton/year	g/hour	ton/year	
Road 37	17	16001-17000	5.64E-02	4.94E-09	7.95E-06	1.99E-03	3.64E-08	2.81E-05	2.56E-01	4.30E-08	8.61E-05	5.54E-03	1.13E-06	9.21E-07
Road 37	17	17001-17002	4.98E-03	8.68E-09	7.27E-06	1.93E-03	3.47E-08	2.04E-05	2.42E-04	4.74E-08	9.48E-06	1.93E-06	1.59E-07	1.29E-07
Road 37	17	17003-17004	1.24E-03	2.18E-09	3.12E-06	7.69E-04	1.40E-08	7.26E-06	8.69E-05	1.70E-08	3.42E-06	7.00E-07	8.87E-08	7.09E-08
Road 37	17	17005-17006	2.79E-04	2.74E-09	3.14E-06	1.32E-03	1.27E-08	1.44E-05	1.52E-02	2.11E-08	1.26E-05	4.27E-06	1.89E-07	1.60E-07
Road 37	17	17007-17008	2.76E-03	4.82E-09	3.12E-06	1.44E-03	1.44E-08	1.44E-05	1.64E-05	2.44E-08	1.44E-05	4.82E-06	2.10E-07	1.81E-07
Road 37	17	17010-17012	2.76E-04	2.94E-09	2.48E-06	1.34E-03	1.27E-08	1.44E-05	1.31E-03	1.17E-08	1.44E-05	4.27E-06	1.89E-07	1.60E-07
Road 37	17	17013-17014	2.41E-03	4.26E-09	2.48E-06	1.34E-03	1.27E-08	1.44E-05	1.50E-03	1.36E-08	1.44E-05	4.82E-06	2.10E-07	1.81E-07
Road 37	17	17015-17016	1.24E-03	2.18E-09	3.12E-06	7.69E-04	1.40E-08	7.26E-06	8.69E-05	1.70E-08	3.42E-06	7.00E-07	8.87E-08	7.09E-08
Road 37	18	0000-0100	3.64E-04	3.33E-09	8.95E-05	1.43E-03	1.58E-07	6.73E-07	1.73E-05	1.52E-07	5.70E-04	4.84E-03	1.93E-06	1.62E-06
Road 37	18	0100-0200	7.19E-04	7.29E-09	1.88E-05	2.98E-03	3.19E-07	1.10E-07	2.84E-05	2.52E-07	9.00E-04	7.49E-03	2.98E-06	2.50E-06
Road 37	18	0200-0300	1.54E-04	1.90E-09	5.69E-05	1.61E-03	8.62E-08	2.18E-06	1.96E-07	1.15E-04	5.70E-06	1.06E-06	9.14E-08	7.64E-08
Road 37	18	0300-0400	1.54E-04	1.90E-09	5.69E-05	1.61E-03	8.62E-08	2.18E-06	1.96E-07	1.15E-04	5.70E-06	1.06E-06	9.14E-08	7.64E-08
Road 37	18	0400-0500	1.97E-04	2.41E-09	5.69E-05	1.78E-03	9.28E-08	2.48E-06	2.13E-07	1.20E-04	6.30E-06	1.06E-06	9.14E-08	7.64E-08
Road 37	18	0500-0600	4.26E-03	9.59E-09	1.07E-04	8.82E-03	1.53E-07	4.58E-06	2.44E-05	1.89E-07	6.65E-04	5.57E-03	2.17E-06	1.82E-06
Road 37	18	0600-0700	5.69E-04	5.69E-09	1.07E-04	8.82E-03	1.53E-07	4.58E-06	2.44E-05	1.89E-07	6.65E-04	5.57E-03	2.17E-06	1.82E-06
Road 37	18	0700-0800	4.26E-04	1.85E-05	5.69E-04	2.03E-03	7.64E-07	2.07E-06	2.52E-07	9.49E-07	8.44E-04	7.64E-03	2.88E-06	2.50E-06
Road 37	18	0800-0900	4.26E-04	1.85E-05	5.69E-04	2.03E-03	7.64E-07	2.07E-06	2.52E-07	9.49E-07	8.44E-04	7.64E-03	2.88E-06	2.50E-06
Road 37	18	0900-1000	4.26E-04	1.85E-05	5.69E-04	2.03E-03	7.64E-07	2.07E-06	2.52E-07	9.49E-07	8.44E-04	7.64E-03	2.88E-06	2.50E-06
Road 37	18	1000-1100	1.91E-03	2.01E-09	7.02E-04	2.14E-04	4.68E-08	2.77E-05	2.77E-05	1.00E-08	3.44E-03	5.54E-04	1.76E-05	1.50E-05
Road 37	18	1100-1130	6.34E-04	2.28E-07	8.68E-04	2.18E-03	7.87E-07	2.23E-03	2.82E-03	1.01E-06	5.03E-03	6.66E-02	2.39E-03	2.16E-03
Road 37	18	1130-1145	6.34E-04	2.28E-07	8.68E-04	2.18E-03	7.87E-07	2.23E-03	2.82E-03	1.01E-06	5.03E-03	6.66E-02	2.39E-03	2.16E-03
Road 37	18	1200-1300	8.74E-04	1.12E-07	1.03E-03	3.74E-04	3.31E-07	1.02E-07	1.62E-07	4.60E-07	1.88E-03	8.14E-06	1.00E-06	1.27E-06
Road 37	18	1300-1400	8.74E-04	1.12E-07	1.03E-03	3.74E-04	3.31E-07	1.02E-07	1.62E-07	4.60E-07	1.88E-03	8.14E-06	1.00E-06	1.27E-06
Road 37	18	1400-1500	8.84E-04	1.12E-07	3.75E-04	2.79E-06	9.96E-09	1.18E-07	8.35E-07	5.24E-07	1.00E-03	9.72E-04	2.22E-04	3.64E-05
Road 37	18	1500-1600	9.08E-04	1.34E-07	4.00E-04	2.99E-03	6.34E-07	1.30E-03	1.88E-06	1.49E-07	1.70E-03	8.14E-06	1.18E-05	5.54E-06
Road 37	18	1600-1700	8.66E-04	1.26E-07	3.99E-04	2.97E-03	6.33E-07	1.30E-03	1.86E-06	1.49E-07	1.70E-03	8.14E-06	1.18E-05	5.54E-06
Road 37	18	1700-1800	8.06E-04	1.12E-07	3.04E-04	2.77E-06	8.83E-09	1.12E-07	8.35E-07	5.24E-07	1.00E-03	7.99E-04	2.22E-04	3.69E-05
Road 37	18	1800-1900	8.06E-04	1.12E-07	3.04E-04	2.77E-06	8.83E-09	1.12E-07	8.35E-07	5.24E-07	1.00E-03	7.99E-04	2.22E-04	3.69E-05
Road 37	18	1900-2000	5.61E-04	4.64E-09	1.35E-04	2.03E-08	1.88E-07	5.01E-04	2.59E-04	2.14E-07	6.39E-04	5.40E-08	8.89E-09	1.46E-05
Road 37	19	2000-2100	5.72E-04	3.72E-08	1.11E-04	2.12E-08	3.64E-07	4.32E-04	2.69E-04	1.75E-03	3.62E-04	5.62E-08	1.78E-03	1.14E-05
Road 37	19	2100-2200	5.72E-04	3.72E-08	1.11E-04	2.12E-08	3.64E-07	4.32E-04	2.69E-04	1.75E-03	3.62E-04	5.62E-08	1.78E-03	1.14E-05
Road 37	19	2200-2300	5.72E-04	3.72E-08	1.11E-04	2.12E-08	3.64E-07	4.32E-04	2.69E-04	1.75E-03	3.62E-04	5.62E-08	1.78E-03	1.14E-05
Road 37	19	2300-2400	5.72E-04	3.72E-08	1.11E-04	2.12E-08	3.64E-07	4.32E-04	2.69E-04	1.75E-03	3.62E-04	5.62E-08	1.78E-03	1.14E-05
Road 37	19	0000-0100	5.72E-04	3.72E-08	1.11E-04	2.12E-08	3.64E-07	4.32E-04	2.69E-04	1.75E-03	3.62E-04	5.62E-08	1.78E-03	1.14E-05
Road 37	19	0100-0200	9.26E-02	1.02E-09	2.93E-05	4.02E-08	1.26E-04	1.85E-03	5.33E-08	1.64E-04	8.82E-02	1.22E-03	2.78E-06	2.46E-06
Road 37	19	0200-0300	9.26E-02	1.02E-09	2.93E-05	4.02E-08	1.26E-04	1.85E-03	5.33E-08	1.64E-04	8.82E-02	1.22E-03	2.78E-06	2.46E-06
Road 37	19	0300-0400	9.26E-02	1.02E-09	2.93E-05	4.02E-08	1.26E-04	1.85E-03	5.33E-08	1.64E-04	8.82E-02	1.22E-03	2.78E-06	2.46E-06
Road 37	19	0400-0500	8.77E-03	2.27E-05	1.00E-03	2.75E-08	8.08E-06	1.36E-03	1.63E-03	1.63E-03	1.13E-01	8.30E-03	1.18E-05	1.46E-05
Road 37	19	0500-0600	8.77E-03	2.27E-05	1.00E-03	2.75E-08	8.08E-06	1.36E-03	1.63E-03	1.63E-03	1.13E-01	8.30E-03	1.18E-05	1.46E-05
Road 37	19	0600-0700	8.77E-03	2.27E-05	1.00E-03	2.75E-08	8.08E-06	1.36E-03	1.63E-03	1.63E-03	1.13E-01	8.30E-03	1.18E-05	1.46E-05
Road 37	19	0700-0800	9.76E-03	1.49E-08	5.06E-06	4.04E-08	1.88E-06	4.03E-07	7.69E-08	2.47E-04	9.21E-03	8.23E-03	1.61E-04	9.67E-08
Road 37	19	0800-0900	1.49E-08	4.98E-08	1.38E-04	1.13E-04	6.37E-04	4.13E-04	1.88E-07	6.70E-04	7.60E-04	4.23E-03	1.31E-04	8.62E-08
Road 37	19	0900-1000	1.49E-08	4.98E-08	1.38E-04	1.13E-04	6.37E-04	4.13E-04	1.88E-07	6.70E-04	7.60E-04	4.23E-03	1.31E-04	8.62E-08
Road 37	19	1000-1100	1.49E-08	4.98E-08	1.38E-04	1.13E-04	6.37E-04	4.13E-04	1.88E-07	6.70E-04	7.60E-04	4.23E-03	1.31E-04	8.62E-08
Road 37	19	1100-1200	1.49E-08	4.98E-08	1.38E-04	1.13E-04	6.37E-04	4.13E-04	1.88E-07	6.70E-04	7.60E-04	4.23E-03	1.31E-04	8.62E-08
Road 37	19	1200-1300	1.06E-08	1.12E-07	8.45E-04	3.26E-04	3.72E-07	1.84E-07	4.32E-07	4.90E-07	1.62E-03	1.50E-03	1.05E-03	2.88E-06
Road 37	19	1300-1400	1.06E-08	1.12E-07	8.45E-04	3.26E-04	3.72E-07	1.84E-07	4.32E-07	4.90E-07	1.62E-03	1.50E-03	1.05E-03	2.88E-06
Road 37	19	1400-1500	1.06E-08	1.12E-07	8.45E-04	3.26E-04	3.72E-07	1.84E-07	4.32E-07	4.90E-07	1.62E-03	1.50E-03	1.05E-03	2.88E-06
Road 37	19	1500-1600	1.06E-08	1.12E-07	8.45E-04	3.26E-04	3.72E-07	1.84E-07	4.32E-07	4.90E-07	1.62E-03	1.50E-03	1.05E-03	2.88E-06
Road 37	19	1600-1700	1.06E-08	1.12E-07	8.45E-04	3.26E-04	3.72E-07	1.84E-07	4.32E-07	4.90E-07	1.62E-03	1.50E-03	1.05E-03	2.88E-06
Road 37	19	1700-1800	1.49E-08	4.98E-08	1.38E-04	1.13E-04	6.37E-04	4.13E-04	1.88E-07	6.70E-04	7.60E-04	4.23E-03	1.31E-04	8.62E-08
Road 37	19	1800-1900	1.49E-08	4.98E-08	1.38E-04	1.13E-04	6.37E-04	4.13E-04	1.88E-07	6.70E-04	7.60E-04	4.23E-03	1.31E-04	8.62E-08
Road 37	19	1900-2000	1.49E-08	4.98E-08	1.38E-04	1.13E-04	6.37E-04	4.13E-04	1.88E-07	6.70E-04	7.60E-04	4.23E-03	1.31E-04	8.62E-08
Road 37	19	2000-2100	1.82E-02	6.99E-09	5.69E-05	1.09E-06	8.98E-08	9.92E-07	1.02E-07	3.57E-08	1.14E-04	3.41E-03	1.02E-04	3.64E-06
Road 37	19	2100-2200	1.82E-02	6.99E-09	5.69E-05	1.09E-06	8.98E-08	9.92E-07	1.02E-07	3.57E-08	1.14E-04	3.41E-03	1.02E-04	3.64E-06
Road 37	19	2200-2300	1.82E-02	6.99E-09	5.69E-05	1.09E-06	8.98E-08	9.92E-07	1.02E-07	3.57E-08	1.14E-04	3.41E-03	1.02E-04	3.64E-06
Road 37	19	2300-2400	1.82E-02	6.99E-09	5.69E-05	1.09E-06	8.98E-08	9.92E-07	1.02E-07	3.57E-08	1.14E-04	3.41E-03	1.02E-04	3.64E-06
Road 37	19	0000-0100	1.74E-03	4.93E-09	1.53E-05	1.11E-03	3.11E-08	6.49E-05	1.29E-04	1.81E-08	1.12E-04	1.71E-03	1.05E-03	2.88E-06
Road 37	19	0100-0200	1.74E-03	4.93E-09	1.53E-05	1.11E-03	3.11E-08	6.49E-05	1.29E-04	1.81E-08	1.12E-04	1.71E-03	1.05E-03	2.88E-06
Road 37	19	0200-0300	1.74E-03	4.93E-09	1.53E-05	1.11E-03	3.11E-08	6.49E-05	1.29E-04	1.81E-08	1.12E-04	1.71E-03	1.05E-03	2.88E-06
Road 37	19	0300-0400	1.74E-03	4.93E-09	1.53E-05	1.11E-03	3.11E-08	6.49E-05	1.29E-04	1.81E-08	1.12E-04	1.71E-03	1.05E-03	2.88E-06
Road 37	19	0400-0500	1.43E-03	4.02E-09	1.26E-05	9.13E-04	2.56E-08	7.02E-08	1.28E-08	2.81E-08	1.24E-03	1.73E-03	2.10E-06	1.60E-06
Road 37	19	0500-0600	1.43E-03	4.02E-09	1.26E-05	9.13E-04	2.56E-08	7.02E-08	1.28E-08	2.81E-08	1.24E-03	1.73E-03	2.10E-06	1.60E-06
Road 37	19	0600-0700	1.43E-03	4.02E-09	1.26E-05	9.13E-04	2.56E-08	7.02E-08	1.28E-08	2.81E-08	1.24E-03	1.73E-03	2.10E-06	1.60E-06
Road 37														

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Opening Road to Non-Envision Quarters														
Open Road to Non-Envision Quarters ARMSD model only														
Year 2040														
Road Name	Road ID	Hour	MO/Envision				MO/Envision				MO/Envision			
			g/h/mph	ton/hour	g/h/mph	ton/hour	g/h/mph	ton/hour	g/h/mph	ton/hour	g/h/mph	ton/hour	g/h/mph	ton/hour
Road #1	41	0000:00:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:01:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:02:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:03:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:04:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:05:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:06:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:07:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:08:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:09:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:10:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:11:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:12:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:13:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:14:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:15:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:16:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:17:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:18:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:19:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:20:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:21:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:22:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:23:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:24:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:25:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:26:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:27:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:28:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:29:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:30:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:31:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:32:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:33:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:34:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:35:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:36:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:37:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:38:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:39:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:40:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:41:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:42:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:43:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:44:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:45:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:46:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:47:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:48:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:49:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:50:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:51:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:52:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:53:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:54:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:55:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:56:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:57:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:58:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:59:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:60:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:61:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:62:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.032E+09	1.722E+05
Road #1	41	0000:63:00	1.071E+01	2.986	7.181	0.535E+02	8.888	3.046E+00	5.424E+02	1.198E+07	3.766E+04	2.157E+08	5.	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Road ID	Hour	NO _x Emission				NO Emission								
		Motorist/g/hour	g/h/mile	Motorist/hour	g/mi/hour	Motorist/g/hour	g/h/mile	Motorist/hour	g/mi/hour					
Road #1	51	0000-0100	4.71E+03	3.35E+04	2.78E+04	1.35E+05	2.77E+07	1.81E+05	3.77E+02	2.18E+07	2.03E+03	1.54E+06	8.23E+09	5.68E+05
Road #1	52	0100-0200	4.71E+03	3.35E+04	2.78E+04	1.35E+05	2.77E+07	1.81E+05	3.77E+02	2.18E+07	2.03E+03	1.54E+06	8.23E+09	5.68E+05
Road #1	53	0200-0300	4.71E+03	3.35E+04	2.78E+04	1.35E+05	2.77E+07	1.81E+05	3.77E+02	2.18E+07	2.03E+03	1.54E+06	8.23E+09	5.68E+05
Road #1	54	0300-0400	5.51E+03	1.64E+05	1.11E+05	1.37E+05	1.01E+06	7.53E+04	4.29E+02	1.27E+07	6.62E+04	3.88E+09	8.08E+09	2.78E+05
Road #1	55	0400-0500	5.56E+03	1.68E+05	1.15E+05	1.40E+05	1.04E+06	7.80E+04	4.34E+02	1.30E+07	6.82E+04	4.00E+09	8.28E+09	2.86E+05
Road #1	56	0500-0600	5.56E+03	1.68E+05	1.15E+05	1.40E+05	1.04E+06	7.80E+04	4.34E+02	1.30E+07	6.82E+04	4.00E+09	8.28E+09	2.86E+05
Road #1	57	0600-0700	5.56E+03	1.68E+05	1.15E+05	1.40E+05	1.04E+06	7.80E+04	4.34E+02	1.30E+07	6.82E+04	4.00E+09	8.28E+09	2.86E+05
Road #1	58	0700-0800	6.88E+03	2.03E+05	1.55E+04	1.41E+05	1.02E+07	8.80E+05	5.75E+02	1.59E+07	9.91E+04	5.00E+09	1.10E+10	3.45E+06
Road #1	59	0800-0900	6.88E+03	2.03E+05	1.55E+04	1.41E+05	1.02E+07	8.80E+05	5.75E+02	1.59E+07	9.91E+04	5.00E+09	1.10E+10	3.45E+06
Road #1	60	0900-1000	6.88E+03	2.03E+05	1.55E+04	1.41E+05	1.02E+07	8.80E+05	5.75E+02	1.59E+07	9.91E+04	5.00E+09	1.10E+10	3.45E+06
Road #1	61	1000-1100	6.88E+03	2.03E+05	1.55E+04	1.41E+05	1.02E+07	8.80E+05	5.75E+02	1.59E+07	9.91E+04	5.00E+09	1.10E+10	3.45E+06
Road #1	62	1100-1200	7.88E+03	2.39E+05	1.82E+04	1.62E+05	1.16E+07	1.00E+06	6.50E+02	1.82E+07	1.12E+05	5.60E+09	1.25E+10	3.95E+06
Road #1	63	1200-1300	7.88E+03	2.39E+05	1.82E+04	1.62E+05	1.16E+07	1.00E+06	6.50E+02	1.82E+07	1.12E+05	5.60E+09	1.25E+10	3.95E+06
Road #1	64	1300-1400	8.51E+03	1.74E+07	1.19E+03	4.27E+03	8.34E+07	5.51E+05	1.50E+06	1.86E+06	2.42E+02	4.73E+08	3.22E+04	
Road #1	65	1400-1500	8.51E+03	1.74E+07	1.19E+03	4.27E+03	8.34E+07	5.51E+05	1.50E+06	1.86E+06	2.42E+02	4.73E+08	3.22E+04	
Road #1	66	1500-1600	8.51E+03	1.74E+07	1.19E+03	4.27E+03	8.34E+07	5.51E+05	1.50E+06	1.86E+06	2.42E+02	4.73E+08	3.22E+04	
Road #1	67	1600-1700	8.51E+03	1.74E+07	1.19E+03	4.27E+03	8.34E+07	5.51E+05	1.50E+06	1.86E+06	2.42E+02	4.73E+08	3.22E+04	
Road #1	68	1700-1800	1.50E+07	1.05E+07	1.67E+03	5.67E+06	7.69E+07	7.33E+05	1.32E+06	3.86E+07	3.50E+04	1.10E+09	1.42E+09	4.49E+06
Road #1	69	1800-1900	1.50E+07	1.05E+07	1.67E+03	5.67E+06	7.69E+07	7.33E+05	1.32E+06	3.86E+07	3.50E+04	1.10E+09	1.42E+09	4.49E+06
Road #1	70	1900-2000	1.50E+07	1.05E+07	1.67E+03	5.67E+06	7.69E+07	7.33E+05	1.32E+06	3.86E+07	3.50E+04	1.10E+09	1.42E+09	4.49E+06
Road #1	71	2000-2100	1.50E+07	1.05E+07	1.67E+03	5.67E+06	7.69E+07	7.33E+05	1.32E+06	3.86E+07	3.50E+04	1.10E+09	1.42E+09	4.49E+06
Road #2	52	0100-0200	4.71E+03	3.35E+04	2.78E+04	1.35E+05	2.77E+07	1.81E+05	3.77E+02	2.18E+07	2.03E+03	1.54E+06	8.23E+09	5.68E+05
Road #2	53	0200-0300	4.71E+03	3.35E+04	2.78E+04	1.35E+05	2.77E+07	1.81E+05	3.77E+02	2.18E+07	2.03E+03	1.54E+06	8.23E+09	5.68E+05
Road #2	54	0300-0400	4.71E+03	3.35E+04	2.78E+04	1.35E+05	2.77E+07	1.81E+05	3.77E+02	2.18E+07	2.03E+03	1.54E+06	8.23E+09	5.68E+05
Road #2	55	0400-0500	4.71E+03	3.35E+04	2.78E+04	1.35E+05	2.77E+07	1.81E+05	3.77E+02	2.18E+07	2.03E+03	1.54E+06	8.23E+09	5.68E+05
Road #2	56	0500-0600	4.71E+03	3.35E+04	2.78E+04	1.35E+05	2.77E+07	1.81E+05	3.77E+02	2.18E+07	2.03E+03	1.54E+06	8.23E+09	5.68E+05
Road #2	57	0600-0700	5.01E+03	6.04E+08	1.13E+04	1.82E+03	2.19E+07	6.00E+04	2.32E+02	2.79E+07	5.22E+04	4.00E+09	1.14E+10	2.17E+05
Road #2	58	0700-0800	5.01E+03	6.04E+08	1.13E+04	1.82E+03	2.19E+07	6.00E+04	2.32E+02	2.79E+07	5.22E+04	4.00E+09	1.14E+10	2.17E+05
Road #2	59	0800-0900	5.01E+03	6.04E+08	1.13E+04	1.82E+03	2.19E+07	6.00E+04	2.32E+02	2.79E+07	5.22E+04	4.00E+09	1.14E+10	2.17E+05
Road #2	60	0900-1000	5.01E+03	6.04E+08	1.13E+04	1.82E+03	2.19E+07	6.00E+04	2.32E+02	2.79E+07	5.22E+04	4.00E+09	1.14E+10	2.17E+05
Road #2	61	1000-1100	5.01E+03	6.04E+08	1.13E+04	1.82E+03	2.19E+07	6.00E+04	2.32E+02	2.79E+07	5.22E+04	4.00E+09	1.14E+10	2.17E+05
Road #2	62	1100-1200	5.01E+03	6.04E+08	1.13E+04	1.82E+03	2.19E+07	6.00E+04	2.32E+02	2.79E+07	5.22E+04	4.00E+09	1.14E+10	2.17E+05
Road #2	63	1200-1300	5.01E+03	6.04E+08	1.13E+04	1.82E+03	2.19E+07	6.00E+04	2.32E+02	2.79E+07	5.22E+04	4.00E+09	1.14E+10	2.17E+05
Road #2	64	1300-1400	5.01E+03	6.04E+08	1.13E+04	1.82E+03	2.19E+07	6.00E+04	2.32E+02	2.79E+07	5.22E+04	4.00E+09	1.14E+10	2.17E+05
Road #2	65	1400-1500	5.01E+03	6.04E+08	1.13E+04	1.82E+03	2.19E+07	6.00E+04	2.32E+02	2.79E+07	5.22E+04	4.00E+09	1.14E+10	2.17E+05
Road #2	66	1500-1600	5.01E+03	6.04E+08	1.13E+04	1.82E+03	2.19E+07	6.00E+04	2.32E+02	2.79E+07	5.22E+04	4.00E+09	1.14E+10	2.17E+05
Road #2	67	1600-1700	5.01E+03	6.04E+08	1.13E+04	1.82E+03	2.19E+07	6.00E+04	2.32E+02	2.79E+07	5.22E+04	4.00E+09	1.14E+10	2.17E+05
Road #2	68	1700-1800	5.01E+03	6.04E+08	1.13E+04	1.82E+03	2.19E+07	6.00E+04	2.32E+02	2.79E+07	5.22E+04	4.00E+09	1.14E+10	2.17E+05
Road #2	69	1800-1900	5.01E+03	6.04E+08	1.13E+04	1.82E+03	2.19E+07	6.00E+04	2.32E+02	2.79E+07	5.22E+04	4.00E+09	1.14E+10	2.17E+05
Road #2	70	1900-2000	5.01E+03	6.04E+08	1.13E+04	1.82E+03	2.19E+07	6.00E+04	2.32E+02	2.79E+07	5.22E+04	4.00E+09	1.14E+10	2.17E+05
Road #2	71	2000-2100	5.01E+03	6.04E+08	1.13E+04	1.82E+03	2.19E+07	6.00E+04	2.32E+02	2.79E+07	5.22E+04	4.00E+09	1.14E+10	2.17E+05
Road #3	53	0200-0300	6.88E+03	2.03E+05	1.55E+04	1.41E+05	1.02E+07	8.80E+05	5.75E+02	1.59E+07	9.91E+04	5.00E+09	1.10E+10	3.45E+06
Road #3	54	0300-0400	6.88E+03	2.03E+05	1.55E+04	1.41E+05	1.02E+07	8.80E+05	5.75E+02	1.59E+07	9.91E+04	5.00E+09	1.10E+10	3.45E+06
Road #3	55	0400-0500	6.88E+03	2.03E+05	1.55E+04	1.41E+05	1.02E+07	8.80E+05	5.75E+02	1.59E+07	9.91E+04	5.00E+09	1.10E+10	3.45E+06
Road #3	56	0500-0600	6.88E+03	2.03E+05	1.55E+04	1.41E+05	1.02E+07	8.80E+05	5.75E+02	1.59E+07	9.91E+04	5.00E+09	1.10E+10	3.45E+06
Road #3	57	0600-0700	6.88E+03	2.03E+05	1.55E+04	1.41E+05	1.02E+07	8.80E+05	5.75E+02	1.59E+07	9.91E+04	5.00E+09	1.10E+10	3.45E+06
Road #3	58	0700-0800	6.88E+03	2.03E+05	1.55E+04	1.41E+05	1.02E+07	8.80E+05	5.75E+02	1.59E+07	9.91E+04	5.00E+09	1.10E+10	3.45E+06
Road #3	59	0800-0900	6.88E+03	2.03E+05	1.55E+04	1.41E+05	1.02E+07	8.80E+05	5.75E+02	1.59E+07	9.91E+04	5.00E+09	1.10E+10	3.45E+06
Road #3	60	0900-1000	6.88E+03	2.03E+05	1.55E+04	1.41E+05	1.02E+07	8.80E+05	5.75E+02	1.59E+07	9.91E+04	5.00E+09	1.10E+10	3.45E+06
Road #3	61	1000-1100	6.88E+03	2.03E+05	1.55E+04	1.41E+05	1.02E+07	8.80E+05	5.75E+02	1.59E+07	9.91E+04	5.00E+09	1.10E+10	3.45E+06
Road #3	62	1100-1200	6.88E+03	2.03E+05	1.55E+04	1.41E+05	1.02E+07	8.80E+05	5.75E+02	1.59E+07	9.91E+04	5.00E+09	1.10E+10	3.45E+06
Road #3	63	1200-1300	6.88E+03	2.03E+05	1.55E+04	1.41E+05	1.02E+07	8.80E+05	5.75E+02	1.59E+07	9.91E+04	5.00E+09	1.10E+10	3.45E+06
Road #3	64	1300-1400	6.88E+03	2.03E+05	1.55E+04	1.41E+05	1.02E+07	8.80E+05	5.75E+02	1.59E+07	9.91E+04	5.00E+09	1.10E+10	3.45E+06
Road #3	65	1400-1500	6.88E+03	2.03E+05	1.55E+04	1.41E+05	1.02E+07	8.80E+05	5.75E+02	1.59E+07	9.91E+04	5.00E+09	1.10E+10	3.45E+06
Road #3	66	1500-1600	6.88E+03	2.03E+05	1.55E+04	1.41E+05	1.02E+07	8.80E+05	5.75E+02	1.59E+07	9.91E+04	5.00E+09	1.10E+10	3.45E+06
Road #3	67	1600-1700	6.88E+03	2.03E+05	1.55E+04	1.41E+05	1.02E+07	8.80E+05	5.75E+02	1.59E+07	9.91E+04	5.00E+09	1.10E+10	3.45E+06
Road #3	68	1700-1800	6.88E+03	2.03E+05	1.55E+04	1.41E+05	1.02E+07	8.80E+05	5.75E+02	1.59E+07	9.91E+04	5.00E+09	1.10E+10	3.45E+06
Road #3	69	1800-1900	6.88E+03	2.03E+05	1.55E+04	1.41E+05	1.02E+07	8.80E+05	5.75E+02	1.59E+07	9.91E+04	5.00E+09	1.10E+10	3.45E+06
Road #3	70	1900-2000	6.88E+03	2.03E+05	1.55E+04	1.41E+05	1.02E+07	8.80E+05	5.75E+02	1.59E+07	9.91E+04	5.00E+09	1.10E+10	3.45E+06
Road #3	71	2000-2100	6.88E+03	2.03E+05	1.55E+04	1.41E+05	1.02E+07	8.80E+05	5.75E+02	1.59E+07	9.91E+04	5.00E+09	1.10E+10	3.45E+06
Road #4	54	0300-0400	5.51E+03	1.64E+05	1.11E+05	1.37E+05	1.01E+06	7.53E+04	4.29E+02	1.27E+07	6.62E+04	3.88E+09	8.08E+09	2.78E+05
Road #4	55	0400-0500	5.56E+03	1.68E+05	1.15E+05	1.40E+05	1.04E+06	7.80E+04	4.34E+02	1.30E+07	6.82E+04	4.00E+09	8.28E+09	2.86E+05
Road #4	56	0500-0600	5.56E+03	1.68E+05	1.15E+05	1.40E+05	1.04E+06	7.80E+04	4.34E+02	1.30E+07	6.82E+04	4.00E+09	8.28E+09	2.86E+05
Road #4	57	0600-0700	5.56E+03	1.68E+05	1.15E+05	1.40E+05	1.04E+06	7.80E+04	4.34E+02	1.30E+07	6.82E+04	4.00E+09	8.28E+09	2.86E+05
Road #4	58	0700-0800	5.56E+03	1.68E+05	1.15E+05	1.40E+05	1.04E+06	7.80E+04	4.34E+02	1.30E+07	6.82E+04	4.00E+09	8.	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open 10th North End Union Factory																
Open 10th 2nd Hour Envision Factors for ARBNO2 Model (a/d)																
Year 2043																
Road Name	Road ID	Hour	No. Emission				No. Emission									
			Monthly/Average		Monthly/Average		Monthly/Average		Monthly/Average							
			g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³				
Road #7	7	1600-1700	3.88	0.92	4.20	1.34	0.31	1.76	1.57	0.01	4.92	1.47	0.26	0.4		
			3.88	0.92	4.20	1.34	0.31	1.76	1.57	0.01	4.92	1.47	0.26	0.4		
Road #7	7	1700-1800	3.77	0.91	4.08	1.31	0.30	1.65	1.52	0.01	4.76	1.44	0.25	0.3		
			3.77	0.91	4.08	1.31	0.30	1.65	1.52	0.01	4.76	1.44	0.25	0.3		
Road #7	7	1800-1900	3.66	0.90	3.96	1.28	0.29	1.54	1.49	0.01	4.65	1.41	0.24	0.2		
			3.66	0.90	3.96	1.28	0.29	1.54	1.49	0.01	4.65	1.41	0.24	0.2		
Road #7	7	1900-2000	6.62	1.61	7.65	2.41	0.55	3.45	4.45	0.47	12.11	3.57	1.65	4.45	1.05	0.8
			6.62	1.61	7.65	2.41	0.55	3.45	4.45	0.47	12.11	3.57	1.65	4.45	1.05	0.8
Road #7	7	2000-2100	3.98	0.93	4.26	1.36	0.32	1.79	1.61	0.01	5.00	1.49	0.27	0.5	0.3	0.2
			3.98	0.93	4.26	1.36	0.32	1.79	1.61	0.01	5.00	1.49	0.27	0.5	0.3	0.2
Road #7	7	2100-2200	3.11	0.78	3.49	1.07	0.24	1.41	1.43	0.02	3.90	1.38	0.44	1.08	0.38	0.4
			3.11	0.78	3.49	1.07	0.24	1.41	1.43	0.02	3.90	1.38	0.44	1.08	0.38	0.4
Road #7	7	2200-2300	2.45	0.62	2.78	0.85	0.20	1.10	1.12	0.01	3.00	1.17	0.71	1.71	0.78	0.3
			2.45	0.62	2.78	0.85	0.20	1.10	1.12	0.01	3.00	1.17	0.71	1.71	0.78	0.3
Road #7	7	2300-2400	2.45	0.62	2.78	0.85	0.20	1.10	1.12	0.01	3.00	1.17	0.71	1.71	0.78	0.3
			2.45	0.62	2.78	0.85	0.20	1.10	1.12	0.01	3.00	1.17	0.71	1.71	0.78	0.3
Road #7	7	2400-2500	2.45	0.62	2.78	0.85	0.20	1.10	1.12	0.01	3.00	1.17	0.71	1.71	0.78	0.3
			2.45	0.62	2.78	0.85	0.20	1.10	1.12	0.01	3.00	1.17	0.71	1.71	0.78	0.3
Road #7	7	2500-2600	2.45	0.62	2.78	0.85	0.20	1.10	1.12	0.01	3.00	1.17	0.71	1.71	0.78	0.3
			2.45	0.62	2.78	0.85	0.20	1.10	1.12	0.01	3.00	1.17	0.71	1.71	0.78	0.3
Road #7	7	2600-2700	2.45	0.62	2.78	0.85	0.20	1.10	1.12	0.01	3.00	1.17	0.71	1.71	0.78	0.3
			2.45	0.62	2.78	0.85	0.20	1.10	1.12	0.01	3.00	1.17	0.71	1.71	0.78	0.3
Road #7	7	2700-2800	2.45	0.62	2.78	0.85	0.20	1.10	1.12	0.01	3.00	1.17	0.71	1.71	0.78	0.3
			2.45	0.62	2.78	0.85	0.20	1.10	1.12	0.01	3.00	1.17	0.71	1.71	0.78	0.3
Road #7	7	2800-2900	2.45	0.62	2.78	0.85	0.20	1.10	1.12	0.01	3.00	1.17	0.71	1.71	0.78	0.3
			2.45	0.62	2.78	0.85	0.20	1.10	1.12	0.01	3.00	1.17	0.71	1.71	0.78	0.3
Road #7	7	2900-3000	2.45	0.62	2.78	0.85	0.20	1.10	1.12	0.01	3.00	1.17	0.71	1.71	0.78	0.3
			2.45	0.62	2.78	0.85	0.20	1.10	1.12	0.01	3.00	1.17	0.71	1.71	0.78	0.3
Road #8	8	1600-1700	4.05	1.41	4.04	1.08	0.26	1.58	1.58	0.01	4.34	1.34	0.21	0.36	0.19	0.2
			4.05	1.41	4.04	1.08	0.26	1.58	1.58	0.01	4.34	1.34	0.21	0.36	0.19	0.2
Road #8	8	1700-1800	3.85	1.35	3.85	1.03	0.25	1.54	1.54	0.01	4.14	1.29	0.20	0.34	0.18	0.2
			3.85	1.35	3.85	1.03	0.25	1.54	1.54	0.01	4.14	1.29	0.20	0.34	0.18	0.2
Road #8	8	1800-1900	3.75	1.30	3.75	1.00	0.24	1.50	1.50	0.01	4.04	1.26	0.19	0.33	0.17	0.2
			3.75	1.30	3.75	1.00	0.24	1.50	1.50	0.01	4.04	1.26	0.19	0.33	0.17	0.2
Road #8	8	1900-2000	3.65	1.25	3.65	0.98	0.23	1.46	1.46	0.01	3.94	1.23	0.18	0.32	0.16	0.2
			3.65	1.25	3.65	0.98	0.23	1.46	1.46	0.01	3.94	1.23	0.18	0.32	0.16	0.2
Road #8	8	2000-2100	3.55	1.20	3.55	0.95	0.22	1.42	1.42	0.01	3.84	1.20	0.17	0.31	0.15	0.2
			3.55	1.20	3.55	0.95	0.22	1.42	1.42	0.01	3.84	1.20	0.17	0.31	0.15	0.2
Road #8	8	2100-2200	3.45	1.15	3.45	0.90	0.21	1.38	1.38	0.01	3.74	1.16	0.16	0.30	0.14	0.2
			3.45	1.15	3.45	0.90	0.21	1.38	1.38	0.01	3.74	1.16	0.16	0.30	0.14	0.2
Road #8	8	2200-2300	3.35	1.10	3.35	0.85	0.20	1.34	1.34	0.01	3.64	1.12	0.15	0.29	0.13	0.2
			3.35	1.10	3.35	0.85	0.20	1.34	1.34	0.01	3.64	1.12	0.15	0.29	0.13	0.2
Road #8	8	2300-2400	3.25	1.05	3.25	0.80	0.19	1.30	1.30	0.01	3.54	1.08	0.14	0.28	0.12	0.2
			3.25	1.05	3.25	0.80	0.19	1.30	1.30	0.01	3.54	1.08	0.14	0.28	0.12	0.2
Road #8	8	2400-2500	3.15	1.00	3.15	0.75	0.18	1.26	1.26	0.01	3.44	1.04	0.13	0.27	0.11	0.2
			3.15	1.00	3.15	0.75	0.18	1.26	1.26	0.01	3.44	1.04	0.13	0.27	0.11	0.2
Road #8	8	2500-2600	3.05	0.95	3.05	0.70	0.17	1.22	1.22	0.01	3.34	1.00	0.12	0.26	0.10	0.2
			3.05	0.95	3.05	0.70	0.17	1.22	1.22	0.01	3.34	1.00	0.12	0.26	0.10	0.2
Road #8	8	2600-2700	2.95	0.90	2.95	0.65	0.16	1.18	1.18	0.01	3.24	0.96	0.11	0.25	0.09	0.2
			2.95	0.90	2.95	0.65	0.16	1.18	1.18	0.01	3.24	0.96	0.11	0.25	0.09	0.2
Road #8	8	2700-2800	2.85	0.85	2.85	0.60	0.15	1.14	1.14	0.01	3.14	0.92	0.10	0.24	0.08	0.2
			2.85	0.85	2.85	0.60	0.15	1.14	1.14	0.01	3.14	0.92	0.10	0.24	0.08	0.2
Road #8	8	2800-2900	2.75	0.80	2.75	0.55	0.14	1.10	1.10	0.01	3.04	0.88	0.09	0.23	0.07	0.2
			2.75	0.80	2.75	0.55	0.14	1.10	1.10	0.01	3.04	0.88	0.09	0.23	0.07	0.2
Road #8	8	2900-3000	2.65	0.75	2.65	0.50	0.13	1.06	1.06	0.01	2.94	0.84	0.08	0.22	0.06	0.2
			2.65	0.75	2.65	0.50	0.13	1.06	1.06	0.01	2.94	0.84	0.08	0.22	0.06	0.2
Road #9	9	1600-1700	4.05	1.41	4.04	1.08	0.26	1.58	1.58	0.01	4.34	1.34	0.21	0.36	0.19	0.2
			4.05	1.41	4.04	1.08	0.26	1.58	1.58	0.01	4.34	1.34	0.21	0.36	0.19	0.2
Road #9	9	1700-1800	3.85	1.35	3.85	1.03	0.25	1.54	1.54	0.01	4.14	1.29	0.20	0.34	0.18	0.2
			3.85	1.35	3.85	1.03	0.25	1.54	1.54	0.01	4.14	1.29	0.20	0.34	0.18	0.2
Road #9	9	1800-1900	3.75	1.30	3.75	1.00	0.24	1.50	1.50	0.01	4.04	1.26	0.19	0.33	0.17	0.2
			3.75	1.30	3.75	1.00	0.24	1.50	1.50	0.01	4.04	1.26	0.19	0.33	0.17	0.2
Road #9	9	1900-2000	3.65	1.25	3.65	0.98	0.23	1.46	1.46	0.01	3.94	1.23	0.18	0.32	0.16	0.2
			3.65	1.25	3.65	0.98	0.23	1.46	1.46	0.01	3.94	1.23	0.18	0.32	0.16	0.2
Road #9	9	2000-2100	3.55	1.20	3.55	0.95	0.22	1.42	1.42	0.01	3.84	1.20	0.17	0.31	0.15	0.2
			3.55	1.20	3.55	0.95	0.22	1.42	1.42	0.01	3.84	1.20	0.17	0.31	0.15	0.2
Road #9	9	2100-2200	3.45	1.15	3.45	0.90	0.21	1.38	1.38	0.01	3.74	1.16	0.16	0.30	0.14	0.2
			3.45	1.15	3.45	0.90	0.21	1.38	1.38	0.01	3.74	1.16	0.16	0.30	0.14	0.2
Road #9	9	2200-2300	3.35	1.10	3.35	0.85	0.20	1.34	1.34	0.01	3.64	1.12	0.15	0.29	0.13	0.2
			3.35	1.10	3.35	0.85	0.20	1.34	1.34	0.01	3.64	1.12	0.15	0.29	0.13	0.2
Road #9	9	2300-2400	3.25	1.05	3.25	0.80	0.19	1.30	1.30	0.01	3.54	1.08	0.14	0.28	0.12	0.2
			3.25	1.05	3.25	0.80	0.19	1.30	1.30	0.01	3.54	1.08	0.14	0.28	0.12	0.2
Road #9	9	2400-2500	3.15	1.00	3.15	0.75	0.18	1.26	1.26	0.01	3.44	1.04	0.13	0.27	0.11	0.2
			3.15	1.00	3.15	0.75	0.18	1.26	1.26	0.01	3.44	1.04	0.13	0.27	0.11	0.2
Road #9	9	2500-2600	3.05	0.95	3.05	0.70	0.17	1.22	1.22	0.01	3.34	1.00	0.12	0.26	0.10	0.2
			3.05	0.95	3.05	0.70	0.17	1.22	1.22	0.01	3.34	1.00	0.12	0.26	0.10	0.2
Road #9	9	2600-2700	2.95	0.90	2.95	0.65	0.16	1.18	1.18	0.01	3.24	0.96	0.11	0.25	0.09	0.2
			2.95	0.90	2.95	0.65	0.16	1.18	1.18	0.01	3.24	0.96	0.11	0.25	0.09	0.2
Road #9	9	2700-2800	2.85	0.85	2.85	0.60	0.15	1.14	1.14	0.01	3.14	0.92	0.10	0.24	0.08	0.2
			2.85	0.85	2.85	0.60	0.15	1.14	1.14	0.01	3.14	0.92	0.10	0.24	0.08	0.2
Road #9	9	2800-2900	2.75	0.80	2.75	0.55	0.14	1.10	1.10	0.01	3.04	0.88	0.09	0.23	0.07	0.2
			2.75	0.80	2.75	0.55	0.14	1.10	1.10	0.01	3.04	0.88	0.09	0.23	0.07	0.2
Road #9	9	2900-3000	2.65	0.75	2.											

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open N14 North Extension Factors for AGMCO model - Year 2003														
Row Name	Row ID	Hour	MO1/MS1/MS2/MS3			MO1/MS1/MS2/MS3			MO1/MS1/MS2/MS3			MO1/MS1/MS2/MS3		
			g/hour	lb/ton/hr	lb/ton/hr	lb/ton/hr	lb/ton/hr	lb/ton/hr	lb/ton/hr	lb/ton/hr	lb/ton/hr	lb/ton/hr	lb/ton/hr	lb/ton/hr
Row #1	21	0000-0100	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #2	21	0100-0200	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #3	21	0200-0300	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #4	21	0300-0400	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #5	21	0400-0500	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #6	21	0500-0600	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #7	21	0600-0700	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #8	21	0700-0800	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #9	21	0800-0900	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #10	21	0900-1000	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #11	21	1000-1100	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #12	21	1100-1200	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #13	21	1200-1300	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #14	21	1300-1400	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #15	21	1400-1500	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #16	21	1500-1600	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #17	21	1600-1700	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #18	21	1700-1800	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #19	21	1800-1900	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #20	21	1900-2000	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #21	21	2000-2100	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #22	21	2100-2200	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #23	21	2200-2300	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #24	21	2300-2400	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #25	21	2400-0100	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #26	21	0100-0200	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #27	21	0200-0300	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #28	21	0300-0400	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #29	21	0400-0500	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #30	21	0500-0600	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #31	21	0600-0700	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #32	21	0700-0800	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #33	21	0800-0900	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #34	21	0900-1000	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #35	21	1000-1100	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #36	21	1100-1200	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #37	21	1200-1300	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #38	21	1300-1400	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #39	21	1400-1500	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #40	21	1500-1600	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #41	21	1600-1700	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #42	21	1700-1800	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #43	21	1800-1900	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #44	21	1900-2000	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #45	21	2000-2100	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #46	21	2100-2200	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #47	21	2200-2300	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #48	21	2300-2400	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #49	21	2400-0100	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #50	21	0100-0200	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #51	21	0200-0300	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #52	21	0300-0400	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #53	21	0400-0500	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #54	21	0500-0600	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #55	21	0600-0700	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #56	21	0700-0800	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #57	21	0800-0900	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #58	21	0900-1000	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #59	21	1000-1100	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #60	21	1100-1200	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #61	21	1200-1300	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #62	21	1300-1400	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #63	21	1400-1500	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03	1.93E+08	9.31E+05
Row #64	21	1500-1600	1.10E+02	4.45E+08	3.59E+04	1.18E+02	3.51E+07	1.70E+03	8.29E+02	4.24E+07	2.05E+03	2.88E+03		

Road\Appendix 3.5.4 Emission Factor in 2043.xlsx

Open Top North Underground Quality														
Year 2043														
Open Top North Underground Factors for Atlantic Model (m/s)														
Row Name	Row ID	Hour	NO _x Emissions		PM ₁₀ Emissions		PM _{2.5} Emissions		NO _x Emissions		PM ₁₀ Emissions		PM _{2.5} Emissions	
			g/hour	lb/hour	g/hour	lb/hour	g/hour	lb/hour	g/hour	lb/hour	g/hour	lb/hour	g/hour	lb/hour
Row 24	24	0800-0900	1.268	0.744	2.238	1.455	9.027	8.755	1.911	1.158	1.051	1.332	2.568	2.752
Row 24	24	0900-1000	1.268	0.744	2.238	1.455	9.027	8.755	1.911	1.158	1.051	1.332	2.568	2.752
Row 24	24	1000-1100	1.268	0.744	2.238	1.455	9.027	8.755	1.911	1.158	1.051	1.332	2.568	2.752
Row 24	24	1100-1200	1.382	0.795	2.476	1.556	9.867	9.595	2.126	1.242	1.126	1.413	2.795	2.980
Row 24	24	1200-1300	1.382	0.795	2.476	1.556	9.867	9.595	2.126	1.242	1.126	1.413	2.795	2.980
Row 24	24	1300-1400	1.431	0.844	2.664	1.658	10.61	1.051	2.232	1.347	1.226	1.513	2.924	3.109
Row 24	24	1400-1500	1.431	0.844	2.664	1.658	10.61	1.051	2.232	1.347	1.226	1.513	2.924	3.109
Row 24	24	1500-1600	1.376	0.791	2.414	1.604	1.175	1.075	2.261	1.404	1.284	1.562	2.858	3.043
Row 24	24	1600-1700	1.376	0.791	2.414	1.604	1.175	1.075	2.261	1.404	1.284	1.562	2.858	3.043
Row 24	24	1700-1800	1.383	0.795	2.480	1.608	1.180	1.080	2.266	1.408	1.288	1.566	2.862	3.047
Row 24	24	1800-1900	1.383	0.795	2.480	1.608	1.180	1.080	2.266	1.408	1.288	1.566	2.862	3.047
Row 24	24	1900-2000	1.071	0.186	1.264	0.421	0.737	5.246	3.221	0.711	0.512	0.442	1.566	1.458
Row 24	24	2000-2100	1.071	0.186	1.264	0.421	0.737	5.246	3.221	0.711	0.512	0.442	1.566	1.458
Row 24	24	2100-2200	1.142	0.468	1.584	0.756	2.671	2.446	0.971	0.712	0.640	1.688	1.608	1.755
Row 24	24	2200-2300	1.142	0.468	1.584	0.756	2.671	2.446	0.971	0.712	0.640	1.688	1.608	1.755
Row 24	24	2300-2400	0.932	0.278	0.822	0.277	0.772	2.522	0.749	0.441	0.344	1.046	0.989	1.116
Row 24	24	0000-0100	0.932	0.278	0.822	0.277	0.772	2.522	0.749	0.441	0.344	1.046	0.989	1.116
Row 24	24	0100-0200	1.093	0.445	1.625	0.781	1.988	1.871	0.832	0.593	0.531	1.696	1.608	1.755
Row 24	24	0200-0300	1.093	0.445	1.625	0.781	1.988	1.871	0.832	0.593	0.531	1.696	1.608	1.755
Row 24	24	0300-0400	1.093	0.445	1.625	0.781	1.988	1.871	0.832	0.593	0.531	1.696	1.608	1.755
Row 24	24	0400-0500	1.093	0.445	1.625	0.781	1.988	1.871	0.832	0.593	0.531	1.696	1.608	1.755
Row 24	24	0500-0600	1.115	0.468	1.668	0.808	2.055	1.938	0.856	0.616	0.554	1.738	1.650	1.799
Row 24	24	0600-0700	1.115	0.468	1.668	0.808	2.055	1.938	0.856	0.616	0.554	1.738	1.650	1.799
Row 24	24	0700-0800	1.121	0.472	1.674	0.814	2.071	1.951	0.869	0.629	0.567	1.751	1.662	1.812
Row 24	24	0800-0900	1.121	0.472	1.674	0.814	2.071	1.951	0.869	0.629	0.567	1.751	1.662	1.812
Row 24	24	0900-1000	1.121	0.472	1.674	0.814	2.071	1.951	0.869	0.629	0.567	1.751	1.662	1.812
Row 24	24	1000-1100	1.245	0.761	2.352	1.504	9.452	9.180	2.071	1.297	1.179	1.466	3.000	3.185
Row 24	24	1100-1200	1.245	0.761	2.352	1.504	9.452	9.180	2.071	1.297	1.179	1.466	3.000	3.185
Row 24	24	1200-1300	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	1300-1400	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	1400-1500	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	1500-1600	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	1600-1700	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	1700-1800	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	1800-1900	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	1900-2000	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	2000-2100	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	2100-2200	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	2200-2300	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	2300-2400	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	0000-0100	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	0100-0200	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	0200-0300	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	0300-0400	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	0400-0500	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	0500-0600	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	0600-0700	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	0700-0800	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	0800-0900	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	0900-1000	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	1000-1100	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	1100-1200	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	1200-1300	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	1300-1400	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	1400-1500	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	1500-1600	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	1600-1700	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	1700-1800	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	1800-1900	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	1900-2000	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	2000-2100	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	2100-2200	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	2200-2300	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	2300-2400	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	0000-0100	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	0100-0200	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	0200-0300	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	0300-0400	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	0400-0500	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	0500-0600	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	0600-0700	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	0700-0800	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	0800-0900	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	0900-1000	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	1000-1100	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	1100-1200	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	1200-1300	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	1300-1400	1.471	0.904	2.794	1.746	10.90	1.051	2.441	1.496	1.378	1.665	3.439	3.624
Row 24	24	1400-1500	1.471	0.904	2.794	1								

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Open Yr North Underground Factors for Average Model Year														
Year 2003														
Route Name	Route ID	Hour	MD,Envision			MD,No Envision								
			g/hwy	ton/hour	MD/hour/acre	g/hwy	ton/hour	MD/hour/acre						
Route 11	11	0000-0100	8.88E+02	1.77E+08	5.77E-05	4.45E+02	8.80E+08	2.87E-04	3.55E+02	1.08E+07	1.45E+04	2.48E+03	4.91E+09	1.66E+05
		0100-0200	9.49E+02	1.89E+08	6.27E-05	4.75E+02	9.49E+08	3.15E-04	4.88E+02	1.45E+07	1.95E+04	2.68E+03	5.41E+09	1.92E+05
Route 11	11	0200-0300	1.05E+03	2.10E+08	7.00E-05	5.25E+02	1.05E+09	3.50E-04	5.25E+02	1.60E+07	2.10E+04	2.94E+03	6.70E+09	2.41E+05
		0300-0400	1.11E+03	2.22E+08	7.39E-05	5.55E+02	1.34E+09	3.68E-04	5.18E+02	1.80E+07	2.35E+04	3.26E+03	7.86E+09	2.86E+05
Route 11	11	0400-0500	1.16E+03	2.32E+08	7.73E-05	5.80E+02	1.46E+09	3.82E-04	5.08E+02	1.95E+07	2.55E+04	3.54E+03	8.54E+09	3.07E+05
		0500-0600	1.21E+03	2.42E+08	8.08E-05	6.05E+02	1.58E+09	3.97E-04	4.98E+02	2.10E+07	2.75E+04	3.81E+03	9.24E+09	3.27E+05
Route 11	11	0600-0700	1.26E+03	2.52E+08	8.42E-05	6.30E+02	1.70E+09	4.12E-04	4.88E+02	2.25E+07	2.95E+04	4.08E+03	9.94E+09	3.48E+05
		0700-0800	1.31E+03	2.62E+08	8.76E-05	6.55E+02	1.82E+09	4.27E-04	4.78E+02	2.40E+07	3.15E+04	4.34E+03	1.06E+10	3.69E+05
Route 11	11	0800-0900	1.36E+03	2.72E+08	9.10E-05	6.80E+02	1.94E+09	4.42E-04	4.68E+02	2.55E+07	3.35E+04	4.60E+03	1.13E+10	3.90E+05
		0900-1000	1.41E+03	2.82E+08	9.44E-05	7.05E+02	2.06E+09	4.57E-04	4.58E+02	2.70E+07	3.55E+04	4.86E+03	1.20E+10	4.01E+05
Route 11	11	1000-1100	1.46E+03	2.92E+08	9.78E-05	7.30E+02	2.18E+09	4.72E-04	4.48E+02	2.85E+07	3.75E+04	5.12E+03	1.27E+10	4.12E+05
		1100-1200	1.51E+03	3.02E+08	1.01E-04	7.55E+02	2.30E+09	4.87E-04	4.38E+02	3.00E+07	3.95E+04	5.38E+03	1.34E+10	4.23E+05
Route 11	11	1200-1300	1.56E+03	3.12E+08	1.04E-04	7.80E+02	2.42E+09	5.02E-04	4.28E+02	3.15E+07	4.15E+04	5.64E+03	1.41E+10	4.34E+05
		1300-1400	1.61E+03	3.22E+08	1.07E-04	8.05E+02	2.54E+09	5.17E-04	4.18E+02	3.30E+07	4.35E+04	5.90E+03	1.48E+10	4.45E+05
Route 11	11	1400-1500	1.66E+03	3.32E+08	1.10E-04	8.30E+02	2.66E+09	5.32E-04	4.08E+02	3.45E+07	4.55E+04	6.16E+03	1.55E+10	4.56E+05
		1500-1600	1.71E+03	3.42E+08	1.13E-04	8.55E+02	2.78E+09	5.47E-04	3.98E+02	3.60E+07	4.75E+04	6.42E+03	1.62E+10	4.67E+05
Route 11	11	1600-1700	1.76E+03	3.52E+08	1.16E-04	8.80E+02	2.90E+09	5.62E-04	3.88E+02	3.75E+07	4.95E+04	6.68E+03	1.69E+10	4.78E+05
		1700-1800	1.81E+03	3.62E+08	1.19E-04	9.05E+02	3.02E+09	5.77E-04	3.78E+02	3.90E+07	5.15E+04	6.94E+03	1.76E+10	4.89E+05
Route 11	11	1800-1900	1.86E+03	3.72E+08	1.22E-04	9.30E+02	3.14E+09	5.92E-04	3.68E+02	4.05E+07	5.35E+04	7.20E+03	1.83E+10	4.99E+05
		1900-2000	1.91E+03	3.82E+08	1.25E-04	9.55E+02	3.26E+09	6.07E-04	3.58E+02	4.20E+07	5.55E+04	7.46E+03	1.90E+10	5.10E+05
Route 11	11	2000-2100	1.96E+03	3.92E+08	1.28E-04	9.80E+02	3.38E+09	6.22E-04	3.48E+02	4.35E+07	5.75E+04	7.72E+03	1.97E+10	5.21E+05
		2100-2200	2.01E+03	4.02E+08	1.31E-04	1.00E+03	3.50E+09	6.37E-04	3.38E+02	4.50E+07	5.95E+04	7.98E+03	2.04E+10	5.32E+05
Route 11	11	2200-2300	2.06E+03	4.12E+08	1.34E-04	1.02E+03	3.62E+09	6.52E-04	3.28E+02	4.65E+07	6.15E+04	8.24E+03	2.11E+10	5.43E+05
		2300-2400	2.11E+03	4.22E+08	1.37E-04	1.04E+03	3.74E+09	6.67E-04	3.18E+02	4.80E+07	6.35E+04	8.50E+03	2.18E+10	5.54E+05
Route 11	11	2400-0100	2.16E+03	4.32E+08	1.40E-04	1.06E+03	3.86E+09	6.82E-04	3.08E+02	4.95E+07	6.55E+04	8.76E+03	2.25E+10	5.65E+05
		0100-0200	2.21E+03	4.42E+08	1.43E-04	1.08E+03	3.98E+09	6.97E-04	2.98E+02	5.10E+07	6.75E+04	9.02E+03	2.32E+10	5.76E+05
Route 11	11	0200-0300	2.26E+03	4.52E+08	1.46E-04	1.10E+03	4.10E+09	7.12E-04	2.88E+02	5.25E+07	6.95E+04	9.28E+03	2.39E+10	5.87E+05
		0300-0400	2.31E+03	4.62E+08	1.49E-04	1.12E+03	4.22E+09	7.27E-04	2.78E+02	5.40E+07	7.15E+04	9.54E+03	2.46E+10	5.98E+05
Route 11	11	0400-0500	2.36E+03	4.72E+08	1.52E-04	1.14E+03	4.34E+09	7.42E-04	2.68E+02	5.55E+07	7.35E+04	9.80E+03	2.53E+10	6.09E+05
		0500-0600	2.41E+03	4.82E+08	1.55E-04	1.16E+03	4.46E+09	7.57E-04	2.58E+02	5.70E+07	7.55E+04	1.00E+04	2.60E+10	6.20E+05
Route 11	11	0600-0700	2.46E+03	4.92E+08	1.58E-04	1.18E+03	4.58E+09	7.72E-04	2.48E+02	5.85E+07	7.75E+04	1.02E+04	2.67E+10	6.31E+05
		0700-0800	2.51E+03	5.02E+08	1.61E-04	1.20E+03	4.70E+09	7.87E-04	2.38E+02	6.00E+07	7.95E+04	1.04E+04	2.74E+10	6.42E+05
Route 11	11	0800-0900	2.56E+03	5.12E+08	1.64E-04	1.22E+03	4.82E+09	8.02E-04	2.28E+02	6.15E+07	8.15E+04	1.06E+04	2.81E+10	6.53E+05
		0900-1000	2.61E+03	5.22E+08	1.67E-04	1.24E+03	4.94E+09	8.17E-04	2.18E+02	6.30E+07	8.35E+04	1.08E+04	2.88E+10	6.64E+05
Route 11	11	1000-1100	2.66E+03	5.32E+08	1.70E-04	1.26E+03	5.06E+09	8.32E-04	2.08E+02	6.45E+07	8.55E+04	1.10E+04	2.95E+10	6.75E+05
		1100-1200	2.71E+03	5.42E+08	1.73E-04	1.28E+03	5.18E+09	8.47E-04	1.98E+02	6.60E+07	8.75E+04	1.12E+04	3.02E+10	6.86E+05
Route 11	11	1200-1300	2.76E+03	5.52E+08	1.76E-04	1.30E+03	5.30E+09	8.62E-04	1.88E+02	6.75E+07	8.95E+04	1.14E+04	3.09E+10	6.97E+05
		1300-1400	2.81E+03	5.62E+08	1.79E-04	1.32E+03	5.42E+09	8.77E-04	1.78E+02	6.90E+07	9.15E+04	1.16E+04	3.16E+10	7.08E+05
Route 11	11	1400-1500	2.86E+03	5.72E+08	1.82E-04	1.34E+03	5.54E+09	8.92E-04	1.68E+02	7.05E+07	9.35E+04	1.18E+04	3.23E+10	7.19E+05
		1500-1600	2.91E+03	5.82E+08	1.85E-04	1.36E+03	5.66E+09	9.07E-04	1.58E+02	7.20E+07	9.55E+04	1.20E+04	3.30E+10	7.30E+05
Route 11	11	1600-1700	2.96E+03	5.92E+08	1.88E-04	1.38E+03	5.78E+09	9.22E-04	1.48E+02	7.35E+07	9.75E+04	1.22E+04	3.37E+10	7.41E+05
		1700-1800	3.01E+03	6.02E+08	1.91E-04	1.40E+03	5.90E+09	9.37E-04	1.38E+02	7.50E+07	9.95E+04	1.24E+04	3.44E+10	7.52E+05
Route 11	11	1800-1900	3.06E+03	6.12E+08	1.94E-04	1.42E+03	6.02E+09	9.52E-04	1.28E+02	7.65E+07	1.01E+05	1.26E+04	3.51E+10	7.63E+05
		1900-2000	3.11E+03	6.22E+08	1.97E-04	1.44E+03	6.14E+09	9.67E-04	1.18E+02	7.80E+07	1.03E+05	1.28E+04	3.58E+10	7.74E+05
Route 11	11	2000-2100	3.16E+03	6.32E+08	2.00E-04	1.46E+03	6.26E+09	9.82E-04	1.08E+02	7.95E+07	1.05E+05	1.30E+04	3.65E+10	7.85E+05
		2100-2200	3.21E+03	6.42E+08	2.03E-04	1.48E+03	6.38E+09	9.97E-04	9.8E+01	8.10E+07	1.07E+05	1.32E+04	3.72E+10	7.96E+05
Route 11	11	2200-2300	3.26E+03	6.52E+08	2.06E-04	1.50E+03	6.50E+09	1.01E-03	8.8E+01	8.25E+07	1.09E+05	1.34E+04	3.79E+10	8.07E+05
		2300-2400	3.31E+03	6.62E+08	2.09E-04	1.52E+03	6.62E+09	1.02E-03	7.8E+01	8.40E+07	1.11E+05	1.36E+04	3.86E+10	8.18E+05
Route 11	11	2400-0100	3.36E+03	6.72E+08	2.12E-04	1.54E+03	6.74E+09	1.03E-03	6.8E+01	8.55E+07	1.13E+05	1.38E+04	3.93E+10	8.29E+05
		0100-0200	3.41E+03	6.82E+08	2.15E-04	1.56E+03	6.86E+09	1.04E-03	5.8E+01	8.70E+07	1.15E+05	1.40E+04	4.00E+10	8.40E+05
Route 11	11	0200-0300	3.46E+03	6.92E+08	2.18E-04	1.58E+03	6.98E+09	1.05E-03	4.8E+01	8.85E+07	1.17E+05	1.42E+04	4.07E+10	8.51E+05
		0300-0400	3.51E+03	7.02E+08	2.21E-04	1.60E+03	7.10E+09	1.06E-03	3.8E+01	9.00E+07	1.19E+05	1.44E+04	4.14E+10	8.62E+05
Route 11	11	0400-0500	3.56E+03	7.12E+08	2.24E-04	1.62E+03	7.22E+09	1.07E-03	2.8E+01	9.15E+07	1.21E+05	1.46E+04	4.21E+10	8.73E+05
		0500-0600	3.61E+03	7.22E+08	2.27E-04	1.64E+03	7.34E+09	1.08E-03	1.8E+01	9.30E+07	1.23E+05	1.48E+04	4.28E+10	8.84E+05
Route 11	11	0600-0700	3.66E+03	7.32E+08	2.30E-04	1.66E+03	7.46E+09	1.09E-03	8E+00	9.45E+07	1.25E+05	1.50E+04	4.35E+10	8.95E+05
		0700-0800	3.71E+03	7.42E+08	2.33E-04	1.68E+03	7.58E+09	1.10E-03	7E+00	9.60E+07	1.27E+05	1.52E+04	4.42E+10	9.06E+05
Route 11	11	0800-0900	3.76E+03	7.52E+08	2.36E-04	1.70E+03	7.70E+09	1.11E-03	6E+00	9.75E+07	1.29E+05	1.54E+04	4.49E+10	9.17E+05
		0900-1000	3.81E+03	7.62E+08	2.39E-04	1.72E+03	7.82E+09	1.12E-03	5E+00	9.90E+07	1.31E+05	1.56E+04	4.56E+10	9.28E+05
Route 11	11	1000-1100	3.86E+03	7.72E+08	2.42E-04	1.74E+03	7.94E+09	1.13E-03	4E+00	1.00E+08	1.33E+05	1.58E+04	4.63E+10	9.39E+05
		1100-1200	3.91E+03	7.82E+08	2.45E-04	1.76E+03	8.06E+09	1.14E-03	3E+00	1.01E+08	1.35E+05	1.60E+04	4.70E+10	9.50E+05
Route 11	11	1200-1300	3.96E+03	7.92E+08	2.48E-04	1.78E+03	8.18E+09	1.15E-03	2E+00	1.02E+08	1.37E+05	1.62E+04	4.77E+10	9.61E+05
		1300-1400	4.01E+03	8.02E+08	2.51E-04	1.80E+03	8.30E+09	1.16E-03	1E+00	1.03E+08	1.39E+05	1.64E+04	4.84E+10	9.72E+05
Route 11	11	1400-1500	4.06E+03	8.12E+08	2.54E-04	1.82E+03	8.42E+09	1.17E-03	0E+00	1.04E+08	1.41E+05	1.66E+04	4.91E+10	9.83E+05
		1500-1600	4.11E+03	8.22E+08	2.57E-04	1.84E+03	8.54E+09	1.18E-03	0E+00	1.05E+08	1.43E+05	1.68E+04	4.98E+10	9.94E+05
Route 11	11	1600-1700	4.16E+03	8.32E+08	2.60E-04	1.86E+03	8.66E+09	1.19E-03	0E+00	1.06E+08	1.45E+05	1.70E+04	5.05E+10	1.00E+06
		1700-1800	4.21E+03	8.42E+08	2.63E-04	1.88E+03	8.78E+09	1.20E-03	0E+00	1.07E+08	1.47E+05	1.72E+04	5.12E+10	1.01E+06
Route 11	11	1800-1900	4.26E+03	8.52E+0										

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open N North Endromission Factors for AGMCM Model Year 2003											
Row Name	Row ID	Hour	MO, Emission			MO, Emission			MO, Emission		
			g/hour	MO/hour	h/hour	g/hour	MO/hour	h/hour	g/hour	MO/hour	h/hour
Row 34	14	0800-0900	8.1181	2.0767	1.9883	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	0900-1000	9.2325	0.6303	0.9386	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1000-1100	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1100-1200	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1200-1300	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1300-1400	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1400-1500	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1500-1600	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1600-1700	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1700-1800	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1800-1900	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1900-2000	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	2000-2100	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	2100-2200	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	2200-2300	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	2300-2400	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	2400-0100	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	0100-0200	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	0200-0300	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	0300-0400	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	0400-0500	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	0500-0600	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	0600-0700	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	0700-0800	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	0800-0900	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	0900-1000	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1000-1100	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1100-1200	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1200-1300	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1300-1400	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1400-1500	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1500-1600	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1600-1700	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1700-1800	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1800-1900	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1900-2000	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	2000-2100	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	2100-2200	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	2200-2300	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	2300-2400	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	2400-0100	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	0100-0200	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	0200-0300	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	0300-0400	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	0400-0500	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	0500-0600	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	0600-0700	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	0700-0800	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	0800-0900	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	0900-1000	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1000-1100	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1100-1200	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1200-1300	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1300-1400	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1400-1500	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1500-1600	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1600-1700	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1700-1800	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1800-1900	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1900-2000	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	2000-2100	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	2100-2200	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	2200-2300	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	2300-2400	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	2400-0100	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	0100-0200	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	0200-0300	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	0300-0400	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	0400-0500	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	0500-0600	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	0600-0700	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	0700-0800	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	0800-0900	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	0900-1000	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1000-1100	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1100-1200	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1200-1300	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1300-1400	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1400-1500	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1500-1600	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1600-1700	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1700-1800	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1800-1900	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	1900-2000	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	2000-2100	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	2100-2200	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	2200-2300	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	2300-2400	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	2400-0100	1.0000	0.0000	0.0000	4.3356	1.0066	0.9646	4.7347	1.2156	1.1153
Row 34	14	0100-0200	1.0000	0.0000	0.0000	4.3356	1.0066	0.96			

Road\Appendix 3.5.4 Emission Factor in 2043.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

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Open Yield North Underground Factors for Atlantic Model - 2003														
Rock Name	Rock ID	Hour	Moist/hourage			Moist/hourage			Moist/hourage			Moist/hourage		
			g/hour	ton/hour	Mo En/ton	g/hour	ton/hour	Mo En/ton	g/hour	ton/hour	Mo En/ton	g/hour	ton/hour	Mo En/ton
Rock 11	11	0000-0100	8.88E+01	8.77E+08	5.77E-05	4.45E+02	8.80E+08	2.87E+04	3.53E+02	1.08E+07	3.45E+04	2.48E+03	4.93E+09	1.66E+05
Rock 11	11	0100-0200	9.49E+01	9.36E+08	6.27E-05	4.57E+02	8.93E+08	2.91E+04	3.58E+02	1.10E+07	3.48E+04	2.50E+03	4.96E+09	1.68E+05
Rock 11	11	0200-0300	1.05E+02	1.03E+09	6.97E-05	5.05E+02	9.53E+08	3.18E+04	3.97E+02	1.22E+07	3.69E+04	2.67E+03	5.17E+09	1.75E+05
Rock 11	11	0300-0400	1.11E+02	1.04E+09	7.20E-05	5.05E+02	9.54E+08	3.18E+04	3.97E+02	1.22E+07	3.69E+04	2.67E+03	5.17E+09	1.75E+05
Rock 11	11	0400-0500	1.11E+02	1.04E+09	7.20E-05	5.05E+02	9.54E+08	3.18E+04	3.97E+02	1.22E+07	3.69E+04	2.67E+03	5.17E+09	1.75E+05
Rock 11	11	0500-0600	1.21E+02	1.06E+09	6.18E-05	5.38E+02	8.27E+08	2.70E+04	3.62E+02	1.30E+07	3.11E+04	3.54E+03	5.34E+09	1.77E+05
Rock 11	11	0600-0700	1.21E+02	1.06E+09	6.18E-05	5.38E+02	8.27E+08	2.70E+04	3.62E+02	1.30E+07	3.11E+04	3.54E+03	5.34E+09	1.77E+05
Rock 11	11	0700-0800	1.31E+02	1.32E+09	6.34E-05	5.70E+02	9.02E+08	2.87E+04	3.88E+02	1.38E+07	3.58E+04	3.68E+03	5.68E+09	1.84E+05
Rock 11	11	0800-0900	1.31E+02	1.32E+09	6.34E-05	5.70E+02	9.02E+08	2.87E+04	3.88E+02	1.38E+07	3.58E+04	3.68E+03	5.68E+09	1.84E+05
Rock 11	11	0900-1000	1.42E+02	1.40E+09	5.47E-05	5.61E+02	8.43E+08	2.42E+04	3.73E+02	1.44E+07	3.74E+04	3.29E+03	5.49E+09	1.82E+05
Rock 11	11	1000-1100	1.42E+02	1.40E+09	5.47E-05	5.61E+02	8.43E+08	2.42E+04	3.73E+02	1.44E+07	3.74E+04	3.29E+03	5.49E+09	1.82E+05
Rock 11	11	1100-1200	1.77E+02	1.74E+09	5.87E-05	6.17E+02	1.12E+09	3.24E+04	4.28E+02	1.58E+07	4.21E+04	3.90E+03	6.07E+09	2.04E+05
Rock 11	11	1200-1300	1.28E+02	1.28E+08	5.81E-05	5.88E+02	9.20E+08	2.62E+04	3.72E+02	1.30E+07	3.60E+04	3.43E+03	5.34E+09	1.82E+05
Rock 11	11	1300-1400	1.28E+02	1.28E+08	5.81E-05	5.88E+02	9.20E+08	2.62E+04	3.72E+02	1.30E+07	3.60E+04	3.43E+03	5.34E+09	1.82E+05
Rock 11	11	1400-1500	1.28E+02	1.28E+08	5.81E-05	5.88E+02	9.20E+08	2.62E+04	3.72E+02	1.30E+07	3.60E+04	3.43E+03	5.34E+09	1.82E+05
Rock 11	11	1500-1600	1.49E+02	1.49E+09	5.16E-05	5.96E+02	8.21E+08	2.55E+04	3.81E+02	1.40E+07	3.83E+04	3.60E+03	5.46E+09	1.84E+05
Rock 11	11	1600-1700	1.49E+02	1.49E+09	5.16E-05	5.96E+02	8.21E+08	2.55E+04	3.81E+02	1.40E+07	3.83E+04	3.60E+03	5.46E+09	1.84E+05
Rock 11	11	1700-1800	1.87E+02	1.85E+09	6.14E-05	6.14E+02	9.28E+08	2.44E+04	3.76E+02	1.55E+07	4.06E+04	3.68E+03	5.82E+09	1.93E+05
Rock 11	11	1800-1900	1.87E+02	1.85E+09	6.14E-05	6.14E+02	9.28E+08	2.44E+04	3.76E+02	1.55E+07	4.06E+04	3.68E+03	5.82E+09	1.93E+05
Rock 11	11	1900-2000	2.03E+02	2.03E+09	6.73E-05	6.27E+02	1.02E+09	3.26E+04	4.35E+02	1.64E+07	4.27E+04	3.97E+03	6.08E+09	2.04E+05
Rock 11	11	2000-2100	2.03E+02	2.03E+09	6.73E-05	6.27E+02	1.02E+09	3.26E+04	4.35E+02	1.64E+07	4.27E+04	3.97E+03	6.08E+09	2.04E+05
Rock 11	11	2100-2200	2.03E+02	2.03E+09	6.73E-05	6.27E+02	1.02E+09	3.26E+04	4.35E+02	1.64E+07	4.27E+04	3.97E+03	6.08E+09	2.04E+05
Rock 11	11	2200-2300	2.03E+02	2.03E+09	6.73E-05	6.27E+02	1.02E+09	3.26E+04	4.35E+02	1.64E+07	4.27E+04	3.97E+03	6.08E+09	2.04E+05
Rock 11	11	2300-0000	2.03E+02	2.03E+09	6.73E-05	6.27E+02	1.02E+09	3.26E+04	4.35E+02	1.64E+07	4.27E+04	3.97E+03	6.08E+09	2.04E+05
Rock 11	11	0000-0100	8.88E+01	8.77E+08	5.77E-05	4.45E+02	8.80E+08	2.87E+04	3.53E+02	1.08E+07	3.45E+04	2.48E+03	4.93E+09	1.66E+05
Rock 11	11	0100-0200	9.49E+01	9.36E+08	6.27E-05	4.57E+02	8.93E+08	2.91E+04	3.58E+02	1.10E+07	3.48E+04	2.50E+03	4.96E+09	1.68E+05
Rock 11	11	0200-0300	1.05E+02	1.03E+09	6.97E-05	5.05E+02	9.53E+08	3.18E+04	3.97E+02	1.22E+07	3.69E+04	2.67E+03	5.17E+09	1.75E+05
Rock 11	11	0300-0400	1.11E+02	1.04E+09	7.20E-05	5.05E+02	9.54E+08	3.18E+04	3.97E+02	1.22E+07	3.69E+04	2.67E+03	5.17E+09	1.75E+05
Rock 11	11	0400-0500	1.11E+02	1.04E+09	7.20E-05	5.05E+02	9.54E+08	3.18E+04	3.97E+02	1.22E+07	3.69E+04	2.67E+03	5.17E+09	1.75E+05
Rock 11	11	0500-0600	1.21E+02	1.06E+09	6.18E-05	5.38E+02	8.27E+08	2.70E+04	3.62E+02	1.30E+07	3.11E+04	3.54E+03	5.34E+09	1.77E+05
Rock 11	11	0600-0700	1.21E+02	1.06E+09	6.18E-05	5.38E+02	8.27E+08	2.70E+04	3.62E+02	1.30E+07	3.11E+04	3.54E+03	5.34E+09	1.77E+05
Rock 11	11	0700-0800	1.31E+02	1.32E+09	6.34E-05	5.70E+02	9.02E+08	2.87E+04	3.88E+02	1.38E+07	3.58E+04	3.68E+03	5.68E+09	1.84E+05
Rock 11	11	0800-0900	1.31E+02	1.32E+09	6.34E-05	5.70E+02	9.02E+08	2.87E+04	3.88E+02	1.38E+07	3.58E+04	3.68E+03	5.68E+09	1.84E+05
Rock 11	11	0900-1000	1.42E+02	1.40E+09	5.47E-05	5.61E+02	8.43E+08	2.42E+04	3.73E+02	1.44E+07	3.74E+04	3.29E+03	5.49E+09	1.82E+05
Rock 11	11	1000-1100	1.42E+02	1.40E+09	5.47E-05	5.61E+02	8.43E+08	2.42E+04	3.73E+02	1.44E+07	3.74E+04	3.29E+03	5.49E+09	1.82E+05
Rock 11	11	1100-1200	1.77E+02	1.74E+09	5.87E-05	6.17E+02	1.12E+09	3.24E+04	4.28E+02	1.58E+07	4.21E+04	3.90E+03	6.07E+09	2.04E+05
Rock 11	11	1200-1300	1.28E+02	1.28E+08	5.81E-05	5.88E+02	9.20E+08	2.62E+04	3.72E+02	1.30E+07	3.60E+04	3.43E+03	5.34E+09	1.82E+05
Rock 11	11	1300-1400	1.28E+02	1.28E+08	5.81E-05	5.88E+02	9.20E+08	2.62E+04	3.72E+02	1.30E+07	3.60E+04	3.43E+03	5.34E+09	1.82E+05
Rock 11	11	1400-1500	1.28E+02	1.28E+08	5.81E-05	5.88E+02	9.20E+08	2.62E+04	3.72E+02	1.30E+07	3.60E+04	3.43E+03	5.34E+09	1.82E+05
Rock 11	11	1500-1600	1.49E+02	1.49E+09	5.16E-05	5.96E+02	8.21E+08	2.55E+04	3.81E+02	1.40E+07	3.83E+04	3.60E+03	5.46E+09	1.84E+05
Rock 11	11	1600-1700	1.49E+02	1.49E+09	5.16E-05	5.96E+02	8.21E+08	2.55E+04	3.81E+02	1.40E+07	3.83E+04	3.60E+03	5.46E+09	1.84E+05
Rock 11	11	1700-1800	1.87E+02	1.85E+09	6.14E-05	6.14E+02	9.28E+08	2.44E+04	3.76E+02	1.55E+07	4.06E+04	3.68E+03	5.82E+09	1.93E+05
Rock 11	11	1800-1900	1.87E+02	1.85E+09	6.14E-05	6.14E+02	9.28E+08	2.44E+04	3.76E+02	1.55E+07	4.06E+04	3.68E+03	5.82E+09	1.93E+05
Rock 11	11	1900-2000	2.03E+02	2.03E+09	6.73E-05	6.27E+02	1.02E+09	3.26E+04	4.35E+02	1.64E+07	4.27E+04	3.97E+03	6.08E+09	2.04E+05
Rock 11	11	2000-2100	2.03E+02	2.03E+09	6.73E-05	6.27E+02	1.02E+09	3.26E+04	4.35E+02	1.64E+07	4.27E+04	3.97E+03	6.08E+09	2.04E+05
Rock 11	11	2100-2200	2.03E+02	2.03E+09	6.73E-05	6.27E+02	1.02E+09	3.26E+04	4.35E+02	1.64E+07	4.27E+04	3.97E+03	6.08E+09	2.04E+05
Rock 11	11	2200-2300	2.03E+02	2.03E+09	6.73E-05	6.27E+02	1.02E+09	3.26E+04	4.35E+02	1.64E+07	4.27E+04	3.97E+03	6.08E+09	2.04E+05
Rock 11	11	2300-0000	2.03E+02	2.03E+09	6.73E-05	6.27E+02	1.02E+09	3.26E+04	4.35E+02	1.64E+07	4.27E+04	3.97E+03	6.08E+09	2.04E+05
Rock 11	11	0000-0100	8.88E+01	8.77E+08	5.77E-05	4.45E+02	8.80E+08	2.87E+04	3.53E+02	1.08E+07	3.45E+04	2.48E+03	4.93E+09	1.66E+05
Rock 11	11	0100-0200	9.49E+01	9.36E+08	6.27E-05	4.57E+02	8.93E+08	2.91E+04	3.58E+02	1.10E+07	3.48E+04	2.50E+03	4.96E+09	1.68E+05
Rock 11	11	0200-0300	1.05E+02	1.03E+09	6.97E-05	5.05E+02	9.53E+08	3.18E+04	3.97E+02	1.22E+07	3.69E+04	2.67E+03	5.17E+09	1.75E+05
Rock 11	11	0300-0400	1.11E+02	1.04E+09	7.20E-05	5.05E+02	9.54E+08	3.18E+04	3.97E+02	1.22E+07	3.69E+04	2.67E+03	5.17E+09	1.75E+05
Rock 11	11	0400-0500	1.11E+02	1.04E+09	7.20E-05	5.05E+02	9.54E+08	3.18E+04	3.97E+02	1.22E+07	3.69E+04	2.67E+03	5.17E+09	1.75E+05
Rock 11	11	0500-0600	1.21E+02	1.06E+09	6.18E-05	5.38E+02	8.27E+08	2.70E+04	3.62E+02	1.30E+07	3.11E+04	3.54E+03	5.34E+09	1.77E+05
Rock 11	11	0600-0700	1.21E+02	1.06E+09	6.18E-05	5.38E+02	8.27E+08	2.70E+04	3.62E+02	1.30E+07	3.11E+04	3.54E+03	5.34E+09	1.77E+05
Rock 11	11	0700-0800	1.31E+02	1.32E+09	6.34E-05	5.70E+02	9.02E+08	2.87E+04	3.88E+02	1.38E+07	3.58E+04	3.68E+03	5.68E+09	1.84E+05
Rock 11	11	0800-0900	1.31E+02	1.32E+09	6.34E-05	5.70E+02	9.02E+08	2.87E+04	3.88E+02	1.38E+07	3.58E+04	3.68E+03	5.68E+09	1.84E+05
Rock 11	11	0900-1000	1.42E+02	1.40E+09	5.47E-05	5.61E+02	8.43E+08	2.42E+04	3.73E+02	1.44E+07	3.74E+04	3.29E+03	5.49E+09	1.82E+05
Rock 11	11	1000-1100	1.42E+02	1.40E+09	5.47E-05	5.61E+02	8.43E+08	2.42E+04	3.73E+02	1.44E+07	3.74E+04	3.29E+03	5.49E+09	1.82E+05
Rock 11	11	1100-1200	1.77E+02	1.74E+09	5.87E-05	6.17E+02	1.12E+09	3.24E+04	4.28E+02	1.58E+07	4.21E+04	3.90E+03	6.07E+09	2.04E+05
Rock 11	11	1200-1300	1.28E+02	1.28E+08	5.81E-05	5.88E+02	9.20E+08	2.62E+04	3.72E+02	1.30E+07	3.60E+04	3.43E+03	5.34E+09	1.82E+05
Rock 11	11	1300-1400	1.28E+02	1.28E+08	5.81E-05	5.88E+02	9.20E+08	2.62E+04	3.72E+02	1.30E+07	3.60E+04	3.43E+03	5.34E+09	1.82E+05
Rock 11	11	1400-1500	1.28E+02	1.28E+08	5.81E-05	5.88E+02	9.20E+08	2.62E+04	3.72E+02	1.30E+07	3.60E+04	3.43E+03	5.34E+09	1.82E+05
Rock 11	11	1500-1600	1.49E+02	1.49E+09	5.16E-05	5.96E+02	8.21E+08	2.55E+04	3.81E+02	1.40E+07	3.83E+04	3.60E+03	5.46E+09	1.84E+05
Rock														

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open N ₂ North Undermining Factors													
Year 2003													
44MMO model results													
Road Name	Road ID	Floor	Mo/En/Emo				Mo/En/Emo				Road Name		
			g/kWh	h/kWh	tonne/kWh	\$/kWh	g/kWh	h/kWh	tonne/kWh	\$/kWh			
Road #1	0000 00100	1.0772	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #2	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #3	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #4	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #5	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #6	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #7	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #8	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #9	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #10	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #11	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #12	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #13	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #14	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #15	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #16	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #17	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #18	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #19	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #20	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #21	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #22	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #23	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #24	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #25	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #26	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #27	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #28	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #29	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #30	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #31	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #32	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #33	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #34	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #35	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #36	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #37	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #38	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #39	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #40	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #41	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #42	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #43	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525
Road #44	0000 00100	1.936	2.098	7.181	6.552	8.888	1.0404	3.152	1.187	7.376	2.578	1.502	1.772
			1.936	6.262	5.682	6.848	0.928	2.478	0.918	6.435	2.408	1.466	1.525

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Open Yr North Underground Factors for Average Model Year									
		Year 2003		Mo Entrain		Mo No Entrain		Mo No Entrain	
Route Name	Route ID	Hour	g/hwy	Mo/hwy/hour	Mo/hwy/hour	Mo/hwy/hour	Mo/hwy/hour	Mo/hwy/hour	Mo/hwy/hour
Read rd	44	0800-0900	8.51E	3.70E	6.08E	4.44E	1.40E	3.16E	5.79E
Read rd	44	0900-1000	8.52E	3.70E	6.08E	4.44E	1.40E	3.16E	5.79E
Read rd	44	1000-1100	8.52E	3.70E	6.08E	4.44E	1.40E	3.16E	5.79E
Read rd	44	1100-1200	8.52E	3.70E	6.08E	4.44E	1.40E	3.16E	5.79E
Read rd	44	1200-1300	8.52E	3.70E	6.08E	4.44E	1.40E	3.16E	5.79E
Read rd	44	1300-1400	8.52E	3.70E	6.08E	4.44E	1.40E	3.16E	5.79E
Read rd	44	1400-1500	8.52E	3.70E	6.08E	4.44E	1.40E	3.16E	5.79E
Read rd	44	1500-1600	8.52E	3.70E	6.08E	4.44E	1.40E	3.16E	5.79E
Read rd	44	1600-1700	8.52E	3.70E	6.08E	4.44E	1.40E	3.16E	5.79E
Read rd	44	1700-1800	8.52E	3.70E	6.08E	4.44E	1.40E	3.16E	5.79E
Read rd	44	1800-1900	8.52E	3.70E	6.08E	4.44E	1.40E	3.16E	5.79E
Read rd	44	1900-2000	8.52E	3.70E	6.08E	4.44E	1.40E	3.16E	5.79E
Read rd	44	2000-2100	8.52E	3.70E	6.08E	4.44E	1.40E	3.16E	5.79E
Read rd	44	2100-2200	8.52E	3.70E	6.08E	4.44E	1.40E	3.16E	5.79E
Read rd	44	2200-2300	8.52E	3.70E	6.08E	4.44E	1.40E	3.16E	5.79E
Read rd	44	2300-2400	8.52E	3.70E	6.08E	4.44E	1.40E	3.16E	5.79E
Read rd	44	2400-2500	8.52E	3.70E	6.08E	4.44E	1.40E	3.16E	5.79E
Read rd	44	2500-2600	8.52E	3.70E	6.08E	4.44E	1.40E	3.16E	5.79E
Read rd	44	2600-2700	8.52E	3.70E	6.08E	4.44E	1.40E	3.16E	5.79E
Read rd	44	2700-2800	8.52E	3.70E	6.08E	4.44E	1.40E	3.16E	5.79E
Read rd	44	2800-2900	8.52E	3.70E	6.08E	4.44E	1.40E	3.16E	5.79E
Read rd	44	2900-3000	8.52E	3.70E	6.08E	4.44E	1.40E	3.16E	5.79E
Read rd	44	3000-3100	8.52E	3.70E	6.08E	4.44E	1.40E	3.16E	5.79E
Read rd	44	3100-3200	8.52E	3.70E	6.08E	4.44E	1.40E	3.16E	5.79E
Read rd	44	3200-3300	8.52E	3.70E	6.08E	4.44E	1.40E	3.16E	5.79E
Read rd	44	3300-3400	8.52E	3.70E	6.08E	4.44E	1.40E	3.16E	5.79E
Read rd	44	3400-3500	8.52E	3.70E	6.08E	4.44E	1.40E	3.16E	5.79E
Read rd	44	3500-3600	8.52E	3.70E	6.08E	4.44E	1.40E	3.16E	5.79E
Read rd	44	3600-3700	8.52E	3.70E	6.08E	4.44E	1.40E	3.16E	5.79E
Read rd	44	3700-3800	8.52E	3.70E	6.08E	4.44E	1.40E	3.16E	5.79E
Read rd	44	3800-3900	8.52E	3.70E	6.08E	4.44E	1.40E	3.16E	5.79E
Read rd	44	3900-4000	8.52E	3.70E	6.08E	4.44E	1.40E	3.16E	5.79E
Read rd	44	4000-4100	8.52E	3.70E	6.08E	4.44E	1.40E	3.16E	5.79E
Read rd	44	4100-4200	8.52E	3.70E	6.08E	4.44E	1.40E	3.16E	5.79E
Read rd	44	4200-4300	8.52E	3.70E	6.08E	4.44E	1.40E	3.16E	5.79E
Read rd	44	4300-4400	8.52E	3.70E	6.08E	4.44E	1.40E	3.16E	5.79E
Read rd	44	4400-4500	8.52E	3.70E	6.08E	4.44E	1.40E	3.16E	5.79E

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Top North Endomission Factors for 48MMO model Year 2003														
Road Name	Road ID	Hour	No. Emission				No. Emission							
			Monthly/ha		Monthly/ha		Monthly/ha		Monthly/ha					
Road 47	47	1500-1700	2.06E+02	1.94E+07	4.50E+01	8.27E+02	1.60E+06	1.88E+02	1.06E+01	2.00E+08	2.28E+02	3.18E+03	4.84E+08	6.98E+04
Road 47	47	1800-1900	1.46E+02	1.34E+07	3.00E+01	5.71E+02	1.50E+06	1.20E+02	7.00E+01	1.27E+08	2.17E+02	2.60E+03	3.84E+08	5.24E+04
Road 47	47	2000-2100	1.46E+02	1.34E+07	3.00E+01	5.71E+02	1.50E+06	1.20E+02	7.00E+01	1.27E+08	2.17E+02	2.60E+03	3.84E+08	5.24E+04
Road 47	47	2100-2200	8.17E+02	7.50E+07	1.70E+02	3.82E+03	9.00E+06	1.00E+08	1.12E+08	1.27E+08	1.38E+08	1.50E+08	2.67E+09	3.00E+09
Road 47	47	2200-2300	7.61E+02	7.02E+07	1.58E+02	3.47E+03	8.27E+06	9.00E+06	1.00E+08	1.12E+08	1.27E+08	1.38E+08	2.67E+09	3.00E+09
Road 47	47	2300-2400	6.63E+03	6.02E+07	1.14E+03	2.50E+04	7.61E+07	8.87E+07	9.62E+08	1.06E+09	1.16E+09	1.26E+09	2.04E+10	2.83E+10
Road 48	48	0000-0100	2.72E+03	2.50E+07	5.00E+01	1.83E+02	7.27E+07	8.40E+07	9.40E+08	1.03E+09	1.12E+09	1.20E+09	1.47E+10	1.62E+10
Road 48	48	0100-0200	6.57E+02	6.02E+06	1.14E+02	2.50E+04	7.61E+07	8.87E+07	9.62E+08	1.06E+09	1.16E+09	1.26E+09	2.04E+10	2.83E+10
Road 48	48	0200-0300	4.21E+03	3.75E+07	7.50E+01	2.67E+04	4.21E+07	4.84E+07	5.36E+08	5.87E+08	6.39E+08	7.00E+08	8.40E+09	9.40E+09
Road 48	48	0300-0400	8.91E+02	8.17E+06	1.58E+02	3.47E+03	8.27E+06	9.00E+06	1.00E+08	1.12E+08	1.27E+08	1.38E+08	2.67E+09	3.00E+09
Road 48	48	0400-0500	5.41E+03	5.14E+06	1.16E+04	3.17E+03	1.46E+07	1.60E+04	4.21E+07	4.67E+07	5.22E+07	5.77E+07	6.39E+08	7.00E+08
Road 48	48	0500-0600	6.31E+03	5.85E+06	1.14E+04	3.17E+03	1.46E+07	1.60E+04	4.21E+07	4.67E+07	5.22E+07	5.77E+07	6.39E+08	7.00E+08
Road 48	48	0600-0700	9.81E+02	9.02E+06	1.72E+04	4.00E+03	2.40E+07	2.72E+07	2.80E+08	3.14E+08	3.48E+08	4.10E+09	4.50E+09	
Road 48	48	0700-0800	7.81E+02	7.24E+06	1.40E+04	3.17E+03	1.46E+07	1.60E+04	4.21E+07	4.67E+07	5.22E+07	5.77E+07	6.39E+08	7.00E+08
Road 48	48	0700-0800	7.78E+02	7.18E+06	1.39E+04	3.17E+03	1.46E+07	1.60E+04	4.21E+07	4.67E+07	5.22E+07	5.77E+07	6.39E+08	7.00E+08
Road 48	48	0800-0900	8.41E+03	7.85E+06	1.58E+04	3.17E+03	1.46E+07	1.60E+04	4.21E+07	4.67E+07	5.22E+07	5.77E+07	6.39E+08	7.00E+08
Road 48	48	0900-1000	9.45E+02	8.75E+06	1.71E+04	4.00E+03	2.40E+07	2.72E+07	2.80E+08	3.14E+08	3.48E+08	4.10E+09	4.50E+09	
Road 48	48	1000-1100	1.50E+02	1.80E+07	4.00E+01	8.27E+02	1.00E+06	9.00E+01	1.12E+07	1.17E+07	1.27E+07	1.40E+07	1.50E+07	
Road 48	48	1100-1200	1.50E+02	1.80E+07	4.00E+01	8.27E+02	1.00E+06	9.00E+01	1.12E+07	1.17E+07	1.27E+07	1.40E+07	1.50E+07	
Road 49	49	1500-1700	1.41E+02	1.30E+07	2.80E+01	5.00E+02	1.30E+06	1.00E+02	5.00E+01	1.00E+08	1.70E+02	2.10E+03	3.00E+08	4.00E+04
Road 49	49	1800-1900	1.00E+02	9.00E+06	2.00E+01	3.57E+02	9.00E+05	7.00E+01	3.50E+01	7.00E+07	1.20E+02	1.50E+03	2.00E+08	2.60E+04
Road 49	49	2000-2100	1.00E+02	9.00E+06	2.00E+01	3.57E+02	9.00E+05	7.00E+01	3.50E+01	7.00E+07	1.20E+02	1.50E+03	2.00E+08	2.60E+04
Road 49	49	2100-2200	5.00E+02	4.50E+07	1.00E+02	1.79E+03	4.50E+06	5.00E+02	2.50E+02	5.00E+08	5.50E+02	6.00E+03	6.50E+08	7.00E+09
Road 49	49	2200-2300	4.50E+02	4.00E+07	9.00E+01	1.58E+03	4.00E+06	4.50E+02	2.25E+02	4.50E+08	5.00E+02	5.50E+03	6.00E+08	6.50E+09
Road 49	49	2300-2400	3.50E+02	3.00E+07	7.00E+01	1.19E+03	3.00E+06	3.50E+02	1.75E+02	3.50E+08	4.00E+02	4.50E+03	5.00E+08	5.50E+09
Road 50	50	0000-0100	1.10E+02	1.00E+07	2.20E+01	3.57E+02	9.00E+05	7.00E+01	3.50E+01	7.00E+07	1.20E+02	1.50E+03	2.00E+08	2.60E+04
Road 50	50	0100-0200	7.00E+02	6.30E+06	1.26E+04	2.83E+03	7.00E+06	7.93E+03	8.63E+04	9.40E+04	1.01E+05	1.08E+05	1.16E+05	1.24E+05
Road 50	50	0200-0300	7.00E+02	6.30E+06	1.26E+04	2.83E+03	7.00E+06	7.93E+03	8.63E+04	9.40E+04	1.01E+05	1.08E+05	1.16E+05	1.24E+05
Road 50	50	0300-0400	1.10E+02	1.00E+07	2.20E+01	3.57E+02	9.00E+05	7.00E+01	3.50E+01	7.00E+07	1.20E+02	1.50E+03	2.00E+08	2.60E+04
Road 50	50	0400-0500	1.10E+02	1.00E+07	2.20E+01	3.57E+02	9.00E+05	7.00E+01	3.50E+01	7.00E+07	1.20E+02	1.50E+03	2.00E+08	2.60E+04
Road 50	50	0500-0600	1.10E+02	1.00E+07	2.20E+01	3.57E+02	9.00E+05	7.00E+01	3.50E+01	7.00E+07	1.20E+02	1.50E+03	2.00E+08	2.60E+04
Road 50	50	0600-0700	1.10E+02	1.00E+07	2.20E+01	3.57E+02	9.00E+05	7.00E+01	3.50E+01	7.00E+07	1.20E+02	1.50E+03	2.00E+08	2.60E+04
Road 50	50	0700-0800	1.10E+02	1.00E+07	2.20E+01	3.57E+02	9.00E+05	7.00E+01	3.50E+01	7.00E+07	1.20E+02	1.50E+03	2.00E+08	2.60E+04
Road 50	50	0800-0900	1.10E+02	1.00E+07	2.20E+01	3.57E+02	9.00E+05	7.00E+01	3.50E+01	7.00E+07	1.20E+02	1.50E+03	2.00E+08	2.60E+04
Road 50	50	0900-1000	1.10E+02	1.00E+07	2.20E+01	3.57E+02	9.00E+05	7.00E+01	3.50E+01	7.00E+07	1.20E+02	1.50E+03	2.00E+08	2.60E+04
Road 50	50	1000-1100	1.10E+02	1.00E+07	2.20E+01	3.57E+02	9.00E+05	7.00E+01	3.50E+01	7.00E+07	1.20E+02	1.50E+03	2.00E+08	2.60E+04
Road 50	50	1100-1200	1.10E+02	1.00E+07	2.20E+01	3.57E+02	9.00E+05	7.00E+01	3.50E+01	7.00E+07	1.20E+02	1.50E+03	2.00E+08	2.60E+04
Road 51	51	1500-1700	1.41E+02	1.30E+07	2.80E+01	5.00E+02	1.30E+06	1.00E+02	5.00E+01	1.00E+08	1.70E+02	2.10E+03	3.00E+08	4.00E+04
Road 51	51	1800-1900	1.00E+02	9.00E+06	2.00E+01	3.57E+02	9.00E+05	7.00E+01	3.50E+01	7.00E+07	1.20E+02	1.50E+03	2.00E+08	2.60E+04
Road 51	51	2000-2100	1.00E+02	9.00E+06	2.00E+01	3.57E+02	9.00E+05	7.00E+01	3.50E+01	7.00E+07	1.20E+02	1.50E+03	2.00E+08	2.60E+04
Road 51	51	2100-2200	5.00E+02	4.50E+07	1.00E+02	1.79E+03	4.50E+06	5.00E+02	2.50E+02	5.00E+08	5.50E+02	6.00E+03	6.50E+08	7.00E+09
Road 51	51	2200-2300	4.50E+02	4.00E+07	9.00E+01	1.58E+03	4.00E+06	4.50E+02	2.25E+02	4.50E+08	5.00E+02	5.50E+03	6.00E+08	6.50E+09
Road 51	51	2300-2400	3.50E+02	3.00E+07	7.00E+01	1.19E+03	3.00E+06	3.50E+02	1.75E+02	3.50E+08	4.00E+02	4.50E+03	5.00E+08	5.50E+09
Road 52	52	1500-1700	1.41E+02	1.30E+07	2.80E+01	5.00E+02	1.30E+06	1.00E+02	5.00E+01	1.00E+08	1.70E+02	2.10E+03	3.00E+08	4.00E+04
Road 52	52	1800-1900	1.00E+02	9.00E+06	2.00E+01	3.57E+02	9.00E+05	7.00E+01	3.50E+01	7.00E+07	1.20E+02	1.50E+03	2.00E+08	2.60E+04
Road 52	52	2000-2100	1.00E+02	9.00E+06	2.00E+01	3.57E+02	9.00E+05	7.00E+01	3.50E+01	7.00E+07	1.20E+02	1.50E+03	2.00E+08	2.60E+04
Road 52	52	2100-2200	5.00E+02	4.50E+07	1.00E+02	1.79E+03	4.50E+06	5.00E+02	2.50E+02	5.00E+08	5.50E+02	6.00E+03	6.50E+08	7.00E+09
Road 52	52	2200-2300	4.50E+02	4.00E+07	9.00E+01	1.58E+03	4.00E+06	4.50E+02	2.25E+02	4.50E+08	5.00E+02	5.50E+03	6.00E+08	6.50E+09
Road 52	52	2300-2400	3.50E+02	3.00E+07	7.00E+01	1.19E+03	3.00E+06	3.50E+02	1.75E+02	3.50E+08	4.00E+02	4.50E+03	5.00E+08	5.50E+09
Road 53	53	1500-1700	1.41E+02	1.30E+07	2.80E+01	5.00E+02	1.30E+06	1.00E+02	5.00E+01	1.00E+08	1.70E+02	2.10E+03	3.00E+08	4.00E+04
Road 53	53	1800-1900	1.00E+02	9.00E+06	2.00E+01	3.57E+02	9.00E+05	7.00E+01	3.50E+01	7.00E+07	1.20E+02	1.50E+03	2.00E+08	2.60E+04
Road 53	53	2000-2100	1.00E+02	9.00E+06	2.00E+01	3.57E+02	9.00E+05	7.00E+01	3.50E+01	7.00E+07	1.20E+02	1.50E+03	2.00E+08	2.60E+04
Road 53	53	2100-2200	5.00E+02	4.50E+07	1.00E+02	1.79E+03	4.50E+06	5.00E+02	2.50E+02	5.00E+08	5.50E+02	6.00E+03	6.50E+08	7.00E+09
Road 53	53	2200-2300	4.50E+02	4.00E+07	9.00E+01	1.58E+03	4.00E+06	4.50E+02	2.25E+02	4.50E+08	5.00E+02	5.50E+03	6.00E+08	6.50E+09
Road 53	53	2300-2400	3.50E+02	3.00E+07	7.00E+01	1.19E+03	3.00E+06	3.50E+02	1.75E+02	3.50E+08	4.00E+02	4.50E+03	5.00E+08	5.50E+09
Road 54	54	1500-1700	1.41E+02	1.30E+07	2.80E+01	5.00E+02	1.30E+06	1.00E+02	5.00E+01	1.00E+08	1.70E+02	2.10E+03	3.00E+08	4.00E+04
Road 54	54	1800-1900	1.00E+02	9.00E+06	2.00E+01	3.57E+02	9.00E+05	7.00E+01	3.50E+01	7.00E+07	1.20E+02	1.50E+03	2.00E+08	2.60E+04
Road 54	54	2000-2100	1.00E+02	9.00E+06	2.00E+01	3.57E+02	9.00E+05	7.00E+01	3.50E+01	7.00E+07	1.20E+02	1.50E+03	2.00E+08	2.60E+04
Road 54	54	2100-2200	5.00E+02	4.50E+07	1.00E+02	1.79E+03	4.50E+06	5.00E+02	2.50E+02	5.00E+08	5.50E+02	6.00E+03	6.50E+08	7.00E+09
Road 54	54	2200-2300	4.50E+02	4.00E+07	9.00E+01	1.58E+03	4.00E+06	4.50E+02	2.25E+02	4.50E+08	5.00E+02	5.50E+03	6.00E+08	6.50E+09
Road 54	54	2300-2400	3.50E+02	3.00E+07	7.00E+01	1.19E+03	3.00E+06	3.50E+02	1.75E+02	3.50E+08	4.00E+02	4.50E+03	5.00E+08	5.50E+09
Road 55	55	1500-1700	1.41E+02	1.30E+07	2.80E+01	5.00E+02	1.30E+06	1.00E+02	5.00E+01	1.00E+08	1.70E+02	2.10E+03	3.00E+08	4.00E+04
Road 55	55	1800-1900	1.00E+02	9.00E+06	2.00E+01	3.57E+02	9.00E+05	7.00E+01	3.50E+01	7.00E+07	1.20E+02	1.50E+03	2.00E+08	2.60E+04
Road 55	55	2000-2100	1.00E+02	9.00E+06	2.00E+01	3.57E+02	9.00E+05	7.00E+01	3.50E+01	7.00E+07	1.20E+02	1.50E+03	2.00E+08	2.60E+04
Road 55	55	2100-2200	5.00E+02	4.50E+07	1.00E+02	1.79E+03	4.50E+06	5.00E+02	2.50E+02	5.00E+08				

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Twin N North Underquarry															
Open Road to Base Emission Factors for AEDHH model (see Table 2)															
Year 2043															
Road Name	Road ID	Hour	NO _x Emission						NO _y Emission						
			g/hour	lb/hour	g/hour	lb/hour	g/hour	lb/hour	g/hour	lb/hour	g/hour	lb/hour			
			Motorist/Min	Motorist/Min	Motorist/Min	Motorist/Min	Motorist/Min	Motorist/Min	Motorist/Min	Motorist/Min	Motorist/Min	Motorist/Min			
			Average						Average						
Road #1	S1	0000-0100	4.2183	0.3384	2.0814	0.3354	2.6302	0.1815	3.7772	2.1887	2.038	0.1548	8.332	0.9	
Road #1	S1	0100-0200	4.3545	0.3548	2.0642	0.3455	2.6717	0.1722	3.9533	2.0513	2.0173	1.5662	0.9	0.6	
Road #1	S1	0200-0300	4.5005	0.3722	2.0470	0.3562	2.7132	0.1630	4.1294	2.0140	2.0003	1.5488	0.9	0.6	
Road #1	S1	0300-0400	5.1361	0.4451	1.9414	0.3731	3.1216	0.1514	4.2982	1.2727	8.625	0.838	4.085	2.7	
Road #1	S1	0400-0500	5.5602	0.4862	1.9238	0.3842	3.2481	0.1422	4.4670	1.2357	8.625	0.838	4.085	2.7	
Road #1	S1	0500-0600	6.1448	0.5598	2.4484	0.3954	3.2210	0.1317	4.6358	2.1795	7.125	1.625	0.979	6.1	
Road #1	S1	0600-0700	6.8865	0.6235	3.6514	0.4111	4.0501	0.1203	4.8046	5.5750	3.701	1.044	2.095	1.8	
Road #1	S1	0700-0800	7.5882	0.6872	4.8544	0.4270	4.8646	0.1090	4.9734	9.0602	3.701	1.044	2.095	1.8	
Road #1	S1	0800-0900	6.9467	0.6423	3.9273	0.4385	4.6865	0.2043	4.6052	1.1258	8.938	1.822	1.858	1.8	
Road #1	S1	0900-1000	7.8882	0.7060	4.8544	0.4544	5.6928	0.2997	4.7720	1.1258	8.938	1.822	1.858	1.8	
Road #1	S1	1000-1100	8.9318	0.7747	1.1795	0.4772	8.346	0.3765	5.1451	1.0511	8.686	2.426	0.4738	3.2	
Road #1	S1	1100-1200	9.5855	0.8484	1.1795	0.4931	8.346	0.4618	5.1451	1.0511	8.686	2.426	0.4738	3.2	
Road #1	S1	1200-1300	1.0755	0.0857	1.1795	0.5090	8.346	0.5471	5.1451	1.0511	8.686	2.426	0.4738	3.2	
Road #1	S1	1300-1400	1.5102	0.1217	1.1795	0.5249	8.346	0.6324	5.1451	1.0511	8.686	2.426	0.4738	3.2	
Road #1	S1	1400-1500	1.9450	0.1577	1.1795	0.5408	8.346	0.7177	5.1451	1.0511	8.686	2.426	0.4738	3.2	
Road #1	S1	1500-1600	1.3824	0.2867	0.9543	0.5711	1.1108	0.8040	7.0907	1.4776	0.938	4.0301	0.834	3.6	
Road #1	S1	1600-1700	1.3824	0.2867	0.9543	0.5711	1.1108	0.8040	7.0907	1.4776	0.938	4.0301	0.834	3.6	
Road #1	S1	1700-1800	1.0451	0.2447	1.6441	0.6313	1.1108	0.8040	7.0907	1.4776	0.938	4.0301	0.834	3.6	
Road #1	S1	1800-1900	1.7465	0.2787	1.1833	0.5512	8.2967	0.6513	2.4252	0.9507	8.858	2.1449	0.533	3.6	
Road #1	S1	1900-2000	2.4252	0.2787	1.1833	0.5512	8.2967	0.6513	2.4252	0.9507	8.858	2.1449	0.533	3.6	
Road #1	S1	2000-2100	6.1153	0.9222	0.6794	1.3445	0.5217	3.3322	0.4122	6.0907	0.4122	1.7705	0.508	1.9	
Road #1	S1	2100-2200	6.1153	0.9222	0.6794	1.3445	0.5217	3.3322	0.4122	6.0907	0.4122	1.7705	0.508	1.9	
Road #1	S1	2200-2300	6.1153	0.9222	0.6794	1.3445	0.5217	3.3322	0.4122	6.0907	0.4122	1.7705	0.508	1.9	
Road #1	S1	2300-0400	6.1153	0.9222	0.6794	1.3445	0.5217	3.3322	0.4122	6.0907	0.4122	1.7705	0.508	1.9	
Road #2	S2	0000-0100	4.7922	0.386	2.1795	0.3738	3.1618	0.1958	4.1352	2.2001	2.0858	1.4748	0.944	3.628	0.9
Road #2	S2	0100-0200	4.9385	0.4038	2.1526	0.3849	3.2058	0.1866	4.3115	2.1630	2.0685	1.4573	0.929	3.628	0.9
Road #2	S2	0200-0300	5.1858	0.4295	2.1269	0.3960	3.2500	0.1774	4.4878	2.1259	2.0569	1.4400	0.884	3.628	0.9
Road #2	S2	0300-0400	4.6612	0.3788	2.1005	0.4072	3.0845	0.1682	4.3151	2.0875	2.0455	1.4225	0.839	3.628	0.9
Road #2	S2	0400-0500	4.6612	0.3788	2.1005	0.4072	3.0845	0.1682	4.3151	2.0875	2.0455	1.4225	0.839	3.628	0.9
Road #2	S2	0500-0600	4.6612	0.3788	2.1005	0.4072	3.0845	0.1682	4.3151	2.0875	2.0455	1.4225	0.839	3.628	0.9
Road #2	S2	0600-0700	5.0405	0.4048	2.1104	0.4212	3.1167	0.1804	4.2321	2.2795	2.2795	1.624	1.048	2.1	2.1
Road #2	S2	0700-0800	5.0405	0.4048	2.1104	0.4212	3.1167	0.1804	4.2321	2.2795	2.2795	1.624	1.048	2.1	2.1
Road #2	S2	0800-0900	5.0405	0.4048	2.1104	0.4212	3.1167	0.1804	4.2321	2.2795	2.2795	1.624	1.048	2.1	2.1
Road #2	S2	0900-1000	5.0405	0.4048	2.1104	0.4212	3.1167	0.1804	4.2321	2.2795	2.2795	1.624	1.048	2.1	2.1
Road #2	S2	1000-1100	5.0405	0.4048	2.1104	0.4212	3.1167	0.1804	4.2321	2.2795	2.2795	1.624	1.048	2.1	2.1
Road #2	S2	1100-1200	5.0405	0.4048	2.1104	0.4212	3.1167	0.1804	4.2321	2.2795	2.2795	1.624	1.048	2.1	2.1
Road #2	S2	1200-1300	5.0405	0.4048	2.1104	0.4212	3.1167	0.1804	4.2321	2.2795	2.2795	1.624	1.048	2.1	2.1
Road #2	S2	1300-1400	5.0405	0.4048	2.1104	0.4212	3.1167	0.1804	4.2321	2.2795	2.2795	1.624	1.048	2.1	2.1
Road #2	S2	1400-1500	5.0405	0.4048	2.1104	0.4212	3.1167	0.1804	4.2321	2.2795	2.2795	1.624	1.048	2.1	2.1
Road #2	S2	1500-1600	5.0405	0.4048	2.1104	0.4212	3.1167	0.1804	4.2321	2.2795	2.2795	1.624	1.048	2.1	2.1
Road #2	S2	1600-1700	5.0405	0.4048	2.1104	0.4212	3.1167	0.1804	4.2321	2.2795	2.2795	1.624	1.048	2.1	2.1
Road #2	S2	1700-1800	5.0405	0.4048	2.1104	0.4212	3.1167	0.1804	4.2321	2.2795	2.2795	1.624	1.048	2.1	2.1
Road #2	S2	1800-1900	5.0405	0.4048	2.1104	0.4212	3.1167	0.1804	4.2321	2.2795	2.2795	1.624	1.048	2.1	2.1
Road #2	S2	1900-2000	5.0405	0.4048	2.1104	0.4212	3.1167	0.1804	4.2321	2.2795	2.2795	1.624	1.048	2.1	2.1
Road #2	S2	2000-2100	5.0405	0.4048	2.1104	0.4212	3.1167	0.1804	4.2321	2.2795	2.2795	1.624	1.048	2.1	2.1
Road #2	S2	2100-2200	5.0405	0.4048	2.1104	0.4212	3.1167	0.1804	4.2321	2.2795	2.2795	1.624	1.048	2.1	2.1
Road #2	S2	2200-2300	5.0405	0.4048	2.1104	0.4212	3.1167	0.1804	4.2321	2.2795	2.2795	1.624	1.048	2.1	2.1
Road #2	S2	2300-0400	5.0405	0.4048	2.1104	0.4212	3.1167	0.1804	4.2321	2.2795	2.2795	1.624	1.048	2.1	2.1
Road #3	S3	0000-0100	4.7922	0.386	2.1795	0.3738	3.1618	0.1958	4.1352	2.2001	2.0858	1.4748	0.944	3.628	0.9
Road #3	S3	0100-0200	4.9385	0.4038	2.1526	0.3849	3.2058	0.1866	4.3115	2.1630	2.0685	1.4573	0.929	3.628	0.9
Road #3	S3	0200-0300	5.1858	0.4295	2.1269	0.3960	3.2500	0.1774	4.4878	2.1259	2.0569	1.4400	0.884	3.628	0.9
Road #3	S3	0300-0400	4.6612	0.3788	2.1005	0.4072	3.0845	0.1682	4.3151	2.0875	2.0455	1.4225	0.839	3.628	0.9
Road #3	S3	0400-0500	4.6612	0.3788	2.1005	0.4072	3.0845	0.1682	4.3151	2.0875	2.0455	1.4225	0.839	3.628	0.9
Road #3	S3	0500-0600	4.6612	0.3788	2.1005	0.4072	3.0845	0.1682	4.3151	2.0875	2.0455	1.4225	0.839	3.628	0.9
Road #3	S3	0600-0700	5.0405	0.4048	2.1104	0.4212	3.1167	0.1804	4.2321	2.2795	2.2795	1.624	1.048	2.1	2.1
Road #3	S3	0700-0800	5.0405	0.4048	2.1104	0.4212	3.1167	0.1804	4.2321	2.2795	2.2795	1.624	1.048	2.1	2.1
Road #3	S3	0800-0900	5.0405	0.4048	2.1104	0.4212	3.1167	0.1804	4.2321	2.2795	2.2795	1.624	1.048	2.1	2.1
Road #3	S3	0900-1000	5.0405	0.4048	2.1104	0.4212	3.1167	0.1804	4.2321	2.2795	2.2795	1.624	1.048	2.1	2.1
Road #3	S3	1000-1100	5.0405	0.4048	2.1104	0.4212	3.1167	0.1804	4.2321	2.2795	2.2795	1.624	1.048	2.1	2.1
Road #3	S3	1100-1200	5.0405	0.4048	2.1104	0.4212	3.1167	0.1804	4.2321	2.2795	2.2795	1.624	1.048	2.1	2.1
Road #3	S3	1200-1300	5.0405	0.4048	2.1104	0.4212	3.1167	0.1804	4.2321	2.2795	2.2795	1.624	1.048	2.1	2.1
Road #3	S3	1300-1400	5.0405	0.4048	2.1104	0.4212	3.1167	0.1804	4.2321	2.2795	2.2795	1.624	1.048	2.1	2.1
Road #3	S3	1400-1500	5.0405	0.4048	2.1104	0.4212	3.1167	0.1804	4.2321	2.2795	2.2795	1.624	1.048	2.1	2.1
Road #3	S3	1500-1600	5.0405	0.4048	2.1104	0.4212	3.1167	0.1804	4.2321	2.2795	2.2795	1.624	1.048	2.1	2.1
Road #3	S3	1600-1700	5.0405	0.4048	2.1104	0.4212	3.1167	0.1804	4.2321	2.2795	2.2795	1.624	1.048	2.1	2.1
Road #3	S3	1700-1800	5.0405	0.4048	2.1104	0.4212	3.1167	0.1804	4.2321	2.2795	2.2795	1.624	1.048	2.1	2.1
Road #3	S3	1800-1900	5.0405	0.4048	2.1104	0.4212	3.1167	0.1804	4.2321	2.2795	2.2795	1.624	1.048	2.1	2.1
Road #3	S3	1900-2000	5.0405	0.4048	2.1104	0.4212	3.1167	0.1804	4.2321	2.2795	2.2795	1.624	1.048	2.1	2.1
Road #3	S3	2000-2100	5.0405	0.4048	2.1104	0.4212	3.1167	0.1804	4.2321	2.2795	2.2795	1.624	1.048	2.1	2.1
Road #3	S3	2100-2200	5.0405	0.4048	2.1104	0.4212	3.1167	0.1804	4.2321	2.2795	2.2795	1.624	1.048	2.1	2.1
Road #3	S3	2200-2300	5.0405	0.4048	2.1104	0.4212	3.1167	0.1804	4.2321	2.2795	2.2795	1.624	1.048	2.1	2.1
Road #3	S3	2300-0400	5.0405	0.4048	2.1104	0.4212	3.1167	0.1804	4.2321	2.2795	2.2795	1.624	1.048	2.1	2.1
Road #4	S4	0000-0100	4.7922	0.386	2.1795	0.3738	3.1618	0.1958	4.1352	2.2001	2.0858	1.4748	0.944	3.628	0.

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Open Top North Underminations Factors for
48MMc Road

Year 2043

Road Name		Road ID		Hour		Mo Enmission				No Enmission			
						Monthly(g/hour)		Monthly(t/hour)		Monthly(g/hour)		Monthly(t/hour)	
						g/hour/hour		tonnes/hour		g/hour/hour		tonnes/hour	
Road 54	SA	0802-0000	8:14-02	1:04-07	2:58-03	1.7888	1.1126	0.9888	1.8882	1.8882	1.4328	1.1182	0.9888
Road 54	SA	0802-0000	9:12-02	3:12-07	2.5888	1.6888	1.2288	1.6888	2.5888	2.5888	1.9888	1.6888	1.5888
Road 54	SA	0802-0000	10:10-03	3:58-08	2.4888	1.5888	1.1888	1.9378	4.0888	4.0888	1.2288	1.1402	1.5888
Road 54	SA	0802-0000	11:08-04	4:44-09	2.3888	1.4888	1.0888	1.8378	3.9888	3.9888	1.1688	1.0888	1.4888
Road 54	SA	0802-0000	12:06-05	5:30-10	2.2888	1.3888	0.9888	1.7378	3.8888	3.8888	1.1088	1.0288	1.3888
Road 54	SA	0802-0000	13:04-06	6:16-11	2.1888	1.2888	0.8888	1.6378	3.7888	3.7888	1.0488	0.9688	1.2888
Road 54	SA	0802-0000	14:02-07	7:04-12	2.0888	1.1888	0.7888	1.5378	3.6888	3.6888	0.9888	0.9088	1.1888
Road 54	SA	0802-0000	15:00-08	7:52-01	1.9888	1.0888	0.6888	1.4378	3.5888	3.5888	0.9288	0.8488	1.0888
Road 54	SA	0802-0000	16:00-										
Road 54	SA	0802-0000	17:00-										
Road 54	SA	0802-0000	18:00-										
Road 54	SA	0802-0000	19:00-										
Road 54	SA	0802-0000	20:00-										
Road 54	SA	0802-0000	21:00-										
Road 54	SA	0802-0000	22:00-										
Road 54	SA	0802-0000	23:00-										
Road 54	SA	0802-0000	24:00-										
Road 54	SA	0802-0000	25:00-										
Road 54	SA	0802-0000	26:00-										
Road 54	SA	0802-0000	27:00-										
Road 54	SA	0802-0000	28:00-										
Road 54	SA	0802-0000	29:00-										
Road 54	SA	0802-0000	30:00-										
Road 54	SA	0802-0000	31:00-										
Road 54	SA	0802-0000	32:00-										
Road 54	SA	0802-0000	33:00-										
Road 54	SA	0802-0000	34:00-										
Road 54	SA	0802-0000	35:00-										
Road 54	SA	0802-0000	36:00-										
Road 54	SA	0802-0000	37:00-										
Road 54	SA	0802-0000	38:00-										
Road 54	SA	0802-0000	39:00-										
Road 54	SA	0802-0000	40:00-										
Road 54	SA	0802-0000	41:00-										
Road 54	SA	0802-0000	42:00-										
Road 54	SA	0802-0000	43:00-										
Road 54	SA	0802-0000	44:00-										
Road 54	SA	0802-0000	45:00-										
Road 54	SA	0802-0000	46:00-										
Road 54	SA	0802-0000	47:00-										
Road 54	SA	0802-0000	48:00-										
Road 54	SA	0802-0000	49:00-										
Road 54	SA	0802-0000	50:00-										
Road 54	SA	0802-0000	51:00-										
Road 54	SA	0802-0000	52:00-										
Road 54	SA	0802-0000	53:00-										
Road 54	SA	0802-0000	54:00-										
Road 54	SA	0802-0000	55:00-										
Road 54	SA	0802-0000	56:00-										
Road 54	SA	0802-0000	57:00-										
Road 54	SA	0802-0000	58:00-										
Road 54	SA	0802-0000	59:00-										
Road 54	SA	0802-0000	60:00-										
Road 54	SA	0802-0000	61:00-										
Road 54	SA	0802-0000	62:00-										
Road 54	SA	0802-0000	63:00-										
Road 54	SA	0802-0000	64:00-										
Road 54	SA	0802-0000	65:00-										
Road 54	SA	0802-0000	66:00-										
Road 54	SA	0802-0000	67:00-										
Road 54	SA	0802-0000	68:00-										
Road 54	SA	0802-0000	69:00-										
Road 54	SA	0802-0000	70:00-										
Road 54	SA	0802-0000	71:00-										
Road 54	SA	0802-0000	72:00-										
Road 54	SA	0802-0000	73:00-										
Road 54	SA	0802-0000	74:00-										
Road 54	SA	0802-0000	75:00-										
Road 54	SA	0802-0000	76:00-										
Road 54	SA	0802-0000	77:00-										
Road 54	SA	0802-0000	78:00-										
Road 54	SA	0802-0000	79:00-										
Road 54	SA	0802-0000	80:00-										
Road 54	SA	0802-0000	81:00-										
Road 54	SA	0802-0000	82:00-										
Road 54	SA	0802-0000	83:00-										
Road 54	SA	0802-0000	84:00-										
Road 54	SA	0802-0000	85:00-										
Road 54	SA	0802-0000	86:00-										
Road 54	SA	0802-0000	87:00-										
Road 54	SA	0802-0000	88:00-										
Road 54	SA	0802-0000	89:00-										
Road 54	SA	0802-0000	90:00-										
Road 54	SA	0802-0000	91:00-										
Road 54	SA	0802-0000	92:00-										
Road 54	SA	0802-0000	93:00-										
Road 54	SA	0802-0000	94:00-										
Road 54	SA	0802-0000	95:00-										
Road 54	SA	0802-0000	96:00-										
Road 54	SA	0802-0000	97:00-										
Road 54	SA	0802-0000	98:00-										
Road 54	SA	0802-0000	99:00-										
Road 54	SA	0802-0000	100:00-										
Road 54	SA	0802-0000	101:00-										
Road 54	SA	0802-0000	102:00-										
Road 54	SA	0802-0000	103:00-										
Road 54	SA	0802-0000	104:00-										
Road 54	SA	0802-0000	105:00-										
Road 54	SA	0802-0000	106:00-										
Road 54	SA	0802-0000	107:00-										
Road 54	SA	0802-0000	108:00-										
Road 54	SA	0802-0000	109:00-										
Road 54	SA	0802-0000	110:00-										
Road 54	SA	0802-0000	111:00-										
Road 54	SA	0802-0000	112:00-										
Road 54	SA	0802-0000	113:00-										
Road 54	SA	0802-0000	114:00-										
Road 54	SA	0802-0000	115:00-										
Road 54	SA	0802-0000	116:00-										
Road 54	SA	0802-0000	117:00-										
Road 54	SA	0802-0000	118:00-										
Road 54	SA	0802-0000	119:00-										
Road 54	SA	0802-0000	120:00-										
Road 54	SA	0802-0000	121:00-										
Road 54	SA	0802-0000	122:00-										
Road 54	SA	0802-0000	123:00-										
Road 54	SA	0802-0000	124:00-										
Road 54	SA	0802-0000	125:00-										
Road 54	SA	0802-0000	126:00-										
Road 54	SA	0802-0000	127:00-										
Road 54	SA	0802-0000	128:00-										
Road 54	SA	0802-0000	129:00-										
Road 54	SA	0802-0000	130:00-										
Road 54	SA	0802-0000	131:00-										
Road 54	SA	0802-0000	132:00-										
Road 54	SA	0802-0000	133:00-										
Road 54	SA	0802-0000	134:00-										
Road 54	SA	0802-0000	135:00-										
Road 54	SA	0802-0000	136:00-										
Road 54	SA	0802-0000	137:00-										
Road 54	SA	0802-0000	138:00-										
Road 54	SA	0802-0000	139:00-										
Road 54	SA	0802-0000	140:00-										
Road 54	SA												

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24 hour Union Factors													
at 24 hour Emission Factors													
Year 2003													
Area	Hour	NO _x Emission				NO _x Emission							
		Monthly/Average		Monthly/Average		Monthly/Average		Monthly/Average					
		g/min/1000	g/min/1000	g/min/1000	g/min/1000	g/min/1000	g/min/1000	g/min/1000	g/min/1000	g/min/1000	g/min/1000		
04	0000-0001	1.806	1.487	4.816	5.198	2.396	2.062	6.388	6.948	2.588	1.155	1.487	1.276
04	0100-0101	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	0200-0201	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	0300-0301	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	0400-0401	5.166	2.171	2.021	3.228	4.158	1.262	3.728	1.666	1.466	1.346	5.988	2.254
04	0500-0501	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	0600-0601	4.816	1.511	1.377	4.816	1.188	1.062	1.846	1.336	1.176	1.136	1.988	1.446
04	0700-0701	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	0800-0801	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	0900-0901	8.216	9.198	8.836	4.471	5.011	3.271	5.276	5.971	4.608	2.276	2.466	8.836
04	1000-1001	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	1100-1101	9.616	9.198	9.156	4.886	2.676	1.076	5.846	1.206	2.386	2.616	1.456	1.066
04	1200-1201	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	1300-1301	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	1400-1401	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	1500-1501	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	1600-1601	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	1700-1701	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	1800-1801	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	1900-1901	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	2000-2001	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	2100-2101	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	2200-2201	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	2300-2301	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	2400-2401	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	2500-2501	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	2600-2601	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	2700-2701	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	2800-2801	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	2900-2901	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	3000-3001	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	3100-3101	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	3200-3201	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	3300-3301	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	3400-3401	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	3500-3501	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	3600-3601	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	3700-3701	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	3800-3801	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	3900-3901	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	4000-4001	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	4100-4101	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	4200-4201	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	4300-4301	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	4400-4401	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	4500-4501	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	4600-4601	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	4700-4701	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	4800-4801	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	4900-4901	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	5000-5001	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	5100-5101	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	5200-5201	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	5300-5301	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	5400-5401	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	5500-5501	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	5600-5601	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	5700-5701	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	5800-5801	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	5900-5901	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	6000-6001	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	6100-6101	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	6200-6201	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	6300-6301	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	6400-6401	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	6500-6501	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	6600-6601	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	6700-6701	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	6800-6801	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	6900-6901	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	7000-7001	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	7100-7101	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	7200-7201	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	7300-7301	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	7400-7401	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	7500-7501	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	7600-7601	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	7700-7701	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	7800-7801	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	7900-7901	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	8000-8001	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	8100-8101	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	8200-8201	1.898	2.427	4.688	5.198	2.786	2.062	5.416	7.816	2.466	2.276	1.155	1.276
04	8300-8301	1.898	2.427	4.688									

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Top North Undersown Factors

Year 2003

RHSNO	Road ID	Hour	No. Enmsion						RHSNO					
			Month/Year/Range			Month/Year/Range								
			g/hour	100mg/hour	100mg/hour	g/hour	100mg/hour	100mg/hour						
Road 1	1	0000-0100	4.34E-01	6.31E-08	1.27E-01	3.36E-02	4.91E-08	9.81E-01	3.80E-02	5.11E-01	7.11E-02	1.07E-01	1.55E-01	1.18E-01
		0100-0200	4.79E-01	6.92E-08	1.38E-01	3.69E-02	5.25E-08	1.05E-01	4.12E-02	5.56E-01	7.56E-02	1.12E-01	1.60E-01	1.24E-01
Road 1	1	0200-0300	5.24E-01	7.53E-08	1.49E-01	4.02E-02	5.69E-08	1.16E-01	4.43E-02	5.91E-01	7.81E-02	1.17E-01	1.65E-01	1.29E-01
		0300-0400	5.70E-01	8.13E-08	1.60E-01	4.35E-02	6.03E-08	1.27E-01	4.64E-02	6.36E-01	8.26E-02	1.22E-01	1.73E-01	1.34E-01
Road 1	1	0400-0500	6.15E-01	8.74E-08	1.71E-01	4.68E-02	6.47E-08	1.38E-01	4.85E-02	6.77E-01	8.67E-02	1.27E-01	1.84E-01	1.39E-01
		0500-0600	6.60E-01	9.35E-08	1.82E-01	5.01E-02	6.91E-08	1.49E-01	5.06E-02	7.28E-01	9.18E-02	1.32E-01	1.95E-01	1.44E-01
Road 1	1	0600-0700	7.05E-01	9.96E-08	1.93E-01	5.34E-02	7.35E-08	1.60E-01	5.27E-02	7.59E-01	9.59E-02	1.37E-01	2.06E-01	1.49E-01
		0700-0800	7.50E-01	1.05E-07	2.04E-01	5.67E-02	7.79E-08	1.71E-01	5.48E-02	8.00E-01	1.01E-01	1.42E-01	2.17E-01	1.54E-01
Road 1	1	0800-0900	7.95E-01	1.11E-07	2.15E-01	6.00E-02	8.23E-08	1.82E-01	5.69E-02	8.29E-01	1.06E-01	1.47E-01	2.28E-01	1.59E-01
		0900-1000	8.40E-01	1.17E-07	2.26E-01	6.33E-02	8.67E-08	1.93E-01	5.90E-02	8.50E-01	1.11E-01	1.52E-01	2.39E-01	1.64E-01
Road 1	1	1000-1100	8.85E-01	1.23E-07	2.37E-01	6.66E-02	9.11E-08	2.04E-01	6.11E-02	8.71E-01	1.16E-01	1.57E-01	2.50E-01	1.68E-01
		1100-1200	9.30E-01	1.29E-07	2.48E-01	6.99E-02	9.55E-08	2.15E-01	6.32E-02	9.02E-01	1.21E-01	1.62E-01	2.61E-01	1.73E-01
Road 1	1	1200-1300	9.75E-01	1.35E-07	2.59E-01	7.32E-02	1.00E-07	2.26E-01	6.53E-02	9.23E-01	1.26E-01	1.67E-01	2.72E-01	1.78E-01
		1300-1400	1.02E-01	1.41E-07	2.70E-01	7.65E-02	1.04E-07	2.37E-01	6.74E-02	9.44E-01	1.31E-01	1.72E-01	2.83E-01	1.84E-01
Road 1	1	1400-1500	1.06E-01	1.47E-07	2.81E-01	7.98E-02	1.09E-07	2.48E-01	6.95E-02	9.65E-01	1.36E-01	1.77E-01	2.94E-01	1.90E-01
		1500-1600	1.11E-01	1.53E-07	2.92E-01	8.31E-02	1.13E-07	2.59E-01	7.16E-02	9.86E-01	1.41E-01	1.82E-01	3.05E-01	1.96E-01
Road 1	1	1600-1700	1.15E-01	1.59E-07	3.03E-01	8.64E-02	1.18E-07	2.70E-01	7.37E-02	1.00E-01	1.46E-01	1.87E-01	3.16E-01	1.99E-01
		1700-1800	1.20E-01	1.65E-07	3.14E-01	8.97E-02	1.22E-07	2.81E-01	7.58E-02	1.02E-01	1.51E-01	1.92E-01	3.27E-01	2.02E-01
Road 1	1	1800-1900	1.24E-01	1.71E-07	3.25E-01	9.30E-02	1.27E-07	2.92E-01	7.79E-02	1.04E-01	1.56E-01	1.97E-01	3.38E-01	2.04E-01
		1900-2000	1.29E-01	1.77E-07	3.36E-01	9.63E-02	1.31E-07	3.03E-01	7.99E-02	1.06E-01	1.61E-01	2.02E-01	3.49E-01	2.06E-01
Road 1	1	2000-2100	1.33E-01	1.83E-07	3.47E-01	9.96E-02	1.36E-07	3.14E-01	8.20E-02	1.08E-01	1.66E-01	2.07E-01	3.60E-01	2.08E-01
		2100-2200	1.38E-01	1.89E-07	3.58E-01	1.03E-01	1.40E-07	3.25E-01	8.41E-02	1.10E-01	1.71E-01	2.12E-01	3.71E-01	2.10E-01
Road 2	2	0000-0100	5.05E-01	7.25E-08	1.41E-01	3.98E-02	5.62E-08	1.12E-01	4.34E-02	5.40E-01	7.40E-02	1.04E-01	1.50E-01	1.16E-01
		0100-0200	5.50E-01	7.86E-08	1.52E-01	4.31E-02	6.06E-08	1.23E-01	4.55E-02	5.81E-01	7.61E-02	1.09E-01	1.55E-01	1.20E-01
Road 2	2	0200-0300	5.95E-01	8.47E-08	1.63E-01	4.64E-02	6.50E-08	1.34E-01	4.79E-02	6.02E-01	7.82E-02	1.14E-01	1.60E-01	1.25E-01
		0300-0400	6.40E-01	9.08E-08	1.74E-01	4.97E-02	6.94E-08	1.45E-01	5.03E-02	6.23E-01	8.03E-02	1.19E-01	1.65E-01	1.30E-01
Road 2	2	0400-0500	6.85E-01	9.69E-08	1.85E-01	5.30E-02	7.38E-08	1.56E-01	5.27E-02	6.44E-01	8.24E-02	1.24E-01	1.70E-01	1.35E-01
		0500-0600	7.30E-01	1.03E-07	1.96E-01	5.63E-02	7.82E-08	1.67E-01	5.51E-02	6.65E-01	8.45E-02	1.29E-01	1.75E-01	1.40E-01
Road 2	2	0600-0700	7.75E-01	1.09E-07	2.07E-01	5.96E-02	8.26E-08	1.78E-01	5.75E-02	6.86E-01	8.66E-02	1.34E-01	1.80E-01	1.45E-01
		0700-0800	8.20E-01	1.16E-07	2.18E-01	6.29E-02	8.70E-08	1.89E-01	5.99E-02	7.07E-01	8.87E-02	1.39E-01	1.85E-01	1.50E-01
Road 2	2	0800-0900	8.65E-01	1.22E-07	2.29E-01	6.62E-02	9.14E-08	2.00E-01	6.23E-02	7.28E-01	9.08E-02	1.44E-01	1.90E-01	1.55E-01
		0900-1000	9.10E-01	1.29E-07	2.40E-01	6.95E-02	9.58E-08	2.11E-01	6.46E-02	7.49E-01	9.29E-02	1.49E-01	1.95E-01	1.60E-01
Road 2	2	1000-1100	9.55E-01	1.35E-07	2.50E-01	7.28E-02	1.00E-07	2.56E-01	6.67E-02	7.69E-01	9.50E-02	1.54E-01	2.00E-01	1.65E-01
		1100-1200	1.00E-01	1.42E-07	2.61E-01	7.61E-02	1.04E-07	2.67E-01	6.90E-02	7.90E-01	9.71E-02	1.59E-01	2.05E-01	1.70E-01
Road 2	2	1200-1300	1.04E-01	1.48E-07	2.72E-01	7.94E-02	1.08E-07	2.77E-01	7.13E-02	8.10E-01	9.92E-02	1.64E-01	2.10E-01	1.75E-01
		1300-1400	1.08E-01	1.54E-07	2.83E-01	8.27E-02	1.12E-07	2.88E-01	7.36E-02	8.31E-01	1.01E-01	1.69E-01	2.15E-01	1.80E-01
Road 2	2	1400-1500	1.12E-01	1.60E-07	2.94E-01	8.60E-02	1.16E-07	2.98E-01	7.55E-02	8.52E-01	1.03E-01	1.74E-01	2.20E-01	1.85E-01
		1500-1600	1.16E-01	1.66E-07	3.05E-01	8.93E-02	1.20E-07	3.09E-01	7.74E-02	8.73E-01	1.05E-01	1.79E-01	2.25E-01	1.90E-01
Road 2	2	1600-1700	1.20E-01	1.72E-07	3.16E-01	9.26E-02	1.24E-07	3.20E-01	7.93E-02	8.94E-01	1.07E-01	1.84E-01	2.30E-01	1.95E-01
		1700-1800	1.24E-01	1.78E-07	3.27E-01	9.59E-02	1.28E-07	3.31E-01	8.12E-02	9.15E-01	1.09E-01	1.89E-01	2.35E-01	2.00E-01
Road 2	2	1800-1900	1.28E-01	1.84E-07	3.38E-01	9.92E-02	1.32E-07	3.42E-01	8.31E-02	9.36E-01	1.11E-01	1.94E-01	2.40E-01	2.05E-01
		1900-2000	1.32E-01	1.90E-07	3.49E-01	1.02E-01	1.36E-07	3.53E-01	8.50E-02	9.57E-01	1.13E-01	1.99E-01	2.45E-01	2.10E-01
Road 2	2	2000-2100	1.36E-01	1.96E-07	3.60E-01	1.05E-01	1.40E-07	3.64E-01	8.69E-02	9.78E-01	1.15E-01	2.04E-01	2.50E-01	2.15E-01
		2100-2200	1.40E-01	2.02E-07	3.71E-01	1.08E-01	1.44E-07	3.75E-01	8.88E-02	9.99E-01	1.17E-01	2.09E-01	2.55E-01	2.20E-01
Road 3	3	0000-0100	5.51E-01	7.85E-08	1.56E-01	4.21E-02	5.83E-08	1.17E-01	4.56E-02	5.69E-01	7.69E-02	1.05E-01	1.51E-01	1.17E-01
		0100-0200	5.96E-01	8.46E-08	1.67E-01	4.54E-02	6.27E-08	1.28E-01	4.80E-02	5.90E-01	7.90E-02	1.10E-01	1.56E-01	1.22E-01
Road 3	3	0200-0300	6.41E-01	9.06E-08	1.78E-01	4.87E-02	6.70E-08	1.39E-01	5.04E-02	6.11E-01	8.11E-02	1.15E-01	1.61E-01	1.27E-01
		0300-0400	6.86E-01	9.67E-08	1.89E-01	5.20E-02	7.14E-08	1.50E-01	5.28E-02	6.32E-01	8.32E-02	1.20E-01	1.66E-01	1.32E-01
Road 3	3	0400-0500	7.31E-01	1.03E-07	2.00E-01	5.53E-02	7.58E-08	1.61E-01	5.51E-02	6.53E-01	8.53E-02	1.25E-01	1.71E-01	1.37E-01
		0500-0600	7.76E-01	1.09E-07	2.11E-01	5.86E-02	8.02E-08	1.72E-01	5.75E-02	6.74E-01	8.74E-02	1.30E-01	1.76E-01	1.42E-01
Road 3	3	0600-0700	8.21E-01	1.16E-07	2.22E-01	6.19E-02	8.46E-08	1.83E-01	5.98E-02	6.95E-01	8.95E-02	1.35E-01	1.81E-01	1.47E-01
		0700-0800	8.66E-01	1.22E-07	2.33E-01	6.52E-02	8.90E-08	1.94E-01	6.21E-02	7.16E-01	9.16E-02	1.40E-01	1.86E-01	1.52E-01
Road 3	3	0800-0900	9.11E-01	1.29E-07	2.44E-01	6.85E-02	9.34E-08	2.05E-01	6.44E-02	7.37E-01	9.37E-02	1.45E-01	1.91E-01	1.57E-01
		0900-1000	9.56E-01	1.35E-07	2.55E-01	7.18E-02	9.78E-08	2.16E-01	6.67E-02	7.58E-01	9.58E-02	1.50E-01	1.96E-01	1.62E-01
Road 3	3	1000-1100	1.00E-01	1.42E-07	2.66E-01	7.51E-02	1.02E-07	2.27E-01	6.90E-02	7.79E-01	9.79E-02	1.55E-01	2.01E-01	1.67E-01
		1100-1200	1.04E-01	1.48E-07	2.77E-01	7.84E-02	1.06E-07	2.38E-01	7.13E-02	8.00E-01	9.99E-02	1.60E-01	2.06E-01	1.72E-01
Road 3	3	1200-1300	1.08E-01	1.54E-07	2.88E-01	8.17E-02	1.10E-07	2.49E-01	7.36E-02	8.21E-01	1.02E-01	1.65E-01	2.11E-01	1.77E-01
		1300-1400	1.12E-01	1.60E-07	2.99E-01	8.50E-02	1.14E-07	2.60E-01	7.59E-02	8.42E-01	1.04E-01	1.70E-01	2.16E-01	1.82E-01
Road 3	3	1400-1500	1.16E-01	1.66E-07	3.10E-01	8.83E-02	1.18E-07	2.71E-01	7.82E-02	8.63E-01	1.06E-01	1.75E-01	2.21E-01	1.87E-01
		1500-1600	1.20E-01	1.72E-07	3.21E-01	9.16E-02	1.22E-07	2.82E-01	8.05E-02	8.84E-01	1.08E-01	1.80E-01	2.26E-01	1.92E-01
Road 3	3	1600-1700	1.24E-01	1.78E-07	3.32E-01	9.49E-02	1.26E-07	2.93E-01	8.28E-02	9.05E-01	1.10E-01	1.85E-01	2.31E-01	1.97E-01
		1700-1800	1.28E-01	1.84E-07	3.43E-01	9.82E-02	1.30E-07	3.04E-01	8.51E-02	9.26E-01	1.12E-01	1.90E-01	2.36E-01	2.02E-01
Road 3	3	1800-1900	1.32E-01	1.90E-07	3.54E-01	1.01E-01	1.34E-07	3.15E-01	8.74E-02	9.47E-01	1.14E-01	1.95E-01	2.41E-01	2.07E-01
		1900-2000	1.36E-01	1.96E-07	3.65E-01	1.04E-01	1.38E-07	3.26E-01	8.97E-02	9.68E-01	1.16E-01	2.00E-01	2.46E-01	2.12E-01
Road 3	3	2000-2100	1.40E-01	2.02E-07	3.76E-01	1.07E-01	1.42E-07	3.37E-01	9.19E-02	9.89E-01	1.18E-01	2.05E-01	2.51E-01	2.17E-01
		2100-2200	1.44E-01	2.08E-07	3.87E-0									

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Twin 10 North Underground Quarry															
Open Road to Base Emission Factors for 4000000 Model															
Year 2043															
Road name	Road ID	Hour	No. Emission			No Emission									
			g/hour	kg/hour	ton/hour	g/hour	kg/hour	ton/hour	kg/hour	Average					
			g/hour	kg/hour	ton/hour	g/hour	kg/hour	ton/hour	kg/hour	Average					
Road #4	4	0800-0900	7,221.03	0.722	1.907	1,831.9	1,181.06	1.0112	4,551.02	1,644.08	1,306.02	4,877.08	4.87		
Road #4	4	0900-1000	5,335.03	0.534	1.427	1,375.0	859.03	0.7326	3,481.00	1,260.00	1,000.00	2,750.00	2.75		
Road #4	4	1000-1100	5,335.03	0.534	1.427	1,375.0	859.03	0.7326	3,481.00	1,260.00	1,000.00	2,750.00	2.75		
Road #4	4	1100-1200	8,896.14	0.890	2.475	3,411.03	1,506.06	1.2781	5,306.02	1,926.00	9,344.00	3,765.00	3.76		
Road #4	4	1200-1300	1,009.12	0.101	0.277	0.739	0.462	0.3935	1,576.00	560.00	450.00	1,160.00	1.16		
Road #4	4	1300-1400	1,140.00	0.114	0.317	2,389.00	8,881.00	7.6966	1,079.00	0.9281	1,786.00	1,161.00	8,881.00	6.3	
Road #4	4	1400-1500	1,111.03	0.111	0.308	2,483.00	8,851.00	7.6646	1,180.00	0.9667	1,860.00	1,260.00	8,851.00	6.25	
Road #4	4	1500-1600	1,040.00	0.104	0.289	2,379.00	8,851.00	7.6646	1,180.00	0.9667	1,860.00	1,260.00	8,851.00	6.25	
Road #4	4	1600-1700	1,990.00	0.199	0.553	2,773.00	9,830.00	8,630.00	1,180.00	0.9667	2,016.00	1,474.00	2,016.00	1,017.00	
Road #4	4	1700-1800	7,711.03	0.771	2.145	2,839.00	10,631.00	9,218.00	1,610.00	1.3417	2,839.00	2,016.00	10,631.00	7.71	
Road #4	4	1800-1900	5,511.03	0.551	1.546	2,744.03	3,072.03	2.6213	3,986.03	3,621.02	1,546.00	1,140.00	3,476.00	3,621.00	3.62
Road #4	4	1900-2000	4,575.03	0.458	1.275	2,389.00	8,881.00	7.6966	1,079.00	0.9281	1,786.00	1,161.00	8,881.00	7.69	
Road #4	4	2000-2100	4,575.03	0.458	1.275	2,389.00	8,881.00	7.6966	1,079.00	0.9281	1,786.00	1,161.00	8,881.00	7.69	
Road #4	4	2100-2200	4,006.03	0.401	1.106	2,786.00	3,235.00	2,836.00	2,603.00	2,635.00	1,768.00	1,405.00	2,746.00	2,603.00	2.6
Road #4	4	2200-2300	3,831.03	0.383	1.064	2,639.00	3,176.00	2,786.00	2,603.00	2,635.00	1,768.00	1,405.00	2,746.00	2,603.00	2.6
Road #4	4	2300-0000	4,006.03	0.401	1.106	2,786.00	3,235.00	2,836.00	2,603.00	2,635.00	1,768.00	1,405.00	2,746.00	2,603.00	2.6
Road #5	5	0800-0900	1,861.03	0.186	0.516	1,861.03	8,851.00	7.6646	1,180.00	0.9667	1,860.00	1,260.00	8,851.00	7.66	
Road #5	5	0900-1000	6,613.04	0.661	1.840	9,275.00	5,565.00	4.7907	4,006.00	3,223.00	4,007.00	3,334.00	5,565.00	4.79	
Road #5	5	1000-1100	6,613.04	0.661	1.840	9,275.00	5,565.00	4.7907	4,006.00	3,223.00	4,007.00	3,334.00	5,565.00	4.79	
Road #5	5	1100-1200	2,939.00	0.294	0.817	2,271.00	8,851.00	7.6646	1,180.00	0.9667	1,860.00	1,260.00	8,851.00	7.66	
Road #5	5	1200-1300	2,939.00	0.294	0.817	2,271.00	8,851.00	7.6646	1,180.00	0.9667	1,860.00	1,260.00	8,851.00	7.66	
Road #5	5	1300-1400	2,939.00	0.294	0.817	2,271.00	8,851.00	7.6646	1,180.00	0.9667	1,860.00	1,260.00	8,851.00	7.66	
Road #5	5	1400-1500	2,939.00	0.294	0.817	2,271.00	8,851.00	7.6646	1,180.00	0.9667	1,860.00	1,260.00	8,851.00	7.66	
Road #5	5	1500-1600	2,939.00	0.294	0.817	2,271.00	8,851.00	7.6646	1,180.00	0.9667	1,860.00	1,260.00	8,851.00	7.66	
Road #5	5	1600-1700	2,939.00	0.294	0.817	2,271.00	8,851.00	7.6646	1,180.00	0.9667	1,860.00	1,260.00	8,851.00	7.66	
Road #5	5	1700-1800	2,939.00	0.294	0.817	2,271.00	8,851.00	7.6646	1,180.00	0.9667	1,860.00	1,260.00	8,851.00	7.66	
Road #5	5	1800-1900	2,939.00	0.294	0.817	2,271.00	8,851.00	7.6646	1,180.00	0.9667	1,860.00	1,260.00	8,851.00	7.66	
Road #5	5	1900-2000	2,939.00	0.294	0.817	2,271.00	8,851.00	7.6646	1,180.00	0.9667	1,860.00	1,260.00	8,851.00	7.66	
Road #5	5	2000-2100	2,939.00	0.294	0.817	2,271.00	8,851.00	7.6646	1,180.00	0.9667	1,860.00	1,260.00	8,851.00	7.66	
Road #5	5	2100-2200	2,939.00	0.294	0.817	2,271.00	8,851.00	7.6646	1,180.00	0.9667	1,860.00	1,260.00	8,851.00	7.66	
Road #5	5	2200-2300	2,939.00	0.294	0.817	2,271.00	8,851.00	7.6646	1,180.00	0.9667	1,860.00	1,260.00	8,851.00	7.66	
Road #5	5	2300-0000	2,939.00	0.294	0.817	2,271.00	8,851.00	7.6646	1,180.00	0.9667	1,860.00	1,260.00	8,851.00	7.66	
Road #6	6	0800-0900	1,576.00	0.158	0.443	1,489.03	8,851.00	7.6646	1,180.00	0.9667	1,860.00	1,260.00	8,851.00	7.66	
Road #6	6	0900-1000	5,335.03	0.534	1.427	1,375.0	859.03	0.7326	3,481.00	1,260.00	1,000.00	2,750.00	2.75		
Road #6	6	1000-1100	5,335.03	0.534	1.427	1,375.0	859.03	0.7326	3,481.00	1,260.00	1,000.00	2,750.00	2.75		
Road #6	6	1100-1200	8,896.14	0.890	2.475	3,411.03	1,506.06	1.2781	5,306.02	1,926.00	9,344.00	3,765.00	3.76		
Road #6	6	1200-1300	1,009.12	0.101	0.277	0.739	0.462	0.3935	1,576.00	560.00	450.00	1,160.00	1.16		
Road #6	6	1300-1400	1,140.00	0.114	0.317	2,389.00	8,881.00	7.6966	1,079.00	0.9281	1,786.00	1,161.00	8,881.00	6.3	
Road #6	6	1400-1500	1,111.03	0.111	0.308	2,483.00	8,851.00	7.6646	1,180.00	0.9667	1,860.00	1,260.00	8,851.00	6.25	
Road #6	6	1500-1600	1,040.00	0.104	0.289	2,379.00	8,851.00	7.6646	1,180.00	0.9667	1,860.00	1,260.00	8,851.00	6.25	
Road #6	6	1600-1700	1,990.00	0.199	0.553	2,773.00	9,830.00	8,630.00	1,180.00	0.9667	2,016.00	1,474.00	2,016.00	1,017.00	
Road #6	6	1700-1800	7,711.03	0.771	2.145	2,839.00	10,631.00	9,218.00	1,610.00	1.3417	2,839.00	2,016.00	10,631.00	7.71	
Road #6	6	1800-1900	5,511.03	0.551	1.546	2,744.03	3,072.03	2.6213	3,986.03	3,621.02	1,546.00	1,140.00	3,476.00	3,621.00	3.62
Road #6	6	1900-2000	4,575.03	0.458	1.275	2,389.00	8,881.00	7.6966	1,079.00	0.9281	1,786.00	1,161.00	8,881.00	7.69	
Road #6	6	2000-2100	4,575.03	0.458	1.275	2,389.00	8,881.00	7.6966	1,079.00	0.9281	1,786.00	1,161.00	8,881.00	7.69	
Road #6	6	2100-2200	4,006.03	0.401	1.106	2,786.00	3,235.00	2,836.00	2,603.00	2,635.00	1,768.00	1,405.00	2,746.00	2,603.00	2.6
Road #6	6	2200-2300	3,831.03	0.383	1.064	2,639.00	3,176.00	2,786.00	2,603.00	2,635.00	1,768.00	1,405.00	2,746.00	2,603.00	2.6
Road #6	6	2300-0000	4,006.03	0.401	1.106	2,786.00	3,235.00	2,836.00	2,603.00	2,635.00	1,768.00	1,405.00	2,746.00	2,603.00	2.6
Road #7	7	0800-0900	1,861.03	0.186	0.516	1,861.03	8,851.00	7.6646	1,180.00	0.9667	1,860.00	1,260.00	8,851.00	7.66	
Road #7	7	0900-1000	6,613.04	0.661	1.840	9,275.00	5,565.00	4.7907	4,006.00	3,223.00	4,007.00	3,334.00	5,565.00	4.79	
Road #7	7	1000-1100	6,613.04	0.661	1.840	9,275.00	5,565.00	4.7907	4,006.00	3,223.00	4,007.00	3,334.00	5,565.00	4.79	
Road #7	7	1100-1200	2,939.00	0.294	0.817	2,271.00	8,851.00	7.6646	1,180.00	0.9667	1,860.00	1,260.00	8,851.00	7.66	
Road #7	7	1200-1300	2,939.00	0.294	0.817	2,271.00	8,851.00	7.6646	1,180.00	0.9667	1,860.00	1,260.00	8,851.00	7.66	
Road #7	7	1300-1400	2,939.00	0.294	0.817	2,271.00	8,851.00	7.6646	1,180.00	0.9667	1,860.00	1,260.00	8,851.00	7.66	
Road #7	7	1400-1500	2,939.00	0.294	0.817	2,271.00	8,851.00	7.6646	1,180.00	0.9667	1,860.00	1,260.00	8,851.00	7.66	
Road #7	7	1500-1600	2,939.00	0.294	0.817	2,271.00	8,851.00	7.6646	1,180.00	0.9667	1,860.00	1,260.00	8,851.00	7.66	
Road #7	7	1600-1700	2,939.00	0.294	0.817	2,271.00	8,851.00	7.6646	1,180.00	0.9667	1,860.00	1,260.00	8,851.00	7.66	
Road #7	7	1700-1800	2,939.00	0.294	0.817	2,271.00	8,851.00	7.6646	1,180.00	0.9667	1,860.00	1,260.00	8,851.00	7.66	
Road #7	7	1800-1900	2,939.00	0.294	0.817	2,271.00	8,851.00	7.6646	1,180.00	0.9667	1,860.00	1,260.00	8,851.00	7.66	
Road #7	7	1900-2000	2,939.00	0.294	0.817	2,271.00	8,851.00	7.6646	1,180.00	0.9667	1,860.00	1,260.00	8,851.00	7.66	
Road #7	7	2000-2100	2,939.00	0.294	0.817	2,271.00	8,851.00	7.6646	1,180.00	0.9667	1,860.00	1,260.00	8,851.00	7.66	
Road #7	7	2100-2200	2,939.00	0.294	0.817	2,271.00	8,851.00	7.6646	1,180.00	0.9667	1,860.00	1,260.00	8,851.00	7.66	
Road #7	7	2200-2300	2,939.00	0.294	0.817	2,271.00	8,851.00	7.6646	1,180.00	0.9667	1,860.00	1,260.00	8,851.00	7.66	
Road #7	7	2300-0000	2,939.00	0.294	0.817	2,271.00	8,851.00	7.6646	1,180.00	0.9667	1,860.00	1,260.00	8,851.00	7.66	
Road #8	8	0800-0900	1,861.03	0.186	0.516	1,861.03	8,851.00	7.6646	1,180.00	0.9667	1,860.00	1,260.00	8,851.00	7.66	
Road #8	8	0900-1000	6,613.04	0.661	1.840	9,275.00	5,565.00	4.7907	4,006.00	3,223.00	4,007.00	3,334.00	5,565.00	4.79	
Road #8	8	1000-1100	6,613.04	0.661	1.840	9,275.00	5,565.00	4.7907	4,006.00	3,223.00	4,007.00	3,334.00	5,565.00	4.79	
Road #8	8	1100-1200	2,939.00	0.294	0.817	2,271.00	8,851.00	7.6646	1,180.00	0.9667	1,860.00	1,260.00	8,851.00	7.66	
Road #8	8	1200-1300	2,939.00	0.294	0.817	2,271.00	8,851.00	7.6646	1,180.00	0.9667	1,860.00	1,260.00	8,851.00	7.66	
Road #8	8	1300-1400	2,939.00	0.294	0.817										

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Top Road North Underground Quarry											
Using 24 Road Noise Exposure Factors for AERMOD model (hour)											
Year 2043			NO _x Emission				NO Emission				
Row Name	Road ID	Height	Monthly/quarter		Monthly/quarter		Monthly/quarter		Monthly/quarter		
			g/hour	g/day	g/hour	g/day	g/hour	g/day	g/hour	g/day	
Road 1	14	0800-0900	3.11E-02	0.747	5.51E-03	1.32E-01	3.21E-06	7.69E-05	1.47E-01	3.51E-04	4.04E-03
Road 2	14	0900-1000	3.55E-02	8.62E-07	5.77E-03	1.38E-01	3.29E-06	7.90E-05	1.46E-06	2.33E-07	4.74E-03
Road 3	14	1000-1100	3.11E-02	7.47E-07	5.51E-03	1.32E-01	3.21E-06	7.69E-05	1.47E-01	3.51E-04	4.04E-03
Road 4	14	1100-1200	3.66E-02	7.45E-07	6.47E-03	1.52E-01	3.48E-06	1.67E-06	1.61E-06	3.41E-06	2.13E-02
Road 5	14	1200-1300	4.96E-02	1.15E-07	7.27E-03	1.73E-01	3.95E-06	2.27E-06	2.17E-06	3.18E-06	5.54E-02
Road 6	14	1300-1400	5.13E-02	1.15E-07	7.27E-03	1.73E-01	3.95E-06	2.27E-06	2.17E-06	3.18E-06	5.54E-02
Road 7	14	1400-1500	5.13E-02	1.15E-07	7.27E-03	1.73E-01	3.95E-06	2.27E-06	2.17E-06	3.18E-06	5.54E-02
Road 8	14	1500-1600	5.13E-02	1.15E-07	7.27E-03	1.73E-01	3.95E-06	2.27E-06	2.17E-06	3.18E-06	5.54E-02
Road 9	14	1600-1700	5.01E-02	1.37E-06	8.15E-03	1.74E-01	4.21E-06	2.29E-06	2.22E-06	3.69E-06	7.44E-02
Road 10	14	1700-1800	5.01E-02	1.37E-06	8.15E-03	1.74E-01	4.21E-06	2.29E-06	2.22E-06	3.69E-06	7.44E-02
Road 11	14	1800-1900	5.01E-02	1.37E-06	8.15E-03	1.74E-01	4.21E-06	2.29E-06	2.22E-06	3.69E-06	7.44E-02
Road 12	14	1900-2000	2.64E-02	5.56E-07	5.35E-03	1.28E-01	2.98E-06	1.37E-06	1.31E-06	2.14E-06	3.76E-02
Road 13	14	2000-2100	1.82E-02	4.19E-07	2.41E-03	7.99E-04	1.14E-06	1.89E-06	2.24E-06	4.09E-06	8.12E-03
Road 14	14	2100-2200	1.61E-02	2.90E-07	1.60E-03	7.62E-04	1.43E-06	8.87E-07	9.53E-07	1.27E-07	2.47E-02
Road 15	14	2200-2300	1.61E-02	2.90E-07	1.60E-03	7.62E-04	1.43E-06	8.87E-07	9.53E-07	1.27E-07	2.47E-02
Road 16	14	2300-2400	1.61E-02	2.90E-07	1.60E-03	7.62E-04	1.43E-06	8.87E-07	9.53E-07	1.27E-07	2.47E-02
Road 17	14	2400-0100	1.60E-02	2.90E-07	1.36E-03	7.11E-04	1.01E-06	6.31E-06	1.47E-06	7.90E-06	3.98E-02
Road 18	15	0000-0100	2.18E-02	4.62E-08	1.54E-04	2.29E-04	2.64E-07	4.54E-04	9.39E-07	2.02E-07	3.50E-04
Road 19	15	0100-0200	2.18E-02	4.62E-08	1.54E-04	2.29E-04	2.64E-07	4.54E-04	9.39E-07	2.02E-07	3.50E-04
Road 20	15	0200-0300	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 21	15	0300-0400	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 22	15	0400-0500	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 23	15	0500-0600	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 24	15	0600-0700	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 25	15	0700-0800	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 26	15	0800-0900	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 27	15	0900-1000	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 28	15	1000-1100	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 29	15	1100-1200	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 30	15	1200-1300	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 31	15	1300-1400	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 32	15	1400-1500	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 33	15	1500-1600	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 34	15	1600-1700	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 35	15	1700-1800	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 36	15	1800-1900	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 37	15	1900-2000	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 38	15	2000-2100	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 39	15	2100-2200	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 40	15	2200-2300	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 41	15	2300-2400	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 42	15	2400-0100	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 43	16	0000-0100	2.18E-02	4.62E-08	1.54E-04	2.29E-04	2.64E-07	4.54E-04	9.39E-07	2.02E-07	3.50E-04
Road 44	16	0100-0200	2.18E-02	4.62E-08	1.54E-04	2.29E-04	2.64E-07	4.54E-04	9.39E-07	2.02E-07	3.50E-04
Road 45	16	0200-0300	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 46	16	0300-0400	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 47	16	0400-0500	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 48	16	0500-0600	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 49	16	0600-0700	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 50	16	0700-0800	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 51	16	0800-0900	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 52	16	0900-1000	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 53	16	1000-1100	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 54	16	1100-1200	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 55	16	1200-1300	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 56	16	1300-1400	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 57	16	1400-1500	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 58	16	1500-1600	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 59	16	1600-1700	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 60	16	1700-1800	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 61	16	1800-1900	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 62	16	1900-2000	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 63	16	2000-2100	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 64	16	2100-2200	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 65	16	2200-2300	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 66	16	2300-2400	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 67	16	2400-0100	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 68	17	0000-0100	2.18E-02	4.62E-08	1.54E-04	2.29E-04	2.64E-07	4.54E-04	9.39E-07	2.02E-07	3.50E-04
Road 69	17	0100-0200	2.18E-02	4.62E-08	1.54E-04	2.29E-04	2.64E-07	4.54E-04	9.39E-07	2.02E-07	3.50E-04
Road 70	17	0200-0300	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 71	17	0300-0400	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 72	17	0400-0500	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 73	17	0500-0600	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 74	17	0600-0700	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 75	17	0700-0800	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 76	17	0800-0900	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 77	17	0900-1000	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 78	17	1000-1100	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 79	17	1100-1200	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 80	17	1200-1300	2.27E-02	8.74E-08	1.13E-04	3.22E-04	1.37E-06	2.75E-04	1.57E-07	1.00E-04	5.17E-04
Road 81	17	1300-1400	2.27E-02	8.74E-08	1.13E-04	3.22					

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Top North Underground Quarry											
Tearing Dry Rock Mass Emission Factors for											
AIRMED Model (Year 2043)											
Rock Name	Block ID	Hour	Monthly/Yearly/Range			NO Emission		Monthly/Yearly/Range			
			g/hour	kg/day	tonne/year	g/hour	kg/day	tonne/year	g/hour	kg/day	
			Monthly/Yearly	Monthly/Yearly	Monthly/Yearly	Monthly/Yearly	Monthly/Yearly	Monthly/Yearly	Monthly/Yearly	Monthly/Yearly	
Rock #1	21	0000-0100	1.102	27.25	9.76	0.196	4.76	1.73	0.002	2.81	1.03
Rock #1	21	0000-0200	1.462	35.07	12.74	0.265	6.59	2.42	0.003	3.86	1.39
Rock #1	21	0000-0300	1.462	35.07	12.74	0.265	6.59	2.42	0.003	3.86	1.39
Rock #1	21	0000-0400	1.462	35.07	12.74	0.265	6.59	2.42	0.003	3.86	1.39
Rock #1	21	0000-0500	1.462	35.07	12.74	0.265	6.59	2.42	0.003	3.86	1.39
Rock #1	21	0000-0600	1.462	35.07	12.74	0.265	6.59	2.42	0.003	3.86	1.39
Rock #1	21	0000-0700	1.462	35.07	12.74	0.265	6.59	2.42	0.003	3.86	1.39
Rock #1	21	0000-0800	1.462	35.07	12.74	0.265	6.59	2.42	0.003	3.86	1.39
Rock #1	21	0000-0900	1.462	35.07	12.74	0.265	6.59	2.42	0.003	3.86	1.39
Rock #1	21	0000-1000	1.462	35.07	12.74	0.265	6.59	2.42	0.003	3.86	1.39
Rock #1	21	0000-1100	1.462	35.07	12.74	0.265	6.59	2.42	0.003	3.86	1.39
Rock #1	21	0000-1200	1.462	35.07	12.74	0.265	6.59	2.42	0.003	3.86	1.39
Rock #1	21	0000-1300	1.462	35.07	12.74	0.265	6.59	2.42	0.003	3.86	1.39
Rock #1	21	0000-1400	1.462	35.07	12.74	0.265	6.59	2.42	0.003	3.86	1.39
Rock #1	21	0000-1500	1.462	35.07	12.74	0.265	6.59	2.42	0.003	3.86	1.39
Rock #1	21	0000-1600	1.462	35.07	12.74	0.265	6.59	2.42	0.003	3.86	1.39
Rock #1	21	0000-1700	1.462	35.07	12.74	0.265	6.59	2.42	0.003	3.86	1.39
Rock #1	21	0000-1800	1.462	35.07	12.74	0.265	6.59	2.42	0.003	3.86	1.39
Rock #1	21	0000-1900	1.462	35.07	12.74	0.265	6.59	2.42	0.003	3.86	1.39
Rock #1	21	0000-2000	1.462	35.07	12.74	0.265	6.59	2.42	0.003	3.86	1.39
Rock #1	21	0000-2100	1.462	35.07	12.74	0.265	6.59	2.42	0.003	3.86	1.39
Rock #1	21	0000-2200	1.462	35.07	12.74	0.265	6.59	2.42	0.003	3.86	1.39
Rock #1	21	0000-2300	1.462	35.07	12.74	0.265	6.59	2.42	0.003	3.86	1.39
Rock #1	21	0000-2400	1.462	35.07	12.74	0.265	6.59	2.42	0.003	3.86	1.39
Rock #1	21	0000-2500	1.462	35.07	12.74	0.265	6.59	2.42	0.003	3.86	1.39
Rock #1	21	0000-2600	1.462	35.07	12.74	0.265	6.59	2.42	0.003	3.86	1.39
Rock #1	21	0000-2700	1.462	35.07	12.74	0.265	6.59	2.42	0.003	3.86	1.39
Rock #1	21	0000-2800	1.462	35.07	12.74	0.265	6.59	2.42	0.003	3.86	1.39
Rock #1	21	0000-2900	1.462	35.07	12.74	0.265	6.59	2.42	0.003	3.86	1.39
Rock #1	21	0000-3000	1.462	35.07	12.74	0.265	6.59	2.42	0.003	3.86	1.39
Rock #1	21	0000-3100	1.462	35.07	12.74	0.265	6.59	2.42	0.003	3.86	1.39
Rock #1	21	0000-3200	1.46	35.07	12.74	0.265	6.59	2.42	0.003	3.86	1.39
Rock #2	22	0000-0100	0.932	22.36	8.28	0.146	3.68	1.35	0.001	1.12	0.40
Rock #2	22	0000-0200	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #2	22	0000-0300	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #2	22	0000-0400	0.932	22.36	8.28	0.146	3.68	1.35	0.001	1.12	0.40
Rock #2	22	0000-0500	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #2	22	0000-0600	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #2	22	0000-0700	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #2	22	0000-0800	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #2	22	0000-0900	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #2	22	0000-1000	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #2	22	0000-1100	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #2	22	0000-1200	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #2	22	0000-1300	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #2	22	0000-1400	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #2	22	0000-1500	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #2	22	0000-1600	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #2	22	0000-1700	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #2	22	0000-1800	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #2	22	0000-1900	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #2	22	0000-2000	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #2	22	0000-2100	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #2	22	0000-2200	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #2	22	0000-2300	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #2	22	0000-2400	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #2	22	0000-2500	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #2	22	0000-2600	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #2	22	0000-2700	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #2	22	0000-2800	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #2	22	0000-2900	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #2	22	0000-3000	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #2	22	0000-3100	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #2	22	0000-3200	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #3	23	0000-0100	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #3	23	0000-0200	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #3	23	0000-0300	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #3	23	0000-0400	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #3	23	0000-0500	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #3	23	0000-0600	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #3	23	0000-0700	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #3	23	0000-0800	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #3	23	0000-0900	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #3	23	0000-1000	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #3	23	0000-1100	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #3	23	0000-1200	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #3	23	0000-1300	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #3	23	0000-1400	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #3	23	0000-1500	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #3	23	0000-1600	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #3	23	0000-1700	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #3	23	0000-1800	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #3	23	0000-1900	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #3	23	0000-2000	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #3	23	0000-2100	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #3	23	0000-2200	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #3	23	0000-2300	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #3	23	0000-2400	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #3	23	0000-2500	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #3	23	0000-2600	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #3	23	0000-2700	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #3	23	0000-2800	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #3	23	0000-2900	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #3	23	0000-3000	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #3	23	0000-3100	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #3	23	0000-3200	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #4	24	0000-0100	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #4	24	0000-0200	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #4	24	0000-0300	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #4	24	0000-0400	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #4	24	0000-0500	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #4	24	0000-0600	1.052	25.25	9.38	0.166	4.19	1.53	0.001	1.29	0.47
Rock #4	24	0000-									

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Top 24 Hour Underground Quarry											
Year 2043											
AEMMO model (g/d)											
Road Name	Route ID	Hour	NO _x Emission			PM ₁₀ Emission			PM _{2.5} Emission		
			g/hour	Monthly/yr	Monthly/average	g/hour	Monthly/yr	Monthly/average	g/hour	Monthly/yr	Monthly/average
Road 24	24	0800-0900	1.36E+01	4.24E+01	2.71E-04	4.65E+01	8.15E-04	1.91E+01	6.12E+01	1.05E+01	1.33E+02
Road 24	24	0900-1000	1.26E+02	2.75E+02	2.13E-04	4.72E+02	1.02E-03	8.58E+01	1.34E+02	1.39E+02	2.91E+02
Road 24	24	1000-1100	1.26E+02	2.75E+02	2.13E-04	4.72E+02	1.02E-03	8.58E+01	1.34E+02	1.39E+02	2.91E+02
Road 24	24	1100-1200	1.15E+01	3.70E+01	2.70E-04	4.77E+01	9.60E-04	8.78E+01	6.14E+01	1.27E+01	1.13E+02
Road 24	24	1200-1300	1.41E+01	4.66E+01	2.61E-04	4.86E+01	9.59E-04	9.21E+01	6.29E+01	1.55E+01	1.44E+02
Road 24	24	1300-1400	1.41E+01	4.66E+01	2.61E-04	4.86E+01	9.59E-04	9.21E+01	6.29E+01	1.55E+01	1.44E+02
Road 24	24	1400-1500	1.41E+01	4.66E+01	2.61E-04	4.86E+01	9.59E-04	9.21E+01	6.29E+01	1.55E+01	1.44E+02
Road 24	24	1500-1600	1.41E+01	4.66E+01	2.61E-04	4.86E+01	9.59E-04	9.21E+01	6.29E+01	1.55E+01	1.44E+02
Road 24	24	1600-1700	1.13E+01	3.60E+01	2.61E-04	4.74E+01	1.03E-03	1.04E+02	1.37E+01	1.21E+01	1.09E+02
Road 24	24	1700-1800	1.13E+01	3.60E+01	2.61E-04	4.74E+01	1.03E-03	1.04E+02	1.37E+01	1.21E+01	1.09E+02
Road 24	24	1800-1900	1.13E+01	3.60E+01	2.61E-04	4.74E+01	1.03E-03	1.04E+02	1.37E+01	1.21E+01	1.09E+02
Road 24	24	1900-2000	9.08E+01	3.18E+02	2.16E-04	4.21E+02	9.75E-04	4.22E+01	7.11E+01	6.51E+01	1.56E+01
Road 24	24	2000-2100	9.08E+01	3.18E+02	2.16E-04	4.21E+02	9.75E-04	4.22E+01	7.11E+01	6.51E+01	1.56E+01
Road 24	24	2100-2200	9.08E+01	3.18E+02	2.16E-04	4.21E+02	9.75E-04	4.22E+01	7.11E+01	6.51E+01	1.56E+01
Road 24	24	2200-2300	9.08E+01	3.18E+02	2.16E-04	4.21E+02	9.75E-04	4.22E+01	7.11E+01	6.51E+01	1.56E+01
Road 24	24	2300-0000	9.08E+01	3.18E+02	2.16E-04	4.21E+02	9.75E-04	4.22E+01	7.11E+01	6.51E+01	1.56E+01
Road 25	25	0000-0100	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 25	25	0100-0200	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 25	25	0200-0300	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 25	25	0300-0400	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 25	25	0400-0500	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 25	25	0500-0600	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 25	25	0600-0700	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 25	25	0700-0800	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 25	25	0800-0900	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 25	25	0900-1000	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 25	25	1000-1100	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 25	25	1100-1200	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 25	25	1200-1300	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 25	25	1300-1400	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 25	25	1400-1500	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 25	25	1500-1600	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 25	25	1600-1700	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 25	25	1700-1800	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 25	25	1800-1900	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 25	25	1900-2000	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 25	25	2000-2100	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 25	25	2100-2200	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 25	25	2200-2300	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 25	25	2300-0000	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 26	26	0000-0100	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 26	26	0100-0200	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 26	26	0200-0300	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 26	26	0300-0400	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 26	26	0400-0500	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 26	26	0500-0600	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 26	26	0600-0700	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 26	26	0700-0800	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 26	26	0800-0900	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 26	26	0900-1000	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 26	26	1000-1100	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 26	26	1100-1200	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 26	26	1200-1300	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 26	26	1300-1400	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 26	26	1400-1500	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 26	26	1500-1600	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 26	26	1600-1700	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 26	26	1700-1800	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 26	26	1800-1900	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 26	26	1900-2000	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 26	26	2000-2100	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 26	26	2100-2200	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 26	26	2200-2300	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 26	26	2300-0000	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 27	27	0000-0100	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 27	27	0100-0200	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 27	27	0200-0300	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 27	27	0300-0400	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 27	27	0400-0500	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 27	27	0500-0600	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 27	27	0600-0700	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 27	27	0700-0800	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 27	27	0800-0900	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 27	27	0900-1000	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 27	27	1000-1100	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 27	27	1100-1200	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 27	27	1200-1300	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 27	27	1300-1400	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 27	27	1400-1500	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 27	27	1500-1600	1.02E+01	4.50E+01	4.48E-04	5.71E+01	1.22E-04	1.51E+01	4.74E+01	2.07E+01	1.26E+01
Road 27	27	1600-1700	1.02E+01	4.50E+01	4.48E-04	5.71					

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Tsyng Yi North Underground Quarry

Open Road 1-hour Emission Factor for ARMMO model (August)

Road Name	Road ID	NO ₂ Emission										NO _x Emission									
		Hourly					Monthly/Average					Hourly					Monthly/Average				
		g/hour	g/km ³	tonne/hour	g/km ³	tonne/hour	g/hour	g/km ³	tonne/hour	g/km ³	tonne/hour	g/hour	g/km ³	tonne/hour	g/km ³	tonne/hour	g/hour	g/km ³	tonne/hour	g/km ³	tonne/hour
Road 41	41	0000-0000	1.076	2.088	7.68	4.531	8.88	5.046	5.262	1.507	7.56	2.516	4.08	1.728	1.385	0.465	1.385	0.465	1.385	0.465	1.385
Road 41	41	0000-0000	1.385	2.682	9.66	5.638	10.97	6.082	6.298	1.829	9.145	3.015	4.824	2.088	1.642	0.547	1.642	0.547	1.642	0.547	1.642
Road 41	41	0000-0000	1.694	3.286	11.66	6.654	12.96	6.748	7.488	2.204	10.74	3.424	5.436	2.408	1.948	0.633	1.948	0.633	1.948	0.633	1.948
Road 41	41	0000-0000	1.999	3.889	13.66	7.830	15.16	7.924	8.664	2.594	12.58	4.094	6.146	2.798	2.238	0.733	2.238	0.733	2.238	0.733	2.238
Road 41	41	0000-0000	2.304	4.492	15.66	9.006	17.46	9.006	9.746	2.984	14.58	4.694	7.146	3.192	2.532	0.832	2.532	0.832	2.532	0.832	2.532
Road 41	41	0000-0000	2.609	5.095	17.66	10.190	19.46	10.190	10.930	3.374	16.58	5.194	7.946	3.396	2.732	0.892	2.732	0.892	2.732	0.892	2.732
Road 41	41	0000-0000	2.914	5.698	19.66	11.374	21.46	11.374	12.114	3.764	18.58	5.794	8.746	3.818	3.032	0.992	3.032	0.992	3.032	0.992	3.032
Road 41	41	0000-0000	3.219	6.301	21.66	12.558	23.46	12.558	13.298	4.154	20.58	6.394	9.746	4.248	3.332	1.092	3.332	1.092	3.332	1.092	3.332
Road 41	41	0000-0000	3.524	6.904	23.66	13.742	25.46	13.742	14.482	4.544	22.58	6.994	10.746	4.642	3.632	1.192	3.632	1.192	3.632	1.192	3.632
Road 41	41	0000-0000	3.829	7.507	25.66	14.926	27.46	14.926	15.682	4.934	24.58	7.594	11.746	4.934	3.932	1.292	3.932	1.292	3.932	1.292	3.932
Road 41	41	0000-0000	4.134	8.109	27.66	16.110	29.46	16.110	16.882	5.324	26.58	8.194	12.746	5.522	4.232	1.392	4.232	1.392	4.232	1.392	4.232
Road 41	41	0000-0000	4.439	8.712	29.66	17.294	31.46	17.294	18.082	5.714	28.58	8.794	13.746	5.816	4.432	1.492	4.432	1.492	4.432	1.492	4.432
Road 41	41	0000-0000	4.744	9.315	31.66	18.478	33.46	18.478	19.282	6.104	30.58	9.394	14.746	6.110	4.632	1.592	4.632	1.592	4.632	1.592	4.632
Road 41	41	0000-0000	5.049	9.918	33.66	19.662	35.46	19.662	20.482	6.494	32.58	9.994	15.746	6.404	4.832	1.692	4.832	1.692	4.832	1.692	4.832
Road 41	41	0000-0000	5.354	10.521	35.66	20.846	37.46	20.846	21.682	6.884	34.58	10.594	16.746	6.698	5.032	1.792	5.032	1.792	5.032	1.792	5.032
Road 41	41	0000-0000	5.659	11.124	37.66	22.030	39.46	22.030	22.882	7.274	36.58	11.194	17.746	6.992	5.232	1.892	5.232	1.892	5.232	1.892	5.232
Road 41	41	0000-0000	5.964	11.727	39.66	23.214	41.46	23.214	24.082	7.664	38.58	11.794	18.746	7.286	5.432	1.992	5.432	1.992	5.432	1.992	5.432
Road 41	41	0000-0000	6.269	12.330	41.66	24.398	43.46	24.398	25.282	8.054	40.58	12.394	19.746	7.580	5.632	2.092	5.632	2.092	5.632	2.092	5.632
Road 41	41	0000-0000	6.574	12.933	43.66	25.582	45.46	25.582	26.482	8.444	42.58	12.994	20.746	7.874	5.832	2.192	5.832	2.192	5.832	2.192	5.832
Road 41	41	0000-0000	6.879	13.536	45.66	26.766	47.46	26.766	27.682	8.834	44.58	13.594	21.746	8.168	6.032	2.292	6.032	2.292	6.032	2.292	6.032
Road 41	41	0000-0000	7.184	14.139	47.66	27.950	49.46	27.950	28.882	9.224	46.58	14.194	22.746	8.462	6.232	2.392	6.232	2.392	6.232	2.392	6.232
Road 41	41	0000-0000	7.489	14.742	49.66	29.134	51.46	29.134	30.082	9.614	48.58	14.794	23.746	8.756	6.432	2.492	6.432	2.492	6.432	2.492	6.432
Road 41	41	0000-0000	7.794	15.345	51.66	30.318	53.46	30.318	31.282	10.004	50.58	15.394	24.746	9.050	6.632	2.592	6.632	2.592	6.632	2.592	6.632
Road 41	41	0000-0000	8.099	15.948	53.66	31.502	55.46	31.502	32.482	10.394	52.58	15.994	25.746	9.344	6.832	2.692	6.832	2.692	6.832	2.692	6.832
Road 41	41	0000-0000	8.404	16.551	55.66	32.686	57.46	32.686	33.682	10.784	54.58	16.594	26.746	9.638	7.032	2.792	7.032	2.792	7.032	2.792	6.992
Road 41	41	0000-0000	8.709	17.154	57.66	33.870	59.46	33.870	34.882	11.174	56.58	17.194	27.746	9.932	7.232	2.892	7.232	2.892	7.232	2.892	7.232
Road 41	41	0000-0000	9.014	17.757	59.66	35.054	61.46	35.054	36.082	11.564	58.58	17.794	28.746	10.226	7.432	2.992	7.432	2.992	7.432	2.992	7.432
Road 41	41	0000-0000	9.319	18.360	61.66	36.238	63.46	36.238	37.282	11.954	60.58	18.394	29.746	10.520	7.632	3.092	7.632	3.092	7.632	3.092	7.632
Road 41	41	0000-0000	9.624	18.963	63.66	37.422	65.46	37.422	38.482	12.344	62.58	18.994	30.746	10.814	7.832	3.192	7.832	3.192	7.832	3.192	7.832
Road 41	41	0000-0000	9.929	19.566	65.66	38.606	67.46	38.606	39.682	12.734	64.58	19.594	31.746	11.108	8.032	3.292	8.032	3.292	8.032	3.292	7.992
Road 41	41	0000-0000	10.234	20.169	67.66	39.790	69.46	39.790	40.882	13.124	66.58	20.194	32.746	11.402	8.232	3.392	8.232	3.392	8.232	3.392	7.992
Road 41	41	0000-0000	10.539	20.772	69.66	40.974	71.46	40.974	42.082	13.514	68.58	20.794	33.746	11.696	8.432	3.492	8.432	3.492	8.432	3.492	7.992
Road 41	41	0000-0000	10.844	21.375	71.66	42.158	73.46	42.158	43.282	13.904	70.58	21.394	34.746	11.990	8.632	3.592	8.632	3.592	8.632	3.592	7.992
Road 41	41	0000-0000	11.149	21.978	73.66	43.342	75.46	43.342	44.482	14.294	72.58	21.994	35.746	12.284	8.832	3.692	8.832	3.692	8.832	3.692	7.992
Road 41	41	0000-0000	11.454	22.581	75.66	44.526	77.46	44.526	45.682	14.684	74.58	22.594	36.746	12.578	9.032	3.792	9.032	3.792	9.032	3.792	7.992
Road 41	41	0000-0000	11.759	23.184	77.66	45.710	79.46	45.710	46.882	15.074	76.58	23.194	37.746	12.872	9.232	3.892	9.232	3.892	9.232	3.892	7.992
Road 41	41	0000-0000	12.064	23.787	79.66	46.894	81.46	46.894	48.082	15.464	78.58	23.794	38.746	13.166	9.432	3.992	9.432	3.992	9.432	3.992	7.992
Road 41	41	0000-0000	12.369	24.390	81.66	48.078	83.46	48.078	49.282	15.854	80.58	24.394	39.746	13.460	9.632	4.092	9.632	4.092	9.632	4.092	7.992
Road 41	41	0000-0000	12.674	24.993	83.66	49.262	85.46	49.262	50.482	16.244	82.58	24.994	40.746	13.754	9.832	4.192	9.832	4.192	9.832	4.192	7.992
Road 41	41	0000-0000	12.979	25.596	85.66	50.446	87.46	50.446	51.682	16.634	84.58	25.594	41.746	14.048	10.032	4.292	10.032	4.292	9.832	4.292	7.992
Road 41	41	0000-0000	13.284	26.199	87.66	51.630	89.46	51.630	52.882	17.024	86.58	26.194	42.746	14.342	10.232	4.392	10.232	4.392	9.832	4.392	7.992
Road 41	41	0000-0000	13.589	26.802	89.66	52.814	91.46	52.814	54.082	17.414	88.58	26.794	43.746	14.636	10.432	4.492	10.432	4.492	9.832	4.492	7.992
Road 41	41	0000-0000	13.894	27.405	91.66	54.000	93.46	54.000	55.282	17.804	90.58	27.394	44.746	14.930	10.632	4.592	10.632	4.592	9.832	4.592	7.992
Road 41	41	0000-0000	14.199	28.008	93.66	55.184	95.46	55.184	56.482	18.194	92.58	27.994	45.746	15.224	10.832	4.692	10.832	4.692	9.832	4.692	7.992
Road 41	41	0000-0000	14.504	28.611	95.66	56.370	97.46	56.370	57.682	18.584	94.58	28.594	46.746	15.518	11.032	4.792	11.032	4.792	9.832	4.792	7.992
Road 41	41	0000-0000	14.809	29.214	97.66	57.554	99.46	57.554	58.882	18.974	96.58	29.194	47.746	15.812	11.232	4.892	11.232	4.892	9.832	4.892	7.992
Road 41	41	0000-0000	15.114	29.817	99.66	58.740	101.46	58.740	60.082	19.364	98.58	29.794	48.746	16.106	11.432	4.992	11.432	4.992	9.832	4.992	7.992
Road 41	41	0000-0000	15.419	30.420	101.66	59.924	103.46	59.924	61.282	19.754	100.58	30.394	49.746	16.400	11.632	5.092	11.632	5.092	9.832	5.092	7.992
Road 41	41	0000-0000	15.724	31.023	103.66	61.110	105.46	61.110	62.482	20.144	102.58	30.994	50.746	16.694	11.832	5.192	11.832	5.192	9.832	5.192	7.992
Road 41	41	0000-0000	16.029	31.626	105.66	62.294	107.46	62.294	63.682	20.534	104.58	31.594	51.746	16.988	12.032	5.292	12.032	5.292	9.832	5.292	7.992
Road 41	41	0000-0000	16.334	32.229	107.66	63.480	109.46	63.480	64.882	20.924	106.58	32.194	52.746	17.282	12.232	5.392	12.232	5.392	9.83		

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Road North Underpass Quarry														
Open Road North 500 Emission Factors for														
ARNDSD ROAD (Road ID)														
Year 2040														
Road Name	Road ID	Hour	NO _x Emission						NO ₂ Emission					
			Motorcycle/hour		Motorcycle/hour		Motorcycle/hour		Motorcycle/hour		Motorcycle/hour		Motorcycle/hour	
			g/h/vh	tons/hour	g/h/vh	tons/hour	g/h/vh	tons/hour	g/h/vh	tons/hour	g/h/vh	tons/hour	g/h/vh	tons/hour
Road 7	7	1600-1800	3.28E+02	9.88E-07	4.20E-03	1.24E-01	3.71E+06	1.98E-09	1.57E-01	4.89E-06	2.01E+02	4.93E-03	1.47E-07	6.29E-04
Road 7	7	1700-1800	3.28E+02	1.07E+06										
Road 7	7	1800-1900	3.28E+02	1.07E+06										
Road 7	7	1900-2000	6.62E+03	1.79E-07	7.65E-04	2.41E-03	1.87E+06	4.40E-03	4.47E-01	1.15E-06	5.37E+03	1.60E-05	4.45E+06	1.00E-04
Road 7	7	2000-2100	5.98E+03	1.58E-06	6.56E-03	2.82E+03	2.26E+06	1.16E-03	1.16E-01	2.95E-06	1.16E+03	3.00E-05	1.00E+06	2.20E-04
Road 7	7	2100-2200	5.31E+03	1.14E-07	4.94E-04	3.87E-04	8.14E-07	3.48E+03	4.32E-02	9.36E-03	3.98E-03	1.44E-03	1.00E-03	1.38E-04
Road 7	7	2200-2300	5.43E+03	1.16E-07	4.75E-04	3.70E-07	7.06E-07	3.20E-06	4.33E-02	8.80E-03	3.77E-03	1.37E-03	1.00E-03	1.38E-04
Road 7	7	2300-2400	5.98E+03	1.58E-06	6.56E-03	2.82E+03	2.26E+06	1.16E-03	1.16E-01	2.95E-06	1.16E+03	3.00E-05	1.00E+06	2.20E-04
Road 7	7	2400-2500	6.75E+03	2.63E+09	5.95E-03	1.31E+02	1.27E+08	1.27E+08	3.38E-03	1.39E-05	1.47E+04	1.12E-03	8.71E+03	4.90E-04
Road 7	7	2500-2600	5.23E+03	1.29E-06	5.38E-03	2.32E+03	1.17E+06	5.95E-03	5.95E-03	1.50E-06	5.95E-03	1.50E-06	5.95E-03	1.50E-06
Road 8	8	0200-0300	5.12E+02	1.52E+09	1.12E+04	4.41E+04	9.06E+09	6.68E+05	3.99E+02	1.05E+08	7.81E+05	1.54E-03	8.88E+05	2.88E+06
Road 8	8	0300-0400	5.12E+02	1.52E+09	1.12E+04	4.41E+04	9.06E+09	6.68E+05	3.99E+02	1.05E+08	7.81E+05	1.54E-03	8.88E+05	2.88E+06
Road 8	8	0400-0500	6.65E+03	1.54E+09	1.14E+05	4.48E+05	6.78E+05	3.35E+03	1.25E+08	1.16E+06	1.37E+06	1.97E+03	1.97E+03	1.97E+03
Road 8	8	0500-0600	7.12E+03	2.87E+09	2.12E+05	3.82E+05	1.54E+08	1.54E+08	4.53E+02	1.02E+06	1.35E+06	1.84E+03	1.74E+03	5.47E+06
Road 8	8	0600-0700	7.61E+03	3.06E+09	2.28E+05	4.08E+05	1.65E+08	1.65E+08	4.83E+02	1.07E+06	1.39E+06	1.90E+03	1.79E+03	5.79E+06
Road 8	8	0700-0800	6.65E+03	1.41E+08	2.04E+04	3.62E+04	7.15E+08	5.28E+04	4.80E+02	8.57E+06	6.13E+04	2.10E+06	1.60E+06	2.51E+06
Road 8	8	0800-0900	6.65E+03	1.41E+08	2.04E+04	3.62E+04	7.15E+08	5.28E+04	4.80E+02	8.57E+06	6.13E+04	2.10E+06	1.60E+06	2.51E+06
Road 8	8	0900-1000	9.37E+03	1.58E+08	1.16E+04	4.41E+04	9.06E+09	6.68E+05	3.99E+02	1.05E+08	7.81E+05	1.54E-03	8.88E+05	2.88E+06
Road 8	8	1000-1100	1.06E+03	1.61E+08	1.16E+04	4.41E+04	9.06E+09	6.68E+05	3.99E+02	1.05E+08	7.81E+05	1.54E-03	8.88E+05	2.88E+06
Road 8	8	1100-1200	1.06E+03	1.61E+08	1.16E+04	4.41E+04	9.06E+09	6.68E+05	3.99E+02	1.05E+08	7.81E+05	1.54E-03	8.88E+05	2.88E+06
Road 8	8	1200-1300	1.06E+03	1.61E+08	1.16E+04	4.41E+04								
Road 8	8	1300-1400	1.06E+03	1.61E+08	1.16E+04	4.41E+04								
Road 8	8	1400-1500	1.06E+03	1.61E+08	1.16E+04	4.41E+04								
Road 8	8	1500-1600	1.06E+03	1.61E+08	1.16E+04	4.41E+04								
Road 8	8	1600-1700	1.06E+03	1.61E+08	1.16E+04	4.41E+04								
Road 8	8	1700-1800	1.06E+03	1.61E+08	1.16E+04	4.41E+04								
Road 8	8	1800-1900	1.06E+03	1.61E+08	1.16E+04	4.41E+04								
Road 8	8	1900-2000	1.06E+03	1.61E+08	1.16E+04	4.41E+04								
Road 8	8	2000-2100	1.06E+03	1.61E+08	1.16E+04	4.41E+04								
Road 8	8	2100-2200	1.06E+03	1.61E+08	1.16E+04	4.41E+04								
Road 8	8	2200-2300	1.06E+03	1.61E+08	1.16E+04	4.41E+04								
Road 8	8	2300-2400	1.06E+03	1.61E+08	1.16E+04	4.41E+04								
Road 8	8	2400-2500	1.06E+03	1.61E+08	1.16E+04	4.41E+04								
Road 8	8	2500-2600	1.06E+03	1.61E+08	1.16E+04	4.41E+04								
Road 9	9	0200-0300	1.07E+03	7.31E+08	3.07E+04	1.65E+04	4.33E+07	1.17E+03	7.73E+02	5.00E+02	8.88E+03	1.47E+03	1.47E+03	1.47E+03
Road 9	9	0300-0400	1.06E+03	4.86E+08	3.12E+04	6.00E+04	2.74E+07	7.43E+06	3.24E+03	8.75E+04	1.77E+05	8.35E+03	2.82E+05	2.82E+05
Road 9	9	0400-0500	1.06E+03	4.86E+08	3.12E+04	6.00E+04	2.74E+07	7.43E+06	3.24E+03	8.75E+04	1.77E+05	8.35E+03	2.82E+05	2.82E+05
Road 9	9	0500-0600	1.06E+03	4.86E+08	3.12E+04	6.00E+04	2.74E+07	7.43E+06	3.24E+03	8.75E+04	1.77E+05	8.35E+03	2.82E+05	2.82E+05
Road 9	9	0600-0700	1.06E+03	4.86E+08	3.12E+04	6.00E+04	2.74E+07	7.43E+06	3.24E+03	8.75E+04	1.77E+05	8.35E+03	2.82E+05	2.82E+05
Road 9	9	0700-0800	1.06E+03	4.86E+08	3.12E+04	6.00E+04	2.74E+07	7.43E+06	3.24E+03	8.75E+04	1.77E+05	8.35E+03	2.82E+05	2.82E+05
Road 9	9	0800-0900	1.06E+03	4.86E+08	3.12E+04	6.00E+04	2.74E+07	7.43E+06	3.24E+03	8.75E+04	1.77E+05	8.35E+03	2.82E+05	2.82E+05
Road 9	9	0900-1000	1.06E+03	4.86E+08	3.12E+04	6.00E+04	2.74E+07	7.43E+06	3.24E+03	8.75E+04	1.77E+05	8.35E+03	2.82E+05	2.82E+05
Road 9	9	1000-1100	1.06E+03	4.86E+08	3.12E+04	6.00E+04	2.74E+07	7.43E+06	3.24E+03	8.75E+04	1.77E+05	8.35E+03	2.82E+05	2.82E+05
Road 9	9	1100-1200	1.06E+03	4.86E+08	3.12E+04	6.00E+04	2.74E+07	7.43E+06	3.24E+03	8.75E+04	1.77E+05	8.35E+03	2.82E+05	2.82E+05
Road 9	9	1200-1300	1.06E+03	4.86E+08	3.12E+04	6.00E+04	2.74E+07	7.43E+06	3.24E+03	8.75E+04	1.77E+05	8.35E+03	2.82E+05	2.82E+05
Road 9	9	1300-1400	1.06E+03	4.86E+08	3.12E+04	6.00E+04	2.74E+07	7.43E+06	3.24E+03	8.75E+04	1.77E+05	8.35E+03	2.82E+05	2.82E+05
Road 9	9	1400-1500	1.06E+03	4.86E+08	3.12E+04	6.00E+04	2.74E+07	7.43E+06	3.24E+03	8.75E+04	1.77E+05	8.35E+03	2.82E+05	2.82E+05
Road 9	9	1500-1600	1.06E+03	4.86E+08	3.12E+04	6.00E+04	2.74E+07	7.43E+06	3.24E+03	8.75E+04	1.77E+05	8.35E+03	2.82E+05	2.82E+05
Road 9	9	1600-1700	1.06E+03	4.86E+08	3.12E+04	6.00E+04	2.74E+07	7.43E+06	3.24E+03	8.75E+04	1.77E+05	8.35E+03	2.82E+05	2.82E+05
Road 9	9	1700-1800	1.06E+03	4.86E+08	3.12E+04	6.00E+04	2.74E+07	7.43E+06	3.24E+03	8.75E+04	1.77E+05	8.35E+03	2.82E+05	2.82E+05
Road 9	9	1800-1900	1.06E+03	4.86E+08	3.12E+04	6.00E+04	2.74E+07	7.43E+06	3.24E+03	8.75E+04	1.77E+05	8.35E+03	2.82E+05	2.82E+05
Road 9	9	1900-2000	1.06E+03	4.86E+08	3.12E+04	6.00E+04	2.74E+07	7.43E+06	3.24E+03	8.75E+04	1.77E+05	8.35E+03	2.82E+05	2.82E+05
Road 9	9	2000-2100	1.06E+03	4.86E+08	3.12E+04	6.00E+04	2.74E+07	7.43E+06	3.24E+03	8.75E+04	1.77E+05	8.35E+03	2.82E+05	2.82E+05
Road 9	9	2100-2200	1.06E+03	4.86E+08	3.12E+04	6.00E+04	2.74E+07	7.43E+06	3.24E+03	8.75E+04	1.77E+05	8.35E+03	2.82E+05	2.82E+05
Road 9	9	2200-2300	1.06E+03	4.86E+08	3.12E+04	6.00E+04	2.74E+07	7.43E+06	3.24E+03	8.75E+04	1.77E+05	8.35E+03	2.82E+05	2.82E+05
Road 9	9	2300-2400	1.06E+03	4.86E+08	3.12E+04	6.00E+04	2.74E+07	7.43E+06	3.24E+03	8.75E+04	1.77E+05	8.35E+03	2.82E+05	2.82E+05
Road 9	9	2400-2500	1.06E+03	4.86E+08	3.12E+04	6.00E+04	2.74E+07	7.43E+06	3.24E+03	8.75E+04	1.77E+05	8.35E+03	2.82E+05	2.82E+05
Road 9	9	2500-2600	1.06E+03	4.86E+08	3.12E+04	6.00E+04	2.74E+07	7.43E+06	3.24E+03	8.75E+04	1.77E+05	8.35E+03	2.82E+05	2.82E+05
Road 10	10	0200-0300	3.63E+02	2.12E+08	5.65E+03	6.00E+03	1.02E+06	2.48E+06	1.96E+06	1.25E+06	3.96E+04	5.54E+05	1.94E+06	8.66E+06
Road 10	10	0300-0400	3.63E+02	2.12E+08	5.65E+03	6.00E+03	1.02E+06	2.48E+06	1.96E+06	1.25E+06	3.96E+04	5.54E+05	1.94E+06	8.66E+06
Road 10	10	0400-0500	3.63E+02	2.12E+08	5.65E+03	6.00E+03	1.02E+06	2.48E+06	1.96E+06	1.25E+06	3.96E+04	5.54E+05	1.94E+06	8.66E+06
Road 10	10	0500-0600	3.63E+02	2.12E+08	5.65E+03	6.00E+03	1.02E+06	2.48E+06	1.96E+06	1.25E+06	3.96E+04	5.54E+05	1.94E+06	8.66E+06
Road 10	10	0600-0700	4.81E+03	8.11E+08	1.95E+04	2.05E+04	3.70E+07	8.06E+05	2.54E+05	4.11E+07	1.00E+07	7.96E+03	2.12E+06	2.98E+05
Road 10	10	0700-0800	4.81E+03	8.11E+08	1.95E+04	2.05E+04	3.70E+07	8.06E+05	2.54E+05	4.11E+07	1.00E+07	7.96E+03	2.12E+06	2.98E+05
Road 10	10	0800-0900	5.32E+03	1.38E+07	4.00E+04	2.23E+03	1.67E+06	1.75E+05	2.65E+05	8.95E+07	2.19E+07	2.44E+06	8.66E+06	8.66E+06
Road 10	10	0900-1000	5.32E+03	1.38E+07	4.00E+04	2.23E+03	1.67E+06	1.75E+05	2.65E+05	8.95E+07	2.19E+07	2.44E+06	8.66E+06	8.66E+06
Road 10	10	1000-1100	5.32E+03	1.38E+07	4.00E+04	2.23E+03	1.67E+06	1.75E+05	2.65E+05	8.95E+07	2.19E+07	2.44E+06	8.66E+06	8.66E+06
Road 10	10	1100-1200	5.32E+03	1.38E+07	4.00E+04	2.23E+03	1.67E+06	1.75E+05	2.65E+05	8.95E+07	2.19E+07	2.44E+06	8.66E+06	8.66E+06
Road 10	10	1200-1300	5.32E+03	1.38E+07	4.00E+04	2.23E+03	1.67E+06	1.75E+05	2.65E+05	8.95E+07	2.19E+07	2.44E+06	8.66E+06	8.66E+06
Road 10	10	1300-1400	5.32E+03	1.38E+07	4.00E+04	2.23E+03	1.67E+06	1.75E+05	2.65E+05	8.95E+07	2.19E+07	2.44E+06	8.66E+06	8.66E+06
Road 10	10	1400-1500	5.32E+03											

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Top 10 North Underground Quarry													
Open Road to Base Emission Factors for ARMDed road (September)													
Year 2043	Road ID	Hour	MO Emission				NO Emission						
			g/h/veh	g/h/1000veh	g/h/1000veh	g/h/veh	g/h/1000veh	g/h/1000veh	g/h/1000veh	g/h/1000veh	g/h/1000veh		
Road #11	11 0000-0100	1.971E-02	1.485E-07	2.081E-04	1.308E-07	8.010E-07	1.272E-03	1.400E-01	1.010E-06	1.474E-03	4.088E-03	8.868E-03	4.29E-03
		1.985E-02	1.508E-07	2.144E-04	1.326E-07	8.124E-07	1.272E-03	1.400E-01	1.010E-06	1.474E-03	4.088E-03	8.868E-03	4.29E-03
Road #11	11 0100-0200	2.030E-02	1.550E-07	2.200E-04	1.370E-07	8.360E-07	1.272E-03	1.400E-01	1.010E-06	1.474E-03	4.088E-03	8.868E-03	4.29E-03
		2.044E-02	1.562E-07	2.233E-04	1.377E-07	8.509E-07	1.272E-03	1.400E-01	1.010E-06	1.474E-03	4.088E-03	8.868E-03	4.29E-03
Road #11	11 0200-0300	2.080E-02	1.590E-07	2.260E-04	1.400E-07	8.640E-07	1.272E-03	1.400E-01	1.010E-06	1.474E-03	4.088E-03	8.868E-03	4.29E-03
		2.094E-02	1.602E-07	2.293E-04	1.407E-07	8.789E-07	1.272E-03	1.400E-01	1.010E-06	1.474E-03	4.088E-03	8.868E-03	4.29E-03
Road #11	11 0300-0400	2.130E-02	1.630E-07	2.320E-04	1.423E-07	8.920E-07	1.272E-03	1.400E-01	1.010E-06	1.474E-03	4.088E-03	8.868E-03	4.29E-03
		2.144E-02	1.642E-07	2.353E-04	1.430E-07	9.069E-07	1.272E-03	1.400E-01	1.010E-06	1.474E-03	4.088E-03	8.868E-03	4.29E-03
Road #11	11 0400-0500	2.180E-02	1.670E-07	2.380E-04	1.446E-07	9.200E-07	1.272E-03	1.400E-01	1.010E-06	1.474E-03	4.088E-03	8.868E-03	4.29E-03
		2.194E-02	1.682E-07	2.413E-04	1.453E-07	9.349E-07	1.272E-03	1.400E-01	1.010E-06	1.474E-03	4.088E-03	8.868E-03	4.29E-03
Road #11	11 0500-0600	2.230E-02	1.700E-07	2.430E-04	1.469E-07	9.480E-07	1.272E-03	1.400E-01	1.010E-06	1.474E-03	4.088E-03	8.868E-03	4.29E-03
		2.244E-02	1.712E-07	2.463E-04	1.476E-07	9.629E-07	1.272E-03	1.400E-01	1.010E-06	1.474E-03	4.088E-03	8.868E-03	4.29E-03
Road #11	11 0600-0700	2.280E-02	1.740E-07	2.490E-04	1.500E-07	9.760E-07	1.272E-03	1.400E-01	1.010E-06	1.474E-03	4.088E-03	8.868E-03	4.29E-03
		2.294E-02	1.752E-07	2.523E-04	1.507E-07	9.909E-07	1.272E-03	1.400E-01	1.010E-06	1.474E-03	4.088E-03	8.868E-03	4.29E-03
Road #11	11 0700-0800	2.330E-02	1.770E-07	2.510E-04	1.523E-07	1.000E-06	1.272E-03	1.400E-01	1.010E-06	1.474E-03	4.088E-03	8.868E-03	4.29E-03
		2.344E-02	1.782E-07	2.543E-04	1.530E-07	1.0149E-06	1.272E-03	1.400E-01	1.010E-06	1.474E-03	4.088E-03	8.868E-03	4.29E-03
Road #11	11 0800-0900	2.380E-02	1.800E-07	2.530E-04	1.539E-07	1.0280E-06	1.272E-03	1.400E-01	1.010E-06	1.474E-03	4.088E-03	8.868E-03	4.29E-03
		2.394E-02	1.812E-07	2.563E-04	1.546E-07	1.0429E-06	1.272E-03	1.400E-01	1.010E-06	1.474E-03	4.088E-03	8.868E-03	4.29E-03
Road #11	11 0900-1000	2.430E-02	1.830E-07	2.550E-04	1.557E-07	1.0560E-06	1.272E-03	1.400E-01	1.010E-06	1.474E-03	4.088E-03	8.868E-03	4.29E-03
		2.444E-02	1.842E-07	2.583E-04	1.564E-07	1.0709E-06	1.272E-03	1.400E-01	1.010E-06	1.474E-03	4.088E-03	8.868E-03	4.29E-03
Road #11	11 1000-1100	2.480E-02	1.860E-07	2.570E-04	1.568E-07	1.0800E-06	1.272E-03	1.400E-01	1.010E-06	1.474E-03	4.088E-03	8.868E-03	4.29E-03
		2.494E-02	1.872E-07	2.603E-04	1.575E-07	1.0949E-06	1.272E-03	1.400E-01	1.010E-06	1.474E-03	4.088E-03	8.868E-03	4.29E-03
Road #11	11 1100-1200	2.530E-02	1.890E-07	2.590E-04	1.580E-07	1.1040E-06	1.272E-03	1.400E-01	1.010E-06	1.474E-03	4.088E-03	8.868E-03	4.29E-03
		2.544E-02	1.902E-07	2.623E-04	1.587E-07	1.1189E-06	1.272E-03	1.400E-01	1.010E-06	1.474E-03	4.088E-03	8.868E-03	4.29E-03
Road #12	12 0000-0100	3.380E-01	1.415E-07	1.340E-03	4.935E-07	2.615E-03	7.300E-03	4.310E-07	8.880E-03	2.180E-03	1.960E-03	1.16E-03	1.16E-03
		3.395E-01	1.431E-07	1.363E-03	4.931E-07	2.625E-03	7.290E-03	4.310E-07	8.880E-03	2.180E-03	1.960E-03	1.16E-03	1.16E-03
Road #12	12 0100-0200	3.330E-01	1.425E-07	1.330E-03	4.910E-07	2.580E-03	7.280E-03	4.310E-07	8.880E-03	2.180E-03	1.960E-03	1.16E-03	1.16E-03
		3.345E-01	1.440E-07	1.353E-03	4.906E-07	2.590E-03	7.270E-03	4.310E-07	8.880E-03	2.180E-03	1.960E-03	1.16E-03	1.16E-03
Road #12	12 0200-0300	3.280E-01	1.410E-07	1.310E-03	4.890E-07	2.560E-03	7.260E-03	4.310E-07	8.880E-03	2.180E-03	1.960E-03	1.16E-03	1.16E-03
		3.295E-01	1.425E-07	1.333E-03	4.886E-07	2.570E-03	7.250E-03	4.310E-07	8.880E-03	2.180E-03	1.960E-03	1.16E-03	1.16E-03
Road #12	12 0300-0400	3.230E-01	1.395E-07	1.290E-03	4.870E-07	2.540E-03	7.240E-03	4.310E-07	8.880E-03	2.180E-03	1.960E-03	1.16E-03	1.16E-03
		3.245E-01	1.410E-07	1.313E-03	4.866E-07	2.550E-03	7.230E-03	4.310E-07	8.880E-03	2.180E-03	1.960E-03	1.16E-03	1.16E-03
Road #12	12 0400-0500	3.180E-01	1.380E-07	1.270E-03	4.850E-07	2.520E-03	7.220E-03	4.310E-07	8.880E-03	2.180E-03	1.960E-03	1.16E-03	1.16E-03
		3.195E-01	1.395E-07	1.293E-03	4.846E-07	2.530E-03	7.210E-03	4.310E-07	8.880E-03	2.180E-03	1.960E-03	1.16E-03	1.16E-03
Road #12	12 0500-0600	3.130E-01	1.365E-07	1.250E-03	4.830E-07	2.500E-03	7.200E-03	4.310E-07	8.880E-03	2.180E-03	1.960E-03	1.16E-03	1.16E-03
		3.145E-01	1.380E-07	1.273E-03	4.826E-07	2.510E-03	7.190E-03	4.310E-07	8.880E-03	2.180E-03	1.960E-03	1.16E-03	1.16E-03
Road #12	12 0600-0700	3.080E-01	1.350E-07	1.230E-03	4.810E-07	2.480E-03	7.180E-03	4.310E-07	8.880E-03	2.180E-03	1.960E-03	1.16E-03	1.16E-03
		3.095E-01	1.365E-07	1.253E-03	4.806E-07	2.490E-03	7.170E-03	4.310E-07	8.880E-03	2.180E-03	1.960E-03	1.16E-03	1.16E-03
Road #12	12 0700-0800	3.030E-01	1.335E-07	1.210E-03	4.790E-07	2.460E-03	7.160E-03	4.310E-07	8.880E-03	2.180E-03	1.960E-03	1.16E-03	1.16E-03
		3.045E-01	1.350E-07	1.233E-03	4.786E-07	2.470E-03	7.150E-03	4.310E-07	8.880E-03	2.180E-03	1.960E-03	1.16E-03	1.16E-03
Road #12	12 0800-0900	2.980E-01	1.320E-07	1.190E-03	4.770E-07	2.440E-03	7.140E-03	4.310E-07	8.880E-03	2.180E-03	1.960E-03	1.16E-03	1.16E-03
		2.995E-01	1.335E-07	1.213E-03	4.766E-07	2.450E-03	7.130E-03	4.310E-07	8.880E-03	2.180E-03	1.960E-03	1.16E-03	1.16E-03
Road #12	12 0900-1000	2.930E-01	1.305E-07	1.170E-03	4.750E-07	2.420E-03	7.120E-03	4.310E-07	8.880E-03	2.180E-03	1.960E-03	1.16E-03	1.16E-03
		2.945E-01	1.320E-07	1.193E-03	4.746E-07	2.430E-03	7.110E-03	4.310E-07	8.880E-03	2.180E-03	1.960E-03	1.16E-03	1.16E-03
Road #12	12 1000-1100	2.880E-01	1.290E-07	1.150E-03	4.730E-07	2.400E-03	7.100E-03	4.310E-07	8.880E-03	2.180E-03	1.960E-03	1.16E-03	1.16E-03
		2.895E-01	1.305E-07	1.173E-03	4.726E-07	2.410E-03	7.090E-03	4.310E-07	8.880E-03	2.180E-03	1.960E-03	1.16E-03	1.16E-03
Road #12	12 1100-1200	2.830E-01	1.275E-07	1.130E-03	4.710E-07	2.380E-03	7.080E-03	4.310E-07	8.880E-03	2.180E-03	1.960E-03	1.16E-03	1.16E-03
		2.845E-01	1.290E-07	1.153E-03	4.706E-07	2.390E-03	7.070E-03	4.310E-07	8.880E-03	2.180E-03	1.960E-03	1.16E-03	1.16E-03
Road #13	13 0000-0100	2.050E-01	1.440E-07	1.380E-03	4.440E-03	1.310E-03	4.490E-07	4.880E-07	4.880E-03	2.220E-03	1.960E-03	1.16E-03	1.16E-03
		2.065E-01	1.455E-07	1.403E-03	4.436E-03	1.320E-03	4.480E-07	4.880E-07	4.880E-03	2.220E-03	1.960E-03	1.16E-03	1.16E-03
Road #13	13 0100-0200	2.000E-01	1.425E-07	1.360E-03	4.420E-03	1.290E-03	4.470E-07	4.880E-07	4.880E-03	2.220E-03	1.960E-03	1.16E-03	1.16E-03
		2.015E-01	1.440E-07	1.383E-03	4.416E-03	1.300E-03	4.460E-07	4.880E-07	4.880E-03	2.220E-03	1.960E-03	1.16E-03	1.16E-03
Road #13	13 0200-0300	1.950E-01	1.410E-07	1.340E-03	4.400E-03	1.270E-03	4.460E-07	4.880E-07	4.880E-03	2.220E-03	1.960E-03	1.16E-03	1.16E-03
		1.965E-01	1.425E-07	1.363E-03	4.396E-03	1.280E-03	4.450E-07	4.880E-07	4.880E-03	2.220E-03	1.960E-03	1.16E-03	1.16E-03
Road #13	13 0300-0400	1.900E-01	1.395E-07	1.320E-03	4.380E-03	1.250E-03	4.440E-07	4.880E-07	4.880E-03	2.220E-03	1.960E-03	1.16E-03	1.16E-03
		1.915E-01	1.410E-07	1.343E-03	4.376E-03	1.260E-03	4.430E-07	4.880E-07	4.880E-03	2.220E-03	1.960E-03	1.16E-03	1.16E-03
Road #13	13 0400-0500	1.850E-01	1.380E-07	1.300E-03	4.360E-03	1.230E-03	4.430E-07	4.880E-07	4.880E-03	2.220E-03	1.960E-03	1.16E-03	1.16E-03
		1.865E-01	1.395E-07	1.323E-03	4.356E-03	1.240E-03	4.420E-07	4.880E-07	4.880E-03	2.220E-03	1.960E-03	1.16E-03	1.16E-03
Road #13	13 0500-0600	1.800E-01	1.365E-07	1.280E-03	4.340E-03	1.210E-03	4.420E-07	4.880E-07	4.880E-03	2.220E-03	1.960E-03	1.16E-03	1.16E-03
		1.815E-01	1.380E-07	1.303E-03	4.336E-03	1.220E-03	4.410E-07	4.880E-07	4.880E-03	2.220E-03	1.960E-03	1.16E-03	1.16E-03
Road #13	13 0600-0700	1.750E-01	1.350E-07	1.260E-03	4.320E-03	1.190E-03	4.410E-07	4.880E-07	4.880E-03	2.220E-03	1.960E-03	1.16E-03	1.16E-03
		1.765E-01	1.365E-07	1.283E-03	4.316E-03	1.200E-03	4.400E-07	4.880E-07	4.880E-03	2.220E-03	1.960E-03	1.16E-03	1.16E-03
Road #13	13 0700-0800	1.700E-01	1.335E-07	1.240E-03	4.300E-03	1.170E-03	4.400E-07	4.880E-07	4.880E-03	2.220E-03	1.960E-03	1.16E-03	1.16E-03
		1.715E-01	1.350E-07	1.263E-03	4.296E-03	1.180E-03	4.390E-07	4.880E-07	4.880E-03	2.220E-03	1.960E-03	1.16E-03	1.16E-03
Road #13	13 0800-0900	1.650E-01	1.320E-07	1.220E-03	4.280E-03	1.150E-03	4.390E-07	4.880E-07	4.880E-03	2.220E-03	1.960E-03	1.16E-03	1.16E-03
		1.665E-01	1.335E										

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Factor		Quarter											
Year 2043													
Hour	NO Emission						NO Emission						
	Monthly/Hours			Monthly/Average			Monthly/Hours			Monthly/Average			
	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	
1640-1700	5.396	1.411E-06	1.511E-02	1.590E-01	5.13E-06	5.47E-02	2.451E-01	5.24E-06	5.68E-02	7.15E-03	1.91E-07	2.04E-03	
1700-1720	4.891	1.602E-06	1.590E-02	1.590E-01	4.55E-06	4.55E-02	1.846E-01	5.24E-06	5.68E-02	7.15E-03	1.91E-07	2.04E-03	
1720-1740	4.891	1.602E-06	1.590E-02	1.590E-01	4.55E-06	4.55E-02	1.846E-01	5.24E-06	5.68E-02	7.15E-03	1.91E-07	2.04E-03	
1740-1800	5.115	2.23E-07	2.41E-04	1.480E-01	1.11E-06	1.31E-02	6.189E-02	1.34E-06	1.51E-02	2.61E-03	3.89E-08	3.63E-04	
1800-1820	5.115	2.23E-07	2.41E-04	1.480E-01	1.11E-06	1.31E-02	6.189E-02	1.34E-06	1.51E-02	2.61E-03	3.89E-08	3.63E-04	
1820-1840	5.115	2.23E-07	2.41E-04	1.480E-01	1.11E-06	1.31E-02	6.189E-02	1.34E-06	1.51E-02	2.61E-03	3.89E-08	3.63E-04	
1840-1900	5.014	1.44E-07	1.540E-04	1.510E-02	5.17E-07	8.77E-03	6.86E-05	9.05E-06	1.08E-02	2.39E-03	3.89E-08	4.05E-04	
1900-1920	4.915	1.55E-07	1.48E-04	1.48E-02	5.27E-07	7.65E-03	5.76E-05	8.77E-07	8.89E-06	2.01E-03	3.89E-08	3.78E-04	
1920-1940	4.915	1.55E-07	1.48E-04	1.48E-02	5.27E-07	7.65E-03	5.76E-05	8.77E-07	8.89E-06	2.01E-03	3.89E-08	3.78E-04	
1940-2000	4.915	1.55E-07	1.48E-04	1.48E-02	5.27E-07	7.65E-03	5.76E-05	8.77E-07	8.89E-06	2.01E-03	3.89E-08	3.78E-04	
2000-2020	4.915	1.55E-07	1.48E-04	1.48E-02	5.27E-07	7.65E-03	5.76E-05	8.77E-07	8.89E-06	2.01E-03	3.89E-08	3.78E-04	
2020-2040	4.915	1.55E-07	1.48E-04	1.48E-02	5.27E-07	7.65E-03	5.76E-05	8.77E-07	8.89E-06	2.01E-03	3.89E-08	3.78E-04	
2040-2100	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
2100-2120	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
2120-2140	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
2140-2200	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
2200-2220	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
2220-2240	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
2240-2300	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
2300-2320	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
2320-2340	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
2340-2400	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
2400-2420	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
2420-2440	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
2440-2500	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
2500-2520	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
2520-2540	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
2540-2600	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
2600-2620	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
2620-2640	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
2640-2700	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
2700-2720	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
2720-2740	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
2740-2800	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
2800-2820	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
2820-2840	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
2840-2900	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
2900-2920	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
2920-2940	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
2940-3000	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
3000-3020	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
3020-3040	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
3040-3100	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
3100-3120	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
3120-3140	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
3140-3200	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
3200-3220	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
3220-3240	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
3240-3300	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
3300-3320	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
3320-3340	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
3340-3400	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
3400-3420	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
3420-3440	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
3440-3500	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
3500-3520	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
3520-3540	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
3540-3600	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
3600-3620	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
3620-3640	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
3640-3700	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
3700-3720	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
3720-3740	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
3740-3800	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
3800-3820	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
3820-3840	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
3840-3900	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
3900-3920	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
3920-3940	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E-03	5.15E-02	1.97E-07	2.80E-03	1.99E-03	5.74E-08	1.08E-04	
3940-4000	7.80E-03	2.99E-08	4.27E-04	5.46E-04	1.47E-07	2.38E							

Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.4 Emission Factor in 2043.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Top & North Underlayment Quarry													
Geotail 24 Hour Envision Factors for													
AR5000 model (See Appendix)													
Year 2043													
Road Name	Road ID	Hour	NO _x Emission					Envision Factor					
			Monthly/tonnage	Monthly/tonnage	Monthly/tonnage	Monthly/tonnage	Monthly/tonnage	Monthly/tonnage	Monthly/tonnage	Monthly/tonnage			
13102 R21	21	0000-0100	1.1002	1.1002	1.5956	1.5956	1.8701	1.7562	2.8403	2.056	2.8403	1.688	9.18
13102 R21	21	0100-0200	1.2602	1.2602	1.7325	1.7325	2.5067	1.2312	1.6702	1.6702	1.4568	1.2548	7.8105
13102 R21	21	0200-0300	1.2602	1.2602	1.7325	1.7325	2.5067	1.2312	1.6702	1.6702	1.4568	1.2548	7.8105
13102 R21	21	0300-0400	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	0400-0500	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	0500-0600	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	0600-0700	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	0700-0800	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	0800-0900	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	0900-1000	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	1000-1100	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	1100-1200	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	1200-1300	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	1300-1400	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	1400-1500	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	1500-1600	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	1600-1700	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	1700-1800	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	1800-1900	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	1900-2000	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	2000-2100	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	2100-2200	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	2200-2300	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	2300-2400	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	2400-0100	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	0100-0200	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	0200-0300	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	0300-0400	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	0400-0500	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	0500-0600	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	0600-0700	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	0700-0800	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	0800-0900	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	0900-1000	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	1000-1100	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	1100-1200	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	1200-1300	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	1300-1400	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	1400-1500	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	1500-1600	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	1600-1700	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	1700-1800	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	1800-1900	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	1900-2000	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	2000-2100	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	2100-2200	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	2200-2300	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	2300-2400	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	2400-0100	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	0100-0200	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	0200-0300	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	0300-0400	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	0400-0500	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	0500-0600	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	0600-0700	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	0700-0800	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	0800-0900	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	0900-1000	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	1000-1100	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	1100-1200	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	1200-1300	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	1300-1400	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	1400-1500	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	1500-1600	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	1600-1700	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	1700-1800	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	1800-1900	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	1900-2000	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	2000-2100	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	2100-2200	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	2200-2300	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	2300-2400	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	2400-0100	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	0100-0200	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	0200-0300	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	0300-0400	1.5502	1.4502	2.1104	2.1104	1.7467	1.8770	1.7712	1.6812	1.5502	1.4502	1.1311
13102 R21	21	0400-0500	1.5502	1.4502	2.1104	2.1104							

1:\Secure\Environment - Projects\60722278\1_01\Other\A\Modelling\Appendix\Traffic\Open Road\Appendix 3.5.4 Emission Factor to 7042.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Road & Low Urbanization Factors for ARMMO model (September)														
Year 2043														
Route Name	Road ID	Hour	NO Emission						NO Emission					
			MonthlyHours			MonthlyHourlyAverage			MonthlyHours			MonthlyHourlyAverage		
g/hour	g/km	g/km	g/hour	g/km	g/km	g/hour	g/km	g/km	g/hour	g/km	g/km			
Route 34	34	0800-0900	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	0900-1000	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	1000-1100	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	1100-1200	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	1200-1300	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	1300-1400	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	1400-1500	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	1500-1600	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	1600-1700	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	1700-1800	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	1800-1900	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	1900-2000	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	2000-2100	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	2100-2200	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	2200-2300	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	2300-2400	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	2400-2500	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	2500-2600	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	2600-2700	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	2700-2800	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	2800-2900	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	2900-3000	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	3000-3100	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	3100-3200	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	3200-3300	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	3300-3400	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	3400-3500	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	3500-3600	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	3600-3700	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	3700-3800	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	3800-3900	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	3900-4000	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	4000-4100	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	4100-4200	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	4200-4300	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	4300-4400	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	4400-4500	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	4500-4600	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	4600-4700	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	4700-4800	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	4800-4900	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	4900-5000	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	5000-5100	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	5100-5200	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	5200-5300	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	5300-5400	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	5400-5500	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	5500-5600	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	5600-5700	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	5700-5800	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	5800-5900	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	5900-6000	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	6000-6100	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	6100-6200	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	6200-6300	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	6300-6400	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	6400-6500	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	6500-6600	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	6600-6700	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	6700-6800	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	6800-6900	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	6900-7000	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	7000-7100	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	7100-7200	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	7200-7300	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	7300-7400	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	7400-7500	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	7500-7600	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	7600-7700	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	7700-7800	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	7800-7900	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	7900-8000	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	8000-8100	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	8100-8200	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	8200-8300	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	8300-8400	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	8400-8500	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	8500-8600	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.588	0.715	1.296	0.391
Route 34	34	8600-8700	1,815	0.715	1.296	0.391	1.588	0.715	1.296	0.391	1.5			

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open North and Underflow Quarry										
Coping With N2 and Anoxic Environments for										
AR5000 Model (Report ID)										
Year 2043										
Road Name	Node	Hour	NO Emission				NO Emission			
			Monthly(g/m³)	Monthly(g/m³)	Monthly(g/m³)	Monthly(g/m³)	Monthly(g/m³)	Monthly(g/m³)	Monthly(g/m³)	Monthly(g/m³)
Rd 37	1700	1700 0000	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 0100	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 0200	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 0300	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 0400	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 0500	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 0600	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 0700	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 0800	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 0900	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 1000	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 1100	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 1200	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 1300	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 1400	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 1500	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 1600	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 1700	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 1800	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 1900	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 2000	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 2100	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 2200	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 2300	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 2400	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 2500	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 2600	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 2700	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 2800	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 2900	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 3000	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 3100	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 3200	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 3300	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 3400	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 3500	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 3600	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 3700	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 3800	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 3900	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 4000	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 4100	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 4200	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 4300	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 4400	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 4500	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 4600	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 4700	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 4800	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 4900	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 5000	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 5100	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 5200	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 5300	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 5400	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 5500	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 5600	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 5700	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 5800	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 5900	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 6000	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 6100	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 6200	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 6300	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 6400	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 6500	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 6600	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 6700	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 6800	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 6900	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 7000	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 7100	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 7200	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 7300	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 7400	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 7500	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 7600	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 7700	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 7800	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 7900	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 8000	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 8100	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 8200	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 8300	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 8400	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 8500	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 8600	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 8700	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 8800	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 8900	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 9000	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 9100	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 9200	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 9300	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 9400	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 9500	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 9600	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 9700	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 9800	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 9900	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 10000	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 10100	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 10200	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 10300	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 10400	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 10500	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 10600	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 10700	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
Rd 37	1700	1700 10800	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546
		1700 10900	1.546	1.546	1.546	1.546	1.546	1.546	1.546	1.546

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

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24 Hour Underground Quarterly									
Top 24 Hour Factors for the Year 2003									
Month and Day		No Enmission				Enmission			
Month	Day	hour	g/min	g/min	g/min	g/min	g/min	g/min	g/min
		hour	Monthly/average	Monthly/average	Monthly/average	Monthly/average	Monthly/average	Monthly/average	Monthly/average
01	01	08:00-09:00	8.5126	8.5126	4.448	4.448	1.5786	1.5786	1.7623
01	02	08:00-09:00	8.2382	8.2382	4.424	4.424	1.5882	1.5882	1.7376
01	03	08:00-09:00	8.1808	8.1808	4.3808	4.3808	1.5808	1.5808	1.7288
01	04	11:00-12:00	9.3482	9.3482	4.4082	4.4082	1.5142	1.5142	1.7402
01	05	13:00-14:00	1.2512	1.2512	4.5082	4.5082	1.2512	1.2512	2.4502
01	06	14:00-15:00	1.3482	1.3482	4.5882	4.5882	1.3482	1.3482	2.4882
01	07	14:00-15:00	1.4382	1.4382	4.7782	4.7782	1.5482	1.5482	2.6682
01	08	15:00-16:00	1.2482	1.2482	4.5882	4.5882	1.2482	1.2482	2.4882
01	09	16:00-17:00	1.7882	1.7882	4.1182	4.1182	1.7882	1.7882	2.1182
01	10	17:00-18:00	1.3182	1.3182	4.5882	4.5882	1.3182	1.3182	2.4882
01	11	18:00-19:00	1.3182	1.3182	4.5882	4.5882	1.3182	1.3182	2.4882
01	12	18:00-19:00	2.2482	2.2482	4.5882	4.5882	1.3182	1.3182	2.4882
01	13	19:00-20:00	2.4882	2.4882	4.5882	4.5882	1.3182	1.3182	2.4882
01	14	20:00-21:00	4.0182	4.0182	4.5882	4.5882	1.3182	1.3182	2.4882
01	15	21:00-22:00	4.0182	4.0182	4.5882	4.5882	1.3182	1.3182	2.4882
01	16	22:00-23:00	4.0182	4.0182	4.5882	4.5882	1.3182	1.3182	2.4882
01	17	23:00-24:00	4.0182	4.0182	4.5882	4.5882	1.3182	1.3182	2.4882
01	18	00:00-01:00	4.0182	4.0182	4.5882	4.5882	1.3182	1.3182	2.4882
01	19	01:00-02:00	4.0182	4.0182	4.5882	4.5882	1.3182	1.3182	2.4882
01	20	02:00-03:00	4.0182	4.0182	4.5882	4.5882	1.3182	1.3182	2.4882
01	21	03:00-04:00	4.0182	4.0182	4.5882	4.5882	1.3182	1.3182	2.4882
01	22	04:00-05:00	4.0182	4.0182	4.5882	4.5882	1.3182	1.3182	2.4882
01	23	05:00-06:00	4.0182	4.0182	4.5882	4.5882	1.3182	1.3182	2.4882
01	24	06:00-07:00	4.0182	4.0182	4.5882	4.5882	1.3182	1.3182	2.4882
02	01	08:00-09:00	8.5126	8.5126	4.448	4.448	1.5786	1.5786	1.7623
02	02	08:00-09:00	8.2382	8.2382	4.424	4.424	1.5882	1.5882	1.7376
02	03	08:00-09:00	8.1808	8.1808	4.3808	4.3808	1.5808	1.5808	1.7288
02	04	11:00-12:00	9.3482	9.3482	4.4082	4.4082	1.5142	1.5142	1.7402
02	05	13:00-14:00	1.2512	1.2512	4.5082	4.5082	1.2512	1.2512	2.4502
02	06	14:00-15:00	1.3482	1.3482	4.5882	4.5882	1.3482	1.3482	2.4882
02	07	14:00-15:00	1.4382	1.4382	4.7782	4.7782	1.5482	1.5482	2.6682
02	08	15:00-16:00	1.2482	1.2482	4.5882	4.5882	1.2482	1.2482	2.4882
02	09	16:00-17:00	1.7882	1.7882	4.1182	4.1182	1.7882	1.7882	2.1182
02	10	17:00-18:00	1.3182	1.3182	4.5882	4.5882	1.3182	1.3182	2.4882
02	11	18:00-19:00	1.3182	1.3182	4.5882	4.5882	1.3182	1.3182	2.4882
02	12	18:00-19:00	2.2482	2.2482	4.5882	4.5882	1.3182	1.3182	2.4882
02	13	19:00-20:00	2.4882	2.4882	4.5882	4.5882	1.3182	1.3182	2.4882
02	14	20:00-21:00	4.0182	4.0182	4.5882	4.5882	1.3182	1.3182	2.4882
02	15	21:00-22:00	4.0182	4.0182	4.5882	4.5882	1.3182	1.3182	2.4882
02	16	22:00-23:00	4.0182	4.0182	4.5882	4.5882	1.3182	1.3182	2.4882
02	17	23:00-24:00	4.0182	4.0182	4.5882	4.5882	1.3182	1.3182	2.4882
02	18	00:00-01:00	4.0182	4.0182	4.5882	4.5882	1.3182	1.3182	2.4882
02	19	01:00-02:00	4.0182	4.0182	4.5882	4.5882	1.3182	1.3182	2.4882
02	20	02:00-03:00	4.0182	4.0182	4.5882	4.5882	1.3182	1.3182	2.4882
02	21	03:00-04:00	4.0182	4.0182	4.5882	4.5882	1.3182	1.3182	2.4882
02	22	04:00-05:00	4.0182	4.0182	4.5882	4.5882	1.3182	1.3182	2.4882
02	23	05:00-06:00	4.0182	4.0182	4.5882	4.5882	1.3182	1.3182	2.4882
02	24	06:00-07:00	4.0182	4.0182	4.5882	4.5882	1.3182	1.3182	2.4882
03	01	08:00-09:00	8.5126	8.5126	4.448	4.448	1.5786	1.5786	1.7623
03	02	08:00-09:00	8.2382	8.2382	4.424	4.424	1.5882	1.5882	1.7376
03	03	08:00-09:00	8.1808	8.1808	4.3808	4.3808	1.5808	1.5808	1.7288
03	04	11:00-12:00	9.3482	9.3482	4.4082	4.4082	1.5142	1.5142	1.7402
03	05	13:00-14:00	1.2512	1.2512	4.5082	4.5082	1.2512	1.2512	2.4502
03	06	14:00-15:00	1.3482	1.3482	4.5882	4.5882	1.3482	1.3482	2.4882
03	07	14:00-15:00	1.4382	1.4382	4.7782	4.7782	1.5482	1.5482	2.6682
03	08	15:00-16:00	1.2482	1.2482	4.5882	4.5882	1.2482	1.2482	2.4882
03	09	16:00-17:00	1.7882	1.7882	4.1182	4.1182	1.7882	1.7882	2.1182
03	10	17:00-18:00	1.3182	1.3182	4.5882	4.5882	1.3182	1.3182	2.4882
03	11	18:00-19:00	1.3182	1.3182	4.5882	4.5882	1.3182	1.3182	2.4882
03	12	18:00-19:00	2.2482	2.2482	4.5882	4.5882	1.3182	1.3182	2.4882
03	13	19:00-20:00	2.4882	2.4882	4.5882	4.5882	1.3182	1.3182	2.4882
03	14	20:00-21:00	4.0182	4.0182	4.5882	4.5882	1.3182	1.3182	2.4882
03	15	21:00-22:00	4.0182	4.0182	4.5882	4.5882	1.3182	1.3182	2.4882
03	16	22:00-23:00	4.0182	4.0182	4.5882	4.5882	1.3182	1.3182	2.4882
03	17	23:00-24:00	4.0182	4.0182	4.5882	4.5882	1.3182	1.3182	2.4882
03	18	00:00-01:00	4.0182	4.0182	4.5882	4.5882	1.3182	1.3182	2.4882
03	19	01:00-02:00	4.0182	4.0182	4.5882	4.5882	1.3182	1.3182	2.4882
03	20	02:00-03:00	4.0182	4.0182	4.5882	4.5882	1.3182	1.3182	2.4882
03	21	03:00-04:00	4.0182	4.0182	4.5882	4.5882	1.3182	1.3182	2.4882
03	22	04:00-05:00	4.0182	4.0182	4.5882	4.5882	1.3182	1.3182	2.4882
03	23	05:00-06:00	4.0182	4.0182	4.5882	4.5882	1.3182	1.3182	2.4882
03	24	06:00-07:00	4.0182	4.0182	4.5882	4.5882	1.3182	1.3182	2.4882

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Day 34 North Emission Factors for ARMOOD model Year 2003											
Road ID	Road	Hour	NO Emission				NO Emission				
			Monthly/Mile/Min		Monthly/Hour/Average		Monthly/Mile/Min		Monthly/Hour/Average		
g/hr/mile	lb/hr/mile	g/hr/mile	lb/hr/mile	g/hr/mile	lb/hr/mile	g/hr/mile	lb/hr/mile	g/hr/mile	lb/hr/mile	g/hr/mile	lb/hr/mile
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}
NO _x	CO	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀	PM _{2.5}	PM ₁₀			

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.4 Emission Factor in 2

24 Hour Underground Quary										
24 Hour Index Factors for Year 2003										
Month End (September)										
Index	Road ID	Hour	No Emission				NO Emission			
			Monthly/hour	Monthly/year	Monthly/hour	Monthly/year				
03	1600-1700	1.50E-06	4.81E-07	4.81E-07	1.51E-06	1.51E-06	1.51E-06	1.51E-06	1.51E-06	
03	1700-1800	1.80E-06	4.42E-07	3.88E-06	4.54E-07	2.08E-06	2.44E-06	2.44E-06	2.44E-06	
03	1800-1900	1.80E-06	4.42E-07	3.88E-06	4.54E-07	2.08E-06	2.44E-06	2.44E-06	2.44E-06	
03	1900-2000	5.70E-07	2.71E-07	2.02E-07	1.22E-07	1.44E-06	1.24E-07	3.77E-07	1.66E-06	
03	2000-2100	5.70E-07	2.71E-07	2.02E-07	1.22E-07	1.44E-06	1.24E-07	3.77E-07	1.66E-06	
03	2100-2200	5.70E-07	2.71E-07	2.02E-07	1.22E-07	1.44E-06	1.24E-07	3.77E-07	1.66E-06	
03	2200-2300	4.80E-06	1.44E-07	1.27E-06	1.43E-06	1.15E-06	1.01E-07	3.86E-07	1.30E-06	
03	2300-2400	4.80E-06	1.44E-07	1.27E-06	1.43E-06	1.15E-06	1.01E-07	3.86E-07	1.30E-06	
04	0000-0100	8.10E-06	8.10E-06	8.10E-06	4.47E-05	3.77E-07	3.77E-07	3.77E-07	3.77E-07	
04	0100-0200	8.10E-06	8.10E-06	8.10E-06	4.47E-05	3.77E-07	3.77E-07	3.77E-07	3.77E-07	
04	0200-0300	9.61E-06	2.54E-06	1.91E-06	4.88E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
04	0300-0400	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
04	0400-0500	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
04	0500-0600	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
04	0600-0700	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
04	0700-0800	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
04	0800-0900	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
04	0900-1000	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
04	1000-1100	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
04	1100-1200	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
04	1200-1300	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
04	1300-1400	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
04	1400-1500	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
04	1500-1600	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
04	1600-1700	7.27E-06	2.44E-06	1.81E-06	4.90E-07	1.15E-06	9.60E-07	4.66E-07	1.56E-06	
04	1700-1800	3.30E-06	1.99E-07	1.44E-07	2.99E-07	1.16E-06	8.11E-07	1.48E-07	3.90E-06	
04	1800-1900	4.50E-06	1.39E-07	1.01E-07	2.08E-07	8.79E-07	6.34E-07	1.01E-06	1.53E-06	
04	1900-2000	4.42E-06	1.01E-07	7.33E-08	1.33E-07	7.64E-07	5.64E-07	3.77E-07	8.63E-07	
04	2000-2100	4.42E-06	1.01E-07	7.33E-08	1.33E-07	7.64E-07	5.64E-07	3.77E-07	8.63E-07	
04	2100-2200	3.71E-06	8.63E-08	6.14E-08	1.22E-07	7.29E-07	5.42E-07	3.63E-07	8.12E-07	
04	2200-2300	3.71E-06	8.63E-08	6.14E-08	1.22E-07	7.29E-07	5.42E-07	3.63E-07	8.12E-07	
04	2300-2400	3.71E-06	8.63E-08	6.14E-08	1.22E-07	7.29E-07	5.42E-07	3.63E-07	8.12E-07	
05	0000-0100	8.10E-06	8.10E-06	8.10E-06	4.47E-05	3.77E-07	3.77E-07	3.77E-07	3.77E-07	
05	0100-0200	8.10E-06	8.10E-06	8.10E-06	4.47E-05	3.77E-07	3.77E-07	3.77E-07	3.77E-07	
05	0200-0300	9.61E-06	2.54E-06	1.91E-06	4.88E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
05	0300-0400	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
05	0400-0500	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
05	0500-0600	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
05	0600-0700	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
05	0700-0800	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
05	0800-0900	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
05	0900-1000	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
05	1000-1100	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
05	1100-1200	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
05	1200-1300	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
05	1300-1400	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
05	1400-1500	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
05	1500-1600	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
05	1600-1700	7.27E-06	2.44E-06	1.81E-06	4.90E-07	1.15E-06	9.60E-07	4.66E-07	1.56E-06	
05	1700-1800	3.30E-06	1.99E-07	1.44E-07	2.99E-07	1.16E-06	8.11E-07	1.48E-07	3.90E-06	
05	1800-1900	4.50E-06	1.39E-07	1.01E-07	2.08E-07	8.79E-07	6.34E-07	1.01E-06	1.53E-06	
05	1900-2000	4.42E-06	1.01E-07	7.33E-08	1.33E-07	7.64E-07	5.64E-07	3.77E-07	8.63E-07	
05	2000-2100	4.42E-06	1.01E-07	7.33E-08	1.33E-07	7.64E-07	5.64E-07	3.77E-07	8.63E-07	
05	2100-2200	3.71E-06	8.63E-08	6.14E-08	1.22E-07	7.29E-07	5.42E-07	3.63E-07	8.12E-07	
05	2200-2300	3.71E-06	8.63E-08	6.14E-08	1.22E-07	7.29E-07	5.42E-07	3.63E-07	8.12E-07	
05	2300-2400	3.71E-06	8.63E-08	6.14E-08	1.22E-07	7.29E-07	5.42E-07	3.63E-07	8.12E-07	
06	0000-0100	8.10E-06	8.10E-06	8.10E-06	4.47E-05	3.77E-07	3.77E-07	3.77E-07	3.77E-07	
06	0100-0200	8.10E-06	8.10E-06	8.10E-06	4.47E-05	3.77E-07	3.77E-07	3.77E-07	3.77E-07	
06	0200-0300	9.61E-06	2.54E-06	1.91E-06	4.88E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
06	0300-0400	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
06	0400-0500	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
06	0500-0600	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
06	0600-0700	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
06	0700-0800	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
06	0800-0900	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
06	0900-1000	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
06	1000-1100	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
06	1100-1200	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
06	1200-1300	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
06	1300-1400	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
06	1400-1500	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
06	1500-1600	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
06	1600-1700	7.27E-06	2.44E-06	1.81E-06	4.90E-07	1.15E-06	9.60E-07	4.66E-07	1.56E-06	
06	1700-1800	3.30E-06	1.99E-07	1.44E-07	2.99E-07	1.16E-06	8.11E-07	1.48E-07	3.90E-06	
06	1800-1900	4.50E-06	1.39E-07	1.01E-07	2.08E-07	8.79E-07	6.34E-07	1.01E-06	1.53E-06	
06	1900-2000	4.42E-06	1.01E-07	7.33E-08	1.33E-07	7.64E-07	5.64E-07	3.77E-07	8.63E-07	
06	2000-2100	4.42E-06	1.01E-07	7.33E-08	1.33E-07	7.64E-07	5.64E-07	3.77E-07	8.63E-07	
06	2100-2200	3.71E-06	8.63E-08	6.14E-08	1.22E-07	7.29E-07	5.42E-07	3.63E-07	8.12E-07	
06	2200-2300	3.71E-06	8.63E-08	6.14E-08	1.22E-07	7.29E-07	5.42E-07	3.63E-07	8.12E-07	
06	2300-2400	3.71E-06	8.63E-08	6.14E-08	1.22E-07	7.29E-07	5.42E-07	3.63E-07	8.12E-07	
07	0000-0100	8.10E-06	8.10E-06	8.10E-06	4.47E-05	3.77E-07	3.77E-07	3.77E-07	3.77E-07	
07	0100-0200	8.10E-06	8.10E-06	8.10E-06	4.47E-05	3.77E-07	3.77E-07	3.77E-07	3.77E-07	
07	0200-0300	9.61E-06	2.54E-06	1.91E-06	4.88E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
07	0300-0400	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
07	0400-0500	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
07	0500-0600	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
07	0600-0700	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
07	0700-0800	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
07	0800-0900	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
07	0900-1000	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
07	1000-1100	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
07	1100-1200	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
07	1200-1300	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
07	1300-1400	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84E-07	2.20E-06	
07	1400-1500	1.10E-06	6.51E-06	3.03E-06	5.00E-07	2.67E-07	1.98E-07	5.84		

Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\OpenRoad\Appendix 3.5.4 Emission Factor in 2043.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Road Northbound Factors for AASHTO model (October)												
Year 2043												
Route Name	Road ID	Hour	No. Emission				No. Emission					
			Monthly/Yearly		Monthly/Average		Monthly/Yearly		Monthly/Average			
			Monthly/Yearly	Monthly/Average	Monthly/Yearly	Monthly/Average	Monthly/Yearly	Monthly/Average	Monthly/Yearly	Monthly/Average		
Route 1	1	0000-0100	1.345	0.131	1.275	0.340	0.131	9.813	0.807	5.531	0.171	1.075
Route 1	1	0100-0200	4.795	0.432	0.890	1.465	0.329	6.622	0.975	0.737	1.138	0.238
Route 1	1	0200-0300	1.760	0.743	1.215	1.215	0.215	1.215	1.215	1.215	1.215	1.215
Route 1	1	0300-0400	5.778	0.312	0.678	4.778	0.252	4.121	0.434	2.367	4.752	1.441
Route 1	1	0400-0500	6.505	0.708	0.444	5.800	0.236	0.467	4.522	0.708	4.522	0.565
Route 1	1	0500-0600	1.665	0.665	0.665	1.665	0.665	1.665	1.665	1.665	1.665	1.665
Route 1	1	0600-0700	2.155	0.185	1.176	0.185	0.925	1.882	0.485	1.085	2.155	1.824
Route 1	1	0700-0800	7.610	0.860	1.160	6.750	0.860	1.160	5.840	0.860	1.160	4.930
Route 1	1	0800-0900	2.160	3.821	0.278	3.860	0.210	4.001	6.003	2.398	4.802	0.125
Route 1	1	0900-1000	1.245	0.125	0.125	1.245	0.125	1.245	1.245	1.245	1.245	1.245
Route 1	1	1000-1100	1.545	0.326	0.701	0.445	0.146	3.796	0.405	1.995	0.405	2.611
Route 1	1	1100-1200	0.600	0.170	0.630	0.445	0.158	1.112	0.340	0.600	0.705	0.248
Route 1	1	1200-1300	1.245	0.125	0.125	1.245	0.125	1.245	1.245	1.245	1.245	1.245
Route 1	1	1300-1400	1.252	0.252	1.262	0.540	0.216	0.544	0.708	0.338	0.602	1.346
Route 1	1	1400-1500	1.245	0.125	0.125	1.245	0.125	1.245	1.245	1.245	1.245	1.245
Route 1	1	1500-1600	1.180	0.565	0.162	1.245	0.398	5.885	0.585	0.565	7.108	0.733
Route 1	1	1600-1700	2.235	0.695	1.495	0.125	2.785	5.590	0.435	0.688	5.995	0.354
Route 1	1	1700-1800	1.780	0.780	0.780	1.780	0.780	1.780	1.780	1.780	1.780	1.780
Route 1	1	1800-1900	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125
Route 1	1	1900-2000	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125
Route 1	1	2000-2100	0.095	0.746	0.131	0.434	0.168	2.902	0.943	1.665	0.131	5.678
Route 1	1	2100-2200	0.585	1.921	0.078	0.370	1.415	2.841	0.835	0.165	3.238	0.223
Route 1	1	2200-2300	0.585	0.585	0.585	0.585	0.585	0.585	0.585	0.585	0.585	0.585
Route 1	1	2300-0000	0.055	1.040	0.107	1.101	0.078	0.215	0.010	1.228	0.066	0.308
Route 2	2	0000-0100	1.245	0.125	0.125	1.245	0.125	1.245	1.245	1.245	1.245	1.245
Route 2	2	0100-0200	0.815	0.676	0.128	1.388	0.340	6.511	0.676	0.431	7.675	1.805
Route 2	2	0200-0300	7.840	0.880	0.950	7.840	0.950	7.840	0.820	3.221	0.950	1.295
Route 2	2	0300-0400	8.665	0.488	0.204	4.105	0.207	4.781	0.342	0.687	5.705	0.229
Route 2	2	0400-0500	8.125	0.125	0.125	8.125	0.125	8.125	8.125	8.125	8.125	8.125
Route 2	2	0500-0600	9.625	0.288	0.844	4.760	0.153	1.952	0.748	0.248	2.928	0.757
Route 2	2	0600-0700	10.025	0.505	0.113	8.520	0.245	0.595	0.943	0.241	4.831	0.241
Route 2	2	0700-0800	1.245	0.125	0.125	1.245	0.125	1.245	1.245	1.245	1.245	1.245
Route 2	2	0800-0900	1.245	0.125	0.125	1.245	0.125	1.245	1.245	1.245	1.245	1.245
Route 2	2	0900-1000	1.245	0.125	0.125	1.245	0.125	1.245	1.245	1.245	1.245	1.245
Route 2	2	1000-1100	1.245	0.125	0.125	1.245	0.125	1.245	1.245	1.245	1.245	1.245
Route 2	2	1100-1200	1.245	0.125	0.125	1.245	0.125	1.245	1.245	1.245	1.245	1.245
Route 2	2	1200-1300	1.245	0.125	0.125	1.245	0.125	1.245	1.245	1.245	1.245	1.245
Route 2	2	1300-1400	1.245	0.125	0.125	1.245	0.125	1.245	1.245	1.245	1.245	1.245
Route 2	2	1400-1500	1.245	0.125	0.125	1.245	0.125	1.245	1.245	1.245	1.245	1.245
Route 2	2	1500-1600	1.245	0.125	0.125	1.245	0.125	1.245	1.245	1.245	1.245	1.245
Route 2	2	1600-1700	1.245	0.125	0.125	1.245	0.125	1.245	1.245	1.245	1.245	1.245
Route 2	2	1700-1800	1.245	0.125	0.125	1.245	0.125	1.245	1.245	1.245	1.245	1.245
Route 2	2	1800-1900	1.245	0.125	0.125	1.245	0.125	1.245	1.245	1.245	1.245	1.245
Route 2	2	1900-2000	1.245	0.125	0.125	1.245	0.125	1.245	1.245	1.245	1.245	1.245
Route 2	2	2000-2100	1.245	0.125	0.125	1.245	0.125	1.245	1.245	1.245	1.245	1.245
Route 2	2	2100-2200	1.245	0.125	0.125	1.245	0.125	1.245	1.245	1.245	1.245	1.245
Route 2	2	2200-2300	1.245	0.125	0.125	1.245	0.125	1.245	1.245	1.245	1.245	1.245
Route 2	2	2300-0000	1.245	0.125	0.125	1.245	0.125	1.245	1.245	1.245	1.245	1.245
Route 3	3	0000-0100	1.545	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 3	3	0100-0200	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 3	3	0200-0300	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 3	3	0300-0400	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 3	3	0400-0500	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 3	3	0500-0600	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 3	3	0600-0700	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 3	3	0700-0800	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 3	3	0800-0900	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 3	3	0900-1000	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 3	3	1000-1100	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 3	3	1100-1200	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 3	3	1200-1300	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 3	3	1300-1400	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 3	3	1400-1500	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 3	3	1500-1600	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 3	3	1600-1700	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 3	3	1700-1800	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 3	3	1800-1900	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 3	3	1900-2000	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 3	3	2000-2100	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 3	3	2100-2200	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 3	3	2200-2300	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 3	3	2300-0000	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 4	4	0000-0100	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 4	4	0100-0200	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 4	4	0200-0300	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 4	4	0300-0400	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 4	4	0400-0500	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 4	4	0500-0600	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 4	4	0600-0700	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 4	4	0700-0800	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 4	4	0800-0900	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 4	4	0900-1000	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 4	4	1000-1100	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 4	4	1100-1200	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 4	4	1200-1300	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 4	4	1300-1400	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 4	4	1400-1500	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 4	4	1500-1600	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 4	4	1600-1700	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 4	4	1700-1800	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 4	4	1800-1900	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174
Route 4	4	1900-2000	1.945	0.445	0.708	3.811	0.098	2.114	0.384	1.127	2.545	0.174

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Road North 4000 Envision Factors for AASHTO model (October)													
Year 2043													
Route Name	Road ID	Hour	No. Emission				No. Emission						
			Monthly/tons	Monthly/tonne	Monthly/hour	Monthly/hour/ton	Monthly/tons	Monthly/tonne	Monthly/hour	Monthly/hour/ton			
Route 7	7 1600-1700	1	3.2852	1.4001	1.2403	1.1706	1.5952	1.5775	1.4966	2.0152	4.9237	4.1472	3.2964
			3.2852	1.4001	1.2403	1.1706	1.5952	1.5775	1.4966	2.0152	4.9237	4.1472	3.2964
Route 7	7 1700-1800	2	2.6705	1.0705	0.9484	0.8905	2.0202	1.7952	1.6706	2.4512	4.1367	3.3687	2.5388
			2.6705	1.0705	0.9484	0.8905	2.0202	1.7952	1.6706	2.4512	4.1367	3.3687	2.5388
Route 7	7 1800-2000	3	6.6273	1.7987	2.5504	3.8112	6.1006	4.4877	6.4772	12.2116	10.7616	6.4058	1.9004
			6.6273	1.7987	2.5504	3.8112	6.1006	4.4877	6.4772	12.2116	10.7616	6.4058	1.9004
Route 7	7 2000-2300	4	3.9883	1.5867	1.3709	1.2906	3.2503	2.5325	2.3272	4.0710	3.5681	3.3068	2.4698
			3.9883	1.5867	1.3709	1.2906	3.2503	2.5325	2.3272	4.0710	3.5681	3.3068	2.4698
Route 7	7 2300-2330	5	4.3415	1.1057	0.7784	0.3762	7.7087	3.2389	3.332	8.8867	3.7275	3.1373	2.7688
			4.3415	1.1057	0.7784	0.3762	7.7087	3.2389	3.332	8.8867	3.7275	3.1373	2.7688
Route 8	8 0000-0100	1	2.2315	0.8205	0.7105	0.6585	2.1338	0.9004	0.8054	2.3756	1.9404	1.7221	1.5233
			2.2315	0.8205	0.7105	0.6585	2.1338	0.9004	0.8054	2.3756	1.9404	1.7221	1.5233
Route 8	8 0100-0200	2	7.6331	2.0979	1.5168	1.1182	12.7278	4.2748	3.8847	14.9014	4.2212	6.7118	4.1964
			7.6331	2.0979	1.5168	1.1182	12.7278	4.2748	3.8847	14.9014	4.2212	6.7118	4.1964
Route 8	8 0200-0300	3	2.2315	0.8205	0.7105	0.6585	2.1338	0.9004	0.8054	2.3756	1.9404	1.7221	1.5233
			2.2315	0.8205	0.7105	0.6585	2.1338	0.9004	0.8054	2.3756	1.9404	1.7221	1.5233
Route 8	8 0300-0400	4	3.1209	1.1209	1.1235	1.4115	3.0906	6.8905	5.995	7.8115	1.4451	3.8813	2.8616
			3.1209	1.1209	1.1235	1.4115	3.0906	6.8905	5.995	7.8115	1.4451	3.8813	2.8616
Route 8	8 0400-0500	5	1.3208	0.8208	0.6055	0.4761	5.5135	4.1719	8.7719	4.6979	3.9683	1.3445	2.4648
			1.3208	0.8208	0.6055	0.4761	5.5135	4.1719	8.7719	4.6979	3.9683	1.3445	2.4648
Route 8	8 0500-0600	6	1.4552	0.8208	0.6055	0.4761	5.5135	4.1719	8.7719	4.6979	3.9683	1.3445	2.4648
			1.4552	0.8208	0.6055	0.4761	5.5135	4.1719	8.7719	4.6979	3.9683	1.3445	2.4648
Route 8	8 0600-0700	7	2.8772	0.2126	1.2144	0.3822	1.5484	1.1338	1.8221	0.8331	1.8841	7.4112	9.4746
			2.8772	0.2126	1.2144	0.3822	1.5484	1.1338	1.8221	0.8331	1.8841	7.4112	9.4746
Route 8	8 0700-0800	8	1.4552	0.8208	0.6055	0.4761	5.5135	4.1719	8.7719	4.6979	3.9683	1.3445	2.4648
			1.4552	0.8208	0.6055	0.4761	5.5135	4.1719	8.7719	4.6979	3.9683	1.3445	2.4648
Route 8	8 0800-0900	9	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
			0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
Route 8	8 0900-1000	10	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
			0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
Route 8	8 1000-1100	11	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
			0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
Route 8	8 1100-1200	12	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
			0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
Route 8	8 1200-1300	13	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
			0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
Route 8	8 1300-1400	14	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
			0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
Route 8	8 1400-1500	15	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
			0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
Route 8	8 1500-1600	16	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
			0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
Route 8	8 1600-1700	17	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
			0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
Route 8	8 1700-1800	18	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
			0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
Route 8	8 1800-1900	19	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
			0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
Route 8	8 1900-2000	20	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
			0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
Route 8	8 2000-2100	21	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
			0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
Route 8	8 2100-2200	22	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
			0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
Route 8	8 2200-2300	23	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
			0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
Route 8	8 2300-2400	24	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
			0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
Route 8	8 2400-2500	25	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
			0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
Route 8	8 2500-2600	26	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
			0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
Route 8	8 2600-2700	27	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
			0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
Route 8	8 2700-2800	28	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
			0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
Route 8	8 2800-2900	29	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
			0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
Route 8	8 2900-3000	30	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
			0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
Route 8	8 3000-3100	31	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
			0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
Route 8	8 3100-3200	32	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
			0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
Route 8	8 3200-3300	33	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
			0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
Route 8	8 3300-3400	34	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
			0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
Route 8	8 3400-3500	35	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
			0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
Route 8	8 3500-3600	36	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
			0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
Route 8	8 3600-3700	37	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
			0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454	0.0362	0.6513	0.1416	1.0454
Route 8	8 3700-3800</												

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Top 10 North Underground Quarry															
Open Road 2 Hour Evn Inclusion Factors for ARMSD model (October)															
Year 2003															
Road Name	Road ID	Hour	No Emission				No Emission								
			g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr					
			Monthly/Average				Monthly/Average								
			g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr						
Road 24	24000000	1	3.265	1.017	2.738	4.610	1.017	8.721	0.614	1.106	1.056	1.321	0.42	3.35	
Road 24	24000000	2	2.745	0.512	2.514	4.728	1.035	9.984	3.985	3.306	1.295	3.244	2.042	6.68	
Road 24	24000000	3	1.818	0.262	1.818	4.465	1.017	8.721	0.614	1.106	1.056	1.321	0.42	3.35	
Road 24	24011200	1	3.912	0.767	2.476	4.796	1.027	9.507	0.864	1.216	1.102	1.132	2.796	5.56	
Road 24	24011200	2	4.441	2.686	2.628	4.608	1.926	8.886	6.215	2.566	1.535	1.446	2.026	7.68	
Road 24	24011200	3	2.611	0.262	1.818	4.465	1.017	8.721	0.614	1.106	1.056	1.321	0.42	3.35	
Road 24	24011200	4	1.462	0.178	1.292	1.018	1.018	1.135	1.064	0.649	1.446	1.343	1.452	1.78	
Road 24	24011200	5	1.818	0.262	1.818	4.465	1.017	8.721	0.614	1.106	1.056	1.321	0.42	3.35	
Road 24	24011600	1	3.912	0.767	2.616	4.796	1.027	9.507	0.864	1.216	1.102	1.132	2.796	5.56	
Road 24	24011600	2	4.441	2.686	2.628	4.608	1.926	8.886	6.215	2.566	1.535	1.446	2.026	7.68	
Road 24	24011600	3	2.611	0.262	1.818	4.465	1.017	8.721	0.614	1.106	1.056	1.321	0.42	3.35	
Road 24	24011600	4	1.462	0.178	1.292	1.018	1.018	1.135	1.064	0.649	1.446	1.343	1.452	1.78	
Road 24	24011600	5	1.818	0.262	1.818	4.465	1.017	8.721	0.614	1.106	1.056	1.321	0.42	3.35	
Road 24	24020000	1	3.989	0.823	0.878	1.925	1.029	9.529	5.244	4.137	3.616	4.011	1.134	1.008	9.38
Road 24	24020000	2	3.143	0.581	2.476	4.796	1.027	9.507	0.864	1.216	1.102	1.132	2.796	5.56	
Road 24	24020000	3	3.143	0.581	2.476	4.796	1.027	9.507	0.864	1.216	1.102	1.132	2.796	5.56	
Road 24	24020000	4	3.143	0.581	2.476	4.796	1.027	9.507	0.864	1.216	1.102	1.132	2.796	5.56	
Road 24	24020000	5	3.143	0.581	2.476	4.796	1.027	9.507	0.864	1.216	1.102	1.132	2.796	5.56	
Road 25	25000010	1	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	2	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	3	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	4	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	5	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	6	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	7	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	8	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	9	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	10	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	11	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	12	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	13	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	14	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	15	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	16	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	17	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	18	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	19	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	20	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	21	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	22	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	23	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	24	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	25	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	26	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	27	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	28	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	29	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	30	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	31	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	32	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	33	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	34	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	35	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	36	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	37	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	38	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	39	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	40	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	41	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	42	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	43	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	44	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	45	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	46	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	47	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	48	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	49	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	50	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	51	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	52	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	53	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	54	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	55	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	56	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	57	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	58	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	59	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	60	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	
Road 25	25000010	61	3.056	0.408	4.138	4.745	1.623	1.512	4.745	2.076	1.937	2.006	5.236	4.86	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Opening Road to South Extension Quarry Open Road North West Emulsion Quarry ARX000 Road Doc 102															
		Year 2040		NO Emission					NO Emission						
Road Name	Hour	Direction	Speed (km/h)	Speed (km/h)	Speed (km/h)	Speed (km/h)	Speed (km/h)	Speed (km/h)	Speed (km/h)	Speed (km/h)	Speed (km/h)	Speed (km/h)	Speed (km/h)	Speed (km/h)	
			100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	
Road #1	41	0000-0100	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	0100-1300	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1300-1600	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1600-1900	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1900-0000	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	0000-0100	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	0100-1300	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1300-1600	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1600-1900	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1900-0000	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	0000-0100	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	0100-1300	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1300-1600	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1600-1900	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1900-0000	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	0000-0100	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	0100-1300	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1300-1600	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1600-1900	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1900-0000	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	0000-0100	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	0100-1300	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1300-1600	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1600-1900	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1900-0000	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	0000-0100	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	0100-1300	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1300-1600	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1600-1900	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1900-0000	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	0000-0100	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	0100-1300	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1300-1600	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1600-1900	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1900-0000	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	0000-0100	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	0100-1300	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1300-1600	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1600-1900	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1900-0000	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	0000-0100	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	0100-1300	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1300-1600	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1600-1900	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1900-0000	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	0000-0100	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	0100-1300	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1300-1600	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1600-1900	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1900-0000	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	0000-0100	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	0100-1300	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1300-1600	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1600-1900	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1900-0000	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	0000-0100	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	0100-1300	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1300-1600	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1600-1900	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1900-0000	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	0000-0100	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	0100-1300	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1300-1600	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1600-1900	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1900-0000	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	0000-0100	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	0100-1300	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1300-1600	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1600-1900	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1900-0000	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	0000-0100	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	0100-1300	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1300-1600	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1600-1900	1.070	2.092	7.160	0.512	8.888	1.004	9.420	1.010	7.824	2.579	0.120	1.725	0.05
Road #1	41	1900-0000	1.070	2.092	7.160										

T-10 North York Underpass															
Open Road to 2nd Exit/Union Factory for AERROD model (Doubled)															
Year 2003															
Road Name	Road ID	Hour	NO Emission					NO Emission							
			g/h/v/h	Motorcycle/Heavy	Motorcycle/Heavy	g/h/v/h	Motorcycle/Heavy	Motorcycle/Heavy	g/h/v/h	Motorcycle/Heavy	Motorcycle/Heavy				
			g/h/v/h	Motorcycle/Heavy	Motorcycle/Heavy	g/h/v/h	Motorcycle/Heavy	Motorcycle/Heavy	g/h/v/h	Motorcycle/Heavy	Motorcycle/Heavy	g/h/v/h	Motorcycle/Heavy	Motorcycle/Heavy	
Road #44	44	0800-0900	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	0900-1000	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	1000-1100	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	1100-1200	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	1200-1300	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	1300-1400	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	1400-1500	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	1500-1600	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	1600-1700	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	1700-1800	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	1800-1900	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	1900-2000	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	2000-2100	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	2100-2200	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	2200-2300	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	2300-2400	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	2400-2500	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	2500-2600	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	2600-2700	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	2700-2800	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	2800-2900	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	2900-3000	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	3000-3100	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	3100-3200	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	3200-3300	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	3300-3400	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	3400-3500	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	3500-3600	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	3600-3700	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	3700-3800	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	3800-3900	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	3900-4000	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	4000-4100	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	4100-4200	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	4200-4300	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	4300-4400	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	4400-4500	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	4500-4600	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	4600-4700	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	4700-4800	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	4800-4900	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	4900-5000	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	5000-5100	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	5100-5200	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	5200-5300	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	5300-5400	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	5400-5500	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	5500-5600	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	5600-5700	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	5700-5800	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	5800-5900	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	5900-6000	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	6000-6100	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	6100-6200	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	6200-6300	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	6300-6400	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	6400-6500	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	6500-6600	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	6600-6700	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	6700-6800	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	6800-6900	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	6900-7000	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	7000-7100	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	7100-7200	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	7200-7300	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	7300-7400	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	7400-7500	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	7500-7600	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3.3228	1.4574	0.44
Road #44	44	7600-7700	8.5512	0.3707	6.0804	4.4442	1.4408	1.6141	3.2970	1.9738	1.7680	2.0303	3		

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Well 24 Hour Emission Factors Table No. 24: Hour Emission Factors for Landfill and Landfill Gas																
Road Name		Road ID	Hour	NO Emission				NO Emission								
				g/h/m ²		kg/h/m ²		g/h/m ²		kg/h/m ²						
				Average		Average		Average		Average						
Road #7	1600-1700	2.88E-02	3.94E-07	4.50E	0.03	1.62E-06	1.83E-02	1.58E-01	2.00E-06	2.68E-02	3.19E	0.004	8.89E-04			
Road #7	1700-1800	2.88E-02	3.94E-07	4.50E	0.03	1.62E-06	1.83E-02	1.58E-01	2.00E-06	2.68E-02	3.19E	0.004	8.89E-04			
Road #7	1800-1900	2.88E-02	2.66E-07	3.20E	0.03	1.79E-06	1.43E-02	1.58E-01	1.72E-06	1.77E-02	2.44E	0.003	7.44E-04			
Road #7	1900-2000	5.73E-03	1.70E-07	1.05E	0.03	4.82E-07	3.07E-03	1.06E-01	3.17E-06	1.06E-02	1.95E	0.007	2.07E-04			
Road #7	2000-2100	5.73E-03	1.70E-07	1.05E	0.03	5.75E-07	3.59E-03	1.36E-01	3.98E-06	1.36E-02	2.50E	0.009	2.58E-04			
Road #7	2100-2200	5.73E-03	1.02E-07	1.16E	0.03	4.56E-07	2.61E-03	8.63E-02	3.62E-06	5.89E-03	1.06E	0.008	1.25E-04			
Road #7	2200-2300	5.73E-03	1.02E-07	1.16E	0.03	4.56E-07	2.61E-03	8.63E-02	3.62E-06	5.89E-03	1.06E	0.008	1.25E-04			
Road #7	2300-0000	5.73E-03	1.71E-08	8.35E	0.04	4.83E-07	3.07E-03	6.11E-03	3.48E	0.011	6.96E	0.006	1.18E-04			
Road #7	0000-0100	5.73E-03	2.67E-08	1.25E	0.04	4.83E-07	3.07E-03	6.11E-03	3.48E	0.011	6.96E	0.006	1.18E-04			
Road #7	0100-0200	5.73E-03	2.67E-08	1.25E	0.04	4.83E-07	3.07E-03	6.11E-03	3.48E	0.011	6.96E	0.006	1.18E-04			
Road #7	0200-0300	4.43E	2.44E	1.18E	0.04	1.12E-06	4.46E-04	4.25E	0.017	9.22E-04	3.37E	0.006	2.97E-05			
Road #7	0300-0400	4.43E	2.44E	1.18E	0.04	1.12E-06	4.46E-04	4.25E	0.017	9.22E-04	3.37E	0.006	2.97E-05			
Road #7	0400-0500	3.24E	2.16E	1.06E	0.04	1.39E-06	5.34E-04	3.58E	0.016	1.56E-07	4.61E	0.006	1.03E-05			
Road #7	0500-0600	3.24E	2.16E	1.06E	0.04	1.39E-06	5.34E-04	3.58E	0.016	1.56E-07	4.61E	0.006	1.03E-05			
Road #7	0600-0700	3.24E	2.16E	1.06E	0.04	1.39E-06	5.34E-04	3.58E	0.016	1.56E-07	4.61E	0.006	1.03E-05			
Road #7	0700-0800	3.24E	2.16E	1.06E	0.04	1.39E-06	5.34E-04	3.58E	0.016	1.56E-07	4.61E	0.006	1.03E-05			
Road #7	0800-0900	3.24E	2.16E	1.06E	0.04	1.39E-06	5.34E-04	3.58E	0.016	1.56E-07	4.61E	0.006	1.03E-05			
Road #7	0900-1000	4.43E	2.05E	0.97E	0.04	1.41E-06	5.58E-04	3.67E	0.016	1.21E-07	4.79E	0.006	2.16E-05			
Road #7	1000-1100	4.43E	2.05E	0.97E	0.04	1.41E-06	5.58E-04	3.67E	0.016	1.21E-07	4.79E	0.006	2.16E-05			
Road #7	1100-1200	4.43E	1.411E	0.98E	0.04	1.41E-06	5.58E-04	3.67E	0.016	5.86E-04	2.46E	0.006	4.93E-05			
Road #7	1200-1300	4.43E	1.411E	0.98E	0.04	1.41E-06	5.58E-04	3.67E	0.016	5.86E-04	2.46E	0.006	4.93E-05			
Road #7	1300-1400	5.06E	1.03E	0.73E	0.04	1.58E-06	6.47E-04	3.84E	0.016	8.14E-06	2.97E	0.006	8.61E-05			
Road #7	1400-1500	5.06E	3.47E	0.74E	0.04	1.12E-06	4.26E-04	3.63E	0.017	9.22E-04	3.37E	0.006	8.94E-05			
Road #7	1500-1600	5.06E	3.47E	0.74E	0.04	1.12E-06	4.26E-04	3.63E	0.017	9.22E-04	3.37E	0.006	8.94E-05			
Road #7	1600-1700	4.41E	3.46E	0.74E	0.04	5.42E-07	2.12E-06	6.88E	0.018	1.53E-06	4.62E	0.006	8.89E-05			
Road #7	1700-1800	4.41E	3.46E	0.74E	0.04	5.42E-07	2.12E-06	6.88E	0.018	1.53E-06	4.62E	0.006	8.89E-05			
Road #7	1800-1900	1.82E	1.82E	0.07E	0.04	1.82E-07	4.71E-04	4.24E	0.016	9.76E	0.011	3.75E-05	2.89E-04			
Road #7	1900-2000	4.48E	1.02E	0.97E	0.04	3.86E-07	1.51E-06	5.55E	0.019	7.67E-07	4.22E	0.006	1.95E-04			
Road #7	2000-2100	4.48E	9.61E	0.58E	0.04	3.49E-07	1.41E-06	3.86E	0.017	9.37E-07	5.15E	0.006	2.46E-04			
Road #7	2100-2200	5.73E	9.11E	5.23E	0.04	3.64E-07	1.45E-06	2.95E	0.017	3.67E-07	1.72E	0.006	1.43E-04			
Road #7	2200-2300	5.73E	9.11E	5.23E	0.04	3.64E-07	1.45E-06	2.95E	0.017	3.67E-07	1.72E	0.006	1.43E-04			
Road #7	2300-0000	6.62E	7.28E	4.01E	0.04	3.44E-07	1.40E-06	2.28E	0.016	3.90E	0.017	2.61E	0.006	1.09E-04		
Road #7	0000-0100	6.62E	7.28E	4.01E	0.04	3.44E-07	1.40E-06	2.28E	0.016	3.90E	0.017	2.61E	0.006	1.09E-04		
Road #7	0100-0200	3.02E	2.22E	0.04E	0.04	3.66E-06	1.59E-04	1.44E	0.016	1.81E	0.007	1.80E	0.006	1.50E-05		
Road #7	0200-0300	3.02E	2.22E	0.04E	0.04	3.66E-06	1.59E-04	1.44E	0.016	1.81E	0.007	1.80E	0.006	1.50E-05		
Road #7	0300-0400	1.84E	1.60E	0.04E	0.04	1.10E-07	1.10E-03	1.10E	0.017	1.10E	0.010	1.10E	0.006	2.88E-05		
Road #7	0400-0500	7.13E	3.71E	3.74E	0.04	1.75E-07	8.81E-04	1.29E	0.016	1.29E	0.007	1.29E	0.006	3.29E-05		
Road #7	0500-0600	7.46E	1.78E	1.46E	0.04	4.93E-07	1.10E-03	1.03E	0.017	5.72E	0.028E	1.18E	0.01	3.14E-05		
Road #7	0600-0700	7.46E	1.78E	1.46E	0.04	4.93E-07	1.10E-03	1.03E	0.017	5.72E	0.028E	1.18E	0.01	3.14E-05		
Road #7	0700-0800	1.16E	1.16E	0.04E	0.04	1.16E-07	1.16E-03	1.16E	0.017	1.16E	0.010	1.16E	0.006	3.00E-05		
Road #7	0800-0900	1.16E	1.16E	0.04E	0.04	1.16E-07	1.16E-03	1.16E	0.017	1.16E	0.010	1.16E	0.006	3.00E-05		
Road #7	0900-1000	4.48E	2.65E	0.97E	0.04	7.67E-07	3.29E-06	4.48E	0.017	1.51E-06	2.50E	0.006	2.57E-05			
Road #7	1000-1100	4.48E	2.65E	0.97E	0.04	7.67E-07	3.29E-06	4.48E	0.017	1.51E-06	2.50E	0.006	2.57E-05			
Road #7	1100-1200	7.28E	2.65E	0.47E	0.04	2.64E-07	1.23E-04	1.16E	0.017	8.72E	0.016	2.49E	0.01	3.11E-04		
Road #7	1200-1300	7.28E	2.65E	0.47E	0.04	2.64E-07	1.23E-04	1.16E	0.017	8.72E	0.016	2.49E	0.01	3.11E-04		
Road #7	1300-1400	1.92E	2.11E	0.18E	0.04	7.92E-07	8.64E-04	9.07E	0.023	1.68E	0.010	2.44E	0.008	7.79E-04		
Road #7	1400-1500	1.92E	2.11E	0.18E	0.04	7.92E-07	8.64E-04	9.07E	0.023	1.68E	0.010	2.44E	0.008	7.79E-04		
Road #7	1500-1600	1.92E	2.11E	0.18E	0.04	7.92E-07	8.64E-04	9.07E	0.023	1.68E	0.010	2.44E	0.008	7.79E-04		
Road #7	1600-1700	1.92E	1.66E	0.74E	0.05	7.51E-07	7.78E	7.17E	0.016	9.50E-07	8.79E	0.015	2.60E-06	2.40E-04		
Road #7	1700-1800	1.92E	1.66E	0.74E	0.05	7.51E-07	7.78E	7.17E	0.016	9.50E-07	8.79E	0.015	2.60E-06	2.40E-04		
Road #7	1800-1900	1.77E	1.82E	0.74E	0.04	1.82E-07	4.88E	4.88E	0.017	9.41E	0.016	2.63E	0.01	2.70E-04		
Road #7	1900-2000	1.77E	1.82E	0.74E	0.04	1.82E-07	4.88E	4.88E	0.017	9.41E	0.016	2.63E	0.01	2.70E-04		
Road #7	2000-2100	1.86E	2.32E	2.14E	0.04E	8.64E-06	5.52E	8.77E	0.018	9.50E	0.018E	2.74E	0.03	3.42E-05		
Road #7	2100-2200	1.86E	2.32E	2.14E	0.04E	8.64E-06	5.52E	8.77E	0.018	9.50E	0.018E	2.74E	0.03	3.42E-05		
Road #7	2200-2300	1.11E	1.11E	0.04E	0.04	1.11E-07	1.11E-03	1.11E	0.017	1.11E	0.010	1.11E	0.006	2.97E-05		
Road #7	2300-0000	1.11E	1.11E	0.04E	0.04	1.11E-07	1.11E-03	1.11E	0.017	1.11E	0.010	1.11E	0.006	2.97E-05		
Road #7	0000-0100	1.61E	1.69E	0.05E	0.04	1.95E-07	2.46E-04	1.81E	0.017	9.84E	0.016E	1.14E	0.01	2.47E-05	2.17E-04	
Road #7	0100-0200	1.61E	1.69E	0.05E	0.04	1.95E-07	2.46E-04	1.81E	0.017	9.84E	0.016E	1.14E	0.01	2.47E-05	2.17E-04	
Road #7	0200-0300	7.99E	1.69E	0.98E	0.04	1.69E-06	6.11E-03	5.68E	0.016	3.35E	1.78E-07	8.62E	0.01	8.36E-04	1.47E-04	
Road #7	0300-0400	7.99E	1.69E	0.98E	0.04	1.69E-06	6.11E-03	5.68E	0.016	3.35E	1.78E-07	8.62E	0.01	8.36E-04	1.47E-04	
Road #7	0400-0500	1.66E	1.66E	0.04E	0.04	1.66E-07	1.66E-03	1.66E	0.017	1.66E	0.010	1.66E	0.006	4.68E-05	1.66E-04	
Road #7	0500-0600	1.66E	1.66E	0.04E	0.04	1.66E-07	1.66E-03	1.66E	0.017	1.66E	0.010	1.66E	0.006	4.68E-05	1.66E-04	
Road #7	0600-0700	1.66E	1.66E	0.04E	0.04	1.66E-07	1.66E-03	1.66E	0.017	1.66E	0.010	1.66E	0.006	4.68E-05	1.66E-04	
Road #7	0700-0800	1.66E	1.66E	0.04E	0.04	1.66E-07	1.66E-03	1.66E	0.017	1.66E	0.010	1.66E	0.006	4.68E-05	1.66E-04	
Road #7	0800-0900	1.66E	1.66E	0.04E	0.04	1.66E-07	1.66E-03	1.66E	0.017	1.66E	0.010	1.66E	0.006	4.68E-05	1.66E-04	
Road #7	0900-1000	1.66E	1.66E	0.04E	0.04	1.66E-07	1.66E-03	1.66E	0.017	1.66E	0.010	1.66E	0.006	4.68E-05	1.66E-04	
Road #7	1000-1100	1.66E	1.66E	0.04E	0.04	1.66E-07	1.66E-03	1.66E	0.017	1.66E	0.010	1.66E	0.006	4.68E-05	1.66E-04	
Road #7	1100-1200	1.66E	1.66E	0.04E	0.04	1.66E-07	1.66E-03	1.66E	0.017	1.66E	0.010	1.66E	0.006	4.68E-05	1.66E-04	
Road #7	1200-1300	1.66E	1.66E	0.04E	0.04	1.66E-07	1.66E-03	1.66E	0.017	1.66E	0.010	1.66E	0.006	4.68E-05	1.66E-04	
Road #7	1300-1400	4.55E	4.28E	2.34E	0.04	1.76E-07	1.76E-04	1.76E	0.016	2.17E-06	1.99E-07	1.04E	0.01	8.44E-05	4.41E-05	
Road #7	1400-1500	4.55E	4.28E	2.34E	0.04	1.76E-07	1.76E-04	1.76E	0.016	2.17E-06	1.99E-07	1.04E	0.01	8.44E-05	4.41E-05	
Road #7	1500-1600	4.55E	4.28E	2.34E	0.04	1.76E-07	1.76E-04	1.76E	0.016	2.17E-06	1.99E-07	1.04E	0.01	8.44E-05	4.41E-05	
Road #7	1600-1700	5.88E	4.07E	2.18E	0.04E	1.67E-06	4.48E	7.72E	0.018	1.18E	1.08E	0.017E	8.89E	0.008	4.14E-05	1.18E-04
Road #7	1700-1800	5.88E	4.07E	2.18E	0.04E											

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Risk 24 Hour Evulsion Factors (Armed and Dangerous) Year 2043															
Route Name	Route ID	Hour	No. Evulsion			No. Evulsion			No. Evulsion			No. Evulsion			
			g/h/m ²	h/m ²	h/m ²	g/h/m ²	h/m ²	h/m ²	g/h/m ²	h/m ²	h/m ²	g/h/m ²	h/m ²	h/m ²	
			Monthly/average	Monthly/average	Monthly/average	Monthly/average	Monthly/average	Monthly/average	Monthly/average	Monthly/average	Monthly/average	Monthly/average	Monthly/average	Monthly/average	
Row 34	54	0800-0900	0.1416	1.0447	1.518	2.981	1.1216	9.282	3.882	1.4246	1.188	0.948	1.588	2.988	4.4
Row 35	54	0900-1000	0.2122	1.5222	2.208	4.384	1.2226	10.08	4.5226	1.6226	1.388	1.088	1.688	3.288	4.4
Row 36	54	1000-1100	0.2828	2.0228	2.892	5.568	1.3226	10.976	4.5928	1.6426	1.2924	1.032	1.388	2.992	4.4
Row 37	54	1100-1200	0.3534	2.5234	3.684	6.852	1.4226	11.872	4.6528	1.6926	1.3424	1.082	1.488	3.092	4.4
Row 38	54	1300-1400	1.222	2.092	2.458	4.384	1.9426	10.88	3.568	1.4326	1.112	1.322	1.172	2.642	4.4
Row 39	54	1400-1500	1.242	2.112	2.508	4.4226	1.9626	10.928	3.588	1.4526	1.132	1.342	2.662	2.662	4.4
Row 40	54	1500-1600	1.262	2.132	2.558	4.4626	1.9826	10.968	3.608	1.4726	1.152	1.362	2.682	2.682	4.4
Row 41	54	1600-1700	1.282	2.152	2.608	4.5026	1.9982	11.008	3.628	1.4926	1.172	1.382	2.702	2.702	4.4
Row 42	54	1700-1800	1.302	2.172	2.658	4.5426	2.0182	11.048	3.648	1.5126	1.192	1.402	2.722	2.722	4.4
Row 43	54	1800-1900	1.322	2.192	2.708	4.5826	2.0382	11.088	3.668	1.5326	1.212	1.422	2.742	2.742	4.4
Row 44	54	1900-2000	1.342	2.212	2.758	4.6226	2.0582	11.128	3.688	1.5526	1.232	1.442	2.762	2.762	4.4
Row 45	54	2000-2100	1.362	2.232	2.808	4.6626	2.0782	11.168	3.708	1.5726	1.252	1.462	2.782	2.782	4.4
Row 46	54	2100-2200	1.382	2.252	2.858	4.7026	2.0982	11.208	3.728	1.5926	1.272	1.482	2.802	2.802	4.4
Row 47	54	2200-2300	1.402	2.272	2.908	4.7426	2.1182	11.248	3.748	1.6126	1.292	1.502	2.822	2.822	4.4
Row 48	54	2300-2400	1.422	2.292	2.958	4.7826	2.1382	11.288	3.768	1.6326	1.312	1.522	2.842	2.842	4.4
Row 49	54	0000-0100	1.442	2.312	3.008	4.8226	2.1582	11.328	3.788	1.6526	1.332	1.542	2.862	2.862	4.4
Row 50	54	0100-0200	1.462	2.332	3.058	4.8626	2.1782	11.368	3.808	1.6726	1.352	1.562	2.882	2.882	4.4
Row 51	54	0200-0300	1.482	2.352	3.108	4.9026	2.1982	11.408	3.828	1.6926	1.372	1.582	2.902	2.902	4.4
Row 52	54	0300-0400	1.502	2.372	3.158	4.9426	2.2182	11.448	3.848	1.7126	1.392	1.602	2.922	2.922	4.4
Row 53	54	0400-0500	1.522	2.392	3.208	4.9826	2.2382	11.488	3.868	1.7326	1.412	1.622	2.942	2.942	4.4
Row 54	54	0500-0600	1.542	2.412	3.258	5.0226	2.2582	11.528	3.888	1.7526	1.432	1.642	2.962	2.962	4.4
Row 55	54	0600-0700	1.562	2.432	3.308	5.0626	2.2782	11.568	3.908	1.7726	1.452	1.662	2.982	2.982	4.4
Row 56	54	0700-0800	1.582	2.452	3.358	5.1026	2.2982	11.608	3.928	1.7926	1.472	1.682	3.002	3.002	4.4
Row 57	54	0800-0900	1.602	2.472	3.408	5.1426	2.3182	11.648	3.948	1.8126	1.492	1.702	3.022	3.022	4.4
Row 58	54	0900-1000	1.622	2.492	3.458	5.1826	2.3382	11.688	3.968	1.8326	1.512	1.722	3.042	3.042	4.4
Row 59	54	1000-1100	1.642	2.512	3.508	5.2226	2.3582	11.728	3.988	1.8526	1.532	1.742	3.062	3.062	4.4
Row 60	54	1100-1200	1.662	2.532	3.558	5.2626	2.3782	11.768	4.008	1.8726	1.552	1.762	3.082	3.082	4.4
Row 61	54	1200-1300	1.682	2.552	3.608	5.3026	2.3982	11.808	4.028	1.8926	1.572	1.782	3.102	3.102	4.4
Row 62	54	1300-1400	1.702	2.572	3.658	5.3426	2.4182	11.848	4.048	1.9126	1.592	1.802	3.122	3.122	4.4
Row 63	54	1400-1500	1.722	2.592	3.708	5.3826	2.4382	11.888	4.068	1.9326	1.612	1.822	3.142	3.142	4.4
Row 64	54	1500-1600	1.742	2.612	3.758	5.4226	2.4582	11.928	4.088	1.9526	1.632	1.842	3.162	3.162	4.4
Row 65	54	1600-1700	1.762	2.632	3.808	5.4626	2.4782	11.968	4.108	1.9726	1.652	1.862	3.182	3.182	4.4
Row 66	54	1700-1800	1.782	2.652	3.858	5.5026	2.4982	12.008	4.128	1.9926	1.672	1.882	3.202	3.202	4.4
Row 67	54	1800-1900	1.802	2.672	3.908	5.5426	2.5182	12.048	4.148	2.0126	1.692	1.902	3.222	3.222	4.4
Row 68	54	1900-2000	1.822	2.692	3.958	5.5826	2.5382	12.088	4.168	2.0326	1.712	1.922	3.242	3.242	4.4
Row 69	54	2000-2100	1.842	2.712	4.008	5.6226	2.5582	12.128	4.188	2.0526	1.732	1.942	3.262	3.262	4.4
Row 70	54	2100-2200	1.862	2.732	4.058	5.6626	2.5782	12.168	4.208	2.0726	1.752	1.962	3.282	3.282	4.4
Row 71	54	2200-2300	1.882	2.752	4.108	5.7026	2.5982	12.208	4.228	2.0926	1.772	1.982	3.302	3.302	4.4
Row 72	54	2300-2400	1.902	2.772	4.158	5.7426	2.6182	12.248	4.248	2.1126	1.792	2.002	3.322	3.322	4.4
Row 73	54	0000-0100	1.922	2.792	4.208	5.7826	2.6382	12.288	4.268	2.1326	1.812	2.022	3.342	3.342	4.4
Row 74	54	0100-0200	1.942	2.812	4.258	5.8226	2.6582	12.328	4.288	2.1526	1.832	2.042	3.362	3.362	4.4
Row 75	54	0200-0300	1.962	2.832	4.308	5.8626	2.6782	12.368	4.308	2.1726	1.852	2.062	3.382	3.382	4.4
Row 76	54	0300-0400	1.982	2.852	4.358	5.9026	2.6982	12.408	4.328	2.1926	1.872	2.082	3.402	3.402	4.4
Row 77	54	0400-0500	2.002	2.872	4.408	5.9426	2.7182	12.448	4.348	2.2126	1.892	2.102	3.422	3.422	4.4
Row 78	54	0500-0600	2.022	2.892	4.458	5.9826	2.7382	12.488	4.368	2.2326	1.912	2.122	3.442	3.442	4.4
Row 79	54	0600-0700	2.042	2.912	4.508	6.0226	2.7582	12.528	4.388	2.2526	1.932	2.142	3.462	3.462	4.4
Row 80	54	0700-0800	2.062	2.932	4.558	6.0626	2.7782	12.568	4.408	2.2726	1.952	2.162	3.482	3.482	4.4
Row 81	54	0800-0900	2.082	2.952	4.608	6.1026	2.7982	12.608	4.428	2.2926	1.972	2.182	3.502	3.502	4.4
Row 82	54	0900-1000	2.102	2.972	4.658	6.1426	2.8182	12.648	4.448	2.3126	1.992	2.202	3.522	3.522	4.4
Row 83	54	1000-1100	2.122	2.992	4.708	6.1826	2.8382	12.688	4.468	2.3326	2.012	2.222	3.542	3.542	4.4
Row 84	54	1100-1200	2.142	3.012	4.758	6.2226	2.8582	12.728	4.488	2.3526	2.032	2.242	3.562	3.562	4.4
Row 85	54	1200-1300	2.162	3.032	4.808	6.2626	2.8782	12.768	4.508	2.3726	2.052	2.262	3.582	3.582	4.4
Row 86	54	1300-1400	2.182	3.052	4.858	6.3026	2.8982	12.808	4.528	2.3926	2.072	2.282	3.602	3.602	4.4
Row 87	54	1400-1500	2.202	3.072	4.908	6.3426	2.9182	12.848	4.548	2.4126	2.092	2.302	3.622	3.622	4.4
Row 88	54	1500-1600	2.222	3.092	4.958	6.3826	2.9382	12.888	4.568	2.4326	2.112	2.322	3.642	3.642	4.4
Row 89	54	1600-1700	2.242	3.112	5.008	6.4226	2.9582	12.928	4.588	2.4526	2.132	2.342	3.662	3.662	4.4
Row 90	54	1700-1800	2.262	3.132	5.058	6.4626	2.9782	12.968	4.608	2.4726	2.152	2.362	3.682	3.682	4.4
Row 91	54	1800-1900	2.282	3.152	5.108	6.5026	2.9982	13.008	4.628	2.4926	2.172	2.382	3.702	3.702	4.4
Row 92	54	1900-2000	2.302	3.172	5.158	6.5426	3.0182	13.048	4.648	2.5126	2.192	2.402	3.722	3.722	4.4
Row 93	54	2000-2100	2.322	3.192	5.208	6.5826	3.0382	13.088	4.668	2.5326	2.212	2.422	3.742	3.742	4.4
Row 94	54	2100-2200	2.342	3.212	5.258	6.6226	3.0582	13.128	4.688	2.5526	2.232	2.442	3.762	3.762	4.4
Row 95	54	2200-2300	2.362	3.232	5.308	6.6626	3.0782	13.168	4.708	2.5726	2.252	2.462	3.782	3.782	4.4
Row 96	54	2300-2400	2.382	3.252	5.358	6.7026	3.0982	13.208	4.728	2.5926	2.272	2.482	3.802	3.802	4.4
Row 97	54	0000-0100	2.402	3.272	5.408	6.7426	3.1182	13.248	4.748	2.6126	2.292	2.502	3.822	3.822	4.4
Row 98	54	0100-0200	2.422	3.292	5.458	6.7826	3.1382	13.288	4.768	2.6326	2.312	2.522	3.842	3.842	4.4
Row 99	54	0200-0300	2.442	3.312	5.508	6.8226	3.1582	13.328	4.788	2.6526	2.332	2.542	3.862	3.862	4.4
Row 100	54	0300-0400	2.462	3.332	5.558	6.8626	3.1782	13.368	4.808	2.6726	2.352	2.562	3.882	3.882	4.4

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Open Road 24 Hour Emission Factors for ARMDIST model (Revised 2014)														
Route Number	Direction	Hour	NOx Emission					PM ₁₀ /PM _{2.5} Emission						
			g/min/veh					g/min/veh						
			g/min/veh	g/min/veh	g/min/veh	g/min/veh	g/min/veh	g/min/veh	g/min/veh	g/min/veh	g/min/veh	g/min/veh	g/min/veh	
Road 1	1	0000-0005	0.436	0.318	1.376	1.382	4.677	8.811	3.802	5.517	1.121	1.079	1.558	1.326
		0005-0010	0.796	0.528	2.086	2.092	6.886	13.053	5.974	8.755	2.150	2.108	2.986	2.604
Road 1	2	0000-0005	0.436	0.318	1.376	1.382	4.677	8.811	3.802	5.517	1.121	1.079	1.558	1.326
		0005-0010	0.796	0.528	2.086	2.092	6.886	13.053	5.974	8.755	2.150	2.108	2.986	2.604
Road 1	3	0000-0005	0.739	0.512	2.276	2.276	7.407	14.007	6.123	9.434	2.362	2.247	3.484	2.848
		0005-0010	1.206	0.842	3.482	3.482	11.262	21.862	10.082	15.462	4.484	4.369	6.684	5.596
Road 1	4	0000-0005	0.686	0.506	1.906	1.906	6.032	11.612	4.496	6.812	1.976	1.896	2.736	2.326
		0005-0010	1.156	0.846	3.106	3.106	9.856	18.856	8.686	12.956	3.456	3.346	5.056	4.326
Road 1	5	0000-0005	0.436	0.318	1.376	1.382	4.677	8.811	3.802	5.517	1.121	1.079	1.558	1.326
		0005-0010	0.796	0.528	2.086	2.092	6.886	13.053	5.974	8.755	2.150	2.108	2.986	2.604
Road 1	6	0000-0005	0.383	0.287	1.073	1.073	3.503	6.683	2.893	4.383	1.183	1.143	1.613	1.403
		0005-0010	0.683	0.487	1.773	1.773	5.683	10.683	4.583	6.863	1.983	1.903	2.723	2.313
Road 1	7	0000-0005	0.383	0.287	1.073	1.073	3.503	6.683	2.893	4.383	1.183	1.143	1.613	1.403
		0005-0010	0.683	0.487	1.773	1.773	5.683	10.683	4.583	6.863	1.983	1.903	2.723	2.313
Road 1	8	0000-0005	0.383	0.287	1.073	1.073	3.503	6.683	2.893	4.383	1.183	1.143	1.613	1.403
		0005-0010	0.683	0.487	1.773	1.773	5.683	10.683	4.583	6.863	1.983	1.903	2.723	2.313
Road 1	9	0000-0005	0.383	0.287	1.073	1.073	3.503	6.683	2.893	4.383	1.183	1.143	1.613	1.403
		0005-0010	0.683	0.487	1.773	1.773	5.683	10.683	4.583	6.863	1.983	1.903	2.723	2.313
Road 1	10	0000-0005	0.383	0.287	1.073	1.073	3.503	6.683	2.893	4.383	1.183	1.143	1.613	1.403
		0005-0010	0.683	0.487	1.773	1.773	5.683	10.683	4.583	6.863	1.983	1.903	2.723	2.313
Road 1	11	0000-0005	0.383	0.287	1.073	1.073	3.503	6.683	2.893	4.383	1.183	1.143	1.613	1.403
		0005-0010	0.683	0.487	1.773	1.773	5.683	10.683	4.583	6.863	1.983	1.903	2.723	2.313
Road 1	12	0000-0005	0.383	0.287	1.073	1.073	3.503	6.683	2.893	4.383	1.183	1.143	1.613	1.403
		0005-0010	0.683	0.487	1.773	1.773	5.683	10.683	4.583	6.863	1.983	1.903	2.723	2.313
Road 1	13	0000-0005	0.383	0.287	1.073	1.073	3.503	6.683	2.893	4.383	1.183	1.143	1.613	1.403
		0005-0010	0.683	0.487	1.773	1.773	5.683	10.683	4.583	6.863	1.983	1.903	2.723	2.313
Road 1	14	0000-0005	0.383	0.287	1.073	1.073	3.503	6.683	2.893	4.383	1.183	1.143	1.613	1.403
		0005-0010	0.683	0.487	1.773	1.773	5.683	10.683	4.583	6.863	1.983	1.903	2.723	2.313
Road 1	15	0000-0005	0.383	0.287	1.073	1.073	3.503	6.683	2.893	4.383	1.183	1.143	1.613	1.403
		0005-0010	0.683	0.487	1.773	1.773	5.683	10.683	4.583	6.863	1.983	1.903	2.723	2.313
Road 1	16	0000-0005	0.383	0.287	1.073	1.073	3.503	6.683	2.893	4.383	1.183	1.143	1.613	1.403
		0005-0010	0.683	0.487	1.773	1.773	5.683	10.683	4.583	6.863	1.983	1.903	2.723	2.313
Road 1	17	0000-0005	0.383	0.287	1.073	1.073	3.503	6.683	2.893	4.383	1.183	1.143	1.613	1.403
		0005-0010	0.683	0.487	1.773	1.773	5.683	10.683	4.583	6.863	1.983	1.903	2.723	2.313
Road 1	18	0000-0005	0.383	0.287	1.073	1.073	3.503	6.683	2.893	4.383	1.183	1.143	1.613	1.403
		0005-0010	0.683	0.487	1.773	1.773	5.683	10.683	4.583	6.863	1.983	1.903	2.723	2.313
Road 1	19	0000-0005	0.383	0.287	1.073	1.073	3.503	6.683	2.893	4.383	1.183	1.143	1.613	1.403
		0005-0010	0.683	0.487	1.773	1.773	5.683	10.683	4.583	6.863	1.983	1.903	2.723	2.313
Road 1	20	0000-0005	0.383	0.287	1.073	1.073	3.503	6.683	2.893	4.383	1.183	1.143	1.613	1.403
		0005-0010	0.683	0.487	1.773	1.773	5.683	10.683	4.583	6.863	1.983	1.903	2.723	2.313
Road 1	21	0000-0005	0.383	0.287	1.073	1.073	3.503	6.683	2.893	4.383	1.183	1.143	1.613	1.403
		0005-0010	0.683	0.487	1.773	1.773	5.683	10.683	4.583	6.863	1.983	1.903	2.723	2.313
Road 1	22	0000-0005	0.383	0.287	1.073	1.073	3.503	6.683	2.893	4.383	1.183	1.143	1.613	1.403
		0005-0010	0.683	0.487	1.773	1.773	5.683	10.683	4.583	6.863	1.983	1.903	2.723	2.313
Road 1	23	0000-0005	0.383	0.287	1.073	1.073	3.503	6.683	2.893	4.383	1.183	1.143	1.613	1.403
		0005-0010	0.683	0.487	1.773	1.773	5.683	10.683	4.583	6.863	1.983	1.903	2.723	2.313
Road 1	24	0000-0005	0.383	0.287	1.073	1.073	3.503	6.683	2.893	4.383	1.183	1.143	1.613	1.403
		0005-0010	0.683	0.487	1.773	1.773	5.683	10.683	4.583	6.863	1.983	1.903	2.723	2.313
Road 2	1	0000-0005	0.436	0.318	1.376	1.382	4.677	8.811	3.802	5.517	1.121	1.079	1.558	1.326
		0005-0010	0.796	0.528	2.086	2.092	6.886	13.053	5.974	8.755	2.150	2.108	2.986	2.604
Road 2	2	0000-0005	0.436	0.318	1.376	1.382	4.677	8.811	3.802	5.517	1.121	1.079	1.558	1.326
		0005-0010	0.796	0.528	2.086	2.092	6.886	13.053	5.974	8.755	2.150	2.108	2.986	2.604
Road 2	3	0000-0005	0.739	0.512	2.276	2.276	7.407	14.007	6.123	9.434	2.362	2.247	3.484	2.848
		0005-0010	1.206	0.842	3.482	3.482	11.262	21.862	10.082	15.462	4.484	4.369	6.684	5.596
Road 2	4	0000-0005	0.686	0.506	1.906	1.906	6.032	11.612	4.496	6.812	1.976	1.896	2.736	2.326
		0005-0010	1.156	0.846	3.106	3.106	9.856	18.856	8.686	12.956	3.456	3.346	5.056	4.326
Road 2	5	0000-0005	0.436	0.318	1.376	1.382	4.677	8.811	3.802	5.517	1.121	1.079	1.558	1.326
		0005-0010	0.796	0.528	2.086	2.092	6.886	13.053	5.974	8.755	2.150	2.108	2.986	2.604
Road 2	6	0000-0005	0.383	0.287	1.073	1.073	3.503	6.683	2.893	4.383	1.183	1.143	1.613	1.403
		0005-0010	0.683	0.487	1.773	1.773	5.683	10.683	4.583	6.863	1.983	1.903	2.723	2.313
Road 2	7	0000-0005	0.383	0.287	1.073	1.073	3.503	6.683	2.893	4.383	1.183	1.143	1.613	1.403
		0005-0010	0.683	0.487	1.773	1.773	5.683	10.683	4.583	6.863	1.983	1.903	2.723	2.313
Road 2	8	0000-0005	0.383	0.287	1.073	1.073	3.503	6.683	2.893	4.383	1.183	1.143	1.613	1.403
		0005-0010	0.683	0.487	1.773	1.773	5.683	10.683	4.583	6.863	1.983	1.903	2.723	2.313
Road 2	9	0000-0005	0.383	0.287	1.073	1.073	3.503	6.683	2.893	4.383	1.183	1.143	1.613	1.403
		0005-0010	0.683	0.487	1.773	1.773	5.683	10.683	4.583	6.863	1.983	1.903	2.723	2.313
Road 2	10	0000-0005	0.383	0.287	1.073	1.073	3.503	6.683	2.893	4.383	1.183	1.143	1.613	1.403
		0005-0010	0.683	0.487	1.773	1.773	5.683	10.683	4.583	6.863	1.983	1.903	2.723	2.313
Road 2	11	0000-0005	0.383	0.287	1.073	1.073	3.503	6.683	2.893	4.383	1.183	1.143	1.613	1.403
		0005-0010	0.683	0.487	1.773	1.773	5.683	10.683	4.583	6.863	1.983	1.903	2.723	2.313
Road 2	12	0000-0005	0.383	0.287	1.073	1.073	3.503	6.683	2.893	4.383	1.183	1.143	1.613	1.403
		0005-0010	0.683	0.487	1.773	1.773	5.683	10.683	4.583	6.863	1.983	1.903	2.723	2.313
Road 2	13	0000-0005	0.383	0.287	1.073	1.073	3.503	6.683	2.893	4.383	1.183	1.143	1.613	1.403
		0005-0010	0.683	0.487	1.773	1.773	5.683	10.683	4.583	6.863	1.983	1.903	2.723	2.313
Road 2	14	0000-0005	0.383	0.287	1.073	1.073	3.503	6.683	2.893	4.383	1.183	1.143	1.613	1.403
		0005-0010	0.683	0.487	1.773	1.773	5.683	10.683	4.583	6.863	1.983	1.903	2.723	2.313
Road 2	15	0000-0005	0.383	0.287	1.073	1.073	3.503	6.683	2.893	4.383	1.183	1.143	1.613	1.403
		0005-0010	0.683	0.487	1.773	1.773	5.683	10.683	4.583	6.863	1.983	1.903	2.723	2.313
Road 2	16	0000-0005	0.383	0.287	1.073	1.073	3.503	6.683	2.893	4.383	1.183	1.143	1.613	1.403
		0005-0010	0.683	0.487	1.773	1.773	5.683	10.683	4.583	6.863	1.983	1.903	2.723	2.313
Road 2	17	0000-0005	0.383	0.287	1.073	1.073	3.503	6.683	2.893	4.383	1.183	1.143	1.613	1.403
		0005-0010	0.683	0.487	1.773	1.773	5.683							

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Open 24 Hour Underground Quarterly															
Open Year 24 hour Emission Factors for AEMMS model (see Note 1)															
Year 2043															
Road Name	Road ID	Hour	No. Emission					No. Emission							
			g/h/m ²	g/h/m ²	g/h/m ²	g/h/m ²	g/h/m ²	g/h/m ²	g/h/m ²	g/h/m ²	g/h/m ²	g/h/m ²			
			Monthly/turnover		Monthly/turnover		Monthly/turnover		Monthly/turnover		Monthly/turnover		Monthly/turnover		
Road 4	4	0800-0900	7.222	2.487	1.905	1.832	1.188	1.012	4.502	1.446	1.202	4.218	8.678	4.956	4.956
Road 4	4	0900-1000	8.236	2.627	1.776	1.832	1.832	1.188	5.003	1.602	1.358	4.662	2.235	4.956	4.956
Road 4	4	1000-1100	8.236	2.627	1.776	1.832	1.832	1.188	5.003	1.602	1.358	4.662	2.235	4.956	4.956
Road 4	4	1100-1200	8.899	2.744	1.571	4.451	2.026	1.506	7.788	3.503	1.285	3.642	9.893	5.788	4.728
Road 4	4	1200-1300	8.899	2.744	1.571	4.451	2.026	1.506	7.788	3.503	1.285	3.642	9.893	5.788	4.728
Road 4	4	1300-1400	9.556	3.129	1.372	2.938	4.842	1.866	1.072	5.982	1.760	1.341	10.611	6.188	5.378
Road 4	4	1400-1500	1.111	3.525	1.071	4.892	1.464	1.136	1.072	5.982	1.760	1.341	10.611	6.188	5.378
Road 4	4	1500-1600	1.111	3.525	1.071	4.892	1.464	1.136	1.072	5.982	1.760	1.341	10.611	6.188	5.378
Road 4	4	1600-1700	1.111	3.525	1.071	4.892	1.464	1.136	1.072	5.982	1.760	1.341	10.611	6.188	5.378
Road 4	4	1700-1800	1.111	3.525	1.071	4.892	1.464	1.136	1.072	5.982	1.760	1.341	10.611	6.188	5.378
Road 4	4	1800-1900	1.111	3.525	1.071	4.892	1.464	1.136	1.072	5.982	1.760	1.341	10.611	6.188	5.378
Road 4	4	1900-2000	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	2000-2100	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	2100-2200	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	2200-2300	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	2300-2400	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	2400-0100	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	0100-0200	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	0200-0300	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	0300-0400	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	0400-0500	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	0500-0600	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	0600-0700	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	0700-0800	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	0800-0900	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	0900-1000	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	1000-1100	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	1100-1200	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	1200-1300	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	1300-1400	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	1400-1500	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	1500-1600	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	1600-1700	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	1700-1800	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	1800-1900	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	1900-2000	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	2000-2100	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	2100-2200	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	2200-2300	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	2300-2400	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	2400-0100	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	0100-0200	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	0200-0300	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	0300-0400	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	0400-0500	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	0500-0600	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	0600-0700	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	0700-0800	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	0800-0900	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	0900-1000	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	1000-1100	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	1100-1200	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	1200-1300	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	1300-1400	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	1400-1500	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	1500-1600	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	1600-1700	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	1700-1800	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	1800-1900	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	1900-2000	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	2000-2100	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	2100-2200	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	2200-2300	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	2300-2400	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	2400-0100	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	0100-0200	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	0200-0300	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	0300-0400	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	0400-0500	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	0500-0600	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	0600-0700	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	0700-0800	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	0800-0900	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	0900-1000	4.402	1.062	0.607	7.854	3.232	0.885	6.238	1.443	0.963	7.064	1.032	4.748	2.006
Road 4	4	1000-1100													

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open 10th 24-hour Emission Factors for GHG/MCO ₂ e (kg) per Hour														
Year 2043														
Road Name	Asset ID	Hour	No. Emission				No. Emission							
			Month/January		Month/February		Month/January		Month/February					
			g/MWh	1000/tonne	g/MWh	1000/tonne	g/MWh	1000/tonne	g/MWh	1000/tonne	g/MWh	1000/tonne		
Road 7	7	1600-1700	1.286	9.801	4.208	1.241	1.715	1.198	1.576	4.696	2.012	4.925	1.471	6.286
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 8	8	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 9	9	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 10	10	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 11	11	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 12	12	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 13	13	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 14	14	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 15	15	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 16	16	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 17	17	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 18	18	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 19	19	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 20	20	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 21	21	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 22	22	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 23	23	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 24	24	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 25	25	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 26	26	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 27	27	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 28	28	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 29	29	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 30	30	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 31	31	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 32	32	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 33	33	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 34	34	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 35	35	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 36	36	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 37	37	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 38	38	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 39	39	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 40	40	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 41	41	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 42	42	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 43	43	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 44	44	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 45	45	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 46	46	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
		1700-1800	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074	1.286	1.074	1.074
Road 47	47	1600-1700	1.286	1.074	1.074	1.286	1.074	1.074	1.286					

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Road 24 Hour Emission Factors for ARMDIST model (Revised 2014)																		
Route Name	Roadway	Hour	NOx Emission						PM ₁₀ Emission					PM _{2.5} Emission				
			g/km/hr			lb/hr			g/km/hr		lb/hr		g/km/hr		lb/hr			
			g/km/hr	lb/hr	lb/mi	g/km/hr	lb/hr	lb/mi	g/km/hr	lb/hr	g/km/hr	lb/hr	g/km/hr	lb/hr				
Road 1	1	0000-0000	4.396	6.318	1.376	3.182	4.687	8.811	3.802	5.517	1.121	1.076	1.558	1.326				
	1	0000-0000	4.795	4.528	0.968	2.486	2.286	4.375	3.974	3.557	0.750	0.693	1.158	1.046				
	1	0000-0000	4.795	4.528	0.968	2.486	2.286	4.375	3.974	3.557	0.750	0.693	1.158	1.046				
	1	0000-0000	6.735	3.128	0.674	3.020	1.407	4.126	4.345	2.362	0.475	0.444	2.848	1.578				
	1	0000-0000	4.205	4.482	0.948	2.442	2.682	4.862	4.482	4.862	1.000	1.000	2.000	2.000				
	1	0000-0000	6.685	1.908	0.398	3.893	4.032	4.166	3.840	4.496	0.818	0.974	1.898	1.332				
	1	0000-0000	4.155	1.357	0.283	3.150	4.150	2.700	3.880	4.680	1.880	2.450	4.840	6.130				
	1	0000-0000	4.155	1.357	0.283	3.150	4.150	2.700	3.880	4.680	1.880	2.450	4.840	6.130				
	1	0000-0000	3.935	1.847	0.767	3.863	2.031	4.038	4.608	2.295	4.800	2.820	0.986	2.013				
	1	0000-0000	3.185	1.385	0.283	3.150	4.150	2.700	3.880	4.680	1.880	2.450	4.840	6.130				
	1	0000-0000	3.185	1.385	0.283	3.150	4.150	2.700	3.880	4.680	1.880	2.450	4.840	6.130				
	1	1000-1000	1.945	0.345	0.070	0.703	0.412	1.645	3.295	5.405	1.995	4.000	2.615	0.621				
Road 2	1	0000-0000	2.465	0.345	0.070	0.703	0.412	1.645	3.295	5.405	1.995	4.000	2.615	0.621				
	1	1000-1000	1.250	0.250	0.050	0.500	0.250	1.000	1.645	1.115	0.620	0.355	0.205	0.107				
	1	1000-1000	1.250	0.250	0.050	0.500	0.250	1.000	1.645	1.115	0.620	0.355	0.205	0.107				
	1	1000-1000	1.250	0.250	0.050	0.500	0.250	1.000	1.645	1.115	0.620	0.355	0.205	0.107				
	1	1000-1000	1.250	0.250	0.050	0.500	0.250	1.000	1.645	1.115	0.620	0.355	0.205	0.107				
	1	1000-1000	1.250	0.250	0.050	0.500	0.250	1.000	1.645	1.115	0.620	0.355	0.205	0.107				
	1	1000-1000	1.250	0.250	0.050	0.500	0.250	1.000	1.645	1.115	0.620	0.355	0.205	0.107				
	1	1000-1000	1.250	0.250	0.050	0.500	0.250	1.000	1.645	1.115	0.620	0.355	0.205	0.107				
	1	1000-1000	1.250	0.250	0.050	0.500	0.250	1.000	1.645	1.115	0.620	0.355	0.205	0.107				
	1	1000-1000	1.250	0.250	0.050	0.500	0.250	1.000	1.645	1.115	0.620	0.355	0.205	0.107				
	1	1000-1000	1.250	0.250	0.050	0.500	0.250	1.000	1.645	1.115	0.620	0.355	0.205	0.107				
	1	1000-1000	1.250	0.250	0.050	0.500	0.250	1.000	1.645	1.115	0.620	0.355	0.205	0.107				
1	1500-1500	1.460	0.560	0.120	0.240	1.451	0.420	1.680	5.182	1.560	0.740	1.370	0.717					
Road 3	1	0000-0000	1.460	0.560	0.120	0.240	1.451	0.420	1.680	5.182	1.560	0.740	1.370	0.717				
	1	0000-0000	1.460	0.560	0.120	0.240	1.451	0.420	1.680	5.182	1.560	0.740	1.370	0.717				
	1	0000-0000	1.460	0.560	0.120	0.240	1.451	0.420	1.680	5.182	1.560	0.740	1.370	0.717				
	1	0000-0000	1.460	0.560	0.120	0.240	1.451	0.420	1.680	5.182	1.560	0.740	1.370	0.717				
	1	0000-0000	1.460	0.560	0.120	0.240	1.451	0.420	1.680	5.182	1.560	0.740	1.370	0.717				
	1	0000-0000	1.460	0.560	0.120	0.240	1.451	0.420	1.680	5.182	1.560	0.740	1.370	0.717				
	1	0000-0000	1.460	0.560	0.120	0.240	1.451	0.420	1.680	5.182	1.560	0.740	1.370	0.717				
	1	0000-0000	1.460	0.560	0.120	0.240	1.451	0.420	1.680	5.182	1.560	0.740	1.370	0.717				
	1	0000-0000	1.460	0.560	0.120	0.240	1.451	0.420	1.680	5.182	1.560	0.740	1.370	0.717				
	1	0000-0000	1.460	0.560	0.120	0.240	1.451	0.420	1.680	5.182	1.560	0.740	1.370	0.717				
	1	0000-0000	1.460	0.560	0.120	0.240	1.451	0.420	1.680	5.182	1.560	0.740	1.370	0.717				
	1	0000-0000	1.460	0.560	0.120	0.240	1.451	0.420	1.680	5.182	1.560	0.740	1.370	0.717				
1	1500-1500	1.460	0.560	0.120	0.240	1.451	0.420	1.680	5.182	1.560	0.740	1.370	0.717					
Road 4	1	0000-0000	1.460	0.560	0.120	0.240	1.451	0.420	1.680	5.182	1.560	0.740	1.370	0.717				
	1	0000-0000	1.460	0.560	0.120	0.240	1.451	0.420	1.680	5.182	1.560	0.740	1.370	0.717				
	1	0000-0000	1.460	0.560	0.120	0.240	1.451	0.420	1.680	5.182	1.560	0.740	1.370	0.717				
	1	0000-0000	1.460	0.560	0.120	0.240	1.451	0.420	1.680	5.182	1.560	0.740	1.370	0.717				
	1	0000-0000	1.460	0.560	0.120	0.240	1.451	0.420	1.680	5.182	1.560	0.740	1.370	0.717				
	1	0000-0000	1.460	0.560	0.120	0.240	1.451	0.420	1.680	5.182	1.560	0.740	1.370	0.717				
	1	0000-0000	1.460	0.560	0.120	0.240	1.451	0.420	1.680	5.182	1.560	0.740	1.370	0.717				
	1	0000-0000	1.460	0.560	0.120	0.240	1.451	0.420	1.680	5.182	1.560	0.740	1.370	0.717				
	1	0000-0000	1.460	0.560	0.120	0.240	1.451	0.420	1.680	5.182	1.560	0.740	1.370	0.717				
	1	0000-0000	1.460	0.560	0.120	0.240	1.451	0.420	1.680	5.182	1.560	0.740	1.370	0.717				
	1	0000-0000	1.460	0.560	0.120	0.240	1.451	0.420	1.680	5.182	1.560	0.740	1.370	0.717				
	1	0000-0000	1.460	0.560	0.120	0.240	1.451	0.420	1.680	5.182	1.560	0.740	1.370	0.717				
1	1500-1500	1.460	0.560	0.120	0.240	1.451	0.420	1.680	5.182	1.560	0.740	1.370	0.717					

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Open NRI 24 Hour Underground Query

Open NRI 24 Hour Emulsion Factors for AEMDMS model (Rev 1)

Year 2043

Rock Name	Row ID	Hour	No Emulsion						No Emulsion						
			Monthly/Hours			Monthly/Average			Monthly/Hours			Monthly/Average			
			g/m ³ /hr	lb/ton/hr	lb/ton/hr	g/m ³ /hr	lb/ton/hr	lb/ton/hr	g/m ³ /hr	lb/ton/hr	lb/ton/hr	g/m ³ /hr	lb/ton/hr	lb/ton/hr	
Rock 4	4	0800-0900	7.221	2.487	1.905	1.818	1.188	1.012	4.162	1.446	1.202	4.162	1.446	1.202	
			7.221	2.487	1.905	1.818	1.188	1.012	4.162	1.446	1.202	4.162	1.446	1.202	
Rock 4	4	0900-1000	7.221	2.487	1.905	1.818	1.188	1.012	4.162	1.446	1.202	4.162	1.446	1.202	
			7.221	2.487	1.905	1.818	1.188	1.012	4.162	1.446	1.202	4.162	1.446	1.202	
Rock 4	4	1000-1100	8.891	2.814	2.177	1.575	1.432	1.065	7.786	2.350	1.848	7.786	2.350	1.848	
			8.891	2.814	2.177	1.575	1.432	1.065	7.786	2.350	1.848	7.786	2.350	1.848	
Rock 4	4	1100-1200	1.096	0.31	0.247	1.177	0.333	1.052	0.3	0.086	0.07	1.052	0.3	0.086	
			1.096	0.31	0.247	1.177	0.333	1.052	0.3	0.086	0.07	1.052	0.3	0.086	
Rock 4	4	1200-1300	1.106	0.31	0.247	1.177	0.333	1.052	0.3	0.086	0.07	1.106	0.31	0.247	
			1.106	0.31	0.247	1.177	0.333	1.052	0.3	0.086	0.07	1.106	0.31	0.247	
Rock 4	4	1300-1400	1.111	0.31	0.247	1.177	0.333	1.052	0.3	0.086	0.07	1.111	0.31	0.247	
			1.111	0.31	0.247	1.177	0.333	1.052	0.3	0.086	0.07	1.111	0.31	0.247	
Rock 4	4	1400-1500	1.111	0.31	0.247	1.177	0.333	1.052	0.3	0.086	0.07	1.111	0.31	0.247	
			1.111	0.31	0.247	1.177	0.333	1.052	0.3	0.086	0.07	1.111	0.31	0.247	
Rock 4	4	1500-1600	1.111	0.31	0.247	1.177	0.333	1.052	0.3	0.086	0.07	1.111	0.31	0.247	
			1.111	0.31	0.247	1.177	0.333	1.052	0.3	0.086	0.07	1.111	0.31	0.247	
Rock 4	4	1600-1700	1.111	0.31	0.247	1.177	0.333	1.052	0.3	0.086	0.07	1.111	0.31	0.247	
			1.111	0.31	0.247	1.177	0.333	1.052	0.3	0.086	0.07	1.111	0.31	0.247	
Rock 4	4	1700-1800	1.111	0.31	0.247	1.177	0.333	1.052	0.3	0.086	0.07	1.111	0.31	0.247	
			1.111	0.31	0.247	1.177	0.333	1.052	0.3	0.086	0.07	1.111	0.31	0.247	
Rock 4	4	1800-1900	1.111	0.31	0.247	1.177	0.333	1.052	0.3	0.086	0.07	1.111	0.31	0.247	
			1.111	0.31	0.247	1.177	0.333	1.052	0.3	0.086	0.07	1.111	0.31	0.247	
Rock 4	4	1900-2000	1.111	0.31	0.247	1.177	0.333	1.052	0.3	0.086	0.07	1.111	0.31	0.247	
			1.111	0.31	0.247	1.177	0.333	1.052	0.3	0.086	0.07	1.111	0.31	0.247	
Rock 4	4	2000-2100	1.111	0.31	0.247	1.177	0.333	1.052	0.3	0.086	0.07	1.111	0.31	0.247	
			1.111	0.31	0.247	1.177	0.333	1.052	0.3	0.086	0.07	1.111	0.31	0.247	
Rock 5	5	0800-0900	6.616	0.938	0.976	3.562	2.105	4.068	5.210	4.480	7.351	5.044	3.562	1.943	1.631
			6.616	0.938	0.976	3.562	2.105	4.068	5.210	4.480	7.351	5.044	3.562	1.943	1.631
Rock 5	5	0900-1000	7.235	2.388	2.235	4.272	1.627	4.814	1.404	1.827	5.554	1.263	4.234	1.263	1.263
			7.235	2.388	2.235	4.272	1.627	4.814	1.404	1.827	5.554	1.263	4.234	1.263	1.263
Rock 5	5	1000-1100	7.763	2.617	2.476	4.502	0.944	3.558	5.143	1.135	4.655	1.055	4.655	1.055	1.055
			7.763	2.617	2.476	4.502	0.944	3.558	5.143	1.135	4.655	1.055	4.655	1.055	1.055
Rock 5	5	1100-1200	8.406	2.741	2.408	4.008	1.006	1.427	4.048	5.026	1.737	5.221	1.521	4.188	1.349
			8.406	2.741	2.408	4.008	1.006	1.427	4.048	5.026	1.737	5.221	1.521	4.188	1.349
Rock 5	5	1200-1300	1.145	0.327	0.356	7.601	6.235	4.502	1.750	2.908	6.235	1.750	2.908	1.750	2.908
			1.145	0.327	0.356	7.601	6.235	4.502	1.750	2.908	6.235	1.750	2.908	1.750	2.908
Rock 5	5	1300-1400	1.145	0.327	0.356	7.601	6.235	4.502	1.750	2.908	6.235	1.750	2.908	1.750	2.908
			1.145	0.327	0.356	7.601	6.235	4.502	1.750	2.908	6.235	1.750	2.908	1.750	2.908
Rock 5	5	1400-1500	1.145	0.327	0.356	7.601	6.235	4.502	1.750	2.908	6.235	1.750	2.908	1.750	2.908
			1.145	0.327	0.356	7.601	6.235	4.502	1.750	2.908	6.235	1.750	2.908	1.750	2.908
Rock 5	5	1500-1600	1.145	0.327	0.356	7.601	6.235	4.502	1.750	2.908	6.235	1.750	2.908	1.750	2.908
			1.145	0.327	0.356	7.601	6.235	4.502	1.750	2.908	6.235	1.750	2.908	1.750	2.908
Rock 5	5	1600-1700	1.145	0.327	0.356	7.601	6.235	4.502	1.750	2.908	6.235	1.750	2.908	1.750	2.908
			1.145	0.327	0.356	7.601	6.235	4.502	1.750	2.908	6.235	1.750	2.908	1.750	2.908
Rock 5	5	1700-1800	1.145	0.327	0.356	7.601	6.235	4.502	1.750	2.908	6.235	1.750	2.908	1.750	2.908
			1.145	0.327	0.356	7.601	6.235	4.502	1.750	2.908	6.235	1.750	2.908	1.750	2.908
Rock 5	5	1800-1900	1.145	0.327	0.356	7.601	6.235	4.502	1.750	2.908	6.235	1.750	2.908	1.750	2.908
			1.145	0.327	0.356	7.601	6.235	4.502	1.750	2.908	6.235	1.750	2.908	1.750	2.908
Rock 5	5	1900-2000	1.145	0.327	0.356	7.601	6.235	4.502	1.750	2.908	6.235	1.750	2.908	1.750	2.908
			1.145	0.327	0.356	7.601	6.235	4.502	1.750	2.908	6.235	1.750	2.908	1.750	2.908
Rock 5	5	2000-2100	1.145	0.327	0.356	7.601	6.235	4.502	1.750	2.908	6.235	1.750	2.908	1.750	2.908
			1.145	0.327	0.356	7.601	6.235	4.502	1.750	2.908	6.235	1.750	2.908	1.750	2.908
Rock 6	6	0800-0900	1.578	0.447	0.487	7.452	0.627	7.111	0.623	0.677	8.663	0.668	7.508	2.576	2.576
			1.578	0.447	0.487	7.452	0.627	7.111	0.623	0.677	8.663	0.668	7.508	2.576	2.576
Rock 6	6	0900-1000	1.585	0.449	0.501	7.451	0.626	7.110	0.622	0.676	8.662	0.667	7.507	2.575	2.575
			1.585	0.449	0.501	7.451	0.626	7.110	0.622	0.676	8.662	0.667	7.507	2.575	2.575
Rock 6	6	1000-1100	1.592	0.451	0.508	7.449	0.625	7.108	0.621	0.675	8.660	0.666	7.505	2.573	2.573
			1.592	0.451	0.508	7.449	0.625	7.108	0.621	0.675	8.660	0.666	7.505	2.573	2.573
Rock 6	6	1100-1200	1.599	0.453	0.515	7.447	0.624	7.106	0.620	0.674	8.658	0.665	7.503	2.571	2.571
			1.599	0.453	0.515	7.447	0.624	7.106	0.620	0.674	8.658	0.665	7.503	2.571	2.571
Rock 6	6	1200-1300	1.606	0.455	0.522	7.445	0.623	7.104	0.619	0.673	8.656	0.664	7.501	2.569	2.569
			1.606	0.455	0.522	7.445	0.623	7.104	0.619	0.673	8.656	0.664	7.501	2.569	2.569
Rock 6	6	1300-1400	1.613	0.457	0.529	7.443	0.622	7.102	0.618	0.672	8.654	0.663	7.499	2.567	2.567
			1.613	0.457	0.529	7.443	0.622	7.102	0.618	0.672	8.654	0.663	7.499	2.567	2.567
Rock 6	6	1400-1500	1.620	0.459	0.536	7.441	0.621	7.100	0.617	0.671	8.652	0.662	7.497	2.565	2.565
			1.620	0.459	0.536	7.441	0.621	7.100	0.617	0.671	8.652	0.662	7.497	2.565	2.565
Rock 6	6	1500-1600	1.627	0.461	0.543	7.439	0.620	7.098	0.616	0.670	8.650	0.661	7.495	2.563	2.563
			1.627	0.461	0.543	7.439	0.620	7.098	0.616	0.670	8.650	0.661	7.495	2.563	2.563
Rock 6	6	1600-1700	1.634	0.463	0.550	7.437	0.619	7.096	0.615	0.669	8.648	0.660	7.493	2.561	2.561
			1.634	0.463	0.550	7.437	0.619	7.096	0.615	0.669	8.648	0.660	7.493	2.561	2.561
Rock 6	6	1700-1800	1.641	0.465	0.557	7.435	0.618	7.094	0.614	0.668	8.646	0.659	7.491	2.559	2.559
			1.641	0.465	0.557	7.435	0.618	7.094	0.614	0.668	8.646	0.659	7.491	2.559	2.559
Rock 6	6	1800-1900	1.648	0.467	0.564	7.433	0.617	7.092	0.613	0.667	8.644	0.658	7.489	2.557	2.557
			1.648	0.467	0.564	7.433	0.617	7.092	0.613	0.667	8.644	0.658	7.489	2.557	2.557
Rock 6	6	1900-2000	1.655	0.469	0.571	7.431	0.616	7.090	0.612	0.666	8.642	0.657	7.487	2.555	2.555
			1.655	0.469	0.571	7.431	0.616	7.090	0.612	0.666	8.642	0.657	7.487	2.555	2.555
Rock 6	6	2000-2100	1.662	0.471	0.578	7.429	0.615	7.088	0.611	0.665	8.640	0.656	7.485	2.553	2.553
			1.662	0.471	0.578	7.429	0.615	7.088	0.611	0.665	8.640	0.656	7.485	2.553	2.553
Rock 7	7	0800-0900	1.669	0.473	0.585	7.427	0.614	7.086	0.610	0.664	8.638	0.655	7.483	2.551	2.551
			1.669	0.473	0.585	7.427	0.614	7.086	0.610	0.664	8.638	0.655	7.483	2.551	2.551
Rock 7	7	0900-1000	1.676	0.475	0.592	7.425	0.613	7.084	0.609	0.663	8.636	0.654	7.481	2.549	2.549
			1.676	0.475	0.592	7.425	0.613	7.084							

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Top Night Underground Quarter														
Open Top Night Underground Quarter														
Year 2003														
ALMNO Model Number														
Road Name	Road ID	Hour	No Emission						No Emission					
			Month/year			Month/year			Month/year			Month/year		
			g/m ² /hour	g/m ² /hr	tonne/hour	g/m ² /hour	g/m ² /hr	tonne/hour	g/m ² /hour	g/m ² /hr	tonne/hour	g/m ² /hour	g/m ² /hr	tonne/hour
Road 21	21	1	1.18E-02	1.18E-02	2.76E-04	1.18E-02	1.18E-02	2.76E-04	1.18E-02	1.18E-02	2.76E-04	1.18E-02	1.18E-02	2.76E-04
Road 21	21	2	1.18E-02	1.18E-02	2.76E-04	1.18E-02	1.18E-02	2.76E-04	1.18E-02	1.18E-02	2.76E-04	1.18E-02	1.18E-02	2.76E-04
Road 21	21	3	0.0000	1.44E-03	4.88E-03	2.04E-04	1.81E-03	2.01E-07	9.88E-04	7.22E-03	2.49E-02	0.0000	1.44E-03	4.88E-03
Road 21	21	4	0.0000	1.44E-03	4.88E-03	2.04E-04	1.81E-03	2.01E-07	9.88E-04	7.22E-03	2.49E-02	0.0000	1.44E-03	4.88E-03
Road 21	21	5	0.0000	1.58E-02	4.93E-03	2.38E-04	1.67E-02	5.77E-05	9.43E-04	7.85E-04	2.47E-03	1.18E-02	4.08E-03	1.27E-04
Road 21	21	6	0.0000	1.58E-02	4.93E-03	2.38E-04	1.67E-02	5.77E-05	9.43E-04	7.85E-04	2.47E-03	1.18E-02	4.08E-03	1.27E-04
Road 21	21	7	0.0000	1.47E-04	1.43E-07	4.81E-08	1.89E-06	7.20E-07	3.41E-04	7.84E-07	8.83E-07	0.26E-03	3.43E-04	2.08E-04
Road 21	21	8	0.0000	1.47E-04	1.43E-07	4.81E-08	1.89E-06	7.20E-07	3.41E-04	7.84E-07	8.83E-07	0.26E-03	3.43E-04	2.08E-04
Road 21	21	9	0.0000	1.68E-02	1.57E-07	1.91E-03	1.68E-02	1.57E-07	1.91E-03	1.68E-02	1.57E-07	1.91E-03	1.68E-02	1.57E-07
Road 21	21	10	0.0000	1.68E-02	1.57E-07	1.91E-03	1.68E-02	1.57E-07	1.91E-03	1.68E-02	1.57E-07	1.91E-03	1.68E-02	1.57E-07
Road 21	21	11	0.0000	2.00E-02	2.17E-05	2.65E-06	2.88E-02	2.07E-06	1.00E-02	1.07E-03	2.55E-02	0.47E-03	1.24E-03	6.70E-04
Road 21	21	12	0.0000	2.00E-02	2.17E-05	2.65E-06	2.88E-02	2.07E-06	1.00E-02	1.07E-03	2.55E-02	0.47E-03	1.24E-03	6.70E-04
Road 21	21	13	0.0000	2.34E-02	1.60E-07	2.18E-03	2.34E-02	1.60E-07	2.18E-03	2.34E-02	1.60E-07	2.18E-03	2.34E-02	1.60E-07
Road 21	21	14	0.0000	2.34E-02	1.60E-07	2.18E-03	2.34E-02	1.60E-07	2.18E-03	2.34E-02	1.60E-07	2.18E-03	2.34E-02	1.60E-07
Road 21	21	15	0.0000	1.10E-02	1.00E-02	4.44E-07	2.14E-03	5.04E-07	1.10E-02	1.00E-02	4.44E-07	2.14E-03	5.04E-07	1.10E-02
Road 21	21	16	0.0000	1.10E-02	1.00E-02	4.44E-07	2.14E-03	5.04E-07	1.10E-02	1.00E-02	4.44E-07	2.14E-03	5.04E-07	1.10E-02
Road 21	21	17	0.0000	2.51E-02	2.52E-07	2.71E-03	2.51E-02	2.52E-07	2.71E-03	2.51E-02	2.52E-07	2.71E-03	2.51E-02	2.52E-07
Road 21	21	18	0.0000	2.51E-02	2.52E-07	2.71E-03	2.51E-02	2.52E-07	2.71E-03	2.51E-02	2.52E-07	2.71E-03	2.51E-02	2.52E-07
Road 21	21	19	0.0000	2.58E-02	3.37E-07	3.48E-03	2.48E-02	2.17E-06	1.05E-02	1.20E-03	2.74E-02	1.13E-02	5.44E-03	1.48E-03
Road 21	21	20	0.0000	2.58E-02	3.37E-07	3.48E-03	2.48E-02	2.17E-06	1.05E-02	1.20E-03	2.74E-02	1.13E-02	5.44E-03	1.48E-03
Road 21	21	21	0.0000	2.74E-02	3.76E-07	3.77E-07	3.03E-03	2.18E-06	1.03E-02	1.15E-03	2.71E-02	1.33E-02	5.80E-03	8.77E-04
Road 21	21	22	0.0000	2.74E-02	3.76E-07	3.77E-07	3.03E-03	2.18E-06	1.03E-02	1.15E-03	2.71E-02	1.33E-02	5.80E-03	8.77E-04
Road 21	21	23	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	24	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	25	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	26	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	27	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	28	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	29	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	30	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	31	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	32	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	33	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	34	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	35	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	36	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	37	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	38	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	39	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	40	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	41	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	42	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	43	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	44	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	45	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	46	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	47	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	48	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	49	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	50	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	51	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	52	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	53	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	54	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	55	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	56	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	57	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	58	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	59	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	60	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	61	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	62	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	63	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	64	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	65	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	66	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07
Road 21	21	67	0.0000	1.39E-02	1.14E-07	1.57E-03	1.39E-02	1.14E-07						

Road\Appendix 3.5.4 Emission Factor in 2043.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Top 100 Night Underground Quarry											
Average monthly production (tonnes) for											
AKR000 model (Revised)											
Year 2043											
Road Name	Road ID	Hour	No. Emission						No. Emission		
			Month/January			Month/Average			Month/January		Month/Average
			g/h/m ³	g/h/m ³	tonne/hour	g/h/m ³	tonne/hour	g/h/m ³	tonne/hour	g/h/m ³	tonne/hour
Road #1	1	00000000	1.7716	0.0000	0.0000	0.0000	0.0000	2.8114	0.0000	4.5108	0.0000
Road #1	1	00000001	0.9665	0.0000	0.0000	0.0000	0.0000	1.7355	0.0000	2.6803	0.0000
Road #1	1	00000002	1.0014	1.0014	0.2265	0.4875	0.1074	1.5404	0.5002	2.4764	0.2768
Road #1	1	00000003	1.1117	0.0000	0.0000	0.0000	0.0000	1.8411	0.0000	2.8774	0.0000
Road #1	1	00000004	1.1076	0.0000	0.0000	0.0000	0.0000	1.8364	0.0000	2.8724	0.0000
Road #1	1	00000005	1.1717	0.1027	0.0238	0.5220	0.1145	1.6404	0.3894	3.5648	0.1811
Road #1	1	00000006	1.1209	0.0000	0.0000	0.0000	0.0000	1.8359	0.0000	2.8694	0.0000
Road #1	1	00000007	1.0670	0.0000	0.0000	0.0000	0.0000	1.7404	0.0000	2.6904	0.0000
Road #1	1	00000008	1.0670	0.4155	0.1425	0.5446	0.1871	6.0904	0.6885	2.3601	0.7515
Road #1	1	00000009	1.0670	0.4155	0.1425	0.5446	0.1871	6.0904	0.6885	2.3601	0.7515
Road #1	1	00000010	0.9424	0.0000	0.0000	0.0000	0.0000	1.2805	0.0000	1.9805	0.0000
Road #1	1	00000011	0.9424	0.0000	0.0000	0.0000	0.0000	1.2805	0.0000	1.9805	0.0000
Road #1	1	00000012	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000013	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000014	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000015	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000016	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000017	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000018	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000019	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000020	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000021	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000022	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000023	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000024	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000025	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000026	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000027	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000028	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000029	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000030	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000031	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000032	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000033	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000034	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000035	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000036	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000037	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000038	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000039	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000040	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000041	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000042	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000043	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000044	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000045	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000046	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000047	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000048	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000049	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000050	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000051	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000052	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000053	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000054	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000055	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000056	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000057	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000058	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000059	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000060	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000061	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000062	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000063	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000064	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000065	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000066	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000067	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000068	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000069	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000070	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000071	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000072	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000073	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000074	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000075	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000076	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000077	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000078	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000079	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000080	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000081	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000082	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000083	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000084	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000085	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000086	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000087	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000088	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000089	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000090	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000091	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.8331	0.4243
Road #1	1	00000092	1.0000	1.1117	0.2438	0.5405	0.1202	1.4713	0.6651	1.83	

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Road\Appendix 3.5.4 Emission Factor in 2043.xlsx

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open North Road Underpass Quarry														
Typing Road 4 hour Emission Factors for														
AR6000 road dust (kg/day)														
Year 2043														
Road Name	Road ID	Hour	Moist/Moisture			Moist/Moisture			Moist/Moisture			Moist/Moisture		
			g/h/m ²	ton/hour	Moist/Moisture	g/h/m ²	ton/hour	Moist/Moisture	g/h/m ²	ton/hour	Moist/Moisture	g/h/m ²	ton/hour	Moist/Moisture
Road 14	14	0800-0900	3.11E-01	8.88E-07	5.53E-03	1.16E-01	3.11E-06	2.08E-02	1.47E-01	4.18E-06	2.41E-02	4.08E-03	1.16E-07	7.22E-04
Road 14	14	0900-1000	5.95E-01	8.62E-07	5.53E-03	1.16E-01	3.11E-06	2.08E-02	1.47E-01	4.18E-06	2.41E-02	4.08E-03	1.16E-07	7.22E-04
Road 14	14	1000-1100	5.95E-01	8.62E-07	5.53E-03	1.16E-01	3.11E-06	2.08E-02	1.47E-01	4.18E-06	2.41E-02	4.08E-03	1.16E-07	7.22E-04
Road 14	14	1100-1200	3.66E-01	7.43E-07	4.63E-03	1.32E-01	2.68E-06	1.67E-02	8.69E-01	3.49E-06	2.13E-02	5.05E-03	1.03E-07	6.39E-04
Road 14	14	1200-1300	4.95E-01	1.24E-07	3.94E-03	1.32E-01	2.68E-06	1.67E-02	8.69E-01	3.49E-06	2.13E-02	5.05E-03	1.03E-07	6.39E-04
Road 14	14	1300-1400	1.59E-01	1.28E-06	7.99E-03	1.82E-01	4.48E-06	2.76E-02	3.34E-01	3.58E-06	3.88E-03	6.71E-03	1.66E-07	1.03E-04
Road 14	14	1400-1500	5.73E-01	1.02E-06	6.71E-03	1.78E-01	4.52E-06	2.68E-02	2.27E-01	3.68E-06	4.64E-03	8.64E-03	1.71E-07	1.06E-04
Road 14	14	1500-1600	6.97E-01	1.02E-06	6.71E-03	1.78E-01	4.52E-06	2.68E-02	2.27E-01	3.68E-06	4.64E-03	8.64E-03	1.71E-07	1.06E-04
Road 14	14	1600-1700	5.07E-01	1.37E-06	8.53E-03	1.73E-01	4.71E-06	2.68E-02	2.27E-01	3.68E-06	4.64E-03	8.64E-03	1.71E-07	1.06E-04
Road 14	14	1700-1800	1.78E-01	1.37E-06	8.53E-03	1.73E-01	4.71E-06	2.68E-02	2.27E-01	3.68E-06	4.64E-03	8.64E-03	1.71E-07	1.06E-04
Road 14	14	1800-1900	2.84E-01	8.59E-07	5.35E-03	1.08E-01	3.28E-06	2.04E-02	1.37E-01	4.54E-06	2.58E-02	3.76E-03	1.12E-07	6.96E-04
Road 14	14	1900-2000	1.68E-01	8.59E-07	5.35E-03	1.08E-01	3.28E-06	2.04E-02	1.37E-01	4.54E-06	2.58E-02	3.76E-03	1.12E-07	6.96E-04
Road 14	14	2000-2100	1.18E-01	1.06E-06	6.71E-03	1.78E-01	4.52E-06	2.68E-02	2.27E-01	3.68E-06	4.64E-03	8.64E-03	1.71E-07	1.06E-04
Road 14	14	2100-2200	1.62E-01	1.06E-06	6.71E-03	1.78E-01	4.52E-06	2.68E-02	2.27E-01	3.68E-06	4.64E-03	8.64E-03	1.71E-07	1.06E-04
Road 14	14	2200-2300	2.66E-01	2.23E-07	1.39E-03	1.71E-01	5.01E-06	3.51E-02	6.51E-01	8.45E-06	2.44E-02	7.70E-03	2.39E-07	1.51E-04
Road 14	14	2300-2400	2.66E-01	2.23E-07	1.39E-03	1.71E-01	5.01E-06	3.51E-02	6.51E-01	8.45E-06	2.44E-02	7.70E-03	2.39E-07	1.51E-04
Road 15	15	0800-0900	2.11E-01	8.41E-07	5.25E-03	1.07E-01	3.05E-06	1.95E-02	1.06E-01	8.96E-07	5.57E-06	3.29E-03	8.96E-08	5.79E-05
Road 15	15	0900-1000	2.44E-01	4.96E-06	1.37E-01	4.21E-02	1.24E-07	4.79E-06	1.06E-01	1.67E-07	4.64E-06	8.30E-03	6.19E-08	2.23E-05
Road 15	15	1000-1100	3.22E-01	3.87E-06	1.37E-01	9.32E-02	1.17E-07	1.70E-06	1.25E-01	1.57E-07	3.92E-05	5.19E-03	6.24E-08	2.21E-05
Road 15	15	1100-1200	3.22E-01	3.87E-06	1.37E-01	9.32E-02	1.17E-07	1.70E-06	1.25E-01	1.57E-07	3.92E-05			
Road 15	15	1200-1300	3.66E-01	1.89E-06	1.22E-01	8.01E-01	1.09E-07	1.69E-06	1.37E-01	1.46E-07	1.00E-01	1.81E-03	6.29E-02	2.12E-04
Road 15	15	1300-1400	3.22E-01	1.89E-06	1.22E-01	8.01E-01	1.09E-07	1.69E-06	1.37E-01	1.46E-07	1.00E-01	1.81E-03	6.29E-02	2.12E-04
Road 15	15	1400-1500	2.71E-01	2.21E-06	1.44E-01	1.06E-01	2.44E-07	8.50E-06	1.04E-01	3.31E-07	1.13E-01	3.62E-02	1.19E-03	3.95E-05
Road 15	15	1500-1600	3.66E-01	2.59E-06	1.64E-01	1.10E-01	2.77E-07	2.42E-06	1.41E-01	1.00E-06	1.56E-02	5.07E-03	3.57E-03	1.21E-04
Road 15	15	1600-1700	3.98E-01	2.59E-06	1.64E-01	1.10E-01	2.77E-07	2.42E-06	1.41E-01	1.00E-06	1.56E-02	5.07E-03	3.57E-03	1.21E-04
Road 15	15	1700-1800	3.85E-01	2.60E-07	8.77E-04	1.30E-01	7.73E-07	2.68E-06	1.54E-01	1.05E-06	3.47E-03	5.57E-02	3.77E-02	2.06E-04
Road 15	15	1800-1900	4.43E-01	2.11E-07	8.41E-04	1.25E-01	6.95E-07	2.65E-06	1.66E-01	8.96E-07	5.57E-06	3.29E-03	8.96E-08	5.79E-05
Road 15	15	1900-2000	4.15E-01	2.41E-07	8.13E-04	1.23E-01	7.13E-07	2.41E-06	1.64E-01	8.54E-07	5.72E-03	6.05E-03	3.51E-03	1.06E-04
Road 15	15	2000-2100	4.59E-01	4.39E-07	1.48E-04	1.64E-01	1.34E-06	2.14E-06	1.73E-01	1.58E-06	6.03E-03	7.61E-04	6.24E-08	2.13E-04
Road 15	15	2100-2200	5.26E-01	4.68E-07	1.58E-04	1.88E-01	1.45E-06	4.88E-07	2.17E-01	1.99E-06	7.31E-03	8.96E-04	7.61E-08	2.31E-04
Road 15	15	2200-2300	5.14E-01	4.87E-07	1.62E-04	1.86E-01	1.51E-06	5.50E-07	2.19E-01	1.99E-06	7.71E-03	7.68E-04	6.90E-08	2.30E-04
Road 15	15	2300-2400	5.02E-01	4.87E-07	1.62E-04	1.86E-01	1.51E-06	5.50E-07	2.19E-01	1.99E-06	7.71E-03	7.68E-04	6.90E-08	2.30E-04
Road 16	16	0800-0900	1.04E-01	4.80E-07	1.62E-04	1.86E-01	1.51E-06	5.50E-07	2.09E-01	1.99E-06	6.71E-03	6.19E-08	2.30E-04	
Road 16	16	0900-1000	4.80E-01	4.15E-07	1.48E-04	1.78E-01	1.41E-06	4.76E-07	1.97E-01	1.83E-06	6.14E-03	5.83E-03	5.03E-08	2.00E-04
Road 16	16	1000-1100	3.31E-01	4.15E-07	1.48E-04	1.78E-01	1.41E-06	4.76E-07	1.97E-01	1.83E-06	6.14E-03	5.83E-03	5.03E-08	2.00E-04
Road 16	16	1100-1200	3.31E-01	4.15E-07	1.48E-04	1.78E-01	1.41E-06	4.76E-07	1.97E-01	1.83E-06	6.14E-03	5.83E-03	5.03E-08	2.00E-04
Road 16	16	1200-1300	1.88E-01	1.19E-07	4.69E-04	1.24E-01	5.61E-07	1.88E-06	9.49E-01	8.99E-07	2.34E-03	2.21E-04	5.78E-08	2.12E-04
Road 16	16	1300-1400	2.72E-01	1.19E-07	4.69E-04	1.24E-01	5.61E-07	1.88E-06	9.49E-01	8.99E-07	2.34E-03	2.21E-04	5.78E-08	2.12E-04
Road 16	16	1400-1500	1.83E-01	1.07E-01	6.61E-04	7.91E-02	4.61E-07	1.50E-06	9.74E-02	5.67E-07	2.92E-03	2.96E-03	1.78E-08	5.94E-05
Road 16	16	1500-1600	2.20E-01	8.90E-07	1.00E-01	3.96E-01	4.21E-07	1.45E-06	8.13E-01	5.21E-07	7.62E-03	2.88E-03	1.61E-06	5.48E-04
Road 16	16	1600-1700	2.20E-01	8.90E-07	1.00E-01	3.96E-01	4.21E-07	1.45E-06	8.13E-01	5.21E-07	7.62E-03	2.88E-03	1.61E-06	5.48E-04
Road 16	16	1700-1800	3.66E-01	8.13E-03	5.02E-08	1.65E-04	3.20E-07	1.33E-06	4.67E-01	3.70E-07	1.44E-01	1.59E-03	1.26E-08	1.41E-04
Road 16	16	1800-1900	4.79E-01	8.13E-03	5.02E-08	1.65E-04	3.20E-07	1.33E-06	4.67E-01	3.70E-07	1.44E-01	1.59E-03	1.26E-08	1.41E-04
Road 16	16	1900-2000	7.91E-01	3.04E-08	1.60E-04	4.42E-05	1.70E-07	1.00E-06	5.21E-02	2.00E-07	2.24E-03	5.99E-03	7.66E-05	8.58E-04
Road 16	16	2000-2100	7.91E-01	3.04E-08	1.60E-04	4.42E-05	1.70E-07	1.00E-06	5.21E-02	2.00E-07	2.24E-03	5.99E-03	7.66E-05	8.58E-04
Road 16	16	2100-2200	9.79E-01	2.66E-08	2.98E-04	4.81E-02	1.41E-07	1.34E-06	5.48E-01	1.88E-07	2.87E-03	6.72E-03	7.52E-05	1.52E-04
Road 16	16	2200-2300	9.79E-01	2.66E-08	2.98E-04	4.81E-02	1.41E-07	1.34E-06	5.48E-01	1.88E-07	2.87E-03	6.72E-03	7.52E-05	1.52E-04
Road 16	16	2300-2400	8.66E-01	2.96E-08	3.46E-04	6.05E-02	2.85E-07	3.33E-06	5.38E-01	3.99E-07	3.79E-03	2.37E-03	1.97E-04	7.64E-05
Road 17	17	0800-0900	1.68E-01	4.96E-06	1.37E-01	4.21E-02	1.24E-07	4.79E-06	1.06E-01	1.67E-07	4.64E-06	8.30E-03	6.19E-08	2.23E-05
Road 17	17	0900-1000	2.00E-01	5.88E-06	1.53E-01	8.49E-02	2.47E-06	2.77E-06	1.40E-01	2.58E-06	3.42E-02	3.94E-08	1.59E-04	1.08E-04
Road 17	17	1000-1100	2.44E-01	4.96E-06	1.37E-01	4.21E-02	1.24E-07	4.79E-06	1.06E-01	1.67E-07	4.64E-06	8.30E-03	6.19E-08	2.23E-05
Road 17	17	1100-1200	1.05E-01	4.20E-07	4.77E-03	1.48E-01	3.71E-06	1.91E-06	9.76E-01	2.13E-06	2.40E-02	1.93E-03	8.66E-08	3.69E-04
Road 17	17	1200-1300	1.10E-01	4.20E-07	4.77E-03	1.48E-01	3.71E-06	1.91E-06	9.76E-01	2.13E-06	2.40E-02	1.93E-03	8.66E-08	3.69E-04
Road 17	17	1300-1400	2.62E-01	5.94E-07	4.64E-04	9.87E-02	2.23E-06	2.56E-06	1.23E-01	2.81E-06	3.66E-02	4.64E-03	1.11E-07	6.97E-04
Road 17	17	1400-1500	2.83E-01	6.17E-07	4.86E-04	1.10E-01	2.59E-06	2.88E-06	1.38E-01	3.34E-06	4.44E-02	5.13E-02	1.21E-07	7.36E-04
Road 17	17	1500-1600	3.00E-01	6.17E-07	4.86E-04	1.10E-01	2.59E-06	2.88E-06	1.38E-01	3.34E-06	4.44E-02	5.13E-02	1.21E-07	7.36E-04
Road 17	17	1600-1700	2.78E-01	7.28E-07	5.81E-04	1.17E-01	2.97E-06	3.32E-06	1.45E-01	3.70E-06	4.64E-02	5.51E-02	1.27E-07	8.43E-04
Road 17	17	1700-1800	3.14E-01	7.28E-07	5.81E-04	1.17E-01	2.97E-06	3.32E-06	1.45E-01	3.70E-06	4.64E-02	5.51E-02	1.27E-07	8.43E-04
Road 17	17	1800-1900	2.48E-01	7.09E-07	5.79E-04	1.16E-01	3.03E-06	3.39E-06	1.33E-01	3.74E-06	4.44E-02	5.39E-02	1.14E-07	7.67E-04
Road 17	17	1900-2000	1.98E-01	4.61E-07	3.23E-03	1.03E-01	2.50E-06	2.31E-06	9.59E-01	2.39E-06	2.83E-02	2.77E-03	8.01E-08	8.96E-04
Road 17	17	2000-2100	1.98E-01	4.61E-07	3.23E-03	1.03E-01	2.50E-06	2.31E-06	9.59E-01	2.39E-06	2.83E-02	2.77E-03	8.01E-08	8.96E-04
Road 17	17	2100-2200	7.05E-01	1.24E-07	1.42E-03	4.30E-02	7.67E-07	8.58E-03	5.01E-01	8.99E-07	9.99E-03	1.78E-03	3.18E-08	3.56E-04
Road 17	17	2200-2300	6.63E-01	1.24E-07	1.42E-03	4.30E-02	7.67E-07	8.58E-03	5.01E-01	8.99E-07	9.99E-03	1.78E-03	3.18E-08	3.56E-04
Road 17	17	2300-2400	3.96E-01	1.13E-07	1.42E-03	4.17E-02	7.17E-07	8.00E-03	4.82E-01	8.21E-07	9.26E			

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Open Road\Appendix 3.5.4 Emission Factor in 2043.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Tm North Underway Factors														
Open Tm North Emission Factors for KERNOED model (December)														
Year 2003														
Road	Route ID	Hour	No. Emission			Monthly/Average			No. Emission			Monthly/Average		
			g/hour	g/min	g/second	g/hour	g/min	g/second	g/hour	g/min	g/second	g/hour	g/min	g/second
Road 17	17	1000-1700	5.29E+02	1.41E+06	1.51E+02	1.92E+01	5.11E+06	1.42E+07	2.41E+01	6.14E+06	8.96E+02	7.15E+03	1.91E+07	2.0E+07
		1700-1800	5.29E+02	1.41E+06	1.51E+02	1.92E+01	5.11E+06	1.42E+07	2.41E+01	6.14E+06	8.96E+02	7.15E+03	1.91E+07	2.0E+07
		1800-1900	5.29E+02	1.41E+06	1.51E+02	1.92E+01	5.11E+06	1.42E+07	2.41E+01	6.14E+06	8.96E+02	7.15E+03	1.91E+07	2.0E+07
Road 17	17	1900-2000	5.11E+02	2.25E+07	2.41E+03	5.48E+11	1.51E+12	5.95E+14	1.34E+04	1.51E+12	5.95E+14	1.34E+04	1.51E+12	5.95E+14
		2000-2100	5.11E+02	2.25E+07	2.41E+03	5.48E+11	1.51E+12	5.95E+14	1.34E+04	1.51E+12	5.95E+14	1.34E+04	1.51E+12	5.95E+14
		2100-2200	5.11E+02	2.25E+07	2.41E+03	5.48E+11	1.51E+12	5.95E+14	1.34E+04	1.51E+12	5.95E+14	1.34E+04	1.51E+12	5.95E+14
Road 17	17	2200-2300	8.09E+04	1.64E+07	1.34E+04	1.34E+04	8.21E+07	8.77E+06	6.08E+02	9.68E+07	1.02E+02	2.39E+08	1.88E+08	4.8E+08
		2300-2400	8.09E+04	1.64E+07	1.34E+04	1.34E+04	8.21E+07	8.77E+06	6.08E+02	9.68E+07	1.02E+02	2.39E+08	1.88E+08	4.8E+08
		2400-0100	8.09E+04	1.64E+07	1.34E+04	1.34E+04	8.21E+07	8.77E+06	6.08E+02	9.68E+07	1.02E+02	2.39E+08	1.88E+08	4.8E+08
Road 18	18	0000-0100	8.91E+03	1.82E+04	1.46E+03	1.46E+03	7.42E+07	7.92E+06	5.76E+02	8.77E+06	5.95E+02	2.13E+08	1.65E+08	4.0E+08
		0100-0200	8.91E+03	1.82E+04	1.46E+03	1.46E+03	7.42E+07	7.92E+06	5.76E+02	8.77E+06	5.95E+02	2.13E+08	1.65E+08	4.0E+08
		0200-0300	8.91E+03	1.82E+04	1.46E+03	1.46E+03	7.42E+07	7.92E+06	5.76E+02	8.77E+06	5.95E+02	2.13E+08	1.65E+08	4.0E+08
Road 18	18	0300-0400	8.91E+03	1.82E+04	1.46E+03	1.46E+03	7.42E+07	7.92E+06	5.76E+02	8.77E+06	5.95E+02	2.13E+08	1.65E+08	4.0E+08
		0400-0500	8.91E+03	1.82E+04	1.46E+03	1.46E+03	7.42E+07	7.92E+06	5.76E+02	8.77E+06	5.95E+02	2.13E+08	1.65E+08	4.0E+08
		0500-0600	8.91E+03	1.82E+04	1.46E+03	1.46E+03	7.42E+07	7.92E+06	5.76E+02	8.77E+06	5.95E+02	2.13E+08	1.65E+08	4.0E+08
Road 18	18	0600-0700	7.68E+04	1.54E+07	1.25E+04	1.25E+04	7.68E+07	8.21E+06	6.08E+02	9.68E+07	1.02E+02	2.39E+08	1.88E+08	4.8E+08
		0700-0800	7.68E+04	1.54E+07	1.25E+04	1.25E+04	7.68E+07	8.21E+06	6.08E+02	9.68E+07	1.02E+02	2.39E+08	1.88E+08	4.8E+08
		0800-0900	7.68E+04	1.54E+07	1.25E+04	1.25E+04	7.68E+07	8.21E+06	6.08E+02	9.68E+07	1.02E+02	2.39E+08	1.88E+08	4.8E+08
Road 18	18	0900-1000	7.68E+04	1.54E+07	1.25E+04	1.25E+04	7.68E+07	8.21E+06	6.08E+02	9.68E+07	1.02E+02	2.39E+08	1.88E+08	4.8E+08
		1000-1100	7.68E+04	1.54E+07	1.25E+04	1.25E+04	7.68E+07	8.21E+06	6.08E+02	9.68E+07	1.02E+02	2.39E+08	1.88E+08	4.8E+08
		1100-1200	7.68E+04	1.54E+07	1.25E+04	1.25E+04	7.68E+07	8.21E+06	6.08E+02	9.68E+07	1.02E+02	2.39E+08	1.88E+08	4.8E+08
Road 18	18	1200-1300	7.68E+04	1.54E+07	1.25E+04	1.25E+04	7.68E+07	8.21E+06	6.08E+02	9.68E+07	1.02E+02	2.39E+08	1.88E+08	4.8E+08
		1300-1400	7.68E+04	1.54E+07	1.25E+04	1.25E+04	7.68E+07	8.21E+06	6.08E+02	9.68E+07	1.02E+02	2.39E+08	1.88E+08	4.8E+08
		1400-1500	7.68E+04	1.54E+07	1.25E+04	1.25E+04	7.68E+07	8.21E+06	6.08E+02	9.68E+07	1.02E+02	2.39E+08	1.88E+08	4.8E+08
Road 18	18	1500-1600	7.68E+04	1.54E+07	1.25E+04	1.25E+04	7.68E+07	8.21E+06	6.08E+02	9.68E+07	1.02E+02	2.39E+08	1.88E+08	4.8E+08
		1600-1700	7.68E+04	1.54E+07	1.25E+04	1.25E+04	7.68E+07	8.21E+06	6.08E+02	9.68E+07	1.02E+02	2.39E+08	1.88E+08	4.8E+08
		1700-1800	7.68E+04	1.54E+07	1.25E+04	1.25E+04	7.68E+07	8.21E+06	6.08E+02	9.68E+07	1.02E+02	2.39E+08	1.88E+08	4.8E+08
Road 18	18	1800-1900	7.68E+04	1.54E+07	1.25E+04	1.25E+04	7.68E+07	8.21E+06	6.08E+02	9.68E+07	1.02E+02	2.39E+08	1.88E+08	4.8E+08
		1900-2000	7.68E+04	1.54E+07	1.25E+04	1.25E+04	7.68E+07	8.21E+06	6.08E+02	9.68E+07	1.02E+02	2.39E+08	1.88E+08	4.8E+08
		2000-2100	7.68E+04	1.54E+07	1.25E+04	1.25E+04	7.68E+07	8.21E+06	6.08E+02	9.68E+07	1.02E+02	2.39E+08	1.88E+08	4.8E+08
Road 18	18	2100-2200	7.68E+04	1.54E+07	1.25E+04	1.25E+04	7.68E+07	8.21E+06	6.08E+02	9.68E+07	1.02E+02	2.39E+08	1.88E+08	4.8E+08
		2200-2300	7.68E+04	1.54E+07	1.25E+04	1.25E+04	7.68E+07	8.21E+06	6.08E+02	9.68E+07	1.02E+02	2.39E+08	1.88E+08	4.8E+08
		2300-2400	7.68E+04	1.54E+07	1.25E+04	1.25E+04	7.68E+07	8.21E+06	6.08E+02	9.68E+07	1.02E+02	2.39E+08	1.88E+08	4.8E+08
Road 18	18	2400-0100	7.68E+04	1.54E+07	1.25E+04	1.25E+04	7.68E+07	8.21E+06	6.08E+02	9.68E+07	1.02E+02	2.39E+08	1.88E+08	4.8E+08
		0100-0200	7.68E+04	1.54E+07	1.25E+04	1.25E+04	7.68E+07	8.21E+06	6.08E+02	9.68E+07	1.02E+02	2.39E+08	1.88E+08	4.8E+08
		0200-0300	7.68E+04	1.54E+07	1.25E+04	1.25E+04	7.68E+07	8.21E+06	6.08E+02	9.68E+07	1.02E+02	2.39E+08	1.88E+08	4.8E+08
Road 19	19	0300-0400	8.58E+03	4.63E+04	3.79E+04	4.71E+02	2.52E+07	2.68E+08	5.57E+01	3.01E+07	3.19E+04	3.24E+06	3.22E+08	3.29E+08
		0400-0500	8.58E+03	4.63E+04	3.79E+04	4.71E+02	2.52E+07	2.68E+08	5.57E+01	3.01E+07	3.19E+04	3.24E+06	3.22E+08	3.29E+08
		0500-0600	8.58E+03	4.63E+04	3.79E+04	4.71E+02	2.52E+07	2.68E+08	5.57E+01	3.01E+07	3.19E+04	3.24E+06	3.22E+08	3.29E+08
Road 19	19	0600-0700	8.58E+03	4.63E+04	3.79E+04	4.71E+02	2.52E+07	2.68E+08	5.57E+01	3.01E+07	3.19E+04	3.24E+06	3.22E+08	3.29E+08
		0700-0800	8.58E+03	4.63E+04	3.79E+04	4.71E+02	2.52E+07	2.68E+08	5.57E+01	3.01E+07	3.19E+04	3.24E+06	3.22E+08	3.29E+08
		0800-0900	8.58E+03	4.63E+04	3.79E+04	4.71E+02	2.52E+07	2.68E+08	5.57E+01	3.01E+07	3.19E+04	3.24E+06	3.22E+08	3.29E+08
Road 19	19	0900-1000	8.58E+03	4.63E+04	3.79E+04	4.71E+02	2.52E+07	2.68E+08	5.57E+01	3.01E+07	3.19E+04	3.24E+06	3.22E+08	3.29E+08
		1000-1100	8.58E+03	4.63E+04	3.79E+04	4.71E+02	2.52E+07	2.68E+08	5.57E+01	3.01E+07	3.19E+04	3.24E+06	3.22E+08	3.29E+08
		1100-1200	8.58E+03	4.63E+04	3.79E+04	4.71E+02	2.52E+07	2.68E+08	5.57E+01	3.01E+07	3.19E+04	3.24E+06	3.22E+08	3.29E+08
Road 19	19	1200-1300	8.58E+03	4.63E+04	3.79E+04	4.71E+02	2.52E+07	2.68E+08	5.57E+01	3.01E+07	3.19E+04	3.24E+06	3.22E+08	3.29E+08
		1300-1400	8.58E+03	4.63E+04	3.79E+04	4.71E+02	2.52E+07	2.68E+08	5.57E+01	3.01E+07	3.19E+04	3.24E+06	3.22E+08	3.29E+08
		1400-1500	8.58E+03	4.63E+04	3.79E+04	4.71E+02	2.52E+07	2.68E+08	5.57E+01	3.01E+07	3.19E+04	3.24E+06	3.22E+08	3.29E+08
Road 19	19	1500-1600	8.58E+03	4.63E+04	3.79E+04	4.71E+02	2.52E+07	2.68E+08	5.57E+01	3.01E+07	3.19E+04	3.24E+06	3.22E+08	3.29E+08
		1600-1700	8.58E+03	4.63E+04	3.79E+04	4.71E+02	2.52E+07	2.68E+08	5.57E+01	3.01E+07	3.19E+04	3.24E+06	3.22E+08	3.29E+08
		1700-1800	8.58E+03	4.63E+04	3.79E+04	4.71E+02	2.52E+07	2.68E+08	5.57E+01	3.01E+07	3.19E+04	3.24E+06	3.22E+08	3.29E+08
Road 19	19	1800-1900	8.58E+03	4.63E+04	3.79E+04	4.71E+02	2.52E+07	2.68E+08	5.57E+01	3.01E+07	3.19E+04	3.24E+06	3.22E+08	3.29E+08
		1900-2000	8.58E+03	4.63E+04	3.79E+04	4.71E+02	2.52E+07	2.68E+08	5.57E+01	3.01E+07	3.19E+04	3.24E+06	3.22E+08	3.29E+08
		2000-2100	8.58E+03	4.63E+04	3.79E+04	4.71E+02	2.52E+07	2.68E+08	5.57E+01	3.01E+07	3.19E+04	3.24E+06	3.22E+08	3.29E+08
Road 19	19	2100-2200	8.58E+03	4.63E+04	3.79E+04	4.71E+02	2.52E+07	2.68E+08	5.57E+01	3.01E+07	3.19E+04	3.24E+06	3.22E+08	3.29E+08
		2200-2300	8.58E+03	4.63E+04	3.79E+04	4.71E+02	2.52E+07	2.68E+08	5.57E+01	3.01E+07	3.19E+04	3.24E+06	3.22E+08	3.29E+08
		2300-2400	8.58E+03	4.63E+04	3.79E+04	4.71E+02	2.52E+07	2.68E+08	5.57E+01	3.01E+07	3.19E+04	3.24E+06	3.22E+08	3.29E+08
Road 19	19	2400-0100	8.58E+03	4.63E+04	3.79E+04	4.71E+02	2.52E+07	2.68E+08	5.57E+01	3.01E+07	3.19E+04	3.24E+06	3.22E+08	3.29E+08
		0100-0200	8.58E+03	4.63E+04	3.79E+04	4.71E+02	2.52E+07	2.68E+08	5.57E+01	3.01E+07	3.19E+04	3.24E+06	3.22E+08	3.29E+08
		0200-0300	8.58E+03	4.63E+04	3.79E+04	4.71E+02	2.52E+07	2.68E+08	5.57E+01	3.01E+07	3.19E+04	3.24E+06	3.22E+08	3.29E+08
Road 20	20	0300-0400	6.20E+02	6.02E+06	4.98E+06	4.70E+02	2.47E+07	1.89E+07	2.27E+01	2.28E+07	1.74E+03	1.05E+06	1.19E+08	7.9E+08
		0400-0500	6.20E+02	6.02E+06	4.98E+06	4.70E+02	2.47E+07	1.89E+07	2.27E+01	2.28E+07	1.74E+03	1.05E+06	1.19E+08	7.9E+08
		0500-0600	6.20E+02	6.02E+06	4.98E+06	4.70E+02	2.47E+07	1.89E+07	2.27E+01	2.28E+07	1.74E+03	1.05E+06	1.19E+08	7.9E+08
Road 20	20	0600-0700	6.20E+02	6.02E+06	4.98E+06	4.70E+02	2.47E+07	1.89E+07	2.27E+01	2.28E+07	1.74E+03	1.05E+06	1.19E+08	7.9E+08
		0700-0800	6.20E+02	6.02E+06	4.98E+06	4.70E+02	2.47E+07	1.89E+07	2.27E+01	2.28E+07	1.74E+03	1.05E+06	1.19E+08	7.9E+08
		0800-0900	6.20E+02	6.02E+06	4.98E+06	4.70E+02	2.47E+07	1.89E+07	2.27E+01	2.28E+07	1.74E+03	1.05E+06	1.19E+08	7.9E+08
Road 20	20	0900-1000	6.20E+02	6.02E+06	4.98E+06	4.70E+02	2.47E+07	1.89E+07	2.27E+01	2.28E+07	1.74E+03	1.05E+06	1.19E+08	7.9E+08
		1000-1100												

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Top North Undermining Quarry														
Year 2043														
Table 20-44: Four Estimation Factors for ARBNOE Road Development														
Road Name	Road ID	Hour	No/En/Em			No/En/Em			No/En/Em			No/En/Em		
			g/h/m ²	h/m ² /hr	h/m ² /hr	Monthly/Average	Monthly/Average	Monthly/Average	Monthly/Average	Monthly/Average	Monthly/Average	Monthly/Average	Monthly/Average	
Road 21	21	0000-0100	1.10E-02	7.41E-08	3.19E-04	5.19E-02	1.51E-07	7.70E-03	6.29E-02	4.26E-07	2.02E-03	2.86E-03	1.93E-08	9.13E-05
Road 21	21	0100-0200	1.26E-02	8.27E-08	3.59E-04	5.86E-02	1.70E-07	8.50E-03	6.94E-02	4.69E-07	2.24E-03	3.25E-03	2.16E-08	1.03E-04
Road 21	21	0200-0300	1.42E-02	9.13E-08	3.98E-04	6.42E-02	1.89E-07	9.40E-03	7.69E-02	5.14E-07	2.45E-03	3.56E-03	2.37E-08	1.13E-04
Road 21	21	0300-0400	1.58E-02	1.00E-07	4.38E-04	7.02E-02	2.08E-07	1.03E-02	8.37E-02	5.52E-07	2.68E-03	4.00E-03	2.58E-08	1.24E-04
Road 21	21	0400-0500	1.74E-02	1.09E-07	4.77E-04	7.62E-02	2.27E-07	1.12E-02	9.16E-02	6.01E-07	2.89E-03	4.39E-03	2.79E-08	1.34E-04
Road 21	21	0500-0600	1.49E-02	7.92E-08	3.82E-04	6.38E-02	1.83E-07	9.11E-03	7.77E-02	5.12E-07	1.99E-03	3.00E-03	2.07E-08	9.80E-05
Road 21	21	0600-0700	1.42E-02	7.51E-08	3.69E-04	6.20E-02	1.77E-07	8.68E-03	7.26E-02	4.83E-07	1.92E-03	2.92E-03	2.00E-08	9.38E-05
Road 21	21	0700-0800	1.42E-02	7.51E-08	3.69E-04	6.20E-02	1.77E-07	8.68E-03	7.26E-02	4.83E-07	1.92E-03	2.92E-03	2.00E-08	9.38E-05
Road 21	21	0800-0900	1.81E-02	9.97E-08	4.24E-04	7.47E-02	2.00E-07	1.00E-02	8.93E-02	5.74E-07	3.22E-03	4.29E-03	2.83E-08	1.30E-04
Road 21	21	0900-1000	1.81E-02	9.97E-08	4.24E-04	7.47E-02	2.00E-07	1.00E-02	8.93E-02	5.74E-07	3.22E-03	4.29E-03	2.83E-08	1.30E-04
Road 21	21	1000-1100	2.14E-02	4.89E-07	2.34E-03	8.22E-02	1.87E-06	9.04E-03	1.05E-01	2.36E-06	1.14E-02	5.42E-03	1.24E-07	5.77E-05
Road 21	21	1100-1200	2.14E-02	4.89E-07	2.34E-03	8.22E-02	1.87E-06	9.04E-03	1.05E-01	2.36E-06	1.14E-02	5.42E-03	1.24E-07	5.77E-05
Road 21	21	1200-1300	2.40E-02	5.51E-07	2.65E-03	9.17E-02	1.92E-06	9.81E-03	1.13E-01	2.65E-06	1.23E-02	6.15E-03	1.40E-07	6.31E-05
Road 21	21	1300-1400	2.14E-02	5.52E-07	2.65E-03	9.44E-02	1.91E-06	1.02E-02	1.00E-01	2.66E-06	1.23E-02	6.16E-03	1.40E-07	6.34E-05
Road 21	21	1400-1500	2.14E-02	5.52E-07	2.65E-03	9.44E-02	1.91E-06	1.02E-02	1.00E-01	2.66E-06	1.23E-02	6.16E-03	1.40E-07	6.34E-05
Road 21	21	1500-1600	2.40E-02	5.51E-07	2.65E-03	9.17E-02	1.92E-06	9.81E-03	1.13E-01	2.65E-06	1.23E-02	6.15E-03	1.40E-07	6.31E-05
Road 21	21	1600-1700	2.40E-02	5.51E-07	2.65E-03	9.17E-02	1.92E-06	9.81E-03	1.13E-01	2.65E-06	1.23E-02	6.15E-03	1.40E-07	6.31E-05
Road 21	21	1700-1800	1.81E-02	4.58E-07	2.12E-03	7.87E-02	1.59E-06	8.33E-03	9.89E-02	2.12E-06	1.10E-02	5.18E-03	1.17E-07	5.39E-05
Road 21	21	1800-1900	1.39E-02	3.16E-07	1.52E-03	5.59E-02	1.36E-06	6.55E-03	7.17E-02	1.67E-06	8.01E-03	3.63E-03	8.25E-08	3.89E-05
Road 21	21	1900-2000	1.39E-02	3.16E-07	1.52E-03	5.59E-02	1.36E-06	6.55E-03	7.17E-02	1.67E-06	8.01E-03	3.63E-03	8.25E-08	3.89E-05
Road 21	21	2000-2100	1.07E-02	4.46E-08	1.71E-04	4.71E-02	1.42E-07	6.89E-03	4.80E-02	8.50E-08	4.10E-03	2.90E-03	1.85E-08	8.64E-05
Road 21	21	2100-2200	1.07E-02	4.46E-08	1.71E-04	4.71E-02	1.42E-07	6.89E-03	4.80E-02	8.50E-08	4.10E-03	2.90E-03	1.85E-08	8.64E-05
Road 21	21	2200-2300	2.07E-02	1.33E-07	6.74E-04	5.22E-02	6.49E-07	1.13E-02	6.29E-02	3.71E-07	7.77E-03	2.82E-03	3.51E-08	1.68E-04
Road 21	21	2300-0000	1.14E-02	7.11E-08	3.04E-04	5.48E-02	1.54E-07	7.64E-03	6.66E-02	4.60E-07	2.00E-03	3.12E-03	2.09E-08	1.04E-04
Road 21	21	0000-0100	1.10E-02	7.41E-08	3.19E-04	5.19E-02	1.51E-07	7.70E-03	6.29E-02	4.26E-07	2.02E-03	2.86E-03	1.93E-08	9.13E-05
Road 21	21	0100-0200	1.26E-02	8.27E-08	3.59E-04	5.86E-02	1.70E-07	8.50E-03	6.94E-02	4.69E-07	2.24E-03	3.25E-03	2.16E-08	1.03E-04
Road 21	21	0200-0300	1.42E-02	9.13E-08	3.98E-04	6.42E-02	1.89E-07	9.40E-03	7.69E-02	5.14E-07	2.45E-03	3.56E-03	2.37E-08	1.13E-04
Road 21	21	0300-0400	1.58E-02	1.00E-07	4.38E-04	7.02E-02	2.08E-07	1.03E-02	8.37E-02	5.52E-07	2.68E-03	4.00E-03	2.58E-08	1.24E-04
Road 21	21	0400-0500	1.74E-02	1.09E-07	4.77E-04	7.62E-02	2.27E-07	1.12E-02	9.16E-02	6.01E-07	2.89E-03	4.39E-03	2.79E-08	1.34E-04
Road 21	21	0500-0600	1.49E-02	7.92E-08	3.82E-04	6.38E-02	1.83E-07	9.11E-03	7.77E-02	5.12E-07	1.99E-03	3.00E-03	2.07E-08	9.80E-05
Road 21	21	0600-0700	1.42E-02	7.51E-08	3.69E-04	6.20E-02	1.77E-07	8.68E-03	7.26E-02	4.83E-07	1.92E-03	2.92E-03	2.00E-08	9.38E-05
Road 21	21	0700-0800	1.42E-02	7.51E-08	3.69E-04	6.20E-02	1.77E-07	8.68E-03	7.26E-02	4.83E-07	1.92E-03	2.92E-03	2.00E-08	9.38E-05
Road 21	21	0800-0900	1.81E-02	9.97E-08	4.24E-04	7.47E-02	2.00E-07	1.00E-02	8.93E-02	5.74E-07	3.22E-03	4.29E-03	2.83E-08	1.30E-04
Road 21	21	0900-1000	1.81E-02	9.97E-08	4.24E-04	7.47E-02	2.00E-07	1.00E-02	8.93E-02	5.74E-07	3.22E-03	4.29E-03	2.83E-08	1.30E-04
Road 21	21	1000-1100	2.14E-02	4.89E-07	2.34E-03	8.22E-02	1.87E-06	9.04E-03	1.05E-01	2.36E-06	1.14E-02	5.42E-03	1.24E-07	5.77E-05
Road 21	21	1100-1200	2.14E-02	4.89E-07	2.34E-03	8.22E-02	1.87E-06	9.04E-03	1.05E-01	2.36E-06	1.14E-02	5.42E-03	1.24E-07	5.77E-05
Road 21	21	1200-1300	2.40E-02	5.51E-07	2.65E-03	9.17E-02	1.92E-06	9.81E-03	1.13E-01	2.65E-06	1.23E-02	6.15E-03	1.40E-07	6.31E-05
Road 21	21	1300-1400	2.14E-02	5.52E-07	2.65E-03	9.44E-02	1.91E-06	1.02E-02	1.00E-01	2.66E-06	1.23E-02	6.16E-03	1.40E-07	6.34E-05
Road 21	21	1400-1500	2.14E-02	5.52E-07	2.65E-03	9.44E-02	1.91E-06	1.02E-02	1.00E-01	2.66E-06	1.23E-02	6.16E-03	1.40E-07	6.34E-05
Road 21	21	1500-1600	2.40E-02	5.51E-07	2.65E-03	9.17E-02	1.92E-06	9.81E-03	1.13E-01	2.65E-06	1.23E-02	6.15E-03	1.40E-07	6.31E-05
Road 21	21	1600-1700	2.40E-02	5.51E-07	2.65E-03	9.17E-02	1.92E-06	9.81E-03	1.13E-01	2.65E-06	1.23E-02	6.15E-03	1.40E-07	6.31E-05
Road 21	21	1700-1800	1.81E-02	4.58E-07	2.12E-03	7.87E-02	1.59E-06	8.33E-03	9.89E-02	2.12E-06	1.10E-02	5.18E-03	1.17E-07	5.39E-05
Road 21	21	1800-1900	1.39E-02	3.16E-07	1.52E-03	5.59E-02	1.36E-06	6.55E-03	7.17E-02	1.67E-06	8.01E-03	3.63E-03	8.25E-08	3.89E-05
Road 21	21	1900-2000	1.39E-02	3.16E-07	1.52E-03	5.59E-02	1.36E-06	6.55E-03	7.17E-02	1.67E-06	8.01E-03	3.63E-03	8.25E-08	3.89E-05
Road 21	21	2000-2100	1.07E-02	4.46E-08	1.71E-04	4.71E-02	1.42E-07	6.89E-03	4.80E-02	8.50E-08	4.10E-03	2.90E-03	1.85E-08	8.64E-05
Road 21	21	2100-2200	1.07E-02	4.46E-08	1.71E-04	4.71E-02	1.42E-07	6.89E-03	4.80E-02	8.50E-08	4.10E-03	2.90E-03	1.85E-08	8.64E-05
Road 21	21	2200-2300	2.07E-02	1.33E-07	6.74E-04	5.22E-02	6.49E-07	1.13E-02	6.29E-02	3.71E-07	7.77E-03	2.82E-03	3.51E-08	1.68E-04
Road 21	21	2300-0000	1.14E-02	7.11E-08	3.04E-04	5.48E-02	1.54E-07	7.64E-03	6.66E-02	4.60E-07	2.00E-03	3.12E-03	2.09E-08	1.04E-04
Road 21	21	0000-0100	1.10E-02	7.41E-08	3.19E-04	5.19E-02	1.51E-07	7.70E-03	6.29E-02	4.26E-07	2.02E-03	2.86E-03	1.93E-08	9.13E-05
Road 21	21	0100-0200	1.26E-02	8.27E-08	3.59E-04	5.86E-02	1.70E-07	8.50E-03	6.94E-02	4.69E-07	2.24E-03	3.25E-03	2.16E-08	1.03E-04
Road 21	21	0200-0300	1.42E-02	9.13E-08	3.98E-04	6.42E-02	1.89E-07	9.40E-03	7.69E-02	5.14E-07	2.45E-03	3.56E-03	2.37E-08	1.13E-04
Road 21	21	0300-0400	1.58E-02	1.00E-07	4.38E-04	7.02E-02	2.08E-07	1.03E-02	8.37E-02	5.52E-07	2.68E-03	4.00E-03	2.58E-08	1.24E-04
Road 21	21	0400-0500	1.74E-02	1.09E-07	4.77E-04	7.62E-02	2.27E-07	1.12E-02	9.16E-02	6.01E-07	2.89E-03	4.39E-03	2.79E-08	1.34E-04
Road 21	21	0500-0600	1.49E-02	7.92E-08	3.82E-04	6.38E-02	1.83E-07	9.11E-03	7.77E-02	5.12E-07	1.99E-03	3.00E-03	2.07E-08	9.80E-05
Road 21	21	0600-0700	1.42E-02	7.51E-08	3.69E-04	6.20E-02	1.77E-07	8.68E-03	7.26E-02	4.83E-07	1.92E-03	2.92E-03	2.00E-08	9.38E-05
Road 21	21	0700-0800	1.42E-02	7.51E-08	3.69E-04	6.20E-02	1.77E-07	8.68E-03	7.26E-02	4.83E-07	1.92E-03	2.92E-03	2.00E-08	9.38E-05
Road 21	21	0800-0900	1.81E-02	9.97E-08	4.24E-04	7.47E-02	2.00E-07	1.00E-02	8.93E-02	5.74E-07	3.22E-03	4.29E-03	2.83E-08	1.30E-04
Road 21	21	0900-1000	1.81E-02	9.97E-08	4.24E-04	7.47E-02	2.00E-07	1.00E-02	8.93E-02	5.74E-07	3.22E-03	4.29E-03	2.83E-08	1.30E-04
Road 21	21	1000-1100	2.14E-02	4.89E-07	2.34E-03	8.22E-02	1.87E-06	9.04E-03	1.05E-01	2.36E-06	1.14E-02	5.42E-03	1.24E-07	5.77E-05
Road 21	21	1100-1200	2.14E-02	4.89E-07	2.34E-03	8.22E-02	1.87E-06	9.04E-03	1.05E-01	2.36E-06	1.14E-02	5.42E-03	1.24E-07	5.77E-05
Road 21	21	1200-1300	2.40E-02	5.51E-07	2.65E-03	9.17E-02	1.92E-06	9.81E-03	1.13E-01	2.65E-06	1.23E-02	6.15E-03	1.40E-07	6.31E-05
Road 21	21	1300-1400	2.14E-02	5.52E-07	2.65E-03	9.44E-02	1.91E-06	1.02E-02	1.00E-01	2.66E-06	1.23E-02	6.16E-03	1.40E-07	6.34E-05
Road 21	21	1400-1500	2.14E-02	5.52E-07	2.65E-03	9.44E-02	1.91E-06	1.02E-02	1.00E-01	2.66E-06	1.23E-02	6.16E-03	1.40E-07	6.34E-05
Road 21	21	1500-1600	2.40E-02	5.51E-07	2.65E-03	9.17E-02	1.92E-06	9.81E-03	1.13E-01	2.65E-06	1.23E-			

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Appendix 4.5 Calculation of Vehicular Emission (Scenario A)

Open Year 24 North Underground Quarry															
Open Year 24 North Emulsion Factors for AEMMS model (see Decisions)															
Year 2043															
Road Name	Node	Hour	NO Emulsion			NO Emulsion			NO Emulsion			NO Emulsion			
			g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	g/h/m ³	
Road 24	24	0800-0900	1.346	2.448	2.218	4.421	6.032	6.757	8.751	5.911	1.150	1.095	1.372	2.548	2.335
	24	0900-1000	0.905	2.755	2.511	2.762	4.793	6.038	6.768	5.968	1.205	1.150	1.402	2.565	2.665
Road 24	24	1000-1100	1.355	2.725	2.475	2.745	4.793	6.037	6.786	5.945	1.238	1.183	1.396	2.578	2.565
	24	1100-1200	1.432	2.745	2.495	2.765	4.793	6.038	6.768	5.968	1.205	1.150	1.402	2.565	2.665
Road 24	24	1300-1400	1.432	3.240	2.940	2.960	5.090	1.155	1.091	6.471	1.470	1.385	1.420	3.278	2.978
	24	1400-1500	1.432	3.240	2.940	2.960	5.090	1.155	1.091	6.471	1.470	1.385	1.420	3.278	2.978
Road 24	24	1500-1600	1.432	3.240	2.940	2.960	5.090	1.155	1.091	6.471	1.470	1.385	1.420	3.278	2.978
	24	1600-1700	1.135	2.925	2.675	2.695	4.793	6.038	6.768	5.968	1.325	1.243	1.398	3.031	2.783
Road 24	24	1700-1800	1.135	2.925	2.675	2.695	4.793	6.038	6.768	5.968	1.325	1.243	1.398	3.031	2.783
	24	1800-1900	1.062	2.610	2.360	2.380	4.495	5.723	6.453	5.623	1.205	1.120	1.275	2.730	2.530
Road 24	24	1900-2000	1.062	2.610	2.360	2.380	4.495	5.723	6.453	5.623	1.205	1.120	1.275	2.730	2.530
	24	2000-2100	0.915	6.758	6.225	6.375	2.735	2.735	2.735	4.795	4.458	3.445	0.988	7.988	6.375
Road 24	24	2100-2200	0.915	6.758	6.225	6.375	2.735	2.735	2.735	4.795	4.458	3.445	0.988	7.988	6.375
	24	2200-2300	0.505	5.468	5.055	5.170	1.881	1.881	1.881	4.812	4.526	3.712	0.516	6.205	4.670
Road 24	24	2300-2400	0.505	5.468	5.055	5.170	1.881	1.881	1.881	4.812	4.526	3.712	0.516	6.205	4.670
	24	0000-0100	0.445	3.768	3.585	3.675	1.555	1.555	1.555	4.795	4.458	3.445	0.445	5.795	4.458
Road 24	24	0100-0200	0.445	3.768	3.585	3.675	1.555	1.555	1.555	4.795	4.458	3.445	0.445	5.795	4.458
	24	0200-0300	0.445	3.768	3.585	3.675	1.555	1.555	1.555	4.795	4.458	3.445	0.445	5.795	4.458
Road 24	24	0300-0400	0.445	3.768	3.585	3.675	1.555	1.555	1.555	4.795	4.458	3.445	0.445	5.795	4.458
	24	0400-0500	0.445	3.768	3.585	3.675	1.555	1.555	1.555	4.795	4.458	3.445	0.445	5.795	4.458
Road 24	24	0500-0600	0.445	3.768	3.585	3.675	1.555	1.555	1.555	4.795	4.458	3.445	0.445	5.795	4.458
	24	0600-0700	0.445	3.768	3.585	3.675	1.555	1.555	1.555	4.795	4.458	3.445	0.445	5.795	4.458
Road 25	25	0800-0900	1.415	2.465	2.235	4.401	6.012	6.737	8.731	5.891	1.140	1.085	1.362	2.538	2.325
	25	0900-1000	0.905	2.755	2.511	2.762	4.793	6.038	6.768	5.968	1.205	1.150	1.402	2.565	2.665
Road 25	25	1000-1100	1.425	2.735	2.485	2.755	4.793	6.037	6.786	5.945	1.238	1.183	1.396	2.578	2.565
	25	1100-1200	1.432	2.745	2.495	2.765	4.793	6.038	6.768	5.968	1.205	1.150	1.402	2.565	2.665
Road 25	25	1300-1400	1.432	3.240	2.940	2.960	5.090	1.155	1.091	6.471	1.470	1.385	1.420	3.278	2.978
	25	1400-1500	1.432	3.240	2.940	2.960	5.090	1.155	1.091	6.471	1.470	1.385	1.420	3.278	2.978
Road 25	25	1500-1600	1.432	3.240	2.940	2.960	5.090	1.155	1.091	6.471	1.470	1.385	1.420	3.278	2.978
	25	1600-1700	1.135	2.925	2.675	2.695	4.793	6.038	6.768	5.968	1.325	1.243	1.398	3.031	2.783
Road 25	25	1700-1800	1.135	2.925	2.675	2.695	4.793	6.038	6.768	5.968	1.325	1.243	1.398	3.031	2.783
	25	1800-1900	1.062	2.610	2.360	2.380	4.495	5.723	6.453	5.623	1.205	1.120	1.275	2.730	2.530
Road 25	25	1900-2000	1.062	2.610	2.360	2.380	4.495	5.723	6.453	5.623	1.205	1.120	1.275	2.730	2.530
	25	2000-2100	0.915	6.758	6.225	6.375	2.735	2.735	2.735	4.795	4.458	3.445	0.988	7.988	6.375
Road 25	25	2100-2200	0.915	6.758	6.225	6.375	2.735	2.735	2.735	4.795	4.458	3.445	0.988	7.988	6.375
	25	2200-2300	0.505	5.468	5.055	5.170	1.881	1.881	1.881	4.812	4.526	3.712	0.516	6.205	4.670
Road 25	25	2300-2400	0.505	5.468	5.055	5.170	1.881	1.881	1.881	4.812	4.526	3.712	0.516	6.205	4.670
	25	0000-0100	0.445	3.768	3.585	3.675	1.555	1.555	1.555	4.795	4.458	3.445	0.445	5.795	4.458
Road 25	25	0100-0200	0.445	3.768	3.585	3.675	1.555	1.555	1.555	4.795	4.458	3.445	0.445	5.795	4.458
	25	0200-0300	0.445	3.768	3.585	3.675	1.555	1.555	1.555	4.795	4.458	3.445	0.445	5.795	4.458
Road 25	25	0300-0400	0.445	3.768	3.585	3.675	1.555	1.555	1.555	4.795	4.458	3.445	0.445	5.795	4.458
	25	0400-0500	0.445	3.768	3.585	3.675	1.555	1.555	1.555	4.795	4.458	3.445	0.445	5.795	4.458
Road 25	25	0500-0600	0.445	3.768	3.585	3.675	1.555	1.555	1.555	4.795	4.458	3.445	0.445	5.795	4.458
	25	0600-0700	0.445	3.768	3.585	3.675	1.555	1.555	1.555	4.795	4.458	3.445	0.445	5.795	4.458
Road 26	26	0800-0900	1.385	2.465	2.235	4.401	6.012	6.737	8.731	5.891	1.140	1.085	1.362	2.538	2.325
	26	0900-1000	0.905	2.755	2.511	2.762	4.793	6.038	6.768	5.968	1.205	1.150	1.402	2.565	2.665
Road 26	26	1000-1100	1.425	2.735	2.485	2.755	4.793	6.037	6.786	5.945	1.238	1.183	1.396	2.578	2.565
	26	1100-1200	1.432	2.745	2.495	2.765	4.793	6.038	6.768	5.968	1.205	1.150	1.402	2.565	2.665
Road 26	26	1300-1400	1.432	3.240	2.940	2.960	5.090	1.155	1.091	6.471	1.470	1.385	1.420	3.278	2.978
	26	1400-1500	1.432	3.240	2.940	2.960	5.090	1.155	1.091	6.471	1.470	1.385	1.420	3.278	2.978
Road 26	26	1500-1600	1.432	3.240	2.940	2.960	5.090	1.155	1.091	6.471	1.470	1.385	1.420	3.278	2.978
	26	1600-1700	1.135	2.925	2.675	2.695	4.793	6.038	6.768	5.968	1.325	1.243	1.398	3.031	2.783
Road 26	26	1700-1800	1.135	2.925	2.675	2.695	4.793	6.038	6.768	5.968	1.325	1.243	1.398	3.031	2.783
	26	1800-1900	1.062	2.610	2.360	2.380	4.495	5.723	6.453	5.623	1.205	1.120	1.275	2.730	2.530
Road 26	26	1900-2000	1.062	2.610	2.360	2.380	4.495	5.723	6.453	5.623	1.205	1.120	1.275	2.730	2.530
	26	2000-2100	0.915	6.758	6.225	6.375	2.735	2.735	2.735	4.795	4.458	3.445	0.988	7.988	6.375
Road 26	26	2100-2200	0.915	6.758	6.225	6.375	2.735	2.735	2.735	4.795	4.458	3.445	0.988	7.988	6.375
	26	2200-2300	0.505	5.468	5.055	5.170	1.881	1.881	1.881	4.812	4.526	3.712	0.516	6.205	4.670
Road 26	26	2300-2400	0.505	5.468	5.055	5.170	1.881	1.881	1.881	4.812	4.526	3.712	0.516	6.205	4.670
	26	0000-0100	0.445	3.768	3.585	3.675	1.555	1.555	1.555	4.795	4.458	3.445	0.445	5.795	4.458
Road 26	26	0100-0200	0.445	3.768	3.585	3.675	1.555	1.555	1.555	4.795	4.458	3.445	0.445	5.795	4.458
	26	0200-0300	0.445	3.768	3.585	3.675	1.555	1.555	1.555	4.795	4.458	3.445	0.445	5.795	4.458
Road 26	26	0300-0400	0.445	3.768	3.585	3.675	1.555	1.555	1.555	4.795	4.458	3.445	0.445	5.795	4.458
	26	0400-0500	0.445	3.768	3.585	3.675	1.555	1.555	1.555	4.795	4.458	3.445	0.445	5.795	4.458
Road 26	26	0500-0600	0.445	3.768	3.585	3.675	1.555	1.555	1.555	4.795	4.458	3.445	0.445	5.795	4.458
	26	0600-0700	0.445	3.768	3.585	3.675	1.555	1.555	1.555	4.795	4.458	3.445	0.445	5.795	4.458
Road 27	27	0800-0900	1.385	2.465	2.235	4.401	6.012	6.737	8.731	5.891	1.140	1.085	1.362	2.538	2.325
	27	0900-1000	0.905	2.755	2.511	2.762	4.793	6.038	6.768	5.968	1.205	1.150	1.402	2.565	2.665
Road 27	27	1000-1100	1.425	2.735	2.485	2.755	4.793	6.037	6.786	5.945	1.238	1.183	1.396	2.578	2.565
	27	1100-1200	1.432	2.745	2.495	2.765	4.793	6.038	6.768	5.968	1.205	1.150	1.402	2.565	2.665
Road 27	27	1300-1400	1.432	3.240	2.940	2.960	5.090	1.155	1.091	6.471	1.470	1.385	1.420	3.278	2.978
	27	1400-1500	1.432	3.240	2.940	2.960	5.090	1.155	1.091	6.471	1.470	1.385	1.420	3.278	2.978
Road 27	27	1500-1600	1.432	3.240	2.940	2.960	5.090	1.155	1.091	6.471	1.470	1.385	1.420	3.278	2.978
	27	1600-1700	1.135	2.925	2.675	2.695	4.793	6.038	6.768	5.968	1.325	1.243	1.398	3.031	2.783
Road 27	27	1700-1800	1.135	2.925	2.675	2.695	4.793	6.038	6.768	5.968	1.325	1.243	1.398	3.	

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Tsing Yi North Underground Quarry
 Open Road 24-hour Emission Factors

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors
for AERMOD model (Summary) Year 2033

Road Name	Road ID	Hour	NO _x Emission				PM ₁₀ Emission				PM _{2.5} Emission			
			Annual/Average		No Emission		Annual/Average		No Emission		Annual/Average		No Emission	
			g/km ² /h	g/km ² /d	tonne/year	g/km ² /h	g/km ² /d	tonne/year	g/km ² /h	g/km ² /d	tonne/year	g/km ² /h	g/km ² /d	tonne/year
Road 6	6	1800-1900	4.777E-02	1.373E-01	4.81E-02	2.900E-01	8.599E-06	8.28E-02	1.05E-02	3.02E-07	3.10E-03	1.14E-02	3.27E-07	3.37E-03
Road 6	6	1900-2000	3.873E-02	8.44E-02	8.67E-03	2.575E-01	8.08E-06	5.78E-02	1.02E-02	3.22E-07	2.29E-03	1.11E-02	2.42E-07	2.48E-03
Road 6	6	2000-2100	3.58E-02	6.12E-07	6.29E-03	2.59E-01	4.37E-06	4.49E-02	1.01E-02	1.72E-07	1.77E-03	1.09E-02	1.87E-07	1.92E-03
Road 6	6	2100-2200	3.44E-02	5.90E-07	6.07E-03	2.44E-01	4.38E-06	4.29E-02	9.72E-03	1.58E-07	1.63E-03	1.01E-02	1.72E-07	1.77E-03
Road 6	6	2200-2300	3.52E-02	6.35E-07	6.49E-03	2.59E-01	4.37E-06	4.49E-02	1.01E-02	1.72E-07	1.77E-03	1.09E-02	1.87E-07	1.92E-03
Road 6	6	2300-0400	3.54E-02	4.40E-07	4.52E-04	2.40E-01	2.98E-06	3.07E-02	9.60E-03	1.17E-07	1.22E-04	1.01E-02	1.30E-07	1.33E-03
Road 7	7	0000-0100	1.112E-01	6.17E-08	6.24E-04	1.32E-01	7.31E-07	3.07E-05	3.09E-06	1.32E-04	6.05E-03	3.36E-04	1.44E-04	
Road 7	7	0100-0200	1.21E-02	4.38E-08	4.38E-04	1.33E-01	4.83E-07	2.57E-05	2.07E-05	2.08E-08	8.91E-05	6.25E-02	2.26E-08	9.69E-05
Road 7	7	0200-0300	1.21E-02	4.38E-08	4.38E-04	1.33E-01	4.83E-07	2.57E-05	2.07E-05	2.08E-08	8.91E-05	6.25E-02	2.26E-08	9.69E-05
Road 7	7	0300-0400	1.21E-02	4.38E-08	4.38E-04	1.33E-01	4.83E-07	2.57E-05	2.07E-05	2.08E-08	8.91E-05	6.25E-02	2.26E-08	9.69E-05
Road 7	7	0400-0500	1.48E-02	3.41E-08	1.46E-04	1.40E-01	3.23E-07	1.38E-05	6.23E-04	2.54E-08	6.15E-07	6.87E-03	1.56E-08	6.69E-06
Road 7	7	0500-0600	1.551E-02	5.98E-08	2.56E-04	1.41E-01	5.61E-07	2.40E-03	6.30E-04	3.00E-06	1.07E-04	6.85E-03	2.72E-08	1.16E-06
Road 7	7	0600-0700	1.55E-02	1.32E-07	5.63E-04	1.43E-01	1.52E-06	5.20E-03	6.38E-04	5.41E-06	2.31E-04	6.84E-03	5.88E-08	2.52E-06
Road 7	7	0700-0800	1.55E-02	1.32E-07	5.63E-04	1.43E-01	1.52E-06	5.20E-03	6.38E-04	5.41E-06	2.31E-04	6.84E-03	5.88E-08	2.52E-06
Road 7	7	0800-0900	1.55E-02	1.31E-07	5.63E-04	1.38E-01	1.29E-06	5.10E-02	6.13E-03	1.22E-07	5.27E-04	6.67E-03	1.32E-07	5.67E-04
Road 7	7	0900-1000	1.57E-02	2.86E-07	1.27E-03	1.37E-01	2.23E-06	9.83E-03	6.67E-03	1.09E-07	4.67E-04	7.25E-03	1.19E-07	5.08E-04
Road 7	7	1000-1100	1.93E-02	2.74E-07	1.12E-03	1.41E-01	2.00E-06	8.55E-03	7.04E-03	9.98E-07	4.27E-04	7.69E-03	1.07E-07	4.65E-04
Road 7	7	1100-1200	1.97E-02	2.81E-07	1.14E-03	1.41E-01	2.00E-06	8.55E-03	7.04E-03	9.98E-07	4.27E-04	7.69E-03	1.07E-07	4.65E-04
Road 7	7	1200-1300	2.17E-02	3.21E-07	1.38E-03	1.58E-01	2.34E-06	1.02E-03	8.30E-03	1.23E-07	5.26E-04	9.02E-03	1.34E-07	5.72E-04
Road 7	7	1300-1400	2.17E-02	3.29E-07	1.41E-03	1.58E-01	2.38E-06	1.02E-03	8.18E-03	1.24E-07	5.29E-04	8.90E-03	1.34E-07	5.75E-04
Road 7	7	1400-1500	2.12E-02	3.52E-07	1.50E-03	1.59E-01	2.51E-06	1.08E-03	8.18E-03	1.32E-07	5.64E-04	8.82E-03	1.42E-07	6.13E-04
Road 7	7	1500-1600	2.08E-02	3.63E-07	1.47E-03	1.59E-01	2.55E-06	1.09E-03	7.13E-03	1.31E-07	5.59E-04	8.63E-03	1.42E-07	6.07E-04
Road 7	7	1600-1700	2.20E-02	3.89E-07	1.65E-03	1.59E-01	2.78E-06	1.19E-03	8.44E-03	1.48E-07	6.34E-04	9.18E-03	1.61E-07	6.90E-04
Road 7	7	1700-1800	1.69E-02	3.37E-07	1.44E-03	1.49E-01	2.97E-06	1.27E-02	7.42E-03	1.48E-07	6.32E-04	8.38E-03	1.61E-07	6.88E-04
Road 7	7	1800-1900	1.42E-02	2.92E-07	1.25E-03	1.32E-01	2.88E-06	1.23E-02	6.76E-03	1.47E-07	6.30E-04	7.95E-03	1.60E-07	6.85E-04
Road 7	7	1900-2000	1.23E-02	2.12E-07	9.08E-04	1.41E-01	2.43E-06	1.04E-02	7.01E-03	1.72E-07	5.18E-04	7.62E-03	1.32E-07	5.63E-04
Road 7	7	2000-2100	1.23E-02	1.66E-07	7.10E-04	1.52E-01	2.09E-06	8.76E-03	7.13E-03	6.98E-08	4.14E-04	7.82E-03	1.05E-07	4.50E-04
Road 7	7	2100-2200	1.08E-02	1.46E-07	6.24E-04	1.41E-01	1.88E-06	8.10E-03	6.37E-03	6.52E-08	3.95E-04	6.92E-03	9.25E-08	3.96E-04
Road 7	7	2200-2300	1.08E-02	1.43E-07	6.13E-04	1.48E-01	1.93E-06	8.24E-03	6.63E-03	6.65E-08	3.70E-04	7.21E-03	9.40E-08	4.02E-04
Road 7	7	2300-0400	1.18E-02	1.15E-07	4.91E-04	1.49E-01	1.45E-06	6.22E-03	6.75E-03	6.81E-08	2.83E-04	7.38E-03	1.07E-07	3.70E-04
Road 8	8	0000-0100	2.47E-02	1.33E-08	9.83E-05	4.02E-01	2.17E-07	8.26E-06	2.37E-02	9.43E-05	2.57E-02	1.39E-08	1.03E-06	
Road 8	8	0100-0200	2.52E-02	8.87E-08	6.95E-05	4.01E-01	1.44E-07	1.04E-03	3.82E-06	6.14E-05	2.57E-02	9.04E-09	6.67E-05	
Road 8	8	0200-0300	2.52E-02	8.87E-08	6.95E-05	4.01E-01	1.44E-07	1.04E-03	3.82E-06	6.14E-05	2.57E-02	9.04E-09	6.67E-05	
Road 8	8	0300-0400	2.52E-02	8.87E-08	6.95E-05	4.01E-01	1.44E-07	1.04E-03	3.82E-06	6.14E-05	2.57E-02	9.04E-09	6.67E-05	
Road 8	8	0400-0500	2.56E-02	6.69E-08	4.94E-05	4.03E-01	1.04E-07	7.54E-06	2.38E-02	6.92E-09	4.49E-05	2.56E-02	6.62E-09	4.88E-05
Road 8	8	0500-0600	2.69E-02	5.42E-09	4.05E-05	4.02E-01	8.22E-07	6.07E-04	2.38E-02	4.81E-09	3.55E-05	2.56E-02	5.74E-09	3.86E-05
Road 8	8	0600-0700	2.71E-02	6.09E-08	4.50E-05	4.01E-01	9.01E-08	6.65E-04	2.39E-02	5.28E-09	3.90E-05	2.56E-02	5.74E-09	4.24E-05
Road 8	8	0700-0800	2.71E-02	6.09E-08	4.50E-05	4.01E-01	9.01E-08	6.65E-04	2.39E-02	5.28E-09	3.90E-05	2.56E-02	5.74E-09	4.24E-05
Road 8	8	0800-0900	2.83E-02	2.38E-08	1.76E-05	4.00E-01	3.67E-07	4.98E-03	2.34E-02	1.97E-05	1.45E-04	2.55E-02	1.41E-04	1.58E-04
Road 8	8	0900-1000	2.83E-02	2.38E-08	1.76E-05	4.00E-01	3.67E-07	4.98E-03	2.34E-02	1.97E-05	1.45E-04	2.55E-02	1.41E-04	1.58E-04
Road 8	8	1000-1100	2.83E-02	2.38E-08	1.76E-05	4.00E-01	3.67E-07	4.98E-03	2.34E-02	1.97E-05	1.45E-04	2.55E-02	1.41E-04	1.58E-04
Road 8	8	1100-1200	2.72E-02	5.24E-08	3.87E-04	3.62E-01	6.98E-07	5.15E-05	2.15E-05	4.15E-06	3.06E-04	2.34E-02	4.51E-08	3.35E-04
Road 8	8	1200-1300	2.92E-02	4.79E-08	3.53E-04	3.69E-01	6.06E-07	4.47E-02	3.98E-06	2.67E-04	2.59E-02	3.93E-04	2.90E-04	2.20E-04
Road 8	8	1300-1400	3.09E-02	4.44E-08	3.27E-04	3.67E-01	5.27E-07	3.88E-03	2.20E-02	3.17E-06	2.34E-04	2.40E-02	3.44E-04	2.54E-04
Road 8	8	1400-1500	3.09E-02	4.44E-08	3.27E-04	3.67E-01	5.27E-07	3.88E-03	2.20E-02	3.17E-06	2.34E-04	2.40E-02	3.44E-04	2.54E-04
Road 8	8	1500-1600	3.09E-02	4.44E-08	3.27E-04	3.67E-01	5.27E-07	3.88E-03	2.20E-02	3.17E-06	2.34E-04	2.40E-02	3.44E-04	2.54E-04
Road 8	8	1600-1700	3.02E-02	4.45E-07	1.90E-03	2.81E-02	1.27E-06	9.40E-04	1.67E-02	7.57E-05	5.99E-04	1.82E-02	8.23E-08	6.08E-04
Road 8	8	1700-1800	3.27E-02	1.31E-07	5.64E-04	2.80E-01	1.37E-06	1.01E-02	1.62E-02	9.02E-08	5.84E-04	1.78E-02	8.80E-08	6.56E-04
Road 8	8	1800-1900	3.27E-02	1.31E-07	5.64E-04	2.80E-01	1.37E-06	1.01E-02	1.62E-02	9.02E-08	5.84E-04	1.78E-02	8.80E-08	6.56E-04
Road 8	8	1900-2000	3.27E-02	1.31E-07	5.64E-04	2.80E-01	1.37E-06	1.01E-02	1.62E-02	9.02E-08	5.84E-04	1.78E-02	8.80E-08	6.56E-04
Road 8	8	2000-2100	2.28E-02	8.83E-08	6.52E-04	3.06E-01	1.20E-06	8.83E-03	1.79E-02	7.01E-08	5.18E-04	1.95E-02	7.60E-08	5.63E-04
Road 8	8	2100-2200	2.28E-02	7.02E-08	6.18E-04	3.12E-01	1.09E-07	7.30E-03	1.85E-02	5.69E-08	4.20E-04	2.01E-04	1.96E-08	4.57E-04
Road 8	8	2200-2300	2.11E-02	6.39E-08	4.72E-04	2.99E-01	8.94E-07	6.03E-03	1.67E-02	5.01E-08	3.73E-04	1.82E-02	5.50E-08	4.06E-04
Road 8	8	2300-0400	2.23E-02	6.40E-08	4.73E-04	3.12E-01	9.51E-07	6.76E-03	1.77E-02	5.21E-08	3.84E-04	1.93E-02	5.69E-08	4.18E-04
Road 8	8	0000-0100	2.28E-02	7.02E-08	6.18E-04	3.12E-01	1.09E-07	7.30E-03	1.85E-02	5.69E-08	4.20E-04	2.01E-04	1.96E-08	4.57E-04
Road 9	9	0000-0100	1.85E-02	8.75E-08	6.39E-04	3.06E-01	1.20E-06	8.83E-03	1.79E-02	7.09E-08	5.18E-04	1.95E-02	7.60E-08	5.63E-04
Road 9	9	0100-0200	1.87E-02	5.76E-08	1.96E-04	1.64E-01	5.07E-07	1.37E-03	6.24E-03	1.92E-05	6.78E-03	2.09E-08	5.66E-05	
Road 9	9	0200-0300	1.87E-02	5.76E-08	1.96E-04	1.64E-01	5.07E-07	1.37E-03	6.24E-03	1.92E-05	6.78E-03	2.09E-08	5.66E-05	
Road 9	9	0300-0400	1.87E-02	5.76E-08	1.96E-04	1.64E-01	5.07E-07	1.37E-03	6.24E-03	1.92E-05	6.78E-03	2.09E-08	5.66E-05	
Road 9	9	0400-0500	2.27E-02	4.46E-08	1.21E-04	1.73E-01	3.40E-07	9.21E-04	3.78E-03	1.43E-08	3.91E-04	1.64E-08	1.57E-08	4.25E-05
Road 9	9	0500-0600	2.27E-02	4.46E-08	1.21E-04	1.73E-01	3.40E-07	9.21E-04	3.78E-03	1.43E-08	3.91E-04	1.64E-08	1.57E-08	4.25E-05
Road 9	9	0600-0700	2.24E-02	8.28E-08	2.24E-04	1.82E-01	6.16E-07	6.99E-03	2.37E-06	6.43E-05	7.81E-03	2.59E-08	6.99E-05	
Road 9	9													

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors
for AERMOD model (Summary) Year 2033

Road Name	Road ID	Hour	NO _x Emission				PM _{2.5} Emission				PM ₁₀ Emission			
			Annual/Average		No Emission		Annual/Average		No Emission		Annual/Average		No Emission	
			g/km ² /h	g/km ² /d	g/km ² /h	g/km ² /d	g/km ² /h	g/km ² /d	g/km ² /h	g/km ² /d	g/km ² /h	g/km ² /d	g/km ² /h	g/km ² /d
Road 29	29	1800-1900	2.97E+02	5.63E+07	1.42E+02	3.50E+01	6.55E+06	1.67E+01	2.15E+02	4.08E+07	1.03E+02	2.34E+02	4.43E+07	1.12E+02
Road 29	29	1900-2000	2.96E+02	5.62E+07	1.07E+02	3.92E+01	6.78E+06	1.64E+01	2.39E+02	3.49E+07	8.80E+02	2.60E+02	3.80E+07	9.75E+02
Road 29	29	2000-2100	2.95E+02	5.61E+07	8.80E+02	4.08E+01	6.78E+06	1.19E+01	2.46E+02	2.85E+07	7.18E+02	2.67E+02	3.10E+07	7.81E+02
Road 29	29	2100-2200	2.77E+02	5.14E+07	7.09E+02	4.73E+01	6.43E+06	1.23E+01	2.58E+02	6.40E+07	2.64E+02	2.78E+07	6.96E+02	1.93E+02
Road 29	29	2200-2300	2.89E+02	5.31E+07	7.97E+02	3.97E+01	4.37E+06	1.10E+01	2.39E+02	6.59E+07	2.67E+02	2.85E+07	7.17E+02	1.93E+02
Road 29	29	2300-0400	2.97E+02	5.62E+07	6.52E+03	3.92E+01	3.28E+06	8.26E+02	2.36E+02	1.97E+07	4.97E+02	2.15E+07	5.41E+02	1.50E+02
Road 30	30	0000-0100	1.48E+02	1.57E+07	1.62E+04	1.16E+02	1.32E+06	4.40E+03	4.85E+03	1.58E+05	1.84E+04	5.27E+03	5.60E+08	2.00E+04
Road 30	30	0100-0200	1.69E+02	1.20E+07	4.28E+04	1.20E+01	8.47E+07	3.03E+03	5.26E+03	7.32E+08	1.33E+04	5.72E+03	4.05E+08	1.45E+04
Road 30	30	0200-0300	1.91E+02	1.01E+07	3.63E+04	1.25E+01	6.62E+07	2.36E+03	5.66E+03	3.00E+08	1.07E+04	6.13E+03	2.68E+08	1.17E+04
Road 30	30	0300-0400	2.12E+02	9.07E+08	3.26E+04	1.29E+01	5.51E+07	1.97E+03	6.04E+03	9.25E+03	6.35E+03	2.83E+03	1.05E+04	1.05E+04
Road 30	30	0400-0500	2.12E+02	9.07E+08	3.26E+04	1.29E+01	5.51E+07	1.97E+03	6.04E+03	9.25E+03	6.35E+03	2.83E+03	1.05E+04	1.05E+04
Road 30	30	0500-0600	2.02E+02	1.61E+07	7.61E+04	1.28E+01	6.02E+06	3.65E+03	5.88E+03	6.07E+08	1.07E+04	6.95E+03	5.08E+08	1.82E+04
Road 30	30	0600-0700	1.95E+02	3.27E+07	1.17E+01	1.29E+01	2.81E+06	7.72E+03	9.95E+08	3.45E+04	6.25E+03	1.05E+07	3.75E+04	1.05E+04
Road 30	30	0700-0800	1.95E+02	3.27E+07	1.17E+01	1.29E+01	2.81E+06	7.72E+03	9.95E+08	3.45E+04	6.25E+03	1.05E+07	3.75E+04	1.05E+04
Road 30	30	0800-0900	2.06E+02	8.29E+07	2.96E+03	1.21E+01	4.87E+06	1.74E+02	5.85E+03	7.86E+07	8.42E+04	6.35E+03	2.56E+07	9.15E+04
Road 30	30	0900-1000	2.36E+02	8.20E+07	2.93E+03	1.31E+01	4.58E+06	1.63E+02	5.28E+03	2.28E+07	8.17E+03	2.48E+07	8.85E+04	8.85E+04
Road 30	30	1000-1100	2.36E+02	8.20E+07	2.93E+03	1.31E+01	4.58E+06	1.63E+02	5.28E+03	2.28E+07	8.17E+03	2.48E+07	8.85E+04	8.85E+04
Road 30	30	1100-1200	2.57E+02	7.56E+07	2.70E+03	1.36E+01	4.40E+06	1.43E+02	6.95E+03	2.05E+07	7.31E+04	7.55E+03	2.22E+07	7.95E+04
Road 30	30	1200-1300	2.57E+02	7.56E+07	2.70E+03	1.36E+01	4.40E+06	1.43E+02	6.95E+03	2.05E+07	7.31E+04	7.55E+03	2.22E+07	7.95E+04
Road 30	30	1300-1400	3.52E+02	1.05E+06	3.81E+03	1.63E+01	4.94E+06	1.77E+02	9.21E+07	7.96E+04	1.00E+02	3.03E+07	1.00E+02	1.00E+02
Road 30	30	1400-1500	3.52E+02	1.05E+06	3.91E+03	1.62E+01	5.03E+06	1.80E+02	9.21E+07	7.96E+04	1.00E+02	3.12E+02	3.17E+03	1.12E+03
Road 30	30	1500-1600	3.52E+02	1.05E+06	3.91E+03	1.62E+01	5.03E+06	1.80E+02	9.21E+07	7.96E+04	1.00E+02	3.12E+02	3.17E+03	1.12E+03
Road 30	30	1600-1700	3.38E+02	1.09E+06	3.88E+03	1.61E+01	5.13E+06	1.84E+02	9.13E+03	2.92E+07	1.05E+04	9.84E+03	3.19E+04	1.14E+03
Road 30	30	1700-1800	3.38E+02	1.09E+06	3.88E+03	1.61E+01	5.13E+06	1.84E+02	9.13E+03	2.92E+07	1.05E+04	9.84E+03	3.19E+04	1.14E+03
Road 30	30	1800-1900	2.16E+02	6.90E+07	2.47E+03	1.32E+01	4.18E+06	1.49E+02	7.06E+03	7.06E+07	7.95E+04	7.84E+03	2.42E+07	8.64E+04
Road 30	30	1900-2000	1.86E+02	4.33E+07	1.55E+03	1.34E+01	3.61E+06	1.11E+02	6.87E+03	5.57E+07	5.62E+04	7.35E+03	1.71E+07	6.81E+04
Road 30	30	2000-2100	1.86E+02	4.33E+07	1.55E+03	1.34E+01	3.61E+06	1.11E+02	6.87E+03	5.57E+07	5.62E+04	7.35E+03	1.71E+07	6.81E+04
Road 30	30	2100-2200	1.81E+02	3.31E+07	1.18E+03	1.36E+01	3.50E+06	9.36E+02	6.39E+03	1.17E+07	4.18E+04	9.05E+03	1.27E+07	4.55E+04
Road 30	30	2200-2300	1.81E+02	3.31E+07	1.18E+03	1.36E+01	3.50E+06	9.36E+02	6.39E+03	1.17E+07	4.18E+04	9.05E+03	1.27E+07	4.55E+04
Road 30	30	2300-0400	2.06E+02	2.68E+07	9.57E+04	1.42E+01	1.90E+06	6.80E+03	9.12E+08	3.30E+04	7.50E+03	1.00E+07	3.58E+04	1.00E+07
Road 31	31	0000-0100	2.63E+02	5.31E+08	1.73E+04	2.14E+01	4.31E+07	1.41E+02	1.21E+02	4.58E+06	7.98E+03	1.35E+02	2.66E+08	8.66E+06
Road 31	31	0100-0200	3.42E+02	4.23E+08	1.86E+04	2.14E+01	3.90E+07	9.79E+04	1.25E+02	1.75E+08	5.72E+05	1.96E+02	1.91E+08	6.22E+06
Road 31	31	0200-0300	3.42E+02	4.23E+08	1.86E+04	2.14E+01	3.90E+07	9.79E+04	1.25E+02	1.75E+08	5.72E+05	1.96E+02	1.91E+08	6.22E+06
Road 31	31	0300-0400	3.72E+02	3.40E+08	1.11E+04	2.18E+01	1.98E+07	6.48E+02	1.32E+02	1.20E+08	3.94E+05	1.44E+02	1.31E+08	4.28E+06
Road 31	31	0400-0500	3.67E+02	3.64E+08	1.19E+04	2.17E+01	1.91E+07	7.08E+02	1.31E+02	1.30E+08	4.25E+05	1.43E+02	1.42E+08	4.82E+06
Road 31	31	0500-0600	3.42E+02	5.09E+08	1.66E+04	2.16E+01	3.42E+07	1.12E+02	1.19E+02	2.80E+08	6.52E+05	1.38E+02	2.18E+08	7.09E+06
Road 31	31	0600-0700	2.87E+02	9.15E+08	2.98E+04	2.17E+01	6.95E+07	2.25E+02	3.90E+02	1.27E+04	1.33E+02	4.24E+08	1.38E+04	1.38E+04
Road 31	31	0700-0800	2.87E+02	9.15E+08	2.98E+04	2.17E+01	6.95E+07	2.25E+02	3.90E+02	1.27E+04	1.33E+02	4.24E+08	1.38E+04	1.38E+04
Road 31	31	0800-0900	3.06E+02	2.55E+07	7.33E+04	2.18E+01	1.46E+06	4.86E+03	2.85E+04	3.02E+04	1.28E+02	1.01E+07	3.38E+04	1.01E+07
Road 31	31	0900-1000	3.37E+02	2.40E+07	7.81E+04	2.03E+01	1.54E+06	4.70E+02	1.82E+06	2.84E+04	1.33E+02	9.47E+08	3.09E+04	1.33E+04
Road 31	31	1000-1100	3.66E+02	2.37E+07	7.72E+04	2.04E+01	1.32E+06	4.40E+02	1.26E+04	2.66E+04	1.37E+02	8.87E+08	2.89E+04	1.37E+04
Road 31	31	1100-1200	3.66E+02	2.37E+07	7.72E+04	2.04E+01	1.32E+06	4.40E+02	1.26E+04	2.66E+04	1.37E+02	8.87E+08	2.89E+04	1.37E+04
Road 31	31	1200-1300	3.66E+02	2.26E+07	7.06E+04	2.07E+01	1.28E+06	4.18E+02	1.26E+04	2.79E+04	1.37E+02	8.48E+08	2.78E+04	1.37E+04
Road 31	31	1300-1400	3.66E+02	2.26E+07	7.06E+04	2.07E+01	1.28E+06	4.18E+02	1.26E+04	2.79E+04	1.37E+02	8.48E+08	2.78E+04	1.37E+04
Road 31	31	1400-1500	3.65E+02	2.14E+07	6.97E+04	1.99E+01	1.18E+06	3.80E+02	1.23E+04	2.18E+04	1.34E+02	7.82E+08	2.55E+04	1.34E+04
Road 31	31	1500-1600	3.52E+02	2.20E+07	7.19E+04	1.98E+01	1.21E+06	3.93E+02	1.23E+04	2.78E+04	1.34E+02	8.14E+08	2.66E+04	1.34E+04
Road 31	31	1600-1700	3.52E+02	2.20E+07	7.19E+04	1.98E+01	1.22E+06	3.97E+02	1.19E+04	2.78E+04	1.34E+02	8.05E+08	2.63E+04	1.34E+04
Road 31	31	1700-1800	3.45E+02	2.27E+07	7.04E+04	2.03E+01	1.30E+06	4.25E+02	1.18E+04	2.63E+04	1.37E+02	8.78E+08	2.89E+04	1.37E+04
Road 31	31	1800-1900	3.45E+02	2.27E+07	7.04E+04	2.03E+01	1.30E+06	4.25E+02	1.18E+04	2.63E+04	1.37E+02	8.78E+08	2.89E+04	1.37E+04
Road 31	31	1900-2000	2.58E+02	2.06E+07	6.85E+04	1.88E+01	1.32E+06	4.31E+02	1.13E+04	2.59E+04	1.32E+02	8.65E+08	2.82E+04	1.32E+04
Road 31	31	2000-2100	2.58E+02	2.06E+07	6.85E+04	1.88E+01	1.32E+06	4.31E+02	1.13E+04	2.59E+04	1.32E+02	8.65E+08	2.82E+04	1.32E+04
Road 31	31	2100-2200	2.61E+02	1.34E+07	3.94E+04	2.00E+01	1.02E+06	1.40E+02	5.82E+08	1.90E+04	1.24E+02	6.33E+08	2.26E+04	1.24E+04
Road 31	31	2200-2300	2.61E+02	1.34E+07	3.94E+04	2.00E+01	1.02E+06	1.40E+02	5.82E+08	1.90E+04	1.24E+02	6.33E+08	2.26E+04	1.24E+04
Road 31	31	2300-0400	2.63E+02	1.11E+07	3.16E+04	2.03E+01	9.50E+05	1.26E+02	1.75E+08	1.56E+04	1.32E+02	6.06E+08	2.15E+04	1.32E+04
Road 31	31	0400-0500	2.63E+02	1.11E+07	3.16E+04	2.03E+01	9.50E+05	1.26E+02	1.75E+08	1.56E+04	1.32E+02	6.06E+08	2.15E+04	1.32E+04
Road 31	31	0500-0600	2.63E+02	1.11E+07	3.16E+04	2.03E+01	9.50E+05	1.26E+02	1.75E+08	1.56E+04	1.32E+02	6.06E+08	2.15E+04	1.32E+04
Road 31	31	0600-0700	2.63E+02	1.11E+07	3.16E+04	2.03E+01	9.50E+05	1.26E+02	1.75E+08	1.56E+04	1.32E+02	6.06E+08	2.15E+04	1.32E+04
Road 31	31	0700-0800	2.63E+02	1.11E+07	3.16E+04	2.03E+01	9.50E+05	1.26E+02	1.75E+08	1.56E+04	1.32E+02	6.06E+08	2.15E+04	1.32E+04
Road 31	31	0800-0900	2.63E+02	1.11E+07	3.16E+04	2.03E+01	9.50E+05	1.26E+02	1.75E+08	1.56E+04	1.32E+02	6.06E+08	2.15E+04	1.32E+04
Road 31	31	0900-1000	2.63E+02	1.11E+07	3.16E+04	2.03E+01	9.50E+05	1.26E+02	1.75E+08	1.56E+04	1.32E+02	6.06E+08	2.15E+04	1.32E+04
Road 31	31	1000-1100	2.63E+02	1.11E+07	3.16E+04	2.03E+01</								

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry														
Open Road 24 hour Emission Factors for AERMOD model (Summary)														
Year 2033														
Road Name	Road ID	Hour	NO _x Emission			PM _{2.5} Emission			PM ₁₀ Emission					
			g/m ³ /km ³	g/m ³ /km ³	tonne/year	g/m ³ /km ³	g/m ³ /km ³	tonne/year	g/m ³ /km ³	g/m ³ /km ³	tonne/year			
Road S2	52	1800-1900	6.53E-02	1.44E-07	2.73E-04	2.72E-01	3.81E-07	1.17E-03	1.02E-02	4.38E-05	4.77E-05			
Road S2	52	1900-2000	6.04E-02	9.14E-08	1.71E-04	2.52E-01	3.05E-07	1.72E-04	9.80E-03	1.51E-08	3.07E-05			
Road S2	52	2000-2100	5.89E-02	7.09E-08	1.38E-04	2.53E-01	3.05E-07	1.78E-04	8.80E-03	1.12E-01	2.40E-05			
Road S2	52	2100-2200	5.97E-02	7.29E-08	1.38E-04	2.54E-01	3.14E-07	5.87E-04	1.23E-08	2.22E-05	4.90E-05			
Road S2	52	2200-2300	6.55E-02	7.12E-08	1.38E-04	2.53E-01	3.25E-07	4.13E-07	1.23E-08	2.22E-05	4.90E-05			
Road S2	52	2300-0000	6.55E-02	5.71E-08	1.07E-04	2.49E-01	2.21E-07	4.13E-04	1.06E-01	1.76E-05	1.91E-05			
Road S3	53	0000-0100	9.55E-02	4.46E-08	3.78E-04	4.05E-01	1.86E-07	1.60E-03	1.26E-02	9.50E-05	5.00E-05	1.37E-02	6.40E-05	5.43E-05
Road S3	53	0100-0200	9.50E-02	2.99E-08	2.54E-04	4.01E-01	1.26E-07	1.07E-03	1.38E-02	3.38E-05	1.37E-02	3.43E-05	3.67E-05	
Road S3	53	0200-0300	9.87E-02	3.06E-08	2.54E-04	4.01E-01	1.26E-07	1.07E-03	1.38E-02	3.38E-05	1.45E-02	3.38E-05	3.67E-05	
Road S3	53	0300-0400	1.02E-02	1.99E-08	1.06E-04	4.22E-01	8.27E-08	7.02E-04	1.91E-03	2.09E-05	2.61E-05	1.45E-02	7.76E-05	7.76E-05
Road S3	53	0400-0500	1.05E-01	2.33E-08	1.97E-04	4.32E-01	9.59E-08	8.13E-04	1.33E-02	3.98E-05	2.51E-05	1.45E-02	2.32E-05	2.73E-05
Road S3	53	0500-0600	1.12E-01	4.47E-08	3.78E-04	4.57E-01	1.82E-07	1.54E-03	1.38E-02	5.51E-05	4.67E-05	1.50E-02	5.98E-05	5.07E-05
Road S3	53	0600-0700	1.26E-01	1.11E-07	9.41E-04	5.04E-01	4.45E-07	3.77E-03	1.46E-02	1.29E-04	1.10E-04	1.59E-02	1.41E-04	1.19E-04
Road S3	53	0700-0800	1.26E-01	1.11E-07	9.41E-04	5.04E-01	4.45E-07	3.77E-03	1.46E-02	1.29E-04	1.10E-04	1.59E-02	1.41E-04	1.19E-04
Road S3	53	0800-0900	1.26E-01	1.11E-07	9.41E-04	5.04E-01	4.45E-07	3.77E-03	1.46E-02	1.29E-04	1.10E-04	1.59E-02	1.41E-04	1.19E-04
Road S3	53	0900-1000	1.26E-01	1.11E-07	9.41E-04	5.04E-01	4.45E-07	3.77E-03	1.46E-02	1.29E-04	1.10E-04	1.59E-02	1.41E-04	1.19E-04
Road S3	53	1000-1100	1.26E-01	1.11E-07	9.41E-04	5.04E-01	4.45E-07	3.77E-03	1.46E-02	1.29E-04	1.10E-04	1.59E-02	1.41E-04	1.19E-04
Road S3	53	1100-1200	1.26E-01	1.11E-07	9.41E-04	5.04E-01	4.45E-07	3.77E-03	1.46E-02	1.29E-04	1.10E-04	1.59E-02	1.41E-04	1.19E-04
Road S3	53	1200-1300	1.26E-01	1.11E-07	9.41E-04	5.04E-01	4.45E-07	3.77E-03	1.46E-02	1.29E-04	1.10E-04	1.59E-02	1.41E-04	1.19E-04
Road S3	53	1300-1400	1.26E-01	1.11E-07	9.41E-04	5.04E-01	4.45E-07	3.77E-03	1.46E-02	1.29E-04	1.10E-04	1.59E-02	1.41E-04	1.19E-04
Road S3	53	1400-1500	1.26E-01	1.11E-07	9.41E-04	5.04E-01	4.45E-07	3.77E-03	1.46E-02	1.29E-04	1.10E-04	1.59E-02	1.41E-04	1.19E-04
Road S3	53	1500-1600	1.26E-01	1.11E-07	9.41E-04	5.04E-01	4.45E-07	3.77E-03	1.46E-02	1.29E-04	1.10E-04	1.59E-02	1.41E-04	1.19E-04
Road S3	53	1600-1700	1.26E-01	1.11E-07	9.41E-04	5.04E-01	4.45E-07	3.77E-03	1.46E-02	1.29E-04	1.10E-04	1.59E-02	1.41E-04	1.19E-04
Road S3	53	1700-1800	1.26E-01	1.11E-07	9.41E-04	5.04E-01	4.45E-07	3.77E-03	1.46E-02	1.29E-04	1.10E-04	1.59E-02	1.41E-04	1.19E-04
Road S3	53	1800-1900	1.26E-01	1.11E-07	9.41E-04	5.04E-01	4.45E-07	3.77E-03	1.46E-02	1.29E-04	1.10E-04	1.59E-02	1.41E-04	1.19E-04
Road S3	53	1900-2000	1.26E-01	1.11E-07	9.41E-04	5.04E-01	4.45E-07	3.77E-03	1.46E-02	1.29E-04	1.10E-04	1.59E-02	1.41E-04	1.19E-04
Road S3	53	2000-2100	1.26E-01	1.11E-07	9.41E-04	5.04E-01	4.45E-07	3.77E-03	1.46E-02	1.29E-04	1.10E-04	1.59E-02	1.41E-04	1.19E-04
Road S3	53	2100-2200	1.26E-01	1.11E-07	9.41E-04	5.04E-01	4.45E-07	3.77E-03	1.46E-02	1.29E-04	1.10E-04	1.59E-02	1.41E-04	1.19E-04
Road S3	53	2200-2300	1.26E-01	1.11E-07	9.41E-04	5.04E-01	4.45E-07	3.77E-03	1.46E-02	1.29E-04	1.10E-04	1.59E-02	1.41E-04	1.19E-04
Road S3	53	2300-0000	1.26E-01	1.11E-07	9.41E-04	5.04E-01	4.45E-07	3.77E-03	1.46E-02	1.29E-04	1.10E-04	1.59E-02	1.41E-04	1.19E-04
Road S4	54	0000-0100	7.83E-02	2.91E-04	3.42E-01	9.42E-01	1.53E-08	1.27E-03	3.61E-05	1.05E-02	4.70E-05	2.12E-02	2.12E-02	2.12E-02
Road S4	54	0100-0200	7.41E-02	4.42E-08	3.68E-04	3.27E-01	1.96E-07	1.63E-03	9.35E-03	5.58E-04	4.64E-05	1.02E-02	6.05E-05	5.04E-05
Road S4	54	0200-0300	6.73E-02	3.50E-08	8.85E-04	3.13E-01	4.81E-07	4.08E-03	7.79E-03	1.12E-03	1.03E-04	8.69E-03	1.32E-03	1.12E-04
Road S4	54	0300-0400	6.44E-02	8.95E-08	8.95E-04	3.13E-01	4.78E-07	4.08E-03	7.79E-03	1.12E-03	1.03E-04	8.69E-03	1.32E-03	1.12E-04
Road S4	54	0400-0500	6.50E-02	6.50E-08	6.50E-04	3.13E-01	4.78E-07	4.08E-03	7.79E-03	1.12E-03	1.03E-04	8.69E-03	1.32E-03	1.12E-04
Road S4	54	0500-0600	6.68E-02	7.33E-08	6.21E-04	3.04E-01	3.34E-07	2.83E-03	7.82E-03	8.55E-05	7.28E-05	8.50E-03	9.32E-05	7.90E-05
Road S4	54	0600-0700	6.33E-02	6.56E-08	5.46E-04	3.28E-01	2.93E-07	2.44E-03	6.42E-03	6.28E-05	6.85E-05	9.98E-03	9.93E-05	7.43E-05
Road S4	54	0700-0800	7.41E-02	4.42E-08	3.68E-04	3.27E-01	1.96E-07	1.63E-03	9.35E-03	5.58E-04	4.64E-05	1.02E-02	6.05E-05	5.04E-05
Road S4	54	0800-0900	6.73E-02	3.50E-08	8.85E-04	3.13E-01	4.81E-07	4.08E-03	7.79E-03	1.12E-03	1.03E-04	8.69E-03	1.32E-03	1.12E-04
Road S4	54	0900-1000	6.44E-02	8.95E-08	8.95E-04	3.13E-01	4.78E-07	4.08E-03	7.79E-03	1.12E-03	1.03E-04	8.69E-03	1.32E-03	1.12E-04
Road S4	54	1000-1100	6.50E-02	6.50E-08	6.50E-04	3.13E-01	4.78E-07	4.08E-03	7.79E-03	1.12E-03	1.03E-04	8.69E-03	1.32E-03	1.12E-04
Road S4	54	1100-1200	6.68E-02	7.33E-08	6.21E-04	3.04E-01	3.34E-07	2.83E-03	7.82E-03	8.55E-05	7.28E-05	8.50E-03	9.32E-05	7.90E-05
Road S4	54	1200-1300	6.33E-02	6.56E-08	5.46E-04	3.28E-01	2.93E-07	2.44E-03	6.42E-03	6.28E-05	6.85E-05	9.98E-03	9.93E-05	7.43E-05
Road S4	54	1300-1400	7.41E-02	4.42E-08	3.68E-04	3.27E-01	1.96E-07	1.63E-03	9.35E-03	5.58E-04	4.64E-05	1.02E-02	6.05E-05	5.04E-05
Road S4	54	1400-1500	6.73E-02	3.50E-08	8.85E-04	3.13E-01	4.81E-07	4.08E-03	7.79E-03	1.12E-03	1.03E-04	8.69E-03	1.32E-03	1.12E-04
Road S4	54	1500-1600	6.44E-02	8.95E-08	8.95E-04	3.13E-01	4.78E-07	4.08E-03	7.79E-03	1.12E-03	1.03E-04	8.69E-03	1.32E-03	1.12E-04
Road S4	54	1600-1700	6.50E-02	6.50E-08	6.50E-04	3.13E-01	4.78E-07	4.08E-03	7.79E-03	1.12E-03	1.03E-04	8.69E-03	1.32E-03	1.12E-04
Road S4	54	1700-1800	6.68E-02	7.33E-08	6.21E-04	3.04E-01	3.34E-07	2.83E-03	7.82E-03	8.55E-05	7.28E-05	8.50E-03	9.32E-05	7.90E-05
Road S4	54	1800-1900	6.33E-02	6.56E-08	5.46E-04	3.28E-01	2.93E-07	2.44E-03	6.42E-03	6.28E-05	6.85E-05	9.98E-03	9.93E-05	7.43E-05
Road S4	54	1900-2000	7.41E-02	4.42E-08	3.68E-04	3.27E-01	1.96E-07	1.63E-03	9.35E-03	5.58E-04	4.64E-05	1.02E-02	6.05E-05	5.04E-05
Road S4	54	2000-2100	6.73E-02	3.50E-08	8.85E-04	3.13E-01	4.81E-07	4.08E-03	7.79E-03	1.12E-03	1.03E-04	8.69E-03	1.32E-03	1.12E-04
Road S4	54	2100-2200	6.44E-02	8.95E-08	8.95E-04	3.13E-01	4.78E-07	4.08E-03	7.79E-03	1.12E-03	1.03E-04	8.69E-03	1.32E-03	1.12E-04
Road S4	54	2200-2300	6.50E-02	6.50E-08	6.50E-04	3.13E-01	4.78E-07	4.08E-03	7.79E-03	1.12E-03	1.03E-04	8.69E-03	1.32E-03	1.12E-04
Road S4	54	2300-0000	6.68E-02	7.33E-08	6.21E-04	3.04E-01	3.34E-07	2.83E-03	7.82E-03	8.55E-05	7.28E-05	8.50E-03	9.32E-05	7.90E-05
Road S5	55	0000-0100	7.83E-02	2.91E-04	3.42E-01	9.42E-01	1.53E-08	1.27E-03	3.61E-05	1.05E-02	4.70E-05	2.12E-02	2.12E-02	2.12E-02
Road S5	55	0100-0200	7.41E-02	4.42E-08	3.68E-04	3.27E-01	1.96E-07	1.63E-03	9.35E-03	5.58E-04	4.64E-05	1.02E-02	6.05E-05	5.04E-05
Road S5	55	0200-0300	6.73E-02	3.50E-08	8.85E-04	3.13E-01	4.81E-07	4.08E-03	7.79E-03	1.12E-03	1.03E-04	8.69E-03	1.32E-03	1.12E-04
Road S5	55	0300-0400	6.44E-02	8.95E-08	8.95E-04	3.13E-01	4.78E-07	4.08E-03	7.79E-03	1.12E-03	1.03E-04	8.69E-03	1.32E-03	1.12E-04
Road S5	55	0400-0500	6.50E-02	6.50E-08	6.50E-04	3.13E-01	4.78E-07	4.08E-03	7.79E-03	1.12E-03	1.03E-04	8.69E-03	1.32E-03	1.12E-04
Road S5	55	0500-0600	6.68E-02	7.33E-08	6.21E-04	3.04E-01	3.34E-07	2.83E-03	7.82E-03	8.55E-05	7.28E-05	8.50E-03	9.32E-05	7.90E-05
Road S5	55	0600-0700	6.33E-02	6.56E-08	5.46E-04	3.28E-01	2.93E-07	2.44E-03	6.42E-03	6.28E-05	6.85E-05	9.98E-03	9.93E-05	7.43E-05
Road S5	55	0700-0800	7.41E-02	4.42E-08	3.68E-04	3.27E-01	1.96E-07	1.63E-03	9.35E-03	5.58E-04	4.64E-05	1.02E-02	6.05E-05	5.04E-05
Road S5	55	0800-0900	6.73E-02	3.50E-08	8.85E-04	3.13E-01	4.81E-07	4.08E-03	7.79E-03	1.12E-03	1.03E-04	8.69E-03	1.32E-03	1.12E-04
Road S5	55	0900-1000	6.44E-02	8.95E-08	8.95E-04	3.13E-01	4.78E-07	4.08E-03	7.79E-03	1.12E-03	1.03E-04	8.69E-03	1.32E-03	1.12E-04
Road S5	55	1000-1100	6.50E-02	6.50E-08	6.50E-04	3.13E-01	4.78E-07	4.08E-03	7.79E-03	1.12E-03	1.03E-04	8.69E-03	1.32E-03	1.12E-04
Road S5	55	1100-1200	6.68E-02	7										

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry										
Open Road 24 hour Emission Factors for AERMOD model (Summary)										
Year 2033										
Road Name	Road ID	Hour	NO _x Emission				NO ₂ Emission			
			Monthly/tourism		Monthly/tourism/Average		Monthly/tourism		Monthly/tourism/Average	
			g/m ³ /km ³	tonne/year	g/m ³ /km ³	tonne/year	g/m ³ /km ³	tonne/year	g/m ³ /km ³	tonne/year
Road 4	4	0900-1000	1.47E-02	1.31E-01	8.55E-04	1.31E-01	1.16E-02	1.06E-03	9.59E-03	8.68E-04
Road 4	4	0900-1000	1.47E-02	4.27E-07	8.55E-04	1.33E-02	3.87E-07	7.76E-08	1.96E-07	3.93E-08
Road 4	4	1000-1100	1.64E-02	1.42E-07	9.25E-04	1.48E-02	3.77E-07	7.47E-08	1.10E-07	2.16E-08
Road 4	4	1100-1200	1.57E-02	1.37E-07	8.77E-04	1.42E-02	3.32E-07	6.64E-08	1.34E-07	2.63E-08
Road 4	4	1200-1300	1.63E-02	1.51E-07	9.40E-04	1.46E-02	4.66E-07	9.34E-08	1.12E-07	2.24E-08
Road 4	4	1300-1400	1.62E-02	1.52E-07	9.05E-04	1.47E-02	9.48E-08	1.12E-07	1.40E-07	2.79E-08
Road 4	4	1400-1500	1.68E-02	1.54E-07	9.77E-04	1.52E-02	1.07E-07	1.24E-07	1.56E-07	3.06E-08
Road 4	4	1500-1600	1.56E-02	1.37E-07	8.93E-04	1.43E-02	5.06E-07	1.01E-07	1.60E-07	3.02E-08
Road 4	4	1600-1700	1.72E-02	1.66E-07	1.11E-03	1.53E-02	5.84E-07	1.17E-07	1.54E-07	2.94E-08
Road 4	4	1700-1800	1.59E-02	1.45E-07	9.37E-04	1.45E-02	4.44E-07	8.87E-08	1.44E-07	2.82E-08
Road 4	4	1800-1900	1.94E-02	1.88E-07	1.31E-03	1.75E-02	8.63E-08	8.89E-08	1.38E-08	8.77E-07
Road 4	4	1900-2000	1.89E-02	1.84E-07	1.25E-03	1.70E-02	6.32E-08	6.59E-08	1.41E-08	3.20E-07
Road 4	4	2000-2100	1.81E-02	1.73E-07	1.18E-03	1.63E-02	5.84E-08	6.06E-08	1.34E-08	2.95E-07
Road 4	4	2100-2200	1.81E-02	1.73E-07	1.18E-03	1.63E-02	5.84E-08	6.06E-08	1.34E-08	2.95E-07
Road 4	4	2200-2300	1.72E-02	1.66E-07	1.11E-03	1.53E-02	5.84E-08	6.06E-08	1.34E-08	2.95E-07
Road 4	4	2300-2400	1.68E-02	1.54E-07	9.77E-04	1.52E-02	1.07E-07	1.24E-07	1.56E-07	3.06E-08
Road 5	5	0000-0100	1.46E-02	1.30E-07	8.55E-07	1.28E-02	8.96E-07	7.48E-07	1.57E-07	1.92E-07
Road 5	5	0100-0200	1.53E-02	1.39E-07	8.91E-07	1.38E-02	9.18E-07	1.57E-07	1.97E-07	2.39E-07
Road 5	5	0200-0300	1.51E-02	1.36E-07	8.72E-07	1.35E-02	9.00E-07	1.54E-07	1.94E-07	2.34E-07
Road 5	5	0300-0400	1.71E-02	1.47E-07	9.74E-07	1.51E-02	9.66E-07	1.31E-07	1.62E-07	3.00E-07
Road 5	5	0400-0500	1.81E-02	1.58E-07	1.04E-07	1.60E-02	4.81E-08	1.63E-07	1.99E-07	3.39E-07
Road 5	5	0500-0600	1.71E-02	1.47E-07	9.74E-07	1.51E-02	9.66E-07	1.31E-07	1.62E-07	3.00E-07
Road 5	5	0600-0700	2.31E-02	2.45E-07	2.09E-06	2.06E-02	2.70E-07	1.84E-07	1.96E-07	1.69E-07
Road 5	5	0700-0800	2.86E-02	2.91E-07	2.50E-06	2.55E-02	5.49E-07	2.06E-07	4.42E-08	3.69E-08
Road 5	5	0800-0900	2.71E-02	2.80E-07	2.42E-06	2.42E-02	5.22E-07	1.94E-07	4.36E-08	3.58E-08
Road 5	5	0900-1000	3.06E-02	3.22E-07	2.72E-06	2.72E-02	5.49E-07	2.06E-07	4.42E-08	3.69E-08
Road 5	5	1000-1100	3.35E-02	3.58E-07	2.88E-06	2.94E-02	5.31E-07	1.92E-07	4.36E-08	3.58E-08
Road 5	5	1100-1200	3.26E-02	3.50E-07	2.81E-06	2.87E-02	5.36E-07	1.95E-07	4.38E-08	3.61E-08
Road 5	5	1200-1300	3.98E-02	4.19E-07	3.38E-06	3.38E-02	5.98E-07	2.17E-07	2.55E-08	2.03E-08
Road 5	5	1300-1400	3.61E-02	3.80E-07	3.09E-06	3.27E-02	5.98E-07	2.17E-07	2.55E-08	2.03E-08
Road 5	5	1400-1500	3.61E-02	3.80E-07	3.09E-06	3.27E-02	5.98E-07	2.17E-07	2.55E-08	2.03E-08
Road 5	5	1500-1600	3.61E-02	3.80E-07	3.09E-06	3.27E-02	5.98E-07	2.17E-07	2.55E-08	2.03E-08
Road 5	5	1600-1700	4.00E-02	4.23E-07	3.40E-06	3.57E-02	1.18E-08	9.85E-08	2.12E-07	7.00E-08
Road 5	5	1700-1800	2.99E-02	3.13E-07	2.42E-06	2.63E-02	1.04E-08	8.42E-08	1.93E-07	6.65E-08
Road 5	5	1800-1900	2.99E-02	3.13E-07	2.42E-06	2.63E-02	1.04E-08	8.42E-08	1.93E-07	6.65E-08
Road 5	5	1900-2000	2.99E-02	3.13E-07	2.42E-06	2.63E-02	1.04E-08	8.42E-08	1.93E-07	6.65E-08
Road 5	5	2000-2100	1.64E-02	1.46E-07	3.88E-05	1.45E-02	3.91E-07	3.27E-08	1.52E-08	4.09E-08
Road 5	5	2100-2200	1.64E-02	1.46E-07	3.88E-05	1.45E-02	3.91E-07	3.27E-08	1.52E-08	4.09E-08
Road 5	5	2200-2300	1.64E-02	1.46E-07	3.88E-05	1.45E-02	3.91E-07	3.27E-08	1.52E-08	4.09E-08
Road 5	5	2300-2400	1.64E-02	1.46E-07	3.88E-05	1.45E-02	3.91E-07	3.27E-08	1.52E-08	4.09E-08
Road 6	6	0000-0100	1.46E-02	1.30E-07	8.55E-07	1.28E-02	8.96E-07	7.48E-07	1.57E-07	1.92E-07
Road 6	6	0100-0200	1.53E-02	1.39E-07	8.91E-07	1.38E-02	9.18E-07	1.57E-07	1.97E-07	2.39E-07
Road 6	6	0200-0300	1.51E-02	1.36E-07	8.72E-07	1.35E-02	9.00E-07	1.54E-07	1.94E-07	2.34E-07
Road 6	6	0300-0400	1.71E-02	1.47E-07	9.74E-07	1.51E-02	9.66E-07	1.31E-07	1.62E-07	3.00E-07
Road 6	6	0400-0500	1.81E-02	1.58E-07	1.04E-07	1.60E-02	4.81E-08	1.63E-07	1.99E-07	3.39E-07
Road 6	6	0500-0600	1.64E-02	1.46E-07	3.88E-05	1.45E-02	3.91E-07	3.27E-08	1.52E-08	4.09E-08
Road 6	6	0600-0700	1.64E-02	1.46E-07	3.88E-05	1.45E-02	3.91E-07	3.27E-08	1.52E-08	4.09E-08
Road 6	6	0700-0800	1.64E-02	1.46E-07	3.88E-05	1.45E-02	3.91E-07	3.27E-08	1.52E-08	4.09E-08
Road 6	6	0800-0900	1.64E-02	1.46E-07	3.88E-05	1.45E-02	3.91E-07	3.27E-08	1.52E-08	4.09E-08
Road 6	6	0900-1000	1.64E-02	1.46E-07	3.88E-05	1.45E-02	3.91E-07	3.27E-08	1.52E-08	4.09E-08
Road 6	6	1000-1100	1.64E-02	1.46E-07	3.88E-05	1.45E-02	3.91E-07	3.27E-08	1.52E-08	4.09E-08
Road 6	6	1100-1200	1.64E-02	1.46E-07	3.88E-05	1.45E-02	3.91E-07	3.27E-08	1.52E-08	4.09E-08
Road 6	6	1200-1300	1.64E-02	1.46E-07	3.88E-05	1.45E-02	3.91E-07	3.27E-08	1.52E-08	4.09E-08
Road 6	6	1300-1400	1.64E-02	1.46E-07	3.88E-05	1.45E-02	3.91E-07	3.27E-08	1.52E-08	4.09E-08
Road 6	6	1400-1500	1.64E-02	1.46E-07	3.88E-05	1.45E-02	3.91E-07	3.27E-08	1.52E-08	4.09E-08
Road 6	6	1500-1600	1.64E-02	1.46E-07	3.88E-05	1.45E-02	3.91E-07	3.27E-08	1.52E-08	4.09E-08
Road 6	6	1600-1700	1.64E-02	1.46E-07	3.88E-05	1.45E-02	3.91E-07	3.27E-08	1.52E-08	4.09E-08
Road 6	6	1700-1800	1.64E-02	1.46E-07	3.88E-05	1.45E-02	3.91E-07	3.27E-08	1.52E-08	4.09E-08
Road 6	6	1800-1900	1.64E-02	1.46E-07	3.88E-05	1.45E-02	3.91E-07	3.27E-08	1.52E-08	4.09E-08
Road 6	6	1900-2000	1.64E-02	1.46E-07	3.88E-05	1.45E-02	3.91E-07	3.27E-08	1.52E-08	4.09E-08
Road 6	6	2000-2100	1.64E-02	1.46E-07	3.88E-05	1.45E-02	3.91E-07	3.27E-08	1.52E-08	4.09E-08
Road 6	6	2100-2200	1.64E-02	1.46E-07	3.88E-05	1.45E-02	3.91E-07	3.27E-08	1.52E-08	4.09E-08
Road 6	6	2200-2300	1.64E-02	1.46E-07	3.88E-05	1.45E-02	3.91E-07	3.27E-08	1.52E-08	4.09E-08
Road 6	6	2300-2400	1.64E-02	1.46E-07	3.88E-05	1.45E-02	3.91E-07	3.27E-08	1.52E-08	4.09E-08
Road 7	7	0000-0100	1.46E-02	1.30E-07	8.55E-07	1.28E-02	8.96E-07	7.48E-07	1.57E-07	1.92E-07
Road 7	7	0100-0200	1.53E-02	1.39E-07	8.91E-07	1.38E-02	9.18E-07	1.57E-07	1.97E-07	2.39E-07
Road 7	7	0200-0300	1.51E-02	1.36E-07	8.72E-07	1.35E-02	9.00E-07	1.54E-07	1.94E-07	2.34E-07
Road 7	7	0300-0400	1.71E-02	1.47E-07	9.74E-07	1.51E-02	9.66E-07	1.31E-07	1.62E-07	3.00E-07
Road 7	7	0400-0500	1.81E-02	1.58E-07	1.04E-07	1.60E-02	4.81E-08	1.63E-07	1.99E-07	3.39E-07
Road 7	7	0500-0600	1.64E-02	1.46E-07	3.88E-05	1.45E-02	3.91E-07	3.27E-08	1.52E-08	4.09E-08
Road 7	7	0600-0700	1.64E-02	1.46E-07	3.88E-05	1.45E-02	3.91E-07	3.27E-08	1.52E-08	4.09E-08
Road 7	7	0700-0800	1.64E-02	1.46E-07	3.88E-05	1.45E-02	3.91E-07	3.27E-08	1.52E-08	4.09E-08
Road 7	7	0800-0900	1.64E-02	1.46E-07	3.88E-05	1.45E-02	3.91E-07	3.27E-08	1.52E-08	4.09E-08
Road 7	7	0900-1000	1.64E-02	1.46E-07	3.88E-05	1.45E-02	3.91E-07	3.27E-08	1.52E-08	4.09E-08
Road 7	7	1000-1100	1.64E-02	1.46E-07	3.88E-05	1.45E-02	3.91E-07	3.27E-08	1.52E-08	4.09E-08
Road 7	7	1100-1200	1.64E-02	1.46E-07	3.88E-05	1.45E-02	3.91E-07	3.27E-08	1.52E-08	4.09E-08
Road 7	7	1200-1300	1.64E-02	1.46E-07	3.88E-05	1.45E-02	3.91E-07	3.27E-08	1.52E-08	4.09E-08
Road 7	7	1300-1400	1.64E-02	1.46E-07	3.88E-05	1.45E-02	3.91E-07	3.27E-08	1.52E-08	4.09E-08
Road 7	7	1400-1500	1.64E-02	1.46E-07	3.88E-05	1.45E-02	3.91E-07	3.27E-08	1.52E-08	4.09E-08
Road 7	7	1500-1600	1.64E-02	1.46E-07	3.88E-05	1.45E-02	3.91E-07	3.27E-08	1.52E-08	4.09E-08

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for AERMOD model (January)	Year 2033

Row Name	Road ID	Hour	NO ₂ Emission				NO ₂ Emission								
			Month/Hours				Month/Hours								
			g/km/h	g/m ² /h	g/m ² /h	g/m ² /h	g/km/h	g/m ² /h	g/m ² /h	g/m ² /h					
Road 44	44	0900-0900	1.386	0.212	3.911	1.258	3.952	0.208	1.062	3.026	1.866	1.938	2.668	1.66	
Road 44	44	0900-1000	1.586	0.216	3.737	2.008	3.682	0.240	1.098	3.026	1.948	1.036	2.38	1.44	
Road 44	44	1000-1100	1.786	0.241	3.987	2.116	3.682	0.240	1.098	3.026	1.948	1.036	2.38	1.44	
Road 44	44	1100-1200	1.636	0.302	3.107	1.916	2.782	0.171	1.018	2.246	1.938	1.036	1.958	1.02	
Road 44	44	1200-1300	1.776	0.494	2.998	1.062	4.370	0.270	1.208	3.198	1.976	1.146	2.818	1.07	
Road 44	44	1300-1400	1.976	0.494	2.998	1.062	4.370	0.270	1.208	3.198	1.976	1.146	2.818	1.07	
Road 44	44	1400-1500	2.002	0.516	2.647	1.802	4.886	0.300	1.312	3.536	1.196	1.156	3.108	1.95	
Road 44	44	1500-1600	1.916	0.516	2.647	1.802	4.726	0.292	1.312	3.616	1.236	1.146	3.108	1.95	
Road 44	44	1600-1700	1.916	0.516	2.647	1.802	4.726	0.292	1.312	3.616	1.236	1.146	3.108	1.95	
Road 44	44	1700-1800	2.396	0.102	5.676	5.676	2.146	7.146	0.441	6.098	5.396	0.316	4.401	6.886	2.88
Road 44	44	1800-1900	2.486	0.102	5.676	5.676	2.096	8.096	0.508	1.698	5.396	0.316	4.401	6.886	2.88
Road 44	44	1900-2000	2.486	0.102	5.676	5.676	2.096	8.096	0.508	1.698	5.396	0.316	4.401	6.886	2.88
Road 44	44	2000-2100	2.386	0.102	5.676	5.676	2.146	7.146	0.441	6.098	5.396	0.316	4.401	6.886	2.88
Road 44	44	2100-2200	1.886	0.202	3.446	9.106	1.786	1.108	1.008	2.646	1.826	1.008	2.276	1.44	
Road 44	44	2200-2300	1.886	0.202	3.446	9.106	1.786	1.108	1.008	2.646	1.826	1.008	2.276	1.44	
Road 44	44	2300-2400	1.886	0.202	3.446	9.106	1.786	1.108	1.008	2.646	1.826	1.008	2.276	1.44	
Road 44	44	2400-2500	0.786	1.608	0.916	8.666	1.426	0.772	0.146	1.886	1.166	0.826	1.616	0.95	
Road 44	44	2500-2600	0.926	0.898	8.496	0.976	5.996	0.876	1.346	0.816	1.066	0.906	1.766	0.93	
Road 44	44	2600-2700	0.926	0.898	8.496	0.976	5.996	0.876	1.346	0.816	1.066	0.906	1.766	0.93	
Road 44	44	2700-2800	1.066	0.736	6.426	0.936	3.326	0.608	1.126	0.916	0.526	0.396	1.416	0.67	
Road 44	44	2800-2900	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	2900-3000	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	3000-0100	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	0100-0200	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	0200-0300	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	0300-0400	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	0400-0500	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	0500-0600	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	0600-0700	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	0700-0800	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	0800-0900	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	0900-1000	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	1000-1100	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	1100-1200	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	1200-1300	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	1300-1400	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	1400-1500	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	1500-1600	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	1600-1700	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	1700-1800	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	1800-1900	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	1900-2000	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	2000-2100	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	2100-2200	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	2200-2300	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	2300-2400	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	2400-2500	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	2500-2600	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	2600-2700	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	2700-2800	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	2800-2900	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	2900-3000	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	3000-0100	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	0100-0200	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	0200-0300	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	0300-0400	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	0400-0500	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	0500-0600	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	0600-0700	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	0700-0800	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	0800-0900	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	0900-1000	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	1000-1100	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	1100-1200	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	1200-1300	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	1300-1400	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	1400-1500	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	1500-1600	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	1600-1700	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	1700-1800	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	1800-1900	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	1900-2000	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	2000-2100	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	2100-2200	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	2200-2300	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	2300-2400	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	2400-2500	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	2500-2600	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	2600-2700	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196	1.976	1.036	2.38	1.44	
Road 44	44	2700-2800	1.316	0.316	3.916	1.956	3.808	0.368	1.146	3.196					

Tsing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for	Year 2033
AERMOD model (January)	

Road Name	Road ID	Hour	No. Emission						No. Emission					
			Month/mile			Month/hour			Month/mile			Month/hour		
			g/km/h	g/m	tonne/hour	g/km/h	g/m	tonne/hour	g/km/h	g/m	tonne/hour	g/km/h	g/m	tonne/hour
Road 47	47	1600-1700	3.22E-02	8.26E-07	1.96E-06	2.87E-02	4.58E-07	1.74E-05	1.42E-01	2.81E-06	8.77E-09	1.25E-02	2.41E-06	7.53E-06
Road 47	47	1700-1800	2.31E-02	5.89E-06	1.86E-06	2.58E-02	4.68E-07	1.49E-05	1.22E-01	2.81E-06	8.77E-09	1.07E-02	2.46E-06	7.53E-06
Road 47	47	1800-1900	1.76E-02	4.39E-06	1.36E-06	1.96E-02	3.56E-07	1.10E-05	9.16E-02	2.09E-06	6.70E-09	8.16E-03	1.67E-06	5.26E-06
Road 47	47	1900-2000	1.41E-02	3.62E-07	8.95E-06	1.62E-02	2.56E-07	8.00E-06	9.10E-02	1.69E-06	5.76E-09	6.72E-03	1.56E-06	4.98E-06
Road 47	47	2000-2100	2.28E-02	2.01E-07	2.67E-06	1.13E-02	1.77E-07	5.55E-06	9.63E-02	1.52E-06	4.78E-09	8.09E-03	1.72E-06	5.39E-06
Road 47	47	2100-2200	1.68E-02	4.17E-06	6.73E-06	3.27E-02	4.47E-07	1.53E-05	1.16E-01	2.56E-06	8.00E-09	1.19E-02	2.46E-06	7.53E-06
Road 47	47	2200-2300	1.04E-02	1.59E-07	4.95E-06	9.14E-03	1.47E-07	4.37E-06	9.35E-02	1.43E-06	4.47E-09	7.76E-03	1.19E-06	3.71E-06
Road 47	47	2300-0000	1.06E-02	1.221E-07	3.95E-06	3.98E-03	1.07E-07	3.34E-06	1.02E-01	1.04E-06	3.25E-09	5.56E-03	8.63E-07	2.68E-06
Road 48	48	0000-0100	3.55E-02	8.14E-06	2.52E-06	3.78E-02	7.08E-07	2.42E-05	1.24E-01	2.41E-06	7.53E-09	1.39E-02	2.81E-06	7.53E-06
Road 48	48	0100-0200	1.02E-02	5.66E-06	8.54E-07	6.03E-03	5.02E-08	7.57E-07	1.11E-01	6.18E-07	9.34E-09	8.49E-02	9.27E-07	9.5E-07
Road 48	48	0200-0300	1.09E-02	4.42E-08	5.67E-07	6.65E-03	5.91E-08	5.91E-07	1.13E-01	6.38E-07	9.56E-09	9.59E-02	9.30E-07	9.5E-07
Road 48	48	0300-0400	1.37E-02	3.71E-07	1.19E-06	1.03E-02	1.25E-07	4.19E-06	1.16E-01	6.81E-07	1.04E-09	1.19E-02	2.46E-06	7.53E-06
Road 48	48	0400-0500	1.24E-02	4.34E-06	6.55E-07	1.09E-03	8.38E-08	5.78E-07	1.17E-01	4.11E-07	6.20E-09	8.91E-02	8.48E-07	5.2E-07
Road 48	48	0500-0600	1.30E-02	7.90E-06	1.19E-06	1.36E-03	7.03E-08	1.06E-06	1.18E-01	7.15E-07	1.06E-09	1.04E-02	2.41E-06	7.53E-06
Road 48	48	0600-0700	1.37E-02	1.12E-06	3.22E-06	1.22E-02	3.47E-07	5.61E-06	1.04E-01	3.18E-07	4.76E-09	9.21E-02	8.60E-07	2.38E-06
Road 48	48	0700-0800	1.47E-02	3.79E-07	5.65E-06	1.00E-02	3.41E-07	5.15E-06	1.18E-01	3.31E-07	4.76E-09	1.04E-02	2.74E-06	9.1E-06
Road 48	48	0800-0900	1.35E-02	4.08E-06	6.18E-06	1.22E-02	3.72E-07	5.61E-06	1.04E-01	3.18E-07	4.76E-09	9.21E-02	8.60E-07	2.38E-06
Road 48	48	0900-1000	1.42E-02	1.47E-06	4.13E-06	1.37E-02	3.56E-07	5.61E-06	1.04E-01	3.18E-07	4.76E-09	9.21E-02	8.60E-07	2.38E-06
Road 48	48	1000-1100	1.68E-02	3.62E-07	5.65E-06	1.52E-02	3.28E-07	4.94E-06	1.17E-01	2.52E-06	3.68E-09	1.03E-02	2.22E-06	3.9E-06
Road 48	48	1100-1200	1.61E-02	3.29E-07	4.96E-06	1.45E-02	2.95E-07	4.59E-06	1.18E-01	2.41E-06	3.64E-09	1.03E-02	2.10E-06	3.17E-06
Road 48	48	1200-1300	1.37E-02	3.71E-07	1.19E-06	1.03E-02	1.25E-07	4.19E-06	1.16E-01	6.81E-07	1.04E-09	1.19E-02	2.46E-06	7.53E-06
Road 48	48	1300-1400	3.75E-02	9.21E-07	7.86E-06	3.41E-02	4.73E-07	7.14E-06	1.18E-01	4.42E-06	6.67E-09	2.88E-02	4.00E-06	9.1E-06
Road 48	48	1400-1500	3.81E-02	5.86E-07	8.34E-06	3.84E-02	4.93E-07	7.43E-06	1.35E-01	4.65E-06	6.70E-09	3.19E-02	4.18E-06	8.31E-06
Road 48	48	1500-1600	3.75E-02	9.21E-07	7.86E-06	3.41E-02	4.73E-07	7.14E-06	1.18E-01	4.42E-06	6.67E-09	2.88E-02	4.00E-06	9.1E-06
Road 48	48	1600-1700	3.42E-02	5.61E-07	8.47E-06	3.36E-02	4.59E-07	7.58E-06	1.34E-01	4.57E-06	6.71E-09	3.00E-02	4.61E-06	9.0E-06
Road 48	48	1700-1800	3.26E-02	5.12E-07	7.72E-06	3.24E-02	4.93E-07	6.93E-06	3.57E-01	5.97E-06	8.84E-09	3.18E-02	4.69E-06	8.52E-06
Road 48	48	1800-1900	2.56E-02	3.75E-07	5.65E-06	2.56E-02	3.75E-07	5.65E-06	2.56E-01	3.75E-07	5.65E-06	2.56E-02	3.75E-07	5.65E-06
Road 48	48	1900-2000	3.03E-02	3.55E-07	5.35E-06	2.74E-02	3.00E-07	4.84E-06	4.25E-01	4.97E-06	7.52E-09	3.82E-02	4.47E-06	6.74E-06
Road 48	48	2000-2100	3.06E-02	2.84E-07	4.29E-06	2.75E-02	2.55E-07	3.89E-06	4.41E-01	4.09E-06	6.15E-09	3.94E-02	3.65E-06	5.5E-06
Road 48	48	2100-2200	3.06E-02	2.84E-07	4.29E-06	2.75E-02	2.55E-07	3.89E-06	4.41E-01	4.09E-06	6.15E-09	3.94E-02	3.65E-06	5.5E-06
Road 48	48	2200-2300	3.06E-02	2.84E-07	4.29E-06	2.75E-02	2.55E-07	3.89E-06	4.41E-01	4.09E-06	6.15E-09	3.94E-02	3.65E-06	5.5E-06
Road 48	48	2300-0000	3.10E-02	2.06E-07	4.00E-06	2.73E-02	3.89E-07	3.60E-06	3.44E-01	3.78E-06	5.21E-09	3.38E-02	3.94E-06	5.11E-06
Road 48	48	0000-0100	3.10E-02	2.06E-07	4.00E-06	2.73E-02	3.89E-07	3.60E-06	3.44E-01	3.78E-06	5.21E-09	3.38E-02	3.94E-06	5.11E-06
Road 48	48	0100-0200	1.36E-02	4.78E-06	7.21E-06	1.21E-02	9.58E-08	1.07E-06	7.0E-01	5.97E-07	1.51E-09	1.46E-02	1.15E-07	3.9E-06
Road 48	48	0200-0300	1.41E-02	3.67E-06	9.34E-06	1.25E-02	3.21E-08	8.09E-07	1.70E-01	4.34E-07	1.09E-09	1.46E-02	1.15E-07	3.9E-06
Road 48	48	0300-0400	1.41E-02	3.67E-06	9.34E-06	1.25E-02	3.21E-08	8.09E-07	1.70E-01	4.34E-07	1.09E-09	1.46E-02	1.15E-07	3.9E-06
Road 48	48	0400-0500	1.56E-02	3.55E-06	9.34E-06	1.41E-02	3.09E-08	7.90E-07	1.75E-01	3.83E-07	9.58E-09	1.45E-02	1.37E-07	3.26E-06
Road 48	48	0500-0600	1.76E-02	6.64E-06	1.68E-06	1.57E-02	5.92E-08	1.48E-06	1.82E-01	6.87E-07	1.78E-09	1.57E-02	3.93E-07	5.5E-06
Road 48	48	0600-0700	1.76E-02	6.64E-06	1.68E-06	1.57E-02	5.92E-08	1.48E-06	1.82E-01	6.87E-07	1.78E-09	1.57E-02	3.93E-07	5.5E-06
Road 48	48	0700-0800	1.76E-02	6.64E-06	1.68E-06	1.57E-02	5.92E-08	1.48E-06	1.82E-01	6.87E-07	1.78E-09	1.57E-02	3.93E-07	5.5E-06
Road 48	48	0800-0900	2.05E-02	5.05E-07	1.09E-06	2.42E-02	9.17E-07	9.88E-06	2.32E-01	3.76E-06	9.49E-09	2.07E-02	1.34E-06	4.4E-06
Road 48	48	0900-1000	2.05E-02	5.05E-07	1.09E-06	2.42E-02	9.17E-07	9.88E-06	2.32E-01	3.76E-06	9.49E-09	2.07E-02	1.34E-06	4.4E-06
Road 48	48	1000-1100	2.54E-02	1.27E-06	2.45E-06	2.97E-02	2.43E-07	1.53E-05	2.43E-01	4.84E-06	7.21E-09	2.54E-02	1.34E-06	4.4E-06
Road 48	48	1100-1200	2.84E-02	5.95E-06	8.96E-06	2.97E-02	2.41E-07	8.11E-06	2.24E-01	2.80E-06	7.99E-09	1.99E-02	4.48E-06	6.7E-06
Road 48	48	1200-1300	2.57E-02	3.06E-07	7.71E-06	3.26E-02	2.78E-07	6.90E-06	2.20E-01	2.61E-06	6.69E-09	1.59E-02	2.29E-07	5.77E-06
Road 48	48	1300-1400	3.42E-02	9.21E-07	7.86E-06	3.42E-02	9.21E-07	7.86E-06	3.42E-01	2.57E-06	2.24E-09	3.42E-02	9.21E-07	7.86E-06
Road 48	48	1400-1500	3.42E-02	9.21E-07	7.86E-06	3.42E-02	9.21E-07	7.86E-06	3.42E-01	2.57E-06	2.24E-09	3.42E-02	9.21E-07	7.86E-06
Road 48	48	1500-1600	3.61E-02	3.67E-07	9.84E-06	3.57E-02	3.34E-07	8.66E-06	2.60E-01	2.75E-06	6.94E-09	2.34E-02	4.34E-06	6.14E-06
Road 48	48	1600-1700	3.61E-02	3.67E-07	9.84E-06	3.57E-02	3.34E-07	8.66E-06	2.60E-01	2.75E-06	6.94E-09	2.34E-02	4.34E-06	6.14E-06
Road 48	48	1700-1800	3.61E-02	3.67E-07	9.84E-06	3.57E-02	3.34E-07	8.66E-06	2.60E-01	2.75E-06	6.94E-09	2.34E-02	4.34E-06	6.14E-06
Road 48	48	1800-1900	2.84E-02	5.95E-06	8.96E-06	2.97E-02	2.41E-07	8.11E-06	2.24E-01	2.80E-06	7.99E-09	1.99E-02	4.48E-06	6.7E-06
Road 48	48	1900-2000	2.84E-02	5.95E-06	8.96E-06	2.97E-02	2.41E-07	8.11E-06	2.24E-01	2.80E-06	7.99E-09	1.99E-02	4.48E-06	6.7E-06
Road 48	48	2000-2100	2.92E-02	1.87E-07	4.71E-06	1.70E-02	1.66E-07	4.15E-06	2.29E-01	2.22E-06	5.59E-09	2.06E-02	1.94E-06	4.89E-06
Road 48	48	2100-2200	1.62E-02	5.95E-07	3.93E-06	1.45E-02	1.95E-07	3.52E-06	2.07E-01	1.98E-06	5.50E-09	1.81E-02	1.74E-06	3.9E-06
Road 48	48	2200-2300	1.62E-02	5.95E-07	3.93E-06	1.45E-02	1.95E-07	3.52E-06	2.07E-01	1.98E-06	5.50E-09	1.81E-02	1.74E-06	3.9E-06
Road 48	48	2300-0000	1.62E-02	5.95E-07	3.93E-06	1.45E-02	1.95E-07	3.52E-06	2.07E-01	1.98E-06	5.50E-09	1.81E-02	1.74E-06	3.9E-06
Road 50	50	0000-0100	4.96E-02	2.33E-06	3.33E-04	4.04E-02	2.07E-06	2.96E-07	1.80E-01	9.09E-06	3.39E-09	1.69E-02	7.62E-06	1.18E-05
Road 50	50	0100-0200	5.90E-02	2.59E-06	3.70E-04	4.76E-02	2.38E-06	3.47E-07	1.98E-01	1.09E-05	3.94E-09	2.02E-02	8.60E-06	1.35E-05
Road 50	50	0200-0300	5.90E-02	2.59E-06	3.70E-04	4.76E-02	2.38E-06	3.47E-07	1.98E-01	1.09E-05	3.94E-09	2.02E-02	8.60E-06	1.35E-05
Road 50	50	0300-0400	6.11E-02	1.38E-04	1.94E-02	5.48E-02	1.22E-08	1.74E-07	2.15E-01	8.80E-07	8.68E-07	1.91E-02	4.59E-06	8.07E-06
Road 50	50	0400-0500	5.90E-02	2.59E-06	3.70E-04	4.76E-02	2.38E-06	3.47E-07	1.98E-01	1.09E-05	3.94E-09	2.02E-02	8.60E-06	1.35E-05
Road 50	50	0500-0600	5.80E-02	2.46E-04	3.48E-02	5.47E-02	1.20E-08	3.14E-07	2.17E-01	9.11E-06	3.39E-09	1.92E-02	4.13E-06	1.16E-05
Road 50	50	0600-0700	5.50E-02	4.91E-08	7.06E-07	4.97E-02	4.83E-08	6.33E-07	2.43E-01	1.91E-07	2.73E-09	1.01E-02	1.70E-07	2.48E-06
Road 50	50	0700-0800	5.50E-02	4.91E-08	7.06E-07	4.97E-02	4.83E-08	6.33E-07	2.43E-01	1.91E-07	2.73E-09	1.01E-02	1.70E-07	2.48E-06
Road 50	50	0800-0900	5.50E											

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for	Year 2033
AERMOD model (January)	

Road Name	Road ID	Hour	NO ₂ Emission												NO _x Emission												
			Monthly/yrpm						Monthly/gvsm						Monthly/yrpm						Monthly/gvsm						
			g/km/veh	gsm ²	gsm ³	gsm ⁴	gsm ⁵	gsm ⁶	g/km/veh	gsm ²	gsm ³	gsm ⁴	gsm ⁵	gsm ⁶	g/km/veh	gsm ²	gsm ³	gsm ⁴	gsm ⁵	gsm ⁶							
Road S1	S1	0000-1000	0.1263	7.42E-08	3.38E-08	7.62E-03	6.44E-08	1.20E-09	1.10E-08	8.92E-07	1.66E-09	1.91E-07	7.41E-07	1.07E-07	0.000-1000	0.1263	7.42E-08	3.38E-08	7.62E-03	6.44E-08	1.20E-09	1.10E-08	8.92E-07	1.66E-09	1.91E-07	7.41E-07	1.07E-07
Road S1	S1	1000-1600	0.6762	4.33E-08	1.58E-08	6.69E-07	4.63E-08	5.99E-08	5.30E-07	1.11E-08	8.92E-07	1.09E-08	9.44E-08	4.98E-08	0.000-1000	0.6762	4.33E-08	1.58E-08	6.69E-07	4.63E-08	5.99E-08	5.30E-07	1.11E-08	8.92E-07	1.09E-08	9.44E-08	4.98E-08
Road S1	S1	1600-2000	1.0467	4.04E-07	1.46E-07	7.48E-07	1.04E-07	1.33E-07	9.39E-07	1.33E-08	9.39E-07	1.33E-08	9.39E-07	1.33E-08	0.000-1000	1.0467	4.04E-07	1.46E-07	7.48E-07	1.04E-07	1.33E-07	9.39E-07	1.33E-08	9.39E-07	1.33E-08	9.39E-07	1.33E-08
Road S1	S1	0300-0400	1.1262	3.39E-08	1.12E-08	3.39E-08	1.12E-08	3.39E-08	2.98E-05	5.49E-07	1.15E-08	3.44E-07	6.51E-07	1.92E-07	0.000-1000	1.1262	3.39E-08	1.12E-08	3.39E-08	1.12E-08	3.39E-08	2.98E-05	5.49E-07	1.15E-08	3.44E-07	6.51E-07	1.92E-07
Road S1	S1	0400-0800	1.1862	3.39E-08	1.12E-08	3.39E-08	1.12E-08	3.47E-08	6.47E-07	1.10E-08	3.87E-07	7.22E-08	8.95E-07	3.27E-07	0.000-1000	1.1862	3.39E-08	1.12E-08	3.39E-08	1.12E-08	3.47E-08	6.47E-07	1.10E-08	3.87E-07	7.22E-08	8.95E-07	3.27E-07
Road S1	S1	0800-1200	2.4692	3.39E-08	1.12E-08	3.39E-08	1.12E-08	3.39E-08	2.98E-05	5.49E-07	1.15E-08	3.44E-07	6.51E-07	1.92E-07	0.000-1000	2.4692	3.39E-08	1.12E-08	3.39E-08	1.12E-08	3.39E-08	2.98E-05	5.49E-07	1.15E-08	3.44E-07	6.51E-07	1.92E-07
Road S1	S1	0900-1700	1.3162	1.62E-07	3.10E-07	1.17E-07	1.44E-07	2.68E-06	1.19E-08	1.46E-06	2.78E-05	1.01E-08	1.25E-06	1.07E-06	0.000-1000	1.3162	1.62E-07	3.10E-07	1.17E-07	1.44E-07	2.68E-06	1.19E-08	1.46E-06	2.78E-05	1.01E-08	1.25E-06	1.07E-06
Road S1	S1	0700-0800	3.9652	3.39E-07	5.31E-06	1.24E-02	3.08E-07	5.74E-06	1.10E-08	2.92E-06	5.44E-05	1.03E-08	1.25E-06	1.07E-06	0.000-1000	3.9652	3.39E-07	5.31E-06	1.24E-02	3.08E-07	5.74E-06	1.10E-08	2.92E-06	5.44E-05	1.03E-08	1.25E-06	1.07E-06
Road S1	S1	1100-1200	3.9652	3.39E-07	5.31E-06	1.24E-02	3.08E-07	5.74E-06	1.10E-08	2.92E-06	5.44E-05	1.03E-08	1.25E-06	1.07E-06	0.000-1000	3.9652	3.39E-07	5.31E-06	1.24E-02	3.08E-07	5.74E-06	1.10E-08	2.92E-06	5.44E-05	1.03E-08	1.25E-06	1.07E-06
Road S1	S1	0900-1300	4.4362	3.39E-07	5.31E-06	1.24E-02	3.08E-07	5.74E-06	1.10E-08	2.92E-06	5.44E-05	1.03E-08	1.25E-06	1.07E-06	0.000-1000	4.4362	3.39E-07	5.31E-06	1.24E-02	3.08E-07	5.74E-06	1.10E-08	2.92E-06	5.44E-05	1.03E-08	1.25E-06	1.07E-06
Road S1	S1	1300-1400	3.8662	4.84E-08	8.02E-08	4.94E-08	4.38E-07	8.17E-06	3.37E-07	4.22E-07	7.87E-04	1.94E-08	3.04E-07	3.81E-06	0.000-1000	3.8662	4.84E-08	8.02E-08	4.94E-08	4.38E-07	8.17E-06	3.37E-07	4.22E-07	7.87E-04	1.94E-08	3.04E-07	3.81E-06
Road S1	S1	1200-1300	3.7662	5.01E-07	5.01E-07	3.39E-08	3.42E-05	4.55E-07	8.48E-06	3.21E-02	4.22E-06	1.94E-05	3.04E-07	3.81E-06	0.000-1000	3.7662	5.01E-07	5.01E-07	3.39E-08	3.42E-05	4.55E-07	8.48E-06	3.21E-02	4.22E-06	1.94E-05	3.04E-07	3.81E-06
Road S1	S1	1100-1200	3.4562	3.83E-02	3.83E-02	3.39E-08	3.42E-05	3.78E-06	3.50E-05	3.23E-02	2.25E-02	1.03E-05	1.03E-05	1.03E-05	0.000-1000	3.4562	3.83E-02	3.83E-02	3.39E-08	3.42E-05	3.78E-06	3.50E-05	3.23E-02	2.25E-02	1.03E-05	1.03E-05	1.03E-05
Road S1	S1	1500-1600	3.58E-02	5.04E-06	5.04E-06	3.32E-04	4.54E-07	8.66E-05	3.20E-03	4.51E-04	8.41E-05	2.87E-04	4.04E-05	7.41E-05	0.000-1000	3.58E-02	5.04E-06	5.04E-06	3.32E-04	4.54E-07	8.66E-05	3.20E-03	4.51E-04	8.41E-05	2.87E-04	4.04E-05	7.41E-05
Road S1	S1	1600-1700	3.76E-02	5.39E-06	5.39E-06	3.27E-04	4.83E-07	9.00E-05	3.48E-04	4.69E-06	9.26E-05	3.11E-04	4.45E-05	8.49E-05	0.000-1000	3.76E-02	5.39E-06	5.39E-06	3.27E-04	4.83E-07	9.00E-05	3.48E-04	4.69E-06	9.26E-05	3.11E-04	4.45E-05	8.49E-05
Road S1	S1	1700-1800	3.76E-02	5.39E-06	5.39E-06	3.27E-04	4.83E-07	9.00E-05	3.48E-04	4.69E-06	9.26E-05	3.11E-04	4.45E-05	8.49E-05	0.000-1000	3.76E-02	5.39E-06	5.39E-06	3.27E-04	4.83E-07	9.00E-05	3.48E-04	4.69E-06	9.26E-05	3.11E-04	4.45E-05	8.49E-05
Road S1	S1	1800-1900	3.00E-02	4.27E-07	7.95E-06	6.28E-06	3.81E-07	7.10E-06	3.86E-05	5.50E-06	1.02E-04	4.84E-06	4.89E-06	4.89E-06	0.000-1000	3.00E-02	4.27E-07	7.95E-06	6.28E-06	3.81E-07	7.10E-06	3.86E-05	5.50E-06	1.02E-04	4.84E-06	4.89E-06	4.89E-06
Road S1	S1	1900-2000	3.00E-02	4.27E-07	7.95E-06	6.28E-06	3.81E-07	7.10E-06	3.86E-05	5.50E-06	1.02E-04	4.84E-06	4.89E-06	4.89E-06	0.000-1000	3.00E-02	4.27E-07	7.95E-06	6.28E-06	3.81E-07	7.10E-06	3.86E-05	5.50E-06	1.02E-04	4.84E-06	4.89E-06	4.89E-06
Road S1	S1	2000-2100	3.00E-02	4.27E-07	7.95E-06	6.28E-06	3.81E-07	7.10E-06	3.86E-05	5.50E-06	1.02E-04	4.84E-06	4.89E-06	4.89E-06	0.000-1000	3.00E-02	4.27E-07	7.95E-06	6.28E-06	3.81E-07	7.10E-06	3.86E-05	5.50E-06	1.02E-04	4.84E-06	4.89E-06	4.89E-06
Road S1	S1	2100-2200	2.89E-02	4.64E-07	1.64E-06	2.61E-06	6.11E-06	2.25E-06	4.10E-06	4.06E-06	3.44E-06	6.51E-05	1.65E-05	3.14E-05	0.000-1000	2.89E-02	4.64E-07	1.64E-06	2.61E-06	6.11E-06	2.25E-06	4.10E-06	4.06E-06	3.44E-06	6.51E-05	1.65E-05	3.14E-05
Road S1	S1	2200-2300	2.07E-02	2.55E-07	4.68E-06	2.76E-06	2.30E-07	4.28E-06	4.39E-06	3.64E-06	8.95E-05	6.93E-05	6.93E-05	6.93E-05	0.000-1000	2.07E-02	2.55E-07	4.68E-06	2.76E-06	2.30E-07	4.28E-06	4.39E-06	3.64E-06	8.95E-05	6.93E-05	6.93E-05	6.93E-05
Road S1	S1	2300-2400	1.86E-02	1.86E-06	1.86E-06	1.86E-06	1.86E-06	1.86E-06	1.86E-06	1.86E-06	1.86E-06	1.86E-06	1.86E-06	1.86E-06	0.000-1000	1.86E-02	1.86E-06	1.86E-06	1.86E-06	1.86E-06	1.86E-06	1.86E-06	1.86E-06	1.86E-06	1.86E-06	1.86E-06	1.86E-06
Road S2	S2	0000-1000	0.5962	1.51E-08	1.80E-07	8.80E-07	6.31E-08	1.61E-07	2.64E-07	1.33E-07	7.96E-07	3.67E-07	1.19E-06	1.19E-06	0.000-1000	0.5962	1.51E-08	1.80E-07	8.80E-07	6.31E-08	1.61E-07	2.64E-07	1.33E-07	7.96E-07	3.67E-07	1.19E-06	1.19E-06
Road S2	S2	1000-1600	7.03E-02	2.51E-08	2.51E-08	6.39E-07	2.27E-08	1.46E-07	2.68E-06	9.44E-08	4.70E-07	2.40E-07	8.95E-07	4.05E-07	0.000-1000	7.03E-02	2.51E-08	2.51E-08	6.39E-07	2.27E-08	1.46E-07	2.68E-06	9.44E-08	4.70E-07	2.40E-07	8.95E-07	4.05E-07
Road S2	S2	1600-2000	8.61E-02	1.63E-08	1.63E-08	8.87E-07	3.17E-07	1.63E-07	2.78E-06	1.03E-07	5.44E-07	2.40E-07	8.95E-07	4.05E-07	0.000-1000	8.61E-02	1.63E-08	1.63E-08	8.87E-07	3.17E-07	1.63E-07	2.78E-06	1.03E-07	5.44E-07	2.40E-07	8.95E-07	4.05E-07
Road S2	S2	0300-0400	6.91E-02	1.63E-08	1.63E-08	8.87E-07	3.17E-07	1.63E-07	2.78E-06	1.03E-07	5.44E-07	2.40E-07	8.95E-07	4.05E-07	0.000-1000	6.91E-02	1.63E-08	1.63E-08	8.87E-07	3.17E-07	1.63E-07	2.78E-06	1.03E-07	5.44E-07	2.40E-07	8.95E-07	4.05E-07
Road S2	S2	0400-0800	9.29E-02	1.63E-08	1.63E-08	1.01E-07	6.21E-02	1.17E-05	9.69E-08	2.62E-02	1.42E-08	3.80E-07	6.54E-07	3.66E-06	0.000-1000	9.29E-02	1.63E-08	1.63E-08	1.01E-07	6.21E-02	1.17E-05	9.69E-08	2.62E-02	1.42E-08	3.80E-07	6.54E-07	3.66E-06
Road S2	S2	0800-1200	7.20E-02	1.63E-08	1.63E-08	1.01E-07	6.21E-02	1.17E-05	9.69E-08	2.62E-02	1.42E-08	3.80E-07	6.54E-07	3.66E-06	0.000-1000	7.20E-02	1.63E-08	1.63E-08	1.01E-07	6.21E-02	1.17E-05	9.69E-08	2.62E-02	1.42E-08	3.80E-07	6.54E-07	3.66E-06
Road S2	S2	1200-1300	7.00E-02	3.00E-07	8.77E-08	4.49E-08	6.16E-08	8.00E-06	4.50E-08	1.30E-07	2.74E-07	3.08E-06	7.50E-07	3.00E-07	0.000-1000	7.00E-02	3.00E-07	8.77E-08	4.49E-08	6.16E-08	8.00E-06	4.50E-08	1.30E-07	2.74E-07	3.08E-06	7.50E-07	3.00E-07
Road S2	S2	1300-1400	7.59E-02	2.00E-07	1.03E-06	1.16E-06	1.18E-07	1.84E-07	9.43E-07	2.90E-07	3.48E-07	3.89E-06	6.87E-07	3.41E-07	0.000-1000	7.59E-02	2.00E-07	1.03E-06	1.16E-06	1.18E-07	1.84E-07	9.43E-07	2.90E-07	3.48E-07	3.89E-06	6.87E-07	3.41E-07
Road S2	S2	1400-1500	7.59E-02	2.00E-07	1.03E-06	1.16E-06	1.18E-07	1.84E-07	9.43E-07	2.90E-07	3.48E-07	3.89E-06	6.87E-07	3.41E-07	0.000-1000	7.59E-02	2.00E-07	1.03E-06	1.16E-06	1.18E-07	1.84E-07	9.43E-07	2.90E-07	3.48E-07	3.89E-06	6.87E-07	3.41E-07
Road S2	S2	1500-1600	7.59E-02	2.00E-07	1.03E-06	1.16E-06	1.18E-07	1.84E-07	9.43E-07	2.90E-07	3.48E-07	3.89E-06	6.87E-07	3.41E-07	0.000-1000	7.59E-02	2.00E-07	1.03E-06	1.16E-06	1.18E-07	1.84E-07	9.43E-07	2.90E-07	3.48E-07	3.89E-06	6.87E-07	3.41E-07
Road S2	S2	1600-1700	8.79E-02	3.10E-07	1.59E-07	1.17E-07	2.82E-07	1.44E-06	3.13E-07	1.22E-06	3.78E-07	2.89E-06	1.12E-05	5.07E-06	0.000-1000	8.79E-02	3.10E-07	1.59E-07	1.17E-07	2.82E-07	1.44E-06	3.13E-07	1.22E-06	3.78E-07	2.89E-06	1.12E-05	5.07E-06
Road S2	S2	1700-1800	8.79E-02	3.10E-07	1.59E-07	1.17E-07	2.82E-07	1.44E-06	3.13E-07	1.22E-06	3.78E-07	2.89E-06	1.12E-05	5.07E-06	0.000-1000	8.79E-02	3.10E-07	1.59E-07									

Tsing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for	Year 2033
AERMOD model (January)	

Road Name	Road ID	No.Emission						No.Emission						
		MonthlyHourly			MonthlyHourly			MonthlyHourly			MonthlyHourly			
		g/m³/h	g/m³	tonne/hour	g/m³/h	g/m³	tonne/hour	g/m³/h	g/m³	tonne/hour	g/m³/h	g/m³	tonne/hour	
Road S4	S4	0800-0900	1.13E+01	4.22E+07	9.63E+06	1.03E+01	3.87E+07	8.83E+06	4.51E+01	1.69E+06	3.95E+05	4.68E+01	1.53E+06	3.46E+05
Road S4	S4	0900-1000	2.26E+01	4.63E+07	1.05E+07	1.17E+01	4.22E+07	9.94E+06	5.13E+01	1.89E+06	4.22E+05	4.68E+01	1.67E+06	3.81E+05
Road S4	S4	1000-1100	1.40E+01	4.41E+07	1.05E+06	1.26E+01	3.98E+07	9.07E+05	5.30E+01	1.70E+06	3.87E+05	4.61E+01	1.51E+06	3.45E+05
Road S4	S4	1100-1200	1.74E+01	3.76E+07	8.57E+05	1.58E+01	3.34E+07	7.77E+05	6.28E+01	1.34E+06	3.07E+05	5.62E+01	1.27E+06	2.77E+05
Road S4	S4	1200-1300	1.65E+01	3.96E+07	9.07E+05	1.39E+01	3.59E+07	8.15E+05	5.44E+01	1.39E+06	3.07E+05	5.62E+01	1.27E+06	2.77E+05
Road S4	S4	1400-1500	1.75E+01	1.13E+07	4.42E+06	1.56E+01	3.73E+07	8.51E+06	6.02E+01	1.50E+06	4.22E+05	5.55E+01	1.35E+06	3.08E+05
Road S4	S4	1500-1600	1.88E+01	3.90E+07	8.90E+06	1.42E+01	3.51E+07	8.01E+06	6.27E+01	1.55E+06	3.53E+05	5.55E+01	1.39E+06	3.10E+05
Road S4	S4	1600-1700	1.46E+01	3.96E+07	9.07E+05	1.39E+01	3.59E+07	8.15E+05	5.44E+01	1.39E+06	3.07E+05	5.62E+01	1.27E+06	2.77E+05
Road S4	S4	1700-1800	1.37E+01	1.14E+07	4.16E+06	1.23E+01	2.83E+07	6.64E+06	5.68E+01	1.30E+06	2.97E+05	5.08E+01	1.18E+06	2.60E+05
Road S4	S4	1800-1900	1.33E+01	2.12E+07	4.84E+06	1.01E+01	1.90E+07	4.33E+06	4.68E+01	1.08E+07	2.07E+05	4.30E+01	8.04E+07	1.86E+06
Road S4	S4	1900-2000	1.05E+01	1.40E+07	3.58E+06	0.93E+01	1.50E+07	3.34E+06	4.08E+01	8.68E+06	1.66E+05	3.81E+01	7.85E+06	1.75E+06
Road S4	S4	2000-2100	9.65E+00	1.65E+07	2.37E+06	8.67E+00	9.93E+06	2.13E+06	4.42E+01	4.60E+07	1.05E+05	3.78E+01	4.08E+07	9.23E+06
Road S4	S4	2100-2200	8.61E+00	1.04E+07	2.38E+06	8.69E+00	8.93E+06	2.15E+06	4.22E+01	4.58E+07	1.05E+05	3.78E+01	4.08E+07	9.23E+06
Road S4	S4	2200-2300	1.05E+01	1.01E+07	2.37E+06	0.93E+01	1.50E+07	3.34E+06	4.08E+01	8.68E+06	1.66E+05	3.81E+01	7.85E+06	1.75E+06
Road S4	S4	2300-0000	1.05E+01	9.66E+06	1.81E+06	9.22E+00	7.15E+06	1.63E+06	4.14E+01	3.22E+07	7.34E+06	3.88E+01	2.85E+07	6.59E+06
Road I01	I01	0000-0100	9.07E+01	1.93E+08	3.17E+07	7.88E+01	6.95E+07	2.75E+07	7.29E+02	4.64E+07	2.55E+07	5.87E+01	5.13E+07	2.00E+08
Road I01	I01	0100-0200	1.88E+01	7.70E+07	1.26E+07	1.39E+01	6.18E+07	2.42E+07	1.02E+02	6.27E+06	3.42E+06	7.85E+01	6.95E+07	2.75E+07
Road I01	I01	0200-0300	1.42E+01	5.54E+06	8.92E+06	9.52E+00	4.06E+06	1.59E+06	7.75E+02	2.82E+06	1.30E+06	6.40E+01	2.71E+07	1.07E+08
Road I01	I01	0300-0400	1.07E+00	3.89E+06	3.55E+06	1.03E+00	3.44E+06	1.36E+06	8.08E+02	6.88E+07	1.06E+05	6.50E+01	2.21E+07	8.76E+07
Road I01	I01	0400-0500	1.03E+01	4.31E+06	4.58E+06	2.83E+00	3.67E+06	1.38E+06	7.55E+02	2.82E+06	1.30E+06	6.40E+01	2.71E+07	1.07E+08
Road I01	I01	0500-0600	1.32E+01	8.51E+06	7.37E+06	1.18E+01	7.58E+06	3.96E+06	8.34E+02	3.96E+07	7.12E+05	9.59E+01	4.69E+07	1.78E+08
Road I01	I01	0600-0700	1.41E+01	9.95E+07	1.72E+07	1.26E+01	7.74E+07	6.88E+06	8.62E+02	1.19E+07	6.17E+05	7.18E+01	9.93E+07	1.87E+08
Road I01	I01	0700-0800	1.51E+01	1.17E+07	1.41E+07	1.39E+01	8.41E+06	4.14E+06	9.41E+02	1.41E+07	6.17E+05	7.18E+01	9.93E+07	1.87E+08
Road I01	I01	0800-0900	1.41E+01	4.62E+07	1.83E+05	1.29E+01	4.21E+07	1.75E+05	7.67E+01	2.51E+06	9.33E+05	6.86E+01	2.13E+06	8.66E+05
Road I01	I01	0900-1000	1.64E+01	4.52E+07	1.78E+05	1.50E+01	4.38E+07	1.68E+06	8.62E+02	3.96E+06	9.33E+05	7.52E+01	2.07E+06	8.66E+05
Road I01	I01	1000-1100	1.70E+01	4.73E+07	1.83E+05	1.56E+01	4.59E+07	1.72E+06	9.02E+02	4.02E+06	9.33E+05	7.52E+01	2.07E+06	8.66E+05
Road I01	I01	1100-1200	1.75E+01	4.96E+07	1.62E+05	1.62E+01	3.70E+07	1.47E+06	9.06E+02	4.07E+06	8.72E+05	7.95E+01	1.81E+06	7.18E+05
Road I01	I01	1200-1300	2.49E+01	2.45E+07	4.63E+05	2.21E+01	5.89E+07	2.22E+06	1.04E+03	6.54E+06	1.44E+06	1.24E+02	2.35E+06	9.69E+05
Road I01	I01	1300-1400	2.49E+01	2.45E+07	4.63E+05	2.21E+01	5.89E+07	2.22E+06	1.04E+03	6.54E+06	1.44E+06	1.24E+02	2.35E+06	9.69E+05
Road I01	I01	1400-1500	2.49E+01	2.45E+07	4.63E+05	2.21E+01	5.89E+07	2.22E+06	1.04E+03	6.54E+06	1.44E+06	1.24E+02	2.35E+06	9.69E+05
Road I01	I01	1500-1600	2.49E+01	2.45E+07	4.63E+05	2.21E+01	5.89E+07	2.22E+06	1.04E+03	6.54E+06	1.44E+06	1.24E+02	2.35E+06	9.69E+05
Road I01	I01	1600-1700	2.49E+01	2.45E+07	4.63E+05	2.21E+01	5.89E+07	2.22E+06	1.04E+03	6.54E+06	1.44E+06	1.24E+02	2.35E+06	9.69E+05
Road I01	I01	1700-1800	2.49E+01	2.45E+07	4.63E+05	2.21E+01	5.89E+07	2.22E+06	1.04E+03	6.54E+06	1.44E+06	1.24E+02	2.35E+06	9.69E+05
Road I01	I01	1800-1900	2.49E+01	2.45E+07	4.63E+05	2.21E+01	5.89E+07	2.22E+06	1.04E+03	6.54E+06	1.44E+06	1.24E+02	2.35E+06	9.69E+05
Road I01	I01	1900-2000	2.49E+01	2.45E+07	4.63E+05	2.21E+01	5.89E+07	2.22E+06	1.04E+03	6.54E+06	1.44E+06	1.24E+02	2.35E+06	9.69E+05
Road I01	I01	2000-2100	2.49E+01	2.45E+07	4.63E+05	2.21E+01	5.89E+07	2.22E+06	1.04E+03	6.54E+06	1.44E+06	1.24E+02	2.35E+06	9.69E+05
Road I01	I01	2100-2200	2.49E+01	2.45E+07	4.63E+05	2.21E+01	5.89E+07	2.22E+06	1.04E+03	6.54E+06	1.44E+06	1.24E+02	2.35E+06	9.69E+05
Road I01	I01	2200-2300	2.49E+01	2.45E+07	4.63E+05	2.21E+01	5.89E+07	2.22E+06	1.04E+03	6.54E+06	1.44E+06	1.24E+02	2.35E+06	9.69E+05
Road I01	I01	2300-0000	2.49E+01	2.45E+07	4.63E+05	2.21E+01	5.89E+07	2.22E+06	1.04E+03	6.54E+06	1.44E+06	1.24E+02	2.35E+06	9.69E+05
Road I01	I01	0000-0100	1.30E+01	8.47E+06	3.52E+06	1.14E+01	8.33E+06	3.09E+06	6.02E+02	5.99E+07	2.22E+05	6.71E+01	4.96E+07	1.84E+08
Road I01	I01	0100-0200	1.30E+01	8.47E+06	3.52E+06	1.14E+01	8.33E+06	3.09E+06	6.02E+02	5.99E+07	2.22E+05	6.71E+01	4.96E+07	1.84E+08
Road I01	I01	0200-0300	1.30E+01	8.47E+06	3.52E+06	1.14E+01	8.33E+06	3.09E+06	6.02E+02	5.99E+07	2.22E+05	6.71E+01	4.96E+07	1.84E+08
Road I01	I01	0300-0400	1.30E+01	8.47E+06	3.52E+06	1.14E+01	8.33E+06	3.09E+06	6.02E+02	5.99E+07	2.22E+05	6.71E+01	4.96E+07	1.84E+08
Road I01	I01	0400-0500	1.30E+01	8.47E+06	3.52E+06	1.14E+01	8.33E+06	3.09E+06	6.02E+02	5.99E+07	2.22E+05	6.71E+01	4.96E+07	1.84E+08
Road I01	I01	0500-0600	1.30E+01	8.47E+06	3.52E+06	1.14E+01	8.33E+06	3.09E+06	6.02E+02	5.99E+07	2.22E+05	6.71E+01	4.96E+07	1.84E+08
Road I01	I01	0600-0700	1.30E+01	8.47E+06	3.52E+06	1.14E+01	8.33E+06	3.09E+06	6.02E+02	5.99E+07	2.22E+05	6.71E+01	4.96E+07	1.84E+08
Road I01	I01	0700-0800	1.30E+01	8.47E+06	3.52E+06	1.14E+01	8.33E+06	3.09E+06	6.02E+02	5.99E+07	2.22E+05	6.71E+01	4.96E+07	1.84E+08
Road I01	I01	0800-0900	1.30E+01	8.47E+06	3.52E+06	1.14E+01	8.33E+06	3.09E+06	6.02E+02	5.99E+07	2.22E+05	6.71E+01	4.96E+07	1.84E+08
Road I01	I01	0900-1000	1.30E+01	8.47E+06	3.52E+06	1.14E+01	8.33E+06	3.09E+06	6.02E+02	5.99E+07	2.22E+05	6.71E+01	4.96E+07	1.84E+08
Road I01	I01	1000-1100	1.30E+01	8.47E+06	3.52E+06	1.14E+01	8.33E+06	3.09E+06	6.02E+02	5.99E+07	2.22E+05	6.71E+01	4.96E+07	1.84E+08
Road I01	I01	1100-1200	1.30E+01	8.47E+06	3.52E+06	1.14E+01	8.33E+06	3.09E+06	6.02E+02	5.99E+07	2.22E+05	6.71E+01	4.96E+07	1.84E+08
Road I01	I01	1200-1300	1.30E+01	8.47E+06	3.52E+06	1.14E+01	8.33E+06	3.09E+06	6.02E+02	5.99E+07	2.22E+05	6.71E+01	4.96E+07	1.84E+08
Road I01	I01	1300-1400	1.30E+01	8.47E+06	3.52E+06	1.14E+01	8.33E+06	3.09E+06	6.02E+02	5.99E+07	2.22E+05	6.71E+01	4.96E+07	1.84E+08
Road I01	I01	1400-1500	1.30E+01	8.47E+06	3.52E+06	1.14E+01	8.33E+06	3.09E+06	6.02E+02	5.99E+07	2.22E+05	6.71E+01	4.96E+07	1.84E+08
Road I01	I01	1500-1600	1.30E+01	8.47E+06	3.52E+06	1.14E+01	8.33E+06	3.09E+06	6.02E+02	5.99E+07	2.22E+05	6.71E+01	4.96E+07	1.84E+08
Road I01	I01	1600-1700	1.30E+01	8.47E+06	3.52E+06	1.14E+01	8.33E+06	3.09E+06	6.02E+02	5.99E+07	2.22E+05	6.71E+01	4.96E+07	1.84E+08
Road I01	I01	1700-1800	1.30E+01	8.47E+06	3.52E+06	1.14E+01	8.33E+06	3.09E+06	6.02E+02	5.99E+07	2.22E+05	6.71E+01	4.96E+07	1.84E+08
Road I01	I01	1800-1900	1.30E+01	8.47E+06	3.52E+06	1.14E+01	8.33E+06	3.09E+06	6.02E+02	5.99E+07	2.22E+05	6.71E+01	4.96E+07	1.84E+08
Road I01	I01	1900-2000	1.30E+01	8.47E+06	3.52E+06	1.14E+01	8.33E+06	3.09E+06	6.02E+02	5.99E+07	2.22E+05	6.71E+01	4.96E+07	1.84E+08
Road I01	I01	2000-2100	1.30E+01	8.47E+06	3.52E+06	1.14E+01	8.33E+06	3.09E+06	6.02E+02	5.99E+07	2.22E+05	6.71E+01	4.96E+07	1.84E+08
Road I01	I01	2100-2200	1.30E+01	8.47E+06	3.52E+06	1.14E+01	8.33E+06	3.09E+06	6.02E+02	5.99E+07	2.22E+05	6.71E+01	4.96E+07	1.84E+08
Road I01	I01	2200-2300	1.30E+01	8.47E+06	3.52E+06	1.14E+01	8.33E+06	3.09E+06	6.02E+02	5.99E+07	2.22E+05	6.71E+01	4.96E+07	1.84E+08
Road I01	I01	2300-0000	1.30E+01	8.47E+06	3.52E+06	1.14E+01	8.33E+06	3.09E+06	6.02E+02	5.99E+07	2.22E+05	6.71E+01	4.96E+07	1.84E+08
Road I03	I03	0000-0100	8.91E+01	9.93E+06	8.21E+06	7.74E+01	7.80E+06	1.98E+06	1.75E+01	3.17E+06	5.53E+05	5.87E+01	4.22E+06	1.41E+07
Road I03	I03	0100-0200	9.12E+01	6.4										

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for
AEDMOD model (baseline) Year 2033

Road Name	Road ID	Hour	NO _x Emission						PM ₁₀ Emission					
			Monthly/tonne			Monthly/hour/Average			Monthly/tonne			Monthly/hour/Average		
			g/kwh	g/tonne	tonne/hour	g/kwh	g/tonne	tonne/hour	g/kwh	g/tonne	tonne/hour	g/kwh	g/tonne	tonne/hour
Road 100	100	1600-1700	1.875	0.25	0.25	1.875	0.25	0.25	1.875	0.25	0.25	1.875	0.25	0.25
Road 100	100	1800-1900	1.336	0.19	0.19	1.336	0.19	0.19	1.336	0.19	0.19	1.336	0.19	0.19
Road 100	100	1900-2000	0.465	0.07	0.07	0.465	0.07	0.07	0.465	0.07	0.07	0.465	0.07	0.07
Road 100	100	2000-2100	0.276	0.04	0.04	0.276	0.04	0.04	0.276	0.04	0.04	0.276	0.04	0.04
Road 100	100	2100-2200	0.135	0.02	0.02	0.135	0.02	0.02	0.135	0.02	0.02	0.135	0.02	0.02
Road 100	100	2200-2300	0.154	0.03	0.03	0.154	0.03	0.03	0.154	0.03	0.03	0.154	0.03	0.03
Road 100	100	2300-2400	0.156	0.03	0.03	0.156	0.03	0.03	0.156	0.03	0.03	0.156	0.03	0.03
Road 100	100	0000-0100	0.448	0.07	0.07	0.448	0.07	0.07	0.448	0.07	0.07	0.448	0.07	0.07
Road 104	104	0200-0300	1.611	0.22	0.22	1.611	0.22	0.22	1.611	0.22	0.22	1.611	0.22	0.22
Road 104	104	0300-0400	1.732	0.24	0.24	1.732	0.24	0.24	1.732	0.24	0.24	1.732	0.24	0.24
Road 104	104	0400-0500	0.920	0.13	0.13	0.920	0.13	0.13	0.920	0.13	0.13	0.920	0.13	0.13
Road 104	104	0500-0600	0.126	0.02	0.02	0.126	0.02	0.02	0.126	0.02	0.02	0.126	0.02	0.02
Road 104	104	0600-0700	0.210	0.03	0.03	0.210	0.03	0.03	0.210	0.03	0.03	0.210	0.03	0.03
Road 104	104	0700-0800	0.212	0.03	0.03	0.212	0.03	0.03	0.212	0.03	0.03	0.212	0.03	0.03
Road 104	104	0800-0900	0.216	0.03	0.03	0.216	0.03	0.03	0.216	0.03	0.03	0.216	0.03	0.03
Road 104	104	0900-1000	0.336	0.05	0.05	0.336	0.05	0.05	0.336	0.05	0.05	0.336	0.05	0.05
Road 104	104	1000-1100	0.508	0.07	0.07	0.508	0.07	0.07	0.508	0.07	0.07	0.508	0.07	0.07
Road 104	104	1100-1200	0.505	0.07	0.07	0.505	0.07	0.07	0.505	0.07	0.07	0.505	0.07	0.07
Road 104	104	1200-1300	0.116	0.02	0.02	0.116	0.02	0.02	0.116	0.02	0.02	0.116	0.02	0.02
Road 104	104	1300-1400	0.166	0.02	0.02	0.166	0.02	0.02	0.166	0.02	0.02	0.166	0.02	0.02
Road 104	104	1400-1500	0.665	0.09	0.09	0.665	0.09	0.09	0.665	0.09	0.09	0.665	0.09	0.09
Road 104	104	1500-1600	1.152	0.16	0.16	1.152	0.16	0.16	1.152	0.16	0.16	1.152	0.16	0.16
Road 104	104	1600-1700	0.831	0.12	0.12	0.831	0.12	0.12	0.831	0.12	0.12	0.831	0.12	0.12
Road 104	104	1700-1800	0.633	0.09	0.09	0.633	0.09	0.09	0.633	0.09	0.09	0.633	0.09	0.09
Road 104	104	1800-1900	0.658	0.10	0.10	0.658	0.10	0.10	0.658	0.10	0.10	0.658	0.10	0.10
Road 104	104	1900-2000	0.228	0.03	0.03	0.228	0.03	0.03	0.228	0.03	0.03	0.228	0.03	0.03
Road 104	104	2000-2100	0.383	0.05	0.05	0.383	0.05	0.05	0.383	0.05	0.05	0.383	0.05	0.05
Road 104	104	2100-2200	0.118	0.02	0.02	0.118	0.02	0.02	0.118	0.02	0.02	0.118	0.02	0.02
Road 104	104	2200-2300	0.147	0.02	0.02	0.147	0.02	0.02	0.147	0.02	0.02	0.147	0.02	0.02
Road 104	104	2300-2400	0.149	0.02	0.02	0.149	0.02	0.02	0.149	0.02	0.02	0.149	0.02	0.02
Road 104	104	0000-0100	0.687	0.09	0.09	0.687	0.09	0.09	0.687	0.09	0.09	0.687	0.09	0.09
Road 104	104	0100-0200	2.405	0.32	0.32	2.405	0.32	0.32	2.405	0.32	0.32	2.405	0.32	0.32
Road 104	104	0200-0300	1.573	0.21	0.21	1.573	0.21	0.21	1.573	0.21	0.21	1.573	0.21	0.21
Road 104	104	0300-0400	2.743	0.37	0.37	2.743	0.37	0.37	2.743	0.37	0.37	2.743	0.37	0.37
Road 104	104	0300-0400	2.938	0.42	0.42	2.938	0.42	0.42	2.938	0.42	0.42	2.938	0.42	0.42
Road 104	104	0400-0500	0.982	0.13	0.13	0.982	0.13	0.13	0.982	0.13	0.13	0.982	0.13	0.13
Road 104	104	0500-0600	0.238	0.03	0.03	0.238	0.03	0.03	0.238	0.03	0.03	0.238	0.03	0.03
Road 104	104	0600-0700	0.448	0.07	0.07	0.448	0.07	0.07	0.448	0.07	0.07	0.448	0.07	0.07
Road 104	104	0700-0800	0.448	0.07	0.07	0.448	0.07	0.07	0.448	0.07	0.07	0.448	0.07	0.07
Road 104	104	0800-0900	0.578	0.08	0.08	0.578	0.08	0.08	0.578	0.08	0.08	0.578	0.08	0.08
Road 104	104	0900-1000	0.588	0.08	0.08	0.588	0.08	0.08	0.588	0.08	0.08	0.588	0.08	0.08
Road 104	104	1000-1100	0.412	0.07	0.07	0.412	0.07	0.07	0.412	0.07	0.07	0.412	0.07	0.07
Road 104	104	1100-1200	0.484	0.08	0.08	0.484	0.08	0.08	0.484	0.08	0.08	0.484	0.08	0.08
Road 104	104	1200-1300	0.441	0.07	0.07	0.441	0.07	0.07	0.441	0.07	0.07	0.441	0.07	0.07
Road 104	104	1300-1400	0.961	0.13	0.13	0.961	0.13	0.13	0.961	0.13	0.13	0.961	0.13	0.13
Road 104	104	1400-1500	1.026	0.14	0.14	1.026	0.14	0.14	1.026	0.14	0.14	1.026	0.14	0.14
Road 104	104	1500-1600	1.026	0.14	0.14	1.026	0.14	0.14	1.026	0.14	0.14	1.026	0.14	0.14
Road 104	104	1600-1700	0.921	0.13	0.13	0.921	0.13	0.13	0.921	0.13	0.13	0.921	0.13	0.13
Road 104	104	1700-1800	0.798	0.11	0.11	0.798	0.11	0.11	0.798	0.11	0.11	0.798	0.11	0.11
Road 104	104	1800-1900	1.146	0.17	0.17	1.146	0.17	0.17	1.146	0.17	0.17	1.146	0.17	0.17
Road 104	104	1900-2000	0.776	0.11	0.11	0.776	0.11	0.11	0.776	0.11	0.11	0.776	0.11	0.11
Road 104	104	2000-2100	0.642	0.09	0.09	0.642	0.09	0.09	0.642	0.09	0.09	0.642	0.09	0.09
Road 104	104	2100-2200	0.642	0.09	0.09	0.642	0.09	0.09	0.642	0.09	0.09	0.642	0.09	0.09
Road 104	104	2200-2300	0.642	0.09	0.09	0.642	0.09	0.09	0.642	0.09	0.09	0.642	0.09	0.09
Road 104	104	2300-2400	0.642	0.09	0.09	0.642	0.09	0.09	0.642	0.09	0.09	0.642	0.09	0.09
Road 104	104	0000-0100	0.856	0.12	0.12	0.856	0.12	0.12	0.856	0.12	0.12	0.856	0.12	0.12
Road 104	104	0100-0200	0.952	0.13	0.13	0.952	0.13	0.13	0.952	0.13	0.13	0.952	0.13	0.13
Road 104	104	0200-0300	1.213	0.17	0.17	1.213	0.17	0.17	1.213	0.17	0.17	1.213	0.17	0.17
Road 104	104	0300-0400	2.208	0.30	0.30	2.208	0.30	0.30	2.208	0.30	0.30	2.208	0.30	0.30
Road 104	104	0400-0500	0.952	0.13	0.13	0.952	0.13	0.13	0.952	0.13	0.13	0.952	0.13	0.13
Road 104	104	0500-0600	0.238	0.03	0.03	0.238	0.03	0.03	0.238	0.03	0.03	0.238	0.03	0.03
Road 104	104	0600-0700	0.448	0.07	0.07	0.448	0.07	0.07	0.448	0.07	0.07	0.448	0.07	0.07
Road 104	104	0700-0800	0.448	0.07	0.07	0.448	0.07	0.07	0.448	0.07	0.07	0.448	0.07	0.07
Road 104	104	0800-0900	0.578	0.08	0.08	0.578	0.08	0.08	0.578	0.08	0.08	0.578	0.08	0.08
Road 104	104	0900-1000	0.588	0.08	0.08	0.588	0.08	0.08	0.588	0.08	0.08	0.588	0.08	0.08
Road 104	104	1000-1100	0.412	0.07	0.07	0.412	0.07	0.07	0.412	0.07	0.07	0.412	0.07	0.07
Road 104	104	1100-1200	0.484	0.08	0.08	0.484	0.08	0.08	0.484	0.08	0.08	0.484	0.08	0.08
Road 104	104	1200-1300	0.961	0.13	0.13	0.961	0.13	0.13	0.961	0.13	0.13	0.961	0.13	0.13
Road 104	104	1300-1400	1.026	0.14	0.14	1.026	0.14	0.14	1.026	0.14	0.14	1.026	0.14	0.14
Road 104	104	1400-1500	1.026	0.14	0.14	1.026	0.14	0.14	1.026	0.14	0.14	1.026	0.14	0.14
Road 104	104	1500-1600	1.026	0.14	0.14	1.026	0.14	0.14	1.026	0.14	0.14	1.026	0.14	0.14
Road 104	104	1600-1700	0.921	0.13	0.13	0.921	0.13	0.13	0.921	0.13	0.13	0.921	0.13	0.13
Road 104	104	1700-1800	0.798	0.11	0.11	0.798	0.11	0.11	0.798	0.11	0.11	0.798	0.11	0.11
Road 104	104	1800-1900	1.146	0.17	0.17	1.146	0.17	0.17	1.146	0.17	0.17	1.146	0.17	0.17
Road 104	104	1900-2000	0.776	0.11	0.11	0.776	0.11	0.11	0.776	0.11	0.11	0.776	0.11	0.11
Road 104	104	2000-2100	0.642	0.09	0.09	0.642	0.09	0.09	0.642	0.09	0.09	0.642	0.09	0.09
Road 104	104	2100-2200	0.642	0.09	0.09	0.642	0.09	0.09	0.642	0.09	0.09	0.642	0.09	0.09
Road 104	104	2200-2300	0.856	0.12	0.12	0.856	0.12	0.12	0.856	0.12	0.12	0.856	0.12	0.12
Road 104	104	2300-2400	0.952	0.13	0.13	0.952	0.13	0.13	0.952	0.13	0.13	0.952	0.13	0.13
Road 104	104	0000-0100	1.008	0.14	0.14	1.008	0.14	0.14	1.008	0.14	0.14	1.008	0.14	0.14
Road 104	104	0100-0200	1.008	0.14	0.14	1.008	0.14	0.14	1.008	0.14	0.14	1.008	0.14	0.14
Road 104	104	0200-0300	1.008	0.14	0.14	1.008	0.14	0.14	1.008	0.14	0.14	1.008	0.14	0.14
Road 104	1													

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for
AERMOD model (Emission) Year 2033

Road Name	Road ID	Hour	NO Emission						NO Emission					
			MonthlyHourly			MonthlyHourlyAverage			MonthlyHourlyMin			MonthlyHourlyMax		
			g/km ³ /hr	g/m ² /hr	tonnes/hour	g/km ³ /hr	g/m ² /hr	tonnes/hour	g/km ³ /hr	g/m ² /hr	tonnes/hour	g/km ³ /hr	g/m ² /hr	tonnes/hour
Road 1	0000-0120	0000-0120	9.2426	9.2426	0.0000	8.2228	8.2228	0.0000	1.1117	1.1117	0.0000	8.2120	8.2120	0.0000
		0100-0200	9.8658	9.8658	4.7886	8.8863	8.7558	4.2776	0.0808	1.0808	0.0000	9.4767	9.2226	9.4626
Road 1	0000-0300	0200-0300	6.8826	6.8826	3.7516	6.4983	6.0888	3.3560	0.0000	7.0257	3.8715	9.5350	6.1007	3.9816
		0300-0400	1.4472	1.4472	0.7500	1.0313	1.1538	0.0000	0.0000	1.1538	0.0000	1.4472	1.4472	0.7500
Road 1	0000-0500	0400-0500	1.2124	1.2124	0.7368	0.3768	0.5488	3.2726	1.1463	6.3317	0.4776	9.7626	0.4776	2.9862
		0500-0600	1.2742	1.2742	0.6768	1.1242	0.1077	5.8906	1.1350	1.1008	6.0686	9.8426	0.4446	2.0070
Road 1	0000-0700	0600-0700	1.3270	1.3270	0.7368	1.1242	0.1077	5.8906	1.1350	1.1008	6.0686	9.8426	0.4446	2.0070
		0700-0800	1.3862	1.3862	0.7376	3.1175	0.2562	5.1867	2.8565	0.1661	4.8836	2.0644	1.0274	0.4346
Road 1	0000-0900	0800-0900	1.3342	6.9342	3.4865	1.2026	0.7507	3.1175	1.0429	4.9966	2.7654	9.2926	0.4246	2.4946
		0900-1000	1.4472	1.4472	0.7500	1.0313	1.1538	0.0000	0.0000	1.1538	0.0000	1.4472	1.4472	0.7500
Road 1	1000-1100	1000-1100	1.6442	6.9342	3.5806	1.5006	0.5117	2.8185	0.1661	3.9966	2.1176	10.0414	1.5446	0.9906
		1100-1200	1.5752	0.5752	0.2786	1.4362	0.4647	2.5565	0.1661	3.7865	2.0704	1.0596	3.3806	0.8896
Road 1	1000-1300	1200-1300	1.7832	1.7832	0.9360	1.0313	1.1538	0.0000	0.0000	1.1538	0.0000	1.7832	1.7832	0.9360
		1300-1400	1.7424	1.7424	0.4906	1.6001	6.9317	0.3005	1.2125	5.2726	2.0806	1.1114	1.8326	0.6966
Road 1	1000-1500	1400-1500	1.7862	8.1362	4.4747	1.6162	0.7447	4.0905	0.2275	5.6306	3.3064	1.1167	5.0206	0.8006
		1500-1600	1.6542	1.6542	0.9360	1.0313	1.1538	0.0000	0.0000	1.1538	0.0000	1.6542	1.6542	0.9360
Road 1	1000-1700	1600-1700	1.7062	1.7062	0.4526	1.6162	0.1807	4.5025	1.2125	6.1866	3.3064	1.1167	5.0206	0.8006
		1700-1800	1.3362	7.6862	4.2326	1.2326	0.1087	3.9315	1.0215	6.5146	3.3064	1.0206	5.9966	0.6806
Road 1	1000-1900	1800-1900	1.0362	1.0362	0.4526	1.0362	0.4526	0.4526	0.4526	0.4526	1.0362	1.0362	0.4526	0.4526
		1900-2000	9.9562	0.4526	0.2176	8.8803	0.5117	0.2562	1.0565	5.3666	2.9564	0.9426	0.9426	0.9426
Road 2	0000-0120	0000-0120	9.2426	9.2426	0.0000	8.2228	8.2228	0.0000	1.1117	1.1117	0.0000	8.2120	8.2120	0.0000
		0100-0200	9.8658	9.8658	4.7886	8.8863	8.7558	4.2776	0.0808	1.0808	0.0000	9.4767	9.2226	9.4626
Road 2	0000-0300	0200-0300	6.8826	6.8826	3.7516	6.4983	6.0888	3.3560	0.0000	7.0257	3.8715	9.5350	6.1007	3.9816
		0300-0400	1.4472	1.4472	0.7500	1.0313	1.1538	0.0000	0.0000	1.1538	0.0000	1.4472	1.4472	0.7500
Road 2	0000-0500	0400-0500	1.2124	1.2124	0.7368	0.3768	0.5488	3.2726	1.1463	6.3317	0.4776	9.7626	0.4776	2.9862
		0500-0600	1.2742	1.2742	0.6768	1.1242	0.1077	5.8906	1.1350	1.1008	6.0686	9.8426	0.4446	2.0070
Road 2	0000-0700	0600-0700	1.3270	1.3270	0.7368	1.1242	0.1077	5.8906	1.1350	1.1008	6.0686	9.8426	0.4446	2.0070
		0700-0800	1.3862	1.3862	0.7376	3.1175	0.2562	5.1867	2.8565	0.1661	4.8836	2.0644	1.0274	0.4346
Road 2	0000-0900	0800-0900	1.3342	6.9342	3.4865	1.2026	0.7507	3.1175	1.0429	4.9966	2.7654	9.2926	0.4246	2.4946
		0900-1000	1.4472	1.4472	0.7500	1.0313	1.1538	0.0000	0.0000	1.1538	0.0000	1.4472	1.4472	0.7500
Road 2	1000-1100	1000-1100	1.6442	6.9342	3.5806	1.5006	0.5117	2.8185	0.1661	3.9966	2.1176	10.0414	1.5446	0.9906
		1100-1200	1.5752	0.5752	0.2786	1.4362	0.4647	2.5565	0.1661	3.7865	2.0704	1.0596	3.3806	0.8896
Road 2	1000-1300	1200-1300	1.7832	1.7832	0.9360	1.0313	1.1538	0.0000	0.0000	1.1538	0.0000	1.7832	1.7832	0.9360
		1300-1400	1.7424	1.7424	0.4906	1.6001	6.9317	0.3005	1.2125	5.2726	2.0806	1.1114	1.8326	0.6966
Road 2	1000-1500	1400-1500	1.7862	8.1362	4.4747	1.6162	0.7447	4.0905	0.2275	5.6306	3.3064	1.1167	5.0206	0.8006
		1500-1600	1.6542	1.6542	0.9360	1.0313	1.1538	0.0000	0.0000	1.1538	0.0000	1.6542	1.6542	0.9360
Road 2	1000-1700	1600-1700	1.7062	1.7062	0.4526	1.6162	0.1807	4.5025	1.2125	6.1866	3.3064	1.1167	5.0206	0.8006
		1700-1800	1.3362	7.6862	4.2326	1.2326	0.1087	3.9315	1.0215	6.5146	3.3064	1.0206	5.9966	0.6806
Road 2	1000-1900	1800-1900	1.0362	1.0362	0.4526	1.0362	0.4526	0.4526	0.4526	1.0362	1.0362	0.4526	0.4526	0.4526
		1900-2000	9.9562	0.4526	0.2176	8.8803	0.5117	0.2562	1.0565	5.3666	2.9564	0.9426	0.9426	0.9426
Road 3	0000-0120	0000-0120	9.2426	9.2426	0.0000	8.2228	8.2228	0.0000	1.1117	1.1117	0.0000	8.2120	8.2120	0.0000
		0100-0200	9.8658	9.8658	4.7886	8.8863	8.7558	4.2776	0.0808	1.0808	0.0000	9.4767	9.2226	9.4626
Road 3	0000-0300	0200-0300	6.8826	6.8826	3.7516	6.4983	6.0888	3.3560	0.0000	7.0257	3.8715	9.5350	6.1007	3.9816
		0300-0400	1.4472	1.4472	0.7500	1.0313	1.1538	0.0000	0.0000	1.1538	0.0000	1.4472	1.4472	0.7500
Road 3	0000-0500	0400-0500	1.2124	1.2124	0.7368	0.3768	0.5488	3.2726	1.1463	6.3317	0.4776	9.7626	0.4776	2.9862
		0500-0600	1.2742	1.2742	0.6768	1.1242	0.1077	5.8906	1.1350	1.1008	6.0686	9.8426	0.4446	2.0070
Road 3	0000-0700	0600-0700	1.3270	1.3270	0.7368	1.1242	0.1077	5.8906	1.1350	1.1008	6.0686	9.8426	0.4446	2.0070
		0700-0800	1.3862	1.3862	0.7376	3.1175	0.2562	5.1867	2.8565	0.1661	4.8836	2.0644	1.0274	0.4346
Road 3	0000-0900	0800-0900	1.3342	6.9342	3.4865	1.2026	0.7507	3.1175	1.0429	4.9966	2.7654	9.2926	0.4246	2.4946
		0900-1000	1.4472	1.4472	0.7500	1.0313	1.1538	0.0000	0.0000	1.1538	0.0000	1.4472	1.4472	0.7500
Road 3	1000-1100	1000-1100	1.6442	6.9342	3.5806	1.5006	0.5117	2.8185	0.1661	3.9966	2.1176	10.0414	1.5446	0.9906
		1100-1200	1.5752	0.5752	0.2786	1.4362	0.4647	2.5565	0.1661	3.7865	2.0704	1.0596	3.3806	0.8896
Road 3	1000-1300	1200-1300	1.7832	1.7832	0.9360	1.0313	1.1538	0.0000	0.0000	1.1538	0.0000	1.7832	1.7832	0.9360
		1300-1400	1.7424	1.7424	0.4906	1.6001	6.9317	0.3005	1.2125	5.2726	2.0806	1.1114	1.8326	0.6966
Road 3	1000-1500	1400-1500	1.7862	8.1362	4.4747	1.6162	0.7447	4.0905	0.2275	5.6306	3.3064	1.1167	5.0206	0.8006
		1500-1600	1.6542	1.6542	0.9360	1.0313	1.1538	0.0000	0.0000	1.1538	0.0000	1.6542	1.6542	0.9360
Road 3	1000-1700	1600-1700	1.7062	1.7062	0.4526	1.6162	0.1807	4.5025	1.2125	6.1866	3.3064	1.1167	5.0206	0.8006
		1700-1800	1.3362	7.6862	4.2326	1.2326	0.1087	3.9315	1.0215	6.5146	3.3064	1.0206	5.9966	0.6806
Road 3	1000-1900	1800-1900	1.0362	1.0362	0.4526	1.0362	0.4526	0.4526	0.4526	1.0362	1.0362	0.4526	0.4526	0.4526
		1900-2000	9.9562	0.4526	0.2176	8.8803	0.5117	0.2562	1.0565	5.3666	2.9564	0.9426	0.9426	0.9426
Road 4	0000-0120	0000-0120	9.2426	9.2426	0.0000	8.2228	8.2228	0.0000	1.1117	1.1117	0.0000	8.2120	8.2120	0.0000
		0100-0200	9.8658	9.8658	4.7886	8.8863	8.7558	4.2776	0.0808	1.0808	0.0000	9.4767	9.2226	9.4626
Road 4	0000-0300	0200-0300	6.8826	6.8826	3.7516	6.4983	6.0888	3.3560	0.0000	7.0257	3.8715	9.5350	6.1007	3.9816
		0300-0400	1.4472	1.4472	0.7500	1.0313	1.1538	0.0000	0.0000	1.1538	0.0000	1.4472	1.4472	0.7500
Road 4	0000-0500	0400-0500	1.2124	1.2124	0.7368	0.3768	0.5488	3.2726	1.1463	6.3317	0.4776	9.7626	0.4776	2.9862
		0500-0600	1.2742	1.2742	0.6768	1.1242	0.1077	5.8906	1.1350	1.1008	6.0686	9.8426	0.4446	2.0070
Road 4	0000-0700	0600-0700	1.3270	1.3270	0.7368	1.1242	0.1077	5.8906	1.1350	1.1008	6.0686	9.8426	0.4446	2.0070
		0700-0800	1.3862	1.3862	0.7376	3.1175	0.2562	5.1867	2.8565	0.1661	4.8836	2.0644	1.0274	0.4346
Road 4	0000-0900	0800-0900	1.3342	6.9342	3.4865	1.2026	0.7507	3.1175	1.0429	4.9966	2.7654	9.2926	0.4246	2.4946
		0900-1000	1.4472	1.4472	0.7500	1.0313	1.1538	0.0000	0.0000	1.1538	0.0000	1.4472	1.4472	0.7500
Road 4	1000-1100	1000-1100	1.6442	6.9342	3.5806	1.5006	0.5117	2.8185	0.1661	3.9966	2.1176	10.0414	1.5446	0.9906
		1100-1200	1.5752	0.5752	0.2786	1.4362	0.4647	2.5565	0.1661	3.7865	2.0704	1.0596	3.3806	0.8896
Road 4	1000-1300	1200-1300	1.7832	1.7832	0.9360	1.0313	1.1538	0.0000	0.0000	1.1538	0.0000	1.7832	1.7832	0.9360
		1300-1400	1.7424	1.7424	0.4906	1.6001	6.9317	0.3005	1.2125	5.2726	2.0806	1.111		

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for
AERMOD model (Emission) Year 2033

Road Name	Road ID	Hour	NO _x Emission						NO ₂ Emission					
			Monthly/JourLin			Monthly/JourAverage			Monthly/JourMin			Monthly/JourAverage		
			g/km/h	g/m ³	g/m ³	g/km/h	g/m ³	g/m ³	g/km/h	g/m ³	g/m ³	g/km/h	g/m ³	g/m ³
Road 4	4	0800-0900	1.1110	3.7662	4.0067	1.1110	3.7662	4.0067	1.1110	3.7662	4.0067	1.1110	3.7662	4.0067
Road 4	4	0900-1000	1.3900	3.9762	4.0067	1.3900	3.9762	4.0067	1.3900	3.9762	4.0067	1.3900	3.9762	4.0067
Road 4	4	1000-1100	1.5520	3.9967	4.0067	1.5520	3.9967	4.0067	1.5520	3.9967	4.0067	1.5520	3.9967	4.0067
Road 4	4	1100-1200	1.4710	3.9762	4.0067	1.4710	3.9762	4.0067	1.4710	3.9762	4.0067	1.4710	3.9762	4.0067
Road 4	4	1200-1300	1.5220	4.8662	4.0067	1.5220	4.8662	4.0067	1.5220	4.8662	4.0067	1.5220	4.8662	4.0067
Road 4	4	1300-1400	1.5220	4.0267	4.0067	1.5220	4.0267	4.0067	1.5220	4.0267	4.0067	1.5220	4.0267	4.0067
Road 4	4	1400-1500	1.6620	4.0267	4.0067	1.6620	4.0267	4.0067	1.6620	4.0267	4.0067	1.6620	4.0267	4.0067
Road 4	4	1500-1600	1.4862	5.2867	4.0067	1.4862	5.2867	4.0067	1.4862	5.2867	4.0067	1.4862	5.2867	4.0067
Road 4	4	1600-1700	1.9962	6.0067	4.0067	1.9962	6.0067	4.0067	1.9962	6.0067	4.0067	1.9962	6.0067	4.0067
Road 4	4	1700-1800	1.0162	4.0267	4.0067	1.0162	4.0267	4.0067	1.0162	4.0267	4.0067	1.0162	4.0267	4.0067
Road 5	5	0800-0900	1.9862	4.4467	4.0067	1.9862	4.4467	4.0067	1.9862	4.4467	4.0067	1.9862	4.4467	4.0067
Road 5	5	0900-1000	2.8462	3.2867	4.0067	2.8462	3.2867	4.0067	2.8462	3.2867	4.0067	2.8462	3.2867	4.0067
Road 5	5	1000-1100	2.8862	4.0867	4.0067	2.8862	4.0867	4.0067	2.8862	4.0867	4.0067	2.8862	4.0867	4.0067
Road 5	5	1100-1200	2.8862	4.0867	4.0067	2.8862	4.0867	4.0067	2.8862	4.0867	4.0067	2.8862	4.0867	4.0067
Road 5	5	1200-1300	2.8862	4.0867	4.0067	2.8862	4.0867	4.0067	2.8862	4.0867	4.0067	2.8862	4.0867	4.0067
Road 5	5	1300-1400	2.8862	4.0867	4.0067	2.8862	4.0867	4.0067	2.8862	4.0867	4.0067	2.8862	4.0867	4.0067
Road 5	5	1400-1500	2.8862	4.0867	4.0067	2.8862	4.0867	4.0067	2.8862	4.0867	4.0067	2.8862	4.0867	4.0067
Road 5	5	1500-1600	2.8862	4.0867	4.0067	2.8862	4.0867	4.0067	2.8862	4.0867	4.0067	2.8862	4.0867	4.0067
Road 5	5	1600-1700	2.8862	4.0867	4.0067	2.8862	4.0867	4.0067	2.8862	4.0867	4.0067	2.8862	4.0867	4.0067
Road 5	5	1700-1800	2.8862	4.0867	4.0067	2.8862	4.0867	4.0067	2.8862	4.0867	4.0067	2.8862	4.0867	4.0067
Road 6	6	0800-0900	1.5520	3.9967	4.0067	1.5520	3.9967	4.0067	1.5520	3.9967	4.0067	1.5520	3.9967	4.0067
Road 6	6	0900-1000	1.5520	3.9967	4.0067	1.5520	3.9967	4.0067	1.5520	3.9967	4.0067	1.5520	3.9967	4.0067
Road 6	6	1000-1100	1.3962	3.9762	4.0067	1.3962	3.9762	4.0067	1.3962	3.9762	4.0067	1.3962	3.9762	4.0067
Road 6	6	1100-1200	1.7162	3.9762	4.0067	1.7162	3.9762	4.0067	1.7162	3.9762	4.0067	1.7162	3.9762	4.0067
Road 6	6	1200-1300	1.7162	3.9762	4.0067	1.7162	3.9762	4.0067	1.7162	3.9762	4.0067	1.7162	3.9762	4.0067
Road 6	6	1300-1400	1.7162	3.9762	4.0067	1.7162	3.9762	4.0067	1.7162	3.9762	4.0067	1.7162	3.9762	4.0067
Road 6	6	1400-1500	1.7162	3.9762	4.0067	1.7162	3.9762	4.0067	1.7162	3.9762	4.0067	1.7162	3.9762	4.0067
Road 6	6	1500-1600	1.7162	3.9762	4.0067	1.7162	3.9762	4.0067	1.7162	3.9762	4.0067	1.7162	3.9762	4.0067
Road 6	6	1600-1700	1.7162	3.9762	4.0067	1.7162	3.9762	4.0067	1.7162	3.9762	4.0067	1.7162	3.9762	4.0067
Road 6	6	1700-1800	1.7162	3.9762	4.0067	1.7162	3.9762	4.0067	1.7162	3.9762	4.0067	1.7162	3.9762	4.0067
Road 7	7	0800-0900	1.4862	3.9762	4.0067	1.4862	3.9762	4.0067	1.4862	3.9762	4.0067	1.4862	3.9762	4.0067
Road 7	7	0900-1000	1.4862	3.9762	4.0067	1.4862	3.9762	4.0067	1.4862	3.9762	4.0067	1.4862	3.9762	4.0067
Road 7	7	1000-1100	1.4862	3.9762	4.0067	1.4862	3.9762	4.0067	1.4862	3.9762	4.0067	1.4862	3.9762	4.0067
Road 7	7	1100-1200	1.4862	3.9762	4.0067	1.4862	3.9762	4.0067	1.4862	3.9762	4.0067	1.4862	3.9762	4.0067
Road 7	7	1200-1300	1.4862	3.9762	4.0067	1.4862	3.9762	4.0067	1.4862	3.9762	4.0067	1.4862	3.9762	4.0067
Road 7	7	1300-1400	1.4862	3.9762	4.0067	1.4862	3.9762	4.0067	1.4862	3.9762	4.0067	1.4862	3.9762	4.0067
Road 7	7	1400-1500	1.4862	3.9762	4.0067	1.4862	3.9762	4.0067	1.4862	3.9762	4.0067	1.4862	3.9762	4.0067
Road 7	7	1500-1600	1.4862	3.9762	4.0067	1.4862	3.9762	4.0067	1.4862	3.9762	4.0067	1.4862	3.9762	4.0067
Road 7	7	1600-1700	1.4862	3.9762	4.0067	1.4862	3.9762	4.0067	1.4862	3.9762	4.0067	1.4862	3.9762	4.0067
Road 7	7	1700-1800	1.4862	3.9762	4.0067	1.4862	3.9762	4.0067	1.4862	3.9762	4.0067	1.4862	3.9762	4.0067

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for
AERMOD model (Cahound) Year 2033

NO _x Emission										NO Emission									
Road Name	Road ID	Hour	MonthlyHourMin			MonthlyHourAverage			MonthlyHourMin			MonthlyHourAverage							
			g/hour	g/min	tonne/hour	g/hour	g/min	tonne/hour	g/hour	g/min	tonne/hour	g/hour	g/min	tonne/hour					
Road 7	7	1600-1700	1.586	0.264	0.0001	1.586	0.264	0.0001	3.176	0.529	0.0002	3.176	0.529	0.0002					
Road 7	7	1700-1800	1.526	0.252	0.0001	1.526	0.252	0.0001	3.052	0.508	0.0002	3.052	0.508	0.0002					
Road 7	7	1800-1900	1.096	0.182	0.0001	1.096	0.182	0.0001	2.192	0.364	0.0001	2.192	0.364	0.0001					
Road 7	7	1900-2000	1.464	0.244	0.0001	1.464	0.244	0.0001	2.928	0.49	0.0002	2.928	0.49	0.0002					
Road 7	7	2000-2100	1.096	0.182	0.0001	1.096	0.182	0.0001	2.192	0.364	0.0001	2.192	0.364	0.0001					
Road 7	7	2100-2200	0.936	0.156	0.0001	0.936	0.156	0.0001	1.872	0.31	0.0001	1.872	0.31	0.0001					
Road 7	7	2200-2300	1.048	0.174	0.0001	1.048	0.174	0.0001	2.096	0.348	0.0001	2.096	0.348	0.0001					
Road 7	7	2300-0000	1.016	0.168	0.0001	1.016	0.168	0.0001	2.032	0.344	0.0001	2.032	0.344	0.0001					
Road 8	8	0000-0100	2.256	0.376	0.0002	2.256	0.376	0.0002	4.512	0.752	0.0004	4.512	0.752	0.0004					
Road 8	8	0100-0200	1.888	0.314	0.0001	1.888	0.314	0.0001	3.776	0.624	0.0002	3.776	0.624	0.0002					
Road 8	8	0200-0300	2.304	0.384	0.0002	2.304	0.384	0.0002	4.608	0.768	0.0004	4.608	0.768	0.0004					
Road 8	8	0300-0400	2.416	0.402	0.0002	2.416	0.402	0.0002	4.832	0.804	0.0004	4.832	0.804	0.0004					
Road 8	8	0400-0500	2.488	0.414	0.0002	2.488	0.414	0.0002	4.976	0.828	0.0004	4.976	0.828	0.0004					
Road 8	8	0500-0600	2.544	0.424	0.0002	2.544	0.424	0.0002	5.088	0.84	0.0004	5.088	0.84	0.0004					
Road 8	8	0600-0700	2.496	0.416	0.0002	2.496	0.416	0.0002	4.992	0.827	0.0004	4.992	0.827	0.0004					
Road 8	8	0700-0800	2.464	0.41	0.0002	2.464	0.41	0.0002	4.928	0.816	0.0004	4.928	0.816	0.0004					
Road 8	8	0800-0900	2.488	0.414	0.0002	2.488	0.414	0.0002	4.976	0.828	0.0004	4.976	0.828	0.0004					
Road 8	8	0900-1000	2.656	0.438	0.0002	2.656	0.438	0.0002	5.312	0.896	0.0004	5.312	0.896	0.0004					
Road 8	8	1000-1100	2.688	0.444	0.0002	2.688	0.444	0.0002	5.376	0.908	0.0004	5.376	0.908	0.0004					
Road 8	8	1100-1200	2.792	0.462	0.0002	2.792	0.462	0.0002	5.584	0.936	0.0004	5.584	0.936	0.0004					
Road 8	8	1200-1300	2.888	0.48	0.0002	2.888	0.48	0.0002	5.776	0.976	0.0004	5.776	0.976	0.0004					
Road 8	8	1300-1400	2.912	0.484	0.0002	2.912	0.484	0.0002	5.824	0.973	0.0004	5.824	0.973	0.0004					
Road 8	8	1400-1500	2.976	0.492	0.0002	2.976	0.492	0.0002	5.952	0.984	0.0004	5.952	0.984	0.0004					
Road 8	8	1500-1600	2.776	0.462	0.0002	2.776	0.462	0.0002	5.552	0.924	0.0004	5.552	0.924	0.0004					
Road 8	8	1600-1700	2.464	0.41	0.0002	2.464	0.41	0.0002	4.928	0.816	0.0004	4.928	0.816	0.0004					
Road 8	8	1700-1800	2.276	0.378	0.0002	2.276	0.378	0.0002	4.552	0.763	0.0004	4.552	0.763	0.0004					
Road 8	8	1800-1900	2.028	0.338	0.0002	2.028	0.338	0.0002	4.056	0.677	0.0004	4.056	0.677	0.0004					
Road 8	8	1900-2000	1.928	0.321	0.0002	1.928	0.321	0.0002	3.856	0.643	0.0004	3.856	0.643	0.0004					
Road 8	8	2000-2100	2.048	0.337	0.0002	2.048	0.337	0.0002	4.096	0.679	0.0004	4.096	0.679	0.0004					
Road 8	8	2100-2200	1.856	0.309	0.0002	1.856	0.309	0.0002	3.712	0.617	0.0004	3.712	0.617	0.0004					
Road 8	8	2200-2300	1.888	0.314	0.0002	1.888	0.314	0.0002	3.776	0.624	0.0004	3.776	0.624	0.0004					
Road 8	8	2300-0000	1.968	0.328	0.0002	1.968	0.328	0.0002	3.936	0.656	0.0004	3.936	0.656	0.0004					
Road 9	9	0000-0100	1.686	0.281	0.0001	1.686	0.281	0.0001	3.372	0.562	0.0002	3.372	0.562	0.0002					
Road 9	9	0100-0200	1.626	0.271	0.0001	1.626	0.271	0.0001	3.252	0.535	0.0002	3.252	0.535	0.0002					
Road 9	9	0200-0300	1.686	0.281	0.0001	1.686	0.281	0.0001	3.372	0.562	0.0002	3.372	0.562	0.0002					
Road 9	9	0300-0400	1.956	0.326	0.0001	1.956	0.326	0.0001	3.912	0.653	0.0002	3.912	0.653	0.0002					
Road 9	9	0400-0500	2.016	0.337	0.0001	2.016	0.337	0.0001	4.032	0.675	0.0002	4.032	0.675	0.0002					
Road 9	9	0500-0600	2.076	0.347	0.0001	2.076	0.347	0.0001	4.152	0.697	0.0002	4.152	0.697	0.0002					
Road 9	9	0600-0700	2.136	0.357	0.0001	2.136	0.357	0.0001	4.272	0.719	0.0002	4.272	0.719	0.0002					
Road 9	9	0700-0800	2.196	0.367	0.0001	2.196	0.367	0.0001	4.392	0.741	0.0002	4.392	0.741	0.0002					
Road 9	9	0800-0900	2.256	0.377	0.0001	2.256	0.377	0.0001	4.512	0.763	0.0002	4.512	0.763	0.0002					
Road 9	9	0900-1000	2.316	0.387	0.0001	2.316	0.387	0.0001	4.632	0.785	0.0002	4.632	0.785	0.0002					
Road 9	9	1000-1100	2.376	0.397	0.0001	2.376	0.397	0.0001	4.752	0.807	0.0002	4.752	0.807	0.0002					
Road 9	9	1100-1200	2.436	0.407	0.0001	2.436	0.407	0.0001	4.872	0.829	0.0002	4.872	0.829	0.0002					
Road 9	9	1200-1300	2.496	0.417	0.0001	2.496	0.417	0.0001	4.992	0.851	0.0002	4.992	0.851	0.0002					
Road 9	9	1300-1400	2.556	0.427	0.0001	2.556	0.427	0.0001	5.112	0.873	0.0002	5.112	0.873	0.0002					
Road 9	9	1400-1500	2.616	0.437	0.0001	2.616	0.437	0.0001	5.232	0.895	0.0002	5.232	0.895	0.0002					
Road 9	9	1500-1600	2.676	0.447	0.0001	2.676	0.447	0.0001	5.352	0.917	0.0002	5.352	0.917	0.0002					
Road 9	9	1600-1700	2.736	0.457	0.0001	2.736	0.457	0.0001	5.472	0.939	0.0002	5.472	0.939	0.0002					
Road 9	9	1700-1800	2.796	0.467	0.0001	2.796	0.467	0.0001	5.592	0.961	0.0002	5.592	0.961	0.0002					
Road 9	9	1800-1900	2.856	0.477	0.0001	2.856	0.477	0.0001	5.712	0.983	0.0002	5.712	0.983	0.0002					
Road 9	9	1900-2000	2.916	0.487	0.0001	2.916	0.487	0.0001	5.832	1.005	0.0002	5.832	1.005	0.0002					
Road 9	9	2000-2100	2.976	0.497	0.0001	2.976	0.497	0.0001	5.952	1.027	0.0002	5.952	1.027	0.0002					
Road 9	9	2100-2200	3.036	0.507	0.0001	3.036	0.507	0.0001	6.072	1.049	0.0002	6.072	1.049	0.0002					
Road 9	9	2200-2300	3.096	0.517	0.0001	3.096	0.517	0.0001	6.192	1.071	0.0002	6.192	1.071	0.0002					
Road 9	9	2300-0000	3.156	0.527	0.0001	3.156	0.527	0.0001	6.312	1.093	0.0002	6.312	1.093	0.0002					
Road 10	10	0000-0100	6.916	1.152	0.0007	6.916	1.152	0.0007	13.832	2.253	0.0009	13.832	2.253	0.0009					
Road 10	10	0100-0200	7.712	1.285	0.0008	7.712	1.285	0.0008	15.424	2.571	0.001	15.424	2.571	0.001					
Road 10	10	0200-0300	8.508	1.418	0.0009	8.508	1.418	0.0009	17.016	2.889	0.001	17.016	2.889	0.001					
Road 10	10	0300-0400	9.304	1.551	0.001	9.304	1.551	0.001	18.608	3.207	0.001	18.608	3.207	0.001					
Road 10	10	0400-0500	10.1	1.684	0.001	10.1	1.684	0.001	20.2	3.525	0.001	20.2	3.525	0.001					
Road 10	10	0500-0600	10.896	1.817	0.001	10.896	1.817	0.001	21.792	3.843	0.001	21.792	3.843	0.001					
Road 10	10	0600-0700	11.692	1.95	0.001	11.692	1.95	0.001	23.384	4.161	0.001	23.384	4.161	0.001					
Road 10	10	0700-0800	12.488	2.083	0.001	12.488	2.083	0.001	24.976	4.479	0.001	24.976	4.479	0.001					
Road 10	10	0800-0900	13.284	2.216	0.001	13.284	2.216	0.001	26.568	4.797	0.001	26.568	4.797	0.001					
Road 10	10	0900-1000	14.08	2.349	0.001	14.08	2.349	0.001	28.16	5.115	0.001	28.16	5.115	0.001					
Road 10	10	1000-1100	14.876	2.482	0.001	14.876	2.482	0.001	29.752	5.433	0.001	29.752	5.433	0.001					
Road 10	10	1100-1200	15.672	2.615	0.001	15.672	2.615	0.001	31.344	5.751	0.001	31.344	5.751	0.001					
Road 10	10	1200-1300	16.468	2.748	0.001	16.468	2.748	0.001	32.936	6.069	0.001	32.936	6.069	0.001					
Road 10	10	1300-1400	17.264	2.881	0.001	17.264	2.881	0.001	34.528	6.387	0.001	34.528	6.387	0.001					
Road 10	10	1400-1500	18.06	3.014	0.001	18.06	3.014	0.001	36.12	6.705	0.001	36.12	6.705	0.001					
Road 10	10	1500-1600	18.856	3.147	0.001	18.856	3.147	0.001	37.712	7.023	0.001	37.712	7.023	0.001					
Road 10	10	1600-1700	19.652	3.28	0.001	19.652	3.28	0.001	39.304	7.341	0.001	39.304	7.341	0.001					
Road 10	10	1700-1800	20.448	3.413	0.001	20.448	3.413	0.001	40.896	7.659	0.001	40.896	7.659	0.001					
Road 10	10	1800-1900	21.244	3.546	0.001	21.244	3.546	0.001	42.488	7.977	0.001	42.488	7.977	0.001					
Road 10	10	1900-2000	22.04	3.679	0.001	22.04	3.679	0.001	44.08	8.295	0.001	44.08	8.295	0.001					
Road 10	10	2000-2100	22.836	3.812	0.001	22.836	3.812	0.001	45.672	8.613	0.001	45.672	8.613	0.001					
Road 10	10	2100-2200	23.632	3.945	0.001	23.632	3.945	0.001	47.264	8.931	0.001	47.264	8.931	0.001					

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for
AERMOD model (Gt/ha/yr) Year 2033

Road Name	Road ID	Hour	NO _x Emission						NO ₂ Emission					
			MonthlyHourIn			MonthlyHourAverage			MonthlyHourIn			MonthlyHourAverage		
			g/m ³	g/m ³ m	tonne/hour	g/m ³	g/m ³ m	tonne/hour	g/m ³	g/m ³ m	tonne/hour	g/m ³	g/m ³ m	tonne/hour
Road 11	11	0000-0010	3.54	0.98	0.27	3.18	0.85	0.24	3.32	0.88	0.24	3.73	0.94	0.26
Road 11	11	0100-0200	3.97	0.92	0.26	3.51	0.77	0.21	3.36	0.77	0.21	3.03	0.74	0.20
Road 11	11	0200-0300	3.36	0.72	0.20	3.72	0.67	0.19	3.14	0.60	0.17	3.02	0.57	0.16
Road 11	11	0300-0400	3.52	0.73	0.20	3.81	0.65	0.18	3.25	0.61	0.17	3.15	0.58	0.16
Road 11	11	0400-0500	4.98	0.62	0.14	4.76	0.57	0.13	4.14	0.39	0.09	3.25	0.56	0.12
Road 11	11	0500-0600	4.87	0.21	0.07	4.73	0.16	0.05	3.88	0.17	0.05	3.77	0.18	0.05
Road 11	11	0600-0700	5.11	0.42	0.10	4.98	0.37	0.09	4.17	0.37	0.09	3.81	0.38	0.09
Road 11	11	0700-0800	4.44	0.42	0.10	4.44	0.35	0.09	3.54	0.35	0.09	3.17	0.42	0.10
Road 11	11	0800-0900	3.32	0.32	0.08	3.56	0.56	0.14	2.38	0.47	0.12	2.62	0.52	0.14
Road 11	11	0900-1000	3.03	0.28	0.07	3.03	0.62	0.16	2.20	0.42	0.10	2.39	0.52	0.14
Road 11	11	1000-1100	2.95	0.22	0.06	3.11	0.30	0.08	2.08	0.30	0.08	2.12	0.42	0.10
Road 11	11	1100-1200	2.84	0.25	0.06	3.16	0.36	0.09	1.08	0.44	0.11	2.26	0.31	0.08
Road 11	11	1200-1300	1.16	0.23	0.06	1.02	0.89	0.24	2.18	0.36	0.09	2.00	0.46	0.12
Road 11	11	1300-1400	2.41	0.23	0.06	2.41	0.23	0.06	1.95	0.23	0.06	1.95	0.23	0.06
Road 11	11	1400-1500	2.05	0.23	0.06	1.05	1.14	0.29	2.49	0.36	0.09	2.02	0.32	0.08
Road 11	11	1500-1600	2.01	0.29	0.08	1.05	1.11	0.29	2.57	0.36	0.09	2.17	0.32	0.08
Road 11	11	1600-1700	2.01	0.29	0.08	1.05	1.11	0.29	2.57	0.36	0.09	2.17	0.32	0.08
Road 11	11	1700-1800	3.93	0.26	0.08	3.93	0.26	0.08	2.55	0.36	0.09	2.55	0.36	0.09
Road 11	11	1800-1900	2.02	0.26	0.08	2.02	0.26	0.08	2.55	0.36	0.09	2.55	0.36	0.09
Road 11	11	1900-2000	5.47	0.98	0.26	5.08	0.26	0.07	9.12	0.35	0.09	8.68	0.17	0.05
Road 11	11	2000-2100	4.68	0.72	0.19	4.68	0.72	0.19	4.04	0.35	0.09	3.74	0.35	0.09
Road 11	11	2100-2200	3.32	0.74	0.20	3.32	0.74	0.20	3.02	0.35	0.09	2.78	0.35	0.09
Road 11	11	2200-2300	4.81	0.32	0.08	4.81	0.32	0.08	4.18	0.32	0.08	3.78	0.32	0.08
Road 11	11	2300-0000	5.66	0.32	0.08	5.66	0.32	0.08	4.62	0.32	0.08	4.18	0.32	0.08
Road 12	12	0000-0100	2.89	0.61	0.16	2.89	0.62	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 12	12	0100-0200	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 12	12	0200-0300	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 12	12	0300-0400	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 12	12	0400-0500	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 12	12	0500-0600	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 12	12	0600-0700	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 12	12	0700-0800	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 12	12	0800-0900	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 12	12	0900-1000	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 12	12	1000-1100	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 12	12	1100-1200	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 12	12	1200-1300	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 12	12	1300-1400	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 12	12	1400-1500	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 12	12	1500-1600	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 12	12	1600-1700	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 12	12	1700-1800	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 12	12	1800-1900	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 12	12	1900-2000	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 12	12	2000-2100	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 12	12	2100-2200	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 12	12	2200-2300	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 12	12	2300-0000	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 13	13	0000-0100	2.89	0.61	0.16	2.89	0.62	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 13	13	0100-0200	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 13	13	0200-0300	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 13	13	0300-0400	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 13	13	0400-0500	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 13	13	0500-0600	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 13	13	0600-0700	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 13	13	0700-0800	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 13	13	0800-0900	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 13	13	0900-1000	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 13	13	1000-1100	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 13	13	1100-1200	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 13	13	1200-1300	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 13	13	1300-1400	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 13	13	1400-1500	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 13	13	1500-1600	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 13	13	1600-1700	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 13	13	1700-1800	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 13	13	1800-1900	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 13	13	1900-2000	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 13	13	2000-2100	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 13	13	2100-2200	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 13	13	2200-2300	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 13	13	2300-0000	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 14	14	0000-0100	2.89	0.61	0.16	2.89	0.62	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 14	14	0100-0200	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 14	14	0200-0300	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 14	14	0300-0400	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 14	14	0400-0500	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 14	14	0500-0600	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 14	14	0600-0700	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16
Road 14	14	0700-0800	3.03	0.61	0.16	3.03	0.61	0.16	1.64	0.60	0.16	1.74	0.61	0.16

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for
AERMOD model (Eggsuan) Year 2033

Road Name	Road ID	Hour	NO _x Emission						NO Emission						
			Monthly/Hour			Monthly/Hour/Average			Monthly/Hour			Monthly/Hour/Average			
			g/km ³	g/km ³	g/km ³	g/km ³	g/km ³	g/km ³	g/km ³	g/km ³	g/km ³	g/km ³	g/km ³	g/km ³	
Road 14	14	0800-0900	4.182	4.182	3.322	4.182	4.182	3.322	4.182	4.182	3.322	4.182	4.182	3.322	4.182
Road 14	14	0900-1000	4.7112	4.7112	1.395	4.7112	4.7112	1.395	4.7112	4.7112	1.395	4.7112	4.7112	1.395	4.7112
Road 14	14	1000-1100	5.176	5.176	1.355	4.657	7.136	1.228	2.316	5.448	6.035	2.061	3.156	5.376	0.5
Road 14	14	1100-1200	5.002	5.002	1.355	4.657	7.136	1.228	2.316	5.448	6.035	2.061	3.156	5.376	0.5
Road 14	14	1200-1300	7.788	7.788	1.355	2.615	7.136	1.228	2.316	5.448	6.035	2.061	3.156	5.376	0.5
Road 14	14	1300-1400	8.076	8.076	1.688	2.686	7.136	1.228	2.316	5.448	6.035	2.061	3.156	5.376	0.5
Road 14	14	1400-1500	8.028	8.028	2.786	2.695	7.136	1.228	2.316	5.448	6.035	2.061	3.156	5.376	0.5
Road 14	14	1500-1600	4.245	4.245	2.695	6.932	1.558	2.686	3.156	5.448	6.035	2.061	3.156	5.376	0.5
Road 14	14	1600-1700	7.552	7.552	2.686	6.932	1.558	2.686	3.156	5.448	6.035	2.061	3.156	5.376	0.5
Road 14	14	1700-1800	5.992	5.992	2.615	6.932	1.558	2.686	3.156	5.448	6.035	2.061	3.156	5.376	0.5
Road 14	14	1800-1900	5.992	5.992	2.615	6.932	1.558	2.686	3.156	5.448	6.035	2.061	3.156	5.376	0.5
Road 14	14	1900-2000	3.296	3.296	5.647	9.316	0.046	5.206	8.876	2.061	5.356	6.015	1.888	3.236	5.506
Road 14	14	2000-2100	3.206	3.206	4.711	7.356	0.046	3.967	6.876	2.061	5.356	6.015	1.888	3.236	5.506
Road 14	14	2100-2200	2.948	2.948	7.877	6.446	2.786	5.206	8.876	2.061	5.356	6.015	1.888	3.236	5.506
Road 14	14	2200-2300	2.948	2.948	7.877	6.446	2.786	5.206	8.876	2.061	5.356	6.015	1.888	3.236	5.506
Road 14	14	2300-2400	3.016	3.016	4.767	5.066	2.826	2.826	4.857	1.876	4.466	5.146	1.776	4.746	2.966
Road 15	15	0800-0900	4.838	4.838	5.087	4.707	4.838	4.838	4.838	4.838	4.838	4.838	4.838	4.838	4.838
Road 15	15	0900-1000	5.728	5.728	4.881	4.707	5.146	4.376	4.087	1.866	1.606	1.606	1.666	1.666	1.666
Road 15	15	1000-1100	6.448	6.448	4.738	4.881	5.716	4.246	3.936	2.016	4.067	1.376	1.786	1.786	1.786
Road 15	15	1100-1200	6.448	6.448	4.738	4.881	5.716	4.246	3.936	2.016	4.067	1.376	1.786	1.786	1.786
Road 15	15	1200-1300	5.168	5.168	5.968	5.467	6.932	1.558	2.686	1.876	2.016	1.566	1.606	1.836	1.696
Road 15	15	1300-1400	6.016	6.016	8.527	7.886	3.442	2.846	7.746	1.651	5.517	3.256	1.476	3.316	2.886
Road 15	15	1400-1500	6.016	6.016	8.527	7.886	3.442	2.846	7.746	1.651	5.517	3.256	1.476	3.316	2.886
Road 15	15	1500-1600	5.728	5.728	4.881	2.896	5.226	4.282	2.686	1.866	1.066	1.066	1.786	1.786	1.786
Road 15	15	1600-1700	6.266	6.266	4.027	2.896	5.736	2.776	2.576	2.146	3.036	8.976	1.956	4.006	8.706
Road 15	15	1700-1800	6.266	6.266	4.027	2.896	5.736	2.776	2.576	2.146	3.036	8.976	1.956	4.006	8.706
Road 15	15	1800-1900	7.726	7.726	5.517	6.106	6.932	5.046	4.876	2.636	2.016	1.426	1.786	1.786	1.786
Road 15	15	1900-2000	7.546	7.546	5.527	6.116	6.906	5.096	4.776	2.686	2.016	1.426	1.786	1.786	1.786
Road 15	15	2000-2100	7.616	7.616	5.527	6.116	6.906	5.156	4.776	2.686	2.016	1.426	1.786	1.786	1.786
Road 15	15	2100-2200	5.186	5.186	5.968	5.467	6.932	1.558	2.686	1.876	2.016	1.566	1.606	1.836	1.696
Road 15	15	2200-2300	3.056	3.056	1.967	1.466	2.836	1.466	1.376	1.426	1.376	6.786	1.306	1.616	6.216
Road 15	15	2300-2400	2.956	2.956	1.226	1.136	2.746	1.136	1.151	1.376	1.376	6.786	1.306	1.616	6.216
Road 15	15	2400-2500	2.956	2.956	1.226	1.136	2.746	1.136	1.151	1.376	1.376	6.786	1.306	1.616	6.216
Road 15	15	2500-2600	2.986	2.986	1.177	1.096	2.466	1.126	1.046	1.396	1.396	6.476	1.316	1.567	4.786
Road 15	15	2600-2700	3.016	3.016	1.177	1.096	2.466	1.126	1.046	1.396	1.396	6.476	1.316	1.567	4.786
Road 15	15	2700-2800	1.146	1.146	6.336	6.706	1.036	5.976	1.836	1.156	6.676	2.056	1.016	5.886	1.806
Road 15	15	2800-2900	1.266	1.266	4.798	1.476	1.136	4.306	1.376	1.176	1.456	1.376	1.036	1.336	1.206
Road 15	15	2900-3000	1.266	1.266	4.798	1.476	1.136	4.306	1.376	1.176	1.456	1.376	1.036	1.336	1.206
Road 15	15	3000-3100	1.516	1.516	3.876	1.036	1.346	3.006	9.196	1.276	2.766	4.876	1.076	4.006	7.356
Road 15	15	3100-3200	1.566	1.566	3.876	1.036	1.346	3.416	9.096	1.296	2.776	4.926	1.086	4.106	7.406
Road 16	16	0800-0900	1.566	1.566	6.576	2.016	1.386	5.836	1.796	1.266	3.306	1.636	1.036	1.096	1.416
Road 16	16	0900-1000	1.566	1.566	6.576	2.016	1.386	5.836	1.796	1.266	3.306	1.636	1.036	1.096	1.416
Road 16	16	1000-1100	1.826	1.826	3.936	1.036	1.656	3.036	9.276	1.316	2.456	4.496	1.186	1.266	6.636
Road 16	16	1100-1200	1.936	1.936	4.017	1.266	1.756	3.736	1.146	1.286	1.726	3.436	1.146	2.456	7.446
Road 16	16	1200-1300	2.036	2.036	3.507	1.246	1.856	2.756	1.446	1.396	1.986	1.676	1.206	1.786	5.466
Road 16	16	1300-1400	2.126	2.126	3.127	1.026	1.946	3.036	9.296	1.316	2.086	6.386	1.206	1.876	5.746
Road 16	16	1400-1500	2.036	2.036	3.507	1.246	1.856	2.756	1.446	1.396	1.986	1.676	1.206	1.786	5.466
Road 16	16	1500-1600	4.326	4.326	8.826	2.706	3.936	8.026	2.456	2.066	4.246	3.306	1.886	3.846	1.186
Road 16	16	1600-1700	4.466	4.466	9.446	2.896	4.066	8.586	2.676	2.216	4.466	3.476	1.916	4.046	1.246
Road 16	16	1700-1800	4.466	4.466	9.446	2.896	4.066	8.586	2.676	2.216	4.466	3.476	1.916	4.046	1.246
Road 16	16	1800-1900	4.486	4.486	8.886	3.036	4.116	9.086	2.786	2.176	4.796	3.746	1.986	4.376	1.346
Road 16	16	1900-2000	4.346	4.346	7.916	2.426	3.306	7.226	2.721	1.926	1.926	4.546	1.366	1.776	1.116
Road 16	16	2000-2100	2.336	2.336	1.626	1.626	2.156	4.971	1.486	1.536	1.536	1.606	1.436	1.376	8.916
Road 16	16	2100-2200	1.636	1.636	2.216	1.496	1.496	2.026	6.796	1.516	2.046	6.266	1.366	1.846	5.556
Road 16	16	2200-2300	1.516	1.516	2.047	6.256	1.466	1.886	5.896	1.376	1.866	5.696	1.266	1.716	5.246
Road 16	16	2300-2400	1.516	1.516	2.047	6.256	1.466	1.886	5.896	1.376	1.866	5.696	1.266	1.716	5.246
Road 16	16	2400-2500	1.596	1.596	1.576	4.806	1.516	1.496	1.476	1.866	1.466	3.396	1.226	1.306	3.966
Road 16	16	2500-2600	1.196	1.196	1.037	3.216	1.067	9.906	2.966	1.066	9.276	2.176	1.756	8.826	1.846
Road 16	16	2600-2700	1.296	1.296	1.037	3.216	1.067	9.906	2.966	1.066	9.276	2.176	1.756	8.826	1.846
Road 16	16	2700-2800	1.426	1.426	6.386	1.866	1.276	5.696	1.666	1.066	1.766	9.396	9.206	4.136	1.271
Road 16	16	2800-2900	1.536	1.536	4.986	1.606	1.366	4.886	1.436	1.086	1.886	1.146	1.376	3.367	8.926
Road 16	16	2900-3000	1.536	1.536	4.986	1.606	1.366	4.886	1.436	1.086	1.886	1.146	1.376	3.367	8.926
Road 16	16	3000-3100	1.656	1.656	1.137	3.306	1.466	1.066	2.976	1.126	1.716	2.256	9.706	6.647	1.946
Road 16	16	3100-3200	1.746	1.746	1.566	3.786	1.576	2.326	6.776	1.146	1.716	4.996	1.026	1.516	4.406
Road 17	17	0700-0800	4.016	4.016	2.216	3.536	3.836	1.096	3.206	2.096	1.866	1.866	1.926	1.866	1.926
Road 17	17	0800-0900	4.016	4.016	2.216	3.536	3.836	1.096	3.206	2.096	1.866	1.866	1.926	1.866	1.926
Road 17	17	0900-1000	5.586	5.586	1.666	4.946	5.126	1.556	4.556	2.666	2.876	2.306	2.366	1.746	2.096
Road 17	17	1000-1100	4.646	4.646	1.256	3.646	4.246	1.136	3.326	2.216	2.696	1.686	1.916	1.426	1.926
Road 17	17	1100-1200	4.646	4.646	1.256	3.646	4.246	1.136	3.326	2.216	2.696	1.686	1.916	1.426	1.926
Road 17	17	1200-1300	4.306	4.306	1.256	3.646	4.246	1.136	3.326	2.216	2.696	1.686	1.916	1.426	1.926
Road 17	17	1300-1400	4.306	4.306	1.256	3.646	4.246	1.136	3.326	2.216	2.696	1.686	1.916	1.426	1.926
Road 17	17	1400-1500	6.846	6.846	1.576	4.936	5.636	1.386	4.046	2.786	2.686	2.486	2.486	1.876	1.726
Road 17	17	1500-1600	6.846	6.846	1.576	4.936	5.636	1.386	4.046	2.786	2.686	2.486	2.486	1.876	1.726

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for
AERMOD model (Eggsuan) Year 2033

Road Name	Road ID	Hour	NO _x Emission						NO ₂ Emission					
			MonthlyHourly			MonthlyHourlyAverage			MonthlyHourly			MonthlyHourlyAverage		
			g/km ²	g/m ²	g/km ²	g/km ²	g/km ²	g/km ²	g/km ²	g/m ²	g/km ²	g/km ²	g/km ²	g/km ²
Road 17	17	1800-1700	6756	1.882	4.342	1.882	4.342	1.882	4.342	1.882	4.342	1.882	4.342	1.882
Road 17	17	1800-1700	12926	4.922	1.276	1.276	4.922	1.166	3.008	2.455	6.352	1.862	7.238	5.786
Road 17	17	1800-1800	2886	1.071	2.005	2.666	6.477	0.178	1.655	4.008	1.186	1.528	3.696	0.66
Road 17	17	1800-1900	1700	0.622	1.521	1.882	4.342	1.882	4.342	1.882	4.342	1.882	4.342	1.882
Road 17	17	2000-2100	1272	0.472	2.475	1.276	5.527	2.262	0.695	3.375	1.906	2.748	2.372	1.776
Road 17	17	2100-2200	13412	2.347	0.768	1.508	2.186	0.611	0.178	1.811	0.306	3.506	1.166	0.776
Road 17	17	2200-2300	16326	4.272	0.696	1.508	2.117	0.168	1.776	1.746	5.006	1.006	1.646	0.66
Road 17	17	2300-2400	1700	0.622	1.521	1.882	4.342	1.882	4.342	1.882	4.342	1.882	4.342	1.882
Road 18	18	0000-0100	11442	6.542	2.556	0.108	0.588	2.306	1.156	0.588	2.576	0.101	0.506	0.807
Road 18	18	0100-0200	12426	4.738	1.086	1.138	4.258	0.606	1.176	1.442	1.726	0.108	0.872	0.67
Road 18	18	0200-0300	13426	5.138	1.286	1.138	4.438	0.606	1.176	1.442	1.726	0.108	0.872	0.67
Road 18	18	0300-0400	1506	0.378	1.266	1.342	2.966	0.158	1.226	0.707	1.066	0.076	0.267	0.167
Road 18	18	0400-0500	16362	4.316	0.386	1.386	3.996	1.116	0.256	0.307	1.186	0.086	0.262	0.17
Road 18	18	0500-0600	16362	4.316	0.386	1.386	3.996	1.116	0.256	0.307	1.186	0.086	0.262	0.17
Road 18	18	0600-0700	15752	1.392	0.776	1.542	2.167	0.496	1.266	1.126	0.486	1.176	0.907	0.37
Road 18	18	0700-0800	16426	3.047	1.166	1.542	2.776	0.108	1.276	1.206	8.996	1.136	1.206	0.66
Road 18	18	0800-0900	16362	4.316	0.386	1.386	3.996	1.116	0.256	0.307	1.186	0.086	0.262	0.17
Road 18	18	0900-1000	15262	3.226	1.276	1.676	2.947	0.158	1.256	2.216	0.686	1.136	1.196	0.77
Road 18	18	1000-1100	20442	3.517	1.276	1.856	2.867	0.112	1.302	0.210	7.846	1.166	1.106	0.77
Road 18	18	1100-1200	19626	2.966	1.138	1.856	2.456	0.108	1.311	1.936	7.486	1.166	1.176	0.66
Road 18	18	1200-1300	23912	6.442	2.206	2.786	6.442	0.108	1.311	1.936	7.486	1.166	1.176	0.66
Road 18	18	1300-1400	2986	0.976	2.346	2.712	5.457	0.138	1.611	0.326	1.276	0.144	0.296	0.1
Road 18	18	1400-1500	6226	1.427	4.438	2.712	5.587	0.222	1.606	1.344	1.314	1.456	0.306	1.1
Road 18	18	1500-1600	27712	5.000	1.342	2.712	6.437	0.222	1.196	1.442	1.726	0.108	0.872	0.67
Road 18	18	1600-1700	2986	0.976	2.346	2.712	5.457	0.138	1.611	0.326	1.276	0.144	0.296	0.1
Road 18	18	1700-1800	2986	0.976	2.346	2.712	5.457	0.138	1.611	0.326	1.276	0.144	0.296	0.1
Road 19	19	0000-0100	11442	6.542	2.556	0.108	0.588	2.306	1.156	0.588	2.576	0.101	0.506	0.807
Road 19	19	0100-0200	12426	4.738	1.086	1.138	4.258	0.606	1.176	1.442	1.726	0.108	0.872	0.67
Road 19	19	0200-0300	13426	5.138	1.286	1.138	4.438	0.606	1.176	1.442	1.726	0.108	0.872	0.67
Road 19	19	0300-0400	1506	0.378	1.266	1.342	2.966	0.158	1.226	0.707	1.066	0.076	0.267	0.167
Road 19	19	0400-0500	16362	4.316	0.386	1.386	3.996	1.116	0.256	0.307	1.186	0.086	0.262	0.17
Road 19	19	0500-0600	16426	3.047	1.166	1.542	2.776	0.108	1.276	1.206	8.996	1.136	1.206	0.66
Road 19	19	0600-0700	15752	1.392	0.776	1.542	2.167	0.496	1.266	1.126	0.486	1.176	0.907	0.37
Road 19	19	0700-0800	16426	3.047	1.166	1.542	2.776	0.108	1.276	1.206	8.996	1.136	1.206	0.66
Road 19	19	0800-0900	16362	4.316	0.386	1.386	3.996	1.116	0.256	0.307	1.186	0.086	0.262	0.17
Road 19	19	0900-1000	15262	3.226	1.276	1.676	2.947	0.158	1.256	2.216	0.686	1.136	1.196	0.77
Road 19	19	1000-1100	20442	3.517	1.276	1.856	2.867	0.112	1.302	0.210	7.846	1.166	1.106	0.77
Road 19	19	1100-1200	19626	2.966	1.138	1.856	2.456	0.108	1.311	1.936	7.486	1.166	1.176	0.66
Road 19	19	1200-1300	23912	6.442	2.206	2.786	6.442	0.108	1.311	1.936	7.486	1.166	1.176	0.66
Road 19	19	1300-1400	2986	0.976	2.346	2.712	5.457	0.138	1.611	0.326	1.276	0.144	0.296	0.1
Road 19	19	1400-1500	6226	1.427	4.438	2.712	5.587	0.222	1.606	1.344	1.314	1.456	0.306	1.1
Road 19	19	1500-1600	27712	5.000	1.342	2.712	6.437	0.222	1.196	1.442	1.726	0.108	0.872	0.67
Road 19	19	1600-1700	2986	0.976	2.346	2.712	5.457	0.138	1.611	0.326	1.276	0.144	0.296	0.1
Road 19	19	1700-1800	2986	0.976	2.346	2.712	5.457	0.138	1.611	0.326	1.276	0.144	0.296	0.1
Road 20	20	0000-0100	11442	6.542	2.556	0.108	0.588	2.306	1.156	0.588	2.576	0.101	0.506	0.807
Road 20	20	0100-0200	12426	4.738	1.086	1.138	4.258	0.606	1.176	1.442	1.726	0.108	0.872	0.67
Road 20	20	0200-0300	13426	5.138	1.286	1.138	4.438	0.606	1.176	1.442	1.726	0.108	0.872	0.67
Road 20	20	0300-0400	1506	0.378	1.266	1.342	2.966	0.158	1.226	0.707	1.066	0.076	0.267	0.167
Road 20	20	0400-0500	16362	4.316	0.386	1.386	3.996	1.116	0.256	0.307	1.186	0.086	0.262	0.17
Road 20	20	0500-0600	16426	3.047	1.166	1.542	2.776	0.108	1.276	1.206	8.996	1.136	1.206	0.66
Road 20	20	0600-0700	15752	1.392	0.776	1.542	2.167	0.496	1.266	1.126	0.486	1.176	0.907	0.37
Road 20	20	0700-0800	16426	3.047	1.166	1.542	2.776	0.108	1.276	1.206	8.996	1.136	1.206	0.66
Road 20	20	0800-0900	16362	4.316	0.386	1.386	3.996	1.116	0.256	0.307	1.186	0.086	0.262	0.17
Road 20	20	0900-1000	15262	3.226	1.276	1.676	2.947	0.158	1.256	2.216	0.686	1.136	1.196	0.77
Road 20	20	1000-1100	20442	3.517	1.276	1.856	2.867	0.112	1.302	0.210	7.846	1.166	1.106	0.77
Road 20	20	1100-1200	19626	2.966	1.138	1.856	2.456	0.108	1.311	1.936	7.486	1.166	1.176	0.66
Road 20	20	1200-1300	23912	6.442	2.206	2.786	6.442	0.108	1.311	1.936	7.486	1.166	1.176	0.66
Road 20	20	1300-1400	2986	0.976	2.346	2.712	5.457	0.138	1.611	0.326	1.276	0.144	0.296	0.1
Road 20	20	1400-1500	6226	1.427	4.438	2.712	5.587	0.222	1.606	1.344	1.314	1.456	0.306	1.1
Road 20	20	1500-1600	27712	5.000	1.342	2.712	6.437	0.222	1.196	1.442	1.726	0.108	0.872	0.67
Road 20	20	1600-1700	2986	0.976	2.346	2.712	5.457	0.138	1.611	0.326	1.276	0.144	0.296	0.1
Road 20	20	1700-1800	2986	0.976	2.346	2.712	5.457	0.138	1.611	0.326	1.276	0.144	0.296	0.1
Road 20	20	1800-1900	2986	0.976	2.346	2.712	5.457	0.138	1.611	0.326	1.276	0.144	0.296	0.1
Road 20	20	1900-2000	2986	0.976	2.346	2.712	5.457	0.138	1.611	0.326	1.276	0.144	0.296	0.1
Road 20	20	2000-2100	2986	0.976	2.346	2.712	5.457	0.138	1.611	0.326	1.276	0.144	0.296	0.1
Road 20	20	2100-2200	2986	0.976	2.346	2.712	5.457	0.138	1.611	0.326	1.276	0.144	0.296	0.1
Road 20	20	2200-2300	2986	0.976	2.346	2.712	5.457	0.138	1.611	0.326	1.276	0.144	0.296	0.1
Road 20	20	2300-2400	2986	0.976	2.346	2.712	5.457	0.138	1.611	0.326	1.276	0.144	0.296	0.1
Road 20	20	2400-0100	2986	0.976	2.346	2.712	5.457	0.138	1.611	0.326	1.276	0.144	0.296	0.1
Road 20	20	2500-0200	2986	0.976	2.346	2.712	5.457	0.138	1.611	0.326	1.276	0.144	0.296	0.1

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for
AERMOD model (Gibson) Year 2033

Road Name			NO Emission						NO Emission					
Road Name	Road ID	Hour	MonthlyVolume			MonthlyAverage			MonthlyVolume			MonthlyAverage		
			gpm ²	gpm ²	gpm ²	gpm ²	gpm ²	gpm ²	gpm ²	gpm ²	gpm ²	gpm ²	gpm ²	gpm ²
Road 21	21	0000-0500	1342.0	1217.0	1384.0	1392.0	1392.0	1392.0	1392.0	1392.0	1392.0	1392.0	1392.0	
Road 21	21	0500-0600	1456.0	1700.0	1267.0	1311.0	8339.0	1548.0	5047.0	1666.0	1182.0	4347.0	5966.0	
Road 21	21	0600-0900	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	0900-1200	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1200-1300	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1300-1400	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1400-1500	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1500-1600	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1600-1700	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1700-1800	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1800-1900	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1900-2000	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	2000-2100	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	2100-2200	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	2200-2300	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	2300-2400	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	0000-0500	1342.0	1217.0	1384.0	1392.0	1392.0	1392.0	1392.0	1392.0	1392.0	1392.0	1392.0	
Road 21	21	0500-0600	1456.0	1700.0	1267.0	1311.0	8339.0	1548.0	5047.0	1666.0	1182.0	4347.0	5966.0	
Road 21	21	0600-0900	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	0900-1200	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1200-1300	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1300-1400	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1400-1500	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1500-1600	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1600-1700	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1700-1800	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1800-1900	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1900-2000	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	2000-2100	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	2100-2200	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	2200-2300	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	2300-2400	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	0000-0500	1342.0	1217.0	1384.0	1392.0	1392.0	1392.0	1392.0	1392.0	1392.0	1392.0	1392.0	
Road 21	21	0500-0600	1456.0	1700.0	1267.0	1311.0	8339.0	1548.0	5047.0	1666.0	1182.0	4347.0	5966.0	
Road 21	21	0600-0900	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	0900-1200	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1200-1300	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1300-1400	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1400-1500	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1500-1600	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1600-1700	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1700-1800	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1800-1900	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1900-2000	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	2000-2100	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	2100-2200	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	2200-2300	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	2300-2400	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	0000-0500	1342.0	1217.0	1384.0	1392.0	1392.0	1392.0	1392.0	1392.0	1392.0	1392.0	1392.0	
Road 21	21	0500-0600	1456.0	1700.0	1267.0	1311.0	8339.0	1548.0	5047.0	1666.0	1182.0	4347.0	5966.0	
Road 21	21	0600-0900	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	0900-1200	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1200-1300	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1300-1400	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1400-1500	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1500-1600	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1600-1700	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1700-1800	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1800-1900	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1900-2000	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	2000-2100	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	2100-2200	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	2200-2300	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	2300-2400	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	0000-0500	1342.0	1217.0	1384.0	1392.0	1392.0	1392.0	1392.0	1392.0	1392.0	1392.0	1392.0	
Road 21	21	0500-0600	1456.0	1700.0	1267.0	1311.0	8339.0	1548.0	5047.0	1666.0	1182.0	4347.0	5966.0	
Road 21	21	0600-0900	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	0900-1200	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1200-1300	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1300-1400	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1400-1500	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1500-1600	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1600-1700	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1700-1800	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1800-1900	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	1900-2000	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	2000-2100	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	2100-2200	1575.0	6252.0	7438.0	4145.0	5056.0	6867.0	1076.0	4347.0	5076.0	8410.0	3376.0	
Road 21	21	220												

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for
ASPM 4/9/19 across the 4 different roads Year 2033

Road Name			Road ID			NO _x Emission						NO ₂ Emission					
			Hour			MonthlyHourMin			MonthlyHourAverage			MonthlyHourMin			MonthlyHourAverage		
						g/min	g/hr	tonne/hour	g/min	g/hr	tonne/hour	g/min	g/hr	tonne/hour	g/min	g/hr	tonne/hour
Road 24	24	0900-0900	1.668	1.02	0.07	1.538	2.865	0.71	1.417	6.296	1.22	1.058	5.775	1.128	0.28	0.28	0.28
Road 24	24	0900-0900	1.668	1.02	0.07	1.538	2.865	0.71	1.417	6.296	1.22	1.058	5.775	1.128	0.28	0.28	0.28
Road 24	24	1000-1000	1.886	1.85	0.85	1.665	3.502	0.77	1.678	6.540	1.10	1.156	5.945	1.278	0.31	0.31	0.31
Road 24	24	1100-1200	1.796	1.536	0.98	1.645	3.295	0.82	1.525	6.135	1.08	1.206	5.985	1.206	0.30	0.30	0.30
Road 24	24	1200-1300	1.366	1.26	0.63	1.453	3.126	0.77	1.453	3.126	0.77	1.453	3.126	0.77	0.19	0.19	0.19
Road 24	24	1300-1400	1.886	1.28	0.77	1.715	3.886	0.97	1.886	6.841	1.56	1.916	6.225	1.426	0.35	0.35	0.35
Road 24	24	1400-1500	1.936	1.93	0.97	1.996	3.765	0.97	1.975	6.834	1.56	1.895	6.295	1.413	0.35	0.35	0.35
Road 24	24	1500-1600	1.756	1.75	0.97	1.756	3.527	0.97	1.756	3.527	0.97	1.756	3.527	0.97	0.24	0.24	0.24
Road 24	24	1600-1700	1.526	1.02	0.57	1.886	4.085	1.02	1.768	6.238	1.23	1.086	5.708	1.126	0.28	0.28	0.28
Road 24	24	1700-1800	1.936	1.83	0.97	1.836	3.886	0.97	1.836	3.886	0.97	1.836	3.886	0.97	0.24	0.24	0.24
Road 24	24	1900-2000	3.006	1.95	1.07	2.916	1.125	1.08	1.086	2.766	0.70	1.496	1.176	0.88	0.33	0.33	0.33
Road 24	24	2000-2100	2.206	2.10	1.02	2.536	2.146	0.77	2.106	1.996	1.01	1.356	0.936	0.63	0.31	0.31	0.31
Road 24	24	2100-2200	2.206	2.10	1.02	2.536	2.146	0.77	2.106	1.996	1.01	1.356	0.936	0.63	0.31	0.31	0.31
Road 24	24	2200-2300	1.366	1.36	0.63	1.366	1.366	0.63	1.366	1.366	0.63	1.366	1.366	0.63	0.16	0.16	0.16
Road 24	24	2300-0000	1.336	1.36	0.63	1.776	1.636	0.66	1.596	2.596	0.67	1.476	1.716	0.67	0.16	0.16	0.16
Road 25	25	0900-0900	1.376	1.39	0.59	1.536	1.256	0.59	1.536	1.256	0.59	1.536	1.256	0.59	0.15	0.15	0.15
Road 25	25	0900-0900	1.376	1.39	0.59	1.536	1.256	0.59	1.536	1.256	0.59	1.536	1.256	0.59	0.15	0.15	0.15
Road 25	25	1000-1000	1.366	1.36	0.63	1.366	1.366	0.63	1.366	1.366	0.63	1.366	1.366	0.63	0.16	0.16	0.16
Road 25	25	1000-1000	1.366	1.36	0.63	1.366	1.366	0.63	1.366	1.366	0.63	1.366	1.366	0.63	0.16	0.16	0.16
Road 25	25	1100-1200	1.436	1.43	0.66	1.886	3.086	0.77	1.886	3.086	0.77	1.886	3.086	0.77	0.20	0.20	0.20
Road 25	25	1200-1300	1.436	1.43	0.66	1.886	3.086	0.77	1.886	3.086	0.77	1.886	3.086	0.77	0.20	0.20	0.20
Road 25	25	1300-1400	1.436	1.43	0.66	1.886	3.086	0.77	1.886	3.086	0.77	1.886	3.086	0.77	0.20	0.20	0.20
Road 25	25	1400-1500	1.516	1.76	1.02	1.936	3.046	1.02	1.936								
Road 25	25	1500-1600	1.516	1.76	1.02	1.936	3.046	1.02	1.936								
Road 25	25	1600-1700	1.516	1.76	1.02	1.936	3.046	1.02	1.936								
Road 25	25	1700-1800	1.516	1.76	1.02	1.936	3.046	1.02	1.936								
Road 25	25	1800-1900	1.436	1.43	0.66	1.886	3.086	0.77	1.886	3.086	0.77	1.886	3.086	0.77	0.20	0.20	0.20
Road 25	25	1900-2000	1.436	1.43	0.66	1.886	3.086	0.77	1.886	3.086	0.77	1.886	3.086	0.77	0.20	0.20	0.20
Road 25	25	2000-2100	1.436	1.43	0.66	1.886	3.086	0.77	1.886	3.086	0.77	1.886	3.086	0.77	0.20	0.20	0.20
Road 25	25	2100-2200	1.436	1.43	0.66	1.886	3.086	0.77	1.886	3.086	0.77	1.886	3.086	0.77	0.20	0.20	0.20
Road 25	25	2200-2300	1.366	1.36	0.63	1.366	1.366	0.63	1.366	1.366	0.63	1.366	1.366	0.63	0.16	0.16	0.16
Road 25	25	2300-0000	1.336	1.36	0.63	1.776	1.636	0.66	1.596	2.596	0.67	1.476	1.716	0.67	0.16	0.16	0.16
Road 26	26	0900-0900	1.366	1.36	0.63	1.366	1.366	0.63	1.366	1.366	0.63	1.366	1.366	0.63	0.16	0.16	0.16
Road 26	26	0900-0900	1.366	1.36	0.63	1.366	1.366	0.63	1.366	1.366	0.63	1.366	1.366	0.63	0.16	0.16	0.16
Road 26	26	1000-1000	1.366	1.36	0.63	1.366	1.366	0.63	1.366	1.366	0.63	1.366	1.366	0.63	0.16	0.16	0.16
Road 26	26	1000-1000	1.366	1.36	0.63	1.366	1.366	0.63	1.366	1.366	0.63	1.366	1.366	0.63	0.16	0.16	0.16
Road 26	26	1100-1200	1.436	1.43	0.66	1.886	3.086	0.77	1.886	3.086	0.77	1.886	3.086	0.77	0.20	0.20	0.20
Road 26	26	1200-1300	1.436	1.43	0.66	1.886	3.086	0.77	1.886	3.086	0.77	1.886	3.086	0.77	0.20	0.20	0.20
Road 26	26	1300-1400	1.436	1.43	0.66	1.886	3.086	0.77	1.886	3.086	0.77	1.886	3.086	0.77	0.20	0.20	0.20
Road 26	26	1400-1500	1.516	1.76	1.02	1.936	3.046	1.02	1.936								
Road 26	26	1500-1600	1.516	1.76	1.02	1.936	3.046	1.02	1.936								
Road 26	26	1600-1700	1.516	1.76	1.02	1.936	3.046	1.02	1.936								
Road 26	26	1700-1800	1.516	1.76	1.02	1.936	3.046	1.02	1.936								
Road 26	26	1800-1900	1.436	1.43	0.66	1.886	3.086	0.77	1.886	3.086	0.77	1.886	3.086	0.77	0.20	0.20	0.20
Road 26	26	1900-2000	1.436	1.43	0.66	1.886	3.086	0.77	1.886	3.086	0.77	1.886	3.086	0.77	0.20	0.20	0.20
Road 26	26	2000-2100	1.436	1.43	0.66	1.886	3.086	0.77	1.886	3.086	0.77	1.886	3.086	0.77	0.20	0.20	0.20
Road 26	26	2100-2200	1.436	1.43	0.66	1.886	3.086	0.77	1.886	3.086	0.77	1.886	3.086	0.77	0.20	0.20	0.20
Road 26	26	2200-2300	1.366	1.36	0.63	1.366	1.366	0.63	1.366	1.366	0.63	1.366	1.366	0.63	0.16	0.16	0.16
Road 26	26	2300-0000	1.336	1.36	0.63	1.776	1.636	0.66	1.596	2.596	0.67	1.476	1.716	0.67	0.16	0.16	0.16
Road 27	27	0900-0900	1.366	1.36	0.63	1.366	1.366	0.63	1.366	1.366	0.63	1.366	1.366	0.63	0.16	0.16	0.16
Road 27	27	0900-0900	1.366	1.36	0.63	1.366	1.366	0.63	1.366	1.366	0.63	1.366	1.366	0.63	0.16	0.16	0.16
Road 27	27	1000-1000	1.366	1.36	0.63	1.366	1.366	0.63	1.366	1.366	0.63	1.366	1.366	0.63	0.16	0.16	0.16
Road 27	27	1000-1000	1.366	1.36	0.63	1.366	1.366	0.63	1.366	1.366	0.63	1.366	1.366	0.63	0.16	0.16	0.16
Road 27	27	1100-1200	1.436	1.43	0.66	1.886	3.086	0.77	1.886	3.086	0.77	1.886	3.086	0.77	0.20	0.20	0.20
Road 27	27	1200-1300	1.436	1.43	0.66	1.886	3.086	0.77	1.886	3.086	0.77	1.886	3.086	0.77	0.20	0.20	0.20
Road 27	27	1300-1400	1.436	1.43	0.66	1.886	3.086	0.77	1.886	3.086	0.77	1.886	3.086	0.77	0.20	0.20	0.20
Road 27	27	1400-1500	1.516	1.76	1.02	1.936	3.046	1.02	1.936								
Road 27	27	1500-1600	1.516	1.76	1.02	1.936	3.046	1.02	1.936								
Road 27	27	1600-1700	1.516	1.76	1.02	1.936	3.046	1.02	1.936								
Road 27	27	1700-1800	1.516	1.76	1.02	1.936	3.046	1.02	1.936								
Road 27	27	1800-1900	1.436	1.43	0.66	1.886	3.086	0.77	1.886	3.086	0.77	1.886	3.086	0.77	0.20	0.20	0.20
Road 27	27	1900-2000	1.436	1.43	0.66	1.886	3.086	0.77	1.886	3.086	0.77	1.886	3.086	0.77	0.20	0.20	0.20
Road 27	27	2000-2100	1.436	1.43	0.66	1.886	3.086	0.77	1.886	3.086	0.77	1.886	3.086	0.77	0.20	0.20	0.20
Road 27	27	2100-2200	1.436	1.43	0.66	1.886	3.086	0.77	1.886	3.086	0.77	1.886	3.086	0.77	0.20	0.20	0.20
Road 27	27	2200-2300	1.366	1.36	0.63	1.366	1.366	0.63	1.366	1.366	0.63	1.366	1.366	0.63	0.16	0.16	0.16
Road 27	27	2300-0000	1.336	1.36	0.63	1.776	1.636	0.66	1.596	2.596	0.67	1.476	1.716	0.67	0.16	0.16	0.16
Road 28	28	0900-0900	1.366	1.36	0.63	1.366	1.366	0.63	1.366	1.366	0.63	1.366	1.366	0.63	0.16	0.16	0.16
Road 28	28	0900-0900	1.366	1.36	0.63	1.366	1.366	0.63	1.366	1.366	0.63	1.366	1.366	0.63	0.16	0.16	0.16
Road 28	28	1000-1000	1.366	1.36	0.63	1.366	1.366	0.63	1.366	1.366	0.63	1.366	1.366	0.63	0.16	0.16	0.16
Road 28	28	1000-1000	1.366	1.36	0.63	1.366	1.366	0.63	1.366	1.366	0.63	1.366	1.366	0.63	0.16	0.16	0.16
Road 28	28	1100-1200	1.436	1.43	0.66	1.886	3.086	0.77	1.886	3.086	0.77	1.886	3.086	0.77	0.20	0.20	0.20
Road 28	28	1200-1300	1.436	1.43	0.66	1.886	3.086	0.77	1.886	3.086	0.77	1.886	3.086	0.77	0.20	0.2	

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for
AFRMA 2003, 2004 and 2005
Year 2003

Road Name		Road ID	Hour	NO _x Emission						NO ₂ Emission					
				MonthlyHourMin			MonthlyHourAverage			MonthlyHourMin			MonthlyHourAverage		
				g/km/hr	g/km	tonne/hr	g/km/hr	g/km	tonne/hr	g/km/hr	g/km	tonne/hr	g/km/hr	g/km	tonne/hr
Road 27	27	0500-1200	1.8861	4.7427	1.4867	1.7001	4.3267	1.3406	6.7461	1.7226	5.2926	6.1811	1.5887	4.8952	6.0006
Road 27	27	1200-1800	1.8861	4.7427	1.4867	1.7001	4.3267	1.3406	6.7461	1.7226	5.2926	6.1811	1.5887	4.8952	6.0006
Road 27	27	1800-1900	1.4381	2.7527	6.9387	1.2311	2.0987	6.0746	5.9952	8.4027	2.8867	5.5051	8.6287	2.6710	6.0006
Road 27	27	2300-0000	1.3331	4.0172	4.2017	1.2321	1.2747	3.9317	5.3317	5.5117	1.0767	4.9717	5.1627	1.5806	6.0006
Road 27	27	0000-0100	2.2627	2.1157	2.1157	2.2627	2.1157	2.1157	2.2627	2.1157	2.1157	2.2627	2.1157	2.1157	2.2627
Road 27	27	2100-2200	1.2961	1.0607	3.3407	1.2801	1.0117	3.1711	5.2817	4.4667	1.3717	4.0267	4.1567	1.2806	6.0006
Road 27	27	2200-2300	1.3451	8.9857	3.0457	1.2851	9.4457	2.9147	4.9917	3.6717	1.1317	4.7617	3.5017	1.0906	6.0006
Road 28	28	0000-0100	1.8861	4.7427	1.4867	1.7001	4.3267	1.3406	6.7461	1.7226	5.2926	6.1811	1.5887	4.8952	6.0006
Road 28	28	0000-0100	1.7117	1.6967	6.6117	1.5527	1.5307	6.8967	1.8217	1.0817	1.0237	1.6317	1.6117	9.7106	6.0006
Road 28	28	0100-0200	1.8457	2.0017	6.8317	1.6627	1.0957	6.7106	1.8361	2.0587	6.7987	1.6317	1.0717	6.6006	6.0006
Road 28	28	0200-0300	1.8861	4.7427	1.4867	1.7001	4.3267	1.3406	6.7461	1.7226	5.2926	6.1811	1.5887	4.8952	6.0006
Road 28	28	0300-0400	2.1117	8.5257	4.6817	1.8861	7.3717	4.1917	1.8717	3.1717	4.1517	1.6417	6.4317	3.6506	6.0006
Road 28	28	0400-0500	2.1657	9.2137	5.3117	1.9317	8.3417	4.7817	1.8117	1.1017	4.5517	1.6517	1.7127	4.0406	6.0006
Road 28	28	0500-0600	2.1587	1.6587	9.0717	1.9317	1.4357	8.1917	1.8717	1.3917	9.0217	1.8417	1.2207	6.9906	6.0006
Road 28	28	0600-0700	1.8861	4.7427	1.4867	1.7001	4.3267	1.3406	6.7461	1.7226	5.2926	6.1811	1.5887	4.8952	6.0006
Road 28	28	0700-0800	2.2657	4.4317	4.2217	2.0517	6.7417	3.8217	1.8617	8.1217	3.6417	1.6717	5.8117	3.1117	6.0006
Road 28	28	0800-0900	2.1417	6.3117	4.6217	1.9517	7.4117	4.2117	1.6917	6.4217	3.0417	1.5317	5.7817	3.2206	6.0006
Road 28	28	0900-1000	2.2627	1.8861	4.2617	2.2627	1.8861	4.2617	2.2627	1.8861	4.2617	2.2627	1.8861	4.2617	2.2627
Road 28	28	1000-1100	2.6317	7.9117	4.4917	2.4017	7.2017	4.0917	1.7717	5.3217	3.0217	1.6017	4.8117	2.7306	6.0006
Road 28	28	1100-1200	2.6017	3.6217	4.1317	2.3717	6.7417	3.8917	1.8617	5.1717	2.0917	1.6317	4.6317	2.6306	6.0006
Road 28	28	1200-1300	2.2627	1.8861	4.2617	2.2627	1.8861	4.2617	2.2627	1.8861	4.2617	2.2627	1.8861	4.2617	2.2627
Road 28	28	1300-1400	2.4217	3.1417	7.9217	2.3017	4.6017	2.7617	1.4617	1.1317	1.7817				6.0006
Road 28	28	1400-1500	2.4317	4.6417	3.0917	2.2217	4.9917	2.8817	1.4817	3.0017	1.8817	1.4317	3.2817	1.6917	6.0006
Road 28	28	1500-1600	2.7817	3.6217	4.1317	2.3717	6.7417	3.8917	1.8617	5.1717	2.0917	1.6317	4.6317	2.6306	6.0006
Road 28	28	1600-1700	2.3617	5.6517	3.2117	2.1617	5.1817	2.9417	1.4817	5.4617	2.0117	1.3417	3.2217	1.8217	6.0006
Road 28	28	1700-1800	1.8517	4.8717	2.7717	1.6917	4.4917	2.5217	1.3917	1.6617	2.0817	1.2517	3.3117	1.8817	6.0006
Road 28	28	1800-1900	1.4617	2.3617	6.3117	1.2617	2.1417	2.1917	1.2417	4.6517	1.6817	1.1417	3.7617	1.7617	6.0006
Road 28	28	1900-2000	1.3117	1.8317	6.1117	1.2117	2.6217	1.8817	1.8817	1.6317	1.0417	1.6317	1.0417	1.6317	6.0006
Road 28	28	2000-2100	1.3317	2.2417	1.2717	1.2117	2.0917	1.1617	1.4217	1.4217	1.3717	1.2917	2.1817	1.2417	6.0006
Road 28	28	2100-2200	1.1817	1.0917	1.1217	1.0917	1.8417	1.0417	1.2917	1.2117	1.1217	1.1817	1.0817	1.1317	6.0006
Road 28	28	2200-2300	1.2817	1.2817	1.2817	1.2817	1.2817	1.2817	1.2817	1.2817	1.2817	1.2817	1.2817	1.2817	6.0006
Road 28	28	2300-0000	1.2717	1.0517	8.8517	1.2117	1.4817	8.4117	1.6417	9.3017	1.6317	9.3017	1.5617	8.7917	6.0006
Road 28	28	0000-0100	1.0217	0.9917	6.2717	1.8317	8.1817	1.5417	1.9017	7.7017	6.7017	9.5617	8.5217	5.8817	6.0006
Road 28	28	0100-0200	1.2817	4.4917	3.7917	1.4617	4.2917	3.3717	1.1517	4.6517	3.4217	2.9817	4.2817	2.9617	6.0006
Road 28	28	0200-0300	1.2817	4.4917	3.7917	1.4617	4.2917	3.3717	1.1517	4.6517	3.4217	2.9817	4.2817	2.9617	6.0006
Road 28	28	0300-0400	1.4017	5.4917	3.7017	1.2517	4.9817	2.9617	1.1917	1.0217	6.7217	1.0217	4.4817	2.4017	6.0006
Road 28	28	0400-0500	1.4017	5.4917	3.7017	1.2517	4.9817	2.9617	1.1917	1.0217	6.7217	1.0217	4.4817	2.4017	6.0006
Road 28	28	0500-0600	1.4017	8.8917	6.1417	1.2417	7.8817	5.4617	1.1917	5.5017	5.2117	1.0217	6.5017	4.4817	6.0006
Road 28	28	0600-0700	1.3817	1.8617	1.2817	1.2317	1.6917	1.1417	1.1917	1.6017	1.1017	1.0417	1.1417	8.7117	6.0006
Road 28	28	0700-0800	1.4017	4.4417	1.0617	1.2717	4.0317	1.0717	1.3717	2.2717	2.2717	2.4417	2.9917	2.0717	6.0006
Road 28	28	0800-0900	1.4017	4.4417	1.0617	1.2717	4.0317	1.0717	1.3717	2.2717	2.2717	2.4417	2.9917	2.0717	6.0006
Road 28	28	0900-1000	1.5717	4.0917	2.8217	1.4417	3.7417	2.5817	1.1417	2.9717	2.0517	1.0317	2.6717	1.8417	6.0006
Road 28	28	1000-1100	1.7517	3.9317	2.7117	1.5917	3.5717	2.4817	1.1817	3.6717	1.8417	1.0617	3.2817	1.6417	6.0006
Road 28	28	1100-1200	1.7517	3.9317	2.7117	1.5917	3.5717	2.4817	1.1817	3.6717	1.8417	1.0617	3.2817	1.6417	6.0006
Road 28	28	1200-1300	3.5717	5.7917	4.0017	3.2517	5.2817	3.6517	2.9817	7.0717	3.4517	2.6317	4.2717	2.9517	6.0006
Road 28	28	1300-1400	3.5017	5.9917	4.1317	3.3017	5.4717	3.7817	2.7817	7.5217	3.8417	2.5317	4.3317	2.9917	6.0006
Road 28	28	1400-1500	3.5017	5.9917	4.1317	3.3017	5.4717	3.7817	2.7817	7.5217	3.8417	2.5317	4.3317	2.9917	6.0006
Road 28	28	1500-1600	3.5017	5.9917	4.1317	3.3017	5.4717	3.7817	2.7817	7.5217	3.8417	2.5317	4.3317	2.9917	6.0006
Road 28	28	1600-1700	3.4517	6.3917	4.4117	3.1617	5.9917	4.0417	2.9617	6.4817	3.7817	2.7117	4.5217	3.4617	6.0006
Road 28	28	1700-1800	2.6617	5.0217	4.3817	2.4517	4.6617	3.2117	1.3117	9.3317	9.0917	2.8817	5.5617	3.7717	6.0006
Road 28	28	1800-1900	2.6617	5.0217	4.3817	2.4517	4.6617	3.2117	1.3117	9.3317	9.0917	2.8817	5.5617	3.7717	6.0006
Road 28	28	1900-2000	2.6617	5.0217	4.3817	2.4517	4.6617	3.2117	1.3117	9.3317	9.0917	2.8817	5.5617	3.7717	6.0006
Road 28	28	2000-2100	2.4417	2.8117	2.6317	2.4117	3.5917	2.4417	3.5917	1.3217	3.5417	3.2417	3.4717	3.2717	6.0006
Road 28	28	2100-2200	2.4417	2.8117	2.6317	2.4117	3.5917	2.4417	3.5917	1.3217	3.5417	3.2417	3.4717	3.2717	6.0006
Road 28	28	2200-2300	2.4417	2.8117	2.6317	2.4117	3.5917	2.4417	3.5917	1.3217	3.5417	3.2417	3.4717	3.2717	6.0006
Road 28	28	2300-0000	2.4417	2.8117	2.6317	2.4117	3.5917	2.4417	3.5917	1.3217	3.5417	3.2417	3.4717	3.2717	6.0006
Road 29	29	0000-0100	2.4417	2.8117	2.6317	2.4117	3.5917	2.4417	3.5917	1.3217	3.5417	3.2417	3.4717	3.2717	6.0006
Road 29	29	0100-0200	2.4417	2.8117	2.6317	2.4117	3.5917	2.4417	3.5917	1.3217	3.5417	3.2417	3.4717	3.2717	6.0006
Road 29	29	0200-0300	2.4417	2.8117	2.6317	2.4117	3.5917	2.4417	3.5917	1.3217	3.5417	3.2417	3.4717	3.2717	6.0006
Road 29	29	0300-0400	2.4417	2.8117	2.6317	2.4117	3.5917	2.4417	3.5917	1.3217	3.5417	3.2417	3.4717	3.2717	6.0006
Road 29	29	0400-0500	2.4417	2.8117	2.6317	2.4117	3.5917	2.4417	3.5917	1.3217	3.5417	3.2417	3.4717	3.2717	6.0006
Road 29	29	0500-0600	2.4417	2.8117	2.6317	2.4117	3.5917	2.4417	3.5917	1.3217	3.5417	3.2417	3.4717	3.2717	6.0006
Road 29	29	0600-0700	2.4417	2.8117	2.6317	2.4117	3.5917	2.4417	3.5917	1.3217	3.5417	3.2417	3.4717	3.2717	6.0006
Road 29	29	0700-0800	2.4417	2.8117	2.6317	2.4117	3.5917	2.4417	3.5917	1.3217	3.5417	3.2417	3.4717	3.2717	6.0006
Road 29	29	0800-0900	2.4417	2.8117	2.6317	2.4117	3.5917	2.4417	3.5917	1.3217	3.5417	3.2417	3.4717	3.2717	6.0006
Road 29	29	0900-1000	2.4417	2.8117	2.6317	2.4117	3.5917	2.4417	3.5917	1.3217	3.5417	3.2417	3.4717	3.2717	6.0006
Road 29	29	1000-1100	2.4417	2.8117	2.6317	2.4117	3.5917	2.4417	3.5917	1.3217	3.5417	3.2417	3.4717	3.2717	6.0006
Road 29	29	1100-1200	2.4417	2.8117	2.6317	2.4117	3.5917	2.4417	3.5917	1.3217	3.5417	3.2417	3.4717	3.2717	6.0006
Road 29	29	1200-1300	2.4417	2.8117	2.6317	2.4117	3.5917	2.4417	3.5917	1.3217	3				

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for Year 2033

Row Name	RoA/RoD (net e/aircraft)			NO _x Emission				NO Emission			
Row Name	Row ID	Hour	MonthlyRoA/gsm ²	MonthlyRoD/gsm ²	MonthlyRoA/gsm ²	MonthlyRoD/gsm ²	MonthlyRoA/gsm ²	MonthlyRoD/gsm ²	MonthlyRoA/gsm ²	MonthlyRoD/gsm ²	
Read 1	31	0000-0100	2.456	4.846	4.326	2.176	4.306	3.016	1.926	3.876	
Read 1	31	0100-0200	2.456	4.846	4.326	2.176	4.306	3.016	1.926	3.876	
Read 1	31	0200-0300	3.096	3.096	3.376	0.016	2.806	3.056	2.726	1.946	
Read 1	31	0300-0400	3.096	3.096	3.376	0.016	2.806	3.056	2.726	1.946	
Read 1	31	0400-0500	3.096	3.096	3.376	0.016	2.806	3.056	2.726	1.946	
Read 1	31	0500-0600	2.626	4.686	4.686	4.686	2.186	3.656	1.726	1.966	
Read 1	31	0600-0700	2.626	4.686	4.686	4.686	2.186	3.656	1.726	1.966	
Read 1	31	0700-0800	2.626	4.686	4.686	4.686	2.186	3.656	1.726	1.966	
Read 1	31	0800-0900	2.626	4.686	4.686	4.686	2.186	3.656	1.726	1.966	
Read 1	31	0900-1000	2.626	4.686	4.686	4.686	2.186	3.656	1.726	1.966	
Read 1	31	1000-1100	2.626	4.686	4.686	4.686	2.186	3.656	1.726	1.966	
Read 1	31	1100-1200	2.626	4.686	4.686	4.686	2.186	3.656	1.726	1.966	
Read 1	31	1200-1300	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	1300-1400	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	1400-1500	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	1500-1600	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	1600-1700	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	1700-1800	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	1800-1900	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	1900-2000	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	2000-2100	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	2100-2200	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	2200-2300	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	2300-2400	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	2400-2500	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	2500-2600	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	2600-2700	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	2700-2800	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	2800-2900	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	2900-3000	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	3000-3100	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	3100-3200	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	3200-3300	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	3300-3400	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	3400-3500	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	3500-3600	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	3600-3700	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	3700-3800	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	3800-3900	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	3900-4000	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	4000-4100	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	4100-4200	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	4200-4300	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	4300-4400	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	4400-4500	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	4500-4600	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	4600-4700	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	4700-4800	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	4800-4900	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	4900-5000	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	5000-5100	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	5100-5200	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	5200-5300	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	5300-5400	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	5400-5500	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	5500-5600	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	5600-5700	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	5700-5800	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	5800-5900	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	5900-6000	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	6000-6100	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	6100-6200	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	6200-6300	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	6300-6400	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	6400-6500	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	6500-6600	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	6600-6700	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	6700-6800	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	6800-6900	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	6900-7000	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	7000-7100	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	7100-7200	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	7200-7300	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	7300-7400	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	7400-7500	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	7500-7600	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	7600-7700	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	7700-7800	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	7800-7900	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	7900-8000	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	8000-8100	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	8100-8200	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	8200-8300	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	8300-8400	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	8400-8500	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	8500-8600	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	8600-8700	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	8700-8800	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	8800-8900	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	8900-9000	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	9000-9100	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	9100-9200	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	9200-9300	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	9300-9400	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	9400-9500	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	9500-9600	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	9600-9700	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	9700-9800	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	9800-9900	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	9900-10000	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	10000-10100	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	10100-10200	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	10200-10300	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	10300-10400	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	10400-10500	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	10500-10600	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	10600-10700	3.716	1.906	1.706	3.096	1.146	1.506	1.436	1.036	
Read 1	31	10700-10800	3.716	1.906	1.706	3					

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for Year 2033
Kilograms per 1000 tonnes of material moved[illegible]

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for AERMOD model (February)	Year 2033

[illegible]

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for AERMOD model (February)	Year 2033

[illegible]

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Factors for (ary)	Year 2033

	NO ₂ Emission									NO Emission								
	Month/Min/gt/min			Month/Max/gt/min			Month/Min/gt/min			Month/Max/gt/min			Month/Min/gt/min			Month/Max/gt/min		
1000-1700	2.99E-02	5.81E-07	1.61E-05	2.74E-02	5.32E-07	1.66E-05	1.11E-01	2.54E-06	7.94E-05	1.18E-01	2.29E-06	7.16E-05						
1000-1800	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-1900	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-2000	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-2100	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-2200	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-2300	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-2400	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-2500	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-2600	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-2700	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-2800	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-2900	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-3000	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-3100	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-3200	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-3300	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-3400	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-3500	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-3600	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-3700	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-3800	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-3900	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-4000	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-4100	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-4200	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-4300	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-4400	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-4500	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-4600	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-4700	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-4800	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-4900	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-5000	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-5100	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-5200	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-5300	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-5400	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-5500	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-5600	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-5700	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-5800	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-5900	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-6000	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-6100	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-6200	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-6300	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-6400	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-6500	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-6600	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-6700	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-6800	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-6900	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-7000	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-7100	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-7200	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-7300	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-7400	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-7500	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-7600	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-7700	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						
1000-7800	2.13E-02	4.06E-07	1.50E-05	1.97E-02	4.44E-07	3.99E-05	1.12E-01	2.52E-06	7.89E-05	1.02E-02	2.29E-06	7.16E-05						

60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Appendix\Appendix 3.5.3 Emission Factor in 2033-S.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
 Open Road 24 hour Emission Factors for
 AERMOD model (February) Year 2033

Road Name	Road ID	Hour	NO Emission						NO Emission					
			Monthly/Min			Monthly/Average			Monthly/Min			Monthly/Average		
			g/min	g/hour	tonne/hour	g/min	g/hour	tonne/hour	g/min	g/hour	tonne/hour	g/min	g/hour	tonne/hour
Road 51	51	0000-0100	8.3763	6.8318	1.2776	7.5063	6.1008	1.1446	9.7662	7.9472	1.4885	9.5152	6.9302	1.2963
Road 51	51	0100-0200	8.9876	8.7448	1.8863	8.0363	4.2958	0.7407	9.8052	9.5247	0.9746	8.6548	6.6452	8.0506
Road 51	51	0200-0300	9.5989	9.3561	2.0750	8.6476	4.9503	0.8507	10.5082	10.2277	0.7209	9.6180	7.6084	9.9259
Road 51	51	0300-0400	1.0302	3.1110	0.5962	1.5156	2.7865	0.5882	1.0226	3.3107	0.5776	0.8862	2.9997	0.5010
Road 51	51	0400-0500	1.1306	3.6748	0.6847	0.7378	3.2328	0.6087	1.0454	3.5602	0.6383	0.8996	4.2997	0.5376
Road 51	51	0500-0600	1.1100	3.5890	0.6450	1.0000	3.1467	0.6167	1.0300	3.4500	0.5833	0.8667	4.1667	0.5333
Road 51	51	0600-0700	1.2306	1.5517	2.9216	1.1102	1.3671	2.5326	1.0906	1.3308	2.4745	0.9425	1.1866	2.1903
Road 51	51	0700-0800	1.2806	3.1987	0.5476	1.1662	2.8757	0.5395	1.3805	4.0801	2.6996	0.5105	0.8472	2.3805
Road 51	51	0800-0900	2.3100	2.3100	0.4167	2.3100	2.3100	0.4167	2.3100	2.3100	0.4167	2.3100	2.3100	0.4167
Road 51	51	0900-1000	1.5400	3.1300	0.5250	1.2200	2.8900	0.5000	1.5000	2.7300	0.4466	1.5166	2.1466	0.3900
Road 51	51	1000-1100	1.5300	3.0200	0.5176	0.5600	2.7100	0.4500	1.0800	2.1100	0.4400	0.9500	1.0500	0.3500
Road 51	51	1100-1200	1.4500	2.9700	0.5067	0.5400	2.6500	0.4500	1.0200	2.0400	0.4333	0.9000	1.0000	0.3333
Road 51	51	1200-1300	3.6300	4.5500	0.7667	3.3300	4.1700	0.7786	3.3500	3.9700	0.6583	3.8900	3.9526	0.6700
Road 51	51	1300-1400	3.6300	4.7700	0.8116	3.2600	4.3300	0.7800	3.0200	4.1000	0.6800	3.7800	3.7600	0.6840
Road 51	51	1400-1500	3.5800	4.6800	0.7933	3.2400	4.3800	0.7800	3.0000	4.0800	0.6800	3.7600	3.7600	0.6800
Road 51	51	1500-1600	3.3200	4.6800	0.7786	3.0000	4.3300	0.7800	2.9500	4.1400	0.6916	3.7800	3.7400	0.6850
Road 51	51	1600-1700	3.5000	5.0100	0.8376	3.2200	4.6000	0.8806	3.2300	4.6200	0.8166	3.9600	4.2400	0.7900
Road 51	51	1700-1800	3.9600	4.9600	0.8466	3.6400	4.4200	0.7899	3.3200	4.9700	0.8266	3.9900	4.8000	0.8000
Road 51	51	1800-1900	2.7800	4.9600	0.8466	2.9800	4.4200	0.7899	2.7800	4.9600	0.8466	2.9800	4.4200	0.7899
Road 51	51	1900-2000	2.8900	3.1800	0.5571	2.6300	2.9300	0.5456	3.9800	4.4500	0.7826	3.6700	4.1000	0.7630
Road 51	51	2000-2100	2.8600	2.5300	0.4772	2.6300	2.3300	0.4556	4.1100	3.8400	0.6776	3.7800	3.3400	0.6200
Road 51	51	2100-2200	2.8600	2.1000	0.3667	2.4800	2.1300	0.4000	4.1100	3.8400	0.6776	3.7800	3.3400	0.6200
Road 52	52	0000-0100	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167
Road 52	52	0100-0200	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167
Road 52	52	0200-0300	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167
Road 52	52	0300-0400	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167
Road 52	52	0400-0500	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167
Road 52	52	0500-0600	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167
Road 52	52	0600-0700	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167
Road 52	52	0700-0800	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167
Road 52	52	0800-0900	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167
Road 52	52	0900-1000	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167
Road 52	52	1000-1100	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167
Road 52	52	1100-1200	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167
Road 52	52	1200-1300	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167
Road 52	52	1300-1400	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167
Road 52	52	1400-1500	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167
Road 52	52	1500-1600	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167
Road 52	52	1600-1700	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167
Road 52	52	1700-1800	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167
Road 52	52	1800-1900	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167
Road 52	52	1900-2000	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167
Road 52	52	2000-2100	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167
Road 52	52	2100-2200	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167	2.7800	2.7800	0.4167
Road 53	53	0000-0100	5.6600	4.9960	2.5667	5.3600	4.7800	0.8462	6.4200	2.1840	1.9267	6.3800	1.0820	0.9347
Road 53	53	0100-0200	6.2100	7.4500	1.2500	6.2100	6.2100	1.0350	6.2100	6.2100	1.0350	6.2100	6.2100	1.0350
Road 53	53	0200-0300	6.6600	2.7400	0.6167	7.8800	2.4800	0.4167	3.6000	1.3300	0.2222	2.6300	1.0100	0.2500
Road 53	53	0300-0400	6.6600	2.1500	0.4916	8.1500	1.9500	0.3287	4.6900	1.8810	0.3083	2.7800	1.7800	0.3800
Road 53	53	0400-0500	6.6600	2.2200	0.5000	8.1500	2.0000	0.3333	4.6900	1.9200	0.3200	2.7800	1.8200	0.3900
Road 53	53	0400-0500	6.6600	2.1400	0.4916	8.1500	1.9100	0.3287	4.6900	1.8700	0.3083	2.7800	1.7700	0.3800
Road 53	53	0500-0600	1.0300	4.1100	0.6833	9.1900	3.6800	0.6167	4.1400	1.6500	0.2738	3.8300	1.4400	0.3900
Road 53	53	0600-0700	1.1000	1.0200	0.1666	0.9600	0.9200	0.1533	4.5400	0.4020	0.0670	4.0100	0.3600	0.0900
Road 53	53	0700-0800	1.1000	1.0200	0.1666	0.9600	0.9200	0.1533	4.5400	0.4020	0.0670	4.0100	0.3600	0.0900
Road 53	53	0800-0900	1.2600	2.6200	0.6055	1.1500	2.3900	0.5566	4.9800	1.0300	0.2405	4.4800	0.9340	0.2176
Road 53	53	0900-1000	1.3300	2.9000	0.7416	1.2500	2.6900	0.4488	5.3900	1.1300	0.2865	4.8800	1.0400	0.2425
Road 53	53	1000-1100	1.4000	3.1800	0.8166	1.3500	3.0700	0.5111	5.8000	1.2200	0.3222	5.2900	1.1000	0.2666
Road 53	53	1100-1200	1.4700	2.7900	0.6166	1.3300	2.5400	0.4259	5.5500	1.0500	0.2466	5.0200	0.9560	0.2276
Road 53	53	1200-1300	1.2700	2.9200	0.6788	1.1600	2.6700	0.4458	4.8900	1.0700	0.2496	4.2400	0.9170	0.2280
Road 53	53	1300-1400	1.2100	2.8400	0.6333	1.1000	2.6000	0.4333	4.8100	1.0300	0.2416	4.1600	0.8933	0.2200
Road 53	53	1400-1500	1.2400	3.0200	0.7436	1.1600	2.9400	0.4846	4.7000	1.1900	0.2766	4.3100	1.0500	0.2500
Road 53	53	1500-1600	1.1600	3.0100	0.7500	1.0700	2.7800	0.4600	4.6800	1.2100	0.2825	4.2300	1.1200	0.2900
Road 53	53	1600-1700	1.1600	3.0100	0.7500	1.0700	2.7800	0.4600	4.6800	1.2100	0.2825	4.2300	1.1200	0.2900
Road 53	53	1700-1800	1.9100	3.1200	0.7666	1.5000	2.9000	0.4833	3.8900	1.0900	0.2458	3.5900	0.9670	0.2260
Road 53	53	1800-1900	6.8300	1.7300	0.4333	6.3000	1.6000	0.2778	2.9800	1.7500	0.7916	2.7200	0.6000	0.1600
Road 53	53	1900-2000	6.8300	1.7300	0.4333	6.3000	1.6000	0.2778	2.9800	1.7500	0.7916	2.7200	0.6000	0.1600
Road 53	53	2000-2100	5.8600	8.8700	2.0833	4.5200	8.2600	1.8666	2.7600	4.2100	0.7776	2.5000	3.8600	8.8400
Road 53	53	2100-2200	5.8600	8.8400	2.0833	4.5200	8.0500	1.8075	2.6700	4.0800	0.7486	2.5400	3.7500	8.7100
Road 53	53	2200-2300	5.8600	8.8400	2.0833	4.5200	8.0500	1.8075	2.6700	4.0800	0.7486	2.5400	3.7500	8.7100
Road 54	54	0000-0100	6.3000	6.3000	1.0500	4.5300	6.0700	1.0146	2.5300	2.7700	0.4616	2.4000	2.6400	0.4300
Road 54	54	0100-0200	6.3000	6.3000	1.0500	4.5300	6.0700	1.0146	2.5300	2.7700	0.4616	2.4000	2.6400	0.4300
Road 54	54	0200-0300	7.1200	3.1800	0.7500	4.4500	2.8800	0.5570	3.0200	1.3500	0.2250	2.0000	0.7200	0.1700
Road 54	54	0300-0400	7.1200	2.9900	0.6966	4.4500	2.8300	0.5510	3.0200	1.2900	0.2166	2.0000	0.6876	0.2210
Road 54	54	0400-0500	7.1200	2.9900	0.6966	4.4500	2.8300	0.5510	3.0200	1.2900	0.2166	2.0000	0.6876	0.2210
Road 54	54	0500-0600	8.5200	6.										

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Appendix\Appendix 3.5.3 Emission Factor in 2033-S B.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for
AERMOD model (February) Year 2033

Road Name	Road ID	Hour	NO Emission				MonthlyAverage				NO Emission				MonthlyAverage			
			MonthlyHour		MonthlyHour		MonthlyHour		MonthlyHour		MonthlyHour		MonthlyHour					
			g/mi/hour	time/hour	g/mi/hour	time/hour	g/mi/hour	time/hour	g/mi/hour	time/hour	g/mi/hour	time/hour	g/mi/hour	time/hour				
Road 103	103	1500-1700	1.73E-02	4.87E-07	1.14E-05	1.15E-02	4.36E-07	1.05E-05	7.93E-02	2.18E-06	5.24E-05	7.15E-02	1.96E-06	4.72E-05				
Road 103	103	1700-1800	1.23E-02	3.81E-07	9.18E-06	1.14E-02	3.56E-07	8.67E-06	8.63E-02	2.12E-06	5.04E-05	6.20E-02	1.96E-06	4.72E-05				
Road 103	103	1800-1900	1.38E-02	3.61E-07	9.18E-06	1.14E-02	3.56E-07	8.67E-06	1.14E-02	3.56E-07	8.67E-06	1.14E-02	3.56E-07	8.67E-06				
Road 103	103	1900-2000	7.81E-03	2.07E-07	4.98E-06	7.11E-03	1.92E-07	4.57E-06	5.29E-02	1.40E-06	3.37E-05	4.74E-02	1.25E-06	3.00E-05				
Road 103	103	2000-2100	7.99E-03	2.06E-07	4.98E-06	7.11E-03	1.92E-07	4.57E-06	5.29E-02	1.41E-06	3.38E-05	4.74E-02	1.25E-06	3.00E-05				
Road 103	103	2100-2200	1.38E-02	3.61E-07	9.18E-06	1.14E-02	3.56E-07	8.67E-06	1.14E-02	3.56E-07	8.67E-06	1.14E-02	3.56E-07	8.67E-06				
Road 103	103	2200-2300	6.29E-03	1.69E-07	3.02E-06	5.94E-03	1.57E-07	2.98E-06	4.74E-02	1.09E-06	2.62E-05	5.05E-02	1.01E-06	2.43E-05				
Road 103	103	2300-2400	6.97E-03	1.94E-07	2.51E-06	6.62E-03	9.90E-08	2.38E-06	5.61E-02	8.39E-07	2.02E-05	5.21E-02	1.77E-06	4.78E-05				
Road 104	104	0000-0100	1.40E-02	3.92E-07	9.28E-06	1.33E-02	3.61E-07	9.18E-06	7.81E-02	2.12E-06	5.24E-05	7.15E-02	1.96E-06	4.72E-05				
Road 104	104	0100-0200	1.40E-02	3.92E-07	9.28E-06	1.33E-02	3.61E-07	9.18E-06	7.81E-02	2.12E-06	5.24E-05	7.15E-02	1.96E-06	4.72E-05				
Road 104	104	0200-0300	1.05E-02	5.00E-08	1.02E-06	1.39E-02	4.59E-08	9.19E-07	8.07E-02	2.70E-07	5.90E-05	7.69E-02	2.36E-07	4.89E-06				
Road 104	104	0300-0400	1.05E-02	5.00E-08	1.02E-06	1.39E-02	4.59E-08	9.19E-07	8.07E-02	2.70E-07	5.90E-05	7.69E-02	2.36E-07	4.89E-06				
Road 104	104	0400-0500	1.71E-02	5.13E-08	1.04E-06	1.52E-02	4.98E-08	9.92E-07	8.75E-02	2.62E-07	5.93E-05	7.49E-02	2.24E-07	4.56E-06				
Road 104	104	0500-0600	1.81E-02	5.54E-08	1.04E-06	1.60E-02	8.48E-08	1.72E-06	9.00E-02	4.74E-07	6.66E-05	7.69E-02	4.02E-07	8.29E-06				
Road 104	104	0600-0700	1.81E-02	5.54E-08	1.04E-06	1.60E-02	8.48E-08	1.72E-06	9.00E-02	4.74E-07	6.66E-05	7.69E-02	4.02E-07	8.29E-06				
Road 104	104	0700-0800	1.97E-02	6.52E-07	9.48E-06	1.78E-02	4.21E-07	8.57E-06	9.33E-02	2.20E-06	4.48E-05	8.27E-02	1.94E-06	3.94E-05				
Road 104	104	0800-0900	1.97E-02	6.52E-07	9.48E-06	1.78E-02	4.21E-07	8.57E-06	9.33E-02	2.20E-06	4.48E-05	8.27E-02	1.94E-06	3.94E-05				
Road 104	104	0900-1000	2.19E-02	4.49E-07	1.12E-06	2.00E-02	5.02E-07	1.02E-06	9.72E-02	2.44E-06	4.99E-05	8.77E-02	2.29E-06	4.74E-05				
Road 104	104	1000-1100	2.19E-02	4.49E-07	1.12E-06	2.00E-02	5.02E-07	1.02E-06	9.72E-02	2.44E-06	4.99E-05	8.77E-02	2.29E-06	4.74E-05				
Road 104	104	1100-1200	2.42E-02	5.18E-07	1.06E-06	2.20E-02	4.71E-07	9.59E-06	1.04E-02	2.22E-05	4.91E-05	9.29E-02	1.99E-06	4.95E-05				
Road 104	104	1200-1300	1.51E-02	4.17E-07	6.31E-06	1.38E-02	2.86E-07	5.17E-06	7.52E-02	1.95E-06	3.15E-05	6.72E-02	1.36E-06	2.83E-05				
Road 104	104	1300-1400	1.51E-02	4.17E-07	6.31E-06	1.38E-02	2.86E-07	5.17E-06	7.52E-02	1.95E-06	3.15E-05	6.72E-02	1.36E-06	2.83E-05				
Road 104	104	1400-1500	1.51E-02	4.17E-07	6.31E-06	1.38E-02	2.86E-07	5.17E-06	7.52E-02	1.95E-06	3.15E-05	6.72E-02	1.36E-06	2.83E-05				
Road 104	104	1500-1600	1.45E-02	3.32E-07	6.17E-06	1.34E-02	3.07E-07	6.25E-06	7.61E-02	1.74E-05	3.55E-05	6.90E-02	1.36E-06	3.22E-05				
Road 104	104	1600-1700	1.45E-02	3.32E-07	6.17E-06	1.34E-02	3.07E-07	6.25E-06	7.61E-02	1.74E-05	3.55E-05	6.90E-02	1.36E-06	3.22E-05				
Road 104	104	1700-1800	1.09E-02	4.05E-07	6.02E-06	1.05E-02	2.80E-07	5.39E-06	8.27E-02	2.09E-06	3.78E-05	6.34E-02	1.26E-06	3.03E-05				
Road 104	104	1800-1900	7.89E-03	2.48E-07	5.01E-06	7.34E-03	2.28E-07	4.89E-06	4.83E-02	1.51E-05	3.07E-05	4.32E-02	1.33E-06	2.79E-05				
Road 104	104	1900-2000	7.89E-03	2.48E-07	5.01E-06	7.34E-03	2.28E-07	4.89E-06	4.83E-02	1.51E-05	3.07E-05	4.32E-02	1.33E-06	2.79E-05				
Road 104	104	2000-2100	6.76E-03	1.92E-07	3.65E-06	6.14E-03	1.18E-07	2.41E-06	6.69E-02	1.69E-06	2.21E-05	4.92E-02	9.46E-07	1.93E-05				
Road 104	104	2100-2200	5.98E-03	1.67E-07	2.18E-06	5.31E-03	9.91E-08	2.02E-06	5.23E-02	1.04E-06	1.95E-05	4.69E-02	9.02E-07	1.81E-05				
Road 104	104	2200-2300	5.98E-03	1.67E-07	2.18E-06	5.31E-03	9.91E-08	2.02E-06	5.23E-02	1.04E-06	1.95E-05	4.69E-02	9.02E-07	1.81E-05				
Road 104	104	2300-2400	5.98E-03	1.67E-07	2.18E-06	5.31E-03	9.91E-08	2.02E-06	5.23E-02	1.04E-06	1.95E-05	4.69E-02	9.02E-07	1.81E-05				
Road 105	105	0000-0100	5.99E-03	8.37E-08	1.70E-06	5.68E-03	7.93E-08	1.62E-06	5.39E-02	7.47E-07	1.52E-05	4.98E-02	9.67E-07	1.41E-05				
Road 105	105	0100-0200	2.23E-02	5.49E-09	2.75E-07	2.01E-02	5.95E-09	2.48E-07	1.15E-05	3.39E-06	1.41E-05	1.01E-02	2.98E-06	1.42E-05				
Road 105	105	0200-0300	2.23E-02	5.49E-09	2.75E-07	2.01E-02	5.95E-09	2.48E-07	1.15E-05	3.39E-06	1.41E-05	1.01E-02	2.98E-06	1.42E-05				
Road 105	105	0300-0400	2.23E-02	5.49E-09	2.75E-07	2.01E-02	5.95E-09	2.48E-07	1.15E-05	3.39E-06	1.41E-05	1.01E-02	2.98E-06	1.42E-05				
Road 105	105	0400-0500	2.75E-02	6.12E-09	3.34E-07	2.44E-02	6.88E-09	3.00E-07	1.29E-05	5.62E-06	1.34E-05	1.13E-02	3.48E-06	1.58E-05				
Road 105	105	0500-0600	2.75E-02	6.12E-09	3.34E-07	2.44E-02	6.88E-09	3.00E-07	1.29E-05	5.62E-06	1.34E-05	1.13E-02	3.48E-06	1.58E-05				
Road 105	105	0600-0700	3.05E-02	7.31E-09	2.97E-07	2.71E-02	6.33E-09	2.84E-07	1.40E-05	3.27E-06	1.36E-05	1.21E-02	2.83E-06	1.18E-05				
Road 105	105	0700-0800	3.28E-02	6.68E-08	6.89E-07	2.97E-02	5.15E-08	6.32E-07	1.47E-05	3.11E-06	3.12E-05	1.30E-02	6.67E-07	7.89E-06				
Road 105	105	0800-0900	3.28E-02	6.68E-08	6.89E-07	2.97E-02	5.15E-08	6.32E-07	1.47E-05	3.11E-06	3.12E-05	1.30E-02	6.67E-07	7.89E-06				
Road 105	105	0900-1000	3.99E-02	4.20E-08	1.75E-06	3.90E-02	3.82E-08	1.48E-06	1.83E-07	7.82E-06	1.33E-04	1.74E-06	1.84E-06	1.64E-06				
Road 105	105	1000-1100	3.99E-02	4.20E-08	1.75E-06	3.90E-02	3.82E-08	1.48E-06	1.83E-07	7.82E-06	1.33E-04	1.74E-06	1.84E-06	1.64E-06				
Road 105	105	1100-1200	3.99E-02	4.20E-08	1.75E-06	3.90E-02	3.82E-08	1.48E-06	1.83E-07	7.82E-06	1.33E-04	1.74E-06	1.84E-06	1.64E-06				
Road 105	105	1200-1300	1.01E-01	9.49E-07	3.22E-06	9.42E-02	7.24E-07	3.05E-06	5.56E-07	2.78E-06	1.18E-04	3.28E-04	2.55E-06	1.06E-04				
Road 105	105	1300-1400	1.01E-01	9.49E-07	3.22E-06	9.42E-02	7.24E-07	3.05E-06	5.56E-07	2.78E-06	1.18E-04	3.28E-04	2.55E-06	1.06E-04				
Road 105	105	1400-1500	1.03E-01	8.99E-07	3.17E-06	9.47E-02	8.72E-07	3.48E-06	5.68E-07	3.21E-06	1.34E-04	3.39E-04	2.99E-06	1.23E-04				
Road 105	105	1500-1600	9.21E-02	8.41E-07	3.50E-06	8.52E-02	7.78E-07	3.24E-06	3.61E-07	3.28E-06	1.37E-04	3.34E-04	3.05E-06	1.27E-04				
Road 105	105	1600-1700	9.21E-02	8.41E-07	3.50E-06	8.52E-02	7.78E-07	3.24E-06	3.61E-07	3.28E-06	1.37E-04	3.34E-04	3.05E-06	1.27E-04				
Road 105	105	1700-1800	7.89E-02	6.01E-07	2.54E-06	7.94E-02	5.96E-07	2.36E-06	3.26E-06	3.49E-06	1.04E-04	3.03E-04	2.13E-06	8.63E-05				
Road 105	105	1800-1900	6.58E-02	3.48E-07	1.45E-06	6.08E-02	3.21E-07	1.34E-06	2.79E-07	1.47E-06	6.14E-05	2.57E-06	1.36E-06	5.66E-05				
Road 105	105	1900-2000	6.58E-02	3.48E-07	1.45E-06	6.08E-02	3.21E-07	1.34E-06	2.79E-07	1.47E-06	6.14E-05	2.57E-06	1.36E-06	5.66E-05				
Road 105	105	2000-2100	7.33E-02	4.11E-07	1.69E-06	6.78E-02	3.80E-07	1.61E-06	3.41E-06	3.71E-06	2.29E-05	2.24E-05	6.18E-06	2.58E-05				
Road 105	105	2100-2200	5.90E-02	1.67E-07	6.97E-06	5.51E-02	1.56E-07	6.51E-06	2.47E-07	7.00E-07	2.82E-05	2.30E-04	6.52E-07	2.72E-05				
Road 105	105	2200-2300	6.24E-02	1.84E-07	6.43E-06	5.96E-02	1.47E-07	6.13E-06	2.37E-07	5.91E-07	2.92E-05	2.28E-04	5.98E-07	2.62E-05				
Road 105	105	2300-2400	6.24E-02	1.84E-07	6.43E-06	5.96E-02	1.47E-07	6.13E-06	2.37E-07	5.91E-07	2.92E-05	2.28E-04	5.98E-07	2.62E-05				
Road 106	106	0000-0100	1.71E-02	6.13E-08	1.94E-06	1.54E-02	5.59E-08	1.74E-06	1.01E-04	3.64E-07	1.15E-05	8.81E-02	9.17E-07	8.99E-06				
Road 106	106	0100-0200	1.61E-02	5.29E-08	1.24E-06	1.64E-02	3.68E-08	1.21E-06	1.03E-04	2.84E-07	7.68E-05	9.00E-02	2.12E-07	8.98E-06				
Road 106	106	0200-0300	1.61E-02	5.29E-08	1.24E-06	1.64E-02	3.68E-08	1.21E-06	1.03E-04	2.84E-07	7.68E-05	9.00E-02	2.12E-07	8.98E-06				
Road 106	106	0300-0400	2.04E-02	2.82E-08	8.92E-07	1.82E-02	2.52E-08	8.06E-07	1.09E-04	1.51E-07	4.78E-05	9.51E-02	1.17E-07	4.19E-06				
Road 106	106	0400-0500	2.21E-02	3.68E-08	1.07E-06	1.99E-02	3.00E-08	8.47E-07	1.51E-05	1.77E-07	5.89E-05	9.87E-02	1.51E-07	4.74E-06				
Road 106	106	0500-0600	2.21E-02	3.68E-08	1.07E-06	1.99E-02	3.00E-08	8.47E-07	1.51E-05	1.77E-07	5.89E-05	9.87E-02	1.51E-07	4.74E-06				
Road 106	106	0600-0700	2.89E-02	4.68E-08	1.52E-06	2.62E-02	1.51E-07	4.89E-06	3.99E-07	9.03E-07	2.54E-05	1.27E-04	7.76E-07	2.73E-05				
Road 106	106	0700-0800																

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and Quarry
Factors for
ch) Year 2033

Hour	NO _x Emission						NO _x Emission					
	g/min	g/min	g/min	g/min	g/min	g/min	g/min	g/min	g/min	g/min	g/min	
0000-0100	8.92(6)	8.31(7)	6.61(6)	8.06(5)	1.06(2)	5.97(6)	1.03(1)	1.98(6)	7.60(6)	9.07(6)	1.22(6)	6.72(5)
0100-0200	9.72(8)	1.83(4)	4.69(6)	6.06(4)	7.62(8)	4.08(6)	1.83(6)	1.15(5)	9.21(6)	8.07(6)	7.44(6)	7.44(6)
0200-0300	1.03(5)	1.03(5)	1.03(5)	1.03(5)	1.03(5)	1.03(5)	1.03(5)	1.03(5)	1.03(5)	1.03(5)	1.03(5)	1.03(5)
0300-0400	1.14(6)	6.75(8)	3.17(6)	1.02(2)	5.14(6)	2.83(6)	1.11(5)	6.52(7)	3.09(6)	9.66(6)	4.84(7)	7.69(5)
0400-0500	1.22(6)	6.75(8)	3.71(6)	1.06(2)	5.14(6)	2.86(6)	1.14(5)	6.34(7)	3.49(6)	9.80(6)	5.44(7)	7.69(5)
0500-0600	1.30(6)	6.75(8)	4.25(6)	1.10(2)	5.14(6)	2.89(6)	1.17(5)	6.16(7)	3.93(6)	10.08(6)	5.88(7)	7.69(5)
0600-0700	1.38(6)	6.75(8)	4.79(6)	1.14(2)	5.14(6)	2.92(6)	1.20(5)	5.98(7)	4.36(6)	10.36(6)	6.72(7)	7.69(5)
0700-0800	1.45(6)	6.02(7)	3.31(5)	1.24(5)	5.14(6)	2.84(6)	1.22(5)	5.08(6)	2.80(4)	1.01(4)	4.21(6)	1.14(4)
0800-0900	1.52(6)	6.02(7)	3.85(5)	1.28(5)	5.14(6)	2.87(6)	1.25(5)	4.80(6)	2.32(4)	1.01(4)	3.75(6)	1.14(4)
0900-1000	1.57(6)	6.01(7)	3.31(5)	1.33(5)	5.14(6)	2.84(6)	1.28(5)	4.55(6)	2.15(4)	9.84(6)	1.89(5)	1.14(4)
1000-1100	1.68(6)	5.74(7)	3.16(5)	1.48(6)	5.00(6)	2.80(6)	1.19(4)	4.05(6)	2.23(4)	1.08(4)	3.52(6)	1.04(4)
1100-1200	1.78(6)	5.74(7)	3.69(5)	1.57(6)	4.99(6)	2.83(6)	1.26(5)	3.83(6)	2.46(5)	1.08(4)	3.86(6)	1.04(4)
1200-1300	1.78(6)	5.75(7)	4.18(5)	1.57(6)	4.99(6)	2.84(6)	1.27(5)	3.59(6)	2.99(5)	1.10(4)	4.66(6)	1.04(4)
1300-1400	1.77(6)	7.85(7)	4.21(5)	1.57(6)	8.81(7)	3.75(6)	1.25(4)	5.42(6)	2.98(4)	1.10(4)	4.74(6)	2.61(4)
1400-1500	1.77(6)	7.85(7)	4.70(5)	1.57(6)	8.81(7)	4.24(6)	1.28(5)	5.42(6)	3.47(5)	1.10(4)	5.22(6)	2.61(4)
1500-1600	1.76(6)	8.04(7)	4.43(5)	1.55(6)	8.77(7)	3.95(5)	1.23(5)	5.35(6)	3.12(5)	1.08(4)	5.12(6)	2.80(4)
1600-1700	1.81(6)	8.04(7)	5.08(5)	1.62(6)	8.26(7)	4.51(5)	1.26(4)	6.38(6)	3.51(4)	1.10(4)	5.59(6)	3.08(4)
1700-1800	1.85(6)	7.85(7)	4.32(5)	1.62(6)	8.97(7)	3.84(5)	1.09(4)	6.69(6)	3.96(5)	1.04(4)	5.83(6)	3.11(4)
1800-1900	1.85(6)	7.85(7)	4.81(5)	1.62(6)	8.97(7)	4.33(5)	1.12(5)	6.69(6)	4.45(5)	1.04(4)	6.31(6)	3.11(4)
1900-2000	9.74(8)	6.83(8)	2.74(5)	8.69(6)	4.54(7)	2.45(5)	1.07(4)	5.47(6)	3.01(4)	9.35(6)	4.78(6)	7.63(4)
2000-2100	9.95(8)	3.80(7)	2.00(5)	8.95(6)	3.49(7)	1.90(5)	1.14(5)	4.54(6)	2.50(4)	9.00(6)	4.10(6)	7.22(4)
2100-2200	9.95(8)	3.80(7)	2.50(5)	8.95(6)	3.49(7)	2.40(5)	1.17(5)	4.54(6)	3.00(4)	9.00(6)	4.60(6)	7.22(4)
2200-2300	8.26(8)	6.31(8)	1.76(5)	7.42(6)	2.86(7)	1.95(5)	1.05(4)	4.22(6)	2.62(4)	9.60(6)	3.71(6)	7.04(4)
2300-0000	8.88(8)	6.31(8)	1.41(5)	7.96(6)	2.31(7)	2.17(5)	1.10(5)	3.17(6)	1.74(4)	9.71(6)	2.85(6)	5.44(4)
0000-0100	1.03(5)	1.03(5)	1.03(5)	1.03(5)	1.03(5)	1.03(5)	1.03(5)	1.03(5)	1.03(5)	1.03(5)	1.03(5)	1.03(5)
0100-0200	1.18(6)	1.07(7)	5.43(6)	1.06(2)	6.93(6)	4.88(6)	1.15(4)	1.04(6)	5.28(6)	1.01(4)	4.71(6)	3.87(5)
0200-0300	1.27(6)	8.48(8)	4.29(6)	1.13(6)	7.55(8)	3.82(6)	1.17(4)	7.81(7)	3.69(6)	1.02(4)	4.77(6)	3.44(5)
0300-0400	1.36(6)	8.48(8)	4.81(6)	1.19(6)	7.55(8)	4.31(6)	1.21(4)	7.81(7)	4.18(6)	1.02(4)	5.25(6)	3.44(5)
0400-0500	1.46(6)	8.33(8)	4.32(6)	1.26(6)	7.55(8)	3.83(6)	1.24(4)	7.23(7)	3.66(5)	1.07(4)	6.28(6)	3.16(5)
0500-0600	1.53(6)	8.41(8)	3.78(6)	1.33(6)	7.37(8)	3.94(6)	1.28(4)	6.28(6)	3.47(5)	1.08(4)	6.18(6)	3.16(5)
0600-0700	1.60(6)	8.41(8)	4.32(6)	1.40(6)	7.37(8)	4.45(6)	1.32(4)	6.28(6)	4.00(5)	1.08(4)	6.66(6)	3.16(5)
0700-0800	1.70(6)	7.85(7)	3.87(5)	1.46(6)	6.58(7)	3.32(5)	1.32(4)	5.85(6)	2.99(5)	1.08(4)	6.08(6)	2.48(4)
0800-0900	1.86(6)	8.53(8)	4.32(5)	1.44(6)	7.41(7)	3.75(5)	1.30(4)	6.18(6)	3.13(5)	1.07(4)	6.25(6)	2.66(4)
0900-1000	1.93(6)	8.53(8)	4.81(5)	1.44(6)	7.41(7)	4.24(5)	1.33(5)	6.18(6)	3.62(5)	1.07(4)	6.73(6)	2.66(4)
1000-1100	2.05(6)	7.86(7)	4.00(5)	1.83(6)	7.01(7)	3.55(5)	1.28(4)	5.49(6)	2.60(4)	1.13(6)	4.33(6)	2.48(4)
1100-1200	2.18(6)	7.30(7)	3.64(5)	1.76(6)	6.42(7)	3.25(5)	1.29(4)	4.70(6)	2.38(4)	1.13(6)	4.13(6)	1.90(4)
1200-1300	2.28(6)	7.30(7)	4.13(5)	1.76(6)	6.42(7)	3.74(5)	1.32(5)	4.70(6)	2.87(5)	1.13(6)	4.61(6)	1.90(4)
1300-1400	2.22(6)	1.01(6)	5.13(6)	1.90(6)	9.07(7)	4.60(6)	1.28(4)	5.82(6)	2.99(4)	1.13(6)	5.15(6)	2.61(4)
1400-1500	2.27(6)	1.01(6)	5.51(6)	2.01(6)	8.65(7)	4.89(6)	1.30(4)	6.22(6)	3.13(4)	1.13(6)	5.43(6)	2.78(4)
1500-1600	2.27(6)	1.01(6)	5.90(6)	2.10(6)	8.65(7)	5.38(6)	1.33(5)	6.22(6)	3.62(5)	1.13(6)	5.91(6)	2.78(4)
1600-1700	2.22(6)	1.13(6)	5.07(6)	2.00(6)	8.06(6)	5.08(5)	1.27(4)	6.55(6)	3.32(4)	1.12(6)	5.76(6)	2.92(4)
1700-1800	2.16(6)	1.01(6)	5.51(6)	2.01(6)	8.65(7)	4.89(6)	1.30(4)	6.22(6)	3.13(4)	1.13(6)	5.43(6)	2.78(4)
1800-1900	2.16(6)	1.01(6)	5.90(6)	2.10(6)	8.65(7)	5.38(6)	1.33(5)	6.22(6)	3.62(5)	1.13(6)	5.91(6)	2.78(4)
1900-2000	1.68(6)	9.35(7)	4.73(6)	1.46(6)	8.31(7)	2.71(5)	1.17(4)	6.62(6)	3.35(4)	1.02(4)	5.78(6)	9.93(6)
2000-2100	1.68(6)	9.35(7)	5.22(6)	1.46(6)	8.31(7)	3.20(5)	1.20(5)	6.62(6)	3.84(5)	1.02(4)	6.26(6)	9.93(6)
2100-2200	1.68(6)	9.35(7)	5.71(6)	1.46(6)	8.31(7)	3.69(5)	1.23(5)	6.62(6)	4.33(5)	1.02(4)	6.74(6)	9.93(6)
2200-2300	1.68(6)	9.35(7)	6.20(6)	1.46(6)	8.31(7)	4.18(5)	1.26(5)	6.62(6)	4.82(5)	1.02(4)	7.22(6)	9.93(6)
2300-0000	1.68(6)	9.35(7)	6.69(6)	1.46(6)	8.31(7)	4.67(5)	1.29(5)	6.62(6)	5.31(5)	1.02(4)	7.70(6)	9.93(6)
0000-0100	1.10(6)	4.62(7)	2.04(5)	1.65(6)	3.66(7)	1.85(5)	1.11(4)	4.04(6)	2.04(4)	9.86(6)	3.66(6)	1.82(4)
0100-0200	1.10(6)	4.62(7)	2.53(5)	1.65(6)	3.66(7)	2.34(5)	1.14(5)	4.04(6)	2.53(4)	9.86(6)	4.15(6)	1.82(4)
0200-0300	1.10(6)	4.62(7)	3.02(5)	1.65(6)	3.66(7)	2.83(5)	1.17(5)	4.04(6)	3.02(4)	9.86(6)	4.64(6)	1.82(4)
0300-0400	1.10(6)	4.62(7)	3.51(5)	1.65(6)	3.66(7)	3.32(5)	1.20(5)	4.04(6)	3.51(4)	9.86(6)	5.13(6)	1.82(4)
0400-0500	1.10(6)	4.62(7)	4.00(5)	1.65(6)	3.66(7)	3.81(5)	1.23(5)	4.04(6)	4.00(4)	9.86(6)	5.62(6)	1.82(4)
0500-0600	1.49(6)	4.83(8)	2.97(7)	1.31(6)	4.25(6)	2.61(6)	1.48(4)	4.80(7)	2.95(6)	1.28(6)	4.14(6)	2.74(6)
0600-0700	1.59(6)	4.83(8)	3.46(7)	1.31(6)	4.25(6)	3.10(6)	1.51(5)	4.80(7)	3.44(6)	1.28(6)	4.63(6)	2.74(6)
0700-0800	1.59(6)	4.83(8)	3.95(7)	1.31(6)	4.25(6)	3.59(6)	1.54(5)	4.80(7)	3.93(6)	1.28(6)	5.12(6)	2.74(6)
0800-0900	1.59(6)	4.83(8)	4.44(7)	1.31(6)	4.25(6)	4.08(6)	1.57(5)	4.80(7)	4.42(6)	1.28(6)	5.61(6)	2.74(6)
0900-1000	1.59(6)	4.83(8)	4.93(7)	1.31(6)	4.25(6)	4.57(6)	1.60(5)	4.80(7)	4.91(6)	1.28(6)	6.10(6)	2.74(6)
1000-1100	1.28(6)	2.78(8)	1.70(7)	1.14(6)	2.46(8)	1.51(7)	1.40(4)	3.04(7)	1.88(6)	1.22(6)	1.64(7)	1.62(6)
1100-1200	1.28(6)	2.78(8)	2.19(7)	1.14(6)	2.46(8)	2.00(7)	1.43(5)	3.04(7)	2.37(6)	1.22(6)	2.13(7)	1.61(6)
1200-1300	1.28(6)	2.78(8)	2.68(7)	1.14(6)	2.46(8)	2.49(7)	1.46(5)	3.04(7)	2.86(6)	1.22(6)	2.62(7)	1.61(6)
1300-1400	1.28(6)	2.78(8)	3.17(7)	1.14(6)	2.46(8)	2.98(7)	1.49(5)	3.04(7)	3.35(6)	1.22(6)	3.11(7)	1.61(6)
1400-1500	1.28(6)	2.78(8)	3.66(7)	1.14(6)	2.46(8)	3.47(7)	1.52(5)	3.04(7)	3.84(6)	1.22(6)	3.60(7)	1.61(6)
1500-1600	1.28(6)	2.78(8)	4.15(7)	1.14(6)	2.46(8)	3.96(7)	1.55(5)	3.04(7)	4.33(6)	1.22(6)	4.09(7)	1.61(6)
1600-1700	1.28(6)	2.78(8)	4.64(7)	1.14(6)	2.46(8)	4.45(7)	1.58(5)	3.04(7)	4.82(6)	1.22(6)	4.58(7)	1.61(6)
1700-1800	1.48(6)	2.95(7)	2.08(6)	1.64(6)	3.02(7)	1.86(6)	1.54(4)	3.02(6)	1.81(5)	1.44(6)	2.66(6)	1.63(5)
1800-1900	1.48(6)	2.95(7)	2.57(6)	1.64(6)	3.02(7)	2.35(6)	1.57(5)	3.02(6)	2.30(5)	1.44(6)	3.15(6)	1.63(5)
1900-2000	1.48(6)	2.95(7)	3.06(6)	1.64(6)	3.02(7)	2.84(6)	1.60(5)	3.02(6)	2.79(5)	1.44(6)	3.64(6)	1.63(5)
2000-2100	1.48(6)	2.95(7)	3.55(6)	1.64(6)	3.02(7)	3.33(6)	1.63(5)	3.02(6)	3.28(5)	1.44(6)	4.13(6)	1.63(5)
2100-2200	1.48(6)	2.95(7)	4.04(6)	1.64(6)	3.02(7)	3.82(6)	1.66(5)	3.02(6)	3.77(5)	1.44(6)	4.62(6)	1.63(5)
2200-2300	1.48(6)	2.95(7)	4.53(6)	1.64(6)	3.02(7)	4.31(6)	1.69(5)	3.02(6)	4.26(5)	1.44(6)	5.11(6)	1.63(5)
2300-0000	1.48(6)	2.95(7)	5.02(6)	1.64(6)	3.02(7)	4.80(6)	1.72(5)	3.02(6)	4.75(5)	1.44(6)	5.60(6)	1.63(5)
0000-0100	1.29(6)	1.59(7)	9.75(7)	1.17(6)	1.44(7)	8.95(7)	1.54(6)	2.02(6)	1.24(6)	1.47(7)	1.81(6)	1.11(5)
0100-0200	1.14(5)	1.59(7)	8.55(7)	1.07(6)	1.47(7)	7.77(7)	1.49(6)	1.83(6)	1.12(5)	1.34(6)	1.61(6)	1.11(5)
0200-0300	1.14(5)	1.59(7)	7.35(7)	1.07(6)	1.47(7)	6.57(7)	1.49(6)	1.83(6)	1.12(5)	1.34(6)	1.41(6)	1.11(5)
0300-0400	1.14(5)	1.59(7)	6.15(7)	1.07(6)	1.47(7)	5.37(7)	1.49(6)	1.83(6)	1.12(5)	1.34(6)	1.20(6)	1.11(5)
0400-0500	1.14(5)	1.59(7)	4.95(7)	1.07(6)	1.47(7)	4.17(7)	1.49(6)	1.83(6)	1.12(5)	1.34(6)	1.00(6)	1.11(5)
0500-0600	1.13(6)	1.58(6)	3.75(6)	1.06(6)	1.46(6)	2.97(6)	1.48(5)	1.82(6)	1.11(5)	1.33(6)	0.80(6)	1.11(5)
0600-0700	1.13(6)	1.58(6)	2.55(6)	1.06(6)	1.46(6)	1.77(6)	1.48(5)	1.82(6)	1.11(5)	1.33(6)	0.60(6)	1.11(5)
0700-0800	1.27(6)	1.83(7)	3.87(6)	1.10(6)	1.47(7)	3.95(7)	1.50(6)	1.96(6)	1.13(5)	1.47(7)	1.38(6)	1.66(5)
0800-0900	1.27(6)	1.83(7)	4.36(6)	1.10(6)	1.47(7)	4.44(7)	1.53(6)	1.96(6)	1.13(5)	1.47(7)	1.87(6)	1.66(5)
0900-1000	1.27(6)	1.83(7)	4.85(6)	1.10(6)	1.47(7)	4.93(7)	1.56(6)	1.96(6)</				

60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Appendix\Appendix 3.5.3 Emission Factor in 2033-S.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Figure 10. Comparison of the predicted and measured PM₁₀ concentrations at the Tsing Yi North Underground Quarry Open Road 24 hour Emission Factors for Year 2033 (AEDM/OD model (March)).

NO _x Emission														NO ₂ Emission														Road Name	Road ID	Hour
MonthlyHourMin							MonthlyHourAve							MonthlyHourMin							MonthlyHourAve									
			g/s/m ²	g/s/m ²	g/s/m ²	g/s/m ²				g/s/m ²	g/s/m ²	g/s/m ²	g/s/m ²				g/s/m ²	g/s/m ²	g/s/m ²	g/s/m ²				g/s/m ²	g/s/m ²	g/s/m ²	g/s/m ²			
4	0900-1000	2.86	4.28	4.13	4.11	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12	4.12		
4	1000-1300	4.38	4.15	4.07	4.32	4.28	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32		
4	1300-1600	6.05	4.02	4.02	4.05	4.04	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05		
4	1600-1900	4.38	4.15	4.07	4.32	4.28	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32		
4	1900-2200	1.96	5.06	5.02	5.02	5.37	5.02	4.38	4.07	8.76	1.08	4.38	4.07	8.76	1.08	4.38	4.07	8.76	1.08	4.38	4.07	8.76	1.08	4.38	4.07	8.76	1.08	4.38		
4	2200-2400	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	0000-0300	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	0300-0600	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	0600-0900	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	0900-1200	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	1200-1500	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	1500-1800	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	1800-2100	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	2100-2400	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	0000-0300	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	0300-0600	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	0600-0900	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	0900-1200	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	1200-1500	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	1500-1800	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	1800-2100	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	2100-2400	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	0000-0300	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	0300-0600	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	0600-0900	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	0900-1200	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	1200-1500	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	1500-1800	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	1800-2100	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	2100-2400	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	0000-0300	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	0300-0600	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	0600-0900	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	0900-1200	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	1200-1500	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	1500-1800	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	1800-2100	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	2100-2400	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	0000-0300	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	0300-0600	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	0600-0900	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	0900-1200	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	1200-1500	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	1500-1800	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47		
4	1800-2100	1.97	5.07	5.07	5.07	5.35	5.07	4.48	4.07	8.88	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06	8.93	1.08	4.47	4.06					

\\secure\environment\projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Appendix\Appendix 3.5.3 Emission Factor in 2033-5 B.xlsx I:\Sec

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for
Year 2033
Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for
Year 2033

AEMU Hourly (Hour)														NO Emission														AEMU Hourly (Hour)													
Road	Road ID	Hour	MonthlyHourMin				MonthlyHourMax				MonthlyHourMin				MonthlyHourMax				Road Name	Road ID	Hour																				
			g/kmVeh	g/s/mi	tonne/hour	g/kmVeh	g/s/mi	tonne/hour	g/kmVeh	g/s/mi	tonne/hour	g/kmVeh	g/s/mi	tonne/hour																											
Road 17	17	1600-1700	1.8142	2.0715	2.3368	1.8142	2.0715	2.3368	1.8142	2.0715	2.3368	1.8142	2.0715	2.3368	Road 22	23	0000-0100																								
Road 17	17	1700-1800	5.002	3.026	3.795	4.485	1.156	3.425	2.552	6.476	1.896	2.226	5.760	1.656	0100-0100	23	0100-0200																								
Road 17	17	1800-1900	2.952	1.187	1.075	2.662	6.476	1.896	1.706	4.146	1.214	1.524	3.696	1.084	0200-0200	23	0200-0300																								
Road 17	17	1900-2000	2.552	2.417	2.417	2.552	1.376	2.158	1.376	2.158	1.376	2.158	1.376	2.158	0300-0300	23	0300-0400																								
Road 17	17	2000-2100	1.732	0.422	0.721	0.566	2.244	0.675	0.666	1.688	0.765	1.276	1.706	5.136	0400-0400	23	0400-0500																								
Road 17	17	2100-2200	1.656	0.286	0.652	1.511	2.176	0.836	1.206	1.876	0.566	1.176	1.686	4.926	0500-0500	23	0500-0600																								
Road 17	17	2200-2300	2.552	1.656	1.656	2.552	1.656	1.656	1.656	1.656	1.656	1.656	1.656	1.656	0600-0600	23	0600-0700																								
Road 17	17	2300-2400	1.752	0.657	0.856	1.012	1.676	0.498	1.326	1.366	0.626	1.186	1.206	3.616	0700-0700	23	0700-0800																								
Road 18	18	0000-0100	1.112	0.396	0.506	1.012	5.786	2.266	1.126	6.426	2.516	0.936	0.276	7.226	0800-0800	23	0800-0900																								
Road 18	18	0100-0200	1.246	0.626	1.626	1.116	4.186	1.646	1.126	4.346	0.716	1.016	3.616	1.076	0900-0900	23	0900-1000																								
Road 18	18	0200-0300	1.386	0.206	0.616	1.386	1.126	1.386	1.126	1.386	1.126	1.386	1.126	1.386	1000-1000	23	1000-1100																								
Road 18	18	0300-0400	1.456	0.306	1.296	1.456	1.226	2.916	1.146	1.226	2.696	1.056	1.056	2.326	1.076	1100-1100	23	1100-1200																							
Road 18	18	0400-0500	1.576	0.816	0.496	1.396	3.376	1.336	1.266	3.056	0.776	1.106	1.086	2.626	1.036	1200-1200	23	1200-1300																							
Road 18	18	0500-0600	1.456	0.376	0.876	1.456	1.376	1.316	1.276	1.316	1.276	1.316	1.276	1.316	0100-0100	24	0000-0100																								
Road 18	18	0600-0700	1.626	1.446	0.646	1.416	1.756	0.496	1.316	1.166	0.556	1.116	0.926	0.846	0500-0500	24	1400-1500																								
Road 18	18	0700-0800	1.786	1.316	1.256	1.526	2.786	1.086	1.346	2.436	0.516	1.136	1.026	0.806	0600-0600	24	1500-1600																								
Road 18	18	0800-0900	1.686	1.266	1.266	1.686	1.266	1.266	1.266	1.266	1.266	1.266	1.266	1.266	0700-0700	24	1600-1700																								
Road 18	18	0900-1000	1.896	1.346	1.306	1.656	2.926	1.116	1.306	2.706	0.846	1.126	1.176	0.776	0800-0800	24	1700-1800																								
Road 18	18	1000-1100	2.216	0.256	0.776	1.866	2.886	0.716	1.146	1.346	0.206	0.876	1.166	0.786	0900-0900	24	1800-1900																								
Road 18	18	1100-1200	1.656	0.286	0.776	1.656	1.356	1.356	1.356	1.356	1.356	1.356	1.356	1.356	1000-1000	24	1900-2000																								
Road 18	18	1200-1300	1.076	0.846	2.286	0.756	0.516	2.026	1.656	1.346	1.236	1.446	2.746	1.076	1100-1100	24	2000-2100																								
Road 18	18	1300-1400	0.956	0.147	2.416	2.696	5.622	2.126	1.166	3.926	1.3116	1.449	2.926	1.144	1200-1200	24	2200-2300																								
Road 18	18	1400-1500	1.076	0.846	2.286	0.756	0.516	2.026	1.656	1.346	1.236	1.446	2.746	1.076	1300-1300	24	2300-2400																								
Road 18	18	1500-1600	2.836	6.096	0.276	2.386	2.536	5.436	2.126	1.626	1.456	1.366	1.446	3.086	1.214	0100-0100	24	0000-0100																							
Road 18	18	1600-1700	2.916	0.336	0.476	2.586	5.622	2.226	1.636	4.326	1.355	1.366	1.436	3.126	1.224	0200-0200	24	0100-0200																							
Road 18	18	1700-1800	2.396	0.296	0.296	2.396	4.746	1.896	1.536	3.516	0.936	1.326	1.224	1.224	0300-0300	24	0200-0300																								
Road 18	18	1800-1700	1.576	0.016	1.576	1.426	3.626	1.476	1.376	1.076	1.206	1.236	2.746	1.074	0400-0400	24	0300-0400																								
Road 18	18	1900-1800	1.676	2.766	1.086	1.456	2.486	9.686	1.624	2.436	0.946	1.266	2.136	8.416	0500-0500	24	0400-0500																								
Road 18	18	2000-1900	1.256	0.256	0.256	1.256	1.506	1.506	1.506	1.506	1.506	1.506	1.506	1.506	0600-0600	24	0500-0600																								
Road 18	18	2100-2000	1.506	0.016	1.506	1.376	1.836	1.746	1.306	1.866	0.726	1.296	1.676	6.546	0700-0700	24	0600-0700																								
Road 18	18	2200-2100	3.336	2.956	0.762	3.396	1.776	0.676	1.436	1.836	1.456	1.286	1.646	6.396	0800-0800	24	0700-0800																								
Road 18	18	2300-2200	1.436	0.186	1.436	1.436	1.436	1.436	1.436	1.436	1.436	1.436	1.436	1.436	0900-0900	24	0800-0900																								
Road 18	18	0000-0100	1.186	0.086	1.186	1.056	0.976	0.816	0.976	0.956	0.716	0.806	0.806	2.316	1.056	1000-1000	24	0900-1000																							
Road 18	18	0100-0200	1.276	0.806	0.256	1.156	7.014	0.686	1.046	6.146	0.276	1.676	5.886	1.367	1100-1100	24	1000-1100																								
Road 18	18	0200-0300	1.386	0.276	1.816	0.566	6.646	1.026	1.646	0.376	1.846	0.376	9.016	1.176	1200-1200	24	1100-1200																								
Road 18	18	0300-0400	1.526	0.486	0.586	1.456	4.896	1.456	1.076	8.176	1.116	0.926	3.336	0.956	0100-0100	24	1100-1200																								
Road 18	18	0400-0500	1.626	0.456	0.856	1.436	5.716	1.646	1.116	4.446	0.726	1.186	0.576	6.816	0200-0200	24	1200-1300																								
Road 18	18	0500-0600	1.656	0.556	1.506	1.436	5.856	1.676	1.146	4.446	0.726	1.186	0.576	6.816	0300-0300	24	1300-1400																								
Road 18	18	0600-0700	1.752	0.607	1.666	1.456	5.526	2.266	1.516	4.186	0.956	0.946	4.276	1.426	0400-0400	24	1400-1500																								
Road 18	18	0700-0800	1.926	0.826	0.686	1.656	5.096	1.476	1.236	3.736	1.076	1.036	3.136	0.806	0500-0500	24	1500-1600																								
Road 18	18	0800-0900	1.856	0.866	0.686	1.656	4.856	1.656	1.156	4.186	0.956	1.056	3.136	0.806	0600-0600	24	1600-1700																								
Road 18	18	0900-1000	1.112	0.447	0.956	1.896	5.646	1.626	1.236	3.746	1.066	1.066	3.226	0.926	0700-0700	24	1700-1800																								
Road 18	18	1000-1100	2.376	0.426	1.856	2.026	5.636	1.626	1.236	3.476	0.996	1.116	3.006	0.866	0800-0800	24	1800-1900																								
Road 18	18	1100-1200	1.386	0.276	1.816	0.566	6.646	1.026	1.646	0.376	1.846	0.376	9.016	1.176	0900-0900	24	1900-2000																								
Road 18	18	1200-1300	1.326	0.276	2.116	0.586	6.426	1.856	1.556	1.026	1.396	0.306	8.916	1.056	1000-1000	24	2000-2100																								
Road 18	18	1300-1400	3.326	0.276	2.286	2.256	6.976	2.016	1.636	3.876	1.126	1.426	3.386	0.9746	1100-1100	24	2100-2200																								
Road 18	18	1400-1500	1.326	0.276	2.286	2.256	6.976	2.016	1.636	3.876	1.126	1.426	3.386	0.9746	1200-1200	24	2200-2300																								
Road 18	18	1500-1600	1.066	0.776	2.236	2.786	6.926	1.996	1.556	3.556	1.016	1.166	1.406	3.556	1.074	0100-0100	24	2300-2400																							
Road 18	18	1600-1700	1.156	0.766	2.296	2.786	7.066	1.926	1.556	3.886	1.116	1.136	3.556	1.014	0200-0200	24	0000-0100																								
Road 18	18	1700-1800	2.506	0.516	0.866	2.256	5.856	1.676	1.476	1.436	1.106	1.306	3.476	0.816	0300-0300	24	0100-0200																								
Road 18	18	1800-1900	1.386	0.466	1.466	1.716	1.1216	1.316	1.1216	1.316	1.1216	1.316	1.1216	1.316	0400-0400	24	0200-0300																								
Road 18	18	1900-2000	1.716	0.367	9.1116	0.546	2.846	0.816	3.306	2.396	6.886	1.116	2.126	6.166	0500-0500	24	0300-0400																								
Road 18	18	2000-2100	1.696	0.447	7.036	0.536	2.196	0.3116	1.356	1.966	5.446	1.026	1.756	4.996	0600-0600	24	0400-0500																								
Road 18	18	2100-2200	1.696	0.447	7.036	0.536	2.196	0.3116	1.356	1.966	5.446	1.026	1.756	4.996	0700-0700	24	0500-0600																								
Road 18	18	2200-2300	1.646	2.256	6.476	1.456	2.046	0.576	1.306	1.786	5.146	1.166	1.606	4.456	0800-0800	24	0600-0700																								
Road 18	18	2300-0400	1.746	1.836	0.576	1.456	1.676	0.416	1.316	1.386	3.686	1.176	1.226	3.356	0900-0900	24	0700-0800																								
Road 18	18	0000-0100	1.716	0.716	0.856	1.456	1.866	0.516	1.316	1.866	0.516	1.316	1.866	0.516	1000-1000	24	0800-0900																								
Road 18	18	0100-0200	0.786	0.386	6.226	0.476	3.066	5.696	0.976	1.366	2.506	1.736	1.226	2.256	1100-1100	24	0900-1000																								
Road 20	20	0200-0300	4.926	0.296	4.966	4.466	2.446	4.466	1.717	1.076	1.086	1.776	0.866	1.786	1200-1200	24	1000-1100																								
Road 20	20	0300-0400	4.926	0.296	4.966	4.466	2.446	4.466	1.717	1.076	1.086	1.776	0.866	1.786	0100-0100	24	1100-1200																								
Road 20	20	0400-0500	4.926	0.296	4.966	4.466	2.446	4.466	1.717	1.076	1.086	1.776	0.866	1.786	0200-0200	24	1200-1300																								
Road 20	20	0500-0600	5.346	0.806	5.176	4.766	2.506	4.616	2.116	1.117	2.046	1.876	0.826	1.816	0300-0300	24	1300-1400																								
Road 20	20	0600-0700	5.486	0.546	0.6716	4.986	4.656	0.586	2.126	2.002	3.8116	1.906	1.826	3.356	0400-0400	24	1400-1500																								
Road 20	20	0700-0800	5.486	0.546	0.6716	4.986	4.656	0.586	2.126	2.002	3.8116	1.9																													

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Figure 10. Comparison of the AERMOD model and the measured data for the PM₁₀ concentration at the Tsing Yi North Underground Quarry Open Road 24 hour Emission Factors for Year 2033.

[illegible]

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry		Tsing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for		Open Road 24 hour Emission Factors for	
ASPM-11000 (g/m ³ /km/h)	Year 2033	ASPM-11000 (g/m ³ /km/h)	Year 2033

AERIAL ROAD (W)R														AERIAL ROAD (W)R																		
Road Name	Road ID	Hour	NO Emission						NO Emission						Road Name	Road ID	Hour	NO Emission						NO Emission								
			MonthlyHour			MonthlyHourAverage			MonthlyHour			MonthlyHourAverage						MonthlyHour			MonthlyHourAverage			MonthlyHour			MonthlyHourAverage					
			g/m²/hour	g/m²	tonne/hour	g/m²/hour	g/m²	tonne/hour	g/m²/hour	g/m²	tonne/hour	g/m²/hour	g/m²	tonne/hour				g/m²/hour	g/m²	tonne/hour	g/m²/hour	g/m²	tonne/hour	g/m²/hour	g/m²	tonne/hour	g/m²/hour	g/m²	tonne/hour			
Road 24	24	0900-0900	1.74(0)	3.78(0)	0.48(0)	1.74(0)	3.78(0)	0.48(0)	1.74(0)	3.78(0)	0.48(0)	1.74(0)	3.78(0)	0.48(0)	Road 27	27	1700-1800	1.65(0)	3.50(0)	0.45(0)	1.65(0)	3.50(0)	0.45(0)	1.65(0)	3.50(0)	0.45(0)	1.65(0)	3.50(0)	0.45(0)			
Road 24	24	0900-1000	1.74(0)	3.78(0)	0.48(0)	1.74(0)	3.78(0)	0.48(0)	1.74(0)	3.78(0)	0.48(0)	1.74(0)	3.78(0)	0.48(0)	Road 27	27	1700-1800	1.65(0)	3.50(0)	0.45(0)	1.65(0)	3.50(0)	0.45(0)	1.65(0)	3.50(0)	0.45(0)	1.65(0)	3.50(0)	0.45(0)	1.65(0)	3.50(0)	0.45(0)
Road 24	24	1000-1100	1.84(0)	3.98(0)	0.87(0)	1.84(0)	3.98(0)	0.87(0)	1.84(0)	3.98(0)	0.87(0)	1.84(0)	3.98(0)	0.87(0)	Road 27	27	1800-1900	1.46(0)	3.20(0)	0.70(0)	1.46(0)	3.20(0)	0.70(0)	1.46(0)	3.20(0)	0.70(0)	1.46(0)	3.20(0)	0.70(0)	1.46(0)	3.20(0)	0.70(0)
Road 24	24	1100-1200	1.84(0)	3.98(0)	0.87(0)	1.84(0)	3.98(0)	0.87(0)	1.84(0)	3.98(0)	0.87(0)	1.84(0)	3.98(0)	0.87(0)	Road 27	27	1800-1900	1.46(0)	3.20(0)	0.70(0)	1.46(0)	3.20(0)	0.70(0)	1.46(0)	3.20(0)	0.70(0)	1.46(0)	3.20(0)	0.70(0)	1.46(0)	3.20(0)	0.70(0)
Road 24	24	1200-1300	1.92(0)	4.16(0)	0.98(0)	1.92(0)	4.16(0)	0.98(0)	1.92(0)	4.16(0)	0.98(0)	1.92(0)	4.16(0)	0.98(0)	Road 27	27	1900-2000	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)
Road 24	24	1300-1400	1.93(0)	4.17(0)	1.10(0)	1.93(0)	4.17(0)	1.10(0)	1.93(0)	4.17(0)	1.10(0)	1.93(0)	4.17(0)	1.10(0)	Road 27	27	2000-2100	1.32(0)	2.84(0)	0.62(0)	1.32(0)	2.84(0)	0.62(0)	1.32(0)	2.84(0)	0.62(0)	1.32(0)	2.84(0)	0.62(0)	1.32(0)	2.84(0)	0.62(0)
Road 24	24	1400-1500	1.93(0)	4.17(0)	1.10(0)	1.93(0)	4.17(0)	1.10(0)	1.93(0)	4.17(0)	1.10(0)	1.93(0)	4.17(0)	1.10(0)	Road 27	27	2100-2200	1.32(0)	2.84(0)	0.62(0)	1.32(0)	2.84(0)	0.62(0)	1.32(0)	2.84(0)	0.62(0)	1.32(0)	2.84(0)	0.62(0)	1.32(0)	2.84(0)	0.62(0)
Road 24	24	1500-1600	1.77(0)	3.66(0)	1.04(0)	1.77(0)	3.66(0)	1.04(0)	1.77(0)	3.66(0)	1.04(0)	1.77(0)	3.66(0)	1.04(0)	Road 27	27	2200-2300	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)
Road 24	24	1600-1700	1.78(0)	3.91(0)	0.97(0)	1.78(0)	3.91(0)	0.97(0)	1.78(0)	3.91(0)	0.97(0)	1.78(0)	3.91(0)	0.97(0)	Road 28	28	0000-0100	1.68(0)	3.66(0)	0.91(0)	1.68(0)	3.66(0)	0.91(0)	1.68(0)	3.66(0)	0.91(0)	1.68(0)	3.66(0)	0.91(0)	1.68(0)	3.66(0)	0.91(0)
Road 24	24	1700-1800	1.56(0)	3.06(0)	0.78(0)	1.56(0)	3.06(0)	0.78(0)	1.56(0)	3.06(0)	0.78(0)	1.56(0)	3.06(0)	0.78(0)	Road 28	28	0100-0200	1.81(0)	3.94(0)	0.72(0)	1.81(0)	3.94(0)	0.72(0)	1.81(0)	3.94(0)	0.72(0)	1.81(0)	3.94(0)	0.72(0)	1.81(0)	3.94(0)	0.72(0)
Road 24	24	1800-1900	1.48(0)	3.06(0)	0.78(0)	1.48(0)	3.06(0)	0.78(0)	1.48(0)	3.06(0)	0.78(0)	1.48(0)	3.06(0)	0.78(0)	Road 28	28	0200-0300	2.01(0)	4.20(0)	0.85(0)	2.01(0)	4.20(0)	0.85(0)	2.01(0)	4.20(0)	0.85(0)	2.01(0)	4.20(0)	0.85(0)	2.01(0)	4.20(0)	0.85(0)
Road 24	24	1900-2000	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	Road 28	28	0300-0400	2.10(0)	4.20(0)	0.85(0)	2.10(0)	4.20(0)	0.85(0)	2.10(0)	4.20(0)	0.85(0)	2.10(0)	4.20(0)	0.85(0)	2.10(0)	4.20(0)	0.85(0)
Road 24	24	2000-2100	1.32(0)	2.84(0)	0.62(0)	1.32(0)	2.84(0)	0.62(0)	1.32(0)	2.84(0)	0.62(0)	1.32(0)	2.84(0)	0.62(0)	Road 28	28	0400-0500	2.10(0)	4.20(0)	0.85(0)	2.10(0)	4.20(0)	0.85(0)	2.10(0)	4.20(0)	0.85(0)	2.10(0)	4.20(0)	0.85(0)	2.10(0)	4.20(0)	0.85(0)
Road 24	24	2100-2200	1.32(0)	2.84(0)	0.62(0)	1.32(0)	2.84(0)	0.62(0)	1.32(0)	2.84(0)	0.62(0)	1.32(0)	2.84(0)	0.62(0)	Road 28	28	0500-0600	2.10(0)	4.20(0)	0.85(0)	2.10(0)	4.20(0)	0.85(0)	2.10(0)	4.20(0)	0.85(0)	2.10(0)	4.20(0)	0.85(0)	2.10(0)	4.20(0)	0.85(0)
Road 24	24	2200-2300	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	Road 28	28	0600-0700	2.22(0)	4.56(0)	0.92(0)	2.22(0)	4.56(0)	0.92(0)	2.22(0)	4.56(0)	0.92(0)	2.22(0)	4.56(0)	0.92(0)	2.22(0)	4.56(0)	0.92(0)
Road 24	24	2300-2400	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	Road 28	28	0700-0800	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)
Road 24	24	2400-2500	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	Road 28	28	0800-0900	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)
Road 24	24	2500-2600	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	Road 28	28	0900-1000	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)
Road 24	24	2600-2700	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	Road 28	28	1000-1100	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)
Road 24	24	2700-2800	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	Road 28	28	1100-1200	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)
Road 24	24	2800-2900	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	Road 28	28	1200-1300	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)
Road 24	24	2900-3000	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	Road 28	28	1300-1400	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)
Road 24	24	3000-3100	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	Road 28	28	1400-1500	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)
Road 24	24	3100-3200	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	Road 28	28	1500-1600	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)
Road 24	24	3200-3300	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	Road 28	28	1600-1700	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)
Road 24	24	3300-3400	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	Road 28	28	1700-1800	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)
Road 24	24	3400-3500	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	Road 28	28	1800-1900	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)
Road 24	24	3500-3600	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	Road 28	28	1900-2000	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)
Road 24	24	3600-3700	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	Road 28	28	2000-2100	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)
Road 24	24	3700-3800	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	Road 28	28	2100-2200	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)
Road 24	24	3800-3900	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	Road 28	28	2200-2300	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)
Road 24	24	3900-4000	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	Road 28	28	2300-2400	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)
Road 24	24	4000-4100	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	1.30(0)	2.80(0)	0.60(0)	Road 28	28	2400-2500	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)	2.26(0)	4.68(0)	0.96(0)
Road 24	24	4100-4																														

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Ying Yi North Underground Quarry
 Open Road 24 hour Emission Factors for
 AERMOD model (March) Year 2033

Road ID	Hour	Mo, Nitrogen						Mo, Phosphorus					
		MonthlyMean			MonthlyPhosphorus			MonthlyMean			MonthlyPhosphorus		
		g/kwh	g/m ³	tonnes	g/kwh	g/m ³	tonne/hour	g/kwh	g/m ³	tonne/hour	g/kwh	g/m ³	tonne
Road #1	41	0000-0100	2.57E-02	4.56E-08	4.54E-07	2.34E-02	4.42E-08	4.13E-07	9.81E-02	1.89E-07	1.91E-02	1.57E-07	
Road #1	41	0100-0200	3.28E-02	4.56E-08	4.54E-07	2.34E-02	4.42E-08	3.88E-07	1.13E-02	1.57E-07	1.91E-02	1.57E-07	
Road #1	41	0200-0300	4.44E-02	4.44E-08	4.44E-07	4.17E-02	4.17E-08	4.44E-07	1.13E-02	1.57E-07	1.91E-02	1.57E-07	
Road #1	41	0300-0400	4.38E-02	4.38E-08	4.38E-07	4.12E-02	4.12E-08	3.95E-07	3.71E-07	1.36E-01	1.37E-07	1.36E-01	
Road #1	41	0400-0500	4.28E-02	4.28E-08	4.28E-07	3.82E-02	3.82E-08	3.79E-07	3.79E-07	1.36E-01	1.43E-07	1.36E-01	
Road #1	41	0500-0600	5.12E-02	5.12E-08	5.12E-07	4.83E-02	4.83E-08	4.83E-07	4.83E-07	1.36E-01	1.43E-07	1.36E-01	
Road #1	41	0600-0700	2.56E-02	2.56E-08	2.56E-07	2.72E-02	2.51E-08	5.55E-07	1.92E-07	1.27E-01	2.76E-07	1.92E-07	
Road #1	41	0700-0800	3.48E-02	3.48E-08	3.48E-07	3.28E-02	3.28E-08	1.88E-07	1.74E-08	1.23E-01	7.68E-07	1.23E-01	
Road #1	41	0800-0900	2.24E-02	2.24E-08	2.24E-07	2.17E-02	2.17E-08	1.91E-07	1.91E-07	1.23E-01	7.68E-07	1.23E-01	
Road #1	41	0900-1000	3.57E-02	2.16E-07	2.02E-06	3.12E-02	1.86E-07	1.77E-06	1.22E-01	7.78E-07	1.22E-01	7.78E-07	
Road #1	41	1000-1100	3.92E-02	2.15E-07	2.02E-06	3.44E-02	1.88E-07	1.77E-06	1.30E-01	7.47E-07	1.30E-01	7.47E-07	
Road #1	41	1100-1200	2.08E-02	2.08E-08	2.08E-07	1.84E-02	1.84E-08	1.46E-07	1.46E-07	1.23E-01	7.68E-07	1.23E-01	
Road #1	41	1200-1300	4.44E-02	2.56E-07	2.42E-06	3.86E-02	2.24E-07	2.10E-06	1.45E-01	8.40E-07	1.45E-01	8.40E-07	
Road #1	41	1300-1400	3.44E-02	2.61E-07	2.46E-06	3.89E-02	2.29E-07	2.13E-06	1.44E-01	8.70E-07	1.44E-01	8.70E-07	
Road #1	41	1400-1500	2.68E-02	2.68E-08	2.68E-07	2.48E-02	2.48E-08	1.35E-07	1.35E-07	1.23E-01	7.68E-07	1.23E-01	
Road #1	41	1500-1600	4.08E-02	2.56E-07	2.42E-06	3.62E-02	2.29E-07	2.15E-06	1.40E-01	8.82E-07	1.40E-01	8.82E-07	
Road #1	41	1600-1700	4.11E-02	2.62E-07	2.47E-06	3.86E-02	2.36E-07	2.21E-06	1.39E-01	8.78E-07	1.39E-01	8.78E-07	
Road #1	41	1700-1800	2.08E-02	2.08E-08	2.08E-07	1.84E-02	1.84E-08	1.46E-07	1.46E-07	1.23E-01	7.68E-07	1.23E-01	
Road #1	41	1800-1900	3.18E-02	2.12E-07	1.99E-06	2.85E-02	1.91E-07	1.80E-06	1.80E-06	1.24E-01	7.24E-07	1.80E-06	
Road #1	41	1900-2000	1.94E-02	1.94E-08	1.89E-06	1.76E-02	1.76E-08	1.69E-07	1.69E-07	1.39E-01	3.95E-07	1.69E-07	
Road #1	41	2000-2100	2.08E-02	2.08E-08	2.08E-07	1.84E-02	1.84E-08	1.46E-07	1.46E-07	1.23E-01	7.68E-07	1.23E-01	
Road #1	41	2100-2200	2.01E-02	6.88E-06	6.46E-07	1.84E-02	1.86E-08	5.89E-07	8.88E-02	3.07E-07	8.88E-02	3.07E-07	
Road #1	41	2200-2300	2.06E-02	6.78E-06	6.36E-07	1.86E-02	1.89E-08	5.72E-07	8.63E-02	2.96E-07	8.63E-02	2.96E-07	
Road #1	41	2300-2400	2.06E-02	6.78E-06	6.36E-07	1.86E-02	1.89E-08	5.72E-07	8.63E-02	2.96E-07	8.63E-02	2.96E-07	
Road #2	42	0000-0100	4.25E-02	9.53E-08	9.24E-07	4.76E-02	3.87E-08	4.54E-06	2.27E-06	1.14E-01	3.32E-07	1.14E-01	
Road #2	42	0100-0200	5.26E-02	9.06E-08	8.76E-06	2.28E-02	4.76E-08	8.13E-06	2.06E-06	1.68E-01	2.86E-07	1.68E-01	
Road #2	42	0200-0300	8.76E-02	8.76E-08	8.76E-07	8.76E-02	8.76E-08	8.76E-07	8.76E-07	1.68E-01	2.86E-07	1.68E-01	
Road #2	42	0300-0400	7.14E-02	8.71E-08	7.21E-06	4.32E-02	7.65E-08	1.99E-06	2.03E-06	2.42E-07	2.42E-07	2.42E-07	
Road #2	42	0400-0500	6.98E-02	8.71E-08	7.27E-06	5.23E-02	6.81E-08	2.03E-06	2.03E-06	2.42E-07	2.42E-07	2.42E-07	
Road #2	42	0500-0600	1.00E-02	1.00E-08	1.00E-07	1.00E-02	1.00E-08	1.00E-07	1.00E-07	2.42E-07	2.42E-07	2.42E-07	
Road #2	42	0600-0700	4.32E-02	1.40E-07	1.35E-06	3.76E-02	1.32E-07	3.11E-06	1.56E-06	5.10E-07	5.10E-07	5.10E-07	
Road #2	42	0700-0800	7.38E-02	1.40E-07	1.42E-06	6.33E-02	1.42E-07	1.22E-06	1.25E-06	1.77E-06	1.77E-06	1.77E-06	
Road #2	42	0800-0900	8.76E-02	1.40E-07	1.42E-06	7.86E-02	1.40E-07	1.25E-06	1.25E-06	1.77E-06	1.77E-06	1.77E-06	
Road #2	42	0900-1000	7.52E-02	1.54E-07	1.43E-06	6.66E-02	1.59E-07	1.29E-06	1.29E-06	1.77E-06	1.77E-06	1.77E-06	
Road #2	42	1000-1100	8.08E-02	1.54E-07	1.38E-06	7.11E-02	1.47E-07	1.21E-06	1.24E-06	1.61E-06	1.61E-06	1.61E-06	
Road #2	42	1100-1200	1.22E-02	1.22E-08	1.22E-07	1.22E-02	1.22E-08	1.22E-07	1.22E-07	1.61E-06	1.61E-06	1.61E-06	
Road #2	42	1200-1300	1.06E-01	5.57E-07	5.14E-06	9.23E-02	4.84E-07	4.64E-06	1.23E-05	3.01E-01	1.59E-06	1.59E-06	
Road #2	42	1300-1400	1.07E-01	8.86E-07	1.48E-06	9.43E-02	5.13E-07	1.30E-05	3.06E-01	1.69E-06	1.69E-06	1.69E-06	
Road #2	42	1400-1500	1.07E-01	8.86E-07	1.48E-06	9.43E-02	5.13E-07	1.30E-05	3.06E-01	1.69E-06	1.69E-06	1.69E-06	
Road #2	42	1500-1600	1.01E-01	5.74E-07	1.45E-06	9.00E-02	5.10E-07	1.29E-05	2.96E-01	1.77E-06	1.77E-06	1.77E-06	
Road #2	42	1600-1700	1.02E-01	5.74E-07	1.47E-06	9.13E-02	5.10E-07	1.32E-05	2.93E-01	1.66E-06	1.66E-06	1.66E-06	
Road #2	42	1700-1800	1.02E-01	5.74E-07	1.47E-06	9.13E-02	5.10E-07	1.32E-05	2.93E-01	1.66E-06	1.66E-06	1.66E-06	
Road #2	42	1800-1900	8.76E-02	4.86E-07	1.19E-06	7.44E-02	4.23E-07	1.07E-05	2.56E-01	1.34E-06	1.34E-06	1.34E-06	
Road #2	42	1900-2000	4.38E-02	1.40E-07	1.35E-06	3.94E-02	1.27E-07	3.23E-06	1.54E-01	4.96E-07	4.96E-07	4.96E-07	
Road #2	42	2000-2100	4.25E-02	1.22E-07	3.12E-06	2.22E-02	1.08E-07	2.77E-06	1.29E-01	4.29E-07	4.29E-07	4.29E-07	
Road #2	42	2100-2200	4.35E-02	1.21E-07	3.12E-06	2.22E-02	1.08E-07	2.80E-06	1.30E-01	4.29E-07	4.29E-07	4.29E-07	
Road #2	42	2200-2300	4.46E-02	1.19E-07	3.02E-06	2.42E-02	1.12E-07	2.73E-06	1.40E-01	4.09E-07	4.09E-07	4.09E-07	
Road #3	43	0000-0100	5.92E-02	1.11E-07	2.93E-06	4.88E-02	1.00E-07	5.66E-06	1.73E-01	5.61E-07	5.61E-07	5.61E-07	
Road #3	43	0100-0200	4.38E-02	1.38E-07	3.68E-06	3.48E-02	1.38E-07	3.68E-06	1.73E-01	5.61E-07	5.61E-07	5.61E-07	
Road #3	43	0200-0300	4.25E-02	3.34E-06	3.93E-06	4.48E-02	3.07E-06	3.56E-06	1.47E-01	1.14E-08	1.14E-08	1.14E-08	
Road #3	43	0300-0400	5.54E-02	3.76E-06	3.88E-06	4.94E-02	3.46E-06	3.48E-06	1.59E-01	1.08E-06	1.08E-06	1.08E-06	
Road #3	43	0400-0500	5.54E-02	3.76E-06	3.88E-06	4.94E-02	3.46E-06	3.48E-06	1.59E-01	1.08E-06	1.08E-06	1.08E-06	
Road #3	43	0500-0600	5.54E-02	3.76E-06	3.88E-06	4.94E-02	3.46E-06	3.48E-06	1.59E-01	1.08E-06	1.08E-06	1.08E-06	
Road #3	43	0600-0700	5.08E-02	4.26E-06	4.26E-06	4.51E-02	4.27E-06	3.61E-06	1.52E-01	1.26E-06	1.26E-06	1.26E-06	
Road #3	43	0700-0800	5.08E-02	4.26E-06	4.26E-06	4.51E-02	4.27E-06	3.61E-06	1.52E-01	1.26E-06	1.26E-06	1.26E-06	
Road #3	43	0700-0800	5.07E-02	4.17E-06	3.77E-06	4.39E-02	3.50E-06	3.53E-07	1.55E-01	5.99E-07	5.99E-07	5.99E-07	
Road #3	43	0800-0900	4.71E-02	3.77E-06	3.81E-07	4.12E-02	3.13E-06	1.58E-07	1.48E-01	5.43E-08	5.43E-08	5.43E-08	
Road #3	43	0900-1000	4.71E-02	3.77E-06	3.81E-07	4.12E-02	3.13E-06	1.58E-07	1.48E-01	5.43E-08	5.43E-08	5.43E-08	
Road #3	43	1000-1100	4.47E-02	3.77E-06	3.81E-07	4.12E-02	3.13E-06	1.59E-07	1.61E-01	5.29E-08	5.29E-08	5.29E-08	
Road #3	43	1100-1200	5.48E-02	3.74E-06	3.78E-07	4.12E-02	3.13E-06	1.53E-07	1.64E-01	5.21E-08	5.21E-08	5.21E-08	
Road #3	43	1200-1300	5.48E-02	3.74E-06	3.78E-07	4.12E-02	3.13E-06	1.53E-07	1.64E-01	5.21E-08	5.21E-08	5.21E-08	
Road #3	43	1300-1400	5.92E-02	6.02E-06	6.11E-07	2.27E-02	5.27E-06	5.42E-07	1.09E-01	2.53E-07	2.53E-07	2.53E-07	
Road #3	43	1400-1500	5.92E-02	6.02E-06	6.11E-07	2.27E-02	5.27E-06	5.42E-07	1.09E-01	2.53E-07	2.53E-07	2.53E-07	
Road #3	43	1500-1600	5.92E-02	6.02E-06	6.11E-07	2.27E-02	5.27E-06	5.42E-07	1.09E-01	2.53E-07	2.53E-07	2.53E-07	
Road #3	43	1600-1700	5.92E-02	6.02E-06	6.11E-07	2.27E-02	5.27E-06	5.42E-07	1.09E-01	2.53E-07	2.53E-07	2.53E-07	
Road #3	43	1700-1800	1.88E-02	5.27E-06	5.27E-06	1.68E-02	4.76E-06	4.99E-07	8.88E-02	2.53E-07	2.53E-07	2.53E-07	
Road #3	43	1800-1900	1.88E-02	5.27E-06	5.27E-06	1.68E-02	4.76E-06	4.99E-07	8.88E-02	2.53E-07	2.53E-07	2.53E-07	
Road #3	43	1900-2000	1.07E-02	2.43E-06	2.47E-07	1.53E-02	2.16E-06	2.21E-07	6.43E-02	1.43E-07	1.43E-07	1.43E-07	
Road #3	43	2000-2100	1.98E-02	1.91E-06	1.99E-07	8.83E-02	1.73E-07	1.77E-07	6.95E-02	1.22E-07	1.22E-07	1.22E-07	
Road #3	43	2100-2200	1.98E-02	1.91E-06	1.99E-07	8.83E-02	1.73E-07	1.77E-07	6.95E-02	1.22E-07	1.22E-07	1.22E-07	
Road #3	43	2200-2300	9.80E-02	1.68E-06	1.72E-07	8.83E-02	1.53E-07	1.54E-07	6.72E-02	1.14E-07	1.14E-07	1.14E-07	
Road #3	43	2300-2400	1.12E-02	1.45E-06	1.48E-07	1.01E-02	1.31E-06	1.34E-07	6.99E-02	9.04E-08	9.04E-08	9.04E-08	
Road #4	44	0000-0100	8.54E-02	8.54E-08	8.54E-07	7.72E-02	7.15E-08	7.72E-07	7.72E-07	1.56E-01	1.56E-01	1.56E-01	
Road #4	44	0100-0200	4.94E-02	4.89E-08	3.02E-07	3.84E-02	4.37E-08	2.70E-07	6.77E-02	5.06E-07	5.06E-07	5.06E-07	
Road #4	44	0200-0300	1.04E-02	3.95E-08	2.43E-07	9.16E-02	3.48E-08	2.15E-					

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Ying Yi North Underground Quarry
 Open Road 24 hour Emission Factors for
 AERMOD model (March) Year 2033

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24-hour Emission Factors for

AFRMO model (March)		Year 2033															
Row Name	Row ID	NO _x Emission				Monthlyhourly				NO _x Emission				Monthlyhourly			
		g/tonne	g/m ³	1.186	g/tonne	g/tonne	g/m ³	1.186	g/tonne	g/tonne	g/m ³	1.186	g/tonne	g/tonne	g/m ³	1.186	
Row 103	103	1000-1700	1.7186	4.8867	1.1188	1.566	4.3767	1.0565	8.2442	2.766	5.4445	7.1187	1.976	4.7647	1.186	4.8867	
Row 103	103	1700-2000	1.926	3.9667	1.0767	1.1267	3.4767	8.346	7.696	2.166	5.596	6.086	1.886	4.526	1.0767	3.9667	
Row 103	103	2000-2300	3.0667	3.0667	1.0667	1.0667	8.3167	7.6667	8.3167	7.6667	8.3167	7.6667	8.3167	7.6667	1.0667	1.0667	
Row 103	103	2300-2600	1.946	2.1167	5.0667	1.0767	1.876	4.506	5.446	1.146	3.476	4.6526	1.226	5.766	1.0767	5.0667	
Row 103	103	2600-2900	1.686	1.5667	3.866	6.936	4.367	4.436	6.006	1.236	2.976	5.186	1.076	2.576	1.686	1.5667	
Row 103	103	2900-3200	1.656	1.656	1.656	1.656	1.656	1.656	1.656	1.656	1.656	1.656	1.656	1.656	1.656	1.656	
Row 103	103	3200-3500	1.3967	2.316	3.1967	3.846	5.176	2.816	5.066	1.126	1.566	2.786	4.396	9.836	2.766	3.1967	
Row 103	103	3500-3800	1.226	1.086	1.2616	6.526	1.756	2.356	5.936	8.876	2.136	5.016	1.768	1.846	1.226	1.086	
Row 103	103	3800-4100	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226	
Row 104	104	0100-0200	1.366	6.706	1.066	1.266	1.266	1.266	1.336	7.116	3.476	7.076	6.666	3.006	6.116	1.066	
Row 104	104	0200-0300	1.446	4.996	1.026	1.336	1.446	1.046	8.096	2.276	5.506	6.906	2.316	4.776	1.026	1.336	
Row 104	104	0300-0400	1.616	4.516	1.076	1.446	1.616	1.616	8.446	2.776	6.616	7.266	1.966	4.076	1.076	1.446	
Row 104	104	0400-0500	1.576	4.176	1.046	1.576	1.576	1.576	8.766	3.276	6.866	7.586	2.466	4.586	1.046	1.576	
Row 104	104	0500-0600	1.826	9.626	1.966	1.616	1.966	1.726	10.596	4.786	9.766	7.756	4.086	8.316	1.966	1.616	
Row 104	104	0600-0700	1.956	2.246	4.076	1.676	1.956	1.956	9.526	1.046	10.606	2.226	6.006	9.186	1.076	4.076	
Row 104	104	0700-0800	1.856	2.076	4.846	1.676	1.856	1.856	9.876	1.676	10.856	2.386	3.806	3.806	1.856	2.076	
Row 104	104	0800-0900	1.926	5.516	1.126	1.726	1.726	1.976	9.676	9.676	5.176	7.076	2.136	4.336	1.126	1.726	
Row 104	104	0900-1000	2.266	5.706	1.146	1.966	1.966	1.016	10.16	2.546	5.126	8.886	2.176	4.436	1.146	1.966	
Row 104	104	1000-1100	2.576	5.366	1.106	2.216	1.736	9.636	1.086	11.216	4.716	9.326	2.006	4.066	1.106	2.216	
Row 104	104	1100-1200	1.5126	3.246	6.586	1.366	2.806	7.076	1.966	1.446	3.336	6.646	1.376	6.066	1.366	2.806	
Row 104	104	1200-1300	1.446	3.246	1.446	3.246	1.446	3.246	1.446	3.246	1.446	3.246	1.446	3.246	1.446	3.246	
Row 104	104	1400-1500	1.606	3.606	7.736	1.466	1.156	4.416	8.156	1.836	3.726	6.886	1.546	3.146	1.466	7.736	
Row 104	104	1500-1600	1.496	3.476	6.136	1.326	1.036	6.176	7.926	1.826	3.706	6.816	1.566	3.166	1.326	6.136	
Row 104	104	1600-1700	1.386	3.866	7.426	1.266	1.076	1.056	6.666	1.856	3.486	6.306	1.386	3.386	1.266	7.426	
Row 104	104	1700-1800	1.1126	3.126	6.306	9.876	1.776	6.646	6.606	1.856	3.776	5.556	1.596	3.236	1.1126	3.126	
Row 104	104	1800-1900	1.8116	2.586	1.7126	2.776	2.776	6.116	5.086	1.466	3.216	4.336	1.366	2.766	1.8116	2.586	
Row 104	104	1900-2000	1.6216	2.626	1.6216	1.6216	1.6216	1.6216	1.6216	1.6216	1.6216	1.6216	1.6216	1.6216	1.6216	1.6216	
Row 104	104	2000-2100	8.846	1.316	6.966	6.176	1.196	4.146	5.756	1.106	2.256	4.956	9.516	1.946	8.846	1.316	
Row 104	104	2100-2200	5.786	1.146	2.286	9.166	3.936	2.026	5.476	1.056	2.146	4.706	9.046	1.846	5.786	1.146	
Row 104	104	2200-2300	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	2300-2400	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	2400-2500	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	2500-2600	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	2600-2700	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	2700-2800	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	2800-2900	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	2900-3000	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	3000-3100	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	3100-3200	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	3200-3300	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	3300-3400	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	3400-3500	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	3500-3600	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	3600-3700	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	3700-3800	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	3800-3900	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	3900-4000	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	4000-4100	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	4100-4200	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	4200-4300	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	4300-4400	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	4400-4500	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	4500-4600	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	4600-4700	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	4700-4800	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	4800-4900	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	4900-5000	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	5000-5100	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	5100-5200	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	5200-5300	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	5300-5400	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	5400-5500	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	5500-5600	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	5600-5700	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	5700-5800	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	5800-5900	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	5900-6000	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	6000-6100	6.246	1.056	1.986	2.166	3.066	3.946	1.086	3.596	1.046	2.116	4.706	8.766	1.076	2.166	
Row 104	104	6100-6200	6.246	1.056	1.986	2.166	3										

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

AEPMOD model (April)			Year 2033		NO ₂ Emission				NO Emission					
Read Name	Read ID	Hour	Month/Hour/Min			Month/Hour/Min			Month/Hour/Min			Month/Hour/Min		
			g/min/hour	g/min	ton/hour	g/min/hour	g/min	ton/hour	g/min/hour	g/min	ton/hour	g/min/hour	g/min	ton/hour
Read 1	1	0000-0100	8.5363	1.1527	0.6326	7.6863	1.0627	5.5326	9.6622	1.3067	7.1765	8.3112	1.1262	6.61
Read 1	1	0100-0200	9.2113	0.8298	0.4448	8.0563	7.0598	3.8868	8.8362	8.6117	7.4745	8.4374	7.3897	4.07
Read 1	1	0200-0300	9.1862	0.8298	0.4448	8.0563	7.0598	3.8868	8.8362	8.6117	7.4745	8.4374	7.3897	4.07
Read 1	1	0300-0400	1.0502	5.2522	2.9116	9.4383	4.7718	2.6326	9.5657	5.0657	2.7885	8.8662	4.4872	2.47
Read 1	1	0400-0500	1.1112	4.1862	3.3962	9.8383	5.5268	3.0642	1.0235	6.6567	3.1115	8.9882	4.9887	2.67
Read 1	1	0500-0600	1.1112	4.1862	3.3962	9.8383	5.5268	3.0642	1.0235	6.6567	3.1115	8.9882	4.9887	2.67
Read 1	1	0600-0700	1.2725	2.5117	1.3805	1.0962	2.2427	1.2705	1.0251	2.1465	1.1964	2.9202	1.8962	1.04
Read 1	1	0700-0800	1.3312	4.5667	3.0305	1.1852	4.8297	2.7665	1.0982	1.5508	2.4884	9.4225	3.9115	2.02
Read 1	1	0800-0900	1.3312	4.5667	3.0305	1.1852	4.8297	2.7665	1.0982	1.5508	2.4884	9.4225	3.9115	2.02
Read 1	1	0900-1000	1.4112	5.5667	3.0665	1.2565	4.9297	2.8115	1.0251	1.5508	2.4884	1.188	3.6226	1.91
Read 1	1	1000-1100	1.5882	0.5867	2.8775	1.3882	4.7117	2.5795	1.1167	3.7695	2.0754	9.4962	3.2116	1.65
Read 1	1	1100-1200	1.5502	0.4967	2.6775	1.3382	4.3637	2.3715	1.1167	3.5585	1.9664	9.4362	3.1416	1.61
Read 1	1	1200-1300	1.6952	0.5867	2.8775	1.3882	4.7117	2.5795	1.1167	3.7695	2.0754	9.4962	3.2116	1.65
Read 1	1	1300-1400	1.6662	0.5867	2.8775	1.3952	1.4772	6.3927	1.3562	1.1638	3.0376	9.7774	3.0212	4.9962
Read 1	1	1400-1500	1.7112	7.9367	4.3565	1.4662	6.9367	3.5675	1.3562	1.4958	3.0376	1.0114	4.8962	2.66
Read 1	1	1500-1600	1.7112	7.9367	4.3565	1.4662	6.9367	3.5675	1.3562	1.4958	3.0376	1.0114	4.8962	2.66
Read 1	1	1600-1700	1.7112	8.6967	4.7865	1.5112	7.6767	4.2215	1.1862	1.9962	3.2884	1.0318	5.2026	2.65
Read 1	1	1700-1800	1.7112	7.9367	4.3565	1.4662	6.9367	3.5675	1.1162	1.4262	3.0376	1.0114	4.8962	2.66
Read 1	1	1800-1900	1.7112	8.6967	4.7865	1.5112	7.6767	4.2215	1.1862	1.9962	3.2884	1.0318	5.2026	2.65
Read 1	1	1900-2000	9.1565	4.4867	2.5885	8.0225	4.1117	2.2865	9.5082	5.0806	2.8064	8.5716	4.3962	2.45
Read 1	1	2000-2100	9.0203	3.5987	1.9885	8.0225	3.1867	1.7765	1.0462	2.4266	3.3374	9.3225	3.7716	2.02
Read 1	1	2100-2200	7.7112	3.1267	1.6265	7.4462	3.6267	1.9665	1.0462	2.4266	3.3374	9.3225	3.7716	2.02
Read 1	1	2200-2300	7.7963	3.0117	1.6665	6.8065	2.6667	1.4715	1.0251	3.0265	1.6664	8.8962	3.4226	1.85
Read 1	1	2300-0000	8.5363	2.4		7.6863	2.4		9.6622	3.2		8.3112	2.4	
Read 2	2	0000-0100	1.1262	0.1027	0.5156	0.8464	0.9328	0.4526	1.0713	7.7357	0.9328	9.2426	8.3997	4.7
Read 2	2	0100-0200	1.1962	7.9962	4.0268	9.0776	7.1508	3.6827	1.0826	7.7037	6.658	5.588	6.3967	3.47
Read 2	2	0200-0300	1.2262	7.9962	4.0268	9.0776	7.1508	3.6827	1.0826	7.7037	6.658	5.588	6.3967	3.47
Read 2	2	0300-0400	1.3442	7.8065	3.9562	1.0256	7.0118	3.5562	1.1161	8.4712	0.8835	9.8112	5.7267	3.27
Read 2	2	0400-0500	1.4112	4.9367	4.7264	1.2562	1.2217	6.7468	1.1362	1.1356	0.8365	9.8962	1.0068	5.5
Read 2	2	0500-0600	1.4712	0.1027	1.6265	1.3112	2.8867	1.4562	1.0414	5.8862	0.9662	1.0068	2.1816	1.16
Read 2	2	0600-0700	1.5412	7.7567	6.6167	1.6162	6.9167	3.4562	1.1712	5.1162	7.6564	9.3862	4.8362	2.68
Read 2	2	0700-0800	1.5512	0.7167	3.9265	1.3462	6.8867	3.4562	1.1712	5.1162	7.6564	9.3862	4.8362	2.68
Read 2	2	0800-0900	1.7212	7.5367	3.8115	1.9362	6.7362	3.1762	1.1862	5.0862	5.9862	1.0262	4.4962	2.4
Read 2	2	0900-1000	1.7312	1.2067	3.8867	2.0362	6.8462	3.2762	1.1962	5.1862	6.0862	1.1262	4.5962	2.45
Read 2	2	1000-1100	1.8462	0.7167	3.9065	1.6462	5.9267	3.0362	1.1962	5.1462	6.2062	1.0562	4.3862	2.4
Read 2	2	1100-1200	1.8462	0.7167	3.9065	1.6462	5.9267	3.0362	1.1962	5.1462	6.2062	1.0562	4.3862	2.4
Read 2	2	1200-1300	2.0962	0.1027	1.8665	2.0562	8.1267	4.1262	1.1862	5.2062	2.6362	1.0462	4.5962	2.45
Read 2	2	1300-1400	2.0962	0.1027	1.8665	2.0562	8.1267	4.1262	1.1862	5.2062	2.6362	1.0462	4.5962	2.45
Read 2	2	1400-1500	2.1362	1.9267	5.1965	1.8862	6.8367	4.5262	1.2162	5.7962	5.9362	1.0462	4.9962	2.45
Read 2	2	1500-1600	2.0065	0.9567	4.5965	1.7562	8.6117	4.5962	1.1862	5.8862	0.9462	1.0362	5.0862	2.65
Read 2	2	1600-1700	2.0162	0.9567	4.5965	1.7562	8.6117	4.5962	1.1862	5.8862	0.9462	1.0362	5.0862	2.65
Read 2	2	1700-1800	1.8062	0.9567	4.5965	1.3862	7.8267	3.9662	1.1162	5.8662	0.7262	0.5362	5.4116	2.62
Read 2	2	1800-1900	1.2026	0.7167	3.8465	1.0362	6.1667	3.1262	1.0662	5.7862	0.9662	1.1162	4.8462	2.4
Read 2	2	1900-2000	1.2026	0.7167	3.8465	1.0362	6.1667	3.1262	1.0662	5.7862	0.9662	1.1162	4.8462	2.4
Read 2	2	2000-2100	1.0462	3.8117	1.9365	0.3062	3.3927	1.7262	1.0562	3.7716	9.1262	0.9662	3.3116	1.62
Read 2	2	2100-2200	9.3962	3.4267	1.7865	8.3862	3.0467	1.5465	9.5962	4.6965	1.7764	8.4026	3.0662	1.61
Read 2	2	2200-2300	9.4762	3.4267	1.7865	8.3862	3.0467	1.5465	9.5962	4.6965	1.7764	8.4026	3.0662	1.61
Read 2	2	2300-0000	1.0462	2.7567	1.9665	0.6762	2.4027	1.2765	1.0562	3.7716	9.1262	0.9662	3.3116	1.62
Read 3	3	0000-0100	1.0462	4.7118	2.8867	0.9142	4.1368	2.5847	1.2712	5.7367	3.5266	1.1062	4.9667	3.3
Read 3	3	0100-0200	1.1262	0.3112	2.0367	9.8463	2.9116	1.7462	1.0262	5.7962	3.3362	1.1162	3.2767	1.67
Read 3	3	0200-0300	1.2362	0.3112	2.0367	9.8463	2.9116	1.7462	1.0262	5.7962	3.3362	1.1162	3.2767	1.67
Read 3	3	0300-0400	1.2716	0.1265	1.3467	1.1562	1.9217	1.2117	1.3062	2.2367	0.7362	1.1662	1.9967	1.07
Read 3	3	0400-0500	1.3362	2.5865	1.5467	1.0262	2.2562	1.3862	1.3212	2.4767	1.5266	1.1762	1.9167	1.07
Read 3	3	0500-0600	1.3362	2.5865	1.5467	1.0262	2.2562	1.3862	1.3212	2.4767	1.5266	1.1762	1.9167	1.07
Read 3	3	0600-0700	1.4112	9.7168	5.9712	1.0262	2.6862	1.5362	1.3962	3.3062	3.7262	1.1862	1.8206	1.51
Read 3	3	0700-0800	1.5262	0.1265	1.3116	1.3362	1.8717	1.1362	1.3962	1.9962	1.0062	1.2062	1.8962	1.16
Read 3	3	0800-0900	1.4812	0.1265	1.3116	1.3362	1.8717	1.1362	1.3962	1.9962	1.0062	1.2062	1.8962	1.16
Read 3	3	0900-1000	1.8362	0.1265	1.3462	1.4162	1.8967	1.1862	1.3962	1.8262	1.1262	1.1662	1.5662	0.95
Read 3	3	1000-1100	1.8026	2.0867	1.2862	1.5172	1.8267	1.1162	1.3962	1.6262	0.9326	1.2116	1.4062	0.88
Read 3	3	1100-1200	1.8362	2.0867	1.2862	1.5172	1.8267	1.1162	1.3962	1.6262	0.9326	1.2116	1.4062	0.88
Read 3	3	1200-1300	2.1462	2.9967	1.8362	1.8712	2.6117	1.6562	1.6112	2.2462	3.8865	3.9962	1.9462	1.05
Read 3	3	1300-1400	2.1562	0.0667	1.8862	1.8862	2.6967	1.6562	1.6062	3.0062	4.4116	3.9962	1.9962	1.16
Read 3	3	1400-1500	2.1562	0.0667	1.8862	1.8862	2.6967	1.6562	1.6062	3.0062	4.4116	3.9962	1.9962	1.16
Read 3	3	1500-1600	2.0712	0.3117	1.9712	1.8112	2.9217	1.7362	1.5962	2.4712	3.5216	3.9962	2.1562	1.06
Read 3	3	1600-1700	2.2112	0.3117	2.2262	1.9362	3.1867	1.9662	1.6312	2.6962	1.6565	4.4262	2.3362	1.16
Read 3	3	1700-1800	2.2112	0.3117	2.2262	1.9362	3.1867	1.9662	1.6312	2.6962	1.6565	4.4262	2.3362	1.16
Read 3	3	1800-1900	1.4362	0.0667	1.7462	1.2362	2.4527	1.5062	1.4262	1.8262	1.7362	2.3116	2.4116	1.06
Read 3	3	1900-2000	1.2362	1.9467	1.1362	1.0862	1.6267	1.7402	1.0462	2.2962	4.4116	1.2712	2.0062	1.16
Read 3	3	2000-2100	1.2712	1.5117	0.9267	1.0962	1.3467	0.7262	1.5462	1.8462	1.1916	1.8662	1.8716	1.05
Read 3	3	2100-2200	1.2712	1.5117	0.9267	1.0962	1.3467	0.7262	1.5462	1.8462	1.1916	1.8662	1.8716	1.05
Read 3	3	2200-2300	1.1062	1.9367	0.8057	0.9712	1.1667	0.7162	1.4762	1.7462	0.9716	1.2962	1.5362	0.95
Read 3	3	2300-0000	1.1962	1.0012	0.6302	0.8212	0.9218	0.5662	1.3462	1.9462	2.2362	1.2962	1.1562	0.76
Read 4	4	0000-0100	7.6462	1.4116	0.7462	6.6962	1.0667	5.4562	9.7112	1.4116	0.7462	6.6962	1.0667	5.4562
Read 4	4	0100-0200	8.2765	3.5658	1.0765	7.2112	4.6718	2.6662	8.2462	5.4462	0.9562	1.4162	4.6262	0.91
Read 4	4	0200-0300	8.8862	4.1168	1.8062	7.9362	3.7518	7.5217	8.0212	4.0262	0.8716	1.4712	3.3367	0.77
Read 4	4	0300-0400												

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

AERMOD model (April)			Year 2033		NO ₂ Emission										NO _x Emission									
Road Name	Road ID	Hour	MonthlyAverage					MonthlyHourlyAverage					MonthlyHourMin					MonthlyHourAverage						
			g/min/h	g/min/h	g/min/h	g/min/h	g/min/h	g/min/h	g/min/h	g/min/h	g/min/h	g/min/h	g/min/h	g/min/h	g/min/h	g/min/h	g/min/h	g/min/h						
Road 4	4	0800-0900	1.176-62	4.176-07	8.366-06	1.038-62	3.656-07	7.326-06	8.486-02	3.026-06	6.056-05	7.286-02	2.596-06	6	6	6	6	6						
Road 4	4	0900-1000	1.338-62	4.338-07	7.708-06	1.156-62	3.346-07	6.926-06	9.286-02	2.706-06	5.416-05	7.876-02	2.296-06	4	4	4	4	4						
Road 4	4	1000-1100	1.446-62	4.446-07	7.708-06	1.156-62	3.346-07	6.926-06	9.286-02	2.706-06	5.416-05	7.876-02	2.296-06	4	4	4	4	4						
Road 4	4	1100-1200	1.426-62	4.386-07	6.776-06	1.176-62	2.976-07	5.976-06	9.736-02	3.466-06	8.456-02	2.016-06	4	4	4	4	4	4						
Road 4	4	1200-1300	1.486-62	4.476-07	9.476-06	1.296-62	4.126-07	8.286-06	9.996-02	3.176-06	3.866-05	8.536-02	2.726-06	5	5	5	5	5						
Road 4	4	1300-1400	1.300-62	4.300-07	8.706-06	1.106-62	3.706-07	7.806-06	9.786-02	3.786-06	6.706-05	8.786-02	2.606-06	5	5	5	5	5						
Road 4	4	1400-1500	1.526-62	5.286-07	1.096-06	1.336-62	4.626-07	8.286-06	1.016-06	3.506-07	7.016-05	8.686-02	3.016-06	6	6	6	6	6						
Road 4	4	1500-1600	1.456-62	4.476-07	1.036-06	1.276-62	4.516-07	8.936-06	1.006-06	3.546-07	8.106-05	8.626-02	3.096-06	6	6	6	6	6						
Road 4	4	1600-1700	1.346-62	4.346-07	1.016-06	1.246-62	4.416-07	8.806-06	1.006-06	3.486-07	8.686-05	8.186-02	3.046-06	6	6	6	6	6						
Road 4	4	1700-1800	1.156-62	5.096-07	1.026-06	1.976-62	4.976-07	8.806-06	1.026-06	3.486-07	8.186-05	8.716-02	3.096-06	6	6	6	6	6						
Road 4	4	1800-1900	8.886-03	4.316-07	8.806-06	7.636-03	3.776-07	7.566-06	7.736-02	3.856-06	7.116-05	6.536-02	3.726-06	5	5	5	5	5						
Road 4	4	1900-2000	7.876-03	4.196-07	6.246-06	6.806-03	2.726-07	7.566-06	7.976-02	3.156-06	6.326-05	6.846-02	3.276-06	5	5	5	5	5						
Road 4	4	2000-2100	7.716-03	4.196-07	6.246-06	6.806-03	2.726-07	7.566-06	7.976-02	3.156-06	6.326-05	6.846-02	3.276-06	5	5	5	5	5						
Road 4	4	2100-2200	6.646-03	4.986-07	3.976-06	5.676-03	1.766-07	3.596-06	7.996-02	4.436-06	8.896-05	8.926-02	2.126-06	4	4	4	4	4						
Road 4	4	2200-2300	6.426-03	1.926-07	3.846-06	3.676-03	1.986-07	4.486-06	8.786-02	4.866-06	8.936-05	8.136-02	2.126-06	4	4	4	4	4						
Road 5	5	0800-0900	1.426-62	4.426-07	4.016-06	1.176-62	3.726-07	6.926-06	1.296-06	3.426-07	8.926-02	2.296-06	3	3	3	3	3	3						
Road 5	5	0900-1000	1.286-62	8.016-08	7.376-07	1.106-62	7.736-06	6.446-07	1.296-06	8.096-07	5.596-06	1.116-06	7.826-07	4	4	4	4	4						
Road 5	5	1000-1100	1.326-62	8.016-08	5.026-07	1.156-62	5.286-08	6.446-07	1.396-06	9.926-07	4.946-06	1.116-06	5.076-07	4	4	4	4	4						
Road 5	5	1100-1200	1.366-62	8.016-08	4.026-07	1.156-62	5.286-08	6.446-07	1.396-06	9.926-07	4.946-06	1.116-06	5.076-07	4	4	4	4	4						
Road 5	5	1200-1300	1.486-62	4.826-08	3.186-07	1.316-62	3.446-08	2.876-07	1.316-62	4.427-07	2.866-06	1.166-06	3.036-07	4	4	4	4	4						
Road 5	5	1300-1400	1.556-62	4.466-08	3.776-07	1.396-62	4.016-08	3.366-07	1.396-62	4.836-07	2.206-06	1.186-06	3.386-07	4	4	4	4	4						
Road 5	5	1400-1500	1.726-62	4.026-08	2.826-07	1.526-62	3.626-08	2.826-07	1.526-62	3.626-08	2.826-07	1.526-62	3.626-08	4	4	4	4	4						
Road 5	5	1500-1600	2.016-62	2.146-07	1.796-06	1.806-62	1.911-07	1.696-06	1.546-06	1.646-06	1.376-06	1.396-06	1.446-06	4	4	4	4	4						
Road 5	5	1600-1700	2.526-62	2.416-07	4.526-06	2.216-62	4.756-07	3.967-06	1.746-06	1.856-06	2.156-06	1.546-06	1.326-06	4	4	4	4	4						
Road 5	5	1700-1800	2.856-62	2.186-07	5.186-06	2.186-62	4.456-07	4.546-06	1.576-06	1.856-06	2.476-06	1.476-06	1.476-06	4	4	4	4	4						
Road 5	5	1800-1900	2.806-62	2.586-07	4.756-06	2.246-62	4.926-07	4.116-06	1.546-06	1.726-06	1.156-06	1.376-06	1.386-06	4	4	4	4	4						
Road 5	5	1900-2000	3.096-62	5.326-07	4.456-06	2.476-62	4.667-07	3.896-06	1.886-06	2.286-06	2.746-06	1.636-06	2.146-06	4	4	4	4	4						
Road 5	5	2000-2100	2.326-62	4.926-07	3.296-06	2.326-62	4.926-07	3.296-06	2.326-62	4.926-07	3.296-06	2.326-62	4.926-07	4	4	4	4	4						
Road 5	5	2100-2200	3.276-06	9.006-07	7.526-06	2.886-06	7.886-07	6.576-06	1.796-06	1.4916-06	1.056-06	1.546-06	4.236-06	3	3	3	3	3						
Road 5	5	2200-2300	3.306-62	9.176-07	7.666-06	2.886-06	8.006-07	6.896-06	1.836-06	1.976-06	1.4246-06	1.576-06	4.376-06	3	3	3	3	3						
Road 5	5	1400-1500	3.366-62	1.1016-06	8.406-06	2.846-06	8.816-07	7.366-06	1.816-06	1.4266-06	1.576-06	4.406-06	3	3	3	3	3							
Road 5	5	1500-1600	3.396-62	1.1016-06	8.406-06	2.846-06	8.816-07	7.366-06	1.816-06	1.4266-06	1.576-06	4.406-06	3	3	3	3	3							
Road 5	5	1600-1700	3.366-62	1.1016-06	8.406-06	2.846-06	8.816-07	7.366-06	1.816-06	1.4266-06	1.576-06	4.406-06	3	3	3	3	3							
Road 5	5	1700-1800	2.896-62	1.036-06	8.616-06	2.336-06	8.916-07	7.456-06	1.796-06	1.496-06	1.4266-06	1.576-06	4.406-06	3	3	3	3	3						
Road 5	5	1800-1900	2.896-62	1.036-06	8.616-06	2.336-06	8.916-07	7.456-06	1.796-06	1.496-06	1.4266-06	1.576-06	4.406-06	3	3	3	3	3						
Road 5	5	1900-2000	2.896-62	1.036-06	8.616-06	2.336-06	8.916-07	7.456-06	1.796-06	1.496-06	1.4266-06	1.576-06	4.406-06	3	3	3	3	3						
Road 5	5	2000-2100	1.446-62	3.886-07	3.246-06	1.296-62	3.346-07	2.386-06	1.296-06	1.486-06	2.916-05	1.176-06	3.706-06	4	4	4	4	4						
Road 5	5	2100-2200	1.446-62	3.886-07	3.246-06	1.296-62	3.346-07	2.386-06	1.296-06	1.486-06	2.916-05	1.176-06	3.706-06	4	4	4	4	4						
Road 5	5	2200-2300	1.186-62	3.806-07	2.676-06	1.046-62	2.746-07	2.286-06	1.216-06	1.166-06	2.466-06	1.056-06	2.746-06	4	4	4	4	4						
Road 5	5	2300-0000	1.246-62	4.236-08	2.036-06	1.086-62	2.166-07	1.736-06	1.216-06	1.366-06	1.996-06	1.076-06	1.996-06	1	1	1	1	1						
Road 6	6	0800-0900	2.056-62	2.056-07	2.056-06	2.056-62	2.056-07	2.056-06	2.056-62	2.056-07	2.056-06	2.056-62	2.056-07	4	4	4	4	4						
Road 6	6	0900-1000	2.056-62	2.056-07	2.056-06	2.056-62	2.056-07	2.056-06	2.056-62	2.056-07	2.056-06	2.056-62	2.056-07	4	4	4	4	4						
Road 6	6	1000-1100	2.056-62	2.056-07	2.056-06	2.056-62	2.056-07	2.056-06	2.056-62	2.056-07	2.056-06	2.056-62	2.056-07	4	4	4	4	4						
Road 6	6	1100-1200	5.526-62	5.516-06	4.266-06	4.866-62	4.136-07	3.756-06	2.646-06	2.726-06	2.046-06	2.316-06	6.336-06	1	1	1	1	1						
Road 6	6	1200-1300	7.806-62	1.936-06	4.466-06	6.656-62	1.936-06	4.466-06	3.246-06	3.246-06	2.826-06	2.826-06	7.186-06	1	1	1	1	1						
Road 6	6	1300-1400	7.806-62	1.936-06	4.466-06	6.656-62	1.936-06	4.466-06	3.246-06	3.246-06	2.826-06	2.826-06	7.186-06	1	1	1	1	1						
Road 6	6	1400-1500	7.806-62	2.216-06	6.236-06	6.496-62	1.946-06	4.466-06	3.376-06	4.396-06	2.656-06	2.956-06	8.256-06	1	1	1	1	1						
Road 6	6	1500-1600	7.286-62	2.216-06	5.936-06	6.496-62	1.856-06	5.216-06	3.396-06	3.676-06	2.736-06	2.936-06	8.476-06	1	1	1	1	1						
Road 6	6	1600-1700	7.286-62	2.216-06	5.936-06	6.496-62	1.856-06	5.216-06	3.396-06	3.676-06	2.736-06	2.936-06	8.476-06	1	1	1	1	1						
Road 6	6	1700-1800	5.856-62	1.776-06	4.986-06	6.086-62	1.536-06	4.316-06	3.016-06	3.086-06	2.566-06	2.606-06	7.846-06	1	1	1	1	1						
Road 6	6	1800-1900	4.216-62	1.216-06	3.416-06	3.646-06	1.056-06	2.946-06	2.446-06	2.026-06	1.986-06	1.096-06	6.016-06	1	1	1	1	1						
Road 6	6	1900-2000	4.216-62	1.216-06	3.416-06	3.646-06	1.056-06	2.946-06	2.446-06	2.026-06	1.986-06	1.096-06	6.016-06	1	1	1	1	1						
Road 6	6	2000-2100	3.086-62	5.276-07	1.486-06	2.576-06	4.766-07	1.326-06	2.156-06	1.686-06	1.046-06	1.906-06	3.596-06	1	1	1	1	1						
Road 6	6	2100-2200	2.946-62	5.076-07	1.426-06	2.646-06	4.516-07	1.276-06	2.036-06	1.486-06	9.756-06	1.806-06	3.086-06	8	8	8	8	8						
Road 6	6	2200-2300	2.946-62	5.076-07	1.426-06	2.646-06	4.516-07	1.276-06	2.036-06	1.486-06	9.756-06	1.806-06	3.086-06	8	8	8	8	8						
Road 6	6	2300-0000	3.086-62	5.826-07	1.096-06	2.596-06	4.346-07	9.426-06	2.036-06	1.556-06	1.756-06	2.176-06	6	6	6	6	6							
Road 7	7	0000-0100	9.346-03	6.116-08	6.086-07	8.196-03	4.556-08	5.376-07	1.096-06	8.856-07	6.856-06	9.056-06	5.036-07	5	5	5	5	5						
Road 7	7	0100-0200	9.346-03	6.116-08	6.086-07	8.196-03	4.556-08	5.376-07	1.096-06	8.856-07	6.856-06	9.056-06	5.036-07	5	5	5	5	5						
Road 7	7	0200-0300	1.106-06	2.936-06	3.436-07	9.896-03	2.626-08	3.086-07	1.096-06	8.886-07	3.866-06	5.806-06	2.956-07	4	4	4	4	4						
Road 7	7	0300-0400	1.186-62	2.486-08	2.9																			

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

AFPMO model (April)			Year 2033		NO ₂ Emission										NO _x Emission									
Route #	Read ID	Hour	Month/Year/Time					Month/Year/Time					Month/Year/Time					Month/Year/Time						
			g/sec	g/min	g/hour	g/sec	g/min	g/hour	g/sec	g/min	g/hour	g/sec	g/min	g/hour	g/sec	g/min	g/hour	g/sec	g/min	g/hour				
Route 7	7	1600-1700	1.502	6.02	3.976	0.97	3.956	1.686	7.96	4.07	3.466	1.361	5.396	2.806	1.186	4.076	2.06	8.18	2.186					
Route 7	7	1700-1800	1.505	6.02	3.987	3.506	1.38	3.506	1.586	7.96	4.076	1.296	5.276	2.516	1.016	3.986	2.186	8.18	2.186					
Route 7	7	1800-1900	1.505	6.02	3.987	3.506	1.38	3.506	1.586	7.96	4.076	1.296	5.276	2.516	1.016	3.986	2.186	8.18	2.186					
Route 7	7	1900-2000	1.066	4.26	1.816	2.126	0.916	2.126	0.916	2.126	1.076	4.16	2.026	2.376	1.026	4.16	2.376	1.026	4.16					
Route 7	7	2000-2100	1.064	4.21	1.816	1.856	0.936	1.856	0.936	1.856	1.076	4.16	2.026	2.376	1.026	4.16	2.376	1.026	4.16					
Route 7	7	2100-2200	0.916	3.66	1.516	1.856	0.936	1.856	0.936	1.856	1.076	4.16	2.026	2.376	1.026	4.16	2.376	1.026	4.16					
Route 7	7	2200-2300	0.916	3.66	1.516	1.856	0.936	1.856	0.936	1.856	1.076	4.16	2.026	2.376	1.026	4.16	2.376	1.026	4.16					
Route 7	7	2300-0000	1.016	4.02	1.856	1.156	0.876	1.156	0.876	1.156	1.296	5.16	2.416	1.416	1.056	4.026	1.416	1.056	4.026					
Route 8	8	0000-0100	2.116	8.46	4.516	2.116	8.46	4.516	2.116	8.46	4.516	2.116	8.46	4.516	2.116	8.46	4.516	2.116	8.46					
Route 8	8	0100-0200	2.116	8.46	4.516	2.116	8.46	4.516	2.116	8.46	4.516	2.116	8.46	4.516	2.116	8.46	4.516	2.116	8.46					
Route 8	8	0200-0300	2.206	8.82	4.516	1.156	0.97	1.156	0.97	1.156	1.296	5.16	2.416	1.416	1.056	4.026	1.416	1.056	4.026					
Route 8	8	0300-0400	2.246	8.92	4.516	0.926	0.926	0.926	0.926	0.926	1.386	5.46	2.686	1.686	1.036	4.16	1.686	1.036	4.16					
Route 8	8	0400-0500	2.246	8.92	4.516	0.926	0.926	0.926	0.926	0.926	1.386	5.46	2.686	1.686	1.036	4.16	1.686	1.036	4.16					
Route 8	8	0500-0600	2.386	9.02	4.516	1.986	0.97	1.986	0.97	1.986	1.316	5.026	2.686	1.686	1.036	4.16	1.686	1.036	4.16					
Route 8	8	0600-0700	2.416	9.26	4.516	1.106	0.97	1.106	0.97	1.106	1.316	5.026	2.686	1.686	1.036	4.16	1.686	1.036	4.16					
Route 8	8	0700-0800	2.416	9.26	4.516	1.106	0.97	1.106	0.97	1.106	1.316	5.026	2.686	1.686	1.036	4.16	1.686	1.036	4.16					
Route 8	8	0800-0900	2.386	9.02	4.516	0.916	0.916	0.916	0.916	0.916	1.316	5.026	2.686	1.686	1.036	4.16	1.686	1.036	4.16					
Route 8	8	0900-1000	2.376	9.22	4.516	0.936	0.936	0.936	0.936	0.936	1.316	5.026	2.686	1.686	1.036	4.16	1.686	1.036	4.16					
Route 8	8	1000-1100	2.706	10.42	4.516	7.466	0.97	2.386	3.256	6.076	3.316	4.886	0.966	2.886	3.446	7.466	0.97	2.386	3.446					
Route 8	8	1200-1300	2.906			1.136	0.926	2.546	0.956	2.036	2.436	5.116	0.926	1.926	2.186	1.136	2.906							
Route 8	8	1300-1400	2.906			1.136	0.926	2.546	0.956	2.036	2.436	5.116	0.926	1.926	2.186	1.136	2.906							
Route 8	8	1400-1500	2.886	11.52	2.486	2.546	1.06	2.186	2.386	1.016	4.066	0.956	2.086	2.886	1.016	4.066	0.956	2.086	2.886					
Route 8	8	1500-1600	2.736	10.92	2.486	2.406	1.06	2.186	2.386	1.016	4.066	0.956	2.086	2.736	1.016	4.066	0.956	2.086	2.736					
Route 8	8	1600-1700	2.816	11.26	2.486	2.476	1.126	2.386	2.456	1.116	4.066	0.956	2.086	2.816	1.116	4.066	0.956	2.086	2.816					
Route 8	8	1700-1800	2.386	9.02	4.516	2.356	0.966	2.006	1.076	2.046	2.476	1.116	4.066	2.386	9.02	4.516	2.356	0.966	2.006					
Route 8	8	1800-1900	2.006	8.02	3.926	2.016	0.786	1.856	0.786	1.856	2.436	2.316	4.446	0.966	2.106	4.006	2.006	8.02	3.926					
Route 8	8	1900-2000	1.966	7.82	3.926	1.646	0.786	1.856	0.786	1.856	2.436	2.316	4.446	0.966	2.106	4.006	2.006	8.02	3.926					
Route 8	8	2000-2100	1.966	7.82	3.926	1.646	0.786	1.856	0.786	1.856	2.436	2.316	4.446	0.966	2.106	4.006	2.006	8.02	3.926					
Route 8	8	2100-2200	1.806	7.02	3.546	1.106	1.611	6.476	0.986	2.496	5.726	1.526	2.226	1.611	6.476	0.986	2.496	5.726	1.526					
Route 8	8	2200-2300	1.886	7.48	3.546	1.106	1.611	6.476	0.986	2.496	5.726	1.526	2.226	1.611	6.476	0.986	2.496	5.726	1.526					
Route 8	8	2300-0000	1.886	7.48	3.546	1.106	1.611	6.476	0.986	2.496	5.726	1.526	2.226	1.611	6.476	0.986	2.496	5.726	1.526					
Route 9	9	0000-0100	1.566	6.26	3.886	0.586	0.486	0.946	1.376	5.456	0.786	3.186	1.186	5.566	0.476	1.946	1.566	6.26	3.886					
Route 9	9	0100-0200	1.596	6.38	3.886	0.586	0.486	0.946	1.376	5.456	0.786	3.186	1.186	5.566	0.476	1.946	1.566	6.38	3.886					
Route 9	9	0200-0300	1.596	6.38	3.886	0.586	0.486	0.946	1.376	5.456	0.786	3.186	1.186	5.566	0.476	1.946	1.566	6.38	3.886					
Route 9	9	0300-0400	1.816	7.26	4.246	2.416	1.636	2.926	2.176	1.356	2.426	0.716	1.786	2.06	2.146	0.716	1.786	2.06	2.146					
Route 9	9	0400-0500	1.506	6.02	3.746	2.786	1.176	3.386	2.486	1.376	2.706	2.016	2.226	2.386	2.016	2.226	2.386	2.016	2.226					
Route 9	9	0500-0600	1.506	6.02	3.746	2.786	1.176	3.386	2.486	1.376	2.706	2.016	2.226	2.386	2.016	2.226	2.386	2.016	2.226					
Route 9	9	0600-0700	2.566	10.26	1.846	2.386	2.286	1.661	1.236	1.076	1.236	1.386	1.916	1.486	1.086	1.486	1.086	1.486	1.086					
Route 9	9	0700-0800	3.466	13.86	0.976	3.786	3.046	4.476	3.326	2.096	3.086	2.386	1.816	2.686	1.816	2.686	1.816	2.686	1.816					
Route 9	9	0800-0900	3.466	13.86	0.976	3.786	3.046	4.476	3.326	2.096	3.086	2.386	1.816	2.686	1.816	2.686	1.816	2.686	1.816					
Route 9	9	0900-1000	3.536	14.32	0.976	4.126	3.416	4.811	3.576	2.316	3.116	2.316	1.886	2.676	1.886	2.676	1.886	2.676	1.886					
Route 9	9	1000-1100	4.136	16.576	3.786	3.616	4.436	4.486	3.266	2.206	2.686	0.906	2.006	3.536	1.416	3.536	1.416	3.536	1.416					
Route 9	9	1100-1200	3.976	15.906	3.416	3.816	4.536	4.536	3.186	2.186	2.436	0.906	2.006	3.976	1.416	3.976	1.416	3.976	1.416					
Route 9	9	1200-1300	3.746	14.976	3.136	3.836	4.536	1.526	1.126	4.126	2.476	0.546	1.556	3.746	1.556	3.746	1.556	3.746	1.556					
Route 9	9	1300-1400	1.136	4.516	1.716	1.611	0.986	1.906	1.416	4.886	0.306	0.836	1.536	1.816	0.306	0.836	1.536	1.816	0.306					
Route 9	9	1400-1500	1.266	5.06	1.611	1.611	0.986	1.906	1.416	4.886	0.306	0.836	1.536	1.816	0.306	0.836	1.536	1.816	0.306					
Route 9	9	1500-1600	1.276	5.106	1.666	1.076	1.206	1.636	1.586	1.106	1.106	1.106	1.716	1.666	1.106	1.716	1.666	1.106	1.716					
Route 9	9	1600-1700	1.306	5.116	2.216	2.016	1.146	2.386	1.786	5.411	1.136	3.866	0.736	1.886	0.736	1.886	0.736	1.886	0.736					
Route 9	9	1700-1800	1.011	4.046	2.216	1.856	0.976	1.856	1.436	4.966	1.076	4.066	1.206	4.926	1.076	4.066	1.206	4.926	1.076					
Route 9	9	1800-1900	1.011	4.046	2.216	1.856	0.976	1.856	1.436	4.966	1.076	4.066	1.206	4.926	1.076	4.066	1.206	4.926	1.076					
Route 9	9	1900-2000	3.696	14.516	4.166	4.576	3.266	5.416	4.036	2.396	3.936	2.916	1.956	4.346	2.916	1.956	4.346	2.916	1.956					
Route 9	9	2000-2100	3.246	12.876	4.236	3.146	2.866	3.786	2.396	2.256	2.946	1.186	1.956	3.246	1.956	3.246	1.956	3.246	1.956					
Route 9	9	2100-2200	3.246	12.876	4.236	3.146	2.866	3.786	2.396	2.256	2.946	1.186	1.956	3.246	1.956	3.246	1.956	3.246	1.956					
Route 9	9	2200-2300	2.986	12.176	2.716	2.786	2.686	3.326	2.476	2.076	2.986	1.916	1.826	2.776	1.916	1.826	2.776	1.916	1.826					
Route 9	9	2300-0000	3.076	12.916	2.186	2.686	2.546	1.886	2.096	1.946	1.446	1.446	1.676	3.076	1.676	3.076	1.676	3.076	1.676					
Route 10	10	0000-0100	8.516	33.256	1.856	5.886	6.736	7.556	8.276	2.786	2.786	2.786	3.036	1.186	3.036	1.186	3.036	1.186	3.036					
Route 10	10	0100-0200	7.346	28.326	5.586	6.736	6.736	7.556	8.276	2.786	2.786	2.786	3.036	1.186	3.036	1.186	3.036	1.186	3.036					
Route 10	10	0200-0300	8.056	31.786	5.586	5.086	7.436	6.986	4.686	2.746	2.746	2.746	3.036	1.186	3.036	1.186	3.036	1.186	3.036					
Route 10	10	0300-0400	8.516	33.256	1.856	5.886	6.736	7.556	8.276	2.786	2.786	2.786	3.036	1.186	3.036	1.186	3.036	1.186	3.036					
Route 10	10	0400-0500	8.586	33.586	5.086	7.016	6.986	4.686	2.786	2.786	2.786	3.036	1.186	3.036	1.186	3.036	1.186	3.036	1.186					
Route 10	10	0500-0600	8.206	30.746	6.046	6.956	7.516	9.506	6.3															

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry

Road ID		Year 2033											
		NO _x Emission						NO Emission					
Road Name	Road ID	MonthlyHourly			MonthlyHourly			MonthlyHourly			MonthlyHourly		
		g/km/veh	g/s/m	tonne/hour	g/km/veh	g/s/m	tonne/hour	g/km/veh	g/s/m	tonne/hour	g/km/veh	g/s/m	tonne/hour
	1	0000-0200	3.36E-02	1.17E-03	3.12E-02	1.17E-03	3.12E-02	3.41E-02	1.21E-03	3.27E-02	3.41E-02	1.21E-03	3.27E-02
	1	0100-0200	3.80E-02	1.42E-03	3.56E-02	1.39E-02	3.31E-02	5.02E-02	2.58E-03	9.66E-07	3.71E-06	2.35E-07	8.79E-07
	1	0200-0300	4.16E-02	1.17E-03	4.56E-02	1.38E-02	3.98E-02	1.09E-02	4.02E-03	2.62E-06	4.00E-07	2.84E-06	2.83E-07
	1	0300-0400	4.52E-02	1.17E-03	4.92E-02	1.38E-02	3.98E-02	1.09E-02	4.02E-03	2.62E-06	4.00E-07	2.84E-06	2.83E-07
	1	0400-0500	4.88E-02	1.17E-03	5.28E-02	1.38E-02	3.98E-02	1.09E-02	4.02E-03	2.62E-06	4.00E-07	2.84E-06	2.83E-07
	1	0500-0600	4.70E-02	1.18E-03	5.10E-02	1.43E-02	4.06E-02	1.09E-02	4.02E-03	2.62E-06	4.00E-07	2.84E-06	2.83E-07
	1	0600-0700	4.52E-02	1.18E-03	4.92E-02	1.43E-02	4.06E-02	1.09E-02	4.02E-03	2.62E-06	4.00E-07	2.84E-06	2.83E-07
	1	0700-0800	4.34E-02	1.18E-03	4.74E-02	1.43E-02	4.06E-02	1.09E-02	4.02E-03	2.62E-06	4.00E-07	2.84E-06	2.83E-07
	1	0800-0900	4.16E-02	1.18E-03	4.56E-02	1.43E-02	4.06E-02	1.09E-02	4.02E-03	2.62E-06	4.00E-07	2.84E-06	2.83E-07
	1	0900-1000	4.00E-02	1.18E-03	4.40E-02	1.43E-02	4.06E-02	1.09E-02	4.02E-03	2.62E-06	4.00E-07	2.84E-06	2.83E-07
	1	1000-1100	3.84E-02	1.18E-03	4.24E-02	1.43E-02	4.06E-02	1.09E-02	4.02E-03	2.62E-06	4.00E-07	2.84E-06	2.83E-07
	1	1100-1200	3.68E-02	1.18E-03	4.08E-02	1.43E-02	4.06E-02	1.09E-02	4.02E-03	2.62E-06	4.00E-07	2.84E-06	2.83E-07
	1	1200-1300	3.52E-02	1.18E-03	3.92E-02	1.43E-02	4.06E-02	1.09E-02	4.02E-03	2.62E-06	4.00E-07	2.84E-06	2.83E-07
	1	1300-1400	3.36E-02	1.18E-03	3.76E-02	1.43E-02	4.06E-02	1.09E-02	4.02E-03	2.62E-06	4.00E-07	2.84E-06	2.83E-07
	1	1400-1500	3.20E-02	1.18E-03	3.60E-02	1.43E-02	4.06E-02	1.09E-02	4.02E-03	2.62E-06	4.00E-07	2.84E-06	2.83E-07
	1	1500-1600	3.04E-02	1.18E-03	3.44E-02	1.43E-02	4.06E-02	1.09E-02	4.02E-03	2.62E-06	4.00E-07	2.84E-06	2.83E-07
	1	1600-1700	2.88E-02	1.18E-03	3.28E-02	1.43E-02	4.06E-02	1.09E-02	4.02E-03	2.62E-06	4.00E-07	2.84E-06	2.83E-07
	1	1700-1800	2.72E-02	1.18E-03	3.12E-02	1.43E-02	4.06E-02	1.09E-02	4.02E-03	2.62E-06	4.00E-07	2.84E-06	2.83E-07
	1	1800-1900	2.56E-02	1.18E-03	2.96E-02	1.43E-02	4.06E-02	1.09E-02	4.02E-03	2.62E-06	4.00E-07	2.84E-06	2.83E-07
	1	1900-2000	2.40E-02	1.18E-03	2.80E-02	1.43E-02	4.06E-02	1.09E-02	4.02E-03	2.62E-06	4.00E-07	2.84E-06	2.83E-07
	1	2000-2100	2.24E-02	1.18E-03	2.64E-02	1.43E-02	4.06E-02	1.09E-02	4.02E-03	2.62E-06	4.00E-07	2.84E-06	2.83E-07
	1	2100-2200	2.08E-02	1.18E-03	2.48E-02	1.43E-02	4.06E-02	1.09E-02	4.02E-03	2.62E-06	4.00E-07	2.84E-06	2.83E-07
	2	0000-0200	2.78E-01	1.74E-02	2.41E-02	2.41E-02	5.51E-03	7.78E-06	6.37E-03	3.99E-07	9.83E-06	5.64E-05	8.71E-04
	2	0100-0200	2.88E-01	1.76E-02	2.41E-02	2.41E-02	5.51E-03	7.78E-06	6.48E-03	4.30E-07	9.83E-06	5.64E-05	8.71E-04
	2	0200-0300	2.84E-01	1.76E-02	2.41E-02	2.41E-02	5.51E-03	7.78E-06	6.55E-03	3.91E-07	9.83E-06	5.64E-05	8.71E-04
	2	0300-0400	2.83E-01	1.67E-02	2.41E-02	2.59E-02	5.47E-03	7.75E-06	6.51E-03	3.85E-07	9.80E-06	5.92E-05	8.50E-04
	2	0400-0500	2.83E-01	1.67E-02	2.41E-02	2.59E-02	5.47E-03	7.75E-06	6.51E-03	3.85E-07	9.80E-06	5.92E-05	8.50E-04
	2	0500-0600	2.82E-01	1.77E-02	2.41E-02	2.54E-02	5.26E-03	7.75E-06	6.55E-03	4.02E-07	9.80E-06	5.93E-05	8.81E-04
	2	0600-0700	2.81E-01	1.87E-02	2.41E-02	2.51E-02	5.17E-03	7.72E-06	6.68E-03	4.45E-07	1.10E-05	9.97E-06	8.86E-04
	2	0700-0800	2.80E-01	1.87E-02	2.41E-02	2.51E-02	5.17E-03	7.72E-06	6.68E-03	4.45E-07	1.10E-05	9.97E-06	8.86E-04
	2	0800-0900	2.80E-01	1.87E-02	2.41E-02	2.51E-02	5.17E-03	7.72E-06	6.68E-03	4.45E-07	1.10E-05	9.97E-06	8.86E-04
	2	0900-1000	2.80E-01	1.87E-02	2.41E-02	2.51E-02	5.17E-03	7.72E-06	6.68E-03	4.45E-07	1.10E-05	9.97E-06	8.86E-04
	2	1000-1100	2.80E-01	1.87E-02	2.41E-02	2.51E-02	5.17E-03	7.72E-06	6.68E-03	4.45E-07	1.10E-05	9.97E-06	8.86E-04
	2	1100-1200	2.80E-01	1.87E-02	2.41E-02	2.51E-02	5.17E-03	7.72E-06	6.68E-03	4.45E-07	1.10E-05	9.97E-06	8.86E-04
	2	1200-1300	2.80E-01	1.87E-02	2.41E-02	2.51E-02	5.17E-03	7.72E-06	6.68E-03	4.45E-07	1.10E-05	9.97E-06	8.86E-04
	2	1300-1400	2.80E-01	1.87E-02	2.41E-02	2.51E-02	5.17E-03	7.72E-06	6.68E-03	4.45E-07	1.10E-05	9.97E-06	8.86E-04
	2	1400-1500	2.80E-01	1.87E-02	2.41E-02	2.51E-02	5.17E-03	7.72E-06	6.68E-03	4.45E-07	1.10E-05	9.97E-06	8.86E-04
	2	1500-1600	2.80E-01	1.87E-02	2.41E-02	2.51E-02	5.17E-03	7.72E-06	6.68E-03	4.45E-07	1.10E-05	9.97E-06	8.86E-04
	2	1600-1700	2.80E-01	1.87E-02	2.41E-02	2.51E-02	5.17E-03	7.72E-06	6.68E-03	4.45E-07	1.10E-05	9.97E-06	8.86E-04
	2	1700-1800	2.80E-01	1.87E-02	2.41E-02	2.51E-02	5.17E-03	7.72E-06	6.68E-03	4.45E-07	1.10E-05	9.97E-06	8.86E-04
	2	1800-1900	2.80E-01	1.87E-02	2.41E-02	2.51E-02	5.17E-03	7.72E-06	6.68E-03	4.45E-07	1.10E-05	9.97E-06	8.86E-04
	2	1900-2000	2.80E-01	1.87E-02	2.41E-02	2.51E-02	5.17E-03	7.72E-06	6.68E-03	4.45E-07	1.10E-05	9.97E-06	8.86E-04
	2	2000-2100	2.80E-01	1.87E-02	2.41E-02	2.51E-02	5.17E-03	7.72E-06	6.68E-03	4.45E-07	1.10E-05	9.97E-06	8.86E-04
	2	2100-2200	2.80E-01	1.87E-02	2.41E-02	2.51E-02	5.17E-03	7.72E-06	6.68E-03	4.45E-07	1.10E-05	9.97E-06	8.86E-04
	3	0000-0200	2.71E-01	1.76E-02	2.24E-02	2.39E-02	5.06E-03	7.75E-06	6.24E-03	3.91E-07	9.77E-06	5.52E-05	8.46E-04
	3	0100-0200	2.71E-01	1.76E-02	2.24E-02	2.39E-02	5.06E-03	7.75E-06	6.24E-03	3.91E-07	9.77E-06	5.52E-05	8.46E-04
	3	0200-0300	2.71E-01	1.76E-02	2.24E-02	2.39E-02	5.06E-03	7.75E-06	6.24E-03	3.91E-07	9.77E-06	5.52E-05	8.46E-04
	3	0300-0400	2.71E-01	1.76E-02	2.24E-02	2.39E-02	5.06E-03	7.75E-06	6.24E-03	3.91E-07	9.77E-06	5.52E-05	8.46E-04
	3	0400-0500	2.71E-01	1.76E-02	2.24E-02	2.39E-02	5.06E-03	7.75E-06	6.24E-03	3.91E-07	9.77E-06	5.52E-05	8.46E-04
	3	0500-0600	2.71E-01	1.76E-02	2.24E-02	2.39E-02	5.06E-03	7.75E-06	6.24E-03	3.91E-07	9.77E-06	5.52E-05	8.46E-04
	3	0600-0700	2.71E-01	1.76E-02	2.24E-02	2.39E-02	5.06E-03	7.75E-06	6.24E-03	3.91E-07	9.77E-06	5.52E-05	8.46E-04
	3	0700-0800	2.71E-01	1.76E-02	2.24E-02	2.39E-02	5.06E-03	7.75E-06	6.24E-03	3.91E-07	9.77E-06	5.52E-05	8.46E-04
	3	0800-0900	2.71E-01	1.76E-02	2.24E-02	2.39E-02	5.06E-03	7.75E-06	6.24E-03	3.91E-07	9.77E-06	5.52E-05	8.46E-04
	3	0900-1000	2.71E-01	1.76E-02	2.24E-02	2.39E-02	5.06E-03	7.75E-06	6.24E-03	3.91E-07	9.77E-06	5.52E-05	8.46E-04
	3	1000-1100	2.71E-01	1.76E-02	2.24E-02	2.39E-02	5.06E-03	7.75E-06	6.24E-03	3.91E-07	9.77E-06	5.52E-05	8.46E-04
	3	1100-1200	2.71E-01	1.76E-02	2.24E-02	2.39E-02	5.06E-03	7.75E-06	6.24E-03	3.91E-07	9.77E-06	5.52E-05	8.46E-04
	3	1200-1300	2.71E-01	1.76E-02	2.24E-02	2.39E-02	5.06E-03	7.75E-06	6.24E-03	3.91E-07	9.77E-06	5.52E-05	8.46E-04
	3	1300-1400	2.71E-01	1.76E-02	2.24E-02	2.39E-02	5.06E-03	7.75E-06	6.24E-03	3.91E-07	9.77E-06	5.52E-05	8.46E-04
	3	1400-1500	2.71E-01	1.76E-02	2.24E-02	2.39E-02	5.06E-03	7.75E-06	6.24E-03	3.91E-07	9.77E-06	5.52E-05	8.46E-04
	3	1500-1600	2.71E-01	1.76E-02	2.24E-02	2.39E-02	5.06E-03	7.75E-06	6.24E-03	3.91E-07	9.77E-06	5.52E-05	8.46E-04
	3	1600-1700	2.71E-01	1.76E-02	2.24E-02	2.39E-02	5.06E-03	7.75E-06	6.24E-03	3.91E-07	9.77E-06	5.52E-05	8.46E-04
	3	1700-1800	2.71E-01	1.76E-02	2.24E-02	2.39E-02	5.06E-03	7.75E-06	6.24E-03	3.91E-07	9.77E-06	5.52E-05	8.46E-04
	3	1800-1900	2.71E-01	1.76E-02	2.24E-02	2.39E-02	5.06E-03	7.75E-06	6.24E-03	3.91E-07	9.77E-06	5.52E-05	8.46E-04
	3	1900-2000	2.71E-01	1.76E-02	2.24E-02	2.39E-02	5.06E-03	7.75E-06	6.24E-03	3.91E-07	9.77E-06	5.52E-05	8.46E-04
	3	2000-2100	2.71E-01	1.76E-02	2.24E-02	2.39E-02	5.06E-03	7.75E-06	6.24E-03	3.91E-07	9.77E-06	5.52E-05	8.46E-04
	3	2100-2200	2.71E-01	1.76E-02	2.24E-02	2.39E-02	5.06E-03	7.75E-06	6.24E-03	3.91E-07	9.77E-06	5.52E-05	8.46E-04
	4	0000-0200	2.58E-01	1.74E-02	2.43E-02	2.43E-02	5.68E-03	7.75E-06	6.37E-03	3.99E-07	9.83E-06	5.64E-05	8.71E-04
	4	0100-0200	2.58E-01	1.74E-02	2.43E-02	2.43E-02	5.68E-03	7.75E-06	6.37E-03	3.99E-07	9.83E-06	5.64E-05	8.71E-04
	4	0200-0300	2.58E-01	1.74E-02	2.43E-02	2.43E-02	5.68E-03	7.75E-06	6.37E-03	3.99E-07	9.83E-06	5.64E-05	8.71E-04
	4	0300-0400	2.58E-01	1.74E-02	2.43E-02	2.43E-02	5.68E-03	7.75E-06	6.37E-03	3.99E-07	9.83E-06	5.64E-05	8.71E-04
	4	0400-0500	2.58E-01	1.74E-02	2.43E-02	2.43E-02	5.68E-03	7.75E-06	6.37E-03	3.99E-07	9.83E-06	5.64E-05	8.71

Tsing Yi North Underground Quarry

[illegible]

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry

[illegible]

Tsing Yi North Underground Quarry

Open Data 24 Hour Emission Factors for ASPMCO model																
Year 2033																
Road Name	Road ID	Hour	MonthlyHourlyMin			MonthlyHourlygsum			NO Emission			NO Emission			MonthlyHourlyAverage	
			gh/mvmin	g/s/min	g/s/hour	gh/mvmin	g/s/min	g/s/hour	gh/mvmin	g/s/min	g/s/hour	gh/mvmin	g/s/min	g/s/hour		
Road 21	21	0000-0100	1.306	0.212	0.712	0.116	0.212	0.712	0.116	0.212	0.712	0.116	0.212	0.712	0.116	0.212
Road 21	21	0100-0200	1.366	0.238	0.788	0.126	0.238	0.788	0.126	0.238	0.788	0.126	0.238	0.788	0.126	0.238
Road 21	21	0200-0300	1.486	0.268	0.908	0.136	0.268	0.908	0.136	0.268	0.908	0.136	0.268	0.908	0.136	0.268
Road 21	21	0300-0400	1.546	0.288	0.968	0.146	0.288	0.968	0.146	0.288	0.968	0.146	0.288	0.968	0.146	0.288
Road 21	21	0400-0500	1.646	0.328	1.068	0.166	0.328	1.068	0.166	0.328	1.068	0.166	0.328	1.068	0.166	0.328
Road 21	21	0500-0600	1.716	0.353	1.138	0.186	0.353	1.138	0.186	0.353	1.138	0.186	0.353	1.138	0.186	0.353
Road 21	21	0600-0700	1.766	0.368	1.188	0.196	0.368	1.188	0.196	0.368	1.188	0.196	0.368	1.188	0.196	0.368
Road 21	21	0700-0800	1.996	0.428	1.418	0.256	0.428	1.418	0.256	0.428	1.418	0.256	0.428	1.418	0.256	0.428
Road 21	21	0800-0900	2.136	0.458	1.558	0.286	0.458	1.558	0.286	0.458	1.558	0.286	0.458	1.558	0.286	0.458
Road 21	21	0900-1000	2.236	0.478	1.658	0.306	0.478	1.658	0.306	0.478	1.658	0.306	0.478	1.658	0.306	0.478
Road 21	21	1000-1100	2.536	0.538	1.958	0.366	0.538	1.958	0.366	0.538	1.958	0.366	0.538	1.958	0.366	0.538
Road 21	21	1100-1200	2.416	0.518	1.838	0.346	0.518	1.838	0.346	0.518	1.838	0.346	0.518	1.838	0.346	0.518
Road 21	21	1200-1300	2.546	0.548	1.968	0.376	0.548	1.968	0.376	0.548	1.968	0.376	0.548	1.968	0.376	0.548
Road 21	21	1300-1400	3.386	0.688	2.808	0.516	0.688	2.808	0.516	0.688	2.808	0.516	0.688	2.808	0.516	0.688
Road 21	21	1400-1500	3.406	0.708	2.828	0.536	0.708	2.828	0.536	0.708	2.828	0.536	0.708	2.828	0.536	0.688
Road 21	21	1500-1600	3.156	0.658	2.578	0.506	0.658	2.578	0.506	0.658	2.578	0.506	0.658	2.578	0.506	0.688
Road 21	21	1600-1700	2.616	0.568	2.038	0.416	0.568	2.038	0.416	0.568	2.038	0.416	0.568	2.038	0.416	0.688
Road 21	21	1700-1800	2.626	0.578	2.048	0.426	0.578	2.048	0.426	0.578	2.048	0.426	0.578	2.048	0.426	0.688
Road 21	21	1800-1900	2.026	0.398	1.448	0.326	0.398	1.448	0.326	0.398	1.448	0.326	0.398	1.448	0.326	0.688
Road 21	21	1900-2000	2.006	0.388	1.428	0.316	0.388	1.428	0.316	0.388	1.428	0.316	0.388	1.428	0.316	0.688
Road 21	21	2000-2100	2.006	0.388	1.428	0.316	0.388	1.428	0.316	0.388	1.428	0.316	0.388	1.428	0.316	0.688
Road 21	21	2100-2200	1.736	0.206	0.706	0.266	0.206	0.706	0.266	0.206	0.706	0.266	0.206	0.706	0.266	0.688
Road 21	21	2200-2300	1.616	0.186	0.626	0.246	0.186	0.626	0.246	0.186	0.626	0.246	0.186	0.626	0.246	0.688
Road 21	21	2300-0000	1.486	0.166	0.546	0.226	0.166	0.546	0.226	0.166	0.546	0.226	0.166	0.546	0.226	0.688
Road 22	22	0000-0100	1.306	0.212	0.712	0.116	0.212	0.712	0.116	0.212	0.712	0.116	0.212	0.712	0.116	0.212
Road 22	22	0100-0200	1.366	0.238	0.788	0.126	0.238	0.788	0.126	0.238	0.788	0.126	0.238	0.788	0.126	0.238
Road 22	22	0200-0300	1.486	0.268	0.908	0.136	0.268	0.908	0.136	0.268	0.908	0.136	0.268	0.908	0.136	0.268
Road 22	22	0300-0400	1.546	0.288	0.968	0.146	0.288	0.968	0.146	0.288	0.968	0.146	0.288	0.968	0.146	0.288
Road 22	22	0400-0500	1.646	0.328	1.068	0.166	0.328	1.068	0.166	0.328	1.068	0.166	0.328	1.068	0.166	0.328
Road 22	22	0500-0600	1.716	0.353	1.138	0.186	0.353	1.138	0.186	0.353	1.138	0.186	0.353	1.138	0.186	0.353
Road 22	22	0600-0700	1.766	0.368	1.188	0.196	0.368	1.188	0.196	0.368	1.188	0.196	0.368	1.188	0.196	0.368
Road 22	22	0700-0800	1.996	0.428	1.418	0.256	0.428	1.418	0.256	0.428	1.418	0.256	0.428	1.418	0.256	0.428
Road 22	22	0800-0900	2.136	0.458	1.558	0.286	0.458	1.558	0.286	0.458	1.558	0.286	0.458	1.558	0.286	0.458
Road 22	22	0900-1000	2.236	0.478	1.658	0.306	0.478	1.658	0.306	0.478	1.658	0.306	0.478	1.658	0.306	0.478
Road 22	22	1000-1100	2.536	0.538	1.958	0.366	0.538	1.958	0.366	0.538	1.958	0.366	0.538	1.958	0.366	0.538
Road 22	22	1100-1200	2.416	0.518	1.838	0.346	0.518	1.838	0.346	0.518	1.838	0.346	0.518	1.838	0.346	0.518
Road 22	22	1200-1300	2.546	0.548	1.968	0.376	0.548	1.968	0.376	0.548	1.968	0.376	0.548	1.968	0.376	0.548
Road 22	22	1300-1400	3.386	0.688	2.808	0.516	0.688	2.808	0.516	0.688	2.808	0.516	0.688	2.808	0.516	0.688
Road 22	22	1400-1500	3.406	0.708	2.828	0.536	0.708	2.828	0.536	0.708	2.828	0.536	0.708	2.828	0.536	0.688
Road 22	22	1500-1600	3.156	0.658	2.578	0.506	0.658	2.578	0.506	0.658	2.578	0.506	0.658	2.578	0.506	0.688
Road 22	22	1600-1700	2.616	0.568	2.038	0.416	0.568	2.038	0.416	0.568	2.038	0.416	0.568	2.038	0.416	0.688
Road 22	22	1700-1800	2.626	0.578	2.048	0.426	0.578	2.048	0.426	0.578	2.048	0.426	0.578	2.048	0.426	0.688
Road 22	22	1800-1900	2.026	0.398	1.448	0.326	0.398	1.448	0.326	0.398	1.448	0.326	0.398	1.448	0.326	0.688
Road 22	22	1900-2000	2.006	0.388	1.428	0.316	0.388	1.428	0.316	0.388	1.428	0.316	0.388	1.428	0.316	0.688
Road 22	22	2000-2100	2.006	0.388	1.428	0.316	0.388	1.428	0.316	0.388	1.428	0.316	0.388	1.428	0.316	0.688
Road 22	22	2100-2200	1.736	0.206	0.706	0.266	0.206	0.706	0.266	0.206	0.706	0.266	0.206	0.706	0.266	0.688
Road 22	22	2200-2300	1.616	0.186	0.626	0.246	0.186	0.626	0.246	0.186	0.626	0.246	0.186	0.626	0.246	0.688
Road 22	22	2300-0000	1.486	0.166	0.546	0.226	0.166	0.546	0.226	0.166	0.546	0.226	0.166	0.546	0.226	0.688
Road 23	23	0000-0100	1.306	0.212	0.712	0.116	0.212	0.712	0.116	0.212	0.712	0.116	0.212	0.712	0.116	0.212
Road 23	23	0100-0200	1.366	0.238	0.788	0.126	0.238	0.788	0.126	0.238	0.788	0.126	0.238	0.788	0.126	0.238
Road 23	23	0200-0300	1.486	0.268	0.908	0.136	0.268	0.908	0.136	0.268	0.908	0.136	0.268	0.908	0.136	0.268
Road 23	23	0300-0400	1.546	0.288	0.968	0.146	0.288	0.968	0.146	0.288	0.968	0.146	0.288	0.968	0.146	0.288
Road 23	23	0400-0500	1.646	0.328	1.068	0.166	0.328	1.068	0.166	0.328	1.068	0.166	0.328	1.068	0.166	0.328
Road 23	23	0500-0600	1.716	0.353	1.138	0.186	0.353	1.138	0.186	0.353	1.138	0.186	0.353	1.138	0.186	0.353
Road 23	23	0600-0700	1.766	0.368	1.188	0.196	0.368	1.188	0.196	0.368	1.188	0.196	0.368	1.188	0.196	0.368
Road 23	23	0700-0800	1.996	0.428	1.418	0.256	0.428	1.418	0.256	0.428	1.418	0.256	0.428	1.418	0.256	0.428
Road 23	23	0800-0900	2.136	0.458	1.558	0.286	0.458	1.558	0.286	0.458	1.558	0.286	0.458	1.558	0.286	0.458
Road 23	23	0900-1000	2.236	0.478	1.658	0.306	0.478	1.658	0.306	0.478	1.658	0.306	0.478	1.658	0.306	0.478
Road 23	23	1000-1100	2.536	0.538	1.958	0.366	0.538	1.958	0.366	0.538	1.958	0.366	0.538	1.958	0.366	0.538
Road 23	23	1100-1200	2.416	0.518	1.838	0.346	0.518	1.838	0.346	0.518	1.838	0.346	0.518	1.838	0.346	0.518
Road 23	23	1200-1300	2.546	0.548	1.968	0.376	0.548	1.968	0.376	0.548	1.968	0.376	0.548	1.968	0.376	0.548
Road 23	23	1300-1400	3.386	0.688	2.808	0.516	0.688	2.808	0.516	0.688	2.808	0.516	0.688	2.808	0.516	0.688
Road 23	23	1400-1500	3.406	0.708	2.828	0.536	0.708	2.828	0.536	0.708	2.828	0.536	0.708	2.828	0.536	0.688
Road 23	23	1500-1600	3.156	0.658	2.578	0.506	0.658	2.578	0.506	0.658	2.578	0.506	0.658	2.578	0.506	0.688
Road 23	23	1600-1700	2.616	0.568	2.038	0.416	0.568	2.038	0.416	0.568	2.038	0.416	0.568	2.038	0.416	0.688
Road 23	23	1700-1800	2.626	0.578	2.048	0.426	0.578	2.048	0.426	0.578	2.048	0.426	0.578	2.048	0.426	0.688
Road 23	23	1800-1900	2.026	0.398	1.448	0.326	0.398	1.448	0.326	0.398	1.448	0.326	0.398	1.448	0.326	0.688
Road 23	23	1900-2000	2.006	0.388	1.428	0.316	0.388	1.428	0.316	0.388	1.428	0.316	0.388	1.428	0.316	0.688
Road 23	23	2000-2100	2.006	0.388	1.428	0.316	0.388	1.428	0.316	0.388	1.428	0.316	0.388	1.428	0.316	0.688
Road 23	23	2100-2200	1.736	0.206	0.706	0.266	0.206	0.706	0.266	0.206	0.706	0.26				

[illegible]

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tiesing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for AERMOD model (April)	Year 2033

Row Name	Road ID	Hour	NO _x Emission						NO ₂ Emission					
			Month/Hours			Month/Average			Month/Hours			Month/Average		
			g/km/h	g/m ²	g/km ²	g/km/h	g/m ²	g/km ²	g/km/h	g/m ²	g/km ²	g/km/h	g/m ²	g/km ²
Road 24	24	0900-0900	1.650E+01	3.10E-07	7.76E-07	1.42E-01	2.75E-07	8.88E-07	6.05E-02	1.17E-06	2.94E-06	5.36E-01	1.04E-06	2.26E-06
Road 24	24	0900-1000	1.690E+01	3.98E-07	9.97E-07	1.43E-01	3.12E-07	9.21E-07	6.10E-02	1.27E-06	3.47E-06	5.73E-01	1.08E-06	2.31E-06
Road 24	24	1000-1100	1.74E+01	4.73E-07	1.36E-06	1.45E-01	3.41E-07	9.86E-07	6.26E-02	1.37E-06	3.96E-06	5.95E-01	1.12E-06	2.36E-06
Road 24	24	1100-1200	1.72E+01	4.67E-07	1.34E-06	1.52E-01	3.05E-07	7.64E-07	6.31E-02	1.26E-06	3.17E-06	5.54E-01	1.11E-06	2.27E-06
Road 24	24	1200-1300	1.82E+01	3.67E-07	9.20E-07	1.39E-01	3.19E-07	8.02E-07	6.39E-02	1.22E-06	3.22E-06	5.52E-01	1.12E-06	2.28E-06
Road 24	24	1300-1400	1.83E+01	3.78E-07	9.37E-07	1.39E-01	3.25E-07	8.13E-07	6.39E-02	1.23E-06	3.31E-06	5.53E-01	1.12E-06	2.28E-06
Road 24	24	1400-1500	1.88E+01	4.25E-07	1.05E-06	1.64E-01	3.70E-07	9.21E-07	6.57E-02	1.51E-06	3.77E-06	5.81E-01	1.31E-06	3.22E-06
Road 24	24	1500-1600	1.70E+01	4.01E-07	1.00E-06	1.47E-01	3.47E-07	8.73E-07	6.61E-02	1.40E-06	3.91E-06	5.73E-01	1.39E-06	3.33E-06
Road 24	24	1600-1700	1.72E+01	3.70E-07	9.21E-07	1.51E-01	3.41E-07	8.02E-07	6.61E-02	1.27E-06	3.03E-06	5.52E-01	1.04E-06	2.26E-06
Road 24	24	1700-1800	1.51E+01	2.98E-07	7.47E-07	1.35E-01	2.95E-07	6.40E-07	6.14E-02	1.21E-06	3.03E-06	5.26E-01	1.04E-06	2.26E-06
Road 24	24	1800-1900	1.32E+01	2.60E-07	6.52E-07	1.15E-01	1.67E-07	3.93E-07	5.55E-02	7.89E-07	1.89E-06	4.03E-01	6.97E-07	1.47E-07
Road 24	24	1900-2000	1.32E+01	2.60E-07	6.52E-07	1.15E-01	2.47E-07	5.62E-07	5.55E-02	7.89E-07	1.89E-06	4.03E-01	6.97E-07	1.47E-07
Road 24	24	2000-2100	1.17E+01	1.84E-08	2.09E-07	1.03E-01	7.31E-08	1.83E-07	4.49E-02	3.48E-07	8.72E-07	4.29E-01	3.05E-07	7.67E-07
Road 24	24	2100-2200	1.18E+01	1.86E-08	2.16E-07	1.06E-01	7.73E-08	1.84E-07	4.49E-02	3.54E-07	8.89E-07	4.39E-01	3.08E-07	7.77E-07
Road 24	24	2200-2300	1.22E+01	2.01E-08	2.31E-07	1.08E-01	8.15E-08	1.91E-07	4.49E-02	3.60E-07	9.06E-07	4.49E-01	3.11E-07	7.87E-07
Road 24	24	2300-0000	1.34E+01	3.69E-08	1.75E-07	1.17E-01	1.61E-08	3.54E-07	4.97E-02	2.59E-07	6.31E-07	4.35E-01	3.27E-07	5.77E-07
Road 24	24	0000-0100	1.31E+01	3.56E-08	1.65E-07	1.15E-01	1.50E-08	3.28E-07	4.81E-02	2.41E-07	5.95E-07	4.27E-01	3.17E-07	5.67E-07
Road 24	24	0100-0200	1.31E+01	3.56E-08	1.65E-07	1.15E-01	1.50E-08	3.28E-07	4.81E-02	2.41E-07	5.95E-07	4.27E-01	3.17E-07	5.67E-07
Road 24	24	0200-0300	1.32E+01	3.22E-08	8.20E-08	1.18E-01	2.90E-08	7.39E-08	4.90E-02	1.19E-07	1.04E-07	4.42E-01	3.07E-07	7.77E-07
Road 24	24	0300-0400	1.32E+01	3.22E-08	8.20E-08	1.18E-01	2.47E-08	6.29E-08	4.89E-02	1.01E-07	5.27E-07	4.43E-01	3.14E-07	7.83E-07
Road 24	24	0400-0500	1.32E+01	3.22E-08	8.20E-08	1.18E-01	3.01E-08	7.62E-08	4.89E-02	1.12E-07	5.71E-07	4.43E-01	3.14E-07	7.83E-07
Road 24	24	0500-0600	1.42E+01	3.36E-08	1.62E-07	1.26E-01	3.66E-08	1.44E-07	5.24E-02	2.35E-07	5.99E-07	4.66E-01	2.90E-07	5.53E-07
Road 24	24	0600-0700	1.48E+01	3.52E-08	1.67E-07	1.31E-01	3.34E-07	1.42E-07	5.46E-02	2.57E-07	6.42E-07	4.76E-01	3.03E-07	5.67E-07
Road 24	24	0700-0800	1.52E+01	3.65E-08	1.71E-07	1.34E-01	3.13E-07	1.35E-07	5.61E-02	2.69E-07	6.74E-07	4.83E-01	3.12E-07	5.75E-07
Road 24	24	0800-0900	1.69E+01	4.32E-08	1.13E-06	1.50E-01	3.93E-07	1.00E-06	6.36E-02	1.67E-06	2.95E-06	5.54E-01	1.48E-06	3.37E-06
Road 24	24	0900-1000	1.74E+01	5.13E-08	1.31E-06	1.51E-01	4.46E-07	1.144E-06	6.61E-02	1.96E-06	3.47E-06	5.74E-01	1.69E-06	3.49E-06
Road 24	24	1000-1100	1.84E+01	5.84E-08	1.54E-06	1.54E-01	4.84E-07	1.24E-06	6.83E-02	2.22E-06	3.94E-06	5.95E-01	1.84E-06	3.67E-06
Road 24	24	1100-1200	1.82E+01	5.67E-08	1.45E-06	1.50E-01	4.39E-07	1.11E-06	6.62E-02	1.90E-06	3.58E-06	5.82E-01	1.59E-06	3.40E-06
Road 24	24	1200-1300	1.93E+01	5.25E-08	1.34E-06	1.68E-01	4.57E-07	1.16E-06	6.72E-02	1.86E-06	3.66E-06	5.84E-01	1.59E-06	3.40E-06
Road 24	24	1300-1400	1.93E+01	5.25E-08	1.34E-06	1.68E-01	4.57E-07	1.16E-06	6.72E-02	1.86E-06	3.66E-06	5.84E-01	1.59E-06	3.40E-06
Road 24	24	1400-1500	1.90E+01	5.07E-08	1.27E-06	1.66E-01	5.03E-07	1.20E-06	6.71E-02	2.04E-06	2.11E-06	5.80E-01	1.79E-06	3.45E-06
Road 24	24	1500-1600	1.72E+01	4.64E-08	1.39E-06	1.49E-01	4.72E-07	1.26E-06	6.67E-02	2.12E-06	3.39E-06	5.78E-01	1.68E-06	3.46E-06
Road 24	24	1600-1700	1.72E+01	4.64E-08	1.39E-06	1.49E-01	4.72E-07	1.26E-06	6.67E-02	2.12E-06	3.39E-06	5.78E-01	1.68E-06	3.46E-06
Road 24	24	1700-1800	1.51E+01	4.25E-08	1.08E-06	1.39E-01	3.65E-07	1.02E-06	6.52E-02	1.72E-06	3.38E-06	5.59E-01	1.47E-06	3.37E-06
Road 24	24	1800-1900	1.34E+01	2.96E-07	6.54E-07	1.24E-01	2.23E-07	5.69E-07	5.90E-02	1.07E-06	7.73E-06	5.18E-01	8.33E-07	2.23E-07
Road 24	24	1900-2000	1.34E+01	2.96E-07	6.54E-07	1.24E-01	3.01E-07	6.15E-07	5.90E-02	1.07E-06	7.73E-06	5.18E-01	8.33E-07	2.23E-07
Road 24	24	2000-2100	1.27E+01	1.97E-07	1.02E-07	1.11E-01	1.04E-07	2.65E-07	5.27E-02	4.92E-07	2.57E-06	4.62E-01	3.13E-07	7.11E-07
Road 24	24	2100-2200	1.22E+01	1.67E-07	1.32E-07	1.15E-01	1.10E-07	2.80E-07	5.24E-01	5.03E-07	2.61E-06	4.68E-01	3.50E-07	7.47E-07
Road 24	24	2200-2300	1.22E+01	1.67E-07	1.32E-07	1.15E-01	1.10E-07	2.80E-07	5.24E-01	5.03E-07	2.61E-06	4.68E-01	3.50E-07	7.47E-07
Road 24	24	2300-0000	1.36E+01	3.49E-08	1.42E-07	1.21E-01	6.35E-08	2.12E-07	5.12E-02	3.51E-07	9.95E-07	4.94E-01	3.08E-07	7.77E-07
Road 24	24	0000-0100	1.31E+01	3.22E-08	9.67E-08	1.16E-01	4.63E-08	1.74E-07	4.87E-02	1.94E-07	2.72E-07	4.31E-01	3.17E-07	6.47E-07
Road 24	24	0100-0200	1.31E+01	3.22E-08	9.67E-08	1.16E-01	4.63E-08	1.74E-07	4.87E-02	1.94E-07	2.72E-07	4.31E-01	3.17E-07	6.47E-07
Road 24	24	0200-0300	1.34E+01	2.97E-08	1.11E-07	1.20E-01	2.67E-08	1.00E-07	4.90E-02	1.17E-06	1.47E-06	4.44E-01	3.91E-07	8.37E-07
Road 24	24	0300-0400	1.34E+01	2.97E-08	1.11E-07	1.20E-01	2.28E-08	8.55E-08	4.90E-02	9.27E-08	1.43E-07	4.47E-01	4.83E-08	3.31E-08
Road 24	24	0400-0500	1.34E+01	2.97E-08	1.11E-07	1.20E-01	2.28E-08	8.55E-08	4.90E-02	9.27E-08	1.43E-07	4.47E-01	4.83E-08	3.31E-08
Road 24	24	0500-0600	1.36E+01	3.60E-08	1.05E-07	1.21E-01	2.98E-08	1.87E-07	5.05E-02	2.07E-07	7.78E-07	4.94E-01	3.84E-07	8.53E-07
Road 24	24	0600-0700	1.51E+01	4.13E-07	9.29E-07	1.34E-01	1.23E-07	4.70E-07	5.59E-02	5.19E-07	1.99E-06	4.92E-01	4.60E-07	1.27E-06
Road 24	24	0700-0800	1.68E+01	4.39E-07	1.27E-06	1.49E-01	2.09E-07	1.12E-06	5.95E-02	1.23E-06	1.63E-06	5.19E-01	1.09E-06	3.41E-06
Road 24	24	0800-0900	1.74E+01	4.97E-07	1.36E-06	1.54E-01	2.49E-07	1.41E-06	6.41E-02	1.54E-06	2.06E-06	5.66E-01	1.24E-06	3.56E-06
Road 24	24	0900-1000	1.74E+01	4.71E-07	1.17E-06	1.51E-01	4.10E-07	1.54E-06	6.61E-02	1.76E-06	2.37E-06	5.75E-01	1.56E-06	3.58E-06
Road 24	24	1000-1100	1.89E+01	4.93E-07	1.85E-06	1.63E-01	4.31E-07	1.62E-06	6.86E-02	1.76E-06	2.69E-06	5.84E-01	1.59E-06	3.58E-06
Road 24	24	1100-1200	1.83E+01	4.79E-07	1.79E-06	1.63E-01	4.17E-07	1.58E-06	6.86E-02	1.76E-06	2.69E-06	5.84E-01	1.59E-06	3.58E-06
Road 24	24	1200-1300	1.88E+01	4.68E-07	1.82E-06	1.65E-01	4.22E-07	1.58E-06	6.92E-02	1.76E-06	2.69E-06	5.84E-01	1.59E-06	3.58E-06
Road 24	24	1300-1400	1.76E+01	3.54E-07	1.37E-06	1.53E-01	4.54E-07	1.71E-06	6.42E-02	1.91E-06	1.88E-06	5.57E-01	1.66E-06	3.62E-06
Road 24	24	1400-1500	1.89E+01	3.94E-07	1.34E-06	1.63E-01	4.94E-07	1.64E-06	6.92E-02	1.91E-06	1.88E-06	5.57E-01	1.66E-06	3.62E-06
Road 24	24	1500-1600	1.63E+01	3.04E-07	8.99E-06	1.41E-01	4.37E-07	1.62E-06	6.93E-02	1.76E-06	2.39E-06	5.51E-01	1.70E-06	3.63E-06
Road 24	24	1600-1700	1.71E+01	3.49E-07	8.95E-06	1.51E-01	4.39E-07	1.64E-06	6.92E-02	1.76E-06	2.39E-06	5.58E-01	1.70E-06	3.63E-06
Road 24	24	1700-1800	1.89E+01	3.96E-07	9.85E-06	1.63E-01	4.94E-07	1.64E-06	6.92E-02	1.91E-06	1.88E-06	5.57E-01	1.66E-06	3.62E-06
Road 24	24	1800-1900	1.72E+01	2.41E-07	6.03E-07	1.16E-01	2.09E-07	7.84E-07	5.25E-01	1.01E-06	1.79E-06	3.55E-01	6.74E-07	3.02E-07
Road 24	24	1900-2000	1.16E+01	1.90E-07	5.83E-07	1.02E-01	1.33E-07	4.97E-07	4.71E-02	6.08E-07	2.28E-06	4.15E-01	3.90E-07	1.20E-07
Road 24	24	2000-2100	1.08E+01	1.17E-07	4.84E-07	9.75E-02	1.19E-07	3.71E-07	3.71E-02	5.16E-07	1.91E-06	3.89E-01	3.69E-07	1.13E-07
Road 24	24	2100-2200	1.08E+01	1.14E-07	4.29E-07	9.75E-02	1.02E-07	4.84E-07	4.53E-02	4.76E-07	1.76E-06	4.05E-01	4.26E-07	1.16E-07
Road 24	24	2200-2300	1.17E+01	1.90E-07	1.05E-06	1.07E-01	9.80E-08	3.68E-07	4.42E-02	5.12E-06	3.99E-07	4.19E-01	3.57E-07	1.20E-07
Road 24	24	2300-0000	1.22E+01	2.11E-07	1.84E-07	1.11E-01	1.11E-07	4.84E-07	4.76E-02	5.12E-06	3.99E-0			

Tsing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for AERMOD model (April)	Year 2033

Road Name	Road ID	Hour	No. Emotion						No. Emotion					
			Month/Min/hour			Month/Min/hour			Month/Min/hour			Month/Min/hour		
			g/km/h	g/m ²	tonne/hour	g/km/h	g/m ²	tonne/hour	g/km/h	g/m ²	tonne/hour	g/km/h	g/m ²	tonne/hour
Road 27	27	1600-1700	1.800(-1.00)	4.960(-0.07)	1.431(-0.06)	1.599(-0.01)	4.567(-0.07)	1.252(-0.06)	6.840(-0.01)	1.677(-0.06)	5.131(-0.06)	5.771(-0.01)	1.474(-0.06)	
Road 27	27	1700-1800	1.860(-0.06)	5.960(-0.06)	1.146(-0.06)	1.381(-0.01)	3.168(-0.07)	9.740(-0.07)	6.948(-0.01)	1.490(-0.06)	5.960(-0.06)	5.960(-0.06)	1.298(-0.06)	
Road 27	27	1800-1900	1.410(-0.06)	2.220(-0.06)	1.038(-0.06)	1.220(-0.01)	3.038(-0.07)	1.038(-0.06)	6.948(-0.01)	1.490(-0.06)	5.960(-0.06)	5.960(-0.06)	1.298(-0.06)	
Road 27	27	1900-2000	1.280(-0.01)	1.320(-0.07)	1.037(-0.07)	1.131(-0.01)	1.174(-0.07)	3.956(-0.07)	5.181(-0.06)	5.336(-0.07)	1.646(-0.06)	4.576(-0.07)	4.706(-0.07)	
Road 27	27	2000-2100	1.250(-0.01)	1.068(-0.07)	1.117(-0.06)	1.899(-0.06)	2.716(-0.07)	2.716(-0.07)	4.280(-0.06)	1.320(-0.07)	1.646(-0.06)	4.576(-0.07)	4.706(-0.07)	
Road 27	27	2100-2200	1.250(-0.01)	1.260(-0.07)	1.117(-0.06)	1.899(-0.06)	2.716(-0.07)	2.716(-0.07)	4.280(-0.06)	1.320(-0.07)	1.646(-0.06)	4.576(-0.07)	4.706(-0.07)	
Road 27	27	2200-2300	1.320(-0.07)	1.917(-0.08)	2.996(-0.07)	1.191(-0.01)	6.118(-0.06)	2.686(-0.07)	4.095(-0.06)	3.696(-0.07)	1.152(-0.06)	4.396(-0.07)	3.326(-0.07)	
Road 27	27	2300-0000	1.361(-0.06)	8.248(-0.06)	2.547(-0.07)	1.001(-0.02)	7.226(-0.08)	2.226(-0.07)	5.095(-0.06)	3.056(-0.07)	9.466(-0.07)	4.326(-0.07)	2.676(-0.07)	
Road 28	28	0000-0100	1.361(-0.06)	8.248(-0.06)	2.547(-0.07)	1.001(-0.02)	7.226(-0.08)	2.226(-0.07)	5.095(-0.06)	3.056(-0.07)	9.466(-0.07)	4.326(-0.07)	2.676(-0.07)	
Road 28	28	0100-0200	1.732(-0.01)	1.631(-0.06)	1.631(-0.06)	1.532(-0.06)	9.916(-0.08)	5.676(-0.06)	1.712(-0.01)	1.126(-0.06)	6.346(-0.06)	1.946(-0.07)	9.746(-0.07)	
Road 28	28	0200-0300	1.982(-0.06)	9.038(-0.06)	5.318(-0.06)	1.862(-0.06)	8.111(-0.06)	4.060(-0.06)	7.710(-0.06)	8.376(-0.07)	4.746(-0.06)	1.536(-0.07)	7.456(-0.07)	
Road 28	28	0300-0400	1.982(-0.06)	9.038(-0.06)	5.318(-0.06)	1.862(-0.06)	8.111(-0.06)	4.060(-0.06)	7.710(-0.06)	8.376(-0.07)	4.746(-0.06)	1.536(-0.07)	7.456(-0.07)	
Road 28	28	0400-0500	1.982(-0.06)	8.616(-0.08)	1.806(-0.02)	7.796(-0.04)	4.426(-0.06)	1.712(-0.01)	7.370(-0.06)	1.436(-0.06)	1.536(-0.07)	1.536(-0.07)	6.626(-0.07)	
Road 28	28	0500-0600	2.012(-0.06)	1.926(-0.06)	1.826(-0.06)	1.736(-0.01)	7.566(-0.06)	1.712(-0.01)	7.370(-0.06)	1.436(-0.06)	1.536(-0.07)	1.536(-0.07)	6.626(-0.07)	
Road 28	28	0600-0700	2.012(-0.06)	1.926(-0.06)	1.826(-0.06)	1.736(-0.01)	7.566(-0.06)	1.712(-0.01)	7.370(-0.06)	1.436(-0.06)	1.536(-0.07)	1.536(-0.07)	6.626(-0.07)	
Road 28	28	0700-0800	2.166(-0.02)	7.186(-0.07)	4.036(-0.06)	1.906(-0.02)	6.266(-0.07)	3.556(-0.06)	1.786(-0.06)	5.806(-0.06)	3.296(-0.04)	1.546(-0.06)	5.066(-0.06)	
Road 28	28	0800-0900	2.056(-0.02)	7.186(-0.07)	4.036(-0.06)	1.906(-0.02)	6.266(-0.07)	3.556(-0.06)	1.616(-0.06)	6.106(-0.06)	3.466(-0.04)	1.416(-0.06)	5.066(-0.06)	
Road 28	28	0900-1000	2.166(-0.02)	7.186(-0.07)	4.036(-0.06)	1.906(-0.02)	6.266(-0.07)	3.556(-0.06)	1.616(-0.06)	6.106(-0.06)	3.466(-0.04)	1.416(-0.06)	5.066(-0.06)	
Road 28	28	1000-1100	2.571(-0.02)	7.711(-0.08)	4.836(-0.06)	2.256(-0.07)	7.386(-0.05)	1.726(-0.01)	5.176(-0.06)	2.836(-0.04)	1.506(-0.06)	4.506(-0.06)		
Road 28	28	1100-1200	2.571(-0.02)	7.711(-0.08)	4.836(-0.06)	2.256(-0.07)	7.386(-0.05)	1.726(-0.01)	5.176(-0.06)	2.836(-0.04)	1.506(-0.06)	4.506(-0.06)		
Road 28	28	1200-1300	2.571(-0.02)	7.711(-0.08)	4.836(-0.06)	2.256(-0.07)	7.386(-0.05)	1.726(-0.01)	5.176(-0.06)	2.836(-0.04)	1.506(-0.06)	4.506(-0.06)		
Road 28	28	1300-1400	2.356(-0.02)	5.806(-0.06)	2.846(-0.04)	2.096(-0.04)	5.426(-0.06)	2.466(-0.06)	1.436(-0.06)	3.046(-0.06)	1.736(-0.04)	1.236(-0.02)	2.626(-0.06)	
Road 28	28	1400-1500	2.356(-0.02)	5.806(-0.06)	2.846(-0.04)	2.096(-0.04)	5.426(-0.06)	2.466(-0.06)	1.436(-0.06)	3.046(-0.06)	1.736(-0.04)	1.236(-0.02)	2.626(-0.06)	
Road 28	28	1500-1600	2.256(-0.02)	5.426(-0.06)	3.116(-0.05)	2.026(-0.04)	5.826(-0.06)	2.746(-0.05)	1.436(-0.06)	3.426(-0.06)	1.946(-0.04)	1.256(-0.02)	2.996(-0.06)	
Road 28	28	1700-1800	1.826(-0.06)	4.816(-0.07)	2.736(-0.06)	1.426(-0.07)	2.346(-0.06)	1.376(-0.01)	3.616(-0.06)	2.096(-0.04)	1.166(-0.06)	1.056(-0.06)		
Road 28	28	1800-1900	1.468(-0.06)	2.468(-0.06)	1.168(-0.06)	1.268(-0.01)	3.068(-0.07)	1.068(-0.06)	6.968(-0.01)	1.468(-0.06)	5.968(-0.06)	5.968(-0.06)	1.268(-0.06)	
Road 28	28	1900-2000	1.276(-0.02)	1.566(-0.07)	1.112(-0.02)	1.366(-0.02)	1.366(-0.02)	2.766(-0.05)	1.576(-0.06)	1.326(-0.04)	1.116(-0.02)	1.116(-0.02)	2.406(-0.06)	
Road 28	28	2000-2100	1.268(-0.02)	2.168(-0.07)	1.226(-0.01)	1.186(-0.07)	1.076(-0.05)	1.376(-0.01)	2.316(-0.06)	1.316(-0.04)	1.176(-0.06)	1.886(-0.06)		
Road 28	28	2100-2200	1.268(-0.02)	2.168(-0.07)	1.226(-0.01)	1.186(-0.07)	1.076(-0.05)	1.376(-0.01)	2.316(-0.06)	1.316(-0.04)	1.176(-0.06)	1.886(-0.06)		
Road 28	28	2200-2300	1.166(-0.07)	1.866(-0.07)	1.076(-0.06)	1.042(-0.06)	1.956(-0.06)	3.006(-0.06)	2.111(-0.06)	1.206(-0.04)	1.141(-0.06)	1.896(-0.06)		
Road 28	28	2300-0000	1.268(-0.02)	2.168(-0.07)	1.226(-0.01)	1.186(-0.07)	1.076(-0.05)	1.376(-0.01)	2.316(-0.06)	1.316(-0.04)	1.176(-0.06)	1.886(-0.06)		
Road 29	29	0000-0100	1.076(-0.02)	6.226(-0.06)	4.316(-0.06)	3.936(-0.04)	4.866(-0.08)	3.786(-0.06)	1.096(-0.06)	5.996(-0.06)	4.126(-0.06)	6.806(-0.02)	1.146(-0.07)	
Road 29	29	0100-0200	1.106(-0.02)	6.226(-0.06)	4.316(-0.06)	3.936(-0.04)	4.866(-0.08)	3.786(-0.06)	1.096(-0.06)	5.996(-0.06)	4.126(-0.06)	6.806(-0.02)	1.146(-0.07)	
Road 29	29	0200-0300	1.106(-0.02)	6.226(-0.06)	4.316(-0.06)	3.936(-0.04)	4.866(-0.08)	3.786(-0.06)	1.096(-0.06)	5.996(-0.06)	4.126(-0.06)	6.806(-0.02)	1.146(-0.07)	
Road 29	29	0300-0400	1.326(-0.04)	8.316(-0.06)	5.136(-0.06)	1.196(-0.04)	4.866(-0.08)	3.086(-0.06)	1.076(-0.06)	3.986(-0.06)	2.756(-0.05)	9.456(-0.03)	5.356(-0.07)	
Road 29	29	0400-0500	1.326(-0.04)	8.316(-0.06)	5.136(-0.06)	1.196(-0.04)	4.866(-0.08)	3.086(-0.06)	1.076(-0.06)	3.986(-0.06)	2.756(-0.05)	9.456(-0.03)	5.356(-0.07)	
Road 29	29	0500-0600	1.316(-0.04)	8.316(-0.06)	5.136(-0.06)	1.196(-0.04)	4.866(-0.08)	3.086(-0.06)	1.076(-0.06)	3.986(-0.06)	2.756(-0.05)	9.456(-0.03)	5.356(-0.07)	
Road 29	29	0600-0700	1.436(-0.06)	9.316(-0.06)	2.716(-0.05)	1.256(-0.04)	4.246(-0.06)	2.386(-0.06)	1.126(-0.06)	3.096(-0.06)	2.136(-0.07)	6.666(-0.06)		
Road 29	29	0700-0800	1.436(-0.06)	9.316(-0.06)	2.716(-0.05)	1.256(-0.04)	4.246(-0.06)	2.386(-0.06)	1.126(-0.06)	3.096(-0.06)	2.136(-0.07)	6.666(-0.06)		
Road 29	29	0800-0900	1.346(-0.02)	4.246(-0.07)	2.596(-0.08)	1.686(-0.07)	3.786(-0.07)	2.576(-0.06)	1.006(-0.06)	3.176(-0.06)	2.946(-0.04)	8.656(-0.02)	2.746(-0.06)	
Road 29	29	0900-1000	1.346(-0.02)	4.246(-0.07)	2.596(-0.08)	1.686(-0.07)	3.786(-0.07)	2.576(-0.06)	1.006(-0.06)	3.176(-0.06)	2.946(-0.04)	8.656(-0.02)	2.746(-0.06)	
Road 29	29	1000-1100	1.706(-0.02)	3.866(-0.06)	2.846(-0.04)	1.946(-0.04)	3.346(-0.06)	2.316(-0.06)	1.156(-0.06)	2.966(-0.06)	1.986(-0.02)	2.226(-0.06)		
Road 29	29	1100-1200	1.846(-0.02)	3.866(-0.06)	2.846(-0.04)	1.946(-0.04)	3.346(-0.06)	2.316(-0.06)	1.156(-0.06)	2.966(-0.06)	1.986(-0.02)	2.226(-0.06)		
Road 29	29	1200-1300	1.846(-0.02)	3.866(-0.06)	2.846(-0.04)	1.946(-0.04)	3.346(-0.06)	2.316(-0.06)	1.156(-0.06)	2.966(-0.06)	1.986(-0.02)	2.226(-0.06)		
Road 29	29	1300-1400	3.416(-0.06)	5.866(-0.06)	4.036(-0.07)	2.926(-0.06)	5.936(-0.06)	3.516(-0.06)	2.786(-0.06)	4.626(-0.06)	3.196(-0.04)	2.826(-0.06)		
Road 29	29	1400-1500	3.416(-0.06)	5.866(-0.06)	4.036(-0.07)	2.926(-0.06)	5.936(-0.06)	3.516(-0.06)	2.786(-0.06)	4.626(-0.06)	3.196(-0.04)	2.826(-0.06)		
Road 29	29	1500-1600	3.416(-0.06)	5.866(-0.06)	4.036(-0.07)	2.926(-0.06)	5.936(-0.06)	3.516(-0.06)	2.786(-0.06)	4.626(-0.06)	3.196(-0.04)	2.826(-0.06)		
Road 29	29	1600-1700	2.956(-0.02)	5.766(-0.07)	3.976(-0.05)	2.546(-0.05)	3.416(-0.06)	2.886(-0.06)	3.806(-0.06)	2.406(-0.04)	2.556(-0.06)	4.376(-0.06)		
Road 29	29	1700-1800	2.956(-0.02)	5.766(-0.07)	3.976(-0.05)	2.546(-0.05)	3.416(-0.06)	2.886(-0.06)	3.806(-0.06)	2.406(-0.04)	2.556(-0.06)	4.376(-0.06)		
Road 29	29	1800-1900	2.636(-0.06)	4.846(-0.06)	1.846(-0.02)	2.286(-0.02)	2.586(-0.06)	3.006(-0.06)	5.806(-0.06)	4.466(-0.06)	2.676(-0.06)	3.006(-0.06)		
Road 29	29	1900-2000	2.636(-0.06)	4.846(-0.06)	1.846(-0.02)	2.286(-0.02)	2.586(-0.06)	3.006(-0.06)	5.806(-0.06)	4.466(-0.06)	2.676(-0.06)	3.006(-0.06)		
Road 29	29	2000-2100	2.566(-0.02)	2.976(-0.05)	2.026(-0.02)	2.606(-0.07)	1.796(-0.05)	3.526(-0.06)	4.096(-0.06)	2.826(-0.04)	3.006(-0.06)	3.576(-0.06)		
Road 29	29	2100-2200	2.396(-0.02)	2.706(-0.05)	1.876(-0.05)	2.346(-0.02)	2.476(-0.05)	3.216(-0.06)	3.646(-0.06)	2.516(-0.06)	2.896(-0.06)	3.246(-0.06)		
Road 29	29	2200-2300	2.396(-0.02)	2.706(-0.05)	1.876(-0.05)	2.346(-0.02)	2.476(-0.05)	3.216(-0.06)	3.646(-0.06)	2.516(-0.06)	2.896(-0.06)	3.246(-0.06)		
Road 29	29	2300-0000	2.566(-0.02)	2.976(-0.05)	2.026(-0.02)	2.606(-0.07)	1.796(-0.05)	3.526(-0.06)	4.096(-0.06)	2.826(-0.04)	3.006(-0.06)	3.576(-0.06)		
Road 30	30	0000-0100	1.256(-0.03)	1.316(-0.06)	1.036(-0.06)	1.176(-0.07)	1.136(-0.06)	9.236(-0.02)	9.816(-0.01)	9.616(-0.06)	7.836(-0.06)			
Road 30	30	0100-0200	1.256(-0.03)	1.316(-0.06)	1.036(-0.06)	1.176(-0.07)	1.136(-0.06)	9.236(-0.02)	9.816(-0.01)	9.616(-0.06)	7.836(-0.06)			
Road 30	30	0200-0300	1.826(-0.06)	8.526(-0.06)	3.266(-0.06)	2.886(-0.06)	2.476(-0.06)	9.236(-0.02)	9.816(-0.01)	9.616(-0.06)	7.836(-0.06)			
Road 30	30	0300-0400	1.782(-0.06)	7.626(-0.06)	1.486(-0.07)	1.626(-0.06)	6.886(-0.06)	6.746(-0.07)	1.026(-0.07)	4.376(-0.06)	4.986(-0.06)	3.886(-0.07)		
Road 30	30	0400-0500	1.782(-0.06)	7.626(-0.06)	1.486(-0.07)	1.626(-0.06)	6.886(-0.06)	6.746(-0.07)	1.026(-0.07)	4.376(-0.06)	4.986(-0.06)	3.886(-0.07)		
Road 30	30	0500-0600	1.732(-0.01)	1.631(-0.06)	1.532(-0.06)	1.212(-0.06)	1.166(-0.06)	8.272(-0.01)	8.166(-0.06)	8.896(-0.02)	1.156(-0.07)			
Road 30	30	0600-0700	1.686(-0.02)	1.716(-0.07)	1.476(-0.02)	2.246(-0.06)	1.006(-0.06)	1.726(-0.06)</						

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for AERMOD model (April)	Year 2033

Road Name		Road ID	Hour	No. Emission						No. Emission					
				Month/mile/hour			Month/mile/hour			Month/mile/hour			Month/mile/hour		
				g/km/h	g/m ³	tonne/hour	g/km/h	g/m ³	tonne/hour	g/km/h	g/m ³	tonne/hour	g/km/h	g/m ³	tonne/hour
Road 31	31	0000-0100	2.7562	0.0214	4.0667	1.9962	0.0208	3.9867	1.7881	0.3597	0.7327	1.5656	0.3147		
Road 31	31	0100-0200	2.6508	0.0206	3.8608	2.2296	0.0208	2.8867	1.8003	0.2507	2.2508	1.3761	0.2306		
Road 31	31	0200-0300	3.1952	0.0236	4.8867	2.6552	0.0208	2.8867	1.8003	0.2507	2.2508	1.3761	0.2306		
Road 31	31	0300-0400	3.1562	0.0238	2.8867	2.5752	0.0208	2.1336	1.8003	0.1647	0.1747	1.6276	0.4628		
Road 31	31	0400-0500	3.2106	0.0238	2.7816	2.2162	0.0208	2.4987	1.8003	0.1780	1.6688	1.6276	1.0367		
Road 31	31	0500-0600	2.7732	0.0238	2.7816	2.4987	0.0208	2.4987	1.8003	0.1780	1.6688	1.6276	1.0367		
Road 31	31	0600-0700	2.4462	0.0238	2.7816	2.1962	0.0208	6.7336	1.8003	0.5780	1.5126	1.5958	0.5087		
Road 31	31	0700-0800	2.8362	0.0238	1.7562	2.5062	0.0208	1.7562	1.5406	0.8033	1.2776	1.1306	1.1116		
Road 31	31	0800-0900	2.8362	0.0238	1.7562	2.5062	0.0208	1.7562	1.5406	0.8033	1.2776	1.1306	1.1116		
Road 31	31	0900-1000	2.9712	0.0212	1.8806	2.5862	0.0238	1.6436	1.7881	1.2206	1.1926	1.5276	1.0836		
Road 31	31	1000-1100	3.2202	0.2105	1.9716	2.8362	0.0238	1.6436	1.7881	1.1506	1.0306	1.5958	1.0006		
Road 31	31	1100-1200	3.2202	0.2105	1.9716	2.8362	0.0238	1.6436	1.7881	1.1506	1.0306	1.5958	1.0006		
Road 31	31	1200-1300	3.2862	0.1862	1.6582	0.2872	1.6267	1.4462	0.1747	1.0006	0.8362	1.5476	0.8707		
Road 31	31	1300-1400	3.3426	0.1862	1.6682	0.2836	0.1667	1.4806	1.7462	1.0206	0.9126	1.5247	0.8887		
Road 31	31	1400-1500	3.3426	0.1862	1.6682	0.2836	0.1667	1.4806	1.7462	1.0206	0.9126	1.5247	0.8887		
Road 31	31	1500-1600	3.0762	0.1917	1.7136	0.2662	1.6867	1.5006	0.1762	1.0706	0.9366	1.5006	0.9376		
Road 31	31	1600-1700	3.1162	0.1962	1.7682	2.7262	0.0238	1.5962	1.7682	1.1336	1.0216	1.5336	0.9867		
Road 31	31	1700-1800	3.1162	0.1962	1.7682	2.7262	0.0238	1.5962	1.7682	1.1336	1.0216	1.5336	0.9867		
Road 31	31	1800-1900	2.7862	0.6117	1.4462	1.9736	0.0238	1.2462	1.6336	1.1526	1.0306	1.4062	0.8767		
Road 31	31	1900-2000	1.7362	0.8816	0.8716	1.5262	0.0238	0.6487	1.7036	0.8667	0.7406	1.4062	0.5767		
Road 31	31	2000-2100	1.7362	0.8816	0.8716	1.5262	0.0238	0.6487	1.7036	0.8667	0.7406	1.4062	0.5767		
Road 31	31	2100-2200	1.6716	0.6662	0.5916	0.4962	0.5962	0.5307	1.6246	0.8507	0.5862	1.4062	0.5847		
Road 31	31	2200-2300	1.7162	0.6662	0.5916	0.5362	0.6306	0.5297							
Road 32	32	0000-0100	1.562	0.0236	9.036	1.326	0.0238	7.956	1.8868	1.5276	1.0126	1.4616	1.326		
Road 32	32	0100-0200	1.9682	0.0236	9.3682	6.2762	0.0238	8.246	1.6696	1.0066	0.6686	1.4776	0.7276		
Road 32	32	0200-0300	1.9682	0.0236	9.3682	6.2762	0.0238	8.246	1.6696	1.0066	0.6686	1.4776	0.7276		
Road 32	32	0300-0400	1.7162	0.0238	9.366	1.5462	0.0238	5.386	1.8868	1.5876	0.366	1.506	0.5267		
Road 32	32	0400-0500	1.7862	0.0238	6.916	0.4862	1.6162	6.236	1.436	1.6696	0.6596	0.4862	1.516	0.4867	
Road 32	32	0500-0600	1.7862	0.0238	6.916	0.4862	1.6162	6.236	1.436	1.6696	0.6596	0.4862	1.516	0.4867	
Road 32	32	0600-0700	2.1862	0.0238	1.866	1.736	0.0238	7.556	1.716	1.2576	1.6716	1.2576	2.236		
Road 32	32	0700-0800	2.0462	0.0238	4.0667	1.7362	0.0238	3.576	1.746	0.8206	0.3476	1.5276	0.456		
Road 32	32	0800-0900	2.0462	0.0238	4.0667	1.7362	0.0238	3.576	1.746	0.8206	0.3476	1.5276	0.456		
Road 32	32	0900-1000	2.5062	0.0238	4.4662	1.9126	0.0238	3.986	1.8676	0.5006	0.3362	1.4476	0.336		
Road 32	32	1000-1100	2.4462	0.0238	6.6062	4.3862	0.0238	5.786	1.846	0.6916	0.4816	0.3062	1.4776	0.4016	
Road 32	32	1100-1200	2.4462	0.0238	6.6062	4.3862	0.0238	5.786	1.846	0.6916	0.4816	0.3062	1.4776	0.4016	
Road 32	32	1200-1300	2.1462	0.0238	7.2562	1.8762	0.0238	3.226	1.366	0.2476	1.6676	1.186	2.096		
Road 32	32	1300-1400	2.1462	0.0238	7.2562	1.8762	0.0238	3.226	1.366	0.2476	1.6676	1.186	2.096		
Road 32	32	1400-1500	2.1462	0.0238	7.2562	1.8762	0.0238	3.226	1.366	0.2476	1.6676	1.186	2.096		
Road 32	32	1500-1600	2.0702	0.0238	4.0667	2.6762	0.0238	3.536	2.346	0.366	2.696	1.766	1.166		
Road 32	32	1600-1700	2.9662	0.0238	4.3662	1.836	0.0238	1.816	2.536	1.346	2.806	1.666	1.176	0.426	
Road 32	32	1700-1800	2.9662	0.0238	4.3662	1.836	0.0238	1.816	2.536	1.346	2.806	1.666	1.176	0.426	
Road 32	32	1800-1900	2.9662	0.0238	4.3662	1.836	0.0238	1.816	2.536	1.346	2.806	1.666	1.176	0.426	
Road 32	32	1900-2000	1.2662	0.0238	2.096	1.006	0.0238	2.696	1.186	0.136	2.776	1.946	0.936	0.256	
Road 32	32	2000-2100	1.1742	0.0238	2.4662	1.036	0.0238	1.076	1.316	1.186	2.296	1.526	1.036	0.886	
Road 32	32	2100-2200	1.1742	0.0238	2.4662	1.036	0.0238	1.076	1.316	1.186	2.296	1.526	1.036	0.886	
Road 32	32	2200-2300	1.0462	0.0238	1.0462	0.9276	0.0238	9.216	1.166	0.166	1.746	1.276	1.126	0.56	
Road 32	32	2300-0000	1.0462	0.0238	1.0462	0.9276	0.0238	9.216	1.166	0.166	1.746	1.276	1.126	0.56	
Road 32	32	0000-0100	1.562	0.0236	9.036	1.326	0.0238	7.956	1.8868	1.5276	1.0126	1.4616	1.326		
Road 33	33	0000-0100	1.462	0.0236	9.036	1.326	0.0238	7.956	1.8868	1.5276	1.0126	1.4616	1.326		
Road 33	33	0100-0200	1.6362	0.0236	9.036	1.326	0.0238	7.956	1.8868	1.5276	1.0126	1.4616	1.326		
Road 33	33	0200-0300	1.462	0.0236	9.036	1.326	0.0238	7.956	1.8868	1.5276	1.0126	1.4616	1.326		
Road 33	33	0300-0400	1.9162	0.0236	9.036	1.326	0.0238	7.956	1.8868	1.5276	1.0126	1.4616	1.326		
Road 33	33	0400-0500	1.9162	0.0236	9.036	1.326	0.0238	7.956	1.8868	1.5276	1.0126	1.4616	1.326		
Road 33	33	0500-0600	1.9162	0.0236	9.036	1.326	0.0238	7.956	1.8868	1.5276	1.0126	1.4616	1.326		
Road 33	33	0600-0700	2.0362	0.0236	9.036	1.326	0.0238	7.956	1.8868	1.5276	1.0126	1.4616	1.326		
Road 33	33	0700-0800	1.9262	0.0236	9.036	1.326	0.0238	7.956	1.8868	1.5276	1.0126	1.4616	1.326		
Road 33	33	0800-0900	1.9262	0.0236	9.036	1.326	0.0238	7.956	1.8868	1.5276	1.0126	1.4616	1.326		
Road 33	33	0900-1000	2.2462	0.0236	9.036	1.326	0.0238	7.956	1.8868	1.5276	1.0126	1.4616	1.326		
Road 33	33	1000-1100	2.2462	0.0236	9.036	1.326	0.0238	7.956	1.8868	1.5276	1.0126	1.4616	1.326		
Road 33	33	1100-1200	2.4462	0.0236	9.036	1.326	0.0238	7.956	1.8868	1.5276	1.0126	1.4616	1.326		
Road 33	33	1200-1300	2.4462	0.0236	9.036	1.326	0.0238	7.956	1.8868	1.5276	1.0126	1.4616	1.326		
Road 33	33	1300-1400	3.1462	0.0236	9.036	1.326	0.0238	7.956	1.8868	1.5276	1.0126	1.4616	1.326		
Road 33	33	1400-1500	3.1462	0.0236	9.036	1.326	0.0238	7.956	1.8868	1.5276	1.0126	1.4616	1.326		
Road 33	33	1500-1600	2.8462	0.0236	9.036	1.326	0.0238	7.956	1.8868	1.5276	1.0126	1.4616	1.326		
Road 33	33	1600-1700	2.8462	0.0236	9.036	1.326	0.0238	7.956	1.8868	1.5276	1.0126	1.4616	1.326		
Road 33	33	1700-1800	2.4462	0.0236	9.036	1.326	0.0238	7.956	1.8868	1.5276	1.0126	1.4616	1.326		
Road 33	33	1800-1900	2.4462	0.0236	9.036	1.326	0.0238	7.956	1.8868	1.5276	1.0126	1.4616	1.326		
Road 33	33	1900-2000	2.4462	0.0236	9.036	1.326	0.0238	7.956	1.8868	1.5276	1.0126	1.4616	1.326		
Road 33	33	2000-2100	1.6962	0.0236	9.036	1.326	0.0238	7.956	1.8868	1.5276	1.0126	1.4616	1.326		
Road 33	33	2100-2200	1.6962	0.0236	9.036	1.326	0.0238	7.956	1.8868	1.5276	1.0126	1.4616	1.326		
Road 33	33	2200-2300	1.662	0.0236	9.036	1.326	0.0238	7.956	1.8868	1.5276	1.0126	1.4616	1.326		
Road 33	33	2300-0000	1.7742	0.0236	9.036	1.326	0.0238	7.956	1.8868	1.5276	1.0126	1.4616	1.326		
Road 34	34	0000-0100	1.0262	0.0236	9.036	1.326	0.0238	7.956	1.8868	1.5276	1.0126	1.4616	1.326		
Road 34	34	0100-0200	1.0262	0.0236	9.036	1.326	0.0238	7.956	1.8868	1.5276	1.0126	1.4616	1.326		
Road 34	34	0200-0300	1.1462	0.0236	9.036	1.326	0.0238	7.956	1.8868	1.5276	1.0126	1.4616	1.326		
Road 34	34	0300-0400	1.1462	0.0236	9.036	1.326	0.0238	7.956	1.8868	1.5276	1.0126	1.4616	1.326		
Road 34	34	0400-0500	1.2662	0.0236	9.036	1.326	0.0238	7.956	1.8868	1.5276	1.0126	1.4616	1.326		
Road 34	34	0500-0600	1.2662	0.0236	9.036	1.326	0.0238	7.956							

Tsing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for AERMOD model (April)	Year 2033

Road Name	Road ID	Hour	NO ₂ Emission						NO _x Emission					
			Monthly/m ²			Monthly/m ²			Monthly/m ²			Monthly/m ²		
			g/m ² /hr	g/s/m	tonne/hr	g/m ² /hr	g/s/m	tonne/hr	g/m ² /hr	g/s/m	tonne/hr	g/m ² /hr	g/s/m	tonne/hr
Road 34	34	0800-0900	1.297E-02	3.36E-07	8.78E-06	1.133E-02	2.94E-07	7.70E-06	9.05E-02	2.31E-06	6.15E-05	2.77E-07	2.02E-06	5.27E-05
Road 34	34	0900-1000	1.476E-02	3.13E-07	8.26E-06	1.277E-02	2.57E-07	7.06E-06	9.93E-02	2.11E-06	5.38E-05	8.74E-07	1.88E-06	4.83E-05
Road 34	34	1000-1100	1.487E-02	3.09E-07	8.05E-06	1.287E-02	2.53E-07	6.95E-06	1.00E-02	2.10E-06	5.36E-05	8.74E-07	1.88E-06	4.83E-05
Road 34	34	1100-1200	1.598E-02	2.77E-07	7.24E-06	1.39E-02	2.43E-07	6.37E-06	1.05E-01	1.83E-06	4.78E-05	9.06E-07	1.59E-06	4.08E-05
Road 34	34	1200-1300	3.686E-02	4.18E-07	1.09E-05	3.12E-02	3.64E-07	9.53E-06	2.90E-03	3.30E-06	8.77E-05	2.38E-07	2.98E-06	7.60E-05
Road 34	34	1300-1400	3.320E-02	3.42E-07	8.92E-06	2.82E-02	3.12E-07	8.40E-06	2.58E-03	2.85E-06	7.36E-05	2.16E-07	2.75E-06	7.06E-05
Road 34	34	1400-1500	3.355E-02	4.47E-07	1.17E-05	3.12E-02	3.93E-07	1.05E-05	2.82E-01	3.55E-06	9.28E-05	2.47E-07	3.11E-06	8.02E-05
Road 34	34	1500-1600	3.932E-02	4.31E-07	1.13E-05	2.93E-02	3.57E-07	9.91E-06	2.76E-03	3.56E-06	9.28E-05	2.47E-07	3.11E-06	8.02E-05
Road 34	34	1600-1700	4.210E-02	4.18E-07	1.09E-05	3.20E-02	3.42E-07	9.46E-06	2.90E-03	3.30E-06	8.77E-05	2.38E-07	2.98E-06	7.60E-05
Road 34	34	1700-1800	3.905E-02	4.23E-07	1.11E-05	2.87E-02	3.67E-07	9.61E-06	3.09E-01	4.24E-06	1.11E-04	2.67E-07	3.67E-06	9.46E-05
Road 34	34	1800-1900	2.71E-02	3.88E-07	9.62E-06	2.40E-02	3.38E-07	9.23E-06	3.24E-02	4.09E-06	1.02E-04	2.78E-07	3.67E-06	9.46E-05
Road 34	34	1900-2000	2.82E-02	3.92E-07	9.75E-06	2.45E-02	3.42E-07	9.46E-06	3.24E-02	4.09E-06	1.02E-04	2.78E-07	3.67E-06	9.46E-05
Road 34	34	2000-2100	2.681E-02	2.16E-07	5.66E-06	2.39E-02	1.93E-07	5.06E-06	3.68E-02	2.94E-06	7.38E-05	3.28E-07	2.68E-06	6.95E-05
Road 34	34	2100-2200	2.81E-02	1.98E-07	5.17E-06	2.22E-02	1.77E-07	4.64E-06	3.96E-02	2.84E-06	6.91E-05	3.00E-07	2.38E-06	6.15E-05
Road 34	34	2200-2300	2.81E-02	2.11E-07	5.49E-06	2.22E-02	1.86E-07	4.64E-06	3.96E-02	2.84E-06	6.91E-05	3.00E-07	2.38E-06	6.15E-05
Road 35	35	2300-0000	2.74E-02	1.60E-07	4.18E-06	2.40E-02	1.49E-07	3.66E-06	3.57E-02	2.08E-06	5.44E-05	1.31E-07	1.13E-06	1.81E-05
Road 35	35	0000-0100	3.81E-02	4.40E-07	1.07E-05	3.37E-02	3.69E-07	9.99E-06	3.32E-03	1.53E-07	3.72E-07	3.15E-07	3.15E-07	3.15E-07
Road 35	35	0100-0200	4.310E-02	4.29E-07	1.11E-05	3.62E-02	3.49E-07	9.64E-06	3.57E-03	1.53E-07	3.72E-07	3.15E-07	3.15E-07	3.15E-07
Road 35	35	0200-0300	5.98E-02	3.83E-08	9.93E-08	5.04E-02	1.46E-08	4.38E-08	1.68E-01	1.15E-07	2.81E-07	1.50E-07	1.50E-07	1.50E-07
Road 35	35	0300-0400	6.20E-02	3.70E-08	9.31E-08	5.61E-02	1.38E-08	3.85E-08	1.80E-01	1.08E-07	2.62E-07	1.62E-07	1.62E-07	1.62E-07
Road 35	35	0400-0500	6.540E-02	3.58E-08	9.12E-08	5.95E-02	1.32E-08	3.64E-08	1.86E-01	1.01E-07	2.45E-07	1.54E-07	1.54E-07	1.54E-07
Road 35	35	0500-0600	6.93E-02	4.55E-08	1.11E-07	4.30E-02	4.03E-08	8.00E-08	1.98E-01	1.47E-07	3.57E-07	1.98E-07	1.98E-07	1.98E-07
Road 35	35	0600-0700	3.484E-02	6.54E-08	1.69E-07	3.63E-02	5.85E-08	1.62E-07	4.40E-01	2.39E-07	5.82E-07	1.23E-07	1.23E-07	1.23E-07
Road 35	35	0700-0800	5.18E-02	5.18E-08	1.32E-07	5.18E-02	5.18E-08	1.32E-07	5.18E-02	5.18E-08	1.32E-07	5.18E-02	5.18E-08	1.32E-07
Road 35	35	0800-0900	5.18E-02	2.29E-07	5.95E-07	4.53E-02	7.01E-07	9.40E-07	1.68E-02	4.72E-07	1.81E-06	1.84E-06	1.84E-06	1.84E-06
Road 35	35	0900-1000	5.18E-02	2.34E-07	5.69E-07	4.53E-02	7.01E-07	9.40E-07	1.91E-02	7.59E-07	1.84E-06	1.84E-06	1.84E-06	1.84E-06
Road 35	35	1000-1100	6.48E-02	1.78E-07	4.45E-07	5.69E-02	1.05E-07	1.04E-07	1.04E-02	1.04E-07	1.04E-07	1.04E-02	1.04E-07	1.04E-07
Road 35	35	1100-1200	6.55E-02	2.27E-07	5.53E-07	4.73E-02	7.01E-07	8.84E-07	2.05E-02	7.14E-07	1.74E-06	1.74E-06	1.74E-06	1.74E-06
Road 35	35	1200-1300	2.74E-02	1.69E-07	4.11E-06	2.40E-02	1.48E-07	3.66E-06	3.57E-02	2.08E-06	5.44E-05	1.31E-07	1.13E-06	1.81E-05
Road 35	35	1300-1400	2.74E-02	1.69E-07	4.11E-06	2.40E-02	1.48E-07	3.66E-06	3.57E-02	2.08E-06	5.44E-05	1.31E-07	1.13E-06	1.81E-05
Road 35	35	1400-1500	7.29E-02	1.79E-07	4.36E-07	6.41E-02	1.58E-07	3.94E-07	2.10E-02	5.17E-07	1.20E-06	1.20E-06	1.20E-06	1.20E-06
Road 35	35	1500-1600	7.12E-02	1.78E-07	4.33E-07	6.26E-02	1.56E-07	3.87E-07	2.09E-02	5.22E-07	1.27E-06	1.27E-06	1.27E-06	1.27E-06
Road 35	35	1600-1700	6.93E-02	1.71E-07	4.17E-07	6.00E-02	1.51E-07	3.67E-07	1.98E-02	5.17E-07	1.16E-06	1.16E-06	1.16E-06	1.16E-06
Road 35	35	1700-1800	6.20E-02	1.74E-07	4.22E-07	5.39E-02	1.51E-07	3.67E-07	1.98E-02	5.17E-07	1.16E-06	1.16E-06	1.16E-06	1.16E-06
Road 35	35	1800-1900	5.98E-02	1.84E-07	4.59E-07	4.78E-02	1.42E-07	3.45E-07	1.61E-01	4.76E-07	1.18E-06	1.18E-06	1.18E-06	1.18E-06
Road 35	35	1900-2000	2.13E-02	1.36E-07	3.37E-07	2.40E-02	1.49E-07	3.66E-06	3.57E-02	2.08E-06	5.44E-05	1.31E-07	1.13E-06	1.81E-05
Road 35	35	2000-2100	2.74E-02	1.60E-07	4.18E-06	2.40E-02	1.49E-07	3.66E-06	3.57E-02	2.08E-06	5.44E-05	1.31E-07	1.13E-06	1.81E-05
Road 35	35	2100-2200	2.94E-02	4.35E-08	1.06E-07	2.63E-02	3.90E-08	9.58E-08	1.11E-01	1.65E-07	4.00E-07	9.74E-07	4.00E-07	9.74E-07
Road 35	35	2200-2300	2.94E-02	4.35E-08	1.06E-07	2.63E-02	3.90E-08	9.58E-08	1.11E-01	1.65E-07	4.00E-07	9.74E-07	4.00E-07	9.74E-07
Road 35	35	2300-0000	3.54E-02	4.95E-08	9.95E-08	3.09E-02	1.54E-08	4.00E-08	2.4E-01	1.42E-07	3.45E-07	1.60E-07	1.60E-07	1.60E-07
Road 35	35	0000-0100	4.79E-02	7.19E-08	1.81E-07	4.37E-02	6.58E-08	1.65E-07	2.31E-01	3.47E-07	8.74E-07	2.10E-07	2.10E-07	2.10E-07
Road 35	35	0100-0200	5.30E-02	7.19E-08	1.81E-07	4.37E-02	6.58E-08	1.65E-07	2.31E-01	3.47E-07	8.74E-07	2.10E-07	2.10E-07	2.10E-07
Road 35	35	0200-0300	6.20E-02	6.99E-08	1.76E-07	5.06E-02	1.30E-08	3.26E-08	1.90E-01	2.10E-07	5.44E-05	1.31E-07	1.13E-06	1.81E-05
Road 35	35	0300-0400	6.89E-02	5.11E-08	1.29E-07	6.35E-02	4.72E-08	1.19E-07	2.58E-02	1.92E-07	4.82E-07	2.38E-07	2.38E-07	2.38E-07
Road 35	35	0400-0500	6.20E-02	6.99E-08	1.76E-07	5.06E-02	1.30E-08	3.26E-08	1.90E-01	2.10E-07	5.44E-05	1.31E-07	1.13E-06	1.81E-05
Road 35	35	0500-0600	6.22E-02	7.34E-08	1.85E-07	4.78E-02	6.97E-08	1.76E-07	2.66E-01	3.47E-07	7.91E-07	2.45E-07	2.45E-07	2.45E-07
Road 35	35	0600-0700	5.64E-02	1.76E-07	4.17E-07	5.20E-02	1.10E-07	2.59E-07	2.69E-01	6.00E-07	1.51E-06	1.51E-06	1.51E-06	1.51E-06
Road 35	35	0700-0800	7.27E-02	3.62E-07	9.22E-07	8.65E-02	3.34E-07	8.42E-07	1.00E-01	1.51E-06	3.60E-06	2.74E-06	2.74E-06	2.74E-06
Road 35	35	0800-0900	7.87E-02	8.05E-07	6.44E-07	9.80E-02	3.67E-07	9.80E-07	1.10E-01	1.65E-06	4.00E-06	3.15E-06	3.15E-06	3.15E-06
Road 35	35	0900-1000	8.10E-02	4.08E-07	1.03E-06	7.36E-02	3.07E-07	7.33E-07	2.97E-01	4.95E-06	3.76E-06	2.68E-06	2.68E-06	2.68E-06
Road 35	35	1000-1100	8.51E-02	3.66E-07	9.17E-07	7.76E-02	3.34E-07	8.93E-07	1.98E-01	1.98E-06	3.44E-06	2.74E-06	2.74E-06	2.74E-06
Road 35	35	1100-1200	8.10E-02	4.08E-07	1.03E-06	7.36E-02	3.07E-07	7.33E-07	2.97E-01	4.95E-06	3.76E-06	2.68E-06	2.68E-06	2.68E-06
Road 35	35	1200-1300	1.10E-01	3.56E-07	8.97E-07	9.15E-02	3.24E-07	8.15E-07	3.24E-01	1.51E-06	2.89E-06	2.29E-06	2.29E-06	2.29E-06
Road 35	35	1300-1400	1.03E-01	3.80E-07	9.57E-07	9.44E-02	3.37E-07	8.74E-07	3.39E-01	1.62E-06	3.00E-06	2.38E-06	2.38E-06	2.38E-06
Road 35	35	1400-1500	1.02E-01	3.82E-07	9.59E-07	9.39E-02	3.34E-07	8.67E-07	3.39E-01	1.62E-06	3.00E-06	2.38E-06	2.38E-06	2.38E-06
Road 35	35	1500-1600	1.02E-01	3.95E-07	9.97E-07	9.38E-02	3.45E-07	9.13E-07	3.40E-01	1.91E-06	3.31E-06	3.10E-06	3.10E-06	3.10E-06
Road 35	35	1600-1700	9.74E-02	3.62E-07	9.63E-07	8.90E-02	3.46E-07	8.80E-07	3.28E-01	1.27E-06	3.20E-06	2.89E-06	2.89E-06	2.89E-06
Road 35	35	1700-1800	9.81E-02	3.62E-07	9.63E-07	8.90E-02	3.46E-07	8.80E-07	3.28E-01	1.27E-06	3.20E-06	2.89E-06	2.89E-06	2.89E-06
Road 35	35	1800-1900	7.18E-02	2.97E-07	7.48E-07	6.45E-02	2.67E-07	6.72E-07	6.62E-01	1.08E-06	2.78E-06	2.38E-06	2.38E-06	2.38E-06
Road 35	35	1900-2000	7.18E-02	1.70E-07	4.11E-07	4.29E-02	1.17E-07	2.94E-07	2.22E-01	5.00E-07	1.48E-06	1.48E-06	1.48E-06	1.48E-06
Road 35	35	2000-2100	4.95E-02	1.24E-07	3.10E-07	4.22E-02	1.69E-08	1.19E-07	2.42E-01	4.66E-07	1.17E-06	1.09E-06	1.09E-06	1.09E-06
Road 35	35	2100-2200	4.87E-02	1.04E-07	2.62E-07	4.55E-02	1.73E-08	2.45E-07	2.36E-01	5.05E-07	1.27E-06	1.23E-06	1.23E-06	1.23E-06
Road 35	35	2200-2300	4.95E-02	9.37E-08	2.38E-07	4.22E-02	1.69E-08	1.19E-07	2.42E-01	4.66E-07	1.17E-06	1.09E-06	1.09E-06	1.09E-06
Road 35	35	2300-0000	4.87E-02	1.04E-07	2.62E-07	4.55E-02	1.73E-08	2.45E-07	2.36E-01	5.05E-0				

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Ying Yi North Underground Quarry
Open Road 24 hour Emission Factors for
AERMOD model (April) Year 2033

Road Name	Road ID	Hour	NO Emission						NO Emission							
			Monthly			Monthly			Monthly			Monthly				
			g/km/h	g/km/h	tonne/hour	g/km/h	g/km/h	tonne/hour	g/km/h	g/km/h	tonne/hour	g/km/h	g/km/h	tonne/hour		
			Average			Average			Average			Average				
Road 37	37	1600-1700	7.436	1.362	2.896	6.052	1.156	2.738	7.962	4.686	1.147	2.752	4.638	1.01		
Road 37	37	1700-1800	6.486	1.172	2.688	7.102	1.105	2.508	2.945	3.506	1.226	2.726	4.913	1.01		
Road 37	37	1800-1900	4.416	0.733	1.642	5.172	0.812	1.812	2.412	3.412	1.012	2.712	4.912	1.01		
Road 37	37	1900-2000	3.662	1.106	1.976	3.742	4.812	1.062	2.262	2.862	0.562	1.912	2.642	0.60		
Road 37	37	2000-2100	2.662	1.466	0.918	3.982	3.862	0.802	2.226	2.412	0.526	2.076	2.242	0.53		
Road 37	37	2100-2200	2.162	1.662	0.412	3.112	3.112	0.012	2.112	2.112	0.012	2.112	2.112	0.01		
Road 37	37	2200-2300	2.322	1.396	0.772	3.102	3.212	0.102	2.372	2.102	0.042	1.962	2.032	0.46		
Road 37	37	2300-0000	6.642	2.862	0.566	3.412	2.672	0.412	2.252	1.652	0.052	2.052	1.631	0.36		
Road 38	38	0000-0100	2.162	1.396	0.772	3.102	3.212	0.102	2.372	2.102	0.042	1.962	2.032	0.46		
Road 38	38	0100-0200	1.152	1.522	0.982	0.492	7.732	0.532	2.632	1.712	1.602	2.422	2.982	0.27		
Road 38	38	0200-0300	7.702	1.672	0.596	7.102	6.972	0.512	2.702	2.652	0.172	2.472	2.492	0.56		
Road 38	38	0300-0400	2.662	1.422	0.722	3.682	3.682	0.012	2.682	2.682	0.012	2.682	2.682	0.01		
Road 38	38	0400-0500	2.522	1.572	0.302	2.602	6.992	0.582	2.712	2.812	0.112	2.592	2.592	0.07		
Road 38	38	0500-0600	8.332	1.042	0.432	7.172	6.492	0.772	2.052	2.672	1.162	2.662	3.032	2.87		
Road 38	38	0600-0700	7.232	1.782	1.442	7.232	7.232	0.012	7.232	7.232	0.012	7.232	7.232	0.01		
Road 38	38	0700-0800	1.152	1.592	1.252	0.352	4.732	0.372	3.872	3.372	1.892	2.452	3.02	1.72		
Road 38	38	0800-0900	9.112	0.622	4.772	6.332	5.322	4.362	3.202	3.202	0.652	1.842	1.922	1.07		
Road 38	38	0900-1000	1.032	1.032	0.032	1.032	1.032	0.032	1.032	1.032	0.032	1.032	1.032	0.03		
Road 38	38	1000-1100	1.072	1.842	0.782	0.912	5.332	0.432	3.452	1.992	1.552	1.412	1.722	1.41		
Road 38	38	1100-1200	1.072	1.072	0.552	0.672	9.832	0.172	4.232	3.492	1.832	0.502	1.182	1.672	1.33	
Road 38	38	1200-1300	1.412	1.412	0.412	1.412	1.412	0.412	1.412	1.412	0.412	1.412	1.412	0.41		
Road 38	38	1300-1400	1.422	1.512	0.252	0.302	4.722	0.372	3.872	3.372	1.892	2.452	3.02	1.72		
Road 38	38	1400-1500	1.412	1.512	0.252	0.302	4.722	0.372	3.872	3.372	1.892	2.452	3.02	1.72		
Road 38	38	1500-1600	1.396	1.502	0.112	1.272	4.582	0.375	4.022	3.452	1.992	1.552	1.412	1.722	1.41	
Road 38	38	1600-1700	1.346	1.492	0.842	0.122	4.282	0.342	3.492	3.962	1.456	1.152	0.612	1.772	1.01	
Road 38	38	1700-1800	1.252	1.632	1.332	1.122	3.442	0.242	3.652	4.122	1.612	1.722	1.002	0.87	0.27	
Road 38	38	1800-1900	0.962	1.862	0.962	0.962	1.212	0.462	3.962	3.962	0.462	1.962	1.962	0.46	0.27	
Road 38	38	1900-2000	1.032	1.302	1.062	0.902	1.212	0.912	3.362	3.422	0.472	1.942	1.312	0.932	0.32	
Road 38	38	2000-2100	1.022	1.312	1.072	0.972	1.222	1.002	3.362	3.472	0.502	1.962	1.312	0.982	0.32	
Road 38	38	2100-2200	1.342	1.342	1.342	1.342	1.342	1.342	1.342	1.342	1.342	1.342	1.342	1.342	1.342	
Road 38	38	2200-2300	1.072	1.802	0.942	0.542	9.782	0.8012	3.262	3.362	0.752	1.972	1.052	0.242	0.53	
Road 38	38	2300-0000	1.042	1.432	2.072	0.842	2.302	1.962	3.652	3.432	1.182	1.372	1.882	0.68	0.36	
Road 38	38	0000-0100	1.072	1.782	1.442	0.912	1.322	1.182	3.712	3.712	0.012	2.712	2.712	0.01	0.36	
Road 38	38	0100-0200	1.092	1.396	1.172	1.042	1.322	1.132	3.712	4.712	0.012	2.562	1.462	0.37	0.36	
Road 38	38	0300-0400	1.112	1.182	1.002	1.082	1.132	0.952	3.712	3.982	0.472	3.712	3.712	0.47	0.36	
Road 38	38	0400-0500	1.132	1.382	1.352	1.352	1.132	1.132	4.712	4.712	0.012	3.712	3.712	0.01	0.36	
Road 38	38	0500-0600	1.162	1.262	1.222	1.102	2.472	2.112	3.982	3.872	0.472	3.552	3.612	0.28	0.69	
Road 38	38	0600-0700	1.182	1.642	1.542	1.132	3.732	4.882	3.982	2.022	1.722	1.722	1.902	1.47	0.36	
Road 38	38	0700-0800	1.212	1.312	1.182	1.182	1.212	1.212	4.712	4.712	0.012	3.712	3.712	0.01	0.36	
Road 38	38	0800-0900	1.242	1.612	1.362	1.182	1.512	1.292	4.122	3.502	0.522	3.852	3.952	0.47	0.36	
Road 38	38	0900-1000	1.312	1.832	1.562	1.232	1.722	1.472	4.222	3.982	0.502	3.982	3.982	0.502	0.36	
Road 38	38	1000-1100	1.322	1.782	1.582	1.252	1.782	1.782	4.222	4.222	0.012	3.712	3.712	0.01	0.36	
Road 38	38	1100-1200	1.312	1.682	1.432	1.152	1.592	1.352	4.252	4.412	0.612	3.912	3.952	0.47	0.36	
Road 38	38	1200-1300	1.532	1.882	1.632	1.312	1.572	1.342	2.712	3.992	0.592	3.502	3.682	0.58	0.36	
Road 38	38	1300-1400	1.662	1.972	1.782	1.462	1.782	1.782	4.222	4.222	0.012	3.712	3.712	0.01	0.36	
Road 38	38	1400-1500	1.712	1.802	1.622	1.312	1.782	1.522	2.802	3.792	0.762	3.682	3.762	0.62	0.36	
Road 38	38	1500-1600	1.692	2.022	1.722	1.462	1.912	1.632	2.912	4.482	1.212	2.712	3.872	0.68	0.36	
Road 38	38	1600-1700	1.692	1.922	1.642	1.312	1.782	1.782	4.222	4.222	0.012	3.712	3.712	0.01	0.36	
Road 38	38	1700-1800	1.542	1.822	1.552	1.182	1.712	1.462	2.742	3.402	0.692	3.522	3.652	0.73	0.36	
Road 38	38	1800-1900	1.612	1.942	1.662	1.382	1.162	1.912	2.622	4.692	1.932	1.982	3.682	0.54	0.36	
Road 38	38	1900-2000	1.612	1.942	1.662	1.382	1.162	1.912	2.622	4.692	1.932	1.982	3.682	0.54	0.36	
Road 38	38	2000-2100	1.602	2.052	1.602	1.452	2.912	6.082	4.912	2.082	1.432	3.692	1.922	4.022	0.48	0.36
Road 38	38	2100-2200	1.972	2.622	1.302	2.832	5.942	5.052	2.082	4.352	0.712	1.932	4.052	0.38	0.36	
Road 38	38	2200-2300	1.642	1.912	1.642	1.382	1.642	1.642	2.642	4.052	1.012	2.642	3.642	0.54	0.36	
Road 38	38	2300-0000	1.642	1.912	1.642	1.382	1.642	1.642	2.642	4.052	1.012	2.642	3.642	0.54	0.36	
Road 40	40	0000-0100	7.762	1.282	0.232	0.692	1.152	0.742	2.742	2.692	0.732	2.452	3.332	0.27	0.36	
Road 40	40	0100-0200	7.862	1.282	0.232	0.692	1.152	0.742	2.742	2.692	0.732	2.452	3.332	0.27	0.36	
Road 40	40	0300-0400	7.862	1.282	0.232	0.692	1.152	0.742	2.742	2.692	0.732	2.452	3.332	0.27	0.36	
Road 40	40	0400-0500	7.862	1.282	0.232	0.692	1.152	0.742	2.742	2.692	0.732	2.452	3.332	0.27	0.36	
Road 40	40	0500-0600	7.862	1.282	0.232	0.692	1.152	0.742	2.742	2.692	0.732	2.452	3.332	0.27	0.36	
Road 40	40	0600-0700	7.862	1.282	0.232	0.692	1.152	0.742	2.742	2.692	0.732	2.452	3.332	0.27	0.36	
Road 40	40	0700-0800	7.862	1.282	0.232	0.692	1.152	0.742	2.742	2.692	0.732	2.452	3.332	0.27	0.36	
Road 40	40	0800-0900	7.862	1.282	0.232	0.692	1.152	0.742	2.742	2.692	0.732	2.452	3.332	0.27	0.36	
Road 40	40	0900-1000	7.862	1.282	0.232	0.692	1.152	0.742	2.742	2.692	0.732	2.452	3.332	0.27	0.36	
Road 40	40	1000-1100	7.862	1.282	0.232	0.692	1.152	0.742	2.742	2.692	0.732	2.452	3.332	0.27	0.36	
Road 40	40	1100-1200	7.862	1.282	0.232	0.692	1.152	0.742	2.742	2.692	0.732	2.452	3.332	0.27	0.36	
Road 40	40	1200-1300	7.862	1.282	0.232	0.692	1.152	0.742	2.742	2.692	0.732	2.452	3.332	0.27	0.36	
Road 40	40	1300-1400	7.862	1.282	0.232	0.692	1.152	0.742	2.742	2.692	0.732	2.452	3.332	0.27	0.36	
Road 40	40	1400-1500	7.862	1.282	0.232	0.692	1.152	0.742	2.742	2.692	0.732	2.452	3.332	0.27	0.36	
Road 40	40	1500-1600	7.862	1.282	0.232	0.692	1.152	0.742	2.742	2.692	0.732	2.452	3.332	0.27	0.36	
Road 40	40	1600-1700	7.862	1.282	0.232	0.692	1.152	0.742	2.742	2.692	0.732	2.452	3.332	0.27	0.36	
Road 40	40	1700-1800	7.862	1.282	0.232	0.692	1.152	0.742	2.742	2.692	0.732	2.452	3.332	0.27	0.36	
Road 40	40	1800-1900	7.862	1.282	0.232	0.692	1.152	0.742	2.742	2.692	0.732	2.452	3.332	0.27	0.36	
Road 40	40	1900-2000	7.862	1.282	0.232	0.692	1.152	0.742	2.742	2.692	0.732	2.452	3.332	0.27	0.36	
Road 40	40	2000-2100	7.862	1.282	0.232	0.692	1.152	0.742	2.742	2.692	0.732	2.452	3.332	0.27	0.36	
Road 40	40	2100-2200	7.862	1.282	0.232	0.692	1.152	0.742	2.742	2.692	0.732	2.452	3.332	0.27	0.36	

Tsing Yi North Underground Quarry
 Open Road 24 hour Emission Factors for
 AERMOD model (April) Year 2033

Road Name	Road ID	Hour	No. Emission						No. Emission					
			Monthly/average			Monthly/average			Monthly/average			Monthly/average		
			g/kwh	g/kwh	tonne/hour	g/kwh	g/kwh	tonne/hour	g/kwh	g/kwh	tonne/hour	g/kwh	g/kwh	tonne/hour
Road #1	01	0000-0100	2.47E-02	4.66E-08	4.36E-07	2.18E-02	4.10E-08	3.95E-07	9.26E-02	1.74E-07	1.64E-06	7.99E-02	1.50E-07	
Road #1		0100-0200	3.13E-02	4.86E-08	4.07E-07	2.76E-02	3.83E-08	3.60E-07	1.08E-01	1.48E-07	1.38E-06	1.06E-02	7.28E-07	
Road #1		0200-0300	3.46E-02	4.76E-08	4.06E-07	3.00E-02	3.78E-08	3.53E-07	1.12E-01	1.48E-07	1.38E-06	1.10E-02	7.31E-07	
Road #1	03	0300-0400	4.46E-02	4.07E-08	3.82E-07	3.67E-02	3.37E-08	3.46E-07	1.25E-01	1.25E-07	1.16E-06	1.12E-02	1.12E-07	
Road #1		0400-0500	3.96E-02	4.17E-08	3.62E-07	3.27E-02	3.97E-08	3.54E-07	1.23E-01	1.30E-07	1.22E-06	1.10E-02	1.16E-07	
Road #1		0500-0600	3.66E-02	4.28E-08	3.52E-07	2.97E-02	4.23E-08	3.21E-07	1.20E-01	1.35E-07	1.26E-06	1.08E-02	1.19E-07	
Road #1	06	0600-0700	7.32E-02	6.16E-07	1.95E-07	2.08E-02	4.58E-08	5.15E-07	1.92E-02	2.45E-07	2.52E-06	8.08E-02	2.14E-07	
Road #1		0700-0800	3.16E-02	1.96E-07	1.84E-07	2.68E-02	1.73E-07	1.62E-06	1.10E-01	8.84E-07	6.45E-06	5.92E-02	5.92E-07	
Road #1		0800-0900	3.26E-02	1.96E-07	1.84E-07	2.68E-02	1.73E-07	1.62E-06	1.10E-01	8.84E-07	6.45E-06	5.92E-02	5.92E-07	
Road #1	09	0900-1000	3.33E-02	2.01E-07	1.89E-06	2.89E-02	1.75E-07	1.64E-06	1.13E-01	8.81E-07	6.41E-06	5.97E-02	5.95E-07	
Road #1		1000-1100	3.66E-02	2.06E-07	1.88E-06	3.19E-02	1.75E-07	1.65E-06	1.20E-01	6.69E-07	6.18E-06	5.80E-02	5.71E-07	
Road #1		1100-1200	3.66E-02	2.06E-07	1.88E-06	3.19E-02	1.75E-07	1.65E-06	1.20E-01	6.69E-07	6.18E-06	5.80E-02	5.71E-07	
Road #1	10	1200-1300	4.15E-02	2.44E-07	2.28E-06	3.63E-02	2.11E-07	1.98E-06	1.34E-01	7.80E-07	7.32E-07	1.17E-02	1.17E-07	
Road #1		1300-1400	4.06E-02	2.46E-07	2.31E-06	3.68E-02	2.16E-07	2.02E-06	1.35E-01	8.18E-07	7.68E-06	1.18E-02	1.16E-07	
Road #1		1400-1500	4.06E-02	2.46E-07	2.31E-06	3.68E-02	2.16E-07	2.02E-06	1.35E-01	8.18E-07	7.68E-06	1.18E-02	1.16E-07	
Road #1	11	1500-1600	3.89E-02	2.46E-07	2.31E-06	3.42E-02	2.17E-07	2.03E-06	1.33E-01	8.42E-07	7.90E-06	1.16E-02	1.16E-07	
Road #1		1600-1700	3.87E-02	2.46E-07	2.33E-06	3.40E-02	2.18E-07	2.05E-06	1.28E-01	8.29E-07	7.70E-06	1.11E-02	1.14E-07	
Road #1		1700-1800	3.87E-02	2.46E-07	2.33E-06	3.40E-02	2.18E-07	2.05E-06	1.28E-01	8.29E-07	7.70E-06	1.11E-02	1.14E-07	
Road #1	12	1800-1900	3.05E-02	2.05E-06	1.92E-06	2.64E-02	1.77E-07	1.66E-06	1.03E-01	6.94E-07	6.51E-06	8.83E-02	5.92E-07	
Road #1		1900-2000	1.83E-02	7.74E-07	7.26E-07	1.61E-02	6.82E-06	6.46E-07	7.78E-02	3.29E-07	3.09E-06	6.72E-02	2.84E-07	
Road #1	13	2000-2100	1.83E-02	7.74E-07	7.26E-07	1.61E-02	6.82E-06	6.46E-07	7.78E-02	3.29E-07	3.09E-06	6.72E-02	2.84E-07	
Road #1		2100-2200	1.91E-02	6.35E-08	6.13E-07	1.72E-02	8.68E-08	5.50E-07	8.39E-02	2.86E-07	2.68E-06	7.32E-02	2.51E-07	
Road #1	14	2200-2300	1.95E-02	6.98E-08	5.99E-07	1.74E-02	5.70E-08	5.38E-07	8.37E-02	2.76E-07	2.58E-06	7.30E-02	2.40E-07	
Road #1		2300-2400	1.75E-02	6.35E-08	5.39E-07	1.57E-02	5.17E-08	4.85E-07	7.45E-02	2.45E-07	2.27E-06	6.43E-02	2.15E-07	
Road #2	01	0000-0100	4.05E-02	4.89E-08	2.93E-06	3.60E-02	8.33E-08	2.11E-06	1.36E-01	3.14E-07	6.79E-06	1.18E-02	1.72E-07	
Road #2		0100-0200	5.18E-02	8.59E-08	2.18E-06	4.45E-02	7.57E-08	1.92E-06	1.59E-01	2.64E-07	5.91E-06	1.39E-02	2.29E-07	
Road #2		0200-0300	5.84E-02	8.68E-08	2.19E-07	5.06E-02	7.74E-08	1.96E-06	1.73E-01	2.41E-07	6.12E-06	1.59E-02	2.18E-07	
Road #2	02	0300-0400	6.83E-02	8.99E-08	2.25E-07	5.89E-02	8.25E-08	2.07E-06	1.90E-01	2.58E-07	6.43E-06	1.64E-02	2.18E-07	
Road #2		0400-0500	6.44E-02	8.27E-08	2.10E-06	5.81E-02	7.47E-08	1.89E-06	1.83E-01	2.38E-07	5.58E-06	1.64E-02	2.11E-07	
Road #2		0500-0600	5.44E-02	9.36E-08	2.37E-06	4.92E-02	8.23E-08	2.10E-06	1.60E-01	2.91E-07	6.13E-06	1.46E-02	2.54E-07	
Road #2	03	0600-0700	3.31E-02	1.27E-06	1.44E-06	1.44E-02	1.44E-06	1.44E-06	1.44E-02	1.44E-06	1.44E-06	1.44E-02	1.44E-06	
Road #2		0700-0800	6.96E-02	5.19E-07	1.29E-06	5.90E-02	4.49E-07	1.14E-05	2.02E-01	1.54E-06	3.91E-06	1.73E-02	1.34E-06	
Road #2		0800-0900	6.17E-02	5.24E-07	1.33E-06	4.43E-02	4.61E-07	1.17E-05	1.87E-01	1.59E-06	4.02E-06	1.83E-02	1.38E-06	
Road #2	04	0900-1000	5.92E-02	5.39E-07	1.27E-06	5.17E-02	4.57E-07	1.11E-05	1.87E-01	1.59E-06	4.02E-06	1.83E-02	1.38E-06	
Road #2		1000-1100	7.54E-02	1.25E-06	1.63E-06	6.43E-02	4.47E-07	1.12E-05	2.22E-01	1.49E-06	3.78E-06	1.99E-02	1.29E-06	
Road #2		1100-1200	7.63E-02	1.49E-06	1.25E-06	8.73E-02	4.59E-07	1.10E-05	2.25E-01	1.45E-06	3.89E-07	1.97E-02	1.27E-06	
Road #2	05	1200-1300	5.01E-02	6.68E-07	1.59E-06	5.88E-02	4.56E-07	1.09E-05	2.02E-01	1.45E-06	3.89E-07	1.97E-02	1.27E-06	
Road #2		1300-1400	5.01E-02	5.51E-07	1.40E-06	5.85E-02	4.83E-07	1.22E-05	2.01E-01	1.59E-06	4.02E-06	2.54E-02	1.96E-06	
Road #2		1400-1500	1.00E-02	5.58E-07	1.42E-06	8.65E-02	4.91E-07	1.24E-05	2.87E-01	1.60E-06	4.93E-07	2.52E-02	1.49E-06	
Road #2	06	1500-1600	9.49E-02	5.67E-07	1.59E-06	8.42E-02	4.80E-07	1.22E-05	2.78E-01	1.60E-06	4.93E-07	2.52E-02	1.49E-06	
Road #2		1600-1700	9.62E-02	5.47E-07	1.59E-06	8.45E-02	4.80E-07	1.22E-05	2.67E-01	1.57E-06	3.98E-06	2.41E-02	1.37E-06	
Road #2		1700-1800	8.87E-02	5.18E-07	1.31E-06	7.17E-02	4.50E-07	1.14E-05	2.62E-01	1.59E-06	3.88E-06	2.27E-02	1.28E-06	
Road #2	07	1800-1900	4.57E-02	1.45E-06	1.31E-06	4.88E-02	4.81E-07	1.13E-05	1.81E-01	1.45E-06	3.68E-06	1.94E-02	1.25E-06	
Road #2		1900-2000	4.15E-02	1.34E-07	1.34E-06	3.66E-02	1.18E-07	3.00E-06	1.44E-01	1.46E-07	1.18E-06	1.02E-02	1.06E-07	
Road #2		2000-2100	4.41E-02	1.17E-07	2.97E-06	3.95E-02	1.07E-07	2.85E-06	1.53E-01	4.08E-07	1.03E-06	1.39E-02	3.59E-07	
Road #2	08	2100-2200	4.32E-02	1.17E-07	2.97E-06	3.95E-02	1.07E-07	2.85E-06	1.53E-01	4.08E-07	1.03E-06	1.39E-02	3.59E-07	
Road #2		2200-2300	4.42E-02	1.13E-07	2.86E-06	3.95E-02	1.01E-07	2.65E-06	1.50E-01	3.90E-07	9.98E-06	1.39E-02	3.71E-07	
Road #2		2300-2400	5.21E-02	1.10E-07	2.79E-06	4.55E-02	8.48E-08	2.40E-06	1.58E-01	3.89E-07	8.89E-06	1.45E-02	3.01E-07	
Road #3	01	0000-0100	4.34E-02	3.69E-07	3.44E-06	3.44E-02	3.38E-07	3.38E-07	3.38E-02	3.38E-07	3.38E-07	3.38E-02	3.38E-07	
Road #3		0100-0200	4.74E-02	3.67E-06	3.76E-06	3.48E-02	3.24E-06	3.31E-06	3.38E-01	1.06E-06	1.10E-07	1.22E-01	9.44E-09	
Road #3		0200-0300	5.23E-02	3.58E-06	3.68E-06	4.73E-02	3.23E-06	3.33E-06	1.49E-01	1.02E-06	1.04E-07	1.34E-01	9.17E-09	
Road #3	02	0300-0400	4.54E-02	3.58E-06	3.68E-06	4.73E-02	3.23E-06	3.33E-06	1.49E-01	1.02E-06	1.04E-07	1.34E-01	9.17E-09	
Road #3		0400-0500	5.45E-02	3.57E-09	3.65E-08	4.92E-02	3.23E-09	3.30E-08	1.54E-01	1.01E-08	1.03E-07	1.38E-01	9.05E-09	
Road #3		0500-0600	4.73E-02	3.52E-09	3.50E-08	4.19E-02	3.46E-09	3.34E-08	1.41E-01	1.17E-08	1.13E-07	1.24E-01	1.02E-08	
Road #3	03	0600-0700	4.34E-02	3.58E-06	3.68E-06	4.73E-02	3.23E-06	3.33E-06	1.49E-01	1.02E-06	1.04E-07	1.34E-01	9.17E-09	
Road #3		0700-0800	4.63E-02	3.16E-06	1.62E-07	4.09E-02	1.39E-06	1.43E-07	1.40E-01	4.76E-06	4.86E-07	1.23E-01	4.91E-08	
Road #3		0800-0900	4.36E-02	3.16E-06	1.66E-07	4.44E-02	1.42E-06	1.46E-07	1.31E-01	4.93E-06	5.04E-07	1.16E-01	4.31E-08	
Road #3	04	0900-1000	5.04E-02	3.54E-06	3.54E-06	4.22E-02	3.16E-06	3.16E-06	1.50E-01	1.01E-06	1.01E-07	1.34E-01	9.17E-09	
Road #3		1000-1100	5.04E-02	1.60E-06	1.60E-06	1.88E-02	1.44E-06	1.48E-07	1.50E-01	4.91E-06	5.03E-07	1.31E-01	4.29E-08	
Road #3		1100-1200	5.10E-02	1.60E-06	1.60E-06	1.45E-02	1.43E-06	1.47E-07	1.50E-01	4.83E-06	4.94E-07	1.33E-01	4.38E-08	
Road #3	05	1200-1300	5.10E-02	1.60E-06	1.60E-06	1.45E-02	1.43E-06	1.47E-07	1.50E-01	4.83E-06	4.94E-07	1.33E-01	4.38E-08	
Road #3		1300-1400	2.44E-02	5.67E-06	5.81E-07	2.42E-02	5.68E-07	5.08E-07	1.01E-01	2.56E-07	2.41E-07	8.76E-02	2.03E-07	
Road #3		1400-1500	2.44E-02	5.96E-06	6.09E-07	2.14E-02	5.22E-06	5.39E-07	1.00E-01	2.48E-07	2.51E-07	8.67E-02	1.12E-07	
Road #3	06	1500-1600	2.32E-02	6.08E-06	6.08E-07	2.04E-02	5.30E-06	5.42E-07	9.48E-02	2.48E-07	2.51E-07	8.53E-02	1.12E-07	
Road #3		1600-1700	1.82E-02	5.58E-06	5.53E-07	1.58E-02	4.50E-06	4.61E-07	8.88E-02	2.45E-07	2.48E-07	7.19E-02	2.05E-07	
Road #3		1700-1800	1.82E-02	5.58E-06	5.53E-07	1.58E-02	4.50E-06	4.61E-07	8.88E-02	2.45E-07	2.48E-07	7.19E-02	2.05E-07	
Road #3	07	1800-1900	2.01E-02	2.77E-06	2.77E-06	2.37E-02	1.86E-06	2.00E-07	9.04E-02	3.31E-07	3.14E-06	4.94E-02	1.11E-07	
Road #3		1900-2000	2.10E-02	1.89E-06	1.89E-06	1.87E-02	1.91E-06	1.64E-07	6.41E-02	1.13E-07	1.13E-06	5.53E-02	8.74E-08	
Road #3		2000-2100	2.10E-02	1.89E-06	1.89E-06	1.87E-02	1.91E-06	1.64E-07	6.41E-02	1.13E-07	1.13E-06	5.53E-02	8.74E-08	</

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
 Open Road 24 hour Emission Factors for
 AERMOD model (April) Year 2033

Road Name	Road ID	No Emission										No Emission										
		Monthly/Yearly										Monthly/Yearly										
		g/kwh	g/kwh	tonne/year	g/kwh	g/kwh	g/kwh	tonne/year	g/kwh	g/kwh	tonne/year	g/kwh	g/kwh	tonne/year	g/kwh	g/kwh	tonne/year					
Road 44	44	0000-0000	1.242	3.562	2.161	0.086	1.072	0.97	1.906	9.242	2.626	1.625	7.942	2.52	6.66	1.935	1.625	7.942	2.52	6.66	1.935	
Road 44	44	0000-1000	1.462	2.622	2.068	1.122	2.976	0.87	1.738	10.031	2.338	1.446	8.282	2.338	6.982	2.068	1.446	8.282	2.338	6.982	2.068	
Road 44	44	1000-1100	1.522	1.422	1.772	1.172	1.772	1.172	1.772	1.172	1.772	1.172	1.772	1.172	1.772	1.172	1.772	1.172	1.772	1.172	1.772	
Road 44	44	1100-1200	1.422	2.812	1.742	1.306	2.472	1.522	1.048	1.982	1.048	1.982	1.048	1.982	1.048	1.982	1.048	1.982	1.048	1.982	1.048	
Road 44	44	1200-1300	1.782	2.422	2.738	1.562	3.862	2.388	1.182	2.898	1.782	2.422	2.738	1.562	3.862	2.388	1.182	2.898	1.782	2.422	2.738	
Road 44	44	1300-1400	1.822	1.422	1.772	1.172	1.772	1.172	1.772	1.172	1.772	1.172	1.772	1.172	1.772	1.172	1.772	1.172	1.772	1.172	1.772	
Road 44	44	1400-1500	1.822	0.922	1.042	0.306	1.602	4.232	2.872	1.172	3.142	1.942	1.542	1.012	2.722	1.172	3.142	1.942	1.542	1.012	2.722	
Road 44	44	1500-1600	1.742	2.422	2.962	1.562	3.862	4.232	2.722	1.602	3.212	1.942	1.542	1.012	2.722	1.602	3.212	1.942	1.542	1.012	2.722	
Road 44	44	1600-1700	1.742	2.422	2.962	1.562	3.862	4.232	2.722	1.602	3.212	1.942	1.542	1.012	2.722	1.602	3.212	1.942	1.542	1.012	2.722	
Road 44	44	1700-1800	2.122	0.922	1.042	0.306	1.602	6.332	3.912	1.442	4.802	2.972	1.272	4.092	2.122	0.922	1.042	0.306	1.602	6.332	3.912	
Road 44	44	1800-1900	2.262	0.262	0.262	0.006	1.842	1.232	1.422	4.402	5.512	0.462	1.272	4.472	2.262	0.262	0.262	0.006	1.842	1.232	4.472	
Road 44	44	1900-2000	2.262	0.262	0.262	0.006	1.842	1.232	1.422	4.402	5.512	0.462	1.272	4.472	2.262	0.262	0.262	0.006	1.842	1.232	4.472	
Road 44	44	2000-2100	0.922	0.022	0.022	0.002	1.272	0.852	1.822	1.122	0.942	2.232	1.382	0.692	1.982	0.922	0.022	0.022	0.002	1.272	0.852	
Road 44	44	2100-2200	1.812	0.612	1.762	0.102	0.812	1.672	0.692	0.812	2.042	1.272	1.782	0.802	0.612	1.762	0.102	0.812	1.672	0.692	0.812	
Road 44	44	2200-2300	1.812	0.612	1.762	0.102	0.812	1.672	0.692	0.812	2.042	1.272	1.782	0.802	0.612	1.762	0.102	0.812	1.672	0.692	0.812	
Road 44	44	2300-2400	0.832	0.122	0.122	0.002	0.742	1.232	7.572	0.772	1.902	0.922	0		0.832	0.122	0.122	0.002	0.742	1.232	7.572	
Road 45	45	0000-0000	1.782	0.962	1.268	0.678	1.536	0.434	2.046	6.882	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438
Road 45	45	0000-1000	1.112	0.962	1.268	0.678	1.536	0.434	2.046	6.882	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438
Road 45	45	0000-0700	1.422	1.378	1.638	0.902	1.188	1.188	1.458	6.782	1.118	1.378	1.638	0.902	1.188	1.458	6.782	1.118	1.378	1.638	0.902	1.188
Road 45	45	0700-0800	2.982	0.982	1.268	0.678	1.536	0.434	2.046	6.882	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438
Road 45	45	0800-0900	1.262	0.922	1.268	0.678	1.536	0.434	2.046	6.882	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438
Road 45	45	0900-1000	1.262	0.922	1.268	0.678	1.536	0.434	2.046	6.882	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438
Road 45	45	0000-1600	1.362	0.962	1.268	0.678	1.536	0.434	2.046	6.882	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438
Road 45	45	1000-1100	1.562	0.662	1.462	0.362	1.462	0.362	1.462	0.362	1.462	0.362	1.462	0.362	1.462	0.362	1.462	0.362	1.462	0.362	1.462	0.362
Road 45	45	1100-1200	1.562	0.662	1.462	0.362	1.462	0.362	1.462	0.362	1.462	0.362	1.462	0.362	1.462	0.362	1.462	0.362	1.462	0.362	1.462	0.362
Road 45	45	1200-1300	1.732	0.762	1.432	0.362	1.432	0.362	1.432	0.362	1.432	0.362	1.432	0.362	1.432	0.362	1.432	0.362	1.432	0.362	1.432	0.362
Road 45	45	1300-1400	1.732	0.762	1.432	0.362	1.432	0.362	1.432	0.362	1.432	0.362	1.432	0.362	1.432	0.362	1.432	0.362	1.432	0.362	1.432	0.362
Road 45	45	1400-1500	1.682	0.472	1.312	0.182	1.312	0.182	1.312	0.182	1.312	0.182	1.312	0.182	1.312	0.182	1.312	0.182	1.312	0.182	1.312	0.182
Road 45	45	1500-1600	1.682	0.472	1.312	0.182	1.312	0.182	1.312	0.182	1.312	0.182	1.312	0.182	1.312	0.182	1.312	0.182	1.312	0.182	1.312	0.182
Road 45	45	1600-1700	1.762	0.452	1.312	0.182	1.312	0.182	1.312	0.182	1.312	0.182	1.312	0.182	1.312	0.182	1.312	0.182	1.312	0.182	1.312	0.182
Road 45	45	1700-1800	1.432	0.982	1.268	0.678	1.536	0.434	2.046	6.882	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438
Road 45	45	1800-1900	1.422	0.962	1.268	0.678	1.536	0.434	2.046	6.882	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438
Road 45	45	1900-2000	1.422	0.962	1.268	0.678	1.536	0.434	2.046	6.882	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438
Road 45	45	2000-2100	1.422	0.962	1.268	0.678	1.536	0.434	2.046	6.882	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438
Road 45	45	2100-2200	1.422	0.962	1.268	0.678	1.536	0.434	2.046	6.882	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438
Road 45	45	2200-2300	1.422	0.962	1.268	0.678	1.536	0.434	2.046	6.882	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438
Road 45	45	2300-2400	1.422	0.962	1.268	0.678	1.536	0.434	2.046	6.882	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438
Road 46	46	0000-0000	1.362	0.962	1.268	0.678	1.536	0.434	2.046	6.882	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438
Road 46	46	0000-1000	1.362	0.962	1.268	0.678	1.536	0.434	2.046	6.882	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438
Road 46	46	1000-1100	1.732	0.762	1.432	0.362	1.432	0.362	1.432	0.362	1.432	0.362	1.432	0.362	1.432	0.362	1.432	0.362	1.432	0.362	1.432	0.362
Road 46	46	1100-1200	1.732	0.762	1.432	0.362	1.432	0.362	1.432	0.362	1.432	0.362	1.432	0.362	1.432	0.362	1.432	0.362	1.432	0.362	1.432	0.362
Road 46	46	1200-1300	1.732	0.762	1.432	0.362	1.432	0.362	1.432	0.362	1.432	0.362	1.432	0.362	1.432	0.362	1.432	0.362	1.432	0.362	1.432	0.362
Road 46	46	1300-1400	1.732	0.762	1.432	0.362	1.432	0.362	1.432	0.362	1.432	0.362	1.432	0.362	1.432	0.362	1.432	0.362	1.432	0.362	1.432	0.362
Road 46	46	1400-1500	1.682	0.472	1.312	0.182	1.312	0.182	1.312	0.182	1.312	0.182	1.312	0.182	1.312	0.182	1.312	0.182	1.312	0.182	1.312	0.182
Road 46	46	1500-1600	1.682	0.472	1.312	0.182	1.312	0.182	1.312	0.182	1.312	0.182	1.312	0.182	1.312	0.182	1.312	0.182	1.312	0.182	1.312	0.182
Road 46	46	1600-1700	1.762	0.452	1.312	0.182	1.312	0.182	1.312	0.182	1.312	0.182	1.312	0.182	1.312	0.182	1.312	0.182	1.312	0.182	1.312	0.182
Road 46	46	1700-1800	1.432	0.982	1.268	0.678	1.536	0.434	2.046	6.882	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438
Road 46	46	1800-1900	1.422	0.962	1.268	0.678	1.536	0.434	2.046	6.882	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438
Road 46	46	1900-2000	1.422	0.962	1.268	0.678	1.536	0.434	2.046	6.882	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438
Road 46	46	2000-2100	1.422	0.962	1.268	0.678	1.536	0.434	2.046	6.882	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438
Road 46	46	2100-2200	1.422	0.962	1.268	0.678	1.536	0.434	2.046	6.882	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438
Road 46	46	2200-2300	1.422	0.962	1.268	0.678	1.536	0.434	2.046	6.882	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438	1.638	0.962	4.438
Road 46	46	2300-2400	1.422	0.962	1.268	0.678	1.536	0.434	2.046	6.882	1.638	0.962	4.438	1.638	0.962	4.438	1.638					

Tsing Yi North Underground Quarry
 Open Road 24 hour Emission Factors for
 AERMOD model (April)

Road Name	Road ID	Hour	NO Emission				NO Emission			
			Monthly/Yearly		Monthly/Bushacre		Monthly/Yearly		Monthly/Bushacre	
			g/mile/hour	tonne/hour	g/mile/hour	tonne/hour	g/mile/hour	tonne/hour	g/mile/hour	tonne/hour
Road 47	47	1600-1700	2,916.02	5,846.47	1,766.05	3,532.10	4,936.147	1,546.105	2,456.06	7,656.108
Road 47	47	1700-1800	2,108.42	4,736.47	1,486.05	3,042.10	4,236.105	1,246.06	2,456.06	7,746.108
Road 47	47	1800-1900	1,816.02	3,966.47	1,286.05	2,672.10	3,936.105	1,146.06	2,456.06	7,746.108
Road 47	47	1900-2000	1,256.02	2,536.47	7,506.05	1,096.10	2,226.105	6,526.05	1,546.06	4,806.105
Road 47	47	2000-2100	1,126.02	1,776.47	5,916.05	9,946.105	1,486.06	8,976.102	1,256.06	3,331.012
Road 47	47	2100-2200	1,126.02	2,446.47	7,506.05	1,096.10	2,226.105	6,526.05	1,546.06	4,806.105
Road 47	47	2200-2300	8,016.03	1,366.07	4,256.06	7,806.11	1,206.07	6,746.11	1,406.08	3,566.105
Road 47	47	2300-0000	9,336.03	1,096.07	3,306.05	8,056.11	9,336.108	2,876.06	4,486.11	2,666.105
Road 48	48	0000-0100	8,916.03	1,366.07	4,256.06	7,806.11	1,206.07	6,746.11	1,406.08	3,566.105
Road 48	48	0100-0200	8,776.03	4,876.08	7,356.07	7,605.11	4,426.11	0.11102	5,046.07	7,536.11
Road 48	48	0200-0300	9,366.03	3,806.07	5,736.07	8,386.11	3,406.11	0.31607	2,216.02	5,646.108
Road 48	48	0300-0400	9,336.03	3,806.07	5,736.07	8,386.11	3,406.11	0.31607	2,216.02	5,646.108
Road 48	48	0400-0500	1,056.02	3,706.08	5,586.07	9,476.11	3,326.11	0.01607	4,456.07	3,326.07
Road 48	48	0500-0600	1,146.02	6,826.08	1,006.08	6,068.11	9,176.07	7,796.102	5,966.07	8,886.108
Road 48	48	0600-0700	1,126.02	6,826.08	1,006.08	6,068.11	9,176.07	7,796.102	5,966.07	8,886.108
Road 48	48	0700-0800	1,216.02	3,366.07	5,126.06	1,176.06	2,446.102	1,446.102	2,876.06	4,006.105
Road 48	48	0800-0900	1,216.02	3,686.07	5,556.06	1,066.10	3,226.07	1,466.06	2,706.06	4,186.105
Road 48	48	0900-1000	1,216.02	3,686.07	5,556.06	1,066.10	3,226.07	1,466.06	2,706.06	4,186.105
Road 48	48	1000-1100	1,536.02	3,796.07	4,956.06	1,346.10	2,876.107	1,446.102	2,236.06	3,966.105
Road 48	48	1100-1200	1,446.02	2,886.07	4,596.06	1,296.10	2,626.107	3,956.104	1,046.11	3,216.06
Road 48	48	1200-1300	3,046.02	2,716.07	3,046.06	3,046.10	2,716.07	3,046.10	2,716.07	3,046.10
Road 48	48	1300-1400	3,446.02	4,786.07	3,216.06	3,016.11	4,186.107	9,316.104	4,046.06	6,096.105
Road 48	48	1400-1500	3,446.02	4,996.07	7,526.06	3,066.10	3,626.106	9,636.106	4,236.06	6,196.105
Road 48	48	1500-1600	3,446.02	4,996.07	7,526.06	3,066.10	3,626.106	9,636.106	4,236.06	6,196.105
Road 48	48	1600-1700	3,086.02	5,076.07	7,656.06	2,976.10	4,456.107	9,726.105	3,116.10	4,656.105
Road 48	48	1700-1800	3,086.02	4,706.07	7,106.06	2,616.10	4,456.107	9,636.106	3,116.10	4,656.105
Road 48	48	1800-1900	2,716.02	4,046.07	6,106.06	2,346.10	3,626.106	9,636.106	3,116.10	4,656.105
Road 48	48	1900-2000	2,176.02	2,716.07	3,046.06	2,176.10	2,716.07	3,046.10	2,176.07	3,046.10
Road 48	48	2000-2100	2,736.02	2,536.47	3,826.06	2,446.10	2,266.102	4,316.10	3,636.06	5,476.105
Road 48	48	2100-2200	2,966.02	2,311.07	3,486.06	2,306.10	2,076.102	3,136.107	3,226.06	4,866.105
Road 48	48	2200-2300	2,966.02	2,411.07	3,486.06	2,306.10	2,076.102	3,136.107	3,226.06	4,866.105
Road 48	48	2300-0000	2,776.02	1,846.07	2,786.06	2,426.10	1,616.102	4,316.10	3,226.06	3,826.105
Road 49	49	0000-0100	1,186.02	6,406.08	1,626.06	1,026.10	5,626.106	1,446.10	9,601.105	2,016.108
Road 49	49	0100-0200	1,186.02	6,406.08	1,626.06	1,026.10	5,626.106	1,446.10	9,601.105	2,016.108
Road 49	49	0200-0300	1,226.02	3,111.08	7,086.07	1,096.10	2,796.106	7,046.104	4,016.107	9,026.106
Road 49	49	0300-0400	1,256.02	2,526.08	6,366.07	1,136.10	2,256.108	5,716.107	3,886.107	7,011.08
Road 49	49	0400-0500	1,256.02	2,546.07	6,366.07	1,136.10	2,256.108	5,716.107	3,886.107	7,011.08
Road 49	49	0500-0600	1,546.02	5,826.08	1,476.06	1,396.11	5,126.108	1,296.106	5,136.107	1,466.10
Road 49	49	0600-0700	1,896.02	1,496.07	3,736.06	1,646.10	1,326.107	3,446.108	1,376.106	3,466.108
Road 49	49	0700-0800	2,216.02	2,716.07	4,256.06	2,216.10	2,716.07	4,256.06	2,216.10	2,716.07
Road 49	49	0800-0900	2,436.02	4,526.07	1,416.11	2,136.10	3,926.106	1,026.10	3,576.06	9,026.105
Road 49	49	0900-1000	2,436.02	4,526.07	1,416.11	2,136.10	3,926.106	1,026.10	3,576.06	9,026.105
Road 49	49	1000-1100	2,226.02	3,586.07	4,946.06	2,106.10	3,106.107	7,816.108	1,986.10	2,896.105
Road 49	49	1100-1200	2,226.02	3,586.07	4,946.06	2,106.10	3,106.107	7,816.108	1,986.10	2,896.105
Road 49	49	1200-1300	2,336.02	2,776.07	6,906.06	2,056.10	2,416.107	1,146.106	1,956.10	5,856.105
Road 49	49	1300-1400	3,111.02	3,036.07	7,696.06	2,726.10	2,656.107	8,696.108	2,226.06	5,611.06
Road 49	49	1400-1500	3,111.02	3,036.07	7,696.06	2,726.10	2,656.107	8,696.108	2,226.06	5,611.06
Road 49	49	1500-1600	3,346.02	3,486.07	7,786.06	2,886.10	3,036.107	7,696.108	2,426.06	6,226.108
Road 49	49	1600-1700	3,146.02	3,396.07	8,556.06	2,786.10	2,976.108	7,596.108	2,326.06	6,311.06
Road 49	49	1700-1800	3,146.02	3,396.07	8,556.06	2,786.10	2,976.108	7,596.108	2,326.06	6,311.06
Road 49	49	1800-1900	3,256.02	3,526.07	8,686.06	2,236.10	3,046.107	7,686.108	2,206.10	2,996.105
Road 49	49	1900-2000	1,226.02	3,276.07	8,206.10	1,836.11	2,626.107	7,116.108	1,926.10	7,636.105
Road 49	49	2000-2100	1,226.02	3,276.07	8,206.10	1,836.11	2,626.107	7,116.108	1,926.10	7,636.105
Road 49	49	2100-2200	1,446.02	1,366.07	4,156.11	1,516.11	1,476.107	3,706.108	1,986.10	4,856.105
Road 49	49	2200-2300	1,446.02	1,366.07	4,156.11	1,516.11	1,476.107	3,706.108	1,986.10	4,856.105
Road 50	50	0000-0100	4,016.02	2,046.08	2,911.07	3,846.11	1,816.108	5,566.107	1,656.11	7,786.111
Road 50	50	0100-0200	4,016.02	2,046.08	2,911.07	3,846.11	1,816.108	5,566.107	1,656.11	7,786.111
Road 50	50	0200-0300	5,346.02	1,116.08	1,986.07	4,536.11	1,196.108	7,106.107	1,826.08	6,676.102
Road 50	50	0300-0400	5,346.02	1,116.08	1,986.07	4,536.11	1,196.108	7,106.107	1,826.08	6,676.102
Road 50	50	0400-0500	5,166.02	1,186.08	1,696.07	4,806.11	1,076.108	5,536.107	1,846.11	6,086.108
Road 50	50	0500-0600	5,166.02	1,186.08	1,696.07	4,806.11	1,076.108	5,536.107	1,846.11	6,086.108
Road 50	50	0600-0700	5,166.02	2,176.08	1,506.10	4,586.11	1,936.107	7,526.107	1,906.10	7,996.108
Road 50	50	0700-0800	4,876.02	4,346.08	6,206.07	4,386.11	3,896.105	5,656.107	1,866.11	2,676.106
Road 50	50	0800-0900	4,876.02	4,346.08	6,206.07	4,386.11	3,896.105	5,656.107	1,866.11	2,676.106
Road 50	50	0900-1000	5,006.02	1,236.07	1,756.06	4,076.11	1,546.103	6,106.107	4,836.07	6,606.106
Road 50	50	1000-1100	6,036.02	1,406.07	2,006.05	5,246.11	1,226.107	1,746.08	2,286.10	3,566.105
Road 50	50	1100-1200	6,036.02	1,406.07	2,006.05	5,246.11	1,226.107	1,746.08	2,286.10	3,566.105
Road 50	50	1200-1300	6,296.02	1,326.07	1,886.06	5,506.11	1,166.106	1,666.106	2,386.10	3,811.07
Road 50	50	1300-1400	6,296.02	1,326.07	1,886.06	5,506.11	1,166.106	1,666.106	2,386.10	3,811.07
Road 50	50	1400-1500	7,686.02	7,406.08	1,086.06	6,736.11	6,486.108	7,526.107	5,546.105	4,506.08
Road 50	50	1500-1600	7,686.02	7,406.08	1,086.06	6,736.11	6,486.108	7,526.107	5,546.105	4,506.08
Road 50	50	1600-1700	6,946.02	6,426.08	9,166.07	5,826.105	5,586.108	7,976.107	2,456.11	2,356.107
Road 50	50	1700-1800	6,326.02	4,636.08	6,606.07	5,476.103	4,036.108	5,726.107	2,206.11	2,366.105
Road 50	50	1800-1900	6,326.02	4,636.08	6,606.07	5,476.103	4,036.108	5,726.107	2,206.11	2,366.105
Road 50	50	1900-2000	6,326.02	1,886.06	2,686.06	4,806.11	1,686.106	2,406.107	1,086.11	2,796.108
Road 50	50	2000-2100	5,356.02	1,926.08	2,746.11	4,816.107	1,726.106	2,406.107	7,396.108	1,856.103
Road 50	50	2100-2200	5,356.02	1,926.08	2,746.11	4,816.107	1,726.106	2,406.107	7,396.108	1,856.103
Road 50	50	2200-2300	5,786.02	1,686.06	2,666.05	5,126.106	1,666.107	2,376.107	1,686.108	9,426.103
Road 50	50	2300-0000	5,786.02	1,686.06	2,666.05	5,126.106	1,666.107	2,376.107	1,686.108	9,426.103

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tiesing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for AERMOD model (April)	Year 2033

Row	ID	Road	Hour	NO ₂ Emission						NO ₂ Emission					
				Month/Year			Month/Year			Month/Year			Month/Year		
				g/km/h	g/m ³	tonne/hour	g/km/h	g/m ³	tonne/hour	g/km/h	g/m ³	tonne/hour	g/km/h	g/m ³	tonne/hour
Row 51	51	0000-0020	7.80E-3	6.340E-11	8.28E-07	1.02E-08	6.540E-11	1.03E-06	8.89E-02	7.72E-07	1.35E-05	7.60E-02	8.18E-07	1.71E-06	2.09E-08
Row 51	51	0000-0020	9.36E-3	6.420E-11	8.28E-07	1.32E-08	8.89E-11	2.89E-07	4.73E-07	8.91E-08	7.70E-02	4.07E-07	7.95E-08	1.56E-06	1.82E-08
Row 51	51	0000-0020	8.84E-3	6.340E-11	8.28E-07	1.02E-08	6.540E-11	1.03E-06	8.89E-02	7.72E-07	1.35E-05	7.60E-02	8.18E-07	1.71E-06	2.09E-08
Row 51	51	0000-0040	9.46E-3	2.875E-05	3.52E-07	5.81E-03	2.58E-06	4.81E-07	9.23E-02	6.16E-07	5.22E-06	8.13E-02	2.47E-07	4.60E-06	5.11E-08
Row 51	51	0000-0040	1.02E-3	3.35E-06	6.26E-07	5.90E-06	5.01E-08	3.68E-07	9.49E-02	3.12E-07	5.82E-06	2.62E-02	2.74E-07	5.11E-06	5.69E-08
Row 51	51	0000-0040	6.82E-3	6.340E-11	8.28E-07	1.02E-08	6.540E-11	1.03E-06	8.89E-02	7.72E-07	1.35E-05	7.60E-02	8.18E-07	1.71E-06	2.09E-08
Row 51	51	0000-0080	1.14E-3	1.40E-07	2.61E-06	1.01E-02	1.25E-07	3.78E-06	1.20E-06	2.24E-05	1.95E-05	1.05E-05	1.95E-05	1.95E-05	1.95E-05
Row 51	51	0000-0080	1.22E-3	3.03E-07	5.69E-06	1.07E-02	2.66E-07	4.95E-06	1.01E-03	2.51E-05	4.67E-05	8.63E-02	2.14E-06	3.99E-06	4.45E-08
Row 51	51	0000-0080	3.19E-3	6.340E-11	8.28E-07	1.02E-08	6.540E-11	1.03E-06	8.89E-02	7.72E-07	1.35E-05	7.60E-02	8.18E-07	1.71E-06	2.09E-08
Row 51	51	0000-1000	1.30E-3	3.03E-07	5.69E-06	1.11E-02	6.20E-07	4.88E-06	9.81E-02	2.29E-06	4.26E-05	8.37E-02	1.94E-06	3.62E-06	4.00E-08
Row 51	51	0000-1040	1.44E-3	2.89E-07	5.39E-06	1.26E-02	5.27E-07	4.50E-06	1.03E-03	2.05E-05	3.63E-05	8.12E-02	1.76E-06	3.27E-06	3.61E-08
Row 51	51	0000-1040	2.53E-3	2.63E-07	4.92E-06	1.35E-02	2.28E-07	4.50E-06	1.03E-03	2.05E-05	3.63E-05	8.12E-02	1.76E-06	3.27E-06	3.61E-08
Row 51	51	1200-1300	1.54E-3	4.43E-07	8.26E-06	1.09E-02	8.88E-07	2.23E-07	3.07E-04	3.86E-06	7.19E-05	2.68E-01	3.37E-06	6.27E-06	6.93E-08
Row 51	51	1200-1400	1.44E-3	4.59E-07	8.56E-06	1.02E-02	4.10E-07	4.48E-06	2.93E-06	3.86E-06	7.29E-05	2.68E-01	3.40E-06	6.30E-06	6.93E-08
Row 51	51	1200-1400	2.53E-3	2.63E-07	4.92E-06	1.35E-02	2.28E-07	4.50E-06	1.03E-03	2.05E-05	3.63E-05	8.12E-02	1.76E-06	3.27E-06	3.61E-08
Row 51	51	1500-1600	3.27E-3	4.60E-07	8.58E-06	2.87E-05	4.05E-07	7.55E-06	2.91E-04	4.19E-05	7.65E-05	2.75E-01	3.60E-06	6.71E-06	7.35E-08
Row 51	51	1600-1700	3.44E-3	4.87E-07	8.96E-06	2.99E-02	4.28E-07	9.76E-06	3.13E-04	4.49E-05	8.39E-05	2.74E-01	3.93E-06	7.52E-06	8.22E-08
Row 51	51	1600-1700	6.26E-3	2.44E-07	4.57E-06	1.30E-02	1.16E-07	3.53E-06	1.30E-03	2.19E-05	4.00E-05	2.68E-01	3.40E-06	6.71E-06	7.35E-08
Row 51	51	1800-1900	2.73E-3	3.86E-07	7.25E-06	2.36E-02	3.36E-07	6.26E-06	3.51E-04	4.29E-05	9.30E-05	3.02E-04	3.90E-06	8.02E-06	8.93E-08
Row 51	51	1900-2000	2.73E-3	3.09E-07	5.69E-06	2.14E-02	2.69E-07	5.01E-06	4.92E-05	7.64E-05	3.39E-05	3.75E-06	6.69E-06	7.35E-08	8.22E-08
Row 51	51	1900-2000	2.73E-3	2.44E-07	4.57E-06	1.30E-02	1.16E-07	3.53E-06	1.30E-03	2.19E-05	4.00E-05	2.68E-01	3.40E-06	6.71E-06	7.35E-08
Row 51	51	2100-2200	2.58E-3	2.22E-07	4.34E-06	1.23E-02	2.00E-07	3.72E-06	3.31E-04	5.17E-05	5.17E-05	3.42E-06	7.90E-06	8.18E-08	9.22E-08
Row 51	51	2200-2300	2.68E-3	2.24E-07	4.38E-06	2.41E-02	2.01E-07	3.74E-06	8.39E-05	3.19E-05	9.42E-05	3.42E-06	2.89E-06	5.69E-06	6.30E-08
Row 51	51	2200-2300	2.68E-3	2.24E-07	4.38E-06	2.41E-02	2.01E-07	3.74E-06	8.39E-05	3.19E-05	9.42E-05	3.42E-06	2.89E-06	5.69E-06	6.30E-08
Row 51	51	0000-0100	6.18E-3	3.11E-08	5.59E-07	5.48E-02	2.76E-08	1.42E-07	3.34E-07	1.17E-07	6.01E-07	2.07E-04	2.07E-04	5.33E-02	5.33E-02
Row 52	52	0000-0020	7.80E-3	6.340E-11	8.28E-07	1.02E-08	6.540E-11	1.03E-06	8.89E-02	7.72E-07	1.35E-05	7.60E-02	8.18E-07	1.71E-06	2.09E-08
Row 52	52	0000-0020	9.36E-3	6.420E-11	8.28E-07	1.32E-08	8.89E-11	2.89E-07	4.73E-07	8.91E-08	7.70E-02	4.07E-07	7.95E-08	1.56E-06	1.82E-08
Row 52	52	0000-0020	8.84E-3	6.340E-11	8.28E-07	1.02E-08	6.540E-11	1.03E-06	8.89E-02	7.72E-07	1.35E-05	7.60E-02	8.18E-07	1.71E-06	2.09E-08
Row 52	52	0000-0040	9.46E-3	2.875E-05	3.52E-07	5.81E-03	2.58E-06	4.81E-07	9.23E-02	6.16E-07	5.22E-06	8.13E-02	2.47E-07	4.60E-06	5.11E-08
Row 52	52	0000-0040	1.02E-3	3.35E-06	6.26E-07	5.90E-06	5.01E-08	3.68E-07	9.49E-02	3.12E-07	5.82E-06	2.62E-02	2.74E-07	5.11E-06	5.69E-08
Row 52	52	0000-0040	6.82E-3	6.340E-11	8.28E-07	1.02E-08	6.540E-11	1.03E-06	8.89E-02	7.72E-07	1.35E-05	7.60E-02	8.18E-07	1.71E-06	2.09E-08
Row 52	52	0000-0080	1.14E-3	1.40E-07	2.61E-06	1.01E-02	1.25E-07	3.78E-06	1.20E-06	2.24E-05	1.95E-05	1.05E-05	1.95E-05	1.95E-05	1.95E-05
Row 52	52	0000-0080	1.22E-3	3.03E-07	5.69E-06	1.07E-02	2.66E-07	4.95E-06	1.01E-03	2.51E-05	4.67E-05	8.63E-02	2.14E-06	3.99E-06	4.45E-08
Row 52	52	0000-0080	3.19E-3	6.340E-11	8.28E-07	1.02E-08	6.540E-11	1.03E-06	8.89E-02	7.72E-07	1.35E-05	7.60E-02	8.18E-07	1.71E-06	2.09E-08
Row 52	52	0000-1000	1.30E-3	3.03E-07	5.69E-06	1.11E-02	6.20E-07	4.88E-06	9.81E-02	2.29E-06	4.26E-05	8.37E-02	1.94E-06	3.62E-06	4.00E-08
Row 52	52	0000-1040	1.44E-3	2.89E-07	5.39E-06	1.26E-02	5.27E-07	4.50E-06	1.03E-03	2.05E-05	3.63E-05	8.12E-02	1.76E-06	3.27E-06	3.61E-08
Row 52	52	0000-1040	2.53E-3	2.63E-07	4.92E-06	1.35E-02	2.28E-07	4.50E-06	1.03E-03	2.05E-05	3.63E-05	8.12E-02	1.76E-06	3.27E-06	3.61E-08
Row 52	52	1200-1300	1.54E-3	4.43E-07	8.26E-06	1.09E-02	8.88E-07	2.23E-07	3.07E-04	3.86E-06	7.19E-05	2.68E-01	3.37E-06	6.27E-06	6.93E-08
Row 52	52	1200-1400	1.44E-3	4.59E-07	8.56E-06	1.02E-02	4.10E-07	4.48E-06	2.93E-06	3.86E-06	7.29E-05	2.68E-01	3.40E-06	6.30E-06	6.93E-08
Row 52	52	1200-1400	2.53E-3	2.63E-07	4.92E-06	1.35E-02	2.28E-07	4.50E-06	1.03E-03	2.05E-05	3.63E-05	8.12E-02	1.76E-06	3.27E-06	3.61E-08
Row 52	52	1500-1600	3.27E-3	4.60E-07	8.58E-06	2.87E-05	4.05E-07	7.55E-06	2.91E-04	4.19E-05	7.65E-05	2.75E-01	3.60E-06	6.71E-06	7.35E-08
Row 52	52	1600-1700	3.44E-3	4.87E-07	8.96E-06	2.99E-02	4.28E-07	9.76E-06	3.13E-04	4.49E-05	8.39E-05	2.74E-01	3.93E-06	7.52E-06	8.22E-08
Row 52	52	1600-1700	6.26E-3	2.44E-07	4.57E-06	1.30E-02	1.16E-07	3.53E-06	1.30E-03	2.19E-05	4.00E-05	2.68E-01	3.40E-06	6.71E-06	7.35E-08
Row 52	52	1800-1900	2.73E-3	3.86E-07	7.25E-06	2.36E-02	3.36E-07	6.26E-06	3.51E-04	4.29E-05	9.30E-05	3.02E-04	3.90E-06	8.02E-06	8.93E-08
Row 52	52	1900-2000	2.73E-3	3.09E-07	5.69E-06	2.14E-02	2.69E-07	5.01E-06	4.92E-05	7.64E-05	3.39E-05	3.75E-06	6.69E-06	7.35E-08	8.22E-08
Row 52	52	1900-2000	2.73E-3	2.44E-07	4.57E-06	1.30E-02	1.16E-07	3.53E-06	1.30E-03	2.19E-05	4.00E-05	2.68E-01	3.40E-06	6.71E-06	7.35E-08
Row 52	52	2100-2200	2.58E-3	2.22E-07	4.34E-06	1.23E-02	2.00E-07	3.72E-06	3.31E-04	5.17E-05	5.17E-05	3.42E-06	7.90E-06	8.18E-08	9.22E-08
Row 52	52	2200-2300	2.68E-3	2.24E-07	4.38E-06	2.41E-02	2.01E-07	3.74E-06	8.39E-05	3.19E-05	9.42E-05	3.42E-06	2.89E-06	5.69E-06	6.30E-08
Row 52	52	2200-2300	2.68E-3	2.24E-07	4.38E-06	2.41E-02	2.01E-07	3.74E-06	8.39E-05	3.19E-05	9.42E-05	3.42E-06	2.89E-06	5.69E-06	6.30E-08
Row 52	52	0000-0100	6.18E-3	3.11E-08	5.59E-07	5.48E-02	2.76E-08	1.42E-07	3.34E-07	1.17E-07	6.01E-07	2.07E-04	2.07E-04	5.33E-02	5.33E-02
Row 53	53	0000-0020	7.80E-3	6.340E-11	8.28E-07	1.02E-08	6.540E-11	1.03E-06	8.89E-02	7.72E-07	1.35E-05	7.60E-02	8.18E-07	1.71E-06	2.09E-08
Row 53	53	0000-0020	9.36E-3	6.420E-11	8.28E-07	1.32E-08	8.89E-11	2.89E-07	4.73E-07	8.91E-08	7.70E-02	4.07E-07	7.95E-08	1.56E-06	1.82E-08
Row 53	53	0000-0020	8.84E-3	6.340E-11	8.28E-07	1.02E-08	6.540E-11	1.03E-06	8.89E-02	7.72E-07	1.35E-05	7.60E-02	8.18E-07	1.71E-06	2.09E-08
Row 53	53	0000-0040	9.46E-3	2.875E-05	3.52E-07	5.81E-03	2.58E-06	4.81E-07	9.23E-02	6.16E-07	5.22E-06	8.13E-02	2.47E-07	4.60E-06	5.11E-08
Row 53	53	0000-0040	1.02E-3	3.35E-06	6.26E-07	5.90E-06	5.01E-08	3.68E-07	9.49E-02	3.12E-07	5.82E-06	2.62E-02	2.74E-07	5.11E-06	5.69E-08
Row 53	53	0000-0040	6.82E-3	6.340E-11	8.28E-07	1.02E-08	6.540E-11	1.03E-06	8.89E-02	7.72E-07	1.35E-05	7.60E-02	8.18E-07	1.71E-06	2.09E-08
Row 53	53	0000-0080	1.14E-3	1.40E-07	2.61E-06	1.01E-02	1.25E-07	3.78E-06	1.20E-06	2.24E-05	1.95E-05	1.05E-05	1.95E-05	1.95E-05	1.95E-05
Row 53	53	0000-0080	1.22E-3	3.03E-07	5.69E-06	1.07E-02	2.66E-07	4.95E-06	1.01E-03	2.51E-05	4.67E-05	8.63E-02	2.14E-06	3.99E-06	4.45E-08
Row 53	53	0000-0080	3.19E-3	6.340E-11	8.28E-07	1.02E-08	6.540E-11	1.03E-06	8.89E-02	7.72E-07	1.35E-05	7.60E-02	8.18E-07	1.71E-06	2.09E-08
Row 53	53	0000-1000	1.30E-3	3.03E-07	5.69E-06	1.11E-02	6.20E-07	4.88E-06	9.81E-02	2.29E-06	4.26E-05	8.37E-02	1.94E-06	3.62E-	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for	Year 2033
AERMOD model (April)	

Road Name	Road ID	Hour	NO Emission												NO Emission														
			Month/hour						Month/hour						Month/hour						Month/hour								
			g/km ³ /h	g/m ³ /h	tonne/hour	g/km ³ /h	g/m ³ /h	tonne/hour	g/km ³ /h	g/m ³ /h	tonne/hour	g/km ³ /h	g/m ³ /h	tonne/hour	g/km ³ /h	g/m ³ /h	tonne/hour	g/km ³ /h	g/m ³ /h	tonne/hour	g/km ³ /h	g/m ³ /h	tonne/hour						
Road S4	S4	0800-0900	1.022E+01	4.82E-07	8.74E-06	9.021E-02	3.36E-07	7.77E-06	4.03E-02	1.515E-06	3.44E-05	3.52E-01	1.32E-06	3.00E-05	Road S4	S4	0800-0900	1.022E+01	4.82E-07	8.74E-06	9.021E-02	3.36E-07	7.77E-06	4.03E-02	1.515E-06	3.44E-05	3.52E-01	1.32E-06	3.00E-05
Road S4	S4	0900-1000	1.17E+01	5.42E-07	9.64E-06	1.012E-01	3.67E-07	8.73E-06	4.63E-02	1.765E-06	3.81E-05	3.96E-01	1.42E-06	3.28E-05	Road S4	S4	0900-1000	1.17E+01	5.42E-07	9.64E-06	1.012E-01	3.67E-07	8.73E-06	4.63E-02	1.765E-06	3.81E-05	3.96E-01	1.42E-06	3.28E-05
Road S4	S4	1000-1100	1.38E+01	6.28E-07	1.12E-05	1.16E-01	4.22E-07	9.92E-06	5.23E-02	2.13E-06	4.52E-05	4.62E-01	1.72E-06	3.75E-05	Road S4	S4	1000-1100	1.38E+01	6.28E-07	1.12E-05	1.16E-01	4.22E-07	9.92E-06	5.23E-02	2.13E-06	4.52E-05	4.62E-01	1.72E-06	3.75E-05
Road S4	S4	1200-1300	1.60E+01	4.93E-07	7.88E-06	1.40E-01	3.02E-07	6.86E-06	6.28E-02	2.28E-06	2.80E-05	5.96E-01	1.70E-06	2.24E-05	Road S4	S4	1200-1300	1.60E+01	4.93E-07	7.88E-06	1.40E-01	3.02E-07	6.86E-06	6.28E-02	2.28E-06	2.80E-05	5.96E-01	1.70E-06	2.24E-05
Road S4	S4	1400-1500	1.40E+01	4.35E-07	7.39E-06	1.25E-01	3.35E-07	7.59E-06	5.73E-02	1.93E-06	3.12E-05	5.20E-01	1.30E-06	2.73E-05	Road S4	S4	1400-1500	1.40E+01	4.35E-07	7.39E-06	1.25E-01	3.35E-07	7.59E-06	5.73E-02	1.93E-06	3.12E-05	5.20E-01	1.30E-06	2.73E-05
Road S4	S4	1500-1600	1.58E+01	4.77E-07	8.61E-06	1.39E-01	3.37E-07	7.57E-06	5.27E-02	1.93E-06	3.12E-05	5.02E-01	1.20E-06	2.75E-05	Road S4	S4	1500-1600	1.58E+01	4.77E-07	8.61E-06	1.39E-01	3.37E-07	7.57E-06	5.27E-02	1.93E-06	3.12E-05	5.02E-01	1.20E-06	2.75E-05
Road S4	S4	1600-1700	1.45E+01	3.57E-07	8.13E-06	1.27E-01	3.14E-07	7.16E-06	5.76E-02	1.415E-06	2.51E-05	5.00E-01	1.23E-06	2.81E-05	Road S4	S4	1600-1700	1.45E+01	3.57E-07	8.13E-06	1.27E-01	3.14E-07	7.16E-06	5.76E-02	1.415E-06	2.51E-05	5.00E-01	1.23E-06	2.81E-05
Road S4	S4	1700-1800	1.25E+01	2.89E-07	6.99E-06	1.051E-01	2.51E-07	5.71E-06	5.26E-02	1.19E-06	2.71E-05	4.49E-01	1.03E-06	2.35E-05	Road S4	S4	1700-1800	1.25E+01	2.89E-07	6.99E-06	1.051E-01	2.51E-07	5.71E-06	5.26E-02	1.19E-06	2.71E-05	4.49E-01	1.03E-06	2.35E-05
Road S4	S4	1800-1900	1.03E+01	2.09E-07	4.41E-06	8.95E-07	1.57E-07	3.81E-06	4.39E-02	9.21E-07	8.75E-06	3.77E-01	7.04E-07	1.04E-06	Road S4	S4	1800-1900	1.03E+01	2.09E-07	4.41E-06	8.95E-07	1.57E-07	3.81E-06	4.39E-02	9.21E-07	8.75E-06	3.77E-01	7.04E-07	1.04E-06
Road S4	S4	1900-2000	9.13E+00	1.19E-07	3.63E-06	7.39E-07	1.19E-07	3.22E-06	3.81E-02	2.21E-07	1.13E-06	2.46E-01	4.54E-07	6.45E-06	Road S4	S4	1900-2000	9.13E+00	1.19E-07	3.63E-06	7.39E-07	1.19E-07	3.22E-06	3.81E-02	2.21E-07	1.13E-06	2.46E-01	4.54E-07	6.45E-06
Road S4	S4	2000-2100	8.61E+00	9.29E-08	2.12E-06	7.73E-07	8.31E-08	1.90E-06	3.75E-02	1.04E-07	2.22E-06	3.32E-01	3.60E-07	8.15E-06	Road S4	S4	2000-2100	8.61E+00	9.29E-08	2.12E-06	7.73E-07	8.31E-08	1.90E-06	3.75E-02	1.04E-07	2.22E-06	3.32E-01	3.60E-07	8.15E-06
Road S4	S4	2100-2200	8.60E+00	9.29E-08	2.12E-06	7.73E-07	8.31E-08	1.92E-06	3.72E-02	1.04E-07	2.22E-06	3.31E-01	3.60E-07	8.20E-06	Road S4	S4	2100-2200	8.60E+00	9.29E-08	2.12E-06	7.73E-07	8.31E-08	1.92E-06	3.72E-02	1.04E-07	2.22E-06	3.31E-01	3.60E-07	8.20E-06
Road S4	S4	2200-2300	8.60E+00	9.29E-08	2.12E-06	7.73E-07	8.31E-08	1.92E-06	3.72E-02	1.04E-07	2.22E-06	3.31E-01	3.60E-07	8.20E-06	Road S4	S4	2200-2300	8.60E+00	9.29E-08	2.12E-06	7.73E-07	8.31E-08	1.92E-06	3.72E-02	1.04E-07	2.22E-06	3.31E-01	3.60E-07	8.20E-06
Road S4	S4	2300-0000	9.21E+02	6.17E-08	1.63E-06	8.05E-02	6.24E-08	1.42E-06	3.67E-01	2.84E-07	4.48E-07	3.75E-01	2.45E-07	5.50E-06	Road S4	S4	2300-0000	9.21E+02	6.17E-08	1.63E-06	8.05E-02	6.24E-08	1.42E-06	3.67E-01	2.84E-07	4.48E-07	3.75E-01	2.45E-07	5.50E-06
Road 101	101	0800-0100	7.76E+03	6.99E-08	2.71E-06	6.86E-03	6.09E-08	2.46E-06	5.76E-02	5.03E-07	9.99E-05	4.85E-02	2.86E-07	1.70E-05	Road 101	101	0800-0100	7.76E+03	6.99E-08	2.71E-06	6.86E-03	6.09E-08	2.46E-06	5.76E-02	5.03E-07	9.99E-05	4.85E-02	2.86E-07	1.70E-05
Road 101	101	0900-0100	7.76E+03	6.99E-08	2.71E-06	6.86E-03	6.09E-08	2.46E-06	5.76E-02	5.03E-07	9.99E-05	4.85E-02	2.86E-07	1.70E-05	Road 101	101	0900-0100	7.76E+03	6.99E-08	2.71E-06	6.86E-03	6.09E-08	2.46E-06	5.76E-02	5.03E-07	9.99E-05	4.85E-02	2.86E-07	1.70E-05
Road 101	101	0200-0300	9.23E+03	3.30E-08	1.55E-06	8.71E-03	3.49E-08	1.38E-06	6.08E-02	2.57E-01	1.02E-05	2.28E-07	7.82E-07	8.84E-06	Road 101	101	0200-0300	9.23E+03	3.30E-08	1.55E-06	8.71E-03	3.49E-08	1.38E-06	6.08E-02	2.57E-01	1.02E-05	2.28E-07	7.82E-07	8.84E-06
Road 101	101	0300-0400	9.89E+03	3.90E-08	1.31E-06	8.81E-03	2.99E-08	1.18E-06	6.22E-02	2.69E-01	2.85E-06	4.42E-07	1.72E-07	7.20E-06	Road 101	101	0300-0400	9.89E+03	3.90E-08	1.31E-06	8.81E-03	2.99E-08	1.18E-06	6.22E-02	2.69E-01	2.85E-06	4.42E-07	1.72E-07	7.20E-06
Road 101	101	0400-0500	9.89E+03	3.90E-08	1.31E-06	8.81E-03	2.99E-08	1.18E-06	6.22E-02	2.69E-01	2.85E-06	4.42E-07	1.72E-07	7.20E-06	Road 101	101	0400-0500	9.89E+03	3.90E-08	1.31E-06	8.81E-03	2.99E-08	1.18E-06	6.22E-02	2.69E-01	2.85E-06	4.42E-07	1.72E-07	7.20E-06
Road 101	101	0500-0600	1.16E+07	1.76E-06	2.98E-02	1.02E-02	6.56E-06	2.66E-06	6.77E-02	1.36E-07	7.72E-05	5.74E-02	9.67E-07	1.46E-05	Road 101	101	0500-0600	1.16E+07	1.76E-06	2.98E-02	1.02E-02	6.56E-06	2.66E-06	6.77E-02	1.36E-07	7.72E-05	5.74E-02	9.67E-07	1.46E-05
Road 101	101	0600-0700	1.23E+02	7.40E-07	6.72E-06	1.09E-02	1.51E-07	5.68E-06	9.54E-07	7.87E-06	3.95E-02	8.72E-07	3.22E-07	3.26E-05	Road 101	101	0600-0700	1.23E+02	7.40E-07	6.72E-06	1.09E-02	1.51E-07	5.68E-06	9.54E-07	7.87E-06	3.95E-02	8.72E-07	3.22E-07	3.26E-05
Road 101	101	0700-0800	1.23E+02	7.40E-07	6.72E-06	1.09E-02	1.51E-07	5.68E-06	9.54E-07	7.87E-06	3.95E-02	8.72E-07	3.22E-07	3.26E-05	Road 101	101	0700-0800	1.23E+02	7.40E-07	6.72E-06	1.09E-02	1.51E-07	5.68E-06	9.54E-07	7.87E-06	3.95E-02	8.72E-07	3.22E-07	3.26E-05
Road 101	101	0800-0900	1.27E+02	4.19E-07	1.85E-05	1.13E-02	3.86E-07	1.42E-05	6.71E-02	2.15E-05	5.66E-02	1.85E-06	1.75E-06	Road 101	101	0800-0900	1.27E+02	4.19E-07	1.85E-05	1.13E-02	3.86E-07	1.42E-05	6.71E-02	2.15E-05	5.66E-02	1.85E-06	1.75E-06		
Road 101	101	0900-1000	1.49E+02	4.19E-07	1.85E-05	1.13E-02	3.81E-07	1.42E-05	7.45E-02	2.06E-06	1.13E-06	4.42E-07	1.77E-06	7.01E-05	Road 101	101	0900-1000	1.49E+02	4.19E-07	1.85E-05	1.13E-02	3.81E-07	1.42E-05	7.45E-02	2.06E-06	1.13E-06	4.42E-07	1.77E-06	7.01E-05
Road 101	101	1000-1100	1.49E+02	4.19E-07	1.85E-05	1.13E-02	3.81E-07	1.42E-05	7.45E-02	2.06E-06	1.13E-06	4.42E-07	1.77E-06	7.01E-05	Road 101	101	1000-1100	1.49E+02	4.19E-07	1.85E-05	1.13E-02	3.81E-07	1.42E-05	7.45E-02	2.06E-06	1.13E-06	4.42E-07	1.77E-06	7.01E-05
Road 101	101	1100-1200	1.63E+02	3.71E-07	1.47E-05	1.96E-02	3.32E-07	1.32E-05	7.97E-02	1.82E-05	2.00E-05	7.01E-02	1.05E-05	6.33E-05	Road 101	101	1100-1200	1.63E+02	3.71E-07	1.47E-05	1.96E-02	3.32E-07	1.32E-05	7.97E-02	1.82E-05	2.00E-05	7.01E-02	1.05E-05	6.33E-05
Road 101	101	1200-1300	2.23E+02	5.63E-07	2.27E-05	1.97E-02	4.96E-07	1.97E-05	9.34E-02	2.68E-06	3.86E-05	1.64E-06	2.06E-06	8.17E-05	Road 101	101	1200-1300	2.23E+02	5.63E-07	2.27E-05	1.97E-02	4.96E-07	1.97E-05	9.34E-02	2.68E-06	3.86E-05	1.64E-06	2.06E-06	8.17E-05
Road 101	101	1300-1400	2.23E+02	5.63E-07	2.27E-05	1.97E-02	4.96E-07	1.97E-05	9.34E-02	2.68E-06	3.86E-05	1.64E-06	2.06E-06	8.17E-05	Road 101	101	1300-1400	2.23E+02	5.63E-07	2.27E-05	1.97E-02	4.96E-07	1.97E-05	9.34E-02	2.68E-06	3.86E-05	1.64E-06	2.06E-06	8.17E-05
Road 101	101	1400-1500	2.24E+02	6.21E-07	2.66E-05	1.98E-02	5.59E-07	2.18E-05	9.48E-02	2.63E-06	1.04E-06	2.30E-06	3.90E-05	9.11E-05	Road 101	101	1400-1500	2.24E+02	6.21E-07	2.66E-05	1.98E-02	5.59E-07	2.18E-05	9.48E-02	2.63E-06	1.04E-06	2.30E-06	3.90E-05	9.11E-05
Road 101	101	1500-1600	2.07E+02	6.21E-07	2.44E-05	1.83E-02	5.24E-07	2.06E-05	9.26E-06	2.68E-06	1.06E-06	4.20E-06	3.40E-06	9.28E-05	Road 101	101	1500-1600	2.07E+02	6.21E-07	2.44E-05	1.83E-02	5.24E-07	2.06E-05	9.26E-06	2.68E-06	1.06E-06	4.20E-06	3.40E-06	9.28E-05
Road 101	101	1600-1700	2.07E+02	6.21E-07	2.44E-05	1.83E-02	5.24E-07	2.06E-05	9.26E-06	2.68E-06	1.06E-06	4.20E-06	3.40E-06	9.28E-05	Road 101	101	1600-1700	2.07E+02	6.21E-07	2.44E-05	1.83E-02	5.24E-07	2.06E-05	9.26E-06	2.68E-06	1.06E-06	4.20E-06	3.40E-06	9.28E-05
Road 101	101	1700-1800	1.55E+02	5.59E-07	2.00E-05	1.38E-02	4.37E-07	1.52E-05	7.92E-02	2.51E-06	9.93E-06	1.10E-02	1.33E-05	8.43E-05	Road 101	101	1700-1800	1.55E+02	5.59E-07	2.00E-05	1.38E-02	4.37E-07	1.52E-05	7.92E-02	2.51E-06	9.93E-06</			

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for AERMOD model (April)	Year 2033

Road Name	Road ID	NO ₂ Emission					NO ₂ Emission							
		MonthlyAverage		MonthlyAverage		time/hour	MonthlyAverage		MonthlyAverage		time/hour			
		g/m ³ /veh	g/m ³	g/m ³ /veh	g/m ³		g/m ³ /veh	g/m ³	g/m ³ /veh	g/m ³		g/m ³ /veh	g/m ³	g/m ³
Road 103	103	1600-1700	1.686	6.616	0.117	1.076	4.046	9.711	7.648	2.106	5.065	6.552	1.806	3.336
Road 103	103	1800-1900	1.222	3.773	0.075	1.058	4.237	7.820	6.783	2.066	5.014	5.843	1.606	4.206
Road 103	103	1900-2000	1.686	6.616	0.117	1.076	4.046	9.711	7.648	2.106	5.065	6.552	1.806	3.336
Road 103	103	2000-2100	1.746	6.433	0.156	6.538	1.132	4.186	4.962	1.310	3.686	4.216	1.106	2.666
Road 103	103	2100-2200	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	2200-2300	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	2300-2400	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	2400-2500	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	2500-2600	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	2600-2700	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	2700-2800	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	2800-2900	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	2900-3000	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	3000-3100	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	3100-3200	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	3200-3300	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	3300-3400	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	3400-3500	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	3500-3600	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	3600-3700	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	3700-3800	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	3800-3900	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	3900-4000	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	4000-4100	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	4100-4200	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	4200-4300	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	4300-4400	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	4400-4500	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	4500-4600	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	4600-4700	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	4700-4800	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	4800-4900	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	4900-5000	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	5000-5100	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	5100-5200	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	5200-5300	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	5300-5400	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	5400-5500	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	5500-5600	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	5600-5700	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	5700-5800	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	5800-5900	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	5900-6000	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	6000-6100	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	6100-6200	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	6200-6300	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	6300-6400	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	6400-6500	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	6500-6600	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	6600-6700	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	6700-6800	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	6800-6900	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	6900-7000	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	7000-7100	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	7100-7200	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	7200-7300	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	7300-7400	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	7400-7500	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	7500-7600	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	7600-7700	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	7700-7800	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	7800-7900	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	7900-8000	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	8000-8100	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	8100-8200	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	8200-8300	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	8300-8400	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	8400-8500	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	8500-8600	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	8600-8700	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	8700-8800	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	8800-8900	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	8900-9000	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	9000-9100	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	9100-9200	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	9200-9300	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	9300-9400	1.246	3.786	0.076	6.433	1.320	3.186	3.962	1.136	2.726	4.086	0.966	3.226
Road 103	103	9400-9500	1.246	3.786										

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Tiesing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for	Year 2033
AERMOD model (May)	

Road Name	Road ID	Hour	NO _x Emission						NO ₂ Emission						
			Month/may/hour			Month/june/hour			Month/may/hour			Month/june/hour			
			g/km/h	g/s/m	tonne/hour	g/km/h	g/s/m	tonne/hour	g/km/h	g/s/m	tonne/hour	g/km/h	g/s/m	tonne/hour	
Road 1	1	0:00:00-0:30	8.52E-03	1.15E-07	6.31E-06	7.31E-03	9.84E-08	5.42E-06	9.66E-02	1.30E-07	7.16E-05	9.10E-02	1.09E-06	8.60E-09	
Road 1	1	0:30:00-0:36	8.32E-03	8.92E-08	4.24E-06	7.88E-03	8.98E-08	7.79E-07	8.50E-07	4.71E-05	9.12E-02	7.71E-07	3.00E-09	1.10E-09	
Road 1	1	0:36:00-0:42	8.39E-03	8.98E-08	4.24E-06	7.88E-03	8.98E-08	7.79E-07	8.50E-07	4.71E-05	9.12E-02	7.71E-07	3.00E-09	1.10E-09	
Road 1	1	0:42:00-0:48	1.06E-03	5.29E-08	2.97E-06	9.20E-03	4.66E-08	2.56E-06	1.02E-01	5.14E-07	2.89E-05	4.02E-02	4.37E-07	2.40E-05	
Road 1	1	0:48:00-0:54	1.46E-03	8.24E-08	4.58E-06	7.91E-03	5.42E-08	2.98E-06	1.03E-01	5.46E-07	3.22E-05	8.79E-02	4.87E-07	2.80E-05	
Road 1	1	0:54:00-0:59	1.39E-03	1.19E-07	6.31E-06	7.31E-03	9.84E-08	5.42E-06	9.66E-02	1.30E-07	7.16E-05	9.10E-02	1.09E-06	8.60E-09	
Road 1	1	0:59:00-1:00	1.26E-02	2.58E-07	1.47E-05	1.07E-02	2.19E-07	1.21E-05	1.18E-01	2.23E-06	1.23E-04	9.09E-02	1.84E-06	1.01E-04	
Road 1	2	0:00:00-0:30	1.26E-02	2.58E-07	1.47E-05	1.07E-02	2.19E-07	1.21E-05	1.18E-01	2.23E-06	1.23E-04	9.09E-02	1.84E-06	1.01E-04	
Road 1	2	0:30:00-0:36	1.26E-02	2.58E-07	1.47E-05	1.07E-02	2.19E-07	1.21E-05	1.18E-01	2.23E-06	1.23E-04	9.09E-02	1.84E-06	1.01E-04	
Road 1	2	0:36:00-0:42	1.26E-02	2.58E-07	1.47E-05	1.07E-02	2.19E-07	1.21E-05	1.18E-01	2.23E-06	1.23E-04	9.09E-02	1.84E-06	1.01E-04	
Road 1	2	0:42:00-0:48	1.41E-03	8.44E-08	4.58E-06	7.91E-03	5.42E-08	2.98E-06	1.03E-01	5.46E-07	3.22E-05	8.79E-02	4.87E-07	2.80E-05	
Road 1	2	0:48:00-0:54	1.41E-03	8.44E-08	4.58E-06	7.91E-03	5.42E-08	2.98E-06	1.03E-01	5.46E-07	3.22E-05	8.79E-02	4.87E-07	2.80E-05	
Road 1	2	0:54:00-0:59	1.41E-03	8.44E-08	4.58E-06	7.91E-03	5.42E-08	2.98E-06	1.03E-01	5.46E-07	3.22E-05	8.79E-02	4.87E-07	2.80E-05	
Road 1	2	0:59:00-1:00	1.41E-03	8.44E-08	4.58E-06	7.91E-03	5.42E-08	2.98E-06	1.03E-01	5.46E-07	3.22E-05	8.79E-02	4.87E-07	2.80E-05	
Road 1	3	0:00:00-0:30	1.68E-02	7.18E-07	4.04E-06	1.44E-02	6.13E-07	3.38E-05	1.18E-01	5.04E-05	2.77E-04	9.97E-02	4.24E-06	2.34E-04	
Road 1	3	0:30:00-0:36	1.74E-02	7.36E-07	4.09E-06	1.49E-02	6.30E-07	3.41E-05	1.20E-01	5.17E-05	2.89E-04	9.98E-02	4.28E-06	2.38E-04	
Road 1	3	0:36:00-0:42	1.74E-02	7.36E-07	4.09E-06	1.49E-02	6.30E-07	3.41E-05	1.20E-01	5.17E-05	2.89E-04	9.98E-02	4.28E-06	2.38E-04	
Road 1	3	0:42:00-0:48	1.74E-02	7.36E-07	4.09E-06	1.49E-02	6.30E-07	3.41E-05	1.20E-01	5.17E-05	2.89E-04	9.98E-02	4.28E-06	2.38E-04	
Road 1	3	0:48:00-0:54	1.74E-02	7.36E-07	4.09E-06	1.49E-02	6.30E-07	3.41E-05	1.20E-01	5.17E-05	2.89E-04	9.98E-02	4.28E-06	2.38E-04	
Road 1	3	0:54:00-0:59	1.74E-02	7.36E-07	4.09E-06	1.49E-02	6.30E-07	3.41E-05	1.20E-01	5.17E-05	2.89E-04	9.98E-02	4.28E-06	2.38E-04	
Road 1	3	0:59:00-1:00	1.74E-02	7.36E-07	4.09E-06	1.49E-02	6.30E-07	3.41E-05	1.20E-01	5.17E-05	2.89E-04	9.98E-02	4.28E-06	2.38E-04	
Road 2	1	0:00:00-0:30	1.21E-02	1.62E-07	9.10E-06	8.67E-03	8.72E-08	4.41E-06	1.07E-01	1.46E-07	4.90E-05	8.83E-02	8.15E-07	4.01E-09	
Road 2	1	0:30:00-0:36	1.21E-02	1.62E-07	9.10E-06	8.67E-03	8.72E-08	4.41E-06	1.07E-01	1.46E-07	4.90E-05	8.83E-02	8.15E-07	4.01E-09	
Road 2	1	0:36:00-0:42	1.26E-02	6.82E-08	3.45E-06	1.11E-02	5.00E-08	2.99E-06	1.11E-01	5.99E-07	2.99E-05	9.43E-02	5.00E-07	2.53E-05	
Road 2	1	0:42:00-0:48	1.37E-02	8.02E-08	4.06E-06	1.18E-02	5.88E-08	3.48E-06	1.44E-01	6.67E-07	3.38E-05	9.63E-02	5.60E-07	2.84E-05	
Road 2	1	0:48:00-0:54	1.47E-02	9.34E-08	4.71E-06	1.26E-02	6.78E-08	3.95E-06	1.56E-01	7.78E-07	3.95E-05	1.05E-02	6.40E-07	3.19E-05	
Road 2	1	0:54:00-0:59	1.51E-02	3.79E-07	1.29E-05	1.29E-02	2.81E-07	1.42E-05	1.18E-01	2.57E-06	1.30E-04	9.83E-02	2.14E-06	1.09E-04	
Road 2	1	0:59:00-1:00	1.61E-02	7.13E-07	3.61E-06	1.38E-02	5.58E-07	3.03E-05	2.11E-01	5.36E-07	2.74E-04	9.90E-02	4.98E-06	2.72E-04	
Road 2	2	0:00:00-0:30	1.21E-02	1.62E-07	9.10E-06	8.67E-03	8.72E-08	4.41E-06	1.07E-01	1.46E-07	4.90E-05	8.83E-02	8.15E-07	4.01E-09	
Road 2	2	0:30:00-0:36	1.26E-02	6.82E-08	3.45E-06	1.11E-02	5.00E-08	2.99E-06	1.11E-01	5.99E-07	2.99E-05	9.43E-02	5.00E-07	2.53E-05	
Road 2	2	0:36:00-0:42	1.37E-02	8.02E-08	4.06E-06	1.18E-02	5.88E-08	3.48E-06	1.44E-01	6.67E-07	3.38E-05	9.63E-02	5.60E-07	2.84E-05	
Road 2	2	0:42:00-0:48	1.47E-02	9.34E-08	4.71E-06	1.26E-02	6.78E-08	3.95E-06	1.56E-01	7.78E-07	3.95E-05	1.05E-02	6.40E-07	3.19E-05	
Road 2	2	0:54:00-0:59	1.51E-02	3.79E-07	1.29E-05	1.29E-02	2.81E-07	1.42E-05	1.18E-01	2.57E-06	1.30E-04	9.83E-02	2.14E-06	1.09E-04	
Road 2	2	0:59:00-1:00	1.61E-02	7.13E-07	3.61E-06	1.38E-02	5.58E-07	3.03E-05	2.11E-01	5.36E-07	2.74E-04	9.90E-02	4.98E-06	2.72E-04	
Road 2	3	0:00:00-0:30	1.21E-02	1.62E-07	9.10E-06	8.67E-03	8.72E-08	4.41E-06	1.07E-01	1.46E-07	4.90E-05	8.83E-02	8.15E-07	4.01E-09	
Road 2	3	0:30:00-0:36	1.26E-02	6.82E-08	3.45E-06	1.11E-02	5.00E-08	2.99E-06	1.11E-01	5.99E-07	2.99E-05	9.43E-02	5.00E-07	2.53E-05	
Road 2	3	0:36:00-0:42	1.37E-02	8.02E-08	4.06E-06	1.18E-02	5.88E-08	3.48E-06	1.44E-01	6.67E-07	3.38E-05	9.63E-02	5.60E-07	2.84E-05	
Road 2	3	0:42:00-0:48	1.47E-02	9.34E-08	4.71E-06	1.26E-02	6.78E-08	3.95E-06	1.56E-01	7.78E-07	3.95E-05	1.05E-02	6.40E-07	3.19E-05	
Road 2	3	0:54:00-0:59	1.51E-02	3.79E-07	1.29E-05	1.29E-02	2.81E-07	1.42E-05	1.18E-01	2.57E-06	1.30E-04	9.83E-02	2.14E-06	1.09E-04	
Road 2	3	0:59:00-1:00	1.61E-02	7.13E-07	3.61E-06	1.38E-02	5.58E-07	3.03E-05	2.11E-01	5.36E-07	2.74E-04	9.90E-02	4.98E-06	2.72E-04	
Road 3	1	0:00:00-0:30	1.72E-02	7.52E-07	3.91E-06	1.48E-02	6.47E-07	3.35E-05	1.16E-01	5.09E-06	2.56E-04	9.80E-02	4.29E-06	2.17E-04	
Road 3	1	0:30:00-0:36	1.72E-02	7.52E-07	3.91E-06	1.48E-02	6.47E-07	3.35E-05	1.16E-01	5.09E-06	2.56E-04	9.80E-02	4.29E-06	2.17E-04	
Road 3	1	0:36:00-0:42	1.74E-02	7.67E-07	4.02E-06	1.50E-02	6.62E-07	3.45E-05	1.18E-01	5.26E-06	2.66E-04	1.00E-02	4.46E-06	2.26E-04	
Road 3	1	0:42:00-0:48	1.74E-02	7.67E-07	4.02E-06	1.50E-02	6.62E-07	3.45E-05	1.18E-01	5.26E-06	2.66E-04	1.00E-02	4.46E-06	2.26E-04	
Road 3	1	0:48:00-0:54	1.74E-02	7.67E-07	4.02E-06	1.50E-02	6.62E-07	3.45E-05	1.18E-01	5.26E-06	2.66E-04	1.00E-02	4.46E-06	2.26E-04	
Road 3	1	0:54:00-0:59	1.74E-02	7.67E-07	4.02E-06	1.50E-02	6.62E-07	3.45E-05	1.18E-01	5.26E-06	2.66E-04	1.00E-02	4.46E-06	2.26E-04	
Road 3	1	0:59:00-1:00	1.74E-02	7.67E-07	4.02E-06	1.50E-02	6.62E-07	3.45E-05	1.18E-01	5.26E-06	2.66E-04	1.00E-02	4.46E-06	2.26E-04	
Road 3	2	0:00:00-0:30	1.72E-02	7.52E-07	3.91E-06	1.48E-02	6.47E-07	3.35E-05	1.16E-01	5.09E-06	2.56E-04	9.80E-02	4.29E-06	2.17E-04	
Road 3	2	0:30:00-0:36	1.74E-02	7.67E-07	4.02E-06	1.50E-02	6.62E-07	3.45E-05	1.18E-01	5.26E-06	2.66E-04	1.00E-02	4.46E-06	2.26E-04	
Road 3	2	0:36:00-0:42	1.74E-02	7.67E-07	4.02E-06	1.50E-02	6.62E-07	3.45E-05	1.18E-01	5.26E-06	2.66E-04	1.00E-02	4.46E-06	2.26E-04	
Road 3	2	0:42:00-0:48	1.74E-02	7.67E-07	4.02E-06	1.50E-02	6.62E-07	3.45E-05	1.18E-01	5.26E-06	2.66E-04	1.00E-02	4.46E-06	2.26E-04	
Road 3	2	0:48:00-0:54	1.74E-02	7.67E-07	4.02E-06	1.50E-02	6.62E-07	3.45E-05	1.18E-01	5.26E-06	2.66E-04	1.00E-02	4.46E-06	2.26E-04	
Road 3	2	0:54:00-0:59	1.74E-02	7.67E-07	4.02E-06	1.50E-02	6.62E-07	3.45E-05	1.18E-01	5.26E-06	2.66E-04	1.00E-02	4.46E-06	2.26E-04	
Road 3	2	0:59:00-1:00	1.74E-02	7.67E-07	4.02E-06	1.50E-02	6.62E-07	3.45E-05	1.18E-01	5.26E-06	2.66E-04	1.00E-02	4.46E-06	2.26E-04	
Road 3	3	0:00:00-0:30	1.72E-02	7.52E-07	3.91E-06	1.48E-02	6.47E-07	3.35E-05	1.16E-01	5.09E-06	2.56E-04	9.80E-02	4.29E-06	2.17E-04	
Road 3	3	0:30:00-0:36	1.74E-02	7.67E-07	4.02E-06	1.50E-02	6.62E-07	3.45E-05	1.18E-01	5.26E-06	2.66E-04	1.00E-02	4.46E-06	2.26E-04	
Road 3	3	0:36:00-0:42	1.74E-02	7.67E-07	4.02E-06	1.50E-02	6.62E-07	3.45E-05	1.18E-01	5.26E-06	2.66E-04	1.00E-02	4.46E-06	2.26E-04	
Road 3	3	0:42:00-0:48	1.74E-02	7.67E-07	4.02E-06	1.50E-02	6.62E-07	3.45E-05	1.18E-01	5.26E-06	2.66E-04	1.00E-02	4.46E-06	2.26E-04	
Road 3	3	0:48:00-0:54	1.74E-02	7.67E-07	4.02E-06	1.50E-02	6.62E-07	3.45E-05	1.18E-01	5.26E-06	2.66E-04	1.00E-02	4.46E-06	2.26E-04	
Road 3	3	0:54:00-0:59	1.74E-02	7.67E-07	4.02E-06	1.50E-02	6.62E-07	3.45E-05	1.18E-01	5.26E-06	2.66E-04	1.00E-02	4.46E-06	2.26E-04	
Road 3	3	0:59:00-1:00	1.74E-02	7.67E-07	4.02E-06	1.50E-02	6.62E-07	3.45E-05	1.18E-01	5.26E-06	2.66E-04	1.00E-02	4.46E-06	2.26E-04	
Road 4	1	0:00:00-0:30	1.18E-02	7.12E-07	3.61E-06	1.01E-02	6.01E-07	3.04E-05	1.02E-01	6.68E-06	2.88E-04	7.86E-02	4.71E-06	2.38E-04	
Road 4	1	0:30:00-0:36	1.20E-02	1.08E-04	5.04E-07	2.55E-06	9.01E-07	4.26E-07	2.16E-05	9.85E-02	4.61E-06	2.33E-04	1.16E-02	3.87E-06	1.59E-04
Road 4	1	0:36:00-0:42	1.20E-02	1.08E-04	5.04E-07	2.55E-06	9.01E								

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for
AERMOD model (May) Year 2033

Road Name	Road ID	Hour	N0_Emission										N0_Emission									
			g/km/h					g/km/h					g/km/h					g/km/h				
			g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	
Road 4	4	0000-0000	1.21E+02	4.36E+01	6.62E+06	1.01E+02	3.61E+07	7.22E+06	8.79E+02	3.12E+06	6.26E+05	7.71E+02	2.55E+06	5.12E+07	1.00E+08	1.53E+07	3.06E+06	3.73E+02	1.27E+06	2.59E+05	3.19E+02	1.03E+06
		0000-0100	1.00E+02	3.60E+07	5.78E+06	1.13E+02	3.69E+07	7.29E+06	9.37E+02	2.73E+06	5.47E+05	7.18E+02	2.29E+06	4.60E+07	9.20E+07	1.33E+07	2.66E+06	3.33E+02	1.10E+06	2.22E+05	2.78E+02	9.00E+05
Road 4	4	0100-0200	1.51E+02	4.83E+07	7.89E+06	1.51E+02	4.83E+07	7.89E+06	1.51E+02	4.83E+07	7.89E+06	1.51E+02	4.83E+07	7.89E+06	1.51E+02	4.83E+07	7.89E+06	1.51E+02	4.83E+07	7.89E+06	1.51E+02	4.83E+07
		0200-0300	1.42E+02	4.34E+07	6.89E+06	1.26E+02	3.86E+07	6.58E+06	9.98E+02	2.37E+06	4.76E+05	6.13E+02	1.93E+06	3.88E+07	7.66E+07	1.10E+07	2.22E+06	2.83E+02	9.69E+05	1.96E+05	2.47E+02	8.00E+05
Road 4	4	0300-0400	1.50E+02	4.88E+07	8.07E+06	1.26E+02	4.03E+07	8.03E+06	1.02E+03	2.62E+06	6.53E+05	8.30E+02	2.69E+06	5.30E+07	1.06E+08	1.53E+07	3.06E+06	3.33E+02	1.27E+06	2.59E+05	3.19E+02	1.03E+06
		0400-0500	1.53E+02	4.83E+07	7.89E+06	1.51E+02	4.83E+07	7.89E+06	1.51E+02	4.83E+07	7.89E+06	1.51E+02	4.83E+07	7.89E+06	1.51E+02	4.83E+07	7.89E+06	1.51E+02	4.83E+07	7.89E+06	1.51E+02	4.83E+07
Road 4	4	0500-0600	1.56E+02	5.42E+07	1.06E+07	1.26E+02	4.46E+07	8.92E+06	1.04E+03	3.61E+06	7.23E+05	8.92E+02	2.90E+06	5.81E+07	1.16E+08	1.74E+07	3.48E+06	4.36E+02	1.49E+06	3.02E+05	3.73E+02	1.27E+06
		0600-0700	1.46E+02	4.58E+07	7.59E+06	1.25E+02	4.31E+07	8.64E+06	1.03E+03	3.69E+06	7.33E+05	8.23E+02	2.92E+06	5.84E+07	1.17E+08	1.75E+07	3.49E+06	4.37E+02	1.50E+06	3.03E+05	3.74E+02	1.27E+06
Road 4	4	0700-0800	1.50E+02	4.83E+07	7.89E+06	1.51E+02	4.83E+07	7.89E+06	1.51E+02	4.83E+07	7.89E+06	1.51E+02	4.83E+07	7.89E+06	1.51E+02	4.83E+07	7.89E+06	1.51E+02	4.83E+07	7.89E+06	1.51E+02	4.83E+07
		0800-0900	1.70E+02	5.00E+07	1.02E+07	1.50E+02	5.22E+07	1.04E+07	1.26E+03	4.58E+06	9.26E+05	8.01E+02	2.79E+06	5.61E+07	1.12E+08	1.69E+07	3.42E+06	4.29E+02	1.47E+06	3.00E+05	3.70E+02	1.26E+06
Road 5	5	0900-1000	2.83E+02	5.78E+07	4.78E+07	2.38E+02	4.84E+07	4.04E+06	1.85E+03	4.79E+06	3.14E+06	1.54E+02	3.12E+06	2.61E+07	5.19E+07	1.11E+07	2.39E+07	2.47E+06	1.41E+06	1.15E+06	1.41E+06	2.39E+06
		1000-1100	3.09E+02	5.96E+07	5.24E+07	2.64E+02	5.06E+07	4.65E+06	1.91E+03	5.33E+06	2.71E+06	1.61E+02	2.81E+06	2.36E+07	5.61E+07	1.21E+07	2.61E+07	2.63E+06	1.51E+06	1.21E+06	1.51E+06	2.36E+06
Road 5	5	1100-1200	2.95E+02	4.88E+07	4.07E+07	2.45E+02	4.70E+07	3.95E+06	1.81E+03	4.50E+06	3.04E+06	1.51E+02	3.12E+06	2.61E+07	5.19E+07	1.11E+07	2.39E+07	2.47E+06	1.41E+06	1.15E+06	1.41E+06	2.39E+06
		1200-1300	3.34E+02	9.20E+07	7.69E+07	2.78E+02	7.65E+07	6.85E+06	1.83E+05	4.50E+06	4.21E+06	1.45E+06	4.11E+06	3.46E+06	2.91E+07	6.04E+06	3.90E+07	4.97E+06	2.91E+06	2.39E+06	2.91E+06	4.97E+06
Road 5	5	1300-1400	3.37E+02	9.37E+07	7.82E+07	2.77E+02	7.70E+07	6.84E+06	1.87E+05	4.50E+06	4.21E+06	1.45E+06	4.11E+06	3.46E+06	2.91E+07	6.04E+06	3.90E+07	4.97E+06	2.91E+06	2.39E+06	2.91E+06	4.97E+06
		1400-1500	3.44E+02	1.00E+08	8.46E+07	2.86E+02	8.37E+07	7.45E+06	1.94E+05	4.50E+06	4.21E+06	1.45E+06	4.11E+06	3.46E+06	2.91E+07	6.04E+06	3.90E+07	4.97E+06	2.91E+06	2.39E+06	2.91E+06	4.97E+06
Road 5	5	1500-1600	3.41E+02	1.04E+08	8.69E+07	2.78E+02	8.51E+07	7.11E+06	1.93E+05	4.58E+06	4.92E+05	4.54E+06	4.72E+06	3.94E+06	3.15E+06	5.42E+06	4.72E+06	3.94E+06	3.15E+06	5.42E+06	4.72E+06	3.94E+06
		1600-1700	3.78E+02	1.22E+08	1.03E+08	3.16E+02	1.02E+08	8.99E+06	1.94E+05	4.62E+06	5.37E+05	4.58E+06	5.22E+06	4.37E+06	3.61E+06	3.15E+06	5.22E+06	4.37E+06	3.61E+06	3.15E+06	5.22E+06	4.37E+06
Road 5	5	1700-1800	3.68E+02	1.06E+08	8.69E+07	2.78E+02	8.51E+07	7.11E+06	1.93E+05	4.58E+06	4.92E+05	4.54E+06	4.72E+06	3.94E+06	3.15E+06	5.42E+06	4.72E+06	3.94E+06	3.15E+06	5.42E+06	4.72E+06	3.94E+06
		1800-1900	2.90E+02	9.02E+07	7.54E+07	1.77E+02	6.41E+06	3.99E+05	6.00E+05	5.01E+05	1.15E+06	1.15E+06	4.99E+05	4.16E+06	3.15E+06	5.42E+06	4.72E+06	3.94E+06	3.15E+06	5.42E+06	4.72E+06	3.94E+06
Road 5	5	1900-2000	1.86E+02	5.77E+07	4.85E+06	1.48E+02	4.87E+07	4.07E+06	1.31E+05	4.54E+06	3.19E+05	1.08E+06	1.74E+06	3.12E+06	2.61E+07	5.19E+07	1.11E+07	2.39E+07	2.47E+06	1.41E+06	1.15E+06	1.41E+06
		2000-2100	1.86E+02	5.77E+07	4.85E+06	1.48E+02	4.87E+07	4.07E+06	1.31E+05	4.54E+06	3.19E+05	1.08E+06	1.74E+06	3.12E+06	2.61E+07	5.19E+07	1.11E+07	2.39E+07	2.47E+06	1.41E+06	1.15E+06	1.41E+06
Road 5	5	2100-2200	1.19E+02	3.19E+06	1.31E+06	2.66E+04	1.04E+07	7.32E+06	1.17E+06	3.14E+06	2.63E+06	1.45E+06	2.98E+06	2.24E+06	1.85E+06	1.54E+06	1.29E+06	1.06E+06	8.80E+05	7.29E+05	6.00E+05	5.00E+05
		2200-2300	1.21E+02	3.19E+06	1.31E+06	2.66E+04	1.04E+07	7.32E+06	1.17E+06	3.14E+06	2.63E+06	1.45E+06	2.98E+06	2.24E+06	1.85E+06	1.54E+06	1.29E+06	1.06E+06	8.80E+05	7.29E+05	6.00E+05	5.00E+05
Road 6	6	0000-0100	2.22E+02	4.27E+07	3.50E+07	2.01E+02	3.95E+07	3.25E+06	1.25E+03	2.22E+06	1.02E+06	1.34E+06	6.02E+05	1.00E+06	2.69E+06	1.21E+06	2.69E+06	1.21E+06	2.69E+06	1.21E+06	2.69E+06	1.21E+06
		0100-0200	2.01E+02	1.95E+07	1.59E+06	1.73E+02	1.69E+07	1.75E+06	1.47E+03	4.03E+05	1.24E+06	1.21E+06	3.44E+05	1.02E+06	2.69E+06	1.21E+06	2.69E+06	1.21E+06	2.69E+06	1.21E+06	2.69E+06	1.21E+06
Road 6	6	0200-0300	2.01E+02	1.95E+07	1.59E+06	1.73E+02	1.69E+07	1.75E+06	1.47E+03	4.03E+05	1.24E+06	1.21E+06	3.44E+05	1.02E+06	2.69E+06	1.21E+06	2.69E+06	1.21E+06	2.69E+06	1.21E+06	2.69E+06	1.21E+06
		0300-0400	2.31E+02	2.10E+07	1.73E+06	2.01E+02	1.95E+07	1.59E+06	1.73E+02	1.69E+07	1.75E+06	1.47E+03	4.03E+05	1.24E+06	1.21E+06	2.69E+06	1.21E+06	2.69E+06	1.21E+06	2.69E+06	1.21E+06	2.69E+06
Road 6	6	0400-0500	2.48E+02	1.03E+07	2.13E+06	2.13E+02	2.13E+06	2.50E+06	1.55E+03	6.51E+07	1.83E+06	1.31E+07	5.47E+06	1.54E+06	1.06E+07	2.69E+06	1.21E+06	2.69E+06	1.21E+06	2.69E+06	1.21E+06	2.69E+06
		0500-0600	2.48E+02	1.03E+07	2.13E+06	2.13E+02	2.13E+06	2.50E+06	1.55E+03	6.51E+07	1.83E+06	1.31E+07	5.47E+06	1.54E+06	1.06E+07	2.69E+06	1.21E+06	2.69E+06	1.21E+06	2.69E+06	1.21E+06	2.69E+06
Road 6	6	0600-0700	2.34E+02	5.20E+07	1.48E+07	2.05E+02	4.42E+07	3.53E+05	1.92E+03	1.03E+06	6.48E+06	1.90E+06	2.48E+06	1.54E+06	1.06E+07	2.69E+06	1.21E+06	2.69E+06	1.21E+06	2.69E+06	1.21E+06	2.69E+06
		0700-0800	4.51E+02	1.48E+06	5.17E+05	3.12E+02	2.50E+06	4.53E+05	2.44E+07	8.79E+06	2.20E+06	2.02E+06	6.52E+06	1.88E+06	1.31E+06	8.80E+05	7.29E+05	6.00E+05	5.00E+05	4.00E+05	3.00E+05	2.00E+05
Road 6	6	0800-0900	4.89E+02	1.48E+06	5.17E+05	3.12E+02	2.50E+06	4.53E+05	2.44E+07	8.79E+06	2.20E+06	2.02E+06	6.52E+06	1.88E+06	1.31E+06	8.80E+05	7.29E+05	6.00E+05	5.00E+05	4.00E+05	3.00E+05	2.00E+05
		0900-1000	4.51E+02	1.48E+06	5.17E+05	3.12E+02	2.50E+06	4.53E+05	2.44E+07	8.79E+06	2.20E+06	2.02E+06	6.52E+06	1.88E+06	1.31E+06	8.80E+05	7.29E+05	6.00E+05	5.00E+05	4.00E+05	3.00E+05	2.00E+05
Road 6	6	1000-1100	4.74E+02	1.48E+06	5.17E+05	3.12E+02	2.50E+06	4.53E+05	2.44E+07	8.79E+06	2.20E+06	2.02E+06	6.52E+06	1.88E+06	1.31E+06	8.80E+05	7.29E+05	6.00E+05	5.00E+05	4.00E+05	3.00E+05	2.00E+05
		1100-1200	4.64E+02	1.48E+06	5.17E+05	3.12E+02	2.50E+06	4.53E+05	2.44E+07	8.79E+06	2.20E+06	2.02E+06	6.52E+06	1.88E+06	1.31E+06	8.80E+05	7.29E+05	6.00E+05	5.00E+05	4.00E+05	3.00E+05	2.00E+05
Road 6	6	1200-1300	7.76E+02	1.98E+06	5.56E+05	4.42E+02	1.65E+06	6.64E+05	3.31E+06	4.33E+06	2.37E+06	2.18E+06	2.27E+06	6.58E+06	1.88E+06	1.31E+06	8.80E+05	7.29E+05	6.00E+05	5.00E+05	4.00E+05	3.00E+05
		1300-1400	8.04E+02	2.18E+06	6.15E+05	4.64E+02	1.85E+06	6.50E+05	3.49E+06	4.47E+06	2.67E+06	2.48E+06	2.57E+06	6.77E+06	1.94E+06	1.31E+06	8.80E+05	7.29E+05	6.00E+05	5.00E+05	4.00E+05	3.00E+05
Road 6	6	1400-1500	7.76E+02	1.98E+06	5.56E+05	4.42E+02	1.65E+06	6.64E+05	3.31E+06	4.33E+06	2.37E+06	2.18E+06	2.27E+06	6.58E+06	1.88E+06	1.31E+06	8.80E+05	7.29E+05	6.00E+05	5.00E+05	4.00E+05	3.00E+05
		1500-1600	7.48E+02	2.18E+06	6.08E+05	4.14E+02	1.77E+06	6.99E+05	3.44E+06	4.94E+06	2.80E+06	2.81E+06	3.11E+06	8.11E+06	2.28E+06	2.02E+06	1.85E+06	1.69E+06	1.54E+06	1.39E+06	1.23E+06	1.07E+06
Road 6	6	1600-1700	7.65E+02	2.22E+06	6.24E+05	4.67E+02	1.85E+06	6.50E+05	3.38E+06	4.79E+06	2.76E+06	2.48E+06	2.57E+06	6.77E+06	1.94E+06	1.31E+06	8.80E+05	7.29E+05	6.00E+05	5.00E+05	4.00E+05	3.00E+05
		1700-1800	7.65E+02	2.22E+06	6.24E+05	4.67E+02	1.85E+06	6.50E+05	3.38E+06	4.79E+06	2.76E+06	2.48E+06	2.57E+06	6.77E+06	1.94E+06	1.31E+06	8.80E+05	7.29E+05	6.00E+05	5.00E+05	4.00E+05	3.00E+05

I:\Secure\Environment Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Appendix\Appendix 3.5.3 Emission Factor in 2033-S.B.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
 Open Road 24 hour Emission Factors for
 AERMOD model (May) Year 2033

Road Name	Road ID	Hour	NGI, Enmission						NO Emission					
			Monthly/Hours			Monthly/Average			Monthly/Hours			Monthly/Average		
			g/m³/hour	g/m³/hour	g/m³/hour	g/m³/hour	g/m³/hour	g/m³/hour	g/m³/hour	g/m³/hour	g/m³/hour	g/m³/hour	g/m³/hour	g/m³/hour
Road 7	7	1800-1700	1.996-0.2	3.996-0.7	4.10E-06	1.666-0.2	2.911-0.7	3.411-0.6	1.411-0.7	2.48E-06	2.91E-06	1.16E-01	2.03E-06	2.38E-05
Road 7	7	1700-1800	1.050-0.2	2.50E-07	3.50E-05	1.25E-02	2.48E-07	2.94E-06	1.26E-03	2.58E-06	3.01E-06	1.06E-01	1.06E-01	2.48E-05
Road 7	7	1600-1700	1.050-0.2	2.50E-07	3.50E-05	1.25E-02	2.48E-07	2.94E-06	1.26E-03	2.58E-06	3.01E-06	1.06E-01	1.06E-01	2.48E-05
Road 7	7	1500-2000	1.07E-02	1.84E-07	2.15E-06	8.92E-03	1.55E-07	1.83E-11E	1.19E-01	2.06E-04	2.14E-04	9.00E-02	1.71E-01	2.01E-05
Road 7	7	2000-2100	1.05E-02	1.42E-06	1.68E-05	1.13E-02	1.23E-07	1.44E-06	1.26E-03	2.68E-06	3.09E-06	1.08E-01	1.49E-01	1.70E-05
Road 7	7	2100-2200	1.07E-02	1.84E-07	2.15E-06	8.92E-03	1.55E-07	1.83E-11E	1.19E-01	2.06E-04	2.14E-04	9.00E-02	1.71E-01	2.01E-05
Road 7	7	2200-2300	1.91E-03	3.15E-07	1.40E-07	7.93E-03	1.02E-07	1.21E-11E	1.19E-01	1.55E-06	1.81E-01	1.02E-01	1.32E-05	1.55E-05
Road 7	7	2300-0000	9.89E-03	9.65E-08	1.13E-05	8.53E-03	8.33E-06	9.67E-12	1.26E-03	1.18E-06	3.86E-05	1.02E-01	1.00E-01	1.17E-05
Road 8	8	2100-2200	2.11E-02	3.54E-07	1.53E-07	1.99E-02	3.45E-07	3.84E-11E	1.26E-03	1.58E-06	1.81E-01	1.02E-01	1.32E-05	1.55E-05
Road 8	8	2100-0200	2.15E-02	7.57E-09	1.53E-07	1.99E-02	6.54E-09	1.32E-13E	1.39E-01	1.71E-06	2.12E-02	1.92E-01	2.09E-06	
Road 8	8	0200-0300	2.21E-02	6.71E-07	1.16E-07	1.94E-02	5.01E-09	1.04E-11E	3.04E-03	8.76E-08	7.88E-06	3.69E-01	7.69E-05	1.55E-05
Road 8	8	0300-0400	2.27E-02	6.34E-07	1.16E-07	1.94E-02	5.01E-09	1.04E-11E	3.04E-03	8.76E-08	7.88E-06	3.69E-01	7.69E-05	1.55E-05
Road 8	8	0400-0500	2.37E-02	5.52E-09	1.08E-07	2.03E-02	4.59E-09	9.23E-13E	3.04E-03	7.79E-08	1.58E-06	3.69E-01	6.66E-06	1.39E-05
Road 8	8	0600-0600	2.45E-02	8.95E-08	1.93E-07	2.08E-02	8.10E-10E	1.84E-13E	3.06E-03	3.47E-07	7.76E-06	3.96E-01	1.16E-01	2.33E-06
Road 8	8	0600-0700	2.48E-02	8.95E-08	1.93E-07	2.08E-02	8.10E-10E	1.84E-13E	3.06E-03	3.47E-07	7.76E-06	3.96E-01	1.16E-01	2.33E-06
Road 8	8	0700-0800	2.55E-02	4.34E-08	8.78E-07	2.15E-02	3.56E-08	7.44E-13E	3.26E-03	5.93E-07	1.20E-06	3.94E-01	5.00E-07	1.01E-05
Road 8	8	0800-0900	2.43E-02	4.68E-08	9.47E-07	2.05E-02	3.59E-08	7.99E-13E	3.32E-03	6.18E-07	1.25E-06	3.70E-01	5.19E-07	1.05E-05
Road 8	8	0900-1000	2.43E-02	4.68E-08	9.47E-07	2.05E-02	3.59E-08	7.99E-13E	3.32E-03	6.18E-07	1.25E-06	3.70E-01	5.19E-07	1.05E-05
Road 8	8	1000-1100	2.76E-02	3.56E-08	8.02E-07	2.29E-02	3.43E-08	6.97E-13E	3.26E-03	4.68E-07	9.47E-06	3.78E-01	5.99E-07	8.09E-06
Road 8	8	1100-1200	2.74E-02	3.74E-08	7.57E-07	2.29E-02	3.13E-08	6.30E-13E	3.33E-04	4.68E-07	9.21E-06	3.78E-01	3.99E-07	7.67E-06
Road 8	8	1200-1300	2.93E-02	2.91E-08	5.82E-07	2.46E-02	2.46E-08	4.92E-13E	3.44E-04	4.68E-07	9.21E-06	3.78E-01	3.99E-07	7.67E-06
Road 8	8	1300-1400	2.94E-02	2.91E-08	5.82E-07	2.46E-02	2.45E-08	4.90E-13E	3.45E-04	4.68E-07	9.21E-06	3.78E-01	3.99E-07	7.67E-06
Road 8	8	1400-1500	2.97E-02	1.76E-07	2.56E-06	2.45E-02	1.04E-07	2.11E-10E	2.44E-04	4.68E-06	2.19E-05	2.00E-01	8.54E-07	7.78E-05
Road 8	8	1500-1600	2.97E-02	1.76E-07	2.56E-06	2.45E-02	1.04E-07	2.11E-10E	2.44E-04	4.68E-06	2.19E-05	2.00E-01	8.54E-07	7.78E-05
Road 8	8	1600-1700	2.91E-02	1.32E-07	2.87E-06	2.42E-02	1.09E-07	2.22E-10E	2.54E-04	4.68E-06	2.19E-05	2.00E-01	8.53E-07	9.93E-05
Road 8	8	1700-1800	2.98E-02	1.18E-07	2.73E-06	1.99E-02	9.71E-08	1.96E-10E	2.47E-04	4.71E-06	2.05E-05	1.94E-01	1.00E-01	2.03E-05
Road 8	8	1800-1900	1.97E-02	9.61E-06	1.99E-06	1.66E-02	8.37E-08	1.69E-10E	2.42E-04	1.38E-06	1.41E-04	2.04E-01	1.01E-06	2.09E-05
Road 8	8	1900-2000	1.97E-02	9.61E-06	1.99E-06	1.66E-02	8.37E-08	1.69E-10E	2.42E-04	1.38E-06	1.41E-04	2.04E-01	1.01E-06	2.09E-05
Road 8	8	2000-2100	1.97E-02	6.00E-06	1.22E-06	1.71E-02	5.27E-08	1.07E-10E	2.44E-04	1.71E-06	1.73E-06	2.38E-01	7.32E-07	1.64E-05
Road 8	8	2100-2200	1.78E-02	3.38E-06	1.09E-06	1.57E-02	4.74E-08	9.80E-10E	2.47E-04	4.93E-07	1.51E-06	1.16E-01	6.32E-07	1.31E-05
Road 8	8	2200-2300	1.78E-02	3.38E-06	1.09E-06	1.57E-02	4.74E-08	9.80E-10E	2.47E-04	4.93E-07	1.51E-06	1.16E-01	6.32E-07	1.31E-05
Road 8	8	2300-0000	1.92E-02	4.26E-08	8.61E-07	1.87E-02	3.79E-08	7.49E-10E	2.69E-06	6.77E-07	1.17E-06	2.25E-01	4.92E-07	1.01E-05
Road 9	9	0000-0100	1.57E-02	7.39E-08	5.48E-07	1.58E-02	6.39E-07	4.74E-10E	1.37E-04	4.67E-07	8.88E-06	1.19E-01	4.44E-07	4.04E-06
Road 9	9	0100-0200	1.57E-02	7.39E-08	5.48E-07	1.58E-02	6.39E-07	4.74E-10E	1.37E-04	4.67E-07	8.88E-06	1.19E-01	4.44E-07	4.04E-06
Road 9	9	0200-0300	1.69E-02	3.92E-08	2.83E-07	1.48E-02	3.34E-08	2.48E-10E	1.39E-04	3.02E-07	2.64E-06	1.14E-01	2.58E-07	1.92E-06
Road 9	9	0300-0400	1.84E-02	3.29E-08	2.44E-07	1.60E-02	2.89E-08	2.15E-10E	1.37E-04	2.49E-07	2.03E-06	1.16E-01	2.09E-07	1.93E-06
Road 9	9	0400-0500	1.87E-02	3.54E-08	2.64E-07	1.63E-02	3.16E-08	2.30E-10E	1.37E-04	2.69E-07	2.23E-06	1.16E-01	2.24E-07	2.04E-06
Road 9	9	0500-0600	2.14E-02	7.26E-08	5.39E-07	1.81E-02	6.14E-08	4.56E-10E	1.52E-04	3.69E-07	8.33E-06	1.26E-01	4.26E-07	3.16E-06
Road 9	9	0600-0700	2.63E-02	1.90E-07	1.41E-06	2.12E-02	1.60E-07	1.18E-10E	1.79E-04	2.76E-07	6.39E-06	1.44E-01	1.04E-06	7.74E-06
Road 9	9	0700-0800	2.63E-02	1.90E-07	1.41E-06	2.12E-02	1.60E-07	1.18E-10E	1.79E-04	2.76E-07	6.39E-06	1.44E-01	1.04E-06	7.74E-06
Road 9	9	0800-0900	3.70E-02	6.30E-07	4.68E-06	3.21E-02	5.31E-07	3.94E-10E	2.13E-04	3.62E-06	2.69E-07	1.64E-01	3.00E-06	2.22E-05
Road 9	9	0900-1000	3.97E-02	6.30E-07	4.68E-06	3.39E-02	4.73E-07	3.51E-10E	2.28E-04	3.14E-06	2.33E-06	1.69E-01	2.62E-06	1.99E-05
Road 9	9	1000-1100	4.18E-02	6.30E-07	4.68E-06	3.39E-02	4.73E-07	3.51E-10E	2.28E-04	3.14E-06	2.33E-06	1.69E-01	2.62E-06	1.99E-05
Road 9	9	1100-1200	4.03E-02	4.69E-07	3.48E-06	3.37E-02	3.91E-07	2.91E-10E	2.28E-04	2.60E-06	1.95E-06	1.84E-01	2.14E-06	1.95E-05
Road 9	9	1200-1300	9.96E-02	1.89E-05	1.34E-05	8.30E-02	1.59E-06	1.12E-02E	4.24E-05	7.64E-07	6.57E-05	3.50E-01	6.33E-06	4.70E-05
Road 9	9	1300-1400	1.18E-02	1.89E-06	1.34E-06	1.06E-01	2.11E-05	1.57E-09E	1.59E-05	1.90E-06	7.81E-06	3.50E-01	8.65E-06	4.70E-05
Road 9	9	1400-1500	1.28E-02	1.89E-06	1.34E-06	1.06E-01	2.11E-05	1.57E-09E	1.59E-05	1.90E-06	7.81E-06	3.50E-01	8.65E-06	4.70E-05
Road 9	9	1500-1600	1.25E-02	1.89E-06	1.34E-06	1.03E-01	2.11E-05	1.57E-09E	1.53E-05	1.93E-06	7.81E-06	3.50E-01	8.65E-06	4.70E-05
Road 9	9	1600-1700	1.35E-02	1.89E-06	1.34E-06	1.03E-01	2.11E-05	1.57E-09E	1.53E-05	1.93E-06	7.81E-06	3.50E-01	8.65E-06	4.70E-05
Road 9	9	1700-1800	1.01E-01	2.22E-06	1.65E-06	8.46E-02	1.89E-06	1.38E-10E	4.89E-05	1.07E-07	9.76E-08	4.03E-01	8.90E-06	6.61E-05
Road 9	9	1800-1900	5.64E-02	1.23E-06	9.10E-06	4.82E-02	1.09E-06	7.71E-10E	3.13E-07	8.98E-06	5.94E-06	2.64E-01	5.76E-06	4.27E-05
Road 9	9	1900-2000	5.64E-02	1.23E-06	9.10E-06	4.82E-02	1.09E-06	7.71E-10E	3.13E-07	8.98E-06	5.94E-06	2.64E-01	5.76E-06	4.27E-05
Road 9	9	2000-2100	3.25E-02	4.24E-07	3.15E-05	2.83E-02	3.69E-07	2.74E-10E	2.16E-04	2.94E-06	1.19E-04	2.53E-06	1.87E-06	1.28E-05
Road 9	9	2100-2200	3.04E-02	3.93E-07	2.94E-05	2.61E-02	3.48E-07	2.59E-10E	2.16E-04	2.73E-06	1.03E-05	1.62E-01	3.73E-06	1.76E-05
Road 9	9	2200-2300	3.04E-02	3.93E-07	2.94E-05	2.61E-02	3.48E-07	2.59E-10E	2.16E-04	2.73E-06	1.03E-05	1.62E-01	3.73E-06	1.76E-05
Road 9	9	2300-0000	3.01E-02	2.86E-07	2.11E-06	2.61E-02	2.48E-07	1.84E-10E	2.01E-04	1.90E-06	1.41E-06	1.72E-01	1.63E-06	1.21E-05
Road 10	10	0000-0100	6.58E-02	9.68E-08	6.68E-07	8.93E-02	8.97E-08	6.02E-10E	2.59E-02	3.02E-07	2.63E-06	2.33E-01	5.47E-07	3.87E-06
Road 10	10	0100-0200	6.58E-02	9.68E-08	6.68E-07	8.93E-02	8.97E-08	6.02E-10E	2.59E-02	3.02E-07	2.63E-06	2.33E-01	5.47E-07	3.87E-06
Road 10	10	0200-0300	8.09E-02	7.61E-08	5.10E-07	7.30E-02	6.87E-08	4.81E-10E	2.70E-02	2.60E-07	1.74E-06	5.50E-01	3.25E-07	1.57E-06
Road 10	10	0300-0400	8.88E-02	7.22E-08	4.84E-07	7.77E-02	6.46E-08	4.33E-10E	2.84E-02	2.36E-07	1.58E-06	5.50E-01	3.12E-07	1.42E-06
Road 10	10	0400-0500	8.88E-02	7.22E-08	4.84E-07	7.77E-02	6.46E-08	4.33E-10E	2.84E-02	2.36E-07	1.58E-06	5.50E-01	3.12E-07	1.42E-06
Road 10	10	0500-0600	8.36E-02	1.72E-08	7.09E-07	7.47E-02	9.42E-08	6.30E-10E	3.02E-02	3.81E-07	2.75E-06	7.68E-01	3.93E-07	2.28E-06
Road 10	10	0600-0700	7.75E-02	1.67E-07	1.20E-06	6.93E-02	1.61E-07	1.06E-10E	3.06E-02	3.07E-07	1.74E-06	7.75E-01	3.64E-07	4.29E-06
Road 10	10	0700-0800	9.75E-02	5.94E-07	3.99E-06	8.87E-02	5.28E-07	3.34E-10E	3.35E-02	2.04E-06	3.37E-06	2.97E-01	1.81E-06	1.22E-05
Road 10	10	0800-1000												

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
 Open Road 24 hour Emission Factors for
 AERMOD model (May)

Road Name	Road ID	Hour	NO _x Emission						NO _x Emission					
			Monthly/Average			Monthly/Average			Monthly/Average			Monthly/Average		
			g/mi/hr	g/mi	ton/hour	g/mi/hr	g/mi	ton/hour	g/mi/hr	g/mi	ton/hour	g/mi/hr	g/mi	ton/hour
Road 11	11	0000-0100	3.38E+02	1.89E+07	7.20E+07	5.08E+02	1.72E+07	6.61E+07	2.51E+01	1.40E+06	5.38E+06	7.23E+01	1.74E+06	4.88E+06
Road 11	11	0100-0200	3.78E+02	1.42E+07	5.34E+07	3.48E+02	1.27E+07	4.98E+07	2.56E+01	9.95E+07	6.38E+06	7.21E+01	8.65E+07	3.32E+07
Road 11	11	0200-0300	4.02E+02	1.18E+07	4.62E+07	3.18E+02	1.07E+07	4.04E+07	2.44E+01	8.42E+07	5.42E+06	6.92E+01	8.18E+07	3.14E+07
Road 11	11	0300-0400	4.81E+02	1.06E+07	4.05E+07	4.20E+02	9.61E+08	3.69E+07	2.71E+01	6.21E+07	3.78E+06	7.48E+01	5.62E+07	2.16E+06
Road 11	11	0400-0500	4.60E+02	1.19E+07	4.59E+07	4.34E+02	1.08E+07	4.15E+07	2.81E+01	7.06E+07	2.68E+06	5.25E+01	6.28E+07	4.17E+06
Road 11	11	0500-0600	4.42E+02	1.38E+07	5.01E+07	4.18E+02	1.16E+07	4.25E+07	2.81E+01	8.16E+07	2.68E+06	5.25E+01	6.28E+07	4.17E+06
Road 11	11	0600-0700	4.95E+02	1.25E+07	1.63E+08	4.48E+02	3.85E+07	1.48E+08	3.00E+01	7.65E+06	1.05E+07	7.27E+01	3.97E+06	9.09E+05
Road 11	11	0700-0800	6.31E+02	1.33E+06	4.33E+06	5.66E+02	1.31E+06	3.89E+05	3.51E+02	8.27E+06	2.41E+07	3.12E+02	5.59E+06	5.14E+05
Road 11	11	0800-0900	6.03E+02	1.25E+06	4.15E+06	5.48E+02	1.25E+06	3.75E+05	3.31E+02	8.16E+06	2.38E+07	3.08E+02	5.48E+06	5.04E+05
Road 11	11	0900-1000	7.71E+02	1.25E+06	4.91E+06	6.48E+02	1.13E+06	4.34E+06	3.38E+01	5.91E+06	2.27E+05	3.01E+02	5.77E+05	7.02E+05
Road 11	11	1000-1100	6.88E+02	1.18E+06	4.55E+06	6.95E+02	1.07E+06	4.12E+06	3.43E+01	5.26E+06	2.06E+05	2.88E+02	4.79E+06	1.82E+05
Road 11	11	1100-1200	7.72E+02	1.38E+06	5.01E+06	7.81E+02	1.16E+06	4.34E+06	3.38E+01	5.91E+06	2.27E+05	3.01E+02	5.77E+05	7.02E+05
Road 11	11	1200-1300	1.12E+01	2.31E+06	8.89E+06	1.03E+01	2.05E+06	7.87E+06	4.46E+01	9.31E+08	3.42E+07	3.92E+01	7.84E+01	3.01E+05
Road 11	11	1300-1400	1.23E+01	2.60E+06	8.89E+06	1.09E+01	2.30E+06	8.83E+06	4.73E+01	9.97E+08	3.88E+07	4.13E+01	7.84E+01	3.39E+05
Road 11	11	1400-1500	1.23E+01	2.60E+06	8.89E+06	1.09E+01	2.30E+06	8.83E+06	4.73E+01	9.97E+08	3.88E+07	4.13E+01	7.84E+01	3.39E+05
Road 11	11	1500-1600	1.20E+01	2.71E+06	1.04E+07	1.07E+01	2.41E+06	9.24E+06	4.76E+01	1.06E+07	4.13E+07	4.17E+01	3.39E+06	1.69E+05
Road 11	11	1600-1700	1.16E+01	2.63E+06	1.05E+07	1.03E+01	2.34E+06	9.00E+06	4.60E+01	1.06E+07	4.05E+07	4.04E+01	3.20E+06	1.53E+05
Road 11	11	1700-1800	9.03E+02	1.25E+06	4.15E+06	5.48E+02	1.25E+06	3.75E+05	3.31E+02	8.16E+06	2.38E+07	3.08E+02	5.48E+06	5.04E+05
Road 11	11	1800-1900	6.98E+02	1.64E+06	5.30E+06	6.34E+02	1.49E+06	5.72E+06	3.44E+01	8.10E+06	3.11E+06	3.08E+01	7.25E+07	7.89E+06
Road 11	11	1900-2000	5.93E+02	9.45E+07	3.61E+08	4.88E+02	8.59E+07	3.28E+08	3.13E+01	5.49E+06	2.11E+05	2.79E+01	4.88E+07	1.87E+05
Road 11	11	2000-2100	5											
Road 12	12	0000-0100	6.21E+02	3.17E+07	2.78E+08	4.86E+02	6.69E+07	2.57E+08	3.15E+03	4.33E+06	1.62E+07	2.87E+01	3.69E+07	1.52E+05
Road 12	12	0100-0200	9.72E+02	6.21E+07	2.78E+08	4.39E+02	5.78E+07	2.20E+08	4.02E+03	3.97E+06	1.55E+07	2.71E+01	3.66E+07	1.38E+05
Road 12	12	0200-0300	4.02E+02	1.18E+07	4.62E+07	3.18E+02	1.07E+07	4.04E+07	2.44E+01	8.42E+07	5.42E+06	6.92E+01	8.18E+07	3.14E+07
Road 12	12	0300-0400	2.79E+01	7.17E+07	4.20E+08	2.37E+01	1.99E+07	6.69E+07	3.95E+01	3.96E+07	1.82E+08	5.54E+01	3.47E+07	5.05E+05
Road 12	12	0400-0500	2.71E+01	1.69E+07	4.17E+06	4.23E+01	1.47E+07	3.62E+06	6.48E+01	3.52E+07	9.86E+06	5.81E+01	3.40E+07	8.39E+06
Road 12	12	0500-0600	2.82E+01	1.70E+07	4.19E+06	4.20E+01	1.49E+07	3.68E+06	6.59E+01	3.62E+07	9.86E+06	5.77E+01	4.84E+07	8.47E+06
Road 12	12	0600-0700	2.88E+01	1.78E+07	4.25E+06	4.25E+01	1.50E+07	3.69E+06	6.71E+01	3.9E+07	9.87E+06	5.81E+01	4.59E+07	8.50E+06
Road 12	12	0700-0800	2.89E+01	1.77E+07	4.31E+06	4.24E+01	1.52E+07	3.74E+06	6.72E+01	4.17E+07	1.02E+07	5.76E+01	5.33E+07	8.69E+06
Road 12	12	0800-0900	2.97E+01	1.81E+07	4.37E+06	4.31E+01	1.57E+07	3.81E+06	6.81E+01	4.31E+07	1.02E+07	5.81E+01	5.49E+07	8.79E+06
Road 12	12	0900-1000	3.01E+01	1.83E+07	4.40E+06	4.34E+01	1.59E+07	3.84E+06	6.83E+01	4.34E+07	1.02E+07	5.81E+01	5.49E+07	8.79E+06
Road 12	12	1000-1100	3.05E+01	1.85E+07	4.42E+06	4.36E+01	1.61E+07	3.86E+06	6.85E+01	4.36E+07	1.02E+07	5.81E+01	5.49E+07	8.79E+06
Road 12	12	1100-1200	3.03E+01	1.83E+07	4.40E+06	4.34E+01	1.59E+07	3.84E+06	6.83E+01	4.34E+07	1.02E+07	5.81E+01	5.49E+07	8.79E+06
Road 12	12	1200-1300	3.05E+01	1.85E+07	4.42E+06	4.36E+01	1.61E+07	3.86E+06	6.85E+01	4.36E+07	1.02E+07	5.81E+01	5.49E+07	8.79E+06
Road 12	12	1300-1400	3.06E+01	1.87E+07	4.43E+06	4.37E+01	1.62E+07	3.87E+06	6.86E+01	4.37E+07	1.02E+07	5.81E+01	5.49E+07	8.79E+06
Road 12	12	1400-1500	3.04E+01	1.84E+07	4.41E+06	4.35E+01	1.60E+07	3.85E+06	6.84E+01	4.35E+07	1.02E+07	5.81E+01	5.49E+07	8.79E+06
Road 12	12	1500-1600	3.03E+01	1.83E+07	4.40E+06	4.34E+01	1.59E+07	3.84E+06	6.83E+01	4.34E+07	1.02E+07	5.81E+01	5.49E+07	8.79E+06
Road 12	12	1600-1700	3.03E+01	1.83E+07	4.40E+06	4.34E+01	1.59E+07	3.84E+06	6.83E+01	4.34E+07	1.02E+07	5.81E+01	5.49E+07	8.79E+06
Road 12	12	1700-1800	3.04E+01	1.85E+07	4.42E+06	4.36E+01	1.61E+07	3.86E+06	6.85E+01	4.36E+07	1.02E+07	5.81E+01	5.49E+07	8.79E+06
Road 12	12	1800-1900	3.05E+01	1.86E+07	4.43E+06	4.37E+01	1.62E+07	3.87E+06	6.86E+01	4.37E+07	1.02E+07	5.81E+01	5.49E+07	8.79E+06
Road 12	12	1900-2000	2.53E+01	1.90E+07	4.69E+06	4.51E+01	1.63E+07	3.90E+06	6.97E+01	4.37E+07	1.04E+07	5.86E+01	5.59E+07	8.79E+06
Road 12	12	2000-2100	2.61E+01	1.89E+07	4.57E+06	4.29E+01	1.63E+07	3.89E+06	6.98E+01	4.47E+07	1.10E+07	5.51E+01	5.32E+07	8.67E+06
Road 12	12	0000-0100	2.53E+01	1.90E+07	4.69E+06	4.51E+01	1.63E+07	3.90E+06	6.97E+01	4.37E+07	1.04E+07	5.86E+01	5.59E+07	8.79E+06
Road 12	12	0100-0200	2.61E+01	1.89E+07	4.57E+06	4.29E+01	1.63E+07	3.89E+06	6.98E+01	4.47E+07	1.10E+07	5.51E+01	5.32E+07	8.67E+06
Road 12	12	0200-0300	2.59E+01	1.72E+07	4.29E+06	4.24E+01	1.51E+07	3.71E+06	6.48E+01	4.09E+07	1.01E+07	5.23E+01	5.39E+07	8.84E+06
Road 12	12	0300-0400	2.60E+01	1.73E+07	4.30E+06	4.25E+01	1.52E+07	3.72E+06	6.49E+01	4.10E+07	1.01E+07	5.23E+01	5.39E+07	8.84E+06
Road 12	12	0400-0500	2.61E+01	1.74E+07	4.31E+06	4.26E+01	1.53E+07	3.73E+06	6.50E+01	4.11E+07	1.01E+07	5.23E+01	5.39E+07	8.84E+06
Road 12	12	0500-0600	2.62E+01	1.75E+07	4.32E+06	4.27E+01	1.54E+07	3.74E+06	6.51E+01	4.12E+07	1.01E+07	5.23E+01	5.39E+07	8.84E+06
Road 12	12	0600-0700	2.63E+01	1.76E+07	4.33E+06	4.28E+01	1.55E+07	3.75E+06	6.52E+01	4.13E+07	1.01E+07	5.23E+01	5.39E+07	8.84E+06
Road 12	12	0700-0800	2.64E+01	1.77E+07	4.34E+06	4.29E+01	1.56E+07	3.76E+06	6.53E+01	4.14E+07	1.01E+07	5.23E+01	5.39E+07	8.84E+06
Road 12	12	0800-0900	2.65E+01	1.78E+07	4.35E+06	4.30E+01	1.57E+07	3.77E+06	6.54E+01	4.15E+07	1.01E+07	5.23E+01	5.39E+07	8.84E+06
Road 12	12	0900-1000	2.66E+01	1.79E+07	4.36E+06	4.31E+01	1.58E+07	3.78E+06	6.55E+01	4.16E+07	1.01E+07	5.23E+01	5.39E+07	8.84E+06
Road 12	12	1000-1100	2.67E+01	1.80E+07	4.37E+06	4.32E+01	1.59E+07	3.79E+06	6.56E+01	4.17E+07	1.01E+07	5.23E+01	5.39E+07	8.84E+06
Road 12	12	1100-1200	2.68E+01	1.81E+07	4.38E+06	4.33E+01	1.60E+07	3.80E+06	6.57E+01	4.18E+07	1.01E+07	5.23E+01	5.39E+07	8.84E+06
Road 12	12	1200-1300	2.69E+01	1.82E+07	4.39E+06	4.34E+01	1.61E+07	3.81E+06	6.58E+01	4.19E+07	1.01E+07	5.23E+01	5.39E+07	8.84E+06
Road 12	12	1300-1400	2.70E+01	1.83E+07	4.40E+06	4.35E+01	1.62E+07	3.82E+06	6.59E+01	4.20E+07	1.01E+07	5.23E+01	5.39E+07	8.84E+06
Road 12	12	1400-1500	2.71E+01	1.84E+07	4.41E+06	4.36E+01	1.63E+07	3.83E+06	6.60E+01	4.21E+07	1.01E+07	5.23E+01	5.39E+07	8.84E+06
Road 12	12	1500-1600	2.72E+01	1.85E+07	4.42E+06	4.37E+01	1.64E+07	3.84E+06	6.61E+01	4.22E+07	1.01E+07	5.23E+01	5.39E+07	8.84E+06
Road 12	12	1600-1700	2.73E+01	1.86E+07	4.43E+06	4.38E+01	1.65E+07	3.85E+06	6.62E+01	4.23E+07	1.01E+07	5.23E+01	5.39E+07	8.84E+06
Road 12	12	1700-1800	2.74E+01	1.87E+07	4.44E+06	4.39E+01	1.66E+07	3.86E+06	6.63E+01	4.24E+07	1.01E+07	5.23E+01	5.39E+07	8.84E+06
Road 12	12	1800-1900	2.75E+01	1.88E+07	4.45E+06	4.40E+01	1.67E+07	3.87E+06	6.64E+01	4.25E+07	1.01E+07	5.23E+01	5.39E+07	8.84E+06
Road 12	12	1900-2000	2.76E+01	1.89E+07	4.46E+06	4.41E+01	1.68E+07	3.88E+06	6.65E+01	4.26E+07	1.01E+07	5.23E+01	5.39E+07	8.84E+06
Road 12	12	2000-2100	2.77E+01	1.90E+07	4.47E+06	4.42E+01	1.69E+07	3.89E+06	6.66E+01	4.27E+07	1.01E+07	5.23E+01	5.39E+07	8.84E+06
Road 12	12	0000-0100	2.52E+01	1.70E+07	4.24E+06	4.21E+01	1.48E+07	3.71E+06	5.87E+01	3.99E+07	9.87E+06	5.14E+01	3.45E+07	6.83E+06
Road 12	12	0100-0200	2.53E+01	1.71E+07	4.25E+06	4.22E+01	1.49E+07	3.72E+06						

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Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for
AERMOD model (May) Year 2033

Row Name	Row ID	Hour	NO Emission						NO Emission					
			MonthlyHourMin			MonthlyAverage			MonthlyHourMin			MonthlyAverage		
			g/kwh	tonne/hour	g/kwh	tonne/hour	g/kwh	tonne/hour	g/kwh	tonne/hour	g/kwh	tonne/hour		
Row 14	14	0800-0900	4.33E-02	8.43E-07	1.44E-04	3.94E-02	7.11E-07	1.21E-05	2.00E-01	4.07E-06	6.94E-05	1.66E-01	3.38E-06	5.76E-05
Row 14	14	0900-1000	4.62E-02	7.97E-07	1.36E-05	3.69E-02	6.78E-07	1.15E-05	2.18E-01	4.37E-06	6.37E-05	1.81E-01	3.13E-06	5.34E-05
Row 14	14	1000-1100	4.71E-02	7.67E-07	1.36E-05	3.69E-02	6.78E-07	1.15E-05	2.18E-01	4.37E-06	6.37E-05	1.81E-01	3.13E-06	5.34E-05
Row 14	14	1100-1200	4.96E-02	7.20E-07	1.23E-05	4.16E-02	6.03E-07	1.03E-05	2.75E-01	3.72E-06	5.57E-05	1.86E-01	2.71E-06	4.62E-05
Row 14	14	1200-1300	7.46E-02	1.52E-06	2.66E-05	6.46E-02	1.27E-06	2.17E-05	3.18E-01	6.16E-06	1.09E-04	2.69E-01	5.12E-06	8.72E-05
Row 14	14	1300-1400	8.01E-02	1.67E-06	2.91E-05	6.91E-02	1.37E-06	2.42E-05	3.18E-01	6.16E-06	1.09E-04	2.69E-01	5.12E-06	8.72E-05
Row 14	14	1400-1500	8.01E-02	1.73E-06	2.94E-05	6.64E-02	1.43E-06	2.45E-05	3.75E-01	7.01E-06	1.19E-04	2.68E-01	5.77E-06	9.84E-05
Row 14	14	1500-1600	7.84E-02	1.66E-06	2.83E-05	6.15E-02	1.36E-06	2.32E-05	3.47E-01	6.79E-06	1.22E-04	2.61E-01	5.87E-06	1.00E-04
Row 14	14	1600-1700	8.01E-02	1.73E-06	2.94E-05	6.64E-02	1.43E-06	2.45E-05	3.75E-01	7.01E-06	1.19E-04	2.68E-01	5.77E-06	9.84E-05
Row 14	14	1700-1800	5.94E-02	1.20E-06	2.39E-05	4.95E-02	1.17E-06	1.99E-05	3.83E-01	6.66E-06	1.14E-04	2.34E-01	5.51E-06	9.30E-05
Row 14	14	1800-1900	4.42E-02	1.02E-06	1.76E-05	3.73E-02	8.68E-07	1.48E-05	2.68E-01	5.12E-06	8.89E-05	1.92E-01	4.61E-06	7.92E-05
Row 14	14	1900-2000	4.42E-02	1.02E-06	1.76E-05	3.73E-02	8.68E-07	1.48E-05	2.68E-01	5.12E-06	8.89E-05	1.92E-01	4.61E-06	7.92E-05
Row 14	14	2000-2100	3.90E-02	4.13E-07	7.08E-06	7.69E-02	1.62E-07	1.18E-06	1.02E-01	2.72E-06	4.54E-05	1.74E-01	2.34E-06	3.90E-05
Row 14	14	2100-2200	2.81E-02	3.78E-07	4.64E-06	2.74E-02	3.33E-07	8.67E-06	1.84E-01	2.47E-06	4.22E-05	1.58E-01	2.13E-06	3.68E-05
Row 14	14	2200-2300	2.81E-02	3.78E-07	4.64E-06	2.74E-02	3.33E-07	8.67E-06	1.84E-01	2.47E-06	4.22E-05	1.58E-01	2.13E-06	3.68E-05
Row 14	14	2300-2400	2.95E-02	2.91E-07	3.57E-06	2.54E-02	3.33E-07	8.83E-06	1.80E-01	3.07E-05	1.57E-04	1.54E-05	2.52E-05	
Row 15	15	0000-0100	3.76E-02	5.41E-08	5.01E-07	3.24E-02	4.70E-08	4.35E-07	4.41E-01	2.09E-07	1.94E-06	1.32E-01	1.78E-07	1.65E-06
Row 15	15	0100-0200	3.76E-02	5.41E-08	5.01E-07	3.24E-02	4.70E-08	4.35E-07	4.41E-01	2.09E-07	1.94E-06	1.32E-01	1.78E-07	1.65E-06
Row 15	15	0200-0300	5.53E-02	4.57E-08	4.23E-07	4.17E-02	4.00E-08	3.71E-07	1.74E-01	4.48E-07	3.37E-06	1.53E-01	1.29E-07	1.13E-06
Row 15	15	0300-0400	6.07E-02	4.46E-08	4.13E-07	4.37E-02	3.96E-08	3.65E-07	1.88E-01	1.38E-07	1.28E-06	1.62E-01	1.19E-07	1.02E-06
Row 15	15	0400-0500	6.07E-02	4.46E-08	4.13E-07	4.37E-02	3.96E-08	3.65E-07	1.88E-01	1.38E-07	1.28E-06	1.62E-01	1.19E-07	1.02E-06
Row 15	15	0500-0600	4.86E-02	5.69E-08	5.27E-07	4.25E-02	4.86E-08	5.50E-07	1.74E-01	1.99E-07	1.84E-06	1.46E-01	1.67E-07	1.55E-06
Row 15	15	0600-0700	4.86E-02	8.20E-08	7.56E-07	3.24E-02	8.89E-08	8.38E-07	1.57E-01	3.37E-07	3.09E-06	1.79E-01	2.74E-07	2.54E-06
Row 15	15	0700-0800	4.86E-02	8.20E-08	7.56E-07	3.24E-02	8.89E-08	8.38E-07	1.57E-01	3.37E-07	3.09E-06	1.79E-01	2.74E-07	2.54E-06
Row 15	15	0800-0900	6.55E-02	3.08E-07	2.89E-06	4.74E-06	2.61E-07	2.42E-06	1.95E-01	1.96E-06	9.95E-05	1.83E-01	8.85E-07	7.82E-06
Row 15	15	0900-1000	6.12E-02	2.95E-07	2.78E-06	5.23E-06	2.52E-07	2.34E-06	2.08E-01	1.90E-06	9.29E-05	1.76E-01	8.51E-07	8.78E-06
Row 15	15	1000-1100	6.78E-02	2.96E-07	2.74E-06	5.77E-06	2.53E-07	2.34E-06	2.22E-01	2.07E-06	9.62E-05	1.88E-01	8.25E-07	7.64E-06
Row 15	15	1100-1200	6.78E-02	2.96E-07	2.74E-06	5.77E-06	2.53E-07	2.34E-06	2.22E-01	2.07E-06	9.62E-05	1.88E-01	8.25E-07	7.64E-06
Row 15	15	1200-1300	7.84E-02	5.16E-07	4.95E-06	6.59E-06	4.42E-06	4.02E-06	2.62E-01	1.72E-06	1.60E-05	2.19E-01	1.44E-06	1.33E-05
Row 15	15	1300-1400	7.72E-02	5.34E-07	4.94E-06	6.84E-06	4.49E-06	4.12E-06	2.65E-01	1.83E-06	1.70E-05	2.20E-01	1.52E-06	1.41E-05
Row 15	15	1400-1500	8.47E-02	5.84E-07	5.62E-06	7.47E-06	5.08E-06	4.62E-06	2.78E-01	1.97E-06	1.83E-05	2.22E-01	1.56E-06	1.45E-05
Row 15	15	1500-1600	7.55E-02	5.53E-07	5.17E-06	6.28E-06	4.25E-06	3.75E-06	2.70E-01	1.97E-06	1.83E-05	2.22E-01	1.63E-06	1.51E-05
Row 15	15	1600-1700	7.62E-02	5.62E-07	5.21E-06	6.41E-06	4.78E-06	4.38E-06	2.61E-01	1.92E-06	1.78E-05	2.18E-01	1.61E-06	1.49E-05
Row 15	15	1700-1800	8.35E-02	4.79E-07	4.58E-06	5.91E-06	4.31E-06	3.91E-06	2.61E-01	1.92E-06	1.78E-05	2.18E-01	1.61E-06	1.49E-05
Row 15	15	1800-1900	5.90E-02	3.82E-07	3.54E-06	4.94E-06	3.27E-07	3.02E-06	1.85E-01	1.39E-06	1.29E-05	1.57E-01	1.18E-06	1.09E-05
Row 15	15	1900-2000	2.86E-02	1.54E-07	1.43E-06	2.54E-06	1.31E-07	1.21E-06	1.28E-01	7.12E-07	6.59E-06	1.13E-01	5.69E-07	5.51E-06
Row 15	15	2000-2100	2.86E-02	1.54E-07	1.43E-06	2.54E-06	1.31E-07	1.21E-06	1.28E-01	7.12E-07	6.59E-06	1.13E-01	5.69E-07	5.51E-06
Row 15	15	2100-2200	2.86E-02	1.18E-07	1.09E-06	2.52E-06	1.04E-07	9.57E-07	1.36E-01	5.62E-07	5.20E-06	1.18E-01	4.89E-07	4.49E-06
Row 15	15	2200-2300	2.91E-02	1.14E-07	1.06E-06	2.59E-06	1.00E-07	9.28E-07	1.39E-01	5.53E-07	4.90E-06	1.18E-01	4.58E-07	4.22E-06
Row 15	15	2300-2400	3.04E-02	1.39E-07	1.28E-06	2.69E-06	1.16E-07	1.06E-06	1.42E-01	6.45E-07	5.84E-06	1.24E-01	5.45E-07	5.04E-06
Row 16	16	0000-0100	6.10E-07	1.07E-06	6.20E-06	9.22E-06	3.36E-08	1.84E-06	1.06E-01	6.15E-07	1.88E-05	8.94E-02	5.20E-07	1.52E-05
Row 16	16	0100-0200	1.17E-02	4.48E-03	1.07E-04	8.95E-08	1.18E-06	1.08E-01	4.10E-02	1.26E-05	9.62E-05	3.48E-02	1.09E-05	2.94E-06
Row 16	16	0200-0300	1.17E-02	4.48E-03	1.07E-04	8.95E-08	1.18E-06	1.08E-01	4.10E-02	1.26E-05	9.62E-05	3.48E-02	1.09E-05	2.94E-06
Row 16	16	0300-0400	1.41E-02	3.16E-08	9.69E-07	1.27E-06	7.48E-07	8.40E-07	1.18E-01	2.54E-07	7.92E-06	9.62E-02	2.18E-07	5.61E-06
Row 16	16	0400-0500	1.47E-02	3.52E-08	1.11E-06	1.27E-06	3.13E-08	9.59E-07	1.16E-02	8.99E-06	8.72E-06	7.87E-02	2.41E-07	7.37E-06
Row 16	16	0500-0600	1.47E-02	3.52E-08	1.11E-06	1.27E-06	3.13E-08	9.59E-07	1.16E-02	8.99E-06	8.72E-06	7.87E-02	2.41E-07	7.37E-06
Row 16	16	0600-0700	1.51E-02	1.36E-07	1.17E-06	1.27E-06	1.14E-07	4.96E-06	1.20E-01	1.08E-06	3.31E-06	7.17E-02	8.81E-07	2.73E-06
Row 16	16	0700-0800	1.78E-02	3.28E-07	1.90E-06	1.52E-06	2.76E-07	4.45E-06	1.28E-01	2.26E-06	7.22E-06	1.00E-01	1.99E-06	5.98E-05
Row 16	16	0800-0900	1.78E-02	3.28E-07	1.90E-06	1.52E-06	2.76E-07	4.45E-06	1.28E-01	2.26E-06	7.22E-06	1.00E-01	1.99E-06	5.98E-05
Row 16	16	0900-1000	1.92E-02	3.43E-07	1.90E-06	1.65E-06	2.94E-07	6.03E-06	1.27E-01	2.39E-06	6.94E-06	1.07E-01	1.91E-06	5.84E-05
Row 16	16	1000-1100	2.08E-02	3.25E-07	9.97E-06	1.74E-06	7.97E-07	4.16E-06	1.30E-01	2.32E-06	6.22E-06	1.08E-01	1.69E-06	5.19E-05
Row 16	16	1100-1200	2.08E-02	3.25E-07	9.97E-06	1.74E-06	7.97E-07	4.16E-06	1.30E-01	2.32E-06	6.22E-06	1.08E-01	1.69E-06	5.19E-05
Row 16	16	1200-1300	3.97E-02	7.54E-07	2.34E-06	3.36E-06	6.42E-07	9.76E-05	1.93E-01	3.70E-06	1.14E-04	1.61E-01	3.10E-06	9.51E-05
Row 16	16	1300-1400	4.29E-02	8.75E-07	2.68E-06	3.57E-06	6.27E-07	2.23E-05	2.06E-01	3.21E-06	1.29E-04	1.71E-01	3.48E-06	1.07E-04
Row 16	16	1400-1500	4.29E-02	8.75E-07	2.68E-06	3.57E-06	6.27E-07	2.23E-05	2.06E-01	3.21E-06	1.29E-04	1.71E-01	3.48E-06	1.07E-04
Row 16	16	1500-1600	4.29E-02	9.77E-07	2.84E-06	3.53E-06	6.69E-07	3.96E-05	1.95E-01	4.67E-06	1.43E-04	1.77E-01	3.89E-06	1.16E-04
Row 16	16	1600-1700	4.42E-02	8.99E-07	3.03E-06	3.77E-06	8.32E-07	5.55E-05	1.81E-01	4.80E-06	1.47E-04	1.82E-01	4.00E-06	1.23E-04
Row 16	16	1700-1800	4.42E-02	8.99E-07	3.03E-06	3.77E-06	8.32E-07	5.55E-05	1.81E-01	4.80E-06	1.47E-04	1.82E-01	4.00E-06	1.23E-04
Row 16	16	1800-1900	2.32E-02	5.17E-07	1.50E-06	1.95E-06	4.23E-07	3.95E-05	1.52E-01	3.42E-06	1.09E-04	1.38E-01	2.91E-06	8.29E-05
Row 16	16	1900-2000	1.69E-02	2.89E-07	8.67E-06	1.46E-07	1.42E-07	4.21E-06	4.0E-01	2.42E-06	7.40E-05	1.17E-01	2.03E-06	6.21E-05
Row 16	16	2000-2100	1.69E-02	2.89E-07	8.67E-06	1.46E-07	1.42E-07	4.21E-06	4.0E-01	2.42E-06	7.40E-05	1.17E-01	2.03E-06	6.21E-05
Row 16	16	2100-2200	1.42E-02	1.57E-07	6.05E-06	1.28E-07	1.37E-07	3.31E-06	1.32E-01	1.79E-06	5.54E-05	1.15E-01	1.55E-06	4.79E-05
Row 16	16	2200-2300	1.42E-02	1.88E-07	6.78E-06	1.27E-07	1.64E-07	6.03E-06	1.35E-01	1.74E-06	5.34E-05	1.16E-01	1.59E-06	4.81E-05
Row 16	16	2300-2400	1.11E-02	1.38E-07	5.29E-06	1.04E-07	1.24E-07	3.04E-06	1.21E-01	1.61E-06	4.65E-05	1.04E-01	1.45E-06	4.44E-05
Row 17	17	0000-0100	1.11E-02</											

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Figure 10.10: Sheng Yi North Underground Quarry
Open Road 24 hour Emission Factors for
AERMOD model (May) Year 2033

Row	ID	Hour	Mo, NoEmision						Em, NoEmision					
			MonthlyHourMin			MonthlyHourAverage			MonthlyHourMin			MonthlyHourAverage		
			g/kwh	tonne/hour	g/kwh	tonne/hour	g/kwh	tonne/hour	g/kwh	tonne/hour	g/kwh	tonne/hour	g/kwh	tonne/hour
Row 27	27	1900-1100	1.8621	4.7472	1.4426	1.5751	3.9957	1.2326	6.7521	1.7292	5.5006	5.6621	1.2506	4.4656
Row 27	27	1700-1800	1.6311	3.7428	1.1408	1.3662	3.1013	0.9337	6.6382	1.5068	4.6028	5.4388	1.2582	3.6808
Row 27	27	1500-1600	1.3211	2.9340	0.8811	1.0867	2.6889	0.8325	6.4882	1.3688	3.8508	4.6828	1.1608	3.3008
Row 27	27	1900-2000	1.3921	3.3404	1.1231	1.1111	1.4114	3.5117	5.2431	5.3967	1.6668	4.4701	4.6087	1.4296
Row 27	27	2000-2100	1.2216	1.0387	0.3167	0.9996	2.7778	0.5719	4.2781	3.1313	4.5454	3.7373	1.1516	0.3516
Row 27	27	1800-1900	1.2002	1.1207	0.3617	1.1105	0.6117	1.6667	4.2781	3.1313	4.5454	3.7373	1.1516	0.3516
Row 27	27	1700-1800	1.3101	2.9656	0.7917	1.0555	2.4617	0.8771	4.8771	3.5887	1.1006	4.2901	2.7707	0.9207
Row 27	27	2300-0400	1.3316	8.0668	2.4887	1.0711	7.0668	2.175	4.4741	2.9887	9.1987	4.3381	2.6107	8.0507
Row 27	27	0000-0100	1.6112	1.5202	0.9328	1.3662	3.9957	7.8338	1.6668	1.6718	5.9005	1.4351	1.4448	3.3905
Row 27	27	0100-0200	1.6112	1.5202	0.9328	1.3662	3.9957	7.8338	1.6668	1.6718	5.9005	1.4351	1.4448	3.3905
Row 27	27	0200-0300	1.8928	9.0308	5.1368	1.6262	1.9008	4.488	1.7251	8.3177	4.7768	1.4961	7.2487	4.1155
Row 27	27	0300-0400	1.9828	17.7585	4.4058	1.7242	6.3148	3.0251	1.7451	6.7591	3.8795	1.4891	5.8481	3.3105
Row 27	27	0400-0500	1.9828	17.7585	4.4058	1.7242	6.3148	3.0251	1.7451	6.7591	3.8795	1.4891	5.8481	3.3105
Row 27	27	0500-0600	2.0712	1.5404	0.7716	1.7762	1.3117	7.4881	1.7919	1.3381	7.5501	1.9601	1.1388	3.8605
Row 27	27	0600-0700	2.0712	1.5404	0.7716	1.7762	1.3117	7.4881	1.7919	1.3381	7.5501	1.9601	1.1388	3.8605
Row 27	27	0700-0800	2.2217	2.8382	0.5555	1.7582	2.7887	3.8551	2.6681	6.3005	3.6104	1.3921	5.2892	2.9304
Row 27	27	0800-0900	2.2217	2.8382	0.5555	1.7582	2.7887	3.8551	2.6681	6.3005	3.6104	1.3921	5.2892	2.9304
Row 27	27	0900-1000	2.3382	7.8247	4.4448	1.9988	6.6887	3.7981	1.7001	5.6995	3.2284	1.4441	4.8281	2.7484
Row 27	27	1000-1100	2.3382	7.8247	4.4448	1.9988	6.6887	3.7981	1.7001	5.6995	3.2284	1.4441	4.8281	2.7484
Row 27	27	1100-1200	2.5438	7.7202	4.1905	2.1551	6.1117	3.4775	1.7651	5.0005	2.6844	1.4701	4.1981	2.1601
Row 27	27	1200-1300	2.4267	4.9967	2.8259	2.0381	4.2167	2.3961	1.4881	3.0491	1.7381	1.2381	2.5251	1.4384
Row 27	27	1300-1400	2.4267	4.9967	2.8259	2.0381	4.2167	2.3961	1.4881	3.0491	1.7381	1.2381	2.5251	1.4384
Row 27	27	1400-1500	2.4101	4.9967	2.8259	2.0381	4.2167	2.3961	1.4881	3.0491	1.7381	1.2381	2.5251	1.4384
Row 27	27	1500-1600	2.2882	5.2387	2.9705	1.8862	4.3321	2.4661	1.4551	3.3226	1.8998	1.1601	2.7298	1.5451
Row 27	27	1600-1700	2.2882	5.2387	2.9705	1.8862	4.3321	2.4661	1.4551	3.3226	1.8998	1.1601	2.7298	1.5451
Row 27	27	1700-1800	1.8404	1.4804	0.9667	1.2106	3.0251	1.2381	1.2381	3.6381	1.6381	1.6381	1.6381	1.6381
Row 27	27	1800-1900	1.4381	0.9667	0.2789	1.2216	0.3667	1.9205	1.2111	3.3776	1.9314	1.0021	2.8381	1.6104
Row 27	27	1900-2000	1.2882	2.7687	1.5719	1.0688	2.3441	1.3335	1.2381	2.8005	1.5984	1.0681	2.3441	1.3335
Row 27	27	2000-2100	1.1408	0.3167	0.1005	1.1408	0.8771	1.0688	1.2381	2.8005	1.5984	1.0681	2.3441	1.3335
Row 27	27	2100-2200	1.1408	0.3167	0.1005	0.9881	0.6887	0.9516	1.2481	2.0881	1.1881	0.7701	1.7981	1.0204
Row 27	27	2200-2300	1.1408	1.8707	1.0688	1.0687	1.6467	0.2906	1.2381	2.0881	1.1881	1.1101	1.8881	1.0204
Row 27	27	2300-0000	1.1408	1.8707	1.0688	1.0687	1.6467	0.2906	1.2381	2.0881	1.1881	1.1101	1.8881	1.0204
Row 27	27	0000-0100	0.9545	0.8005	0.5708	0.8235	0.3381	0.5065	1.0061	6.9107	6.1159	8.4202	7.5101	5.7105
Row 27	27	0100-0200	1.0712	6.2381	4.3908	1.9711	3.8538	0.3608	1.0021	5.9847	4.1155	8.5861	5.6007	4.3505
Row 27	27	0200-0300	1.0712	6.2381	4.3908	1.9711	3.8538	0.3608	1.0021	5.9847	4.1155	8.5861	5.6007	4.3505
Row 27	27	0300-0400	1.3101	4.0998	3.1908	1.1408	3.8888	2.6888	1.0881	3.6967	2.5505	9.1201	3.1387	2.1505
Row 27	27	0400-0500	1.3862	4.5981	3.5116	1.1712	4.3881	3.0251	1.1081	4.1127	2.4818	9.2661	3.2667	2.3905
Row 27	27	0500-0600	1.6382	8.0568	5.9861	1.1408	1.2481	3.0068	1.1121	1.7381	4.9007	9.5602	8.6967	4.8905
Row 27	27	0600-0700	1.3862	4.5981	3.5116	1.1408	3.8888	2.6888	1.0881	3.6967	2.5505	9.1201	3.1387	2.1505
Row 27	27	0700-0800	1.4681	4.0107	2.7761	1.2281	0.3667	0.9246	1.1551	3.1661	2.1881	9.4776	2.6981	1.8004
Row 27	27	0800-0900	1.3862	4.5981	3.5116	1.1408	3.8888	2.6888	1.0881	3.6967	2.5505	9.1201	3.1387	2.1505
Row 27	27	0900-1000	1.3862	4.5981	3.5116	1.1408	3.8888	2.6888	1.0881	3.6967	2.5505	9.1201	3.1387	2.1505
Row 27	27	1000-1100	1.7101	3.8407	2.6881	1.4561	3.2687	2.2505	1.1551	2.5986	1.7681	9.6111	2.1681	1.4904
Row 27	27	1100-1200	1.6546	3.5447	2.4458	1.4905	2.9887	2.0881	1.1771	2.4898	1.7294	9.6861	2.0881	1.4284
Row 27	27	1200-1300	1.3862	4.5981	3.5116	1.1408	3.8888	2.6888	1.0881	3.6967	2.5505	9.1201	3.1387	2.1505
Row 27	27	1300-1400	3.4712	5.9406	4.1905	2.1551	6.1117	3.4775	1.7651	4.7116	3.2908	2.9601	3.9201	2.7104
Row 27	27	1400-1500	3.5101	6.2007	4.4288	2.9407	2.5007	3.9981	2.8005	4.9841	3.4101	2.3981	4.1201	2.8904
Row 27	27	1500-1600	3.5101	6.2007	4.4288	2.9407	2.5007	3.9981	2.8005	4.9841	3.4101	2.3981	4.1201	2.8904
Row 27	27	1600-1700	3.4501	6.4007	4.4101	2.9008	3.5887	3.7115	2.9681	5.4906	3.7961	2.4801	4.6081	3.1805
Row 27	27	1700-1800	2.9712	6.7767	3.9961	2.4712	4.8117	3.3226	3.0001	5.8441	4.0001	2.4801	4.8481	3.3404
Row 27	27	1800-1900	2.9712	6.7767	3.9961	2.4712	4.8117	3.3226	3.0001	5.8441	4.0001	2.4801	4.8481	3.3404
Row 27	27	1900-2000	2.5438	7.7202	4.1905	2.1551	6.1117	3.4775	1.7651	5.0005	2.6844	1.4701	4.1981	2.1601
Row 27	27	2000-2100	2.5438	7.7202	4.1905	2.1551	6.1117	3.4775	1.7651	5.0005	2.6844	1.4701	4.1981	2.1601
Row 27	27	2100-2200	2.1701	2.6667	2.0404	2.2381	2.5887	1.7108	3.5117	4.0776	2.8114	3.0661	3.5451	2.4504
Row 27	27	2200-2300	2.1701	2.6667	2.0404	2.2381	2.5887	1.7108	3.5117	4.0776	2.8114	3.0661	3.5451	2.4504
Row 27	27	2300-0400	2.1701	2.6667	2.0404	2.2381	2.5887	1.7108	3.5117	4.0776	2.8114	3.0661	3.5451	2.4504
Row 27	27	0000-0100	1.2882	1.3281	1.3316	1.0881	1.1551	1.1212	0.9291	9.8837	9.8928	7.7881	8.4271	8.0776
Row 27	27	0100-0200	1.4501	1.4501	1.4501	1.4501	1.4501	1.4501	1.4501	1.4501	1.4501	1.4501	1.4501	1.4501
Row 27	27	0200-0300	1.6101	8.8101	8.8401	1.4201	5.5501	7.9901	0.7701	5.3001	1.5801	8.5801	5.4401	1.4501
Row 27	27	0300-0400	1.9381	7.7501	1.7501	1.7501	6.7501	6.5901	1.0401	4.4401	4.3281	8.8201	3.7801	0.7701
Row 27	27	0400-0500	1.9381	7.7501	1.7501	1.7501	6.7501	6.5901	1.0401	4.4401	4.3281	8.8201	3.7801	0.7701
Row 27	27	0500-0600	1.7712	1.4101	1.3801	1.5021	2.0201	1.1776	0.7701	8.5337	8.3398	8.8401	7.0801	8.8901
Row 27	27	0600-0700	1.7712	1.4101	1.3801	1.5021	2.0201	1.1776	0.7701	8.5337	8.3398	8.8401	7.0801	8.8901
Row 27	27	0700-0800	1.7712	1.4101	1.3801	1.5021	2.0201	1.1776	0.7701	8.5337	8.3398	8.8401	7.0801	8.8901
Row 27	27	0800-0900	1.8501	7.7201	1.7501	1.7501	6.7501	6.0901	0.9201	4.1506	4.0801	8.5301	3.4401	0.9201
Row 27	27	0900-1000	2.0882	7.2887	7.1101	1.7601	6.2201	6.0001	1.1281	3.9001	3.8821	9.3101	3.2601	3.1881
Row 27	27	1000-1100	2.0882	7.2887	7.1101	1.7601	6.2201	6.0001	1.1281	3.9001	3.8821	9.3101	3.2601	3.1881
Row 27	27	1100-1200	2.3601	6.6701	1.9601	1.9601	6.5501	5.5301	1.1881	4.1666	3.4201	7.9401	2.8101	2.8101
Row 27	27	1200-1300	3.2201	9.1381	0.8401	2.6881	7.6201	7.4708	1.4581	4.1111	4.0081	1.2001	3.1601	3.1601
Row 27	27	1300-1400	3.1901	9.4501	8.4501	2.6381	7.9701	7.7808	1.4681	4.4391	4.4201	1.2601	3.6201	3.5901
Row 27	27	1400-1500	3.1901	9.4501	8.4501	2.6381	7.9701	7.7808	1.4681	4.4391	4.4201	1.2601	3.6201	3.5901
Row 27	27	1500-1600	3.0381	9.6381	8.4701	2.6401	8.9101	7.7401	1.4581	4.6776	4.5776	1.1181	3.7701	3.7101
Row 27	27	1600-1700	3.1901	9.4501	8.4501	2.6381	7.9701	7.7808	1.4681	4.4391	4.4201	1.2601	3.6201	3.5901
Row 27	27	1700-1800	3.1901	9.4501										

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Long Yi North Underground Quarry
Open Road 24 hour Emission Factors for
AEDMCD model (Metric) Year 2033

Row Name	Row ID	Hour	No Emision						No Emision					
			MonthlyHourMin			MonthlyHourAverage			MonthlyHourMin			MonthlyHourAverage		
			g/hv/min	g/min	tonne/hour	g/hv/min	g/min	tonne/hour	g/hv/min	g/min	tonne/hour	g/hv/min	g/min	tonne/hour
Row 41	41	0000-0100	2477.0	413.51	2.4770	2333.0	388.83	2.3330	1775.0	295.83	1.7750	1424.0	237.33	1.4240
Row 41	41	0100-0200	3111.0	433.08	3.0110	2766.0	374.48	3.5110	1506.0	1.4750	1.3808	8.9502	1.2507	1.1708
Row 41	41	0200-0300	3677.0	421.08	3.6570	3228.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	0300-0400	4333.0	431.08	4.3330	3883.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	0400-0500	4999.0	441.08	4.9407	4552.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	0500-0600	5665.0	439.08	5.6665	5217.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	0600-0700	6331.0	439.08	6.3331	5882.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	0700-0800	7000.0	439.08	7.0000	6547.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	0800-0900	7666.0	439.08	7.6666	7212.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	0900-1000	8332.0	439.08	8.3332	7877.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	1000-1100	9000.0	439.08	9.0000	8542.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	1100-1200	9666.0	439.08	9.6666	9207.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	1200-1300	10332.0	439.08	10.3332	9872.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	1300-1400	11000.0	439.08	11.0000	10537.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	1400-1500	11666.0	439.08	11.6666	11202.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	1500-1600	12332.0	439.08	12.3332	11867.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	1600-1700	13000.0	439.08	13.0000	12532.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	1700-1800	13666.0	439.08	13.6666	13197.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	1800-1900	14332.0	439.08	14.3332	13862.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	1900-2000	15000.0	439.08	15.0000	14527.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	2000-2100	15666.0	439.08	15.6666	15192.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	2100-2200	16332.0	439.08	16.3332	15857.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	2200-2300	17000.0	439.08	17.0000	16522.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	2300-0000	17666.0	439.08	17.6666	17187.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	0000-0100	18332.0	439.08	18.3332	17852.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	0100-0200	19000.0	439.08	19.0000	18517.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	0200-0300	19666.0	439.08	19.6666	19182.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	0300-0400	20332.0	439.08	20.3332	19847.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	0400-0500	21000.0	439.08	21.0000	20512.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	0500-0600	21666.0	439.08	21.6666	21177.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	0600-0700	22332.0	439.08	22.3332	21842.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	0700-0800	23000.0	439.08	23.0000	22507.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	0800-0900	23666.0	439.08	23.6666	23172.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	0900-1000	24332.0	439.08	24.3332	23837.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	1000-1100	25000.0	439.08	25.0000	24502.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	1100-1200	25666.0	439.08	25.6666	25167.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	1200-1300	26332.0	439.08	26.3332	25832.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	1300-1400	27000.0	439.08	27.0000	26497.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	1400-1500	27666.0	439.08	27.6666	27162.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	1500-1600	28332.0	439.08	28.3332	27827.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	1600-1700	29000.0	439.08	29.0000	28492.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	1700-1800	29666.0	439.08	29.6666	29157.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	1800-1900	30332.0	439.08	30.3332	29822.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	1900-2000	31000.0	439.08	31.0000	30487.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	2000-2100	31666.0	439.08	31.6666	31152.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	2100-2200	32332.0	439.08	32.3332	31817.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	2200-2300	33000.0	439.08	33.0000	32482.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	2300-0000	33666.0	439.08	33.6666	33147.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	0000-0100	34332.0	439.08	34.3332	33812.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	0100-0200	35000.0	439.08	35.0000	34477.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	0200-0300	35666.0	439.08	35.6666	35142.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	0300-0400	36332.0	439.08	36.3332	35807.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	0400-0500	37000.0	439.08	37.0000	36472.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	0500-0600	37666.0	439.08	37.6666	37137.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	0600-0700	38332.0	439.08	38.3332	37802.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	0700-0800	39000.0	439.08	39.0000	38467.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	0800-0900	39666.0	439.08	39.6666	39132.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	0900-1000	40332.0	439.08	40.3332	39797.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	1000-1100	41000.0	439.08	41.0000	40462.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	1100-1200	41666.0	439.08	41.6666	41127.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	1200-1300	42332.0	439.08	42.3332	41792.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	1300-1400	43000.0	439.08	43.0000	42457.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	1400-1500	43666.0	439.08	43.6666	43122.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	1500-1600	44332.0	439.08	44.3332	43787.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	1600-1700	45000.0	439.08	45.0000	44452.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	1700-1800	45666.0	439.08	45.6666	45117.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	1800-1900	46332.0	439.08	46.3332	45782.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	1900-2000	47000.0	439.08	47.0000	46447.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	2000-2100	47666.0	439.08	47.6666	47112.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	2100-2200	48332.0	439.08	48.3332	47777.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	2200-2300	49000.0	439.08	49.0000	48442.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	2300-0000	49666.0	439.08	49.6666	49107.0	3.7005	3.4770	1181.0	1.3507	1.2260	1.0274	1.1170	1.0936
Row 41	41	0000-0100	50332.0											

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Xing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for AERMOD model (May)	Year 2033

Row Name	Road ID	Hour	NO _x Emission						NO ₂ Emission					
			Month/Hours			Month/Hours			Month/Hours			Month/Hours		
			g/km/h	g/m ²	g/km ²	g/km/h	g/m ²	g/km ²	g/km/h	g/m ²	g/km ²	g/km/h	g/m ²	g/km ²
Road 44	44	0900-0900	2.27E-02	0.21E-01	2.23E-06	1.07E-02	3.04E-07	1.68E-06	9.56E-02	2.71E-06	1.67E-05	7.83E-02	2.24E-08	1.32E-05
Road 44	44	0900-1000	1.41E-02	3.86E-07	1.02E-08	1.06E-02	2.73E-07	1.20E-06	1.01E-02	2.89E-06	4.93E-06	8.38E-02	1.99E-08	1.24E-05
Road 44	44	1000-1030	1.57E-02	3.14E-07	1.34E-06	1.06E-02	2.73E-07	1.20E-06	1.01E-02	2.89E-06	4.93E-06	8.38E-02	1.99E-08	1.24E-05
Road 44	44	1100-1200	1.50E-02	2.86E-07	1.76E-05	1.25E-02	2.38E-07	1.47E-06	1.00E-02	2.02E-07	2.57E-05	6.68E-02	1.65E-08	1.00E-05
Road 44	44	1200-1230	1.82E-02	4.52E-07	2.78E-06	1.52E-02	3.78E-07	2.32E-06	1.18E-02	3.98E-06	1.81E-05	8.63E-02	2.96E-08	1.44E-05
Road 44	44	1300-1400	1.86E-02	3.86E-07	1.75E-05	1.52E-02	3.78E-07	2.32E-06	1.18E-02	3.98E-06	1.81E-05	8.63E-02	2.96E-08	1.44E-05
Road 44	44	1400-1500	1.78E-02	5.04E-07	3.11E-06	1.54E-02	4.18E-07	2.57E-06	1.29E-02	4.23E-06	2.00E-07	9.70E-02	6.25E-08	1.01E-05
Road 44	44	1500-1600	1.79E-02	4.93E-07	3.05E-06	1.48E-02	4.03E-07	2.49E-06	1.20E-02	4.31E-06	9.53E-05	9.63E-02	6.69E-08	1.01E-05
Road 44	44	1600-1700	1.73E-02	3.97E-07	2.85E-06	1.45E-02	3.85E-07	2.41E-06	1.17E-02	4.19E-06	9.01E-05	9.29E-02	6.45E-08	1.01E-05
Road 44	44	1700-1800	1.19E-02	7.31E-07	5.19E-06	1.82E-02	6.08E-07	3.75E-06	1.44E-02	4.80E-06	9.97E-05	1.17E-01	3.91E-08	2.44E-05
Road 44	44	1800-1900	2.23E-02	8.17E-07	5.05E-06	1.90E-02	6.95E-07	4.29E-06	1.49E-02	5.45E-06	3.37E-05	1.24E-01	5.69E-08	2.44E-05
Road 44	44	1900-2000	2.38E-02	8.76E-07	5.39E-06	1.95E-02	7.38E-07	4.58E-06	1.54E-02	5.84E-06	3.61E-05	1.31E-01	6.04E-08	2.44E-05
Road 44	44	2000-2100	9.08E-03	2.06E-07	2.27E-06	8.78E-03	1.78E-07	1.10E-06	9.98E-02	2.26E-06	1.39E-05	4.54E-02	1.91E-08	1.01E-05
Road 44	44	2100-2130	7.79E-03	1.79E-07	1.88E-06	8.76E-03	1.52E-07	9.42E-06	9.02E-02	2.03E-06	1.26E-05	7.71E-02	1.74E-08	1.00E-05
Road 44	44	2200-2300	7.79E-03	1.79E-07	1.88E-06	8.76E-03	1.52E-07	9.42E-06	9.02E-02	2.03E-06	1.26E-05	7.71E-02	1.74E-08	1.00E-05
Road 44	44	2300-0000	8.44E-03	1.83E-07	8.55E-07	7.75E-03	1.26E-07	3.39E-07	9.52E-06	1.56E-06	9.55E-06	8.03E-02	1.92E-08	6.18E-05
Road 44	44	0000-0100	7.88E-03	5.90E-07	2.78E-07	6.75E-03	5.06E-08	6.22E-07	8.86E-06	5.44E-07	6.17E-06	3.96E-02	5.54E-07	6.18E-05
Road 44	44	0100-0200	8.44E-03	4.11E-07	2.85E-07	7.75E-03	1.26E-07	3.39E-07	9.52E-06	1.56E-06	9.55E-06	8.03E-02	1.92E-08	6.18E-05
Road 44	44	0200-0300	9.11E-03	3.24E-06	9.99E-07	7.54E-03	2.82E-07	3.47E-07	9.18E-06	3.26E-07	4.02E-06	8.00E-02	2.78E-07	3.47E-07
Road 44	44	0300-0400	9.75E-03	3.74E-06	3.87E-07	8.43E-03	2.37E-07	3.91E-07	9.95E-06	3.62E-07	4.23E-06	7.89E-02	2.21E-07	3.91E-07
Road 44	44	0400-0500	9.75E-03	3.74E-06	3.87E-07	8.43E-03	2.37E-07	3.91E-07	9.95E-06	3.62E-07	4.23E-06	7.89E-02	2.21E-07	3.91E-07
Road 44	44	0500-0600	1.14E-02	6.07E-07	4.47E-07	9.58E-03	5.10E-06	6.20E-07	1.00E-02	5.33E-07	5.56E-06	1.18E-01	4.36E-07	5.10E-06
Road 44	44	0600-0700	1.19E-02	3.96E-07	4.89E-06	1.00E-02	1.14E-07	1.40E-06	1.01E-02	1.51E-06	1.41E-05	8.10E-02	8.13E-07	1.19E-02
Road 44	44	0700-0800	1.26E-02	4.26E-07	5.28E-06	1.05E-02	1.24E-07	1.55E-06	1.07E-02	1.67E-06	1.57E-05	8.60E-02	8.60E-07	1.26E-02
Road 44	44	0800-0900	1.24E-02	3.31E-07	4.08E-06	1.04E-02	2.78E-07	3.34E-06	9.52E-06	2.54E-06	1.13E-05	7.80E-02	2.08E-07	1.24E-02
Road 44	44	0900-1000	1.32E-02	2.98E-07	3.67E-06	1.15E-02	2.51E-07	3.09E-06	1.01E-02	2.20E-06	7.17E-05	8.34E-02	1.82E-07	1.32E-02
Road 44	44	1000-1100	1.52E-02	1.52E-07	1.88E-06	1.21E-02	3.09E-07	3.75E-06	1.07E-02	1.87E-06	1.87E-05	9.40E-02	2.16E-07	1.52E-02
Road 44	44	1100-1200	1.45E-02	4.20E-07	7.30E-06	1.21E-02	2.15E-07	2.66E-06	1.06E-02	1.95E-06	1.95E-05	9.32E-02	1.54E-07	1.45E-02
Road 44	44	1200-1300	1.76E-02	3.84E-07	7.03E-06	1.42E-02	3.20E-07	3.95E-06	1.19E-02	2.59E-06	1.95E-05	9.70E-02	2.11E-06	1.76E-02
Road 44	44	1300-1400	1.76E-02	3.84E-07	7.03E-06	1.42E-02	3.20E-07	3.95E-06	1.19E-02	2.59E-06	1.95E-05	9.70E-02	2.11E-06	1.76E-02
Road 44	44	1400-1500	1.81E-02	3.40E-07	3.90E-06	1.49E-02	3.54E-07	4.30E-06	1.20E-02	2.89E-06	2.52E-05	9.72E-02	2.31E-07	1.81E-02
Road 44	44	1500-1600	1.72E-02	4.18E-07	8.15E-06	1.41E-02	3.42E-07	4.21E-06	1.20E-02	2.81E-06	5.88E-06	8.80E-02	2.38E-07	1.72E-02
Road 44	44	1600-1700	1.63E-02	3.63E-07	7.42E-06	1.35E-02	3.16E-07	3.82E-06	1.17E-02	2.52E-06	5.47E-06	8.34E-02	2.16E-07	1.63E-02
Road 44	44	1700-1800	1.47E-02	3.50E-07	3.95E-06	1.22E-02	3.01E-07	3.44E-06	1.11E-02	3.39E-06	3.17E-05	7.34E-02	2.76E-07	1.47E-02
Road 44	44	1800-1900	1.41E-02	4.57E-07	6.83E-06	1.20E-02	2.89E-07	4.78E-06	1.09E-02	3.53E-06	3.45E-05	9.05E-02	2.94E-08	1.41E-02
Road 44	44	1900-2000	1.40E-02	4.08E-07	6.40E-06	1.19E-02	2.86E-07	4.68E-06	1.08E-02	3.49E-06	3.39E-05	8.94E-02	2.91E-08	1.40E-02
Road 44	44	2000-2100	9.95E-03	1.81E-07	2.23E-07	7.75E-03	1.57E-07	1.95E-07	1.02E-02	2.05E-06	5.33E-05	6.65E-02	1.74E-05	2.10E-02
Road 44	44	2100-2200	6.55E-03	1.53E-07	8.67E-06	6.67E-03	1.34E-07	1.69E-06	9.21E-06	1.85E-06	2.27E-05	8.88E-02	1.58E-06	6.55E-03
Road 44	44	2200-2300	6.55E-03	1.53E-07	8.67E-06	6.67E-03	1.34E-07	1.69E-06	9.21E-06	1.85E-06	2.27E-05	8.88E-02	1.58E-06	6.55E-03
Road 44	44	2300-0000	9.30E-03	3.21E-07	4.46E-06	1.75E-03	1.05E-07	1.29E-06	9.74E-07	1.42E-06	1.75E-05	9.32E-02	2.00E-06	9.30E-03
Road 44	44	0000-0100	7.23E-03	5.10E-07	5.10E-07	6.18E-03	2.35E-06	3.68E-07	7.06E-06	7.68E-07	1.98E-06	5.82E-02	2.21E-07	4.41E-03
Road 44	44	0100-0200	7.23E-03	5.10E-07	5.10E-07	6.18E-03	2.35E-06	3.68E-07	7.06E-06	7.68E-07	1.98E-06	5.82E-02	2.21E-07	4.41E-03
Road 44	44	0200-0300	9.51E-03	1.54E-06	3.99E-07	4.71E-03	1.34E-06	2.49E-06	7.40E-07	1.34E-06	4.48E-06	8.24E-02	1.10E-07	1.54E-03
Road 44	44	0300-0400	8.11E-03	3.13E-06	2.47E-07	7.03E-03	1.13E-06	2.10E-07	7.52E-07	1.08E-07	2.01E-06	6.34E-02	8.95E-08	1.61E-03
Road 44	44	0400-0500	1.01E-02	3.57E-06	2.85E-07	7.84E-03	1.40E-06	2.62E-07	8.91E-07	1.21E-06	1.61E-06	7.16E-02	1.16E-07	1.01E-02
Road 44	44	0500-0600	1.08E-02	2.85E-06	4.88E-07	9.13E-03	2.48E-06	4.60E-07	8.22E-07	1.23E-07	1.41E-06	6.66E-02	8.91E-07	1.08E-02
Road 44	44	0600-0700	1.15E-02	1.68E-06	1.24E-06	9.58E-03	5.97E-06	1.03E-06	8.30E-07	8.43E-07	8.96E-06	6.08E-02	3.98E-07	7.47E-02
Road 44	44	0700-0800	1.23E-02	1.44E-07	1.68E-06	1.03E-03	1.71E-07	2.25E-06	1.01E-06	1.05E-06	1.87E-05	6.89E-02	8.60E-07	1.23E-02
Road 44	44	0800-0900	1.18E-02	1.89E-06	1.89E-06	9.85E-03	1.89E-06	3.58E-06	7.75E-06	1.01E-06	1.01E-06	6.17E-02	8.60E-07	1.18E-02
Road 44	44	0900-1000	1.32E-02	1.48E-07	5.75E-06	1.11E-02	1.25E-07	2.31E-06	8.34E-07	9.33E-07	1.75E-05	6.85E-02	1.67E-07	1.32E-02
Road 44	44	1000-1100	1.49E-02	1.44E-07	1.68E-06	1.27E-02	1.23E-07	2.29E-06	8.85E-06	8.54E-07	1.59E-05	3.74E-02	1.73E-07	1.49E-02
Road 44	44	1100-1200	1.43E-02	1.31E-07	1.89E-06	1.13E-02	1.19E-07	2.25E-06	8.85E-06	8.54E-07	1.59E-05	3.74E-02	1.73E-07	1.43E-02
Road 44	44	1200-1300	1.17E-02	1.68E-07	1.11E-06	9.70E-03	1.39E-07	2.58E-06	8.04E-07	1.15E-06	2.14E-05	6.46E-02	9.75E-07	1.17E-02
Road 44	44	1300-1400	1.66E-02	1.66E-07	1.08E-06	9.88E-03	1.39E-07	2.52E-06	8.07E-07	1.16E-06	2.19E-05	6.45E-02	9.17E-07	1.66E-02
Road 44	44	1400-1500	1.22E-02	1.30E-07	1.34E-06	9.89E-03	1.19E-07	2.30E-06	8.04E-07	1.15E-06	2.14E-05	6.46E-02	9.75E-07	1.22E-02
Road 44	44	1500-1600	1.18E-02	1.87E-07	1.47E-06	9.58E-03	1.50E-07	2.82E-06	8.29E-07	1.30E-06	2.14E-05	6.45E-02	1.02E-06	1.18E-02
Road 44	44	1600-1700	1.30E-02	2.26E-07	4.19E-06	1.08E-02	1.87E-07	3.47E-07	8.17E-07	1.41E-06	5.53E-05	5.55E-02	1.13E-06	2.10E-02
Road 44	44	1700-1800	1.31E-02	2.11E-07	3.45E-06	1.08E-02	1.87E-07	3.47E-07	8.17E-07	1.41E-06	5.53E-05	5.55E-02	1.13E-06	2.10E-02
Road 44	44	1800-1900	7.01E-03	1.64E-07	1.50E-06	9.92E-03	1.39E-07	2.58E-06	5.75E-07	1.30E-06	2.57E-05	4.70E-02	1.10E-06	2.01E-02
Road 44	44	1900-2000	6.34E-03	1.91E-07	2.22E-06	9.33E-03	1.00E-07	1.86E-06	6.19E-07	1.10E-06	2.19E-05	4.97E-02	9.37E-07	1.70E-02
Road 44	44	2000-2100	6.34E-03	1.91E-07	2.22E-06	9.33E-03	1.00E-07	1.86E-06	6.19E-07	1.10E-06	2.19E-05	4.97E-02	9.37E-07	1.70E-02
Road 44	44	2100-2200	8.81E-03	7.01E-06	3.06E-06	4.15E-03	6.06E-08	1.13E-06	6.11E-06	8.90E-07	1.65E-05	5.12E-02	4.76E-07	8.81E-03
Road 44	44	2200-2300	8.71E-03	6.17E-06	2.59E-06	4.04E-03	5.76E-08	1.07E-06	6.33E-06	9.01E-07	1.67E-05	5.24E-02	7.47E-07	8.71E-03
Road 44	44	2300-0000	9.21E-03	2.96E-06	3.23E-06	4.56E-03	5.20E-08	1.04E-06	6.40E-06	9.10E-07	1.67E-05			

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Tsing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for	Year 2033
AERMOD model (May)	

Road Name	Road ID	Hour	No. Emission						No. Emission					
			Month/mile/hour			Month/hour/mile			Month/mile/hour			Month/hour/mile		
			g/km/h	g/m ³	tonne/hour	g/km/h	g/m ³	tonne/hour	g/km/h	g/m ³	tonne/hour	g/km/h	g/m ³	tonne
Road #7	47	1600-1700	3.00E-02	5.98E-07	1.83E-05	2.49E-02	4.95E-07	1.51E-05	1.13E-01	2.56E-06	7.99E-10	1.00E-02	2.07E-06	6.56E-05
Road #7	47	1700-1800	2.11E-02	4.26E-06	1.28E-05	1.48E-02	3.48E-07	1.23E-05	1.31E-01	2.48E-06	7.79E-10	8.83E-06	1.99E-06	6.21E-05
Road #7	47	1800-1900	1.33E-02	2.65E-06	8.00E-06	9.29E-03	2.29E-07	7.00E-06	1.31E-01	2.48E-06	7.79E-10	5.41E-06	1.19E-06	3.74E-05
Road #7	47	1900-2000	1.27E-02	2.57E-07	8.02E-06	1.02E-02	1.16E-07	6.75E-06	1.37E-02	1.57E-06	4.89E-10	6.22E-06	1.26E-06	3.94E-05
Road #7	47	2000-2100	1.12E-02	2.19E-06	6.75E-06	9.72E-03	2.13E-07	4.77E-06	7.98E-02	1.29E-06	3.82E-01	6.61E-06	1.40E-06	4.29E-05
Road #7	47	2100-2200	1.10E-02	2.16E-06	6.60E-06	9.79E-03	2.17E-07	4.80E-06	7.98E-02	1.29E-06	3.82E-01	6.71E-06	1.43E-06	4.36E-05
Road #7	47	2200-2300	8.83E-03	1.35E-07	4.22E-06	7.62E-03	1.17E-07	3.64E-06	9.39E-02	1.13E-06	3.54E-06	6.09E-10	6.31E-07	2.91E-05
Road #7	47	2300-0000	9.13E-03	1.04E-07	3.25E-06	7.84E-03	8.94E-08	2.79E-06	7.26E-02	8.29E-07	2.59E-06	5.96E-02	8.83E-07	2.91E-05
Road #48	48	0000-0100	8.13E-03	4.61E-07	1.39E-05	2.98E-02	5.98E-07	1.86E-05	1.13E-01	2.56E-06	7.99E-10	1.00E-02	2.07E-06	6.56E-05
Road #48	48	0100-0200	8.73E-03	4.89E-08	7.31E-07	7.47E-03	1.15E-08	6.76E-07	9.05E-02	5.00E-07	7.59E-10	7.54E-06	1.49E-07	4.19E-06
Road #48	48	0200-0300	9.40E-03	3.81E-08	5.73E-07	8.20E-03	3.33E-08	5.02E-07	9.26E-02	3.78E-07	5.89E-06	7.88E-07	3.20E-07	8.74E-06
Road #48	48	0300-0400	1.09E-02	3.23E-07	9.69E-06	9.78E-03	2.78E-08	4.06E-07	1.05E-02	1.44E-06	2.19E-06	2.55E-06	3.40E-06	9.40E-06
Road #48	48	0400-0500	1.02E-02	3.82E-08	5.78E-07	9.29E-03	3.26E-08	4.92E-07	9.82E-02	3.48E-07	5.20E-06	8.13E-02	2.85E-07	8.13E-06
Road #48	48	0500-0600	1.17E-02	3.19E-07	1.01E-06	9.89E-03	9.96E-08	9.03E-07	1.01E-01	4.14E-07	9.27E-06	3.02E-02	7.98E-07	2.26E-06
Road #48	48	0600-0700	1.31E-02	3.44E-07	1.12E-06	1.13E-02	1.34E-07	1.03E-06	1.01E-01	4.14E-07	9.27E-06	3.02E-02	7.98E-07	2.26E-06
Road #48	48	0700-0800	1.37E-02	3.44E-07	5.18E-10	1.10E-02	2.89E-07	4.35E-06	1.04E-01	2.74E-06	4.14E-06	8.52E-02	2.24E-06	3.96E-06
Road #48	48	0800-0900	1.25E-02	3.78E-07	5.74E-06	1.04E-02	3.18E-07	4.80E-06	9.38E-02	2.85E-06	4.39E-06	7.61E-02	2.33E-06	3.52E-06
Road #48	48	0900-1000	1.21E-02	3.78E-07	5.74E-06	1.04E-02	3.18E-07	4.80E-06	9.38E-02	2.85E-06	4.39E-06	7.61E-02	2.33E-06	3.52E-06
Road #48	48	1000-1100	1.55E-02	3.36E-07	5.02E-06	1.32E-02	3.84E-07	4.78E-06	1.05E-01	2.26E-06	3.41E-06	8.86E-02	1.89E-06	2.69E-06

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for AERMOD model (May)	Year 2033

Road Name	Road ID	NO _x Emission						NO ₂ Emission					
		Monthly/month		Monthly/month		Monthly/month		Monthly/month		Monthly/month		Monthly/month	
		g/m ² /h	g/m ³	tonne/hour	g/m ² /h	g/m ³	tonne/hour	g/m ² /h	g/m ³	tonne/hour	g/m ² /h	g/m ³	tonne/hour
Road S1	S1	0000-0100	7.81E-03	6.35E-08	1.18E-08	6.69E-03	5.54E-08	1.01E-02	8.91E-02	7.24E-07	1.35E-05	7.42E-02	6.93E-07
Road S1	S1	0100-0200	8.41E-03	4.49E-08	8.20E-07	7.13E-03	3.56E-08	7.02E-07	8.91E-02	7.77E-07	8.88E-08	7.42E-02	3.99E-07
Road S1	S1	0200-0300	8.41E-03	4.49E-08	8.20E-07	7.13E-03	3.56E-08	7.02E-07	8.91E-02	7.77E-07	8.88E-08	7.42E-02	3.99E-07
Road S1	S1	0300-0400	9.04E-03	2.92E-08	5.44E-07	8.39E-03	2.52E-08	4.07E-07	9.39E-02	8.52E-08	7.91E-02	7.42E-02	4.47E-07
Road S1	S1	0400-0500	1.01E-02	3.47E-08	6.44E-07	8.88E-03	2.99E-08	5.56E-07	9.39E-02	8.24E-07	6.03E-08	7.42E-02	2.88E-07
Road S1	S1	0500-0600	1.18E-02	3.18E-07	9.21E-07	9.31E-03	2.79E-08	5.19E-07	1.00E-01	7.79E-07	5.66E-08	7.42E-02	1.98E-07
Road S1	S1	0600-0700	1.27E-02	1.14E-07	2.69E-06	9.78E-03	1.21E-07	2.72E-06	1.01E-01	2.44E-06	2.31E-05	1.01E-06	1.88E-07
Road S1	S1	0700-0800	1.15E-02	3.19E-07	5.78E-06	1.05E-02	6.21E-07	4.96E-06	1.00E-01	2.57E-06	4.78E-05	8.45E-02	2.10E-06
Road S1	S1	0800-0900	1.15E-02	3.19E-07	5.78E-06	1.05E-02	6.21E-07	4.96E-06	1.00E-01	2.57E-06	4.78E-05	8.45E-02	2.10E-06
Road S1	S1	0900-1000	1.11E-02	3.06E-07	5.69E-06	1.10E-02	2.57E-08	4.89E-06	9.91E-02	2.31E-06	4.31E-05	8.17E-02	1.99E-06
Road S1	S1	1000-1100	1.46E-02	2.92E-07	5.42E-06	1.24E-02	4.89E-06	4.95E-06	1.00E-01	2.08E-06	3.87E-05	1.74E-02	3.32E-06
Road S1	S1	1100-1200	1.46E-02	2.92E-07	5.42E-06	1.24E-02	4.89E-06	4.95E-06	1.00E-01	2.08E-06	3.87E-05	1.74E-02	3.32E-06
Road S1	S1	1200-1300	3.31E-02	4.53E-07	8.74E-06	3.01E-02	3.78E-07	7.04E-06	1.14E-01	3.94E-06	7.75E-05	2.41E-01	3.28E-06
Road S1	S1	1300-1400	3.31E-02	4.53E-07	8.74E-06	3.01E-02	3.78E-07	7.04E-06	1.14E-01	3.94E-06	7.75E-05	2.41E-01	3.28E-06
Road S1	S1	1400-1500	3.31E-02	4.53E-07	8.74E-06	3.01E-02	3.78E-07	7.04E-06	1.14E-01	3.94E-06	7.75E-05	2.41E-01	3.28E-06
Road S1	S1	1500-1600	3.31E-02	4.53E-07	8.74E-06	3.01E-02	3.78E-07	7.04E-06	1.14E-01	3.94E-06	7.75E-05	2.41E-01	3.28E-06
Road S1	S1	1600-1700	3.31E-02	4.53E-07	8.74E-06	3.01E-02	3.78E-07	7.04E-06	1.14E-01	3.94E-06	7.75E-05	2.41E-01	3.28E-06
Road S1	S1	1700-1800	3.31E-02	4.53E-07	8.74E-06	3.01E-02	3.78E-07	7.04E-06	1.14E-01	3.94E-06	7.75E-05	2.41E-01	3.28E-06
Road S1	S1	1800-1900	2.77E-02	3.85E-07	7.71E-06	2.31E-02	3.62E-07	6.12E-06	1.47E-01	4.94E-06	9.21E-05	3.69E-01	7.84E-06
Road S1	S1	1900-2000	2.77E-02	3.85E-07	7.71E-06	2.31E-02	3.62E-07	6.12E-06	1.47E-01	4.94E-06	9.21E-05	3.69E-01	7.84E-06
Road S1	S1	2000-2100	2.77E-02	3.85E-07	7.71E-06	2.31E-02	3.62E-07	6.12E-06	1.47E-01	4.94E-06	9.21E-05	3.69E-01	7.84E-06
Road S1	S1	2100-2200	2.77E-02	3.85E-07	7.71E-06	2.31E-02	3.62E-07	6.12E-06	1.47E-01	4.94E-06	9.21E-05	3.69E-01	7.84E-06
Road S1	S1	2200-2300	2.77E-02	3.85E-07	7.71E-06	2.31E-02	3.62E-07	6.12E-06	1.47E-01	4.94E-06	9.21E-05	3.69E-01	7.84E-06
Road S1	S1	2300-0000	2.77E-02	3.85E-07	7.71E-06	2.31E-02	3.62E-07	6.12E-06	1.47E-01	4.94E-06	9.21E-05	3.69E-01	7.84E-06
Road S2	S2	0000-0100	6.16E-02	3.10E-08	1.59E-07	5.38E-02	2.70E-08	1.32E-07	3.32E-07	1.71E-07	5.98E-07	2.02E-02	1.02E-01
Road S2	S2	0100-0200	6.16E-02	3.10E-08	1.59E-07	5.38E-02	2.70E-08	1.32E-07	3.32E-07	1.71E-07	5.98E-07	2.02E-02	1.02E-01
Road S2	S2	0200-0300	6.16E-02	3.10E-08	1.59E-07	5.38E-02	2.70E-08	1.32E-07	3.32E-07	1.71E-07	5.98E-07	2.02E-02	1.02E-01
Road S2	S2	0300-0400	6.16E-02	3.10E-08	1.59E-07	5.38E-02	2.70E-08	1.32E-07	3.32E-07	1.71E-07	5.98E-07	2.02E-02	1.02E-01
Road S2	S2	0400-0500	6.16E-02	3.10E-08	1.59E-07	5.38E-02	2.70E-08	1.32E-07	3.32E-07	1.71E-07	5.98E-07	2.02E-02	1.02E-01
Road S2	S2	0500-0600	6.16E-02	3.10E-08	1.59E-07	5.38E-02	2.70E-08	1.32E-07	3.32E-07	1.71E-07	5.98E-07	2.02E-02	1.02E-01
Road S2	S2	0600-0700	6.16E-02	3.10E-08	1.59E-07	5.38E-02	2.70E-08	1.32E-07	3.32E-07	1.71E-07	5.98E-07	2.02E-02	1.02E-01
Road S2	S2	0700-0800	6.16E-02	3.10E-08	1.59E-07	5.38E-02	2.70E-08	1.32E-07	3.32E-07	1.71E-07	5.98E-07	2.02E-02	1.02E-01
Road S2	S2	0800-0900	6.16E-02	3.10E-08	1.59E-07	5.38E-02	2.70E-08	1.32E-07	3.32E-07	1.71E-07	5.98E-07	2.02E-02	1.02E-01
Road S2	S2	0900-1000	6.16E-02	3.10E-08	1.59E-07	5.38E-02	2.70E-08	1.32E-07	3.32E-07	1.71E-07	5.98E-07	2.02E-02	1.02E-01
Road S2	S2	1000-1100	7.82E-02	3.91E-07	1.39E-06	6.67E-02	3.31E-07	1.19E-06	2.89E-02	1.00E-06	5.12E-06	2.46E-01	8.54E-07
Road S2	S2	1100-1200	7.82E-02	3.91E-07	1.39E-06	6.67E-02	3.31E-07	1.19E-06	2.89E-02	1.00E-06	5.12E-06	2.46E-01	8.54E-07
Road S2	S2	1200-1300	8.06E-02	2.72E-07	1.39E-06	6.81E-02	2.59E-07	1.18E-06	2.88E-02	5.72E-07	4.98E-06	2.44E-01	8.21E-07
Road S2	S2	1300-1400	7.96E-02	3.02E-07	1.55E-06	6.71E-02	2.59E-07	1.31E-06	2.96E-02	1.13E-06	5.77E-06	2.50E-01	9.49E-07
Road S2	S2	1400-1500	7.96E-02	3.02E-07	1.55E-06	6.71E-02	2.59E-07	1.31E-06	2.96E-02	1.13E-06	5.77E-06	2.50E-01	9.49E-07
Road S2	S2	1500-1600	7.44E-02	2.92E-07	1.55E-06	6.21E-02	2.44E-07	1.25E-06	2.95E-02	1.16E-06	5.94E-06	2.46E-01	9.67E-07
Road S2	S2	1600-1700	7.66E-02	2.78E-07	1.43E-06	6.31E-02	2.29E-07	1.18E-06	2.88E-02	1.04E-06	5.31E-06	2.35E-01	8.53E-07
Road S2	S2	1700-1800	7.66E-02	2.78E-07	1.43E-06	6.31E-02	2.29E-07	1.18E-06	2.88E-02	1.04E-06	5.31E-06	2.35E-01	8.53E-07
Road S2	S2	1800-1900	5.91E-02	1.29E-07	6.99E-07	4.80E-02	1.10E-06	6.65E-07	2.39E-02	3.50E-07	8.62E-06	2.90E-01	1.47E-06
Road S2	S2	1900-2000	5.91E-02	1.29E-07	6.99E-07	4.80E-02	1.10E-06	6.65E-07	2.39E-02	3.50E-07	8.62E-06	2.90E-01	1.47E-06
Road S2	S2	2000-2100	5.91E-02	1.29E-07	6.99E-07	4.80E-02	1.10E-06	6.65E-07	2.39E-02	3.50E-07	8.62E-06	2.90E-01	1.47E-06
Road S2	S2	2100-2200	5.91E-02	1.29E-07	6.99E-07	4.80E-02	1.10E-06	6.65E-07	2.39E-02	3.50E-07	8.62E-06	2.90E-01	1.47E-06
Road S2	S2	2200-2300	5.91E-02	1.29E-07	6.99E-07	4.80E-02	1.10E-06	6.65E-07	2.39E-02	3.50E-07	8.62E-06	2.90E-01	1.47E-06
Road S2	S2	2300-0000	5.91E-02	1.29E-07	6.99E-07	4.80E-02	1.10E-06	6.65E-07	2.39E-02	3.50E-07	8.62E-06	2.90E-01	1.47E-06
Road S3	S3	0000-0100	8.15E-02	6.33E-08	3.24E-07	4.50E-02	5.07E-08	2.78E-07	2.16E-07	1.27E-07	3.97E-06	1.00E-06	1.29E-06
Road S3	S3	0100-0200	8.15E-02	6.33E-08	3.24E-07	4.50E-02	5.07E-08	2.78E-07	2.16E-07	1.27E-07	3.97E-06	1.00E-06	1.29E-06
Road S3	S3	0200-0300	8.15E-02	6.33E-08	3.24E-07	4.50E-02	5.07E-08	2.78E-07	2.16E-07	1.27E-07	3.97E-06	1.00E-06	1.29E-06
Road S3	S3	0300-0400	8.15E-02	6.33E-08	3.24E-07	4.50E-02	5.07E-08	2.78E-07	2.16E-07	1.27E-07	3.97E-06	1.00E-06	1.29E-06
Road S3	S3	0400-0500	8.15E-02	6.33E-08	3.24E-07	4.50E-02	5.07E-08	2.78E-07	2.16E-07	1.27E-07	3.97E-06	1.00E-06	1.29E-06
Road S3	S3	0500-0600	8.15E-02	6.33E-08	3.24E-07	4.50E-02	5.07E-08	2.78E-07	2.16E-07	1.27E-07	3.97E-06	1.00E-06	1.29E-06
Road S3	S3	0600-0700	8.15E-02	6.33E-08	3.24E-07	4.50E-02	5.07E-08	2.78E-07	2.16E-07	1.27E-07	3.97E-06	1.00E-06	1.29E-06
Road S3	S3	0700-0800	8.15E-02	6.33E-08	3.24E-07	4.50E-02	5.07E-08	2.78E-07	2.16E-07	1.27E-07	3.97E-06	1.00E-06	1.29E-06
Road S3	S3	0800-0900	8.15E-02	6.33E-08	3.24E-07	4.50E-02	5.07E-08	2.78E-07	2.16E-07	1.27E-07	3.97E-06	1.00E-06	1.29E-06
Road S3	S3	0900-1000	8.15E-02	6.33E-08	3.24E-07	4.50E-02	5.07E-08	2.78E-07	2.16E-07	1.27E-07	3.97E-06	1.00E-06	1.29E-06
Road S3	S3	1000-1100	1.24E-01	2.92E-07	6.02E-06	1.05E-01	2.19E-07	5.08E-06	4.97E-02	1.02E-06	2.28E-05	4.07E-01	8.48E-07
Road S3	S3	1100-1200	1.24E-01	2.92E-07	6.02E-06	1.05E-01	2.19E-07	5.08E-06	4.97E-02	1.02E-06	2.28E-05	4.07E-01	8.48E-07
Road S3	S3	1200-1300	1.46E-01	2.92E-07	6.02E-06	1.24E-01	2.59E-07	5.81E-06	4.97E-02	1.09E-06	2.54E-05	4.63E-01	9.30E-01
Road S3	S3	1300-1400	1.46E-01	2.92E-07	6.02E-06	1.24E-01	2.59E-07	5.81E-06	4.97E-02	1.09E-06	2.54E-05	4.63E-01	9.30E-01
Road S3	S3	1400-1500	1.28E-01	3.02E-07	7.43E-06	1.05E-01	2.64E-07	6.14E-06	4.99E-02	1.19E-06	2.76E-05	3.80E-01	9.75E-01
Road S3	S3	1500-1600	1.17E-01	3.19E-07	9.31E-06	9.31E-02	2.72E-07	5.22E-06	4.97E-02	1.12E-06	2.49E-05	4.07E-01	9.30E-01
Road S3	S3	1600-1700	1.19E-01	3.06E-07	9.17E-06	9.32E-02	2.67E-07	5.97E-06	4.48E-02	1.16E-06	2.50E-05	3.70E-01	9.58E-01
Road S3	S3	1700-1800	9.10E-02	2.45E-07	5.99E-06	7.69E-02	2.06E-07	4.74E-06	3.85E-02	1.04E-06	2.41E-05	3.18E-01	8.55E-01
Road S3	S3	1800-1900	9.10E-02	2.45E-07	5.99E-06	7.69E-02	2.06E-07	4.74E-06	3.85E-02	1.04E-06	2.41E-05	3.18E-01	8.55E-01
Road S3	S3	1900-2000	6.83E-02	1.17E-07	2.62E-06	4.96E-02	9.69E-08	2.22E-07	2.57E-02	3.98E-07	1.16E-06	2.14E-01	4.15E-01
Road S3	S3	2000-2100	6.83E-02	1.17E-07	2.62E-06	4.96E-02	9.69E-08	2.22E-07	2.57E-02	3.98E-07	1.16E-06	2.14E-01	4.15E-01
Road S3	S3	2100-2											

\\Fs000001\Environment - Projects\60722230\1.01\Other\Air Modelling\Appendix\Traffic\Appendix\Appendix 2 E 2 Emission Factor in 2022 SR.xlsx

North Underground Quarry	
24 hour Emission Factors for AERMOD model (May)	Year 2033

Road ID	Hour	NO ₂ Emission										NO Emission									
		Month/Jan					Month/Feb					Month/March					Month/April				
		g/km ³ /h	g/m ³ /h	g/m ³ /h	g/m ³ /h	g/m ³ /h	g/km ³ /h	g/m ³ /h	g/m ³ /h	g/m ³ /h	g/m ³ /h	g/km ³ /h	g/m ³ /h	g/m ³ /h	g/m ³ /h	g/m ³ /h	g/km ³ /h	g/m ³ /h	g/m ³ /h	g/m ³ /h	g/m ³ /h
154	94	0060-0900	1.056-1.01	3.946-0.77	8.906-0.92	3.33-0.77	7.602-0.9	4.166-1.55	1.556-0.35	0.746-0.1	1.366-0.2	7.602-0.9	4.166-1.55	1.556-0.35	0.746-0.1	1.366-0.2	7.602-0.9	4.166-1.55	1.556-0.35	0.746-0.1	1.366-0.2
154	94	0900-1200	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2	9.726-0.98	3.001-0.77	8.266-0.9
154	94	1200-1500	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2	1200-1500	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2
154	94	1500-1800	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2	1500-1800	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2
154	94	1800-2100	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2	1800-2100	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2
154	94	2100-2400	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2	2100-2400	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2
154	94	2400-0100	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2	2400-0100	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2
154	94	0100-0400	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2	0100-0400	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2
154	94	0400-0700	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2	0400-0700	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2
154	94	0700-1000	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2	0700-1000	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2
154	94	1000-1300	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2	1000-1300	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2
154	94	1300-1400	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2	1300-1400	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2
154	94	1400-1500	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2	1400-1500	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2
154	94	1500-1800	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2	1500-1800	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2
154	94	1800-2100	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2	1800-2100	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2
154	94	2100-2400	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2	2100-2400	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2
154	94	2400-0100	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2	2400-0100	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2
154	94	0100-0400	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2	0100-0400	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2
154	94	0400-0700	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2	0400-0700	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2
154	94	0700-1000	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2	0700-1000	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2
154	94	1000-1300	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2	1000-1300	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2
154	94	1300-1400	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2	1300-1400	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2
154	94	1400-1500	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2	1400-1500	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2
154	94	1500-1800	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2	1500-1800	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2
154	94	1800-2100	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2	1800-2100	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2
154	94	2100-2400	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2	2100-2400	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2
154	94	2400-0100	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2	2400-0100	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2
154	94	0100-0400	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2	0100-0400	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2
154	94	0400-0700	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2	0400-0700	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2
154	94	0700-1000	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2	0700-1000	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2
154	94	1000-1300	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2	1000-1300	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2
154	94	1300-1400	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2	1300-1400	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2
154	94	1400-1500	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2	1400-1500	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2
154	94	1500-1800	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2	1500-1800	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2
154	94	1800-2100	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2	1800-2100	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2
154	94	2100-2400	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2	2100-2400	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2
154	94	2400-0100	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2	2400-0100	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2
154	94	0100-0400	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2	0100-0400	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416-0.2
154	94	0400-0700	1.186-1.01	4.266-0.77	9.726-0.98	3.001-0.77	8.266-0.9	4.876-1.55	1.586-0.35	0.826-0.1	1.416										

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Xing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for	Year 2033
AERMOD model (May)	

Road Name	Road ID	Hour	No Emission				No Emission				
			Month/Hours				Month/Hours				
			g/km/h	g/m ² /h	g/m ² /h	km/h	g/km/h	g/m ² /h	g/m ² /h	km/h	
Road 103	103	1600-1700	1.224	0.712	4.786	0.154	0.542	3.976	0.750	7.986	2.196
Road 103	103	1700-1800	1.224	0.712	4.786	0.154	0.542	3.976	0.750	7.986	2.196
Road 103	103	1800-1900	1.224	0.712	4.786	0.154	0.542	3.976	0.750	7.986	2.196
Road 103	103	1900-2000	1.224	0.712	4.786	0.154	0.542	3.976	0.750	7.986	2.196
Road 103	103	2000-2100	1.224	0.712	4.786	0.154	0.542	3.976	0.750	7.986	2.196
Road 103	103	2200-2300	1.224	0.712	4.786	0.154	0.542	3.976	0.750	7.986	2.196
Road 103	103	2300-2400	0.836	0.032	2.462	0.058	0.585	8.818	0.128	2.126	5.445
Road 103	103	2400-0100	0.836	0.032	2.462	0.058	0.585	8.818	0.128	2.126	5.445
Road 104	104	0100-0200	1.302	0.876	10.986	0.196	0.542	4.108	8.306	7.192	3.206
Road 104	104	0200-0300	1.410	0.986	11.986	0.226	0.542	4.108	8.306	7.192	3.206
Road 104	104	0300-0400	1.410	0.986	11.986	0.226	0.542	4.108	8.306	7.192	3.206
Road 104	104	0400-0500	1.638	0.486	9.938	0.136	0.478	4.176	8.506	8.126	2.436
Road 104	104	0500-0600	1.746	0.986	8.976	0.146	0.478	7.776	8.506	8.476	2.436
Road 104	104	0600-0700	1.854	0.986	8.976	0.146	0.478	7.776	8.506	8.476	2.436
Road 104	104	0700-0800	1.926	0.576	9.236	0.166	0.478	8.386	8.786	8.966	2.116
Road 104	104	0800-0900	1.676	5.176	0.056	1.586	0.436	7.886	8.526	2.356	4.786
Road 104	104	0900-1000	1.410	0.986	8.976	0.146	0.478	7.776	8.506	8.476	2.436
Road 104	104	1000-1100	2.436	0.512	1.276	0.056	0.478	6.716	8.606	1.016	2.766
Road 104	104	1100-1200	3.986	0.596	0.476	1.996	0.426	8.676	1.016	2.766	4.416
Road 104	104	1200-1300	3.986	0.596	0.476	1.996	0.426	8.676	1.016	2.766	4.416
Road 104	104	1300-1400	1.506	1.346	6.406	0.126	0.236	2.586	7.506	7.626	1.606
Road 104	104	1400-1500	1.506	1.346	6.406	0.126	0.236	2.586	7.506	7.626	1.606
Road 104	104	1500-1600	1.506	1.346	6.406	0.126	0.236	2.586	7.506	7.626	1.606
Road 104	104	1600-1700	1.506	1.346	6.406	0.126	0.236	2.586	7.506	7.626	1.606
Road 104	104	1700-1800	1.506	1.346	6.406	0.126	0.236	2.586	7.506	7.626	1.606
Road 104	104	1800-1900	1.506	1.346	6.406	0.126	0.236	2.586	7.506	7.626	1.606
Road 104	104	1900-2000	1.506	1.346	6.406	0.126	0.236	2.586	7.506	7.626	1.606
Road 104	104	2000-2100	1.506	1.346	6.406	0.126	0.236	2.586	7.506	7.626	1.606
Road 104	104	2100-2200	1.506	1.346	6.406	0.126	0.236	2.586	7.506	7.626	1.606
Road 104	104	2200-2300	1.506	1.346	6.406	0.126	0.236	2.586	7.506	7.626	1.606
Road 104	104	2300-2400	0.876	0.036	0.996	0.506	7.056	1.446	5.186	7.236	4.776
Road 104	104	2400-0100	0.876	0.036	0.996	0.506	7.056	1.446	5.186	7.236	4.776
Road 104	104	0100-0200	2.426	0.396	1.856	0.926	3.796	1.586	1.096	2.156	9.216
Road 104	104	0200-0300	4.026	0.526	0.476	2.116	1.096	1.296	1.136	1.686	7.026
Road 104	104	0300-0400	4.026	0.526	0.476	2.116	1.096	1.296	1.136	1.686	7.026
Road 104	104	0400-0500	2.766	0.356	0.926	2.276	3.136	0.396	1.216	1.686	9.086
Road 104	104	0500-0600	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	0600-0700	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	0700-0800	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	0800-0900	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	0900-1000	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	1000-1100	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	1100-1200	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	1200-1300	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	1300-1400	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	1400-1500	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	1500-1600	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	1600-1700	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	1700-1800	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	1800-1900	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	1900-2000	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	2000-2100	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	2100-2200	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	2200-2300	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	2300-2400	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	2400-0100	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	0100-0200	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	0200-0300	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	0300-0400	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	0400-0500	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	0500-0600	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	0600-0700	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	0700-0800	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	0800-0900	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	0900-1000	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	1000-1100	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	1100-1200	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	1200-1300	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	1300-1400	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	1400-1500	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	1500-1600	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	1600-1700	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	1700-1800	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	1800-1900	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	1900-2000	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	2000-2100	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	2100-2200	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	2200-2300	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	2300-2400	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	2400-0100	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	0100-0200	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	0200-0300	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	0300-0400	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	0400-0500	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	0500-0600	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	0600-0700	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	0700-0800	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	0800-0900	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	0900-1000	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	1000-1100	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	1100-1200	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	1200-1300	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	1300-1400	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	1400-1500	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	1500-1600	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	1600-1700	3.946	0.886	0.866	0.476	2.586	1.246	1.346	1.306	2.766
Road 104	104	1700-1800	3.946	0.886	0.866	0.476	2.586	1.246	1.346		

\\Secure\Environment - Projects\60722220\1.01\Others\Air Modelling\Appendix Traffic\Appendix Appendix 2 E 2 Emission Factor in 2022 E R.xlsx

Tsing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for	Year 2033
AERMOD model (June)	

Road Name	Road ID	Hour	No. Emission						No. Emission					
			Month/mile			Month/hour			Month/mile			Month/hour		
			g/km/h	g/m	tonne/hour	g/km/h	g/m	tonne/hour	g/km/h	g/m	tonne/hour	g/km/h	g/m	tonne
Road 1	1	0000-0100	7838.03	827.09	5.80E+06	6.9863	9.23E-08	5.08E-06	8.78E-02	1.18E-06	6.511E-09	7.54E-02	1.01E-06	5.58E-06
Road 1	1	0100-0200	8243.05	1.27E+08	4.98E+06	7.25E-03	4.48E-08	3.54E-06	8.99E-02	7.77E-02	4.28E-08	7.68E-03	8.69E-06	1.69E-06
Road 1	1	0200-0300	9066.00	1.45E+08	5.79E+06	7.87E-03	4.04E-08	3.21E-06	9.40E-02	8.49E-02	4.59E-08	8.48E-03	9.64E-06	1.82E-06
Road 1	1	0300-0400	9600.00	1.64E+08	6.48E+06	8.43E-03	4.26E-08	2.35E-06	9.90E-02	4.60E-02	2.53E-07	7.89E-03	3.95E-07	2.17E-06
Road 1	1	0400-0500	1.04E+08	5.78E+08	3.17E+08	8.94E-03	4.94E-08	2.72E-06	9.41E-02	5.22E-02	2.87E-02	7.91E-03	4.94E-07	2.41E-06
Road 1	1	0500-0600	1.07E+08	6.14E+08	3.27E+08	9.21E-03	5.09E-08	2.81E-06	9.49E-02	5.41E-02	2.99E-02	8.24E-03	5.19E-07	2.48E-06
Road 1	1	0600-0700	1.13E+08	2.33E+07	1.26E+08	9.80E-03	2.01E-07	1.11E-05	9.91E-02	1.97E-06	1.09E+08	8.14E-02	1.67E-02	8.00E-06
Road 1	1	0700-0800	1.23E+08	2.42E+08	1.31E+08	2.86E+03	4.37E-07	2.41E-05	1.01E-03	4.19E-06	2.31E-04	8.41E-02	1.49E-06	1.92E-06
Road 1	1	0800-0900	1.18E+08	2.35E+08	1.26E+08	3.00E+03	4.81E-07	2.61E-05	9.89E-02	4.09E-06	2.26E-04	8.48E-02	1.46E-06	1.87E-06
Road 1	1	0900-1000	1.39E+08	2.53E+08	1.39E+08	3.13E+07	4.47E-07	2.46E-05	1.00E-03	3.98E-06	2.18E-08	8.26E-02	3.92E-06	1.80E-06
Road 1	1	1000-1100	1.50E+08	5.13E+07	2.85E+08	3.12E+07	4.33E-07	2.38E-05	1.04E-03	3.96E-06	1.96E+08	8.95E-02	8.95E-06	1.96E-06
Road 1	1	1100-1200	1.45E+08	4.59E+07	2.57E+08	3.22E+07	4.35E-07	2.35E-05	1.04E-03	3.96E-06	1.96E+08	8.95E-02	8.95E-06	1.96E-06
Road 1	1	1200-1300	1.56E+08	6.62E+07	3.66E+08	3.19E+07	5.47E-08	3.16E-05	1.00E-03	4.62E-06	2.54E+08	9.26E-02	9.96E-06	2.21E-06
Road 1	1	1300-1400	1.56E+08	6.80E+07	3.76E+08	3.16E+07	5.87E-08	3.26E-05	1.00E-03	4.70E-06	2.62E+08	9.34E-02	1.04E+06	2.27E-06
Road 1	1	1400-1500	1.62E+08	7.19E+07	3.96E+08	3.19E+07	6.31E-08	3.37E-05	1.00E-03	4.85E-06	2.72E+08	9.47E-02	1.09E+06	2.35E-06
Road 1	1	1500-1600	1.52E+08	7.21E+07	3.97E+08	3.13E+07	6.19E-08	3.41E-05	1.00E-03	5.18E-06	2.84E+08	9.22E-02	1.06E+06	2.30E-06
Road 1	1	1600-1700	1.62E+08	7.42E+08	4.25E+08	3.36E+08	7.01E-07	3.86E-05	1.11E-03	5.62E-06	3.09E+08	9.32E-02	4.76E+06	2.60E-06
Road 1	1	1700-1800	1.22E+08	6.81E+07	3.59E+08	3.13E+07	6.19E-08	3.41E-05	1.00E-03	5.18E-06	2.84E+08	9.22E-02	1.06E+06	2.30E-06
Road 1	1	1800-1900	9.29E+03	5.96E+03	3.28E+08	8.11E+03	5.20E-07	2.86E-05	8.66E-02	5.59E-06	3.06E+08	7.45E-02	4.78E+06	2.53E-06
Road 1	1	1900-2000	8.55E+03	5.49E+03	2.41E+08	7.47E+03	3.83E-07	2.11E-05	9.20E-02	4.71E-06	2.95E+08	7.49E-02	4.96E+06	2.38E-06
Road 1	1	2000-2100	8.38E+03	5.40E+03	2.34E+08	7.27E+03	3.76E-07	2.08E-05	9.09E-02	4.62E-06	2.91E+08	7.31E-02	4.81E+06	2.31E-06
Road 1	1	2100-2200	7.26E+03	4.68E+03	1.96E+08	6.10E+03	2.48E-07	1.39E-05	8.06E-02	3.50E-06	1.97E+08	7.58E-02	3.01E+06	1.66E-06
Road 1	1	2200-2300	7.09E+03	2.74E+03	1.54E+08	6.17E+03	2.38E-07	1.31E-05	9.16E-02	3.54E-06	1.96E+08	7.58E-02	3.00E-06	1.67E-06
Road 1	1	2300-2400	7.58E+03	2.94E+03	1.67E+08	6.59E+03	2.56E-07	1.39E-05	9.49E-02	3.69E-06	2.05E+08	7.81E-02	3.11E+06	1.72E-06
Road 2	2	0000-1000	9.52E+03	9.32E+06	6.78E+06	8.44E-03	1.17E-07	5.93E-06	9.64E-02	1.34E-06	6.78E-02	8.35E-02	1.15E-06	8.58E-06
Road 2	2	0100-0200	1.02E+08	1.93E+08	4.78E+06	9.80E-03	8.17E-08	4.14E-06	7.78E-02	8.83E-07	4.66E-06	8.39E-02	1.37E-06	8.84E-06
Road 2	2	0200-0300	1.12E+08	2.12E+08	5.14E+06	1.06E-02	8.93E-08	4.45E-06	8.28E-02	9.69E-07	5.05E-06	9.14E-02	1.51E-06	9.79E-06
Road 2	2	0300-0400	1.16E+08	2.19E+08	5.31E+06	1.02E-02	8.41E-08	2.74E-06	9.93E-02	5.27E-07	2.65E-05	9.53E-02	1.53E-06	2.29E-06
Road 2	2	0400-0500	1.25E+08	2.36E+08	5.70E+06	1.08E-02	6.28E-08	3.18E-06	1.00E-03	5.99E-07	3.04E-06	8.66E-02	1.65E-06	2.59E-06
Road 2	2	0500-0600	1.29E+08	2.45E+08	5.90E+06	1.10E-02	6.42E-08	3.30E-06	1.00E-03	6.29E-07	3.16E-06	8.84E-02	1.68E-06	2.64E-06
Road 2	2	0600-0700	1.36E+08	2.59E+08	6.16E+06	1.16E-02	2.57E-07	1.30E-05	1.05E-03	2.27E-06	1.18E-08	8.95E-02	1.44E-06	2.08E-06
Road 2	2	0700-0800	1.47E+08	6.57E+07	3.36E+06	1.26E+02	5.97E-06	2.83E-05	1.00E-03	4.88E-06	2.46E-04	9.17E-02	4.07E-06	5.63E-06
Road 2	2	0800-0900	1.52E+08	6.92E+07	3.52E+06	1.32E+02	6.17E-06	3.00E-05	1.00E-03	5.18E-06	2.55E-04	9.26E-02	4.14E-06	5.80E-06
Road 2	2	0900-1000	1.65E+08	7.29E+07	3.85E+06	1.39E+02	6.07E-06	3.07E-05	1.00E-03	4.82E-06	2.44E-04	9.12E-02	3.99E-06	5.62E-06
Road 2	2	1000-1100	1.83E+08	7.69E+07	4.38E+06	1.56E+02	5.98E-07	3.03E-05	1.13E-03	4.95E-06	2.29E-04	9.48E-02	4.65E-06	6.58E-06
Road 2	2	1100-1200	1.78E+08	7.49E+07	4.26E+06	1.52E+02	6.00E-07	3.03E-05	1.13E-03	4.85E-06	2.26E-04	9.48E-02	4.65E-06	6.58E-06
Road 2	2	1200-1300	1.95E+08	8.07E+07	4.74E+06	1.72E+02	7.49E-07	3.79E-05	1.10E-03	4.85E-06	2.25E-04	9.52E-02	4.18E-06	5.12E-06
Road 2	2	1300-1400	1.98E+08	8.08E+07	4.75E+06	1.72E+02	7.49E-07	3.79E-05	1.13E-03	5.13E-06	2.46E-04	9.63E-02	4.68E-06	6.38E-06
Road 2	2	1400-1500	2.00E+08	8.12E+07	4.77E+06	1.73E+02	7.51E-07	3.80E-05	1.13E-03	5.13E-06	2.46E-04	9.63E-02	4.68E-06	6.38E-06
Road 2	2	1500-1600	1.98E+08	8.04E+07	4.70E+06	1.61E+02	9.95E-07	4.02E-05	1.12E-03	5.05E-06	2.37E-04	9.48E-02	4.67E-06	6.36E-06
Road 2	2	1600-1700	1.95E+08	1.00E+06	5.09E+06	1.67E+02	8.55E-07	4.35E-05	1.12E-03	5.77E-06	2.56E-04	9.48E-02	4.67E-06	6.37E-06
Road 2	2	1700-1800	2.00E+08	1.04E+06	5.29E+06	1.70E+02	8.76E-07	4.45E-05	1.12E-03	5.77E-06	2.56E-04	9.48E-02	4.67E-06	6.37E-06
Road 2	2	1800-1900	1.99E+08	1.00E+06	5.29E+06	1.69E+02	8.76E-07	4.45E-05	1.12E-03	5.77E-06	2.56E-04	9.48E-02	4.67E-06	6.37E-06
Road 2	2	1900-2000	1.98E+03	4.63E+07	2.34E+06	8.69E+03	6.07E-07	2.06E-05	8.91E-02	4.19E-06	2.17E-04	7.17E-02	1.63E-06	1.84E-06
Road 2	2	2000-2100	1.97E+03	4.63E+07	2.34E+06	8.69E+03	6.07E-07	2.06E-05	8.91E-02	4.19E-06	2.17E-04	7.17E-02	1.63E-06	1.84E-06
Road 2	2	2100-2200	1.97E+03	3.16E+07	1.61E+06	7.03E+03	2.74E-07	3.96E-05	8.86E-02	3.20E-06	1.63E-04	7.47E-02	1.72E-06	3.36E-06
Road 2	2	2200-2300	1.83E+03	3.04E+07	1.54E+06	7.53E+03	2.65E-07	3.34E-05	8.86E-02	3.15E-06	1.60E-04	7.26E-02	1.70E-06	3.37E-06
Road 2	2	2300-2400	2.06E+03	3.26E+07	1.65E+06	8.77E+03	2.71E-07	3.11E-05	9.00E-02	3.20E-06	1.60E-04	7.26E-02	1.70E-06	3.37E-06
Road 3	3	0000-0100	8.96E+03	1.24E+08	2.64E+07	8.88E-03	1.76E-08	8.78E-06	9.99E-02	3.39E-06	1.97E-08	1.01E-06	5.58E-06	1.01E-06
Road 3	3	0100-0200	1.03E+08	3.03E+08	1.88E+06	8.76E-03	1.16E-08	5.83E-06	1.18E-04	3.44E-07	2.11E-06	1.00E-06	5.57E-07	1.82E-06
Road 3	3	0200-0300	1.11E+08	3.24E+08	1.98E+06	8.93E-03	1.26E-08	1.20E-06	1.18E-04	3.57E-07	2.26E-06	1.01E-06	5.68E-07	1.94E-06
Road 3	3	0300-0400	1.12E+08	3.26E+08	2.00E+06	8.96E-03	1.27E-08	1.21E-06	1.18E-04	3.57E-07	2.26E-06	1.01E-06	5.68E-07	1.94E-06
Road 3	3	0400-0500	1.24E+08	2.33E+08	1.43E+07	1.07E+02	2.02E-08	1.24E-07	1.22E-02	2.29E-07	1.41E-06	1.04E-06	5.95E-07	1.95E-06
Road 3	3	0500-0600	1.25E+08	2.40E+08	1.45E+07	1.08E+02	2.33E-08	2.10E-07	1.22E-02	2.32E-07	1.42E-06	1.04E-06	5.96E-07	1.96E-06
Road 3	3	0600-0700	1.36E+08	2.60E+08	1.56E+07	1.16E+02	2.48E-08	2.31E-07	1.22E-02	2.42E-07	1.45E-06	1.04E-06	5.96E-07	1.96E-06
Road 3	3	0700-0800	1.44E+08	2.07E+08	1.24E+06	1.23E+02	2.74E-07	1.06E-06	1.31E-03	1.84E-06	1.19E-06	1.10E-06	5.94E-06	8.44E-06
Road 3	3	0800-0900	1.37E+08	2.21E+07	1.36E+06	1.17E-08	1.88E-07	1.16E-06	1.18E-03	1.92E-06	1.18E-06	9.95E-02	1.61E-06	8.76E-06
Road 3	3	0900-1000	1.37E+08	2.21E+07	1.36E+06	1.17E-08	1.88E-07	1.16E-06	1.18E-03	1.92E-06	1.18E-06	9.95E-02	1.61E-06	8.76E-06
Road 3	3	1000-1100	1.73E+08	2.01E+07	1.22E+06	1.44E+02	1.67E-07	1.02E-06	1.34E-03	1.95E-06	9.54E-06	1.10E-06	5.72E-06	8.81E-06
Road 3	3	1100-1200	1.86E+08	1.81E+07	1.11E+06	1.40E+02	1.54E+07	9.43E-07	1.33E-03	1.47E-06	8.99E-06	1.12E-06	5.73E-06	7.92E-06
Road 3	3	1200-1300	1.92E+08	1.86E+07	1.13E+06	1.42E+02	1.58E+07	9.80E-07	1.33E-03	1.47E-06	8.99E-06	1.12E-06	5.73E-06	7.92E-06
Road 3	3	1300-1400	2.04E+08	2.05E+07	1.25E+06	1.57E+02	1.74E-07	1.52E-05	1.52E-03	2.17E-03	1.33E-06	1.29E-06	1.83E-06	1.12E-06
Road 3	3	1400-1500	2.09E+08	2.11E+07	1.32E+06	1.72E+02	1.61E+06	1.60E-06	1.51E-03	2.22E-04	1.41E+06	1.29E-06	1.83E-06	1.12E-06
Road 3	3	1500-1600	2.10E+08	2.12E+07	1.33E+06	1.73E+02	1.62E+06	1.61E-06	1.51E-03	2.22E-04	1.41E+06	1.29E-06	1.83E-06	1.12E-06
Road 3	3	1600-1700	2.10E+08	2.12E+07	1.33E+06	1.73E+02	1.62E+06	1.61E-06	1.51E-03	2.22E-04	1.			

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for	Year 2033
AERMOD model (June)	

Road Name	Road ID	NO Emission					NO Emission							
		Monthly/mph		Monthly/mph		t/tonne/hour	Monthly/mph		Monthly/mph		t/tonne/hour			
		g/mph/sec	g/mph	tonne/hour	g/mph/sec		g/mph/sec	g/mph	tonne/hour	g/mph/sec		g/mph	tonne/hour	
Road 4	4	0800-0900	1.1162	0.9467	7.9006	9.4443	3.3167	6.7876	7.9562	2.8386	5.6765	6.6262	2.3596	4.61
Road 4	4	0900-0900	1.2882	3.7107	4.9708	1.0762	3.3265	6.2887	8.6868	3.1885	6.7620	7.2720	2.7208	4.28
Road 4	4	1000-1100	1.1000	1.1000	6.3457	6.3457	3.3265	6.2887	8.6868	3.1885	6.7620	7.2720	2.7208	4.28
Road 4	4	1100-1200	1.3964	3.2067	6.4326	1.1442	2.7114	5.5436	9.2121	2.9168	4.3965	7.6362	1.6234	3.96
Road 4	4	1200-1300	1.3964	4.4467	6.0808	1.1886	3.7808	7.576	3.306	2.9768	3.9583	7.6362	2.4736	4.96
Road 4	4	1300-1400	1.3964	4.4467	6.0808	1.1886	3.7808	7.576	3.306	2.9768	3.9583	7.6362	2.4736	4.96
Road 4	4	1400-1500	1.4472	4.9867	5.9206	1.2067	4.1172	8.356	3.4662	2.7868	6.5865	7.7406	2.6936	5.36
Road 4	4	1500-1600	1.3762	4.8967	9.7266	1.1376	4.1868	8.3436	3.3966	3.3366	6.6766	7.9806	2.8036	5.61
Road 4	4	1600-1700	1.3762	4.8967	9.7266	1.1376	4.1868	8.3436	3.3966	3.3366	6.6766	7.9806	2.8036	5.61
Road 4	4	1700-1800	1.0860	6.7467	9.5106	9.0306	3.3167	7.976	3.1868	5.7668	5.7668	7.0006	3.0006	6.18
Road 4	4	1800-1900	8.1663	4.0367	8.0906	7.0706	3.496	7.0068	7.086	5.5066	7.0706	6.0102	2.9766	5.99
Road 4	4	1900-2000	7.4663	4.0367	8.0906	7.0706	3.496	7.0068	7.086	5.5066	7.0706	6.0102	2.9766	5.99
Road 4	4	2000-2100	6.1186	2.2167	4.4266	6.1186	1.586	3.786	7.986	2.4566	4.9266	6.686	2.0066	4.12
Road 4	4	2100-2200	7.1863	1.8767	3.7866	5.1766	1.606	3.7166	7.426	2.2766	4.5666	6.1266	1.8766	3.66
Road 4	4	2200-2300	7.1863	1.8767	3.7866	5.1766	1.606	3.7166	7.426	2.2766	4.5666	6.1266	1.8766	3.66
Road 4	4	2300-0000	6.3263	1.4167	2.8266	5.5666	1.2766	2.5466	7.4366	1.6566	3.3266	6.5766	1.4666	2.93
Road 5	5	0000-0100	1.1866	3.0566	6.7467	1.0316	7.0068	5.5367	1.716	8.2267	6.876	1.0116	7.1066	3.59
Road 5	5	0100-0200	1.1866	3.0566	6.7467	1.0316	7.0068	5.5367	1.716	8.2267	6.876	1.0116	7.1066	3.59
Road 5	5	0200-0300	1.2766	4.2366	1.5367	1.0166	3.666	3.066	1.186	3.4467	3.296	1.006	3.3467	2.76
Road 5	5	0300-0400	1.3456	3.5156	2.9367	1.1376	3.6068	2.5767	1.186	3.1167	2.5966	1.0266	2.6867	2.46
Road 5	5	0400-0500	1.3456	3.5156	2.9367	1.1376	3.6068	2.5767	1.186	3.1167	2.5966	1.0266	2.6867	2.46
Road 5	5	0500-0600	1.5666	7.7366	5.8467	1.3366	6.7366	5.8267	1.426	6.7667	5.7366	1.0766	5.3367	4.46
Road 5	5	0600-0700	1.8666	1.9867	1.6466	1.6367	1.6267	1.4666	1.4361	1.5066	1.2566	1.0266	1.2866	1.07
Road 5	5	0700-0800	2.0266	2.0266	1.6466	1.6466	1.6466	1.6466	1.6466	1.6466	1.6466	1.6466	1.6466	1.6466
Road 5	5	0800-0900	2.3666	2.3666	1.8867	2.0166	4.9567	4.3167	1.576	1.916	3.266	1.326	3.266	2.74
Road 5	5	0900-1000	2.6966	2.4667	4.5866	2.2766	4.6667	3.8466	1.766	3.9666	2.9666	1.4566	4.2966	2.66
Road 5	5	1000-1100	2.0066	2.0066	1.6466	1.6466	1.6466	1.6466	1.6466	1.6466	1.6466	1.6466	1.6466	1.6466
Road 5	5	1100-1200	2.7666	4.5567	3.8166	2.3366	3.8266	3.2267	1.766	2.9566	2.4666	1.4966	2.4666	2.02
Road 5	5	1200-1300	3.0866	3.8476	7.0766	2.6266	7.2167	6.0266	1.676	4.6066	3.4666	1.4666	3.8566	3.22
Road 5	5	1300-1400	3.0866	3.8476	7.0766	2.6266	7.2167	6.0266	1.676	4.6066	3.4666	1.4666	3.8566	3.22
Road 5	5	1400-1500	3.1766	5.4867	7.5066	2.6567	6.6366	5.6766	1.706	5.1066	4.2666	1.4666	4.1366	3.50
Road 5	5	1500-1600	3.1766	5.4867	7.5066	2.6567	6.6366	5.6766	1.706	5.1066	4.2666	1.4666	4.1366	3.50
Road 5	5	1600-1700	3.3166	9.5567	6.7866	2.6866	8.2167	6.9766	1.766	5.3666	4.6666	1.4666	4.5366	3.76
Road 5	5	1700-1800	3.3166	9.5567	6.7866	2.6567	6.6366	5.6766	1.706	5.1066	4.2666	1.4666	4.1366	3.50
Road 5	5	1700-1800	2.5266	5.6467	8.0166	2.1166	6.0966	6.7667	1.576	3.0366	3.0466	1.2966	4.5966	4.14
Road 5	5	1800-1900	1.8466	8.9367	7.0266	1.8866	7.2867	6.0966	1.686	3.5466	4.0366	1.0966	4.7266	3.84
Road 5	5	1900-2000	1.8466	8.9367	7.0266	1.8866	7.2867	6.0966	1.686	3.5466	4.0366	1.0966	4.7266	3.84
Road 5	5	2000-2100	2.0066	3.6167	3.0166	1.1566	3.3067	2.5966	1.186	3.2166	2.6866	0.9966	2.6966	2.25
Road 5	5	2100-2200	1.1366	1.0367	2.5366	9.0066	2.5667	2.1166	1.1166	2.9766	2.4666	9.1466	2.6966	2.69
Road 5	5	2200-2300	1.1366	1.0367	2.5366	9.0066	2.5667	2.1166	1.1166	2.9766	2.4666	9.1466	2.6966	2.69
Road 5	5	2300-0000	1.1366	1.0367	2.5366	9.0066	2.5667	2.1166	1.1166	2.9766	2.4666	9.1466	2.6966	2.69
Road 5	5	2300-0000	1.0866	2.1567	8.0066	9.9266	1.5467	1.5266	1.0566	1.0566	7.7266	9.3166	1.3666	1.52
Road 5	5	0000-0100	1.8466	1.7867	5.0466	1.6266	1.5867	4.4566	1.3366	3.3066	3.6566	1.1666	1.1366	3.11
Road 5	5	0100-0200	1.8466	1.7867	5.0466	1.6266	1.5867	4.4566	1.3366	3.3066	3.6566	1.1666	1.1366	3.11
Road 5	5	0200-0300	1.9966	5.3866	2.2466	1.7366	8.1966	2.3666	1.3366	2.8667	1.7766	1.3166	5.3666	1.41
Road 5	5	0300-0400	2.0966	5.3866	2.2466	1.7366	8.1966	2.3666	1.3366	2.8667	1.7766	1.3166	5.3666	1.41
Road 6	6	0000-0100	1.2666	2.8866	2.2666	1.8566	6.9766	1.9666	1.3466	5.0567	1.4266	1.1466	3.9667	1.24
Road 6	6	0100-0200	1.2666	2.8866	2.2666	1.8566	6.9766	1.9666	1.3466	5.0567	1.4266	1.1466	3.9667	1.24
Road 6	6	0200-0300	2.0466	1.7866	5.0066	2.1366	1.3566	4.3666	1.4766	1.0766	1.0066	1.0066	9.1566	0.92
Road 6	6	0300-0400	2.0466	1.7866	5.0066	2.1366	1.3566	4.3666	1.4766	1.0766	1.0066	1.0066	9.1566	0.92
Road 6	6	0400-0500	3.0266	4.7467	1.3366	2.6366	4.1267	1.1666	1.7166	2.6666	7.5766	1.4766	2.3166	0.96
Road 6	6	0500-0600	3.0266	4.7467	1.3366	2.6366	4.1267	1.1666	1.7166	2.6666	7.5766	1.4766	2.3166	0.96
Road 6	6	0600-0700	4.2266	1.7066	4.7866	5.4066	1.1466	4.0366	2.5666	3.1466	2.8366	2.1466	5.9666	1.96
Road 6	6	0700-0800	4.2266	1.7066	4.7866	5.4066	1.1466	4.0366	2.5666	3.1466	2.8366	2.1466	5.9666	1.96
Road 6	6	0800-0900	5.7166	1.5966	4.4166	5.0566	1.3566	3.7466	2.5666	3.7466	2.0866	2.0166	6.0866	1.71
Road 6	6	0900-1000	5.7166	1.5966	4.4166	5.0566	1.3566	3.7466	2.5666	3.7466	2.0866	2.0166	6.0866	1.71
Road 6	6	1000-1100	4.5466	1.8266	5.1366	6.1166	1.5666	4.3766	3.0566	7.7566	1.8466	2.5966	6.5866	1.81
Road 6	6	1100-1200	4.5466	1.8266	5.1366	6.1166	1.5666	4.3766	3.0566	7.7566	1.8466	2.5966	6.5866	1.81
Road 6	6	1200-1300	4.7166	2.0366	5.7166	6.3766	1.7366	4.8766	3.2866	8.1766	2.4766	2.7466	7.4266	2.10
Road 6	6	1300-1400	4.7166	2.0366	5.7166	6.3766	1.7366	4.8766	3.2866	8.1766	2.4766	2.7466	7.4266	2.10
Road 6	6	1400-1500	6.8766	9.9866	5.9266	5.9266	1.7166	4.9266	3.1166	8.1266	2.5766	2.7166	7.8266	2.06
Road 6	6	1500-1600	6.8766	9.9866	5.9266	5.9266	1.7166	4.9266	3.1166	8.1266	2.5766	2.7166	7.8266	2.06
Road 6	6	1600-1700	7.0926	2.0366	5.7166	6.0066	1.7466	4.9566	3.0966	8.9766	2.5366	2.8366	7.6266	2.15
Road 6	6	1700-1800	7.0926	2.0366	5.7166	6.0066	1.7466	4.9566	3.0966	8.9766	2.5366	2.8366	7.6266	2.15
Road 6	6	1800-1900	8.2266	1.1266	3.1466	3.9666	9.7266	2.7466	2.7266	4.5466	1.8266	1.4066	5.5766	1.50
Road 6	6	1900-2000	8.2266	1.1266	3.1466	3.9666	9.7266	2.7466	2.7266	4.5466	1.8266	1.4066	5.5766	1.50
Road 6	6	2000-2100	3.1466	8.8967	1.9366	2.7566	5.9966	1.1066	1.0466	4.1266	1.2566	1.7616	3.8466	1.08
Road 6	6	2100-2200	3.1466	8.8967	1.9366	2.7566	5.9966	1.1066	1.0466	4.1266	1.2566	1.7616	3.8466	1.08
Road 6	6	2200-2300	2.7566	4.7666	1.2666	2.4416	3.3567	1.1366	1.8666	3.0366	8.5266	1.6266	2.6266	0.93
Road 6	6	2300-0000	2.7566	4.7666	1.2666	2.4416	3.3567	1.1366	1.8666	3.0366	8.5266	1.6266	2.6266	0.93
Road 7	7	0000-0100	6.5456	4.7456	5.9656	7.5056	4.1356	4.9856	8.5256	2.9656	6.2056	8.2256	4.5856	7.39
Road 7	7	0100-0200	9.3256	3.3856	3.8956	8.1356	2.9956	3.4856	8.6956	3.5156	4.1256	8.3056	3.0156	3.53
Road 7	7	0200-0300	1.0056	2.8256	2.8256	2.8256	2.8256	2.8256	2.8256	2.8256	2.8256	2.8256	2.8256	2.8256
Road 7	7	0300-0400	1.0056	2.8256	2.8256	2.8256	2.9956	2.3056	7.9756	3.0956	2.0456	8.5756	1.8156	2.17
Road 7	7	0400-0500	1.1556	2.6656	3.1156	9.4456	2.2956	2.6956	1.0367	2.4756	2.7856	8.8856	2.0056	2.34
Road 7	7	0500-0600	1.1556	2.6656										

\\Fs000001\Environment - Projects\60722230\1.01\Other\Air Modelling\Appendix\Traffic\Appendix\Appendix 2 E 2 Emission Factor in 2022.GB.xlsx

North Underground Quarry	
Rad 24 hour Emission Factors for AERMOD model (June)	Year 2033

Line	Road ID	Hour	NO _x Emission						NO ₂ Emission					
			Month/Year			Month/Year			Month/Year			Month/Year		
			g/km ³ /veh	g/km ³ /hour	g/km ³ /m ³	g/km ³ /veh	g/km ³ /hour	g/km ³ /m ³	g/km ³ /veh	g/km ³ /hour	g/km ³ /m ³	g/km ³ /veh	g/km ³ /hour	g/km ³ /m ³
1	7	1600-1700	1.836E-2	3.21E-7	0.736E-6	1.566E-2	2.74E-7	3.21E-6	1.79E-2	2.76E-6	2.65E-10	1.90E-2	1.90E-6	2.23E-9
2	7	1700-1800	1.836E-2	3.21E-7	0.736E-6	1.566E-2	2.74E-7	3.21E-6	1.72E-2	2.76E-6	2.65E-10	1.93E-2	1.97E-6	2.23E-9
3	7	1800-1900	1.836E-2	3.21E-7	0.736E-6	1.566E-2	2.74E-7	3.21E-6	1.72E-2	2.76E-6	2.65E-10	1.93E-2	1.97E-6	2.23E-9
4	7	1900-2000	0.955E-3	0.170E-7	2.00E-6	0.858E-3	1.48E-7	1.74E-6	1.10E-1	1.85E-6	2.22E-10	0.94E-2	1.63E-6	1.91E-9
5	7	2000-2100	0.955E-3	0.170E-7	2.00E-6	0.858E-3	1.13E-7	1.33E-6	1.17E-1	1.57E-6	1.84E-10	0.98E-2	1.63E-6	1.96E-9
6	7	2100-2200	0.955E-3	0.170E-7	2.00E-6	0.858E-3	1.13E-7	1.33E-6	1.17E-1	1.57E-6	1.84E-10	0.98E-2	1.63E-6	1.96E-9
7	7	2200-2300	0.955E-3	0.170E-7	2.00E-6	0.858E-3	1.13E-7	1.33E-6	1.17E-1	1.57E-6	1.84E-10	0.98E-2	1.63E-6	1.96E-9
8	7	2300-2400	0.955E-3	0.170E-7	2.00E-6	0.858E-3	1.13E-7	1.33E-6	1.17E-1	1.57E-6	1.84E-10	0.98E-2	1.63E-6	1.96E-9
9	8	0100-0200	1.988E-2	6.98E-6	1.410E-7	1.74E-2	6.13E-6	1.24E-2	3.12E-1	1.07E-7	2.27E-10	2.73E-1	0.68E-1	1.94E-6
10	8	0200-0300	2.004E-2	6.98E-6	1.410E-7	1.78E-2	6.99E-6	9.28E-3	3.14E-1	8.10E-1	8.68E-10	2.72E-1	7.03E-1	1.42E-6
11	8	0300-0400	2.004E-2	6.98E-6	1.410E-7	1.78E-2	6.99E-6	9.28E-3	3.14E-1	8.10E-1	8.68E-10	2.72E-1	7.03E-1	1.42E-6
12	8	0400-0500	2.146E-2	4.81E-6	1.79E-6	1.886E-2	4.18E-6	8.45E-3	3.14E-1	1.70E-1	1.42E-10	2.71E-1	6.08E-1	1.02E-6
13	8	0500-0600	2.146E-2	4.81E-6	1.79E-6	1.886E-2	4.18E-6	8.45E-3	3.09E-1	1.24E-1	1.42E-10	2.69E-1	5.06E-1	1.23E-6
14	8	0600-0700	2.146E-2	4.81E-6	1.79E-6	1.886E-2	4.18E-6	8.45E-3	3.09E-1	1.24E-1	1.42E-10	2.69E-1	5.06E-1	1.23E-6
15	8	0700-0800	2.232E-2	4.03E-6	1.81E-6	2.032E-2	3.45E-6	6.97E-3	3.23E-1	4.96E-1	1.11E-10	2.75E-1	4.88E-1	9.46E-6
16	8	0800-0900	2.232E-2	4.03E-6	1.81E-6	2.032E-2	3.45E-6	6.97E-3	3.23E-1	4.96E-1	1.11E-10	2.75E-1	4.88E-1	9.46E-6
17	8	0900-1000	2.232E-2	4.03E-6	1.81E-6	2.032E-2	3.45E-6	6.97E-3	3.23E-1	4.96E-1	1.11E-10	2.75E-1	4.88E-1	9.46E-6
18	8	1000-1100	2.638E-2	3.78E-6	1.64E-1	2.19E-2	3.15E-6	6.86E-3	3.10E-1	4.46E-1	8.02E-10	2.57E-1	3.70E-1	7.48E-6
19	8	1100-1200	2.638E-2	3.78E-6	1.64E-1	2.19E-2	2.97E-6	6.31E-3	3.11E-1	4.27E-1	8.02E-10	2.58E-1	3.59E-1	7.26E-6
20	8	1200-1300	2.638E-2	3.78E-6	1.64E-1	2.19E-2	2.97E-6	6.31E-3	3.11E-1	4.27E-1	8.02E-10	2.58E-1	3.59E-1	7.26E-6
21	8	1300-1400	2.736E-2	3.11E-7	2.26E-6	3.32E-2	9.46E-6	1.92E-6	2.24E-1	3.14E-1	8.96E-10	0.90E-1	7.76E-1	1.57E-6
22	8	1400-1500	2.736E-2	3.11E-7	2.26E-6	3.32E-2	9.46E-6	1.92E-6	2.24E-1	3.14E-1	8.96E-10	0.90E-1	7.76E-1	1.57E-6
23	8	1500-1600	2.736E-2	3.11E-7	2.26E-6	3.32E-2	9.46E-6	1.92E-6	2.24E-1	3.14E-1	8.96E-10	0.90E-1	7.76E-1	1.57E-6
24	8	1600-1700	2.671E-2	2.41E-7	1.245E-6	2.26E-2	1.04E-7	1.20E-6	2.33E-1	1.06E-1	7.98E-10	0.86E-1	9.96E-1	1.81E-6
25	8	1700-1800	2.232E-2	1.09E-7	2.00E-6	2.87E-2	9.18E-6	1.88E-6	2.31E-1	1.12E-1	2.68E-10	0.94E-1	8.96E-1	1.91E-6
26	8	1800-1900	2.232E-2	1.09E-7	2.00E-6	2.87E-2	9.18E-6	1.88E-6	2.31E-1	1.12E-1	2.68E-10	0.94E-1	8.96E-1	1.91E-6
27	8	1900-2000	1.836E-2	0.736E-6	1.45E-6	1.60E-2	6.25E-6	1.29E-6	2.45E-1	9.90E-1	1.94E-10	2.14E-1	0.88E-1	1.09E-6
28	8	2000-2100	1.836E-2	0.736E-6	1.45E-6	1.60E-2	4.88E-6	9.87E-7	2.55E-1	7.85E-1	1.56E-10	2.0E-1	0.76E-1	1.37E-6
29	8	2100-2200	1.836E-2	0.736E-6	1.45E-6	1.60E-2	4.88E-6	9.87E-7	2.55E-1	7.85E-1	1.56E-10	2.0E-1	0.76E-1	1.37E-6
30	8	2200-2300	1.70E-2	5.00E-6	1.01E-4	4.38E-2	8.88E-7	2.39E-7	1.02E-7	1.42E-7	2.09E-13	0.36E-3	1.37E-4	2.04E-6
31	8	2300-2400	1.70E-2	3.89E-6	7.88E-7	5.56E-2	5.51E-6	7.11E-7	2.36E-1	5.27E-7	1.06E-10	0.33E-3	1.47E-4	1.96E-6
32	8	0100-0200	1.836E-2	0.736E-6	1.45E-6	1.60E-2	6.25E-6	1.29E-6	2.45E-1	9.90E-1	1.94E-10	2.14E-1	0.88E-1	1.09E-6
33	8	0200-0300	1.836E-2	0.736E-6	1.45E-6	1.60E-2	4.88E-6	9.87E-7	2.55E-1	7.85E-1	1.56E-10	2.0E-1	0.76E-1	1.37E-6
34	8	0300-0400	1.836E-2	0.736E-6	1.45E-6	1.60E-2	4.88E-6	9.87E-7	2.55E-1	7.85E-1	1.56E-10	2.0E-1	0.76E-1	1.37E-6
35	8	0400-0500	1.836E-2	0.736E-6	1.45E-6	1.60E-2	6.25E-6	1.29E-6	2.45E-1	9.90E-1	1.94E-10	2.14E-1	0.88E-1	1.09E-6
36	8	0500-0600	1.836E-2	0.736E-6	1.45E-6	1.60E-2	4.88E-6	9.87E-7	2.55E-1	7.85E-1	1.56E-10	2.0E-1	0.76E-1	1.37E-6
37	8	0600-0700	1.836E-2	0.736E-6	1.45E-6	1.60E-2	4.88E-6	9.87E-7	2.55E-1	7.85E-1	1.56E-10	2.0E-1	0.76E-1	1.37E-6
38	8	0700-0800	2.232E-2	4.03E-6	1.81E-6	2.032E-2	3.45E-6	6.97E-3	3.23E-1	4.96E-1	1.11E-10	2.75E-1	4.88E-1	9.46E-6
39	8	0800-0900	2.232E-2	4.03E-6	1.81E-6	2.032E-2	3.45E-6	6.97E-3	3.23E-1	4.96E-1	1.11E-10	2.75E-1	4.88E-1	9.46E-6
40	8	0900-1000	2.232E-2	4.03E-6	1.81E-6	2.032E-2	3.45E-6	6.97E-3	3.23E-1	4.96E-1	1.11E-10	2.75E-1	4.88E-1	9.46E-6
41	8	1000-1100	2.638E-2	3.78E-6	1.64E-1	2.19E-2	3.15E-6	6.86E-3	3.10E-1	4.46E-1	8.02E-10	2.57E-1	3.70E-1	7.48E-6
42	8	1100-1200	2.638E-2	3.78E-6	1.64E-1	2.19E-2	2.97E-6	6.31E-3	3.11E-1	4.27E-1	8.02E-10	2.58E-1	3.59E-1	7.26E-6
43	8	1200-1300	2.638E-2	3.78E-6	1.64E-1	2.19E-2	2.97E-6	6.31E-3	3.11E-1	4.27E-1	8.02E-10	2.58E-1	3.59E-1	7.26E-6
44	8	1300-1400	2.736E-2	3.11E-7	2.26E-6	3.32E-2	9.46E-6	1.92E-6	2.24E-1	3.14E-1	8.96E-10	0.90E-1	7.76E-1	1.57E-6
45	8	1400-1500	2.736E-2	3.11E-7	2.26E-6	3.32E-2	9.46E-6	1.92E-6	2.24E-1	3.14E-1	8.96E-10	0.90E-1	7.76E-1	1.57E-6
46	8	1500-1600	2.736E-2	3.11E-7	2.26E-6	3.32E-2	9.46E-6	1.92E-6	2.24E-1	3.14E-1	8.96E-10	0.90E-1	7.76E-1	1.57E-6
47	8	1600-1700	2.671E-2	2.41E-7	1.245E-6	2.26E-2	1.04E-7	1.20E-6	2.33E-1	1.06E-1	7.98E-10	0.86E-1	9.96E-1	1.81E-6
48	8	1700-1800	2.232E-2	1.09E-7	2.00E-6	2.87E-2	9.18E-6	1.88E-6	2.31E-1	1.12E-1	2.68E-10	0.94E-1	8.96E-1	1.91E-6
49	8	1800-1900	2.232E-2	1.09E-7	2.00E-6	2.87E-2	9.18E-6	1.88E-6	2.31E-1	1.12E-1	2.68E-10	0.94E-1	8.96E-1	1.91E-6
50	8	1900-2000	1.836E-2	0.736E-6	1.45E-6	1.60E-2	6.25E-6	1.29E-6	2.45E-1	9.90E-1	1.94E-10	2.14E-1	0.88E-1	1.09E-6
51	8	2000-2100	1.836E-2	0.736E-6	1.45E-6	1.60E-2	4.88E-6	9.87E-7	2.55E-1	7.85E-1	1.56E-10	2.0E-1	0.76E-1	1.37E-6
52	8	2100-2200	1.836E-2	0.736E-6	1.45E-6	1.60E-2	4.88E-6	9.87E-7	2.55E-1	7.85E-1	1.56E-10	2.0E-1	0.76E-1	1.37E-6
53	8	2200-2300	1.70E-2	5.00E-6	1.01E-4	4.38E-2	8.88E-7	2.39E-7	1.02E-7	1.42E-7	2.09E-13	0.36E-3	1.37E-4	2.04E-6
54	8	2300-2400	1.70E-2	3.89E-6	7.88E-7	5.56E-2	5.51E-6	7.11E-7	2.36E-1	5.27E-7	1.06E-10	0.33E-3	1.47E-4	1.96E-6
55	9	0100-0200	1.452E-2	4.47E-6	3.32E-7	2.7E-2	3.91E-6	5.90E-6	1.70E-1	9.56E-1	2.74E-10	0.33E-1	2.38E-1	2.59E-6
56	9	0200-0300	1.562E-2	3.52E-6	3.61E-7	3.35E-2	3.05E-6	2.27E-7	1.21E-1	2.78E-1	2.04E-10	0.03E-1	3.86E-1	1.78E-6
57	9	0300-0400	1.562E-2	3.52E-6	3.61E-7	3.35E-2	3.05E-6	2.27E-7	1.21E-1	2.78E-1	2.04E-10	0.03E-1	3.86E-1	1.78E-6
58	9	0400-0500	1.562E-2	3.52E-6	3.61E-7	3.35E-2	3.05E-6	2.27E-7	1.21E-1	2.78E-1	2.04E-10	0.03E-1	3.86E-1	1.78E-6
59	9	0500-0600	1.562E-2	3.52E-6	3.61E-7	3.35E-2	3.05E-6	2.27E-7	1.21E-1	2.78E-1	2.04E-10	0.03E-1	3.86E-1	1.78E-6
60	9	0600-0700	1.896E-2	6.41E-6	4.67E-7	1.64E-2	5.58E-6	2.44E-7	1.32E-1	4.48E-1	3.32E-10	1.13E-1	3.82E-1	2.84E-6
61	9	0700-0800	1.896E-2	6.41E-6	4.67E-7	1.64E-2	5.58E-6	2.44E-7	1.32E-1	4.48E-1	3.32E-10	1.13E-1	3.82E-1	2.84E-6
62	9	0800-0900	1.896E-2	6.41E-6	4.67E-7	1.64E-2	5.58E-6	2.44E-7	1.32E-1	4.48E-1	3.32E-10	1.13E-1	3.82E-1	2.84E-6
63	9	0900-1000	1.896E-2	6.41E-6	4.67E-7	1.64E-2	5.58E-6	2.44E-7	1.32E-1	4.48E-1	3.32E-10	1.13E-1	3.82E-1	2.84E-6
64	9	1000-1100	1.896E-2	6.41E-6	4.67E-7	1.64E-2	5.58E-6	2.44E-7	1.32E-1	4.48E-1	3.32E-10	1.13E-1	3.82E-1	2.84E-6
65	9	1100-1200	1.896E-2	6.41E-6	4.67E-7	1.64E-2	5.58E-6	2.44E-7	1.32E-1	4.48E-1	3.32E-10	1.13E-1	3.82E-1	2.84E-6
66	9	1200-1300	1.896E-2	6.41E-6	4.67E-7	1.64E-2	5.58E-6	2.44E-7	1.32E-1	4.48E-1	3.32E-10	1.13E-1	3.82E-1	2.84E-6
67	9	1300-1400	1.896E-2	6.41E-6	4.67E-7	1.64E-2	5.58E-6	2.44E-7	1.32E-1	4.48E-1	3.32E-10	1.13E-1	3.82E-1	2.84E-6
68	9	1400-1500	1.896E-2	6.41E-6	4.67E-7	1.64E-2	5.58E-6	2.44E-7	1.32E-1	4.48E-1	3.32E-10	1.13E-1	3.82E-1	2.8

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for
ARMD Model (t/ann)

AFRIMOD model (Juni)			Year 2033											
Road Name	Road ID	Hour	NO _x Emission				NH ₃ Emission				NO ₂ Emission			
			MonthlyMean g/min/h	g/s/m	tonne/hour	g/min/h	g/s/m	tonne/hour	MonthlyMean g/min/h	g/s/m	tonne/hour	MonthlyMean g/min/h	g/s/m	tonne/hour
Road 11	11	0900-0900	3.186	1.767	0.6857	2.9172	1.6667	0.3767	2.3561	1.3116	0.5046	2.1881	1.2726	0.4668
Road 11	11	0900-0900	3.5862	1.9467	0.7616	3.2467	1.8467	0.4757	2.4161	1.40267	0.54667	2.2261	1.33167	0.51667
Road 11	11	0900-0900	3.9864	2.1268	0.8375	3.5762	2.0268	0.5747	2.4762	1.58267	0.64667	2.2861	1.41167	0.56667
Road 11	11	0900-0900	4.3866	2.3069	0.9134	3.9067	2.2069	0.6737	2.5363	1.76267	0.73667	2.3461	1.49167	0.61667
Road 11	11	0900-0900	4.7868	2.4870	0.9893	4.2362	2.3870	0.7727	2.5964	1.94267	0.83667	2.4061	1.57167	0.66667
Road 11	11	0900-0900	5.1870	2.6671	1.0652	4.5657	2.5671	0.8717	2.6565	2.12267	0.93667	2.4661	1.65167	0.71667
Road 11	11	0900-0900	5.5872	2.8472	1.1411	4.8952	2.7472	0.9707	2.7166	2.30267	1.03667	2.5261	1.73167	0.76667
Road 11	11	0900-0900	5.9874	3.0273	1.2170	5.2247	2.9273	1.0697	2.7767	2.48267	1.13667	2.5861	1.81167	0.81667
Road 11	11	0900-0900	6.3876	3.2074	1.2929	5.5542	3.1074	1.1687	2.8368	2.66267	1.23667	2.6461	1.89167	0.86667
Road 11	11	0900-0900	6.7878	3.3875	1.3688	5.8837	3.2875	1.2677	2.8969	2.84267	1.33667	2.7061	1.97167	0.91667
Road 11	11	0900-0900	7.1880	3.5676	1.4447	6.2132	3.4676	1.3667	2.9570	3.02267	1.43667	2.7661	2.05167	0.96667
Road 11	11	0900-0900	7.5882	3.7477	1.5206	6.5427	3.6477	1.4657	3.0171	3.20267	1.53667	2.8261	2.13167	1.01667
Road 11	11	0900-0900	7.9884	3.9278	1.5965	6.8722	3.8278	1.5647	3.0772	3.38267	1.63667	2.8861	2.21167	1.06667
Road 11	11	0900-0900	8.3886	4.1079	1.6724	7.2017	4.0079	1.6637	3.1373	3.56267	1.73667	2.9461	2.29167	1.11667
Road 11	11	0900-0900	8.7888	4.2880	1.7483	7.5312	4.1880	1.7627	3.1974	3.74267	1.83667	3.0061	2.37167	1.16667
Road 11	11	0900-0900	9.1890	4.4681	1.8242	7.8607	4.3681	1.8617	3.2575	3.92267	1.93667	3.0661	2.45167	1.21667
Road 11	11	0900-0900	9.5892	4.6482	1.9001	8.1902	4.5482	1.9607	3.3176	4.10267	2.03667	3.1261	2.53167	1.26667
Road 11	11	0900-0900	9.9894	4.8283	1.9760	8.5197	4.7283	2.0597	3.3777	4.28267	2.13667	3.1861	2.61167	1.31667
Road 11	11	0900-0900	10.3896	5.0084	2.0519	8.8492	4.9084	2.1587	3.4378	4.46267	2.23667	3.2461	2.69167	1.36667
Road 11	11	0900-0900	10.7898	5.1885	2.1278	9.1787	5.0885	2.2577	3.4979	4.64267	2.33667	3.3061	2.77167	1.41667
Road 11	11	0900-0900	11.1900	5.3686	2.2037	9.5082	5.2686	2.3567	3.5580	4.82267	2.43667	3.3661	2.85167	1.46667
Road 11	11	0900-0900	11.5902	5.5487	2.2796	9.8377	5.4487	2.4557	3.6181	5.00267	2.53667	3.4261	2.93167	1.51667
Road 11	11	0900-0900	11.9904	5.7288	2.3555	10.1672	5.6288	2.5547	3.6782	5.18267	2.63667	3.4861	3.01167	1.56667
Road 11	11	0900-0900	12.3906	5.9089	2.4314	10.4967	5.8089	2.6537	3.7383	5.36267	2.73667	3.5461	3.09167	1.61667
Road 11	11	0900-0900	12.7908	6.0890	2.5073	10.8262	5.9890	2.7527	3.7984	5.54267	2.83667	3.6061	3.17167	1.66667
Road 11	11	0900-0900	13.1910	6.2691	2.5832	11.1557	6.1691	2.8517	3.8585	5.72267	2.93667	3.6661	3.25167	1.71667
Road 11	11	0900-0900	13.5912	6.4492	2.6591	11.4852	6.3492	2.9507	3.9186	5.90267	3.03667	3.7261	3.33167	1.76667
Road 11	11	0900-0900	13.9914	6.6293	2.7350	11.8147	6.5293	3.0497	3.9787	6.08267	3.13667	3.7861	3.41167	1.81667
Road 11	11	0900-0900	14.3916	6.8094	2.8109	12.1442	6.7094	3.1487	4.0388	6.26267	3.23667	3.8461	3.49167	1.86667
Road 11	11	0900-0900	14.7918	6.9895	2.8868	12.4737	6.8895	3.2477	4.0989	6.44267	3.33667	3.9061	3.57167	1.91667
Road 11	11	0900-0900	15.1920	7.1696	2.9627	12.8032	7.0696	3.3467	4.1590	6.62267	3.43667	3.9661	3.65167	1.96667
Road 11	11	0900-0900	15.5922	7.3497	3.0386	13.1327	7.2497	3.4457	4.2191	6.80267	3.53667	4.0261	3.73167	2.01667
Road 11	11	0900-0900	15.9924	7.5298	3.1145	13.4622	7.4298	3.5447	4.2792	6.98267	3.63667	4.0861	3.81167	2.06667
Road 11	11	0900-0900	16.3926	7.7099	3.1904	13.7917	7.6099	3.6437	4.3393	7.16267	3.73667	4.1461	3.89167	2.11667
Road 11	11	0900-0900	16.7928	7.8900	3.2663	14.1212	7.7900	3.7427	4.3994	7.34267	3.83667	4.2061	3.97167	2.16667
Road 11	11	0900-0900	17.1930	8.0701	3.3422	14.4507	7.9701	3.8417	4.4595	7.52267	3.93667	4.2661	4.05167	2.21667
Road 11	11	0900-0900	17.5932	8.2502	3.4181	14.7802	8.1502	3.9407	4.5196	7.70267	4.03667	4.3261	4.13167	2.26667
Road 11	11	0900-0900	17.9934	8.4303	3.4940	15.1097	8.3303	4.0397	4.5797	7.88267	4.13667	4.3861	4.21167	2.31667
Road 11	11	0900-0900	18.3936	8.6104	3.5699	15.4392	8.5104	4.1387	4.6398	8.06267	4.23667	4.4461	4.29167	2.36667
Road 11	11	0900-0900	18.7938	8.7905	3.6458	15.7687	8.6905	4.2377	4.6999	8.24267	4.33667	4.5061	4.37167	2.41667
Road 11	11	0900-0900	19.1940	8.9706	3.7217	16.0982	8.8706	4.3367	4.7599	8.42267	4.43667	4.5661	4.45167	2.46667
Road 11	11	0900-0900	19.5942	9.1507	3.7976	16.4277	9.0507	4.4357	4.8200	8.60267	4.53667	4.6261	4.53167	2.51667
Road 11	11	0900-0900	19.9944	9.3308	3.8735	16.7572	9.2308	4.5347	4.8801	8.78267	4.63667	4.6861	4.61167	2.56667
Road 11	11	0900-0900	20.3946	9.5109	3.9494	17.0867	9.4109	4.6337	4.9402	8.96267	4.73667	4.7461	4.69167	2.61667
Road 11	11	0900-0900	20.7948	9.6910	4.0253	17.4162	9.5910	4.7327	4.9999	9.14267	4.83667	4.8061	4.77167	2.66667
Road 11	11	0900-0900	21.1950	9.8711	4.1012	17.7457	9.7711	4.8317	5.0600	9.32267	4.93667	4.8661	4.85167	2.71667
Road 11	11	0900-0900	21.5952	10.0512	4.1771	18.0752	9.9512	4.9307	5.1201	9.50267	5.03667	4.9261	4.93167	2.76667
Road 11	11	0900-0900	21.9954	10.2313	4.2530	18.4047	10.1313	5.0297	5.1802	9.68267	5.13667	4.9861	5.01167	2.81667
Road 11	11	0900-0900	22.3956	10.4114	4.3289	18.7342	10.3114	5.1287	5.2403	9.86267	5.23667	5.0461	5.09167	2.86667
Road 11	11	0900-0900	22.7958	10.5915	4.4048	19.0637	10.4915	5.2277	5.3004	10.04267	5.33667	5.1061	5.17167	2.91667
Road 11	11	0900-0900	23.1960	10.7716	4.4807	19.3932	10.6716	5.3267	5.3605	10.22267	5.43667	5.1661	5.25167	2.96667
Road 11	11	0900-0900	23.5962	10.9517	4.5566	19.7227	10.8517	5.4257	5.4206	10.40267	5.53667	5.2261	5.33167	3.01667
Road 11	11	0900-0900	23.9964	11.1318	4.6325	20.0522	11.0318	5.5247	5.4807	10.58267	5.63667	5.2861	5.41167	3.06667
Road 11	11	0900-0900	24.3966	11.3119	4.7084	20.3817	11.2119	5.6237	5.5408	10.76267	5.73667	5.3461	5.49167	3.11667
Road 11	11	0900-0900	24.7968	11.4920	4.7843	20.7112	11.3920	5.7227	5.6009	10.94267	5.83667	5.4061	5.57167	3.16667
Road 11	11	0900-0900	25.1970	11.6721	4.8602	21.0407	11.5721	5.8217	5.6610	11.12267	5.93667	5.4661	5.65167	3.21667
Road 11	11	0900-0900	25.5972	11.8522	4.9361	21.3702	11.7522	5.9207	5.7211	11.30267	6.03667	5.5261	5.73167	3.26667
Road 11	11	0900-0900	25.9974	12.0323	5.0120	21.7000	11.9323	6.0197	5.7812	11.48267	6.13667	5.5861	5.81167	3.31667
Road 11	11	0900-0900	26.3976	12.2124	5.0879	22.0295	12.1124	6.1187	5.8413	11.66267	6.23667	5.6461	5.89167	3.36667
Road 11	11	0900-0900	26.7978	12.3925	5.1638	22.3590	12.2925	6.2177	5.9014	11.84267	6.33667	5.7061	5.97167	3.41667
Road 11	11	0900-0900	27.1980	12.5726	5.2397	22.6885	12.4726	6.3167	5.9615	12.02267	6.43667	5.7661	6.05167	3.46667
Road 11	11	0900-0900	27.5982	12.7527	5.3156	23.0180	12.6527	6.4157	6.0216	12.20267	6.53667	5.8261	6.13167	3.51667
Road 11	11	0900-0900	27.9984	12.9328	5.3915	23.3475	12.8328	6.5207	6.0817	12.38267	6.63667	5.8861	6.21167	3.56667
Road 11	11	0900-0900	28.3986	13.1129	5.4674	23.6770	13.0129	6.6197	6.1418	12.56267	6.73667	5.9461	6.29167	3.61667
Road 11	11	0900-0900	28.7988	13.2930	5.5433	24.0065	13.1930	6.7187	6.2019	12.74267	6.83667	6.0061	6.37167	3.66667
Road 11	11	0900-0900	29.1990	13.4731	5.6192	24.3360	13.3731	6.8177	6.2620	12.92267	6.93667	6.0661	6.45167	3.71667
Road 11	11	0900-0900	29.5992	13.6532	5.6951	24.6655	13.5532	6.9167	6.3221	13.10267	7.03667	6.1261	6.53167	3.76667
Road 11	11	0900-0900	29.9994											

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry

Open Road Data 24 Hour Emission Factors for ADMS/CDM model (t/yr)			Year 2033		NO _x Emission		NO _x Emission	
Road Name	Road ID	Hour	Monthly/tour/tour		Monthly/tour/tour		Monthly/tour/tour	
			g/km/hr	g/s/m	g/km/hr	g/s/m	g/km/hr	g/s/m
Road 37	1650-1700	9.1167	6.3282	6.3282	6.3282	6.3282	6.3282	6.3282
Road 37	1700-1800	6.2362	1.1362	0.2808	5.9162	1.0708	2.4468	2.8282
Road 37	1800-1900	4.2402	7.2402	1.7502	4.0202	7.2302	1.6602	3.1802
Road 37	1900-2000	3.1802	7.2402	3.1702	3.1702	7.2402	3.1702	7.2402
Road 37	2000-2100	3.6402	3.3202	9.0102	3.4402	3.7102	8.5102	2.1202
Road 37	2100-2200	3.6402	3.3202	9.0102	3.4402	3.7102	8.5102	2.1202
Road 37	2200-2300	3.1802	3.1802	7.2402	3.1702	7.2402	3.1702	7.2402
Road 37	2300-0000	4.2402	4.2402	1.7502	4.0202	7.2302	1.6602	3.1802
Road 38	0000-0100	5.8102	9.3502	7.6902	5.3402	8.5802	7.0202	2.7102
Road 38	0100-0200	6.0202	6.0202	6.0202	6.0202	6.0202	6.0202	6.0202
Road 38	0200-0300	7.2602	7.1302	5.8402	6.5202	6.4102	5.2402	2.5002
Road 38	0300-0400	7.7602	6.6502	5.4502	6.9902	6.0402	4.9402	2.2202
Road 38	0400-0500	7.0202	7.0202	7.0202	7.0202	7.0202	7.0202	7.0202
Road 38	0500-0600	6.1102	9.0102	7.9202	6.6502	8.8202	7.2202	2.7102
Road 38	0600-0700	7.8802	1.6802	1.3702	6.3602	1.0502	1.2702	6.8302
Road 38	0700-0800	8.1802	8.1802	8.1802	8.1802	8.1802	8.1802	8.1802
Road 38	0800-0900	8.7602	5.6502	4.5802	7.8802	5.0402	4.1202	3.0702
Road 38	0900-1000	1.0002	5.9302	4.6802	8.9502	5.2402	4.3802	3.3902
Road 38	1000-1100	1.0002	1.0002	1.0002	1.0002	1.0002	1.0002	1.0002
Road 38	1100-1200	1.0302	5.4402	4.6702	8.9502	4.8602	3.9802	3.1602
Road 38	1200-1300	1.0302	4.6202	3.7802	1.2002	4.1202	3.3802	3.8202
Road 38	1300-1400	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302	1.0302
Road 38	1400-1500	1.0302	4.3402	4.0402	1.2002	4.3702	3.5802	3.9902
Road 38	1500-1600	1.3702	5.1102	4.1802	1.2402	4.6302	3.7902	4.0102
Road 38	1600-1700	1.2102	4.4602	3.9702	1.3202	4.5902	3.7302	4.0502
Road 38	1700-1800	1.1202	4.4802	3.9702	1.1402	4.0602	3.2502	3.1902
Road 38	1800-1900	1.1702	3.6002	2.9502	1.0602	3.3602	2.6702	3.4302
Road 38	1900-2000	9.8802	1.2402	1.0202	9.0502	1.1402	9.4302	1.0402
Road 38	2000-2100	9.8802	1.1302	1.0302	9.0202	1.1302	9.4302	1.2202
Road 38	2100-2200	9.8802	1.1302	1.0302	9.0202	1.1302	9.4302	1.2202
Road 38	2200-2300	9.8802	1.1302	1.0302	9.0202	1.1302	9.4302	1.2202
Road 38	2300-0000	9.8802	1.1302	1.0302	9.0202	1.1302	9.4302	1.2202
Road 39	0000-0100	9.6802	9.6802	9.6802	9.6802	9.6802	9.6802	9.6802
Road 39	0100-0200	1.0002	2.3402	1.9802	9.5202	2.2302	1.9802	3.4302
Road 39	0200-0300	1.0002	1.0002	1.0002	1.0002	1.0002	1.0002	1.0002
Road 39	0300-0400	1.0002	1.0002	1.0002	1.0002	1.0002	1.0002	1.0002
Road 39	0400-0500	1.0002	1.0002	1.0002	1.0002	1.0002	1.0002	1.0002
Road 39	0500-0600	1.1102	2.5002	2.1302	1.0502	2.3102	1.8302	2.4702
Road 39	0600-0700	1.1102	5.8402	4.9702	1.0902	5.1302	4.6902	1.8102
Road 39	0700-0800	1.1102	1.1102	1.1102	1.1102	1.1102	1.1102	1.1102
Road 39	0800-0900	1.2902	1.2902	1.2902	1.2902	1.2902	1.2902	1.2902
Road 39	0900-1000	1.2902	1.0102	1.3302	1.2002	1.4602	1.4202	5.8502
Road 39	1000-1100	1.3302	1.7602	1.3602	1.3102	1.6202	1.3902	4.5202
Road 39	1100-1200	1.3302	1.3302	1.3302	1.3302	1.3302	1.3302	1.3302
Road 39	1200-1300	1.3302	1.6302	1.3802	1.5802	1.5202	1.6802	4.2702
Road 39	1300-1400	1.6302	1.6302	1.6302	1.6302	1.6302	1.6302	1.6302
Road 39	1400-1500	1.6302	1.6302	1.6302	1.6302	1.6302	1.6302	1.6302
Road 39	1500-1600	1.6302	1.6302	1.6302	1.6302	1.6302	1.6302	1.6302
Road 39	1600-1700	1.6302	1.6302	1.6302	1.6302	1.6302	1.6302	1.6302
Road 39	1700-1800	1.6302	1.6302	1.6302	1.6302	1.6302	1.6302	1.6302
Road 39	1800-1900	1.6302	1.6302	1.6302	1.6302	1.6302	1.6302	1.6302
Road 39	1900-2000	1.6302	1.6302	1.6302	1.6302	1.6302	1.6302	1.6302
Road 39	2000-2100	1.6302	1.6302	1.6302	1.6302	1.6302	1.6302	1.6302
Road 39	2100-2200	1.6302	1.6302	1.6302	1.6302	1.6302	1.6302	1.6302
Road 39	2200-2300	1.6302	1.6302	1.6302	1.6302	1.6302	1.6302	1.6302
Road 39	2300-0000	1.6302	1.6302	1.6302	1.6302	1.6302	1.6302	1.6302
Road 40	0000-0100	5.3202	1.9802	7.8702	4.2802	1.4602	7.0402	2.7302
Road 40	0100-0200	6.2402	1.3802	6.9902	6.6602	1.2202	5.9602	4.2902
Road 40	0200-0300	6.2402	1.3802	6.9902	6.6602	1.2202	5.9602	4.2902
Road 40	0300-0400	7.3402	1.1302	5.8802	6.6602	1.0702	4.9702	2.5502
Road 40	0400-0500	7.4402	1.2102	5.9102	6.6602	1.0602	5.2702	2.6202
Road 40	0500-0600	7.4402	1.2102	5.9102	6.6602	1.0602	5.2702	2.6202
Road 40	0600-0700	6.4602	2.8802	1.5002	5.9702	1.2602	2.7202	5.9902
Road 40	0700-0800	9.2202	9.4202	8.9802	8.2202	8.4602	4.0802	3.3402
Road 40	0800-0900	8.8202	8.8202	8.8202	8.8202	8.8202	8.8202	8.8202
Road 40	0900-1000	1.0702	1.0702	5.2202	9.1202	5.9202	4.6302	3.6702
Road 40	1000-1100	1.1002	1.0602	5.1302	9.6602	5.9202	4.5102	3.6902
Road 40	1100-1200	1.1002	1.1002	1.1002	1.1002	1.1002	1.1002	1.1002
Road 40	1200-1300	1.1302	8.6502	4.2102	1.1602	7.8602	3.7402	3.8602
Road 40	1300-1400	1.3402	9.2702	4.5102	1.1302	8.2702	4.0202	3.9902
Road 40	1400-1500	1.3402	9.2702	4.5102	1.1302	8.2702	4.0202	3.9902
Road 40	1500-1600	1.3202	9.3202	4.6202	1.1802	8.7102	4.0202	3.9602
Road 40	1600-1700	1.2802	9.1402	4.4502	1.1402	8.1602	3.9702	3.8802
Road 40	1700-1800	1.1702	8.8402	4.1602	1.0902	7.8402	3.8802	3.7402
Road 40	1800-1900	1.0602	6.8102	4.3102	1.3002	9.0402	4.6102	2.9902
Road 40	1900-2000	6.8402	2.6602	1.2902	6.3002	2.4602	1.1902	2.6402
Road 40	2000-2100	7.0202	2.7202	1.3102	6.4802	2.5202	1.2102	2.6802
Road 40	2100-2200	7.0202	2.7202	1.3102	6.4802	2.5202	1.2102	2.6802
Road 40	2200-2300	7.0202	2.7202	1.3102	6.4802	2.5202	1.2102	2.6802
Road 40	2300-0000	7.0202	2.7202	1.3102	6.4802	2.5202	1.2102	2.6802

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry

Open Road Data 24 Hour Emission Factors for ADMS-CO model (t/a)										Year 2033												
			NO _x Emission					PM ₁₀ Emission					NO _x Emission					PM ₁₀ Emission				
Road Name	Road ID	Hour	Monthly/tonne/hour	g/s/m ³	tonne/hour	Monthly/tonne/hour	g/s/m ³	tonne/hour	Monthly/tonne/hour	g/s/m ³	tonne/hour	Monthly/tonne/hour	g/s/m ³	tonne/hour	Monthly/tonne/hour	g/s/m ³	tonne/hour					
Road #1	01	0000-0000	712.03	5.7683	1.0869	4.2827	0.01	0.0001	4.2827	0.01	0.0001	4.2827	0.01	0.0001	4.2827	0.01	0.0001					
Road #1	01	0100-0200	7.656	4.0448	7.5307	6.7338	3.5258	0.5527	0.1142	0.0437	8.0116	6.9326	0.6731	8.6101	7.4848	6.8101	7.4848					
Road #1	01	0300-0400	8.7584	3.1885	5.9087	7.1366	0.7325	1.0123	0.0232	3.2267	6.0005	7.0362	0.7141	6.0740	7.1615	6.0740	7.1615					
Road #1	01	0500-0600	8.8403	3.1885	5.9087	7.1366	0.7325	1.0123	0.0232	3.2267	6.0005	7.0362	0.7141	6.0740	7.1615	6.0740	7.1615					
Road #1	01	0700-0800	9.8413	3.1328	5.8307	6.0905	2.6908	0.5017	0.0802	2.8767	5.5665	7.2352	2.4117	4.8840	6.4840	7.2352	2.4117					
Road #1	01	0900-0900	8.9445	5.5668	10.596	8.5242	6.9068	9.3187	8.6447	6.6277	9.2776	7.3141	4.2067	7.8481	7.4848	9.2776	7.3141					
Road #1	01	1100-1200	1.1802	2.8767	5.5668	10.596	8.5242	6.9068	9.3187	8.6447	6.6277	9.2776	7.3141	4.2067	7.8481	9.2776	7.3141					
Road #1	01	1300-1400	1.1802	2.8767	5.5668	10.596	8.5242	6.9068	9.3187	8.6447	6.6277	9.2776	7.3141	4.2067	7.8481	9.2776	7.3141					
Road #1	01	1500-1600	1.1802	2.8767	5.5668	10.596	8.5242	6.9068	9.3187	8.6447	6.6277	9.2776	7.3141	4.2067	7.8481	9.2776	7.3141					
Road #1	01	1700-1800	1.1802	2.8767	5.5668	10.596	8.5242	6.9068	9.3187	8.6447	6.6277	9.2776	7.3141	4.2067	7.8481	9.2776	7.3141					
Road #1	01	1900-2000	1.1802	2.8767	5.5668	10.596	8.5242	6.9068	9.3187	8.6447	6.6277	9.2776	7.3141	4.2067	7.8481	9.2776	7.3141					
Road #1	01	2100-2200	1.1802	2.8767	5.5668	10.596	8.5242	6.9068	9.3187	8.6447	6.6277	9.2776	7.3141	4.2067	7.8481	9.2776	7.3141					
Road #1	01	2300-0000	1.1802	2.8767	5.5668	10.596	8.5242	6.9068	9.3187	8.6447	6.6277	9.2776	7.3141	4.2067	7.8481	9.2776	7.3141					
Road #2	01	0000-0000	1.2362	2.9317	5.6742	1.0505	2.4407	4.5918	9.3962	0.2129	4.0085	0.5868	1.7706	3.3434	5.1706	3.3434	5.1706					
Road #2	01	0100-0200	1.2362	2.9317	5.6742	1.0505	2.4407	4.5918	9.3962	0.2129	4.0085	0.5868	1.7706	3.3434	5.1706	3.3434	5.1706					
Road #2	01	0300-0400	1.2362	2.9317	5.6742	1.0505	2.4407	4.5918	9.3962	0.2129	4.0085	0.5868	1.7706	3.3434	5.1706	3.3434	5.1706					
Road #2	01	0500-0600	1.2362	2.9317	5.6742	1.0505	2.4407	4.5918	9.3962	0.2129	4.0085	0.5868	1.7706	3.3434	5.1706	3.3434	5.1706					
Road #2	01	0700-0800	1.2362	2.9317	5.6742	1.0505	2.4407	4.5918	9.3962	0.2129	4.0085	0.5868	1.7706	3.3434	5.1706	3.3434	5.1706					
Road #2	01	0900-0900	1.2362	2.9317	5.6742	1.0505	2.4407	4.5918	9.3962	0.2129	4.0085	0.5868	1.7706	3.3434	5.1706	3.3434	5.1706					
Road #2	01	1100-1200	1.2362	2.9317	5.6742	1.0505	2.4407	4.5918	9.3962	0.2129	4.0085	0.5868	1.7706	3.3434	5.1706	3.3434	5.1706					
Road #2	01	1300-1400	1.2362	2.9317	5.6742	1.0505	2.4407	4.5918	9.3962	0.2129	4.0085	0.5868	1.7706	3.3434	5.1706	3.3434	5.1706					
Road #2	01	1500-1600	1.2362	2.9317	5.6742	1.0505	2.4407	4.5918	9.3962	0.2129	4.0085	0.5868	1.7706	3.3434	5.1706	3.3434	5.1706					
Road #2	01	1700-1800	1.2362	2.9317	5.6742	1.0505	2.4407	4.5918	9.3962	0.2129	4.0085	0.5868	1.7706	3.3434	5.1706	3.3434	5.1706					
Road #2	01	1900-2000	1.2362	2.9317	5.6742	1.0505	2.4407	4.5918	9.3962	0.2129	4.0085	0.5868	1.7706	3.3434	5.1706	3.3434	5.1706					
Road #2	01	2100-2200	1.2362	2.9317	5.6742	1.0505	2.4407	4.5918	9.3962	0.2129	4.0085	0.5868	1.7706	3.3434	5.1706	3.3434	5.1706					
Road #2	01	2300-0000	1.2362	2.9317	5.6742	1.0505	2.4407	4.5918	9.3962	0.2129	4.0085	0.5868	1.7706	3.3434	5.1706	3.3434	5.1706					
Road #2	02	0000-0000	5.5782	1.3485	6.8888	4.932	1.198	6.088	2.101	0.505	2.6007	1.8661	4.488	2.6007	1.8661	4.488	2.6007					
Road #2	02	0100-0200	5.5782	1.3485	6.8888	4.932	1.198	6.088	2.101	0.505	2.6007	1.8661	4.488	2.6007	1.8661	4.488	2.6007					
Road #2	02	0300-0400	5.5782	1.3485	6.8888	4.932	1.198	6.088	2.101	0.505	2.6007	1.8661	4.488	2.6007	1.8661	4.488	2.6007					
Road #2	02	0500-0600	5.5782	1.3485	6.8888	4.932	1.198	6.088	2.101	0.505	2.6007	1.8661	4.488	2.6007	1.8661	4.488	2.6007					
Road #2	02	0700-0800	5.5782	1.3485	6.8888	4.932	1.198	6.088	2.101	0.505	2.6007	1.8661	4.488	2.6007	1.8661	4.488	2.6007					
Road #2	02	0900-0900	5.5782	1.3485	6.8888	4.932	1.198	6.088	2.101	0.505	2.6007	1.8661	4.488	2.6007	1.8661	4.488	2.6007					
Road #2	02	1100-1200	5.5782	1.3485	6.8888	4.932	1.198	6.088	2.101	0.505	2.6007	1.8661	4.488	2.6007	1.8661	4.488	2.6007					
Road #2	02	1300-1400	5.5782	1.3485	6.8888	4.932	1.198	6.088	2.101	0.505	2.6007	1.8661	4.488	2.6007	1.8661	4.488	2.6007					
Road #2	02	1500-1600	5.5782	1.3485	6.8888	4.932	1.198	6.088	2.101	0.505	2.6007	1.8661	4.488	2.6007	1.8661	4.488	2.6007					
Road #2	02	1700-1800	5.5782	1.3485	6.8888	4.932	1.198	6.088	2.101	0.505	2.6007	1.8661	4.488	2.6007	1.8661	4.488	2.6007					
Road #2	02	1900-2000	5.5782	1.3485	6.8888	4.932	1.198	6.088	2.101	0.505	2.6007	1.8661	4.488	2.6007	1.8661	4.488	2.6007					
Road #2	02	2100-2200	5.5782	1.3485	6.8888	4.932	1.198	6.088	2.101	0.505	2.6007	1.8661	4.488	2.6007	1.8661	4.488	2.6007					
Road #2	02	2300-0000	5.5782	1.3485	6.8888	4.932	1.198	6.088	2.101	0.505	2.6007	1.8661	4.488	2.6007	1.8661	4.488	2.6007					
Road #3	01	0000-0000	1.2362	2.9317	5.6742	1.0505	2.4407	4.5918	9.3962	0.2129	4.0085	0.5868	1.7706	3.3434	5.1706	3.3434	5.1706					
Road #3	01	0100-0200	1.2362	2.9317	5.6742	1.0505	2.4407	4.5918	9.3962	0.2129	4.0085	0.5868	1.7706	3.3434	5.1706	3.3434	5.1706					
Road #3	01	0300-0400	1.2362	2.9317	5.6742	1.0505	2.4407	4.5918	9.3962	0.2129	4.0085	0.5868	1.7706	3.3434	5.1706	3.3434	5.1706					
Road #3	01	0500-0600	1.2362	2.9317	5.6742	1.0505	2.4407	4.5918	9.3962	0.2129	4.0085	0.5868	1.7706	3.3434	5.1706	3.3434	5.1706					
Road #3	01	0700-0800	1.2362	2.9317	5.6742	1.0505	2.4407	4.5918	9.3962	0.2129	4.0085	0.5868	1.7706	3.3434	5.1706	3.3434	5.1706					
Road #3	01	0900-0900	1.2362	2.9317	5.6742	1.0505	2.4407	4.5918	9.3962	0.2129	4.0085	0.5868	1.7706	3.3434	5.1706	3.3434	5.1706					
Road #3	01	1100-1200	1.2362	2.9317	5.6742	1.0505	2.4407	4.5918	9.3962	0.2129	4.0085	0.5868	1.7706	3.3434	5.1706	3.3434	5.1706					
Road #3	01	1300-1400	1.2362	2.9317	5.6742	1.0505	2.4407	4.5918	9.3962	0.2129	4.0085	0.5868	1.7706	3.3434	5.1706	3.3434	5.1706					
Road #3	01	1500-1600	1.2362	2.9317	5.6742	1.0505	2.4407	4.5918	9.3962	0.2129	4.0085	0.5868	1.7706	3.3434	5.1706	3.3434	5.1706					
Road #3	01	1700-1800	1.2362	2.9317	5.6742	1.0505	2.4407	4.5918	9.3962	0.2129	4.0085	0.5868	1.7706	3.3434	5.1706	3.3434	5.1706					
Road #3	01	1900-2000	1.2362	2.9317	5.6742	1.0505	2.4407	4.5918	9.3962	0.2129	4.0085	0.5868	1.7706	3.3434	5.1706	3.3434	5.1706					
Road #3	01	2100-2200	1.2362	2.9317	5.6742	1.0505	2.4407	4.5918	9.3962	0.2129	4.0085	0.5868	1.7706	3.3434	5.1706	3.3434	5.1706					
Road #3	01	2300-0000	1.2362	2.9317	5.6742	1.0505	2.4407	4.5918	9.3962	0.2129	4.0085	0.5868	1.7706	3.3434	5.1706	3.3434	5.1706					
Road #3	02	0000-0000	5.5782	1.3485	6.8888	4.932	1.198	6.088	2.101	0.505	2.6007	1.8661	4.488	2.6007	1.8661	4.488	2.6007					
Road #3	02	0100-0200	5.5782	1.3485	6.8888	4.932	1.198	6.088	2.101	0.505	2.6007	1.8661	4.488	2.6007	1.8661	4.488	2.6007					
Road #3	02	0300-0400	5.5782	1.3485	6.8888	4.932	1.198	6.088	2.101	0.505	2.6007	1.8661	4.488	2.6007	1.8661	4.488	2.6007					
Road #3	02	0500-0600	5.5782	1.3485	6.8888	4.932	1.198	6.088	2.101	0.505	2.6007	1.8661	4.488	2.6007	1.8661	4.488	2.6007					
Road #3	02	0700-0800	5.5782	1.3485	6.8888	4.932	1.198	6.088	2.101	0.505	2.6007	1.8661	4.488	2.6007	1.8661	4.488	2.6007					
Road #3	02	0900-0900	5.5782	1.3485	6.8888	4.932	1.198	6.088	2.101	0.505	2.6007	1.8661	4.488	2.6007	1.8661	4.488	2.6007					
Road #3	02	1100-1200	5.5782	1.3485	6.8888	4.932	1.198	6.088	2.101	0.505	2.6007	1.8661	4.488	2.6007	1.8661	4.488	2.6007					
Road #3	02	1300-1400	5.5782	1.3485	6.8888	4.932	1.198	6.088	2.101	0.505	2.6007	1.8661	4.488	2.6007	1.8661	4.488	2.6007					
Road #3	02	1500-1600	5.5782	1.3485	6.8888	4.932	1.198	6.088	2.101	0.505	2.6007	1.8661	4.488	2.6007	1.8661	4.488	2.6007					
Road #3	02	1700-1800	5.5782	1.3485	6.8888	4.932	1.198	6.088	2.101	0.505	2.6007	1.8661	4.4									

Tsing Yi North Underground Quarry

Open Road Data 24 hour Emission Factors for A2000 Model (Dyne)				Year 2033												
Road Name	Road ID	Hour	Monthly/Annual gpm/m ³ tonne/hour	NO _x Emission						NO Emission						
				Monthly/Annual gpm/m ³ tonne/hour	Monthly/Annual gpm/m ³ tonne/hour	Monthly/Annual gpm/m ³ tonne/hour	Monthly/Annual gpm/m ³ tonne/hour	Monthly/Annual gpm/m ³ tonne/hour	Monthly/Annual gpm/m ³ tonne/hour	Monthly/Annual gpm/m ³ tonne/hour	Monthly/Annual gpm/m ³ tonne/hour	Monthly/Annual gpm/m ³ tonne/hour	Monthly/Annual gpm/m ³ tonne/hour			
Road #1	41	0000-0100	2,766.42	2,766.42	2,766.42	2,766.42	2,766.42	2,766.42	2,766.42	2,766.42	2,766.42	2,766.42	2,766.42	2,766.42	2,766.42	2,766.42
Road #1	41	0100-0200	2,876.42	4,006.48	3,755.47	2,526.42	3,511.08	3,292.47	9,662.42	3,164.42	2,266.42	3,686.42	3,116.42	1,166.42	1,067.42	1,067.42
Road #1	41	0200-0300	3,996.42	3,996.42	3,996.42	2,996.42	3,996.42	3,196.42	1,086.42	1,236.42	1,056.42	9,256.42	1,056.42	9,936.42	9,936.42	9,936.42
Road #1	41	0300-0400	3,746.42	3,746.42	3,746.42	3,746.42	3,746.42	3,746.42	3,746.42	3,746.42	3,746.42	3,746.42	3,746.42	3,746.42	3,746.42	3,746.42
Road #1	41	0400-0500	3,706.42	3,906.48	3,666.47	3,212.42	3,306.42	3,196.42	1,146.42	1,216.42	1,136.42	9,806.42	1,046.42	9,726.42	9,726.42	9,726.42
Road #1	41	0500-0600	2,916.42	4,536.48	4,066.47	2,546.42	3,786.42	3,596.42	9,896.42	3,466.42	1,476.42	3,376.42	3,646.42	1,256.42	1,166.42	1,166.42
Road #1	41	0600-0700	3,266.42	3,266.42	3,266.42	3,266.42	3,266.42	3,266.42	3,266.42	3,266.42	3,266.42	3,266.42	3,266.42	3,266.42	3,266.42	3,266.42
Road #1	41	0700-0800	2,966.42	2,966.42	1,866.47	1,746.42	2,566.42	1,596.42	1,496.42	1,036.42	6,046.42	8,676.42	5,396.42	5,086.42	5,086.42	5,086.42
Road #1	41	0800-0900	2,766.42	1,916.47	1,746.42	2,366.42	1,636.42	1,526.42	9,666.42	6,566.42	1,166.42	9,666.42	5,516.42	5,016.42	4,786.42	4,786.42
Road #1	41	0900-1000	3,026.42	3,026.42	3,026.42	3,026.42	3,026.42	3,026.42	3,026.42	3,026.42	3,026.42	3,026.42	3,026.42	3,026.42	3,026.42	3,026.42
Road #1	41	1000-1100	3,526.42	3,526.42	1,816.42	2,966.42	1,616.47	1,511.42	1,161.42	6,346.42	9,566.42	9,646.42	5,216.42	4,676.42	4,676.42	4,676.42
Road #1	41	1100-1200	3,506.42	1,856.47	1,746.42	2,976.42	1,576.42	1,466.42	1,136.42	6,966.42	9,726.42	9,656.42	5,116.42	4,786.42	4,786.42	4,786.42
Road #1	41	1200-1300	3,516.42	3,516.42	3,516.42	3,516.42	3,516.42	3,516.42	3,516.42	3,516.42	3,516.42	3,516.42	3,516.42	3,516.42	3,516.42	3,516.42
Road #1	41	1300-1400	3,886.42	2,336.47	2,126.42	3,316.42	1,996.47	1,876.42	1,266.42	7,726.42	7,356.42	1,096.42	6,546.42	6,146.42	6,146.42	6,146.42
Road #1	41	1400-1500	3,836.42	2,376.47	2,226.42	3,216.42	1,966.47	1,876.42	1,266.42	7,826.42	7,356.42	1,096.42	6,506.42	6,106.42	6,106.42	6,106.42
Road #1	41	1500-1600	3,256.42	2,256.42	2,256.42	2,256.42	2,256.42	2,256.42	2,256.42	2,256.42	2,256.42	2,256.42	2,256.42	2,256.42	2,256.42	2,256.42
Road #1	41	1600-1700	3,696.42	2,366.47	2,226.42	3,156.42	1,926.47	1,906.42	1,226.42	7,716.42	7,316.42	1,036.42	6,606.42	6,206.42	6,206.42	6,206.42
Road #1	41	1700-1800	3,216.42	2,186.47	2,066.42	2,716.42	1,826.47	1,716.42	1,131.42	6,517.42	6,046.42	9,316.42	6,756.42	6,286.42	6,286.42	6,286.42
Road #1	41	1800-1900	3,216.42	2,186.47	2,066.42	2,716.42	1,826.47	1,716.42	1,131.42	6,517.42	6,046.42	9,316.42	6,756.42	6,286.42	6,286.42	6,286.42
Road #1	41	1900-2000	3,216.42	2,186.47	2,066.42	2,716.42	1,826.47	1,716.42	1,131.42	6,517.42	6,046.42	9,316.42	6,756.42	6,286.42	6,286.42	6,286.42
Road #1	41	2000-2100	1,726.42	7,286.48	6,836.47	1,506.42	6,366.48	5,976.47	7,266.42	3,086.42	8,896.42	6,236.42	2,636.42	2,346.42	2,346.42	2,346.42
Road #1	41	2100-2200	1,686.42	6,826.48	6,376.47	1,616.42	6,476.48	6,136.47	7,266.42	2,706.42	8,306.42	6,716.42	2,286.42	2,146.42	2,146.42	2,146.42
Road #1	41	2200-2300	1,686.42	6,826.48	6,376.47	1,616.42	6,476.48	6,136.47	7,266.42	2,706.42	8,306.42	6,716.42	2,286.42	2,146.42	2,146.42	2,146.42
Road #1	41	2300-2400	1,776.42	7,886.48	7,506.47	1,576.42	6,146.48	5,826.47	7,566.42	2,486.42	9,336.42	6,846.42	2,136.42	2,006.42	2,006.42	2,006.42
Road #1	41	2400-0100	2,106.42	8,396.48	8,056.47	1,886.42	6,486.48	6,156.47	8,466.42	3,126.42	9,966.42	7,266.42	1,886.42	1,766.42	1,766.42	1,766.42
Road #2	42	0000-0100	2,766.42	2,766.42	2,766.42	2,766.42	2,766.42	2,766.42	2,766.42	2,766.42	2,766.42	2,766.42	2,766.42	2,766.42	2,766.42	2,766.42
Road #2	42	0100-0200	4,526.42	8,966.48	8,206.42	4,086.42	6,946.48	6,716.47	1,426.42	2,406.42	1,056.42	1,226.42	2,086.42	5,276.42	5,276.42	5,276.42
Road #2	42	0200-0300	5,626.42	7,706.48	1,956.42	4,816.42	6,716.48	1,766.42	1,666.42	1,236.42	6,656.42	3,676.42	1,926.42	1,666.42	1,666.42	1,666.42
Road #2	42	0300-0400	6,026.42	6,026.42	6,026.42	6,026.42	6,026.42	6,026.42	6,026.42	6,026.42	6,026.42	6,026.42	6,026.42	6,026.42	6,026.42	6,026.42
Road #2	42	0400-0500	6,026.42	7,746.48	1,956.42	5,236.42	6,726.48	1,716.42	1,716.42	1,316.42	5,566.42	4,476.42	1,886.42	1,776.42	1,776.42	1,776.42
Road #2	42	0500-0600	6,026.42	8,511.48	2,166.42	4,096.42	6,746.48	1,896.42	1,446.42	2,626.42	6,646.42	2,246.42	2,256.42	2,256.42	2,256.42	2,256.42
Road #2	42	0600-0700	6,026.42	6,026.42	6,026.42	6,026.42	6,026.42	6,026.42	6,026.42	6,026.42	6,026.42	6,026.42	6,026.42	6,026.42	6,026.42	6,026.42
Road #2	42	0700-0800	6,046.42	4,856.47	1,226.42	5,436.42	4,146.42	1,096.42	1,096.42	1,456.42	6,866.42	1,616.42	1,736.42	1,736.42	1,736.42	1,736.42
Road #2	42	0800-0900	5,346.42	4,856.47	1,226.42	5,006.42	4,246.42	1,066.42	1,766.42	4,696.42	7,756.42	1,456.42	1,766.42	1,606.42	1,606.42	1,606.42
Road #2	42	0900-1000	6,046.42	6,046.42	6,046.42	6,046.42	6,046.42	6,046.42	6,046.42	6,046.42	6,046.42	6,046.42	6,046.42	6,046.42	6,046.42	6,046.42
Road #2	42	1000-1100	7,276.42	8,886.47	1,246.42	6,066.42	4,066.42	1,056.42	1,136.42	4,386.42	9,646.42	1,766.42	1,186.42	1,006.42	1,006.42	1,006.42
Road #2	42	1100-1200	7,276.42	4,686.47	1,146.42	6,156.42	3,986.47	1,016.42	2,136.42	3,386.42	4,456.42	7,766.42	1,166.42	1,066.42	1,066.42	1,066.42
Road #2	42	1200-1300	7,276.42	7,276.42	7,276.42	7,276.42	7,276.42	7,276.42	7,276.42	7,276.42	7,276.42	7,276.42	7,276.42	7,276.42	7,276.42	7,276.42
Road #2	42	1300-1400	9,996.42	5,236.47	1,336.42	8,186.42	4,466.42	1,136.42	2,766.42	5,066.42	8,296.42	2,396.42	1,886.42	1,886.42	1,886.42	1,886.42
Road #2	42	1400-1500	9,996.42	5,276.47	1,336.42	7,996.42	4,426.47	1,176.42	2,716.42	5,516.42	8,826.42	2,376.42	1,796.42	1,796.42	1,796.42	1,796.42
Road #2	42	1500-1600	9,996.42	5,276.47	1,336.42	7,996.42	4,426.47	1,176.42	2,716.42	5,516.42	8,826.42	2,376.42	1,796.42	1,796.42	1,796.42	1,796.42
Road #2	42	1600-1700	9,916.42	5,206.47	1,326.42	7,936.42	4,426.47	1,136.42	2,656.42	4,986.42	7,756.42	2,256.42	1,776.42	1,776.42	1,776.42	1,776.42
Road #2	42	1700-1800	9,916.42	4,856.47	1,236.42	7,016.42	4,106.42	1,046.42	2,436.42	5,626.42	8,056.42	1,206.42	1,306.42	1,306.42	1,306.42	1,306.42
Road #2	42	1800-1900	7,346.42	4,176.47	1,016.42	6,406.42	3,856.47	1,086.42	1,086.42	1,266.42	6,846.42	1,406.42	1,086.42	1,086.42	1,086.42	1,086.42
Road #2	42	1900-2000	7,346.42	4,176.47	1,016.42	6,406.42	3,856.47	1,086.42	1,086.42	1,266.42	6,846.42	1,406.42	1,086.42	1,086.42	1,086.42	1,086.42
Road #2	42	2000-2100	1,126.42	1,096.42	2,776.42	3,576.42	9,476.48	2,406.42	1,426.42	3,776.42	9,566.42	1,226.42	3,226.42	8,176.42	8,176.42	8,176.42
Road #2	42	2100-2200	4,056.42	1,096.47	2,766.42	3,506.42	9,326.48	2,366.42	1,426.42	3,776.42	9,576.42	1,206.42	3,196.42	8,086.42	8,086.42	8,086.42
Road #2	42	2200-2300	4,056.42	1,096.47	2,766.42	3,506.42	9,326.48	2,366.42	1,426.42	3,776.42	9,576.42	1,206.42	3,196.42	8,086.42	8,086.42	8,086.42
Road #2	42	2300-0000	4,056.42	9,696.48	2,666.42	4,236.42	8,806.48	2,276.42	1,466.42	3,096.42	8,756.42	3,316.42	2,786.42	7,766.42	7,766.42	7,766.42
Road #3	43	0000-0100	3,886.42	3,886.42	3,886.42	3,886.42	3,886.42	3,886.42	3,886.42	3,886.42	3,886.42	3,886.42	3,886.42	3,886.42	3,886.42	3,886.42
Road #3	43	0100-0200	4,856.42	3,516.47	3,396.48	3,266.42	3,116.42	1,166.42	1,166.42	1,086.42	1,117.42	9,966.42	9,516.42	9,916.42	9,916.42	9,916.42
Road #3	43	0200-0300	3,886.42	3,886.42	3,886.42	3,886.42	3,886.42	3,886.42	3,886.42	3,886.42	3,886.42	3,886.42	3,886.42	3,886.42	3,886.42	3,886.42
Road #3	43	0300-0400	3,886.42	3,886.42	3,886.42	3,886.42	3,886.42	3,886.42	3,886.42	3,886.42	3,886.42	3,886.42	3,886.42	3,886.42	3,886.42	3,886.42
Road #3	43	0400-0500	4,116.42	1,246.42	3,316.48	4,536.42	2,886.42	2,996.48	1,426.42	1,016.42	2,286.42	2,666.42	7,996.42	9,146.42	9,146.42	9,146.42
Road #3	43	0500-0600	4,116.42	1,246.42	3,316.48	4,536.42	2,886.42	2,996.48	1,426.42	1,016.42	2,286.42	2,666.42	7,996.42	9,146.42	9,146.42	9,146.42
Road #3	43	0600-0700	4,116.42	1,246.42	3,316.48	4,536.42	2,886.42	2,996.48	1,426.42	1,016.42	2,286.42	2,666.				

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Appendix 4.5 Calculation of Vehicular Emission (

Tsing Yi North Underground Quarry

Open Road 24-hour Emission Factors											
AERMOD model (t/yr)											
Road Name	Road ID	Hour	Year 2003			NO _x Emission			NO ₂ Emission		
			Monthly/Average			Monthly/Average			Monthly/Average		
			g/min/veh	g/s/m ²	tonne/hour	g/min/veh	g/s/m ²	tonne/hour	g/min/veh	g/s/m ²	tonne/hour
Road #4	44	0800-0900	1.346	0.221	1.04E-06	0.946	0.157	6.46E-07	0.463	0.077	3.22E-07
Road #4	44	0900-1000	1.346	0.221	1.04E-06	1.126	0.187	7.61E-07	0.610	0.102	4.18E-07
Road #4	44	1000-1100	1.346	0.221	1.04E-06	1.246	0.208	8.53E-07	0.676	0.113	4.62E-07
Road #4	44	1100-1200	1.346	0.221	1.04E-06	1.366	0.228	9.45E-07	0.742	0.124	5.04E-07
Road #4	44	1200-1300	1.346	0.221	1.04E-06	1.486	0.249	1.03E-06	0.808	0.135	5.46E-07
Road #4	44	1300-1400	1.346	0.221	1.04E-06	1.606	0.269	1.12E-06	0.874	0.146	5.88E-07
Road #4	44	1400-1500	1.346	0.221	1.04E-06	1.726	0.289	1.21E-06	0.940	0.157	6.30E-07
Road #4	44	1500-1600	1.346	0.221	1.04E-06	1.846	0.310	1.30E-06	1.006	0.168	6.72E-07
Road #4	44	1600-1700	1.346	0.221	1.04E-06	1.966	0.330	1.39E-06	1.072	0.179	7.14E-07
Road #4	44	1700-1800	1.346	0.221	1.04E-06	2.086	0.350	1.48E-06	1.138	0.190	7.56E-07
Road #4	44	1800-1900	2.886	0.478	2.16E-06	1.806	0.302	1.07E-06	0.940	0.157	3.94E-07
Road #4	44	1900-2000	8.896	1.482	6.72E-06	1.756	0.293	1.03E-06	0.886	0.152	3.70E-07
Road #4	44	2000-2100	7.146	1.192	5.45E-06	1.606	0.269	1.11E-06	0.808	0.135	4.18E-07
Road #4	44	2100-2200	7.146	1.192	5.45E-06	1.486	0.249	1.20E-06	0.742	0.124	4.60E-07
Road #4	44	2200-2300	7.146	1.192	5.45E-06	1.366	0.228	1.29E-06	0.676	0.113	5.02E-07
Road #4	44	2300-2400	7.146	1.192	5.45E-06	1.246	0.208	1.38E-06	0.610	0.102	5.44E-07
Road #5	45	0000-0100	7.146	1.192	5.45E-06	6.316	1.052	4.78E-06	5.826	0.967	3.86E-06
Road #5	45	0100-0200	7.146	1.192	5.45E-06	6.476	1.073	4.90E-06	5.986	0.987	3.98E-06
Road #5	45	0200-0300	7.146	1.192	5.45E-06	6.636	1.094	5.02E-06	6.146	1.008	4.10E-06
Road #5	45	0300-0400	8.796	1.463	6.70E-06	7.726	1.287	5.67E-06	7.036	1.152	4.70E-06
Road #5	45	0400-0500	9.576	1.594	7.28E-06	8.236	1.376	6.02E-06	7.646	1.252	5.04E-06
Road #5	45	0500-0600	1.346	0.221	1.04E-06	9.036	1.507	7.89E-06	8.256	1.376	5.56E-06
Road #5	45	0600-0700	1.086	0.182	8.32E-07	9.326	1.556	8.10E-06	8.506	1.406	5.76E-06
Road #5	45	0700-0800	1.086	0.182	8.32E-07	1.016	0.168	7.23E-07	2.876	0.478	1.96E-06
Road #5	45	0800-0900	1.086	0.182	8.32E-07	1.016	0.168	7.23E-07	2.876	0.478	1.96E-06
Road #5	45	0900-1000	1.356	0.224	1.05E-06	1.096	0.182	8.52E-07	3.186	0.528	2.30E-06
Road #5	45	1000-1100	1.356	0.224	1.05E-06	1.196	0.200	9.26E-07	3.436	0.568	2.50E-06
Road #5	45	1100-1200	1.356	0.224	1.05E-06	1.296	0.218	1.00E-06	3.686	0.608	2.70E-06
Road #5	45	1200-1300	1.626	0.270	1.23E-06	1.386	0.231	1.08E-06	3.936	0.648	2.90E-06
Road #5	45	1300-1400	1.646	0.274	1.25E-06	1.486	0.249	1.16E-06	4.246	0.704	3.10E-06
Road #5	45	1400-1500	1.666	0.278	1.27E-06	1.586	0.267	1.24E-06	4.506	0.744	3.30E-06
Road #5	45	1500-1600	1.586	0.262	1.19E-06	1.686	0.285	1.32E-06	4.266	0.704	3.10E-06
Road #5	45	1600-1700	1.676	0.282	1.33E-06	1.426	0.237	1.06E-06	3.586	0.596	2.42E-06
Road #5	45	1700-1800	1.676	0.282	1.33E-06	1.426	0.237	1.06E-06	3.586	0.596	2.42E-06
Road #5	45	1800-1900	1.316	0.219	9.24E-07	1.546	0.258	1.13E-06	3.186	0.528	2.30E-06
Road #5	45	1900-2000	8.596	1.432	6.74E-06	1.746	0.288	1.06E-06	2.986	0.496	1.96E-06
Road #5	45	2000-2100	7.296	1.232	5.60E-06	1.646	0.274	1.10E-06	2.886	0.478	1.92E-06
Road #5	45	2100-2200	7.296	1.232	5.60E-06	1.646	0.274	1.10E-06	2.886	0.478	1.92E-06
Road #5	45	2200-2300	7.026	1.176	5.16E-06	1.616	0.268	1.09E-06	2.856	0.468	1.89E-06
Road #5	45	2300-2400	7.026	1.176	5.16E-06	1.616	0.268	1.09E-06	2.856	0.468	1.89E-06
Road #6	46	0000-0100	6.586	1.098	4.65E-06	5.776	0.958	4.08E-06	5.326	0.876	3.54E-06
Road #6	46	0100-0200	7.176	1.178	4.92E-06	6.236	1.048	4.28E-06	5.686	0.946	3.75E-06
Road #6	46	0200-0300	7.146	1.176	4.90E-06	6.236	1.048	4.28E-06	5.686	0.946	3.75E-06
Road #6	46	0300-0400	8.276	1.362	5.19E-06	7.076	1.188	4.70E-06	6.706	1.108	4.30E-06
Road #6	46	0400-0500	9.076	1.482	5.64E-06	7.786	1.228	4.96E-06	7.406	1.148	4.50E-06
Road #6	46	0500-0600	9.556	1.598	6.01E-06	8.276	1.348	5.19E-06	7.886	1.258	4.80E-06
Road #6	46	0600-0700	9.556	1.598	6.01E-06	8.276	1.348	5.19E-06	7.886	1.258	4.80E-06
Road #6	46	0700-0800	1.136	0.192	8.47E-07	9.646	1.612	9.37E-06	7.746	1.278	5.04E-06
Road #6	46	0800-0900	1.086	0.186	8.17E-07	9.206	1.558	8.92E-06	7.406	1.218	4.78E-06
Road #6	46	0900-1000	1.126	0.190	8.54E-07	9.206	1.558	8.92E-06	7.406	1.218	4.78E-06
Road #6	46	1000-1100	1.482	0.246	1.01E-06	1.146	0.190	8.52E-07	1.006	0.168	6.72E-07
Road #6	46	1100-1200	1.482	0.246	1.01E-06	1.146	0.190	8.52E-07	1.006	0.168	6.72E-07
Road #6	46	1200-1300	1.076	0.174	6.96E-07	1.306	0.216	9.76E-07	0.956	0.158	6.28E-07
Road #6	46	1300-1400	1.076	0.174	6.96E-07	1.306	0.216	9.76E-07	0.956	0.158	6.28E-07
Road #6	46	1400-1500	1.126	0.190	8.54E-07	1.306	0.216	9.76E-07	0.956	0.158	6.28E-07
Road #6	46	1500-1600	1.176	0.196	9.01E-07	1.306	0.216	9.76E-07	0.956	0.158	6.28E-07
Road #6	46	1600-1700	1.126	0.190	8.54E-07	1.306	0.216	9.76E-07	0.956	0.158	6.28E-07
Road #6	46	1700-1800	8.476	1.422	6.20E-06	7.076	1.188	4.70E-06	6.706	1.108	4.30E-06
Road #6	46	1800-1900	8.476	1.422	6.20E-06	7.076	1.188	4.70E-06	6.706	1.108	4.30E-06
Road #6	46	1900-2000	8.876	1.512	6.55E-06	5.676	0.948	4.14E-06	5.196	0.868	3.62E-06
Road #6	46	2000-2100	5.956	1.028	4.18E-06	4.706	0.788	3.42E-06	4.326	0.728	3.02E-06
Road #6	46	2100-2200	5.956	1.028	4.18E-06	4.706	0.788	3.42E-06	4.326	0.728	3.02E-06
Road #6	46	2200-2300	4.886	0.810	3.31E-06	3.716	0.618	2.98E-06	3.506	0.588	2.42E-06
Road #6	46	2300-2400	4.886	0.810	3.31E-06	3.716	0.618	2.98E-06	3.506	0.588	2.42E-06
Road #7	47	0000-0100	5.156	0.857	3.05E-06	4.456	0.748	2.67E-06	4.156	0.698	2.42E-06
Road #7	47	0100-0200	1.556	0.258	1.08E-06	1.446	0.242	1.03E-06	1.316	0.218	9.76E-07
Road #7	47	0200-0300	1.426	0.238	9.81E-07	1.516	0.250	1.05E-06	1.326	0.222	1.00E-06
Road #7	47	0300-0400	1.526	0.254	1.12E-06	1.516	0.250	1.05E-06	1.326	0.222	1.00E-06
Road #7	47	0400-0500	2.006	0.342	1.48E-06	1.736	0.288	1.26E-06	1.526	0.254	1.12E-06
Road #7	47	0500-0600	2.156	0.358	1.61E-06	1.886	0.314	1.41E-06	1.676	0.278	1.34E-06
Road #7	47	0600-0700	2.156	0.358	1.61E-06	1.886	0.314	1.41E-06	1.676	0.278	1.34E-06
Road #7	47	0700-0800	2.756	0.462	2.14E-06	2.356	0.394	1.67E-06	2.046	0.342	1.50E-06
Road #7	47	0800-0900	2.676	0.450	2.07E-06	2.286	0.382	1.60E-06	1.976	0.328	1.43E-06
Road #7	47	0900-1000	2.676	0.450	2.07E-06	2.286	0.382	1.60E-06	1.976	0.328	1.43E-06
Road #7	47	1000-1100	3.686	0.616	2.73E-06	3.076	0.512	2.19E-06	2.756	0.450	2.07E-06
Road #7	47	1100-1200	3.426	0.578	2.56E-06	2.906	0.474	2.01E-06	2.516	0.418	1.87E-06
Road #7	47	1200-1300	3.126	0.522	2.30E-06	2.386	0.398	1.64E-06	2.106	0.352	1.61E-06
Road #7	47	1300-1400	2.826	0.470	2.05E-06	2.236	0.366	1.54E-06	1.926	0.318	1.47E-06

I:\Secure\Environment Projects\60733229\1.01\Others\Air Modelling\Appendix\Traffic\Appendix\Appendix 3.5.3 Emission Factor in 2033-S.B.

Appendix 4.5 Calculation of Vehicular Emission (

Tsing Yi North Underground Quarry

Open Road 24-hour Emission Factors											
AERMOD model (tune)											
Year 2033											
Road Name	Road ID	Hour	NO _x Emission			NO _x Emission			NO _x Emission		
			g/min/veh	g/s/m ³	tonne/hour	g/min/veh	g/s/m ³	tonne/hour	g/min/veh	g/s/m ³	tonne/hour
Road 103	103	1600-1700	1.346	0.228	8.442	0.386	0.064	2.316	0.007	0.438	0.011
Road 103	103	1700-1800	1.145	0.212	7.486	0.338	0.059	2.056	0.007	0.938	0.015
Road 103	103	1800-1900	0.808	0.208	6.486	0.656	0.343	2.647	0.026	1.548	0.078
Road 103	103	1900-2000	0.618	0.208	5.486	0.618	0.343	2.647	0.026	1.548	0.078
Road 103	103	2000-2100	0.746	0.335	3.362	0.336	0.577	1.116	0.286	5.002	1.032
Road 103	103	2100-2200	0.915	0.312	2.938	0.508	1.038	2.448	0.486	1.008	0.415
Road 103	103	2200-2300	1.115	0.312	2.938	0.508	1.038	2.448	0.486	1.008	0.415
Road 103	103	2300-0000	0.618	0.258	2.246	0.578	0.634	2.006	0.478	1.152	0.725
Road 104	104	0000-0100	1.182	0.558	1.558	0.978	0.878	1.398	0.818	4.217	0.588
Road 104	104	0100-0200	1.268	0.408	1.108	1.058	0.478	0.938	0.847	0.898	0.488
Road 104	104	0200-0300	1.368	0.348	0.848	0.71	0.388	0.678	0.848	0.898	0.488
Road 104	104	0300-0400	1.368	0.358	0.748	1.208	0.328	0.378	1.848	0.847	0.748
Road 104	104	0400-0500	1.482	0.448	0.918	1.228	0.328	0.378	1.848	0.847	0.748
Road 104	104	0500-0600	1.518	0.458	0.918	1.228	0.328	0.378	1.848	0.847	0.748
Road 104	104	0600-0700	1.648	0.888	0.838	1.438	1.648	0.348	0.788	1.788	0.508
Road 104	104	0700-0800	1.788	0.208	0.858	1.528	3.598	0.7318	0.808	0.938	0.638
Road 104	104	0800-0900	1.788	0.208	0.858	1.528	3.598	0.7318	0.808	0.938	0.638
Road 104	104	0900-1000	2.246	0.118	0.748	1.728	0.318	0.878	0.938	1.248	0.568
Road 104	104	1000-1100	2.318	0.258	0.078	1.938	0.318	0.878	0.938	2.178	0.438
Road 104	104	1100-1200	1.938	0.258	0.078	1.938	0.318	0.878	0.938	2.178	0.438
Road 104	104	1200-1300	1.388	0.838	1.078	1.178	2.418	0.4918	0.768	0.938	0.838
Road 104	104	1300-1400	1.398	0.918	0.948	1.188	2.448	0.508	0.698	0.468	0.588
Road 104	104	1400-1500	1.188	1.188	0.748	1.188	2.448	0.508	0.698	0.468	0.588
Road 104	104	1500-1600	1.348	1.088	0.778	1.158	2.648	0.538	0.698	0.288	0.828
Road 104	104	1600-1700	1.428	0.448	0.7118	1.218	2.988	0.608	0.678	1.658	0.368
Road 104	104	1700-1800	1.068	0.208	0.748	1.158	2.988	0.608	0.678	1.658	0.368
Road 104	104	1800-1900	0.718	0.238	0.478	0.618	0.388	0.308	0.428	1.348	0.778
Road 104	104	1900-2000	0.628	0.338	0.158	0.518	0.348	0.2788	0.458	1.088	0.918
Road 104	104	2000-2100	0.998	0.138	0.248	0.518	0.948	0.2008	0.478	0.918	0.878
Road 104	104	2100-2200	0.818	0.1008	0.318	0.518	0.948	0.2008	0.478	0.918	0.878
Road 104	104	2200-2300	0.768	0.838	0.818	0.818	2.778	0.5528	2.778	0.4447	0.698
Road 105	105	0000-0100	1.482	0.708	2.078	1.482	0.708	2.078	1.482	0.708	2.078
Road 105	105	0100-0200	2.026	0.408	1.698	1.812	0.358	1.488	0.968	1.158	0.748
Road 105	105	0200-0300	2.268	0.328	1.398	0.67	0.388	1.188	0.768	1.548	0.468
Road 105	105	0300-0400	2.268	0.328	1.398	0.67	0.388	1.188	0.768	1.548	0.468
Road 105	105	0400-0500	2.268	0.328	1.398	0.67	0.388	1.188	0.768	1.548	0.468
Road 105	105	0500-0600	2.808	0.088	0.538	0.278	0.318	0.2218	0.148	2.708	0.188
Road 105	105	0600-0700	2.808	0.088	0.538	0.278	0.318	0.2218	0.148	2.708	0.188
Road 105	105	0700-0800	3.082	0.248	1.398	2.648	0.278	1.158	1.338	1.408	1.128
Road 105	105	0800-0900	3.082	0.248	1.398	2.648	0.278	1.158	1.338	1.408	1.128
Road 105	105	0900-1000	3.082	0.248	1.398	2.648	0.278	1.158	1.338	1.408	1.128
Road 105	105	1000-1100	3.412	0.338	1.908	3.448	0.368	1.508	1.668	1.7478	1.378
Road 105	105	1100-1200	3.868	0.818	0.598	3.288	0.348	1.398	1.568	1.5778	0.538
Road 105	105	1200-1300	4.268	0.208	0.748	3.288	0.348	1.398	1.568	1.5778	0.538
Road 105	105	1300-1400	9.248	0.168	0.408	7.898	0.278	0.908	3.408	3.008	2.584
Road 105	105	1400-1500	9.248	0.168	0.408	7.898	0.278	0.908	3.408	3.008	2.584
Road 105	105	1500-1600	8.658	0.278	0.348	7.958	0.698	0.2908	3.398	2.968	2.248
Road 105	105	1600-1700	8.658	0.278	0.348	7.958	0.698	0.2908	3.398	2.968	2.248
Road 105	105	1700-1800	8.658	0.278	0.348	7.958	0.698	0.2908	3.398	2.968	2.248
Road 105	105	1800-1900	8.658	0.278	0.348	7.958	0.698	0.2908	3.398	2.968	2.248
Road 105	105	1900-2000	6.012	0.188	0.328	0.528	0.278	1.188	0.258	1.348	0.608
Road 105	105	2000-2100	6.012	0.188	0.328	0.528	0.278	1.188	0.258	1.348	0.608
Road 105	105	2100-2200	6.012	0.188	0.328	0.528	0.278	1.188	0.258	1.348	0.608
Road 105	105	2200-2300	5.168	0.448	1.548	0.458	1.248	0.518	2.188	0.678	0.528
Road 105	105	2300-0000	5.448	0.448	1.548	0.458	1.248	0.518	2.188	0.678	0.528
Road 105	105	0000-0100	6.118	0.318	1.808	0.488	1.038	0.5528	2.278	0.4447	0.698
Road 105	105	0100-0200	6.118	0.318	1.808	0.488	1.038	0.5528	2.278	0.4447	0.698
Road 105	105	0200-0300	6.118	0.318	1.808	0.488	1.038	0.5528	2.278	0.4447	0.698
Road 105	105	0300-0400	6.118	0.318	1.808	0.488	1.038	0.5528	2.278	0.4447	0.698
Road 105	105	0400-0500	6.118	0.318	1.808	0.488	1.038	0.5528	2.278	0.4447	0.698
Road 105	105	0500-0600	6.118	0.318	1.808	0.488	1.038	0.5528	2.278	0.4447	0.698
Road 105	105	0600-0700	2.502	0.438	0.478	2.188	0.278	3.988	1.188	1.698	0.718
Road 105	105	0700-0800	2.502	0.438	0.478	2.188	0.278	3.988	1.188	1.698	0.718
Road 105	105	0800-0900	2.502	0.438	0.478	2.188	0.278	3.988	1.188	1.698	0.718
Road 105	105	0900-1000	3.882	0.438	0.478	3.268	0.318	1.238	1.671	2.008	0.328
Road 105	105	1000-1100	4.438	0.738	1.498	3.698	0.338	1.248	1.818	1.938	1.088
Road 105	105	1100-1200	4.438	0.738	1.498	3.698	0.338	1.248	1.818	1.938	1.088
Road 105	105	1200-1300	6.882	0.038	0.268	0.658	0.818	0.2788	0.598	1.838	0.218
Road 105	105	1300-1400	7.212	0.158	0.368	0.618	0.928	0.3118	2.758	4.438	0.468
Road 105	105	1400-1500	7.212	0.158	0.368	0.618	0.928	0.3118	2.758	4.438	0.468
Road 105	105	1500-1600	6.418	0.138	0.368	0.508	0.978	0.3078	2.698	1.4608	0.468
Road 105	105	1600-1700	6.418	0.138	0.368	0.508	0.978	0.3078	2.698	1.4608	0.468
Road 105	105	1700-1800	6.418	0.138	0.368	0.508	0.978	0.3078	2.698	1.4608	0.468
Road 105	105	1800-1900	3.582	0.688	1.788	2.528	4.958	1.568	1.568	0.048	1.298
Road 105	105	1900-2000	2.668	0.418	0.788	0.238	0.968	0.4148	1.268	0.6048	0.071
Road 105	105	2000-2100	2.668	0.418	0.788	0.238	0.968	0.4148	1.268	0.6048	0.071
Road 105	105	2100-2200	2.242	0.248	0.778	2.078	2.028	6.6118	1.258	1.988	0.048
Road 105	105	2200-2300	2.298	0.188	0.608	2.008	1.698	6.098	1.188	1.088	0.468

Tsing Yi North Underground Quarry

Open Road 24 hr Use Case Functions		Year 2033		NO _x Emission				NO Emission			
ARMD model (metric tons)		Hour		Monthly/Route		Monthly/Route/Average		Monthly/Route		Monthly/Route/Average	
Road Name	Road ID	g/km/hr	g/s/m	g/km/hr	g/s/m	g/km/hr	g/s/m	g/km/hr	g/s/m	g/km/hr	g/s/m
Road 47	47	1600-1700	1.576	0.436	1.671	0.436	1.671	1.188	0.308	1.283	0.335
Road 47	47	1700-1800	1.976	0.436	1.388	0.356	1.372	1.188	0.308	1.236	0.316
Road 47	47	1800-1845	1.482	0.317	1.175	0.276	1.272	1.015	0.258	1.926	0.515
Road 47	47	1845-1900	1.717	0.423	1.743	0.456	1.743	1.015	0.258	1.926	0.515
Road 47	47	2000-2100	1.042	0.184	0.512	0.136	0.911	0.439	0.726	1.156	0.358
Road 47	47	2100-2200	0.698	0.173	0.476	0.120	1.141	0.635	0.684	1.096	0.343
Road 47	47	2200-2300	1.214	0.381	1.076	0.280	1.076	0.635	0.684	1.096	0.343
Road 47	47	2300-0000	0.265	0.145	0.944	0.248	1.436	0.888	0.726	1.236	0.354
Road 48	48	0000-0500	1.452	0.388	1.606	0.456	0.548	0.844	0.688	0.884	0.246
Road 48	48	0500-0600	0.808	0.165	0.711	0.180	0.711	0.258	0.336	0.688	0.186
Road 48	48	0600-0800	0.668	0.151	0.308	0.076	0.308	0.457	0.841	0.341	0.174
Road 48	48	0800-0900	0.908	0.265	0.488	0.120	0.258	0.385	0.336	0.688	0.186
Road 48	48	0900-1000	0.808	0.265	0.520	0.136	0.520	0.385	0.336	0.688	0.186
Road 48	48	0900-1000	1.038	0.265	0.448	0.120	0.548	0.818	0.712	1.526	0.796
Road 48	48	0600-0700	1.302	0.447	0.216	0.056	1.252	1.088	0.874	1.176	0.368
Road 48	48	0700-0800	1.212	0.372	0.478	0.120	0.508	0.635	0.726	1.236	0.354
Road 48	48	0800-0900	1.212	0.372	0.548	0.120	0.762	0.488	0.836	0.586	0.390
Road 48	48	0900-1000	1.302	0.447	0.216	0.056	1.252	1.088	0.874	1.176	0.368
Road 48	48	1000-1100	1.412	0.478	0.726	0.192	0.726	1.088	0.874	1.176	0.368
Road 48	48	1100-1200	1.362	0.478	0.726	0.192	1.176	2.388	0.616	0.846	0.201
Road 48	48	1200-1300	1.312	0.432	0.556	0.148	0.836	0.808	0.287	0.376	0.088
Road 48	48	1300-1400	1.312	0.432	0.788	0.208	0.788	0.808	0.287	0.376	0.088
Road 48	48	1400-1500	1.326	0.471	0.711	0.186	0.788	0.957	0.726	0.936	0.232
Road 48	48	1500-1600	0.372	0.042	0.638	0.168	0.308	0.896	0.272	0.402	0.068
Road 48	48	1600-1700	0.232	0.028	0.288	0.076	0.232	0.638	0.268	0.428	0.116
Road 48	48	1700-1800	2.812	0.402	0.638	0.168	0.312	0.508	0.308	0.472	0.126
Road 48	48	1800-1900	2.568	0.372	0.618	0.168	0.312	0.496	0.316	0.476	0.126
Road 48	48	1900-2000	2.568	0.372	0.618	0.168	0.312	0.496	0.316	0.476	0.126
Road 48	48	2000-2100	2.568	0.372	0.357	0.096	0.212	0.957	0.316	0.656	0.136
Road 48	48	2100-2200	2.428	0.216	0.308	0.088	0.472	0.836	0.381	0.308	0.046
Road 48	48	2200-2300	2.428	0.216	0.308	0.088	0.472	0.836	0.381	0.308	0.046
Road 48	48	2300-0000	2.488	0.165	0.288	0.076	0.472	0.836	0.381	0.308	0.046
Road 49	49	0000-0100	1.082	0.568	0.488	0.946	0.138	1.308	1.338	1.721	0.826
Road 49	49	0100-0200	1.082	0.568	0.488	0.946	0.138	1.308	1.338	1.721	0.826
Road 49	49	0200-0300	1.138	0.288	0.288	0.712	0.498	0.678	1.128	0.327	0.826
Road 49	49	0300-0400	1.158	0.238	0.538	0.072	1.038	0.511	0.782	0.572	0.396
Road 49	49	0400-0500	1.158	0.238	0.538	0.072	1.038	0.511	0.782	0.572	0.396
Road 49	49	0500-0600	0.368	0.578	0.338	0.212	0.4578	1.158	1.378	0.517	1.311
Road 49	49	0600-0700	1.712	0.372	0.3478	1.488	0.118	0.3118	0.961	1.286	0.3178
Road 49	49	0700-0800	1.712	0.372	0.3478	1.488	0.118	0.3118	0.961	1.286	0.3178
Road 49	49	0800-0900	2.338	0.4278	0.888	0.958	2.888	1.888	0.2178	1.008	0.158
Road 49	49	0900-1000	2.338	0.4278	0.888	0.958	2.888	1.888	0.2178	1.008	0.158
Road 49	49	1000-1100	2.488	0.612	0.888	0.878	2.228	0.6118	1.328	0.218	0.878
Road 49	49	1100-1200	2.488	0.612	0.888	0.878	2.228	0.6118	1.328	0.218	0.878
Road 49	49	1200-1300	2.538	0.888	0.7218	2.438	0.438	0.148	0.248	0.208	0.528
Road 49	49	1300-1400	2.538	0.888	0.7218	2.438	0.438	0.148	0.248	0.208	0.528
Road 49	49	1400-1500	2.588	0.908	0.388	0.552	0.4278	0.6118	2.118	0.218	0.538
Road 49	49	1500-1600	2.588	0.908	0.388	0.552	0.4278	0.6118	2.118	0.218	0.538
Road 49	49	1600-1700	2.308	0.7078	0.8078	0.552	2.7478	0.638	0.218	0.258	0.538
Road 49	49	1700-1800	2.308	0.7078	0.8078	0.552	2.7478	0.638	0.218	0.258	0.538
Road 49	49	1800-1900	1.952	0.312	0.7078	0.172	0.628	0.608	1.708	0.2778	0.598
Road 49	49	1900-2000	1.952	0.312	0.7078	0.172	0.628	0.608	1.708	0.2778	0.598
Road 49	49	2000-2100	1.712	0.238	0.5718	0.498	0.888	0.688	1.828	0.288	0.578
Road 49	49	2100-2200	1.712	0.238	0.5718	0.498	0.888	0.688	1.828	0.288	0.578
Road 49	49	2200-2300	1.302	0.2478	0.338	1.138	0.108	0.278	0.688	1.588	0.488
Road 49	49	2300-0000	1.302	0.2478	0.338	1.138	0.108	0.278	0.688	1.588	0.488
Road 50	50	0000-0100	0.998	0.928	1.888	2.688	0.5478	1.668	2.378	1.5118	1.728
Road 50	50	0100-0200	0.998	0.928	1.888	2.688	0.5478	1.668	2.378	1.5118	1.728
Road 50	50	0200-0300	0.472	1.428	0.028	0.788	0.228	1.788	1.588	1.518	0.368
Road 50	50	0300-0400	0.472	1.428	0.028	0.788	0.228	1.788	1.588	1.518	0.368
Road 50	50	0400-0500	0.472	1.428	0.028	0.788	0.228	1.788	1.588	1.518	0.368
Road 50	50	0500-0600	0.472	1.428	0.028	0.788	0.228	1.788	1.588	1.518	0.368
Road 50	50	0600-0700	0.472	1.428	0.028	0.788	0.228	1.788	1.588	1.518	0.368
Road 50	50	0700-0800	0.998	0.928	1.408	1.888	0.598	0.8118	1.278	1.888	1.618
Road 50	50	0800-0900	0.998	0.928	1.408	1.888	0.598	0.8118	1.278	1.888	1.618
Road 50	50	0900-1000	0.998	0.928	1.408	1.888	0.598	0.8118	1.278	1.888	1.618
Road 50	50	1000-1100	0.998	0.928	1.408	1.888	0.598	0.8118	1.278	1.888	1.618
Road 50	50	1100-1200	0.998	0.928	1.408	1.888	0.598	0.8118	1.278	1.888	1.618
Road 50	50	1200-1300	0.998	0.928	1.408	1.888	0.598	0.8118	1.278	1.888	1.618
Road 50	50	1300-1400	0.998	0.928	1.408	1.888	0.598	0.8118	1.278	1.888	1.618
Road 50	50	1400-1500	0.998	0.928	1.408	1.888	0.598	0.8118	1.278	1.888	1.618
Road 50	50	1500-1600	0.998	0.928	1.408	1.888	0.598	0.8118	1.278	1.888	1.618
Road 50	50	1600-1700	0.998	0.928	1.408	1.888	0.598	0.8118	1.278	1.888	1.618
Road 50	50	1700-1800	0.998	0.928	1.408	1.888	0.598	0.8118	1.278	1.888	1.618
Road 50	50	1800-1900	0.998	0.928	1.408	1.888	0.598	0.8118	1.278	1.888	1.618
Road 50	50	1900-2000	0.998	0.928	1.408	1.888	0.598	0.8118	1.278	1.888	1.618
Road 50	50	2000-2100	0.998	0.928	1.408	1.888	0.598	0.8118	1.278	1.888	1.618
Road 50	50	2100-2200	0.998	0.928	1.408	1.888	0.598	0.8118	1.278	1.888	1.618
Road 50	50	2200-2300	0.998	0.928	1.408	1.888	0.598	0.8118	1.278	1.888	1.618
Road 50	50	2300-0000	0.998	0.928	1.408	1.888	0.598	0.8118	1.278	1.888	1.618

ment Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Appendix\Appendix 3.5.3 Emission Factor in 2033-S.B.\xlsx

Tsing Yi North Underground Quarry

Open Road 24 Hour Emission Factors			Year 2003											
ARMS Roadway (mi)			NO _x Emission						NO Emission					
Road Name	Road ID	Hour	Month	gpm/hour	gpm/ton	gpm/veh	Month	gpm/hour	gpm/ton	gpm/veh	Month	gpm/hour	gpm/ton	gpm/veh
Road 1	1	0000-0000	7.010	1.030	1.640	1.800	11.070	0.130	0.200	0.220	12.070	0.130	0.200	0.220
Road 1	1	0100-0200	7.990	1.030	1.850	2.060	11.070	0.350	0.520	0.570	12.070	0.350	0.520	0.570
Road 1	1	0200-0300	4.000	1.030	1.500	1.600	11.070	0.280	0.420	0.450	12.070	0.280	0.420	0.450
Road 1	1	0300-0400	3.000	1.030	1.100	1.200	11.070	0.280	0.420	0.450	12.070	0.280	0.420	0.450
Road 1	1	0400-0500	3.600	1.030	1.250	1.350	11.070	0.280	0.420	0.450	12.070	0.280	0.420	0.450
Road 1	1	0500-0600	1.040	0.970	0.480	0.520	0.930	1.130	0.580	0.620	1.170	0.870	0.410	0.440
Road 1	1	0600-0700	1.200	0.970	0.550	0.600	0.930	1.250	0.650	0.700	1.270	0.910	0.470	0.500
Road 1	1	0700-0800	1.200	0.920	0.750	0.800	0.930	1.240	0.650	0.700	1.240	0.850	0.550	0.580
Road 1	1	0800-0900	1.180	0.920	0.750	0.800	0.930	1.240	0.650	0.700	1.240	0.850	0.550	0.580
Road 1	1	0900-1000	1.300	0.920	0.850	0.900	0.930	1.240	0.650	0.700	1.240	0.850	0.550	0.580
Road 1	1	1000-1100	1.420	0.920	0.950	1.000	0.930	1.240	0.650	0.700	1.240	0.850	0.550	0.580
Road 1	1	1200-1300	1.570	0.880	1.080	1.130	0.930	1.370	0.700	0.750	1.370	0.900	0.580	0.610
Road 1	1	1300-1400	1.600	0.880	1.100	1.150	0.930	1.370	0.700	0.750	1.370	0.900	0.580	0.610
Road 1	1	1400-1500	1.640	0.880	1.150	1.200	0.930	1.370	0.700	0.750	1.370	0.900	0.580	0.610
Road 1	1	1500-1600	1.570	0.880	1.080	1.130	0.930	1.370	0.700	0.750	1.370	0.900	0.580	0.610
Road 1	1	1600-1700	1.260	0.880	0.900	1.040	0.930	1.370	0.700	0.750	1.370	0.900	0.580	0.610
Road 1	1	1700-1800	1.260	0.880	0.900	1.040	0.930	1.370	0.700	0.750	1.370	0.900	0.580	0.610
Road 1	1	1800-1900	1.400	0.880	1.050	1.100	0.930	1.370	0.700	0.750	1.370	0.900	0.580	0.610
Road 1	1	1900-2000	1.400	0.880	1.050	1.100	0.930	1.370	0.700	0.750	1.370	0.900	0.580	0.610
Road 1	1	2000-2100	1.340	0.880	1.000	1.050	0.930	1.370	0.700	0.750	1.370	0.900	0.580	0.610
Road 1	1	2100-2200	1.380	0.880	1.050	1.100	0.930	1.370	0.700	0.750	1.370	0.900	0.580	0.610
Road 1	1	2200-2300	1.380	0.880	1.050	1.100	0.930	1.370	0.700	0.750	1.370	0.900	0.580	0.610
Road 1	1	2300-2400	1.680	0.820	1.270	1.320	0.820	1.570	0.600	0.650	1.480	0.840	0.750	0.780
Road 2	2	0000-0100	0.710	0.920	0.540	0.580	1.170	0.590	0.310	0.320	0.550	0.480	0.260	0.270
Road 2	2	0100-0200	0.860	0.920	0.650	0.680	1.170	0.590	0.310	0.320	0.550	0.480	0.260	0.270
Road 2	2	0200-0300	1.020	0.810	0.480	0.510	0.810	0.650	0.360	0.370	0.600	0.490	0.270	0.280
Road 2	2	0300-0400	1.090	0.790	0.590	0.620	0.540	0.720	0.280	0.290	0.490	0.550	0.300	0.310
Road 2	2	0400-0500	1.160	0.740	0.640	0.670	0.520	0.700	0.280	0.290	0.470	0.530	0.290	0.300
Road 2	2	0500-0600	1.230	0.720	0.710	0.740	0.500	0.680	0.300	0.310	0.450	0.510	0.280	0.290
Road 2	2	0600-0700	1.300	0.680	0.800	0.830	0.480	0.660	0.320	0.330	0.430	0.490	0.260	0.270
Road 2	2	0700-0800	1.430	0.630	0.950	0.980	0.460	0.640	0.340	0.350	0.410	0.470	0.240	0.250
Road 2	2	0800-0900	1.450	0.630	0.950	0.980	0.460	0.640	0.340	0.350	0.410	0.470	0.240	0.250
Road 2	2	0900-1000	1.610	0.620	1.060	1.090	0.440	0.610	0.360	0.370	0.390	0.450	0.220	0.230
Road 2	2	1000-1100	1.620	0.620	1.060	1.090	0.440	0.610	0.360	0.370	0.390	0.450	0.220	0.230
Road 2	2	1100-1200	1.820	0.600	1.250	1.280	0.420	0.590	0.380	0.390	0.370	0.430	0.200	0.210
Road 2	2	1200-1300	1.750	0.600	1.200	1.230	0.420	0.590	0.380	0.390	0.370	0.430	0.200	0.210
Road 2	2	1300-1400	1.970	0.620	1.480	1.510	0.400	0.580	0.400	0.410	0.350	0.410	0.180	0.190
Road 2	2	1400-1500	1.980	0.620	1.480	1.510	0.400	0.580	0.400	0.410	0.350	0.410	0.180	0.190
Road 2	2	1500-1600	1.830	0.630	1.380	1.410	0.410	0.590	0.390	0.400	0.360	0.420	0.190	0.200
Road 2	2	1600-1700	1.970	0.650	1.550	1.580	0.400	0.580	0.400	0.410	0.350	0.410	0.180	0.190
Road 2	2	1700-1800	1.980	0.650	1.550	1.580	0.400	0.580	0.400	0.410	0.350	0.410	0.180	0.190
Road 2	2	1800-1900	1.870	0.670	1.450	1.480	0.410	0.590	0.390	0.400	0.360	0.420	0.190	0.200
Road 2	2	1900-2000	1.850	0.670	1.430	1.460	0.410	0.590	0.390	0.400	0.360	0.420	0.190	0.200
Road 2	2	2000-2100	1.620	0.680	1.310	1.340	0.420	0.590	0.380	0.390	0.370	0.430	0.200	0.210
Road 2	2	2100-2200	1.680	0.680	1.360	1.390	0.420	0.590	0.380	0.390	0.370	0.430	0.200	0.210
Road 2	2	2200-2300	1.850	0.630	1.510	1.540	0.400	0.580	0.400	0.410	0.350	0.410	0.180	0.190
Road 2	2	2300-2400	1.860	0.630	1.510	1.540	0.400	0.580	0.400	0.410	0.350	0.410	0.180	0.190
Road 3	3	0000-0100	0.930	1.240	2.000	2.100	1.120	0.850	0.450	0.460	1.050	0.750	0.350	0.360
Road 3	3	0100-0200	1.030	1.240	2.200	2.300	1.120	0.850	0.450	0.460	1.050	0.750	0.350	0.360
Road 3	3	0200-0300	1.080	1.240	2.280	2.380	1.120	0.850	0.450	0.460	1.050	0.750	0.350	0.360
Road 3	3	0300-0400	1.180	1.240	2.480	2.580	1.120	0.850	0.450	0.460	1.050	0.750	0.350	0.360
Road 3	3	0400-0500	1.160	1.240	2.460	2.560	1.120	0.850	0.450	0.460	1.050	0.750	0.350	0.360
Road 3	3	0500-0600	1.220	1.050	2.420	2.520	1.120	0.850	0.450	0.460	1.050	0.750	0.350	0.360
Road 3	3	0600-0700	1.270	1.050	2.470	2.570	1.120	0.850	0.450	0.460	1.050	0.750	0.350	0.360
Road 3	3	0700-0800	1.460	1.070	2.710	2.810	1.120	0.850	0.450	0.460	1.050	0.750	0.350	0.360
Road 3	3	0800-0900	1.460	1.070	2.710	2.810	1.120	0.850	0.450	0.460	1.050	0.750	0.350	0.360
Road 3	3	0900-1000	1.720	1.020	3.000	3.100	1.120	0.850	0.450	0.460	1.050	0.750	0.350	0.360
Road 3	3	1000-1100	1.720	1.020	3.000	3.100	1.120	0.850	0.450	0.460	1.050	0.750	0.350	0.360
Road 3	3	1100-1200	1.660	1.020	2.870	2.970	1.120	0.850	0.450	0.460	1.050	0.750	0.350	0.360
Road 3	3	1200-1300	1.660	1.020	2.870	2.970	1.120	0.850	0.450	0.460	1.050	0.750	0.350	0.360
Road 3	3	1300-1400	1.590	1.020	2.800	2.900	1.120	0.850	0.450	0.460	1.050	0.750	0.350	0.360
Road 3	3	1400-1500	1.590	1.020	2.800	2.900	1.120	0.850	0.450	0.460	1.050	0.750	0.350	0.360
Road 3	3	1500-1600	1.590	1.020	2.800	2.900	1.120	0.850	0.450	0.460	1.050	0.750	0.350	0.360
Road 3	3	1600-1700	1.590	1.020	2.800	2.900	1.120	0.850	0.450	0.460	1.050	0.750	0.350	0.360
Road 3	3	1700-1800	1.670	1.030	2.900	3.000	1.120	0.850	0.450	0.460	1.050	0.750	0.350	0.360
Road 3	3	1800-1900	1.670	1.030	2.900	3.000	1.120	0.850	0.450	0.460	1.050	0.750	0.350	0.360
Road 3	3	1900-2000	1.670	1.030	2.900	3.000	1.120	0.850	0.450	0.460	1.050	0.750	0.350	0.360
Road 3	3	2000-2100	1.670	1.030	2.900	3.000	1.120	0.850	0.450	0.460	1.050	0.750	0.350	0.360
Road 3	3	2100-2200	1.670	1.030	2.900	3.000	1.120	0.850	0.450	0.460	1.050	0.750	0.350	0.360
Road 3	3	2200-2300	1.670	1.030	2.900	3.000	1.120	0.850	0.450	0.460	1.050	0.750	0.350	0.360
Road 3	3	2300-2400	1.670	1.030	2.900	3.000	1.120	0.850	0.450	0.460	1.050	0.750	0.350	0.360
Road 4	4	0000-0100	0.880	1.030	1.830	1.930	1.120	0.850	0.450	0.460	1.050	0.750	0.350	0.360
Road 4	4	0100-0200	0.940	1.030	1.900	2.000	1.120	0.850	0.450	0.460	1.050	0.750	0.350	0.360
Road 4	4	0200-0300	1.040	1.030	2.000	2.100	1.120	0.850	0.450	0.460	1.050	0.750	0.350	0.360
Road 4	4	0300-0400	1.120	1.030	2.100	2.200	1.120	0.850	0.450	0.460	1.050	0.750	0.350	0.360
Road 4	4	0400-0500	1.120	1.030	2.100	2.200	1.120	0.850	0.450	0.460	1.050	0.750	0.350	0.360
Road 4	4	0500-0600	1.120	1.030	2.100	2.200	1.120	0.850	0.450	0.460	1.050	0.750	0.350	0.360
Road 4	4	0600-0700	1.030	1.030	1.930	2.030	1.120	0.850	0.450	0.460	1.050	0.750	0.350	0.360
Road 4	4	0700-0800	1.030	1.030	1.930	2.030	1.120	0.850	0.450	0.460	1.050	0.750	0.350	0.360
Road 4	4	0800-0900	1.030	1.030	1.930	2.030	1.120	0.850	0.450	0.460	1.050	0.750	0.350	0.360
Road 4														

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry		Open Road 24 hour Emission Factors for		Year 2033	
AERMOD model (July)		MPG Emission		MPG Emission	

Road Name	Road ID	Hour	Month/Year/Min				Month/Year/average				Month/Year/average			
			g/km/h	g/m	g/km/h	g/m	g/km/h	g/m	g/km/h	g/m	g/km/h	g/m	g/km/h	g/m
Road 14	14	0800-0900	3.80E+02	7.75E-07	1.32E+05	3.20E+02	6.64E-07	1.13E+05	1.83E-01	3.72E-06	6.35E+05	1.54E+01	2.93E+06	5.36E+05
Road 14	14	0900-1000	4.33E+02	8.66E-07	1.44E+05	3.66E+02	7.32E-07	1.28E+05	2.12E-01	4.24E-06	7.00E+05	1.70E+01	3.26E+06	5.95E+05
Road 14	14	1000-1100	4.75E+02	9.75E-07	1.24E+05	4.01E+02	8.13E-07	1.05E+05	2.22E-01	4.44E-06	7.66E+05	1.76E+01	3.69E+06	4.59E+05
Road 14	14	1100-1200	4.44E+02	8.87E-07	1.14E+05	3.95E+02	7.97E-07	9.81E+04	2.10E-01	3.95E+06	5.20E+05	1.77E+01	2.58E+06	4.39E+05
Road 14	14	1200-1300	4.11E+02	8.22E-07	1.04E+05	3.62E+02	7.23E-07	9.28E+04	2.03E-01	3.62E+06	4.80E+05	1.69E+01	2.34E+06	4.14E+05
Road 14	14	1300-1400	7.44E+02	1.55E+06	2.65E+05	6.43E+02	1.34E+06	2.36E+05	3.97E-01	6.38E+06	1.90E+07	2.63E+01	5.97E+06	9.32E+05
Road 14	14	1400-1500	7.51E+02	1.62E+06	2.76E+05	6.41E+02	1.38E+06	2.39E+05	4.04E-01	6.55E+06	1.92E+07	2.59E+01	5.57E+06	9.90E+05
Road 14	14	1500-1600	7.51E+02	1.62E+06	2.76E+05	6.41E+02	1.38E+06	2.39E+05	4.04E-01	6.55E+06	1.92E+07	2.59E+01	5.57E+06	9.90E+05
Road 14	14	1600-1700	7.00E+02	1.47E+06	2.60E+05	5.93E+02	1.22E+06	2.24E+05	3.79E-01	5.94E+06	1.11E+07	2.40E+01	5.31E+06	9.39E+05
Road 14	14	1700-1800	5.57E+02	1.311E+06	2.24E+05	4.77E+02	1.12E+06	1.92E+05	2.64E-01	6.24E+06	1.09E+07	2.29E+01	5.30E+06	9.70E+05
Road 14	14	1800-1900	5.57E+02	1.311E+06	2.24E+05	4.77E+02	1.12E+06	1.92E+05	2.64E-01	6.24E+06	1.09E+07	2.29E+01	5.30E+06	9.70E+05
Road 14	14	1900-2000	2.54E+02	5.07E+05	8.57E+04	2.58E+02	4.41E+07	7.52E+05	1.02E-01	3.12E+06	5.31E+05	1.58E+01	2.71E+06	4.62E+05
Road 14	14	2000-2100	2.82E+02	5.63E+05	8.67E+04	2.55E+02	3.43E+07	5.58E+06	1.84E-01	4.47E+06	4.22E+05	1.85E+01	2.22E+06	3.78E+05
Road 14	14	2100-2200	2.82E+02	5.63E+05	8.67E+04	2.55E+02	3.43E+07	5.58E+06	1.84E-01	4.47E+06	4.22E+05	1.85E+01	2.22E+06	3.78E+05
Road 14	14	2200-2300	2.73E+02	3.511E+07	5.90E+05	2.43E+02	3.05E+07	5.20E+06	1.77E-01	2.27E+06	3.87E+05	1.51E+01	9.99E+06	3.32E+05
Road 14	14	2300-0000	2.73E+02	3.511E+07	5.90E+05	2.43E+02	3.05E+07	5.20E+06	1.77E-01	2.27E+06	3.87E+05	1.51E+01	9.99E+06	3.32E+05
Road 15	15	0000-0100	2.73E+02	2.69E+07	4.59E+06	2.43E+02	2.45E+07	4.09E+06	1.68E-01	1.55E+06	2.81E+05	1.48E+01	1.45E+06	2.48E+05
Road 15	15	0100-0200	2.73E+02	2.69E+07	4.59E+06	2.43E+02	2.45E+07	4.09E+06	1.68E-01	1.55E+06	2.81E+05	1.48E+01	1.45E+06	2.48E+05
Road 15	15	0200-0300	3.98E+02	4.18E+06	3.87E+07	2.75E+02	3.98E+06	3.61E+07	1.37E-01	1.44E+07	3.38E+06	1.27E+01	3.37E+07	1.23E+06
Road 15	15	0300-0400	3.98E+02	4.18E+06	3.87E+07	2.75E+02	3.98E+06	3.61E+07	1.37E-01	1.44E+07	3.38E+06	1.27E+01	3.37E+07	1.23E+06
Road 15	15	0400-0500	4.61E+02	3.911E+08	3.62E+07	4.34E+02	3.69E+08	3.42E+07	1.48E+01	1.29E+07	1.16E+08	1.38E+01	1.18E+07	1.09E+08
Road 15	15	0500-0600	3.98E+02	4.18E+06	3.87E+07	2.75E+02	3.98E+06	3.61E+07	1.37E-01	1.44E+07	3.38E+06	1.27E+01	3.37E+07	1.23E+06
Road 15	15	0600-0700	5.13E+02	5.05E+06	9.75E+07	4.73E+02	5.05E+06	9.75E+07	1.68E-01	1.70E+07	1.46E+08	1.46E+01	1.46E+07	1.50E+08
Road 15	15	0700-0800	4.29E+02	4.04E+08	4.54E+07	3.98E+02	4.55E+06	4.22E+07	1.48E+01	1.70E+07	1.57E+07	1.37E+01	1.56E+07	1.43E+08
Road 15	15	0800-0900	3.39E+02	7.20E+08	6.61E+07	3.05E+02	7.20E+06	6.61E+07	1.96E+01	2.89E+07	2.67E+06	1.21E+01	2.69E+07	2.47E+08
Road 15	15	0900-1000	6.46E+02	6.46E+08	6.46E+08	6.46E+02	6.46E+08	6.46E+08	1.96E+01	2.89E+07	2.67E+06	1.21E+01	2.69E+07	2.47E+08
Road 15	15	0900-1000	5.13E+02	5.05E+06	9.75E+07	4.73E+02	5.05E+06	9.75E+07	1.68E-01	1.70E+07	1.46E+08	1.46E+01	1.46E+07	1.50E+08
Road 15	15	0900-1000	5.68E+02	2.74E+07	2.54E+08	5.24E+02	2.38E+07	2.21E+08	1.93E+01	3.31E+07	8.62E+06	1.68E+01	8.03E+07	7.44E+08
Road 15	15	0900-1000	6.46E+02	6.46E+08	6.46E+08	6.46E+02	6.46E+08	6.46E+08	1.96E+01	2.89E+07	2.67E+06	1.21E+01	2.69E+07	2.47E+08
Road 15	15	1100-1200	6.18E+02	2.56E+07	2.41E+08	5.33E+02	2.14E+07	2.08E+08	2.04E+01	8.59E+07	7.95E+06	1.57E+01	7.36E+07	6.62E+08
Road 15	15	1200-1300	7.28E+02	4.80E+07	4.44E+08	6.30E+02	4.13E+07	3.84E+08	2.43E+01	1.60E+08	1.49E+08	2.09E+01	1.36E+08	1.27E+09
Road 15	15	1300-1400	7.05E+02	7.05E+07	7.05E+07	7.05E+02	7.05E+07	7.05E+07	2.43E+01	1.60E+08	1.49E+08	2.09E+01	1.36E+08	1.27E+09
Road 15	15	1400-1500	7.20E+02	5.14E+07	4.76E+08	6.11E+02	4.36E+07	4.08E+08	2.44E+01	1.74E+06	1.62E+05	1.27E+01	1.47E+06	1.37E+05
Road 15	15	1500-1600	7.12E+02	5.21E+07	4.83E+08	5.96E+02	4.36E+07	4.04E+08	2.54E+01	1.98E+06	1.72E+05	2.11E+01	1.95E+06	1.43E+05
Road 15	15	1600-1700	6.46E+02	6.46E+08	6.46E+08	6.46E+02	6.46E+08	6.46E+08	1.96E+01	2.89E+07	2.67E+06	1.21E+01	2.69E+07	2.47E+08
Road 15	15	1700-1800	5.63E+02	4.49E+07	4.02E+08	4.80E+02	4.37E+07	4.34E+08	2.08E+01	1.63E+06	1.49E+05	1.76E+01	1.39E+06	1.25E+05
Road 15	15	1800-1900	4.78E+02	3.59E+07	3.33E+08	4.13E+02	3.10E+07	2.87E+08	1.74E+01	1.31E+06	1.21E+05	1.49E+01	1.13E+06	1.04E+05
Road 15	15	1900-2000	4.78E+02	3.59E+07	3.33E+08	4.13E+02	3.10E+07	2.87E+08	1.74E+01	1.31E+06	1.21E+05	1.49E+01	1.13E+06	1.04E+05
Road 15	15	2000-2100	2.73E+02	1.12E+07	1.04E+08	2.44E+02	1.06E+07	9.36E+07	1.29E+01	5.27E+07	4.88E+06	1.13E+01	4.64E+07	4.36E+06
Road 15	15	2100-2200	2.68E+02	1.04E+07	1.02E+08	2.39E+02	9.98E+06	9.13E+07	1.27E+01	5.27E+07	4.88E+06	1.12E+01	4.60E+07	4.33E+06
Road 15	15	2200-2300	2.68E+02	1.04E+07	1.02E+08	2.39E+02	9.98E+06	9.13E+07	1.27E+01	5.27E+07	4.88E+06	1.12E+01	4.60E+07	4.33E+06
Road 15	15	2300-0000	2.99E+02	9.61E+08	8.49E+07	2.67E+02	8.11E+08	7.57E+07	1.29E+01	3.96E+07	3.68E+06	1.14E+01	3.48E+07	3.23E+06
Road 16	16	0000-0100	9.68E+03	9.61E+08	1.72E+08	8.71E+03	5.06E+08	1.55E+08	5.46E+02	5.50E+07	1.67E+08	8.42E+02	4.98E+07	1.50E+08
Road 16	16	0100-0200	1.02E+04	1.02E+08	1.82E+08	9.28E+03	5.11E+08	1.22E+08	5.46E+02	5.50E+07	1.67E+08	8.42E+02	4.98E+07	1.50E+08
Road 16	16	0200-0300	1.10E+04	1.310E+09	9.49E+07	1.04E+04	7.91E+08	9.32E+06	6.10E+02	5.95E+06	8.60E+02	1.42E+02	7.41E+06	1.95E+07
Road 16	16	0300-0400	1.22E+03	7.18E+08	8.37E+07	1.10E+03	5.28E+08	7.67E+07	8.02E+02	6.19E+06	6.99E+06	8.70E+02	9.64E+07	9.88E+06
Road 16	16	0400-0500	1.22E+03	7.18E+08	8.37E+07	1.10E+03	5.28E+08	7.67E+07	8.02E+02	6.19E+06	6.99E+06	8.70E+02	9.64E+07	9.88E+06
Road 16	16	0500-0600	1.29E+04	5.19E+08	1.66E+06	1.13E+04	5.02E+08	1.54E+06	1.00E+02	4.23E+06	3.30E+06	9.10E+02	3.87E+07	1.19E+06
Road 16	16	0600-0700	1.32E+03	1.54E+07	3.65E+06	1.13E+03	1.07E+07	3.27E+06	1.03E+03	9.00E+05	2.89E+05	9.13E+02	2.72E+06	2.52E+05
Road 16	16	0700-0800	1.45E+03	1.68E+07	3.94E+06	1.22E+03	1.15E+07	3.54E+06	1.10E+03	9.80E+05	3.00E+05	9.13E+02	2.72E+06	2.52E+05
Road 16	16	0800-0900	1.75E+03	3.71E+07	1.14E+05	1.50E+03	3.19E+07	9.75E+06	1.14E+02	2.42E+05	7.41E+05	6.52E+02	2.04E+05	6.26E+05
Road 16	16	0900-1000	1.78E+03	3.71E+07	9.77E+04	1.54E+03	2.76E+07	8.45E+06	1.17E+02	2.48E+05	6.38E+05	9.95E+02	1.78E+05	5.68E+05
Road 16	16	1000-1100	1.78E+03	3.71E+07	9.77E+04	1.54E+03	2.76E+07	8.45E+06	1.17E+02	2.48E+05	6.38E+05	9.95E+02	1.78E+05	5.68E+05
Road 16	16	1100-1200	1.86E+03	2.76E+07	2.85E+06	1.60E+03	2.76E+07	7.28E+06	1.21E+02	1.80E+06	5.51E+05	1.03E+01	1.53E+06	4.68E+05
Road 16	16	1200-1300	3.69E+02	7.10E+07	2.18E+06	1.33E+03	6.14E+07	1.89E+06	1.47E+02	1.95E+06	1.54E+06	1.54E+01	2.96E+06	9.08E+05
Road 16	16	1300-1400	3.69E+02	7.10E+07	2.18E+06	1.33E+03	6.14E+07	1.89E+06	1.47E+02	1.95E+06	1.54E+06	1.54E+01	2.96E+06	9.08E+05
Road 16	16	1400-1500	4.15E+02	8.79E+07	2.69E+05	3.50E+02	7.47E+06	2.27E+06	1.99E+01	1.95E+06	1.27E+04	1.64E+01	4.34E+06	1.06E+04
Road 16	16	1500-1600	4.02E+02	8.79E+07	2.69E+05	3.33E+02	7.25E+06	2.22E+06	2.02E+01	4.40E+06	1.37E+04	1.66E+01	3.62E+06	1.11E+04
Road 16	16	1600-1700	4.15E+02	8.79E+07	2.69E+05	3.50E+02	7.47E+06	2.27E+06	2.02E+01	4.41E+06	1.37E+04	1.70E+01	3.76E+06	1.15E+04
Road 16	16	1700-1800	3.11E+02	6.47E+07	2.11E+05	2.64E+02	6.47E+06	1.68E+06	1.42E+01	3.29E+06	1.22E+04	1.26E+01	2.76E+06	8.66E+05
Road 16	16	1800-1900	2.14E+02	6.86E+07	1.49E+05	1.93E+02	4.19E+06	1.12E+06	1.42E+01	3.96E+06	1.02E+04	1.27E+01	2.76E+06	8.66E+05
Road 16	16	1900-2000	1.51E+02	7.81E+07	8.01E+04	1.33E+02	2.34E+07	1.24E+06	1.27E+01	2.21E+06	8.78E+05	1.11E+01	1.92E+06	5.88E+05
Road 16	16	2000-2100	1.48E+02	7.81E+07	8.01E+04	1.33E+02	2.34E+07	1.24E+06	1.27E+01	2.21E+06	8.78E+05	1.11E+01	1.92E+06	5.88E+05
Road 16	16	2100-2200	1.39E+02	1.84E+07	5.05E+05	1.22E+02	1.65E+07	5.05E+05	1.23E+01	5.61E+06	5.11E+05	1.04E+01	1.47E+06	4.51E+05
Road 16	16	2200-2300	1.42E+02											

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry		Open Road 24 hour Emission Factors for		Year 2033	
AERMOD model (July)					

Road Name	Road ID	Hour	Monthly/gw/Min			Monthly/tour/hour			Monthly/gw/Min			Monthly/tour/hour		
			g/kwh	g/s/m	tonne/hour	g/kwh	g/s/m	tonne/hour	g/kwh	g/s/m	tonne/hour	g/kwh	g/s/m	tonne/hour
Road 27	27	1600-1700	1.726	4.171	1.356	1.476	3.747	1.157	6.236	1.516	4.896	5.336	1.366	4.186
Road 27	27	1700-1800	1.726	4.171	1.356	1.476	3.747	1.157	6.236	1.516	4.896	5.336	1.366	4.186
Road 27	27	1800-1900	1.316	2.087	6.996	1.1476	1.767	5.556	4.596	5.666	4.676	4.746	2.967	2.906
Road 27	27	1900-2000	1.196	1.326	3.786	1.056	1.046	3.336	4.816	4.596	1.526	4.236	4.346	1.346
Road 27	27	2000-2100	1.146	1.936	2.896	1.0716	1.836	2.686	4.746	3.996	1.206	4.346	3.467	1.066
Road 27	27	2100-2200	1.146	1.936	2.896	1.0716	1.836	2.686	4.746	3.996	1.206	4.346	3.467	1.066
Road 27	27	2200-2300	1.766	1.916	2.866	1.1106	1.076	2.486	4.696	4.546	1.096	4.076	2.967	0.936
Road 27	27	2300-0000	1.246	1.707	2.306	1.1106	1.686	2.066	4.596	2.776	0.516	4.066	2.477	7.616
Road 28	28	0000-0100	1.466	2.467	8.186	0.966	1.336	4.616	1.336	1.336	1.336	1.336	1.336	1.336
Road 28	28	0100-0200	1.516	0.626	8.606	1.416	0.926	5.236	1.476	0.846	2.476	1.366	0.936	0.976
Road 28	28	0200-0300	1.596	0.926	7.726	4.386	1.466	7.276	1.456	7.086	4.026	1.366	6.636	3.766
Road 28	28	0300-0400	1.596	0.926	7.726	4.386	1.466	7.276	1.456	7.086	4.026	1.366	6.636	3.766
Road 28	28	0400-0500	1.786	0.926	4.376	1.626	7.026	3.686	1.516	6.546	3.716	1.376	5.926	3.366
Road 28	28	0500-0600	1.786	1.336	7.546	1.606	1.236	6.996	1.526	1.146	6.466	1.406	1.096	5.946
Road 28	28	0600-0700	1.786	1.336	7.546	1.606	1.236	6.996	1.526	1.146	6.466	1.406	1.096	5.946
Road 28	28	0700-0800	1.596	0.656	3.376	1.176	5.716	3.246	1.626	1.526	3.026	1.406	4.596	2.616
Road 28	28	0800-0900	1.946	0.727	4.186	1.676	6.346	3.606	1.526	5.766	3.076	1.296	4.146	2.796
Road 28	28	0900-1000	1.946	0.727	4.186	1.676	6.346	3.606	1.526	5.766	3.076	1.296	4.146	2.796
Road 28	28	1000-1100	2.446	0.627	4.156	2.056	6.246	3.546	1.536	0.906	2.786	1.396	1.316	2.596
Road 28	28	1100-1200	2.386	0.727	3.846	2.056	5.846	3.316	1.646	4.656	2.066	1.416	3.996	2.276
Road 28	28	1200-1300	2.446	0.627	4.156	2.056	6.246	3.546	1.536	0.906	2.786	1.396	1.316	2.596
Road 28	28	1300-1400	2.546	0.727	4.156	2.056	6.246	3.546	1.536	0.906	2.786	1.396	1.316	2.596
Road 28	28	1400-1500	2.276	0.627	2.886	1.916	4.286	2.436	1.376	1.366	1.646	1.146	2.666	1.34
Road 28	28	1500-1600	2.156	0.436	2.806	1.756	4.166	2.236	1.366	1.126	1.776	1.126	2.576	1.466
Road 28	28	1600-1700	2.156	0.436	2.806	1.756	4.166	2.236	1.366	1.126	1.776	1.126	2.576	1.466
Road 28	28	1700-1800	1.696	0.627	2.536	1.436	3.766	2.116	1.266	1.326	1.886	1.056	2.786	1.966
Road 28	28	1800-1900	1.396	0.376	2.126	1.036	3.226	1.836	1.136	1.136	1.786	0.966	2.686	1.526
Road 28	28	1900-2000	1.396	0.376	2.126	1.036	3.226	1.836	1.136	1.136	1.786	0.966	2.686	1.526
Road 28	28	2000-2100	1.186	0.967	1.116	1.036	1.736	0.946	1.216	2.086	1.186	1.086	1.826	1.036
Road 28	28	2100-2200	1.076	1.196	1.026	0.936	1.946	1.026	1.136	1.936	1.106	1.016	1.706	0.966
Road 28	28	2200-2300	1.156	1.116	1.116	1.116	1.836	1.246	1.136	1.836	1.116	1.116	1.836	1.116
Road 28	28	2300-0000	1.156	1.146	8.026	0.936	1.266	1.746	1.206	1.476	8.336	0.956	1.266	7.316
Road 29	29	0000-0100	8.616	7.676	5.296	7.766	6.526	4.076	8.926	8.956	4.746	8.956	7.916	7.056
Road 29	29	0100-0200	8.616	7.676	5.296	7.766	6.526	4.076	8.926	8.956	4.746	8.956	7.916	7.056
Road 29	29	0200-0300	1.016	0.926	3.016	0.916	4.056	2.826	0.746	2.766	2.606	6.136	2.067	2.466
Road 29	29	0300-0400	1.136	3.876	2.676	1.046	3.956	2.456	0.916	4.126	2.156	8.026	2.826	1.956
Road 29	29	0400-0500	1.136	3.876	2.676	1.046	3.956	2.456	0.916	4.126	2.156	8.026	2.826	1.956
Road 29	29	0500-0600	1.136	0.726	3.056	1.066	6.776	4.676	0.946	5.986	1.176	8.586	2.467	3.776
Road 29	29	0600-0700	1.136	0.617	1.076	1.046	1.466	0.846	0.956	1.296	0.926	8.456	1.146	7.886
Road 29	29	0700-0800	1.136	0.617	1.076	1.046	1.466	0.846	0.956	1.296	0.926	8.456	1.146	7.886
Road 29	29	0800-0900	1.276	4.016	2.716	1.066	3.446	2.716	0.926	5.986	2.066	7.936	2.216	1.766
Road 29	29	0900-1000	1.426	0.617	2.556	1.236	3.366	2.216	1.026	1.646	1.826	8.666	2.256	1.556
Road 29	29	1000-1100	1.626	0.636	2.556	1.386	3.066	2.116	1.086	1.686	1.906	8.666	2.256	1.416
Road 29	29	1100-1200	1.626	0.636	2.556	1.386	3.066	2.116	1.086	1.686	1.906	8.666	2.256	1.416
Road 29	29	1200-1300	3.316	0.576	3.706	2.886	1.466	3.206	2.686	1.346	3.006	2.316	3.756	2.586
Road 29	29	1300-1400	3.256	0.536	3.846	2.776	1.476	3.276	2.586	1.416	3.066	2.196	3.746	2.586
Road 29	29	1400-1500	3.256	0.536	3.846	2.776	1.476	3.276	2.586	1.416	3.066	2.196	3.746	2.586
Road 29	29	1500-1600	3.126	0.566	3.916	2.686	1.476	3.266	2.596	1.706	3.256	2.156	3.916	2.766
Road 29	29	1600-1700	3.186	0.506	4.076	2.726	1.506	3.486	2.736	1.506	3.466	2.336	3.916	2.986
Road 29	29	1700-1800	3.186	0.506	4.076	2.726	1.506	3.486	2.736	1.506	3.466	2.336	3.916	2.986
Road 29	29	1800-1900	2.406	0.466	3.216	2.116	1.401	2.776	2.876	1.546	3.766	2.476	4.686	3.246
Road 29	29	1900-2000	2.346	0.427	2.366	0.506	3.067	2.076	3.416	1.596	3.716	2.756	4.026	2.786
Road 29	29	2000-2100	2.216	0.466	2.366	0.506	3.067	2.076	3.416	1.596	3.716	2.756	4.026	2.786
Road 29	29	2100-2200	2.216	0.256	1.776	1.596	2.246	1.556	2.976	1.366	2.326	2.656	3.006	2.076
Road 29	29	2200-2300	2.986	0.596	1.786	2.056	2.346	1.556	3.286	1.346	2.466	2.786	3.056	2.116
Road 30	30	0000-0100	1.136	0.626	1.076	1.036	1.076	1.216	0.776	1.216	0.776	1.216	0.776	1.216
Road 30	30	0000-0100	1.136	0.626	1.076	1.036	1.076	1.216	0.776	1.216	0.776	1.216	0.776	1.216
Road 30	30	0100-0200	1.296	8.806	8.716	1.016	8.236	8.066	8.736	8.836	5.716	7.516	5.326	5.206
Road 30	30	0200-0300	1.296	8.806	8.716	1.016	8.236	8.066	8.736	8.836	5.716	7.516	5.326	5.206
Road 30	30	0300-0400	1.546	0.606	6.466	1.446	6.186	4.676	0.876	1.726	4.466	8.106	3.467	3.756
Road 30	30	0400-0500	1.546	0.606	6.466	1.446	6.186	4.676	0.876	1.726	4.466	8.106	3.467	3.756
Road 30	30	0500-0600	1.536	0.216	1.196	1.416	1.126	1.106	8.026	1.166	7.036	8.266	6.976	6.436
Road 30	30	0600-0700	1.536	0.216	1.196	1.416	1.126	1.106	8.026	1.166	7.036	8.266	6.976	6.436
Road 30	30	0700-0800	1.726	0.586	5.886	1.526	5.366	3.196	0.896	4.466	3.756	8.616	2.966	2.836
Road 30	30	0800-0900	1.696	0.576	6.856	1.486	5.586	3.676	0.946	4.306	3.726	7.836	3.186	3.136
Road 30	30	0900-1000	1.696	0.576	6.856	1.486	5.586	3.676	0.946	4.306	3.726	7.836	3.186	3.136
Road 30	30	1000-1100	2.216	0.686	6.716	1.886	5.776	3.656	1.116	4.346	3.066	9.186	2.856	2.766
Road 30	30	1100-1200	2.156	0.636	6.206	1.836	5.946	3.746	1.106	4.296	3.186	9.276	2.876	2.816
Road 30	30	1200-1300	2.216	0.686	6.716	1.886	5.776	3.656	1.116	4.346	3.066	9.186	2.856	2.766
Road 30	30	1300-1400	2.976	0.896	8.806	2.556	7.736	5.716	1.366	4.126	4.036	1.166	3.526	3.446
Road 30	30	1400-1500	3.016	0.936	9.186	2.576	7.996	7.826	1.376	4.296	4.106	1.166	3.506	3.526
Road 30	30	1500-1600	3.016	0.936	9.186	2.576	7.996	7.826	1.376	4.296	4.106	1.166	3.506	3.526
Road 30	30	1600-1700	2.846	0.926	8.836	2.466	7.706	7.546	1.336	4.266	4.176	1.116	3.576	3.506
Road 30	30	1700-1800	2.306	0.746	7.486	1.956	6.536	6.696	1.246	4.126	4.046	1.056	3.496	3.426
Road 30	30	1800-1900	2.306	0.746	7.486	1.956	6.536	6.696	1.246	4.126	4.046	1.056	3.496	3.426
Road 30	30	1900-2000	1.496	0.646	3.996	1.316	3.036	2.976	1.046	2.416	2.396	8.996	2.096	2.056
Road 30	30	2000-2100	1.486	0.676	2.646	1.376	2.436	2.386	1.086	1.986	1.936	9.666	1.786	1.786
Road 30	30	2100-2200	1.426	0.726	2.626	1.276	2.536	2.366	1.046	1.936	1.936	9.106	1.676	1.676
Road 30	30	2200-2300	1.426	0.726	2.626	1.276	2.536	2.366	1.046	1.936	1.936	9.106	1.676	1.676
Road 30	30	230												

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Tsing Yi North Underground Quarry

Open Road 24 hour Emission Factors for AERMOD model (g/hd) Year 2033

70000	98	970000000	6.67E-06	6.00E-07	1.70E-09	6.46E-06	6.00E-07	9.00E-09	6.67E-06	6.00E-09	6.97E-09	6.00E-06	6.00E-09	9.70E-09
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Open Road 24 hour Emission Factors for
AERMOD model (July) Year 2033

150000000	00	400000000	10000000	400000000	00000000	100000000	400000000	400000000	00000000	00000000	40000000	40000000	00000000	40000000
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Tsing Yi North Underground Quarry

Open Road 24 hour Emission Factors for AERMOD model (July) Year 2033

10/01/92	92	2.000/0000	1.000/00	2.100/01	0.000/01	0.000/00	2.000/01	1.0110/01	2.000/02	0.000/01	0.000/00	2.000/02	0.000/01	2.000/01
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Tsing Yi North Underground Quarry

Open Road 24 hour Emission Factors for AERMOD model (July) Year 2033

15/08/1999	1999	07/09/2000	4.40%/06	4.20%/07	4.30%/00	4.30%/06	4.30%/07	4.20%/00	4.20%/06	4.40%/00	4.744%/07	5.000%/06	4.20%/07
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Tsing Yi North Underground Quarry

Open Road 24 hour Emission Factors for Year 2033

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Open Road 24 hour Emission Factors for Year 2033

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Tsing Yi North Underground Quarry

Open Road 24 hour Emission Factors for Year 2033

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Tsing Yi North Underground Quarry

Open Road 24 hour Emission Factors for Year 2033

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Open Yih North Underground Quarry												
2023 Year 2023												
ADDITIONAL MODEL (g/t)												
Road Name	Road ID	Hour	NO _x Emission				NO _x Emission					
			Monthlyt/hourMin	Monthlyt/hour	Monthlyt/hourMin	Monthlyt/hour	Monthlyt/hourMin	Monthlyt/hour				
Road 103	103	1600-1700	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 103	103	1700-1800	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 103	103	1800-1900	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 103	103	1900-2000	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 103	103	2000-2100	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 103	103	2100-2200	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 103	103	2200-2300	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 104	104	0600-0700	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 104	104	0700-0800	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 104	104	0800-0900	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 104	104	0900-1000	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 104	104	1000-1100	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 104	104	1100-1200	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 104	104	1200-1300	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 104	104	1300-1400	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 104	104	1400-1500	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 104	104	1500-1600	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 104	104	1600-1700	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 104	104	1700-1800	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 104	104	1800-1900	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 104	104	1900-2000	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 104	104	2000-2100	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 104	104	2100-2200	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 104	104	2200-2300	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 105	105	0600-0700	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 105	105	0700-0800	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 105	105	0800-0900	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 105	105	0900-1000	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 105	105	1000-1100	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 105	105	1100-1200	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 105	105	1200-1300	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 105	105	1300-1400	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 105	105	1400-1500	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 105	105	1500-1600	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 105	105	1600-1700	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 105	105	1700-1800	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 105	105	1800-1900	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 105	105	1900-2000	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 105	105	2000-2100	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 105	105	2100-2200	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 105	105	2200-2300	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 106	106	0600-0700	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 106	106	0700-0800	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 106	106	0800-0900	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 106	106	0900-1000	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 106	106	1000-1100	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 106	106	1100-1200	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 106	106	1200-1300	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 106	106	1300-1400	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 106	106	1400-1500	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 106	106	1500-1600	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 106	106	1600-1700	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 106	106	1700-1800	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 106	106	1800-1900	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 106	106	1900-2000	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 106	106	2000-2100	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 106	106	2100-2200	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022
Road 106	106	2200-2300	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022	1.146	2.022

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Open Yih North Underground Quarry															
Top 20 Hourly Energy Emission Factors for															
AEPMD model (August)															
Road Name	Road ID	Hour	NO _x Emission						NO ₂ Emission						
			Monthly/gvM	Monthly/gvM	Monthly/gvM	Monthly/gvM	Monthly/gvM	Monthly/gvM	Monthly/gvM	Monthly/gvM	Monthly/gvM	Monthly/gvM			
Road 11	11	0000-0100	3.186	2.985	1.871	2.882	2.465	1.510	2.345	2.115	1.476	2.006			
Road 11	11	0100-0200	3.566	1.335	1.520	3.371	2.267	4.805	2.398	8.959	3.441	7.261	8.485	3.265	
Road 11	11	0200-0300	3.885	1.105	4.472	3.695	1.045	3.995	2.471	6.835	2.657	2.396	2.345	6.495	4.695
Road 11	11	0300-0400	4.205	1.005	2.805	4.005	2.465	2.545	4.135	2.485	2.545	2.485	2.545	2.485	2.545
Road 11	11	0400-0500	4.285	1.105	4.225	4.145	1.045	3.875	2.575	6.395	2.455	2.495	2.435	6.105	2.315
Road 11	11	0500-0600	4.285	1.175	6.811	4.145	1.715	6.757	2.611	6.181	3.145	4.145	2.351	1.045	3.995
Road 11	11	0600-0700	4.505	1.305	3.615	4.305	2.885	1.765	2.815	1.515	2.885	1.515	2.885	1.515	2.885
Road 11	11	0700-0800	5.805	2.805	5.805	5.475	2.805	1.765	2.805	1.765	2.805	1.765	2.805	1.765	2.805
Road 11	11	0800-0900	5.945	1.225	4.695	5.465	1.125	4.325	3.035	6.245	2.485	2.785	4.745	2.205	4.695
Road 11	11	0900-1000	7.195	1.395	5.485	5.385	1.025	4.215	3.195	5.385	2.145	2.395	3.135	1.975	5.385
Road 11	11	1000-1100	7.525	1.105	4.285	6.795	3.905	3.395	3.395	4.975	1.915	3.035	3.035	4.445	1.715
Road 11	11	1200-1300	1.115	2.225	8.335	1.015	2.025	6.775	4.285	5.585	3.295	3.875	1.745	7.475	2.975
Road 11	11	1300-1400	1.125	2.225	8.335	1.015	2.025	6.775	4.285	5.585	3.295	3.875	1.745	7.475	2.975
Road 11	11	1400-1500	1.165	2.535	9.725	1.045	2.775	8.715	4.745	4.775	3.975	3.985	1.695	8.335	3.335
Road 11	11	1500-1600	1.165	2.615	10.055	1.055	3.075	9.055	4.585	4.105	3.955	4.105	1.695	8.235	3.455
Road 11	11	1600-1700	1.165	2.615	10.055	1.055	3.075	9.055	4.585	4.105	3.955	4.105	1.695	8.235	3.455
Road 11	11	1700-1800	1.445	2.275	8.705	2.545	2.055	6.875	4.215	1.015	3.985	3.765	1.035	3.035	3.475
Road 11	11	1800-1900	6.675	1.875	6.085	6.175	4.555	5.675	3.275	7.685	2.995	3.005	7.055	2.065	6.085
Road 11	11	1900-2000	5.195	1.905	4.775	4.745	4.305	1.375	3.195	2.985	5.215	2.065	2.785	4.775	1.815
Road 11	11	2000-2100	5.195	1.905	4.775	4.745	4.305	1.375	3.195	2.985	5.215	2.065	2.785	4.775	1.815
Road 11	11	2100-2200	5.115	7.045	3.705	4.475	6.511	2.555	3.065	4.125	1.625	2.785	1.875	4.845	1.475
Road 11	11	2200-2300	4.685	6.585	3.275	4.245	5.585	2.145	2.875	3.015	1.595	2.695	1.495	4.385	1.445
Road 12	12	0000-0100	4.845	4.875	1.875	4.475	4.475	1.755	6.285	2.915	1.295	1.295	1.685	1.035	4.845
Road 12	12	0100-0200	2.505	1.575	3.865	2.235	4.025	4.535	5.835	3.665	9.015	5.225	3.275	8.075	
Road 12	12	0200-0300	2.505	1.555	3.825	2.305	4.35	3.515	5.915	3.385	8.845	5.445	3.301	8.145	
Road 12	12	0300-0400	2.505	1.555	3.825	2.305	4.35	3.515	5.915	3.385	8.845	5.445	3.301	8.145	
Road 12	12	0400-0500	2.505	1.555	3.825	2.305	4.35	3.515	5.915	3.385	8.845	5.445	3.301	8.145	
Road 12	12	0500-0600	2.505	1.555	3.825	2.305	4.35	3.515	5.915	3.385	8.845	5.445	3.301	8.145	
Road 12	12	0600-0700	2.505	1.555	3.825	2.305	4.35	3.515	5.915	3.385	8.845	5.445	3.301	8.145	
Road 12	12	0700-0800	2.505	1.555	3.825	2.305	4.35	3.515	5.915	3.385	8.845	5.445	3.301	8.145	
Road 12	12	0800-0900	2.505	1.555	3.825	2.305	4.35	3.515	5.915	3.385	8.845	5.445	3.301	8.145	
Road 12	12	0900-1000	2.505	1.555	3.825	2.305	4.35	3.515	5.915	3.385	8.845	5.445	3.301	8.145	
Road 12	12	1000-1100	2.505	1.555	3.825	2.305	4.35	3.515	5.915	3.385	8.845	5.445	3.301	8.145	
Road 12	12	1100-1200	3.495	1.835	2.945	2.985	1.995	1.725	8.035	1.905	4.675	8.785	1.615	3.965	
Road 12	12	1200-1300	3.495	1.835	2.945	2.985	1.995	1.725	8.035	1.905	4.675	8.785	1.615	3.965	
Road 12	12	1300-1400	3.495	1.835	2.945	2.985	1.995	1.725	8.035	1.905	4.675	8.785	1.615	3.965	
Road 12	12	1400-1500	3.495	1.835	2.945	2.985	1.995	1.725	8.035	1.905	4.675	8.785	1.615	3.965	
Road 12	12	1500-1600	3.495	1.835	2.945	2.985	1.995	1.725	8.035	1.905	4.675	8.785	1.615	3.965	
Road 12	12	1600-1700	3.495	1.835	2.945	2.985	1.995	1.725	8.035	1.905	4.675	8.785	1.615	3.965	
Road 12	12	1700-1800	3.495	1.835	2.945	2.985	1.995	1.725	8.035	1.905	4.675	8.785	1.615	3.965	
Road 12	12	1800-1900	3.495	1.835	2.945	2.985	1.995	1.725	8.035	1.905	4.675	8.785	1.615	3.965	
Road 12	12	1900-2000	2.375	1.795	4.405	2.095	1.545	3.805	5.765	4.345	1.075	4.945	7.765	9.265	
Road 12	12	2000-2100	2.375	1.795	4.405	2.095	1.545	3.805	5.765	4.345	1.075	4.945	7.765	9.265	
Road 12	12	2100-2200	2.475	1.795	4.395	2.155	1.545	3.785	5.775	4.115	1.075	5.145	7.655	9.155	
Road 12	12	2200-2300	2.475	1.795	4.395	2.155	1.545	3.785	5.775	4.115	1.075	5.145	7.655	9.155	
Road 12	12	2300-0000	2.475	1.795	4.395	2.155	1.545	3.785	5.775	4.115	1.075	5.145	7.655	9.155	
Road 12	12	0000-0100	2.475	1.795	4.395	2.155	1.545	3.785	5.775	4.115	1.075	5.145	7.655	9.155	
Road 12	12	0100-0200	2.475	1.795	4.395	2.155	1.545	3.785	5.775	4.115	1.075	5.145	7.655	9.155	
Road 12	12	0200-0300	2.475	1.795	4.395	2.155	1.545	3.785	5.775	4.115	1.075	5.145	7.655	9.155	
Road 12	12	0300-0400	2.475	1.795	4.395	2.155	1.545	3.785	5.775	4.115	1.075	5.145	7.655	9.155	
Road 12	12	0400-0500	2.475	1.795	4.395	2.155	1.545	3.785	5.775	4.115	1.075	5.145	7.655	9.155	
Road 12	12	0500-0600	2.475	1.795	4.395	2.155	1.545	3.785	5.775	4.115	1.075	5.145	7.655	9.155	
Road 12	12	0600-0700	2.475	1.795	4.395	2.155	1.545	3.785	5.775	4.115	1.075	5.145	7.655	9.155	
Road 12	12	0700-0800	2.475	1.795	4.395	2.155	1.545	3.785	5.775	4.115	1.075	5.145	7.655	9.155	
Road 12	12	0800-0900	2.475	1.795	4.395	2.155	1.545	3.785	5.775	4.115	1.075	5.145	7.655	9.155	
Road 12	12	0900-1000	2.475	1.795	4.395	2.155	1.545	3.785	5.775	4.115	1.075	5.145	7.655	9.155	
Road 12	12	1000-1100	2.475	1.795	4.395	2.155	1.545	3.785	5.775	4.115	1.075	5.145	7.655	9.155	
Road 12	12	1100-1200	3.495	1.835	2.945	2.985	1.995	1.725	8.035	1.905	4.675	8.785	1.615	3.965	
Road 12	12	1200-1300	3.495	1.835	2.945	2.985	1.995	1.725	8.035	1.905	4.675	8.785	1.615	3.965	
Road 12	12	1300-1400	3.495	1.835	2.945	2.985	1.995	1.725	8.035	1.905	4.675	8.785	1.615	3.965	
Road 12	12	1400-1500	3.495	1.835	2.945	2.985	1.995	1.725	8.035	1.905	4.675	8.785	1.615	3.965	
Road 12	12	1500-1600	3.495	1.835	2.945	2.985	1.995	1.725	8.035	1.905	4.675	8.785	1.615	3.965	
Road 12	12	1600-1700	3.495	1.835	2.945	2.985	1.995	1.725	8.035	1.905	4.675	8.785	1.615	3.965	
Road 12	12	1700-1800	3.495	1.835	2.945	2.985	1.995	1.725	8.035	1.905	4.675	8.785	1.615	3.965	
Road 12	12	1800-1900	3.495	1.835	2.945	2.985	1.995	1.725	8.035	1.905	4.675	8.785	1.615	3.965	
Road 12	12	1900-2000	2.375	1.795	4.405	2.095	1.545	3.805	5.765	4.345	1.075	4.945	7.765	9.265	
Road 12	12	2000-2100	2.375	1.795	4.405	2.095	1.545	3.805	5.765	4.345	1.075	4.945	7.765	9.265	
Road 12	12	2100-2200	2.475	1.795	4.395	2.155	1.545	3.785	5.775	4.115	1.075	5.145	7.655	9.155	
Road 12	12	2200-2300	2.475	1.795	4.395	2.155	1.545	3.785	5.775	4.115	1.075	5.145	7.655	9.155	
Road 12	12	2300-0000	2.475	1.795	4.395	2.155	1.545	3.785	5.775	4.115	1.075	5.145	7.655	9.155	
Road 12	12	0000-0100	2.475	1.795	4.395	2.155	1.545	3.785	5.775	4.115	1.075	5.145	7.655	9.155	
Road 12	12	0100-0200	2.475	1.795	4.395	2.155	1.545	3.785	5.775	4.115	1.075	5.145	7.655	9.155	
Road 12	12	0200-0300	2.475	1.795	4.395	2.155	1.545	3.785	5.775	4.115	1.075	5.145	7.655	9.155	
Road 12	12	0300-0400	2.475	1.795	4.395	2.155	1.545	3.785	5.775	4.115	1.075	5.145	7.655	9.155	
Road 12	12	0400-0500	2.475	1.795	4.395	2.155	1.545	3.785	5.775	4.115	1.075	5.145	7.655	9.155	
Road 12	12	0500-0600	2.475	1.795	4.395	2.155	1.545	3.785	5.775	4.115	1.075	5.145	7.655	9.155	
Road 12	12	0600-0700	2.475	1.795	4.395										

Open Road 24 Hr Underground Quarry										
Upper North East Underdrain Factors for										
AEMMO Model (Road #)										
Road Name	Road ID	Hour	NO Emission				NO Emission			
			MonthlyHourMin	MonthlyHourAverage	MonthlyHourMin	MonthlyHourAverage	MonthlyHourMin	MonthlyHourAverage		
			g/min	g/min	g/min	g/min	g/min	g/min	g/min	
Road 1	0100-0200	7:77.0	4.038	6.986	4.102	7.162	4.038	6.986	4.102	
Road 1	0200-0300	8:36.0	7.32.0	4.058	7.55.0	6.61.0	8.36.0	7.72.0	7.85.0	
Road 1	0300-0400	8:87.0	6.85.0	3.13.0	8.14.0	5.21.0	8.87.0	5.66.0	3.12.0	
Road 1	0400-0500	9:57.0	6.57.0	3.05.0	7.50.0	4.41.0	9:57.0	6.57.0	3.05.0	
Road 1	0500-0600	1:00.0	5.57.0	3.07.0	6.14.0	5.07.0	7.06.0	5.04.0	7.78.0	
Road 1	0600-0700	1:03.0	6.02.0	5.43.0	9.61.0	9.28.0	6.03.0	8.61.0	7.44.0	
Road 1	0700-0800	1:08.0	2.22.0	1.23.0	1.01.0	2.28.0	1.18.0	1.08.0	1.84.0	
Road 1	0800-0900	1:12.0	4.76.0	4.47.0	2.46.0	4.47.0	4.76.0	4.47.0	2.46.0	
Road 1	0900-1000	1:17.0	6.51.0	3.09.0	6.10.0	4.89.0	6.57.0	3.23.0	7.71.0	
Road 1	1000-1100	1:30.0	5.12.0	2.62.0	3.12.0	4.57.0	5.59.0	3.62.0	2.78.0	
Road 1	1100-1200	1:32.0	1.96.0	1.96.0	2.84.0	2.84.0	1.96.0	2.11.0	2.11.0	
Road 1	1200-1300	1:45.0	6.02.0	6.67.0	2.58.0	1.25.0	4.04.0	7.22.0	1.05.0	
Road 1	1300-1400	1:50.0	4.68.0	3.78.0	3.94.0	5.52.0	6.77.0	3.45.0	4.79.0	
Road 1	1400-1500	2:00.0	1.40.0	1.40.0	1.40.0	1.40.0	1.40.0	1.40.0	1.40.0	
Road 1	1500-1600	1:55.0	7.62.0	4.35.0	3.39.0	4.67.0	5.59.0	1.14.0	5.99.0	
Road 1	1600-1700	1:57.0	7.47.0	4.09.0	3.13.0	6.21.0	7.42.0	1.15.0	5.34.0	
Road 1	1700-1800	1:59.0	6.92.0	4.71.0	4.72.0	5.09.0	7.07.0	8.98.0	3.24.0	
Road 1	1800-1900	2:00.0	1:01.0	1:01.0	1:01.0	1:01.0	1:01.0	1:01.0	1:01.0	
Road 1	1900-2000	9:34.0	8.57.0	9.30.0	8.13.0	5.22.0	8.87.0	7.18.0	6.50.0	
Road 1	2000-2100	8:57.0	4.44.0	2.44.0	7.41.0	3.37.0	2.09.0	9.38.0	4.79.0	
Road 1	2100-2200	8:03.0	2.72.0	2.72.0	2.72.0	2.72.0	2.72.0	2.72.0	2.72.0	
Road 1	2200-2300	7:42.0	2.34.0	1.62.0	3.60.0	3.52.0	3.76.0	3.68.0	2.20.0	
Road 1	2300-2400	7:44.0	2.36.0	1.63.0	3.68.0	3.63.0	2.46.0	3.65.0	2.12.0	
Road 2	0100-0200	7:06.0	2.26.0	1.35.0	6.84.0	3.98.0	1.09.0	5.61.0	2.77.0	
Road 2	0200-0300	9:52.0	1.32.0	6.89.0	6.45.0	7.17.0	5.94.0	5.95.0	3.27.0	
Road 2	0300-0400	1:02.0	9:28.0	4.69.0	9.18.0	8.33.0	8.23.0	6.66.0	8.77.0	
Road 2	0400-0500	1:06.0	7.15.0	3.64.0	9.89.0	6.86.0	6.14.0	3.44.0	7.57.0	
Road 2	0500-0600	1:16.0	9:16.0	3.66.0	9.16.0	6.86.0	6.14.0	3.44.0	7.57.0	
Road 2	0600-0700	1:21.0	7:05.0	3:57.0	1:10.0	6:45.0	3:26.0	8:66.0	5:77.0	
Road 2	0700-0800	1:24.0	1:26.0	6:39.0	1:18.0	1:18.0	9:56.0	9:56.0	9:22.0	
Road 2	0800-0900	1:26.0	1:26.0	6:39.0	1:18.0	1:18.0	9:56.0	9:56.0	9:22.0	
Road 2	0900-1000	1:40.0	6:22.0	3:15.0	6:27.0	5:59.0	7:07.0	4:01.0	6:11.0	
Road 2	1000-1100	1:40.0	7:23.0	3:66.0	1:23.0	6:30.0	7:16.0	9:44.0	5:12.0	
Road 2	1100-1200	1:42.0	1:26.0	1:26.0	1:26.0	1:26.0	1:26.0	1:26.0	1:26.0	
Road 2	1200-1300	1:44.0	7:05.0	3:57.0	1:05.0	6:15.0	7:12.0	1:45.0	4:39.0	
Road 2	1300-1400	1:46.0	6:07.0	3:28.0	1:56.0	5:63.0	8:25.0	1:55.0	4:18.0	
Road 2	1400-1500	1:48.0	6:07.0	3:28.0	1:56.0	5:63.0	8:25.0	1:55.0	4:18.0	
Road 2	1500-1600	1:50.0	6:07.0	3:28.0	1:56.0	5:63.0	8:25.0	1:55.0	4:18.0	
Road 2	1600-1700	1:52.0	6:07.0	3:28.0	1:56.0	5:63.0	8:25.0	1:55.0	4:18.0	
Road 2	1700-1800	1:54.0	6:07.0	3:28.0	1:56.0	5:63.0	8:25.0	1:55.0	4:18.0	
Road 2	1800-1900	1:56.0	6:07.0	3:28.0	1:56.0	5:63.0	8:25.0	1:55.0	4:18.0	
Road 2	1900-2000	1:58.0	6:07.0	3:28.0	1:56.0	5:63.0	8:25.0	1:55.0	4:18.0	
Road 2	2000-2100	2:00.0	6:07.0	3:28.0	1:56.0	5:63.0	8:25.0	1:55.0	4:18.0	
Road 2	2100-2200	2:02.0	6:07.0	3:28.0	1:56.0	5:63.0	8:25.0	1:55.0	4:18.0	
Road 2	2200-2300	2:04.0	6:07.0	3:28.0	1:56.0	5:63.0	8:25.0	1:55.0	4:18.0	
Road 2	2300-2400	2:06.0	6:07.0	3:28.0	1:56.0	5:63.0	8:25.0	1:55.0	4:18.0	
Road 3	0100-0200	9:51.0	4.03.0	2.64.0	8.23.0	8.32.0	2.34.0	1.15.0	5.71.0	
Road 3	0200-0300	1:02.0	3:01.0	1.85.0	9.29.0	7.73.0	1.68.0	1.15.0	4.42.0	
Road 3	0300-0400	1:06.0	2:52.0	1.76.0	8.98.0	7.37.0	1.59.0	1.15.0	4.33.0	
Road 3	0400-0500	1:16.0	2:05.0	1.22.0	6.07.0	1.81.0	1.01.0	1.15.0	2.02.0	
Road 3	0500-0600	1:21.0	2:28.0	1.40.0	1.10.0	2:08.0	1.26.0	1.15.0	2.23.0	
Road 3	0600-0700	1:26.0	2:46.0	1.51.0	1.21.0	2:46.0	1.51.0	1.15.0	2.46.0	
Road 3	0700-0800	1:26.0	2:46.0	1.51.0	1.21.0	2:46.0	1.51.0	1.15.0	2.46.0	
Road 3	0800-0900	1:26.0	2:46.0	1.51.0	1.21.0	2:46.0	1.51.0	1.15.0	2.46.0	
Road 3	0900-1000	1:26.0	2:46.0	1.51.0	1.21.0	2:46.0	1.51.0	1.15.0	2.46.0	
Road 3	1000-1100	1:26.0	2:46.0	1.51.0	1.21.0	2:46.0	1.51.0	1.15.0	2.46.0	
Road 3	1100-1200	1:26.0	2:46.0	1.51.0	1.21.0	2:46.0	1.51.0	1.15.0	2.46.0	
Road 3	1200-1300	1:26.0	2:46.0	1.51.0	1.21.0	2:46.0	1.51.0	1.15.0	2.46.0	
Road 3	1300-1400	1:26.0	2:46.0	1.51.0	1.21.0	2:46.0	1.51.0	1.15.0	2.46.0	
Road 3	1400-1500	1:26.0	2:46.0	1.51.0	1.21.0	2:46.0	1.51.0	1.15.0	2.46.0	
Road 3	1500-1600	1:26.0	2:46.0	1.51.0	1.21.0	2:46.0	1.51.0	1.15.0	2.46.0	
Road 3	1600-1700	1:26.0	2:46.0	1.51.0	1.21.0	2:46.0	1.51.0	1.15.0	2.46.0	
Road 3	1700-1800	1:26.0	2:46.0	1.51.0	1.21.0	2:46.0	1.51.0	1.15.0	2.46.0	
Road 3	1800-1900	1:26.0	2:46.0	1.51.0	1.21.0	2:46.0	1.51.0	1.15.0	2.46.0	
Road 3	1900-2000	1:26.0	2:46.0	1.51.0	1.21.0	2:46.0	1.51.0	1.15.0	2.46.0	
Road 3	2000-2100	1:26.0	2:46.0	1.51.0	1.21.0	2:46.0	1.51.0	1.15.0	2.46.0	
Road 3	2100-2200	1:26.0	2:46.0	1.51.0	1.21.0	2:46.0	1.51.0	1.15.0	2.46.0	
Road 3	2200-2300	1:26.0	2:46.0	1.51.0	1.21.0	2:46.0	1.51.0	1.15.0	2.46.0	
Road 3	2300-2400	1:26.0	2:46.0	1.51.0	1.21.0	2:46.0	1.51.0	1.15.0	2.46.0	
Road 4	0100-0200	9:51.0	4.03.0	2.64.0	8.23.0	8.32.0	2.34.0	1.15.0	5.71.0	
Road 4	0200-0300	1:02.0	3:01.0	1.85.0	9.29.0	7.73.0	1.68.0	1.15.0	4.42.0	
Road 4	0300-0400	1:06.0	2:52.0	1.76.0	8.98.0	7.37.0	1.59.0	1.15.0	4.33.0	
Road 4	0400-0500	1:16.0	2:05.0	1.22.0	6.07.0	1.81.0	1.01.0	1.15.0	2.02.0	
Road 4	0500-0600	1:21.0	2:28.0	1.40.0	1.10.0	2:08.0	1.26.0	1.15.0	2.23.0	
Road 4	0600-0700	1:26.0	2:46.0	1.51.0	1.21.0	2:46.0	1.51.0	1.15.0	2.46.0	
Road 4	0700-0800	1:26.0	2:46.0	1.51.0	1.21.0	2:46.0	1.51.0	1.15.0	2.46.0	
Road 4	0800-0900	1:26.0	2:46.0	1.51.0	1.21.0	2:46.0	1.51.0	1.15.0	2.46.0	
Road 4	0900-1000	1:26.0	2:46.0	1.51.0	1.21.0	2:46.0	1.51.0	1.15.0	2.46.0	
Road 4	1000-1100	1:26.0	2:46.0	1.51.0	1.21.0	2:46.0	1.51.0	1.15.0	2.46.0	
Road 4	1100-1200	1:26.0	2:46.0	1.51.0	1.21.0	2:46.0	1.51.0	1.15.0	2.46.0	
Road 4	1200-1300	1:26.0	2:46.0	1.51.0	1.21.0	2:46.0	1.51.0	1.15.0	2.46.0	
Road 4	1300-1400	1:26.0	2:46.0	1.51.0	1.21.0	2:46.0	1.51.0	1.15.0	2.46.0	
Road 4	1400-1500	1:26.0	2:46.0	1.51.0	1.21.0	2:46.0	1.51.0	1.15.0	2.46.0	
Road 4	1500-1600	1:26.0	2:46.0	1.51.0	1.21.0	2:46.0	1.51.0	1.15.0	2.46.0	
Road 4	1600-1700	1:26.0	2:46.0	1.51.0	1.21.0	2:46.0	1.51.0	1.15.0	2.46.0	
Road 4	1700-1800	1:26.0	2:46.0	1.51.0	1.21.0	2:46.0	1.51.0	1.15.0	2.46.0	
Road 4	1800-1900	1:26.0	2:46.0	1.51.0	1.21.0	2:46.0	1.51.0	1.15.0	2.46.0	
Road 4	1900-2000	1:26.0	2:46.0	1.51.0	1.21.0	2:46.0	1.51.0	1.15.0	2.46.0	
Road 4	2000-2100	1:26.0	2:46.0	1.51.0	1.21.0	2:46.0	1.51.0	1.15.0	2.46.0	
Road 4	2100-2200	1:26.0	2:46.0	1.51.0	1.21.0	2:46.0	1.51.0	1.15.0	2.46.0	
Road 4	2200-2300	1:26.0	2:46.0	1.51.0	1.21.0	2:46.0	1.51.0	1.15.0	2.46.0	
Road 4	2300-2400	1:26.0	2:46.0	1.51.0	1.21.0	2:46.0	1.51.0	1.15.0	2.46.0	

I:\Secure\Environment Projects\60733229\1.01\Others\Air Modelling\Appendix\Traffic\Appendix\Appendix 3.5.3 Emission Factor in 2033-S.B.xlsx

Open Road 24 Hour Underground Quarry									
Typical Yearly Noise Exposure Factors for									
AEMTMO Model (A) (dB)									
Year 2003			NO Emission				NO Emission		
Route Name	Segment	Hour	Month/YearMin	Month/YearAverage	Month/YearMax	Month/YearMin	Month/YearAverage	Month/YearMax	Month/YearAverage
			gln/m/min	gln/m/min	gln/m/min	gln/m/min	gln/m/min	gln/m/min	gln/m/min
Route 14	14	0000-0500	3.772	4.000	4.228	3.772	4.000	4.228	3.772
Route 14	14	0500-1000	4.238	4.738	5.238	4.238	4.738	5.238	4.238
Route 14	14	1000-1500	4.868	5.468	6.068	4.868	5.468	6.068	4.868
Route 14	14	1500-2000	4.438	4.938	5.438	4.438	4.938	5.438	4.438
Route 14	14	2000-2300	4.238	4.448	4.658	4.238	4.448	4.658	4.238
Route 14	14	1300-1400	7.548	1.578	2.888	4.518	1.358	2.318	1.018
Route 14	14	1500-1600	7.598	1.628	2.938	4.568	1.368	2.368	1.068
Route 14	14	1600-1700	7.648	1.678	2.988	4.618	1.378	2.418	1.118
Route 14	14	1700-1800	7.698	1.728	3.038	4.668	1.388	2.468	1.168
Route 14	14	1800-1900	7.748	1.778	3.088	4.718	1.398	2.518	1.218
Route 14	14	1900-2000	7.798	1.828	3.138	4.768	1.408	2.568	1.268
Route 14	14	2000-2100	7.848	1.878	3.188	4.818	1.418	2.618	1.318
Route 14	14	2100-2200	7.898	1.928	3.238	4.868	1.428	2.668	1.368
Route 14	14	2200-2300	7.948	1.978	3.288	4.918	1.438	2.718	1.418
Route 14	14	2300-2400	7.998	2.028	3.338	4.968	1.448	2.768	1.468
Route 15	15	0000-0100	4.148	4.358	4.568	4.148	4.358	4.568	4.148
Route 15	15	0100-0200	4.882	4.408	4.908	4.882	4.408	4.908	4.882
Route 15	15	0200-0300	5.588	4.488	5.608	5.588	4.488	5.608	5.588
Route 15	15	0300-0400	6.294	4.568	6.314	6.294	4.568	6.314	6.294
Route 15	15	0400-0500	6.998	4.648	7.018	6.998	4.648	7.018	6.998
Route 15	15	0500-0600	7.702	4.728	7.722	7.702	4.728	7.722	7.702
Route 15	15	0600-0700	8.406	4.808	8.426	8.406	4.808	8.426	8.406
Route 15	15	0700-0800	9.110	4.888	9.130	9.110	4.888	9.130	9.110
Route 15	15	0800-0900	9.814	4.968	9.834	9.814	4.968	9.834	9.814
Route 15	15	0900-1000	10.518	5.048	10.538	10.518	5.048	10.538	10.518
Route 15	15	1000-1100	11.222	5.128	11.242	11.222	5.128	11.242	11.222
Route 15	15	1100-1200	11.926	5.208	11.946	11.926	5.208	11.946	11.926
Route 15	15	1200-1300	12.630	5.288	12.650	12.630	5.288	12.650	12.630
Route 15	15	1300-1400	13.334	5.368	13.354	13.334	5.368	13.354	13.334
Route 15	15	1400-1500	14.038	5.448	14.058	14.038	5.448	14.058	14.038
Route 15	15	1500-1600	14.742	5.528	14.762	14.742	5.528	14.762	14.742
Route 15	15	1600-1700	15.446	5.608	15.466	15.446	5.608	15.466	15.446
Route 15	15	1700-1800	16.150	5.688	16.170	16.150	5.688	16.170	16.150
Route 15	15	1800-1900	16.854	5.768	16.874	16.854	5.768	16.874	16.854
Route 15	15	1900-2000	17.558	5.848	17.578	17.558	5.848	17.578	17.558
Route 15	15	2000-2100	18.262	5.928	18.282	18.262	5.928	18.282	18.262
Route 15	15	2100-2200	18.966	6.008	18.986	18.966	6.008	18.986	18.966
Route 15	15	2200-2300	19.670	6.088	19.690	19.670	6.088	19.690	19.670
Route 15	15	2300-2400	20.374	6.168	20.394	20.374	6.168	20.394	20.374
Route 16	16	0000-0100	4.148	4.358	4.568	4.148	4.358	4.568	4.148
Route 16	16	0100-0200	4.882	4.408	4.908	4.882	4.408	4.908	4.882
Route 16	16	0200-0300	5.588	4.488	5.608	5.588	4.488	5.608	5.588
Route 16	16	0300-0400	6.294	4.568	6.314	6.294	4.568	6.314	6.294
Route 16	16	0400-0500	6.998	4.648	7.018	6.998	4.648	7.018	6.998
Route 16	16	0500-0600	7.702	4.728	7.722	7.702	4.728	7.722	7.702
Route 16	16	0600-0700	8.406	4.808	8.426	8.406	4.808	8.426	8.406
Route 16	16	0700-0800	9.110	4.888	9.130	9.110	4.888	9.130	9.110
Route 16	16	0800-0900	9.814	4.968	9.834	9.814	4.968	9.834	9.814
Route 16	16	0900-1000	10.518	5.048	10.538	10.518	5.048	10.538	10.518
Route 16	16	1000-1100	11.222	5.128	11.242	11.222	5.128	11.242	11.222
Route 16	16	1100-1200	11.926	5.208	11.946	11.926	5.208	11.946	11.926
Route 16	16	1200-1300	12.630	5.288	12.650	12.630	5.288	12.650	12.630
Route 16	16	1300-1400	13.334	5.368	13.354	13.334	5.368	13.354	13.334
Route 16	16	1400-1500	14.038	5.448	14.058	14.038	5.448	14.058	14.038
Route 16	16	1500-1600	14.742	5.528	14.762	14.742	5.528	14.762	14.742
Route 16	16	1600-1700	15.446	5.608	15.466	15.446	5.608	15.466	15.446
Route 16	16	1700-1800	16.150	5.688	16.170	16.150	5.688	16.170	16.150
Route 16	16	1800-1900	16.854	5.768	16.874	16.854	5.768	16.874	16.854
Route 16	16	1900-2000	17.558	5.848	17.578	17.558	5.848	17.578	17.558
Route 16	16	2000-2100	18.262	5.928	18.282	18.262	5.928	18.282	18.262
Route 16	16	2100-2200	18.966	6.008	18.986	18.966	6.008	18.986	18.966
Route 16	16	2200-2300	19.670	6.088	19.690	19.670	6.088	19.690	19.670
Route 16	16	2300-2400	20.374	6.168	20.394	20.374	6.168	20.394	20.374
Route 17	17	0000-0100	4.148	4.358	4.568	4.148	4.358	4.568	4.148
Route 17	17	0100-0200	4.882	4.408	4.908	4.882	4.408	4.908	4.882
Route 17	17	0200-0300	5.588	4.488	5.608	5.588	4.488	5.608	5.588
Route 17	17	0300-0400	6.294	4.568	6.314	6.294	4.568	6.314	6.294
Route 17	17	0400-0500	6.998	4.648	7.018	6.998	4.648	7.018	6.998
Route 17	17	0500-0600	7.702	4.728	7.722	7.702	4.728	7.722	7.702
Route 17	17	0600-0700	8.406	4.808	8.426	8.406	4.808	8.426	8.406
Route 17	17	0700-0800	9.110	4.888	9.130	9.110	4.888	9.130	9.110
Route 17	17	0800-0900	9.814	4.968	9.834	9.814	4.968	9.834	9.814
Route 17	17	0900-1000	10.518	5.048	10.538	10.518	5.048	10.538	10.518
Route 17	17	1000-1100	11.222	5.128	11.242	11.222	5.128	11.242	11.222
Route 17	17	1100-1200	11.926	5.208	11.946	11.926	5.208	11.946	11.926
Route 17	17	1200-1300	12.630	5.288	12.650	12.630	5.288	12.650	12.630
Route 17	17	1300-1400	13.334	5.368	13.354	13.334	5.368	13.354	13.334
Route 17	17	1400-1500	14.038	5.448	14.058	14.038	5.448	14.058	14.038
Route 17	17	1500-1600	14.742	5.528	14.762	14.742	5.528	14.762	14.742
Route 17	17	1600-1700	15.446	5.608	15.466	15.446	5.608	15.466	15.446
Route 17	17	1700-1800	16.150	5.688	16.170	16.150	5.688	16.170	16.150
Route 17	17	1800-1900	16.854	5.768	16.874	16.854	5.768	16.874	16.854
Route 17	17	1900-2000	17.558	5.848	17.578	17.558	5.848	17.578	17.558
Route 17	17	2000-2100	18.262	5.928	18.282	18.262	5.928	18.282	18.262
Route 17	17	2100-2200	18.966	6.008	18.986	18.966	6.008	18.986	18.966
Route 17	17	2200-2300	19.670	6.088	19.690	19.670	6.088	19.690	19.670
Route 17	17	2300-2400	20.374	6.168	20.394	20.374	6.168	20.394	20.374

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Sizing Yr North Underdevelopment										
Open Road 24 Hour Emission Factors for										
ADMMRD Model (August)										
Year 2003			NO Emission				NO Emission			
Road Name	Road ID	Hour	Monthly/tour/km	hourly/tour/km	Monthly/tour/km	hourly/tour/km	Monthly/tour/km	hourly/tour/km	Monthly/tour/km	hourly/tour/km
Route 4	0900-0900	1202	1.328	1.112	1.328	1.112	1.328	1.112	1.328	1.112
Route 4	0900-1200	1358	1.588	1.717	1.588	1.717	1.588	1.717	1.588	1.717
Route 4	1200-1300	1466	1.667	1.752	1.667	1.752	1.619	1.542	2.402	4.085
Route 4	1300-1400	1296	1.296	1.296	1.296	1.296	1.296	1.296	1.296	1.296
Route 4	1400-1500	1426	1.426	1.426	1.426	1.426	1.426	1.426	1.426	1.426
Route 4	1500-1600	1482	1.518	1.038	1.238	1.238	1.518	1.038	1.238	1.238
Route 4	1600-1700	1418	1.418	1.488	1.188	1.188	1.418	1.488	1.188	1.188
Route 4	1700-1800	1538	1.538	1.838	1.178	1.178	1.538	1.838	1.178	1.178
Route 4	1800-1900	1592	1.612	1.652	1.952	1.952	1.612	1.652	1.952	1.952
Route 4	1900-2000	1612	1.612	1.612	1.792	1.792	1.612	1.612	1.792	1.792
Route 4	2000-2100	1748	1.962	1.962	1.632	1.632	1.962	1.962	1.632	1.632
Route 4	2100-2200	1673	1.217	1.362	1.138	1.138	1.217	1.362	1.138	1.138
Route 4	2200-2300	1593	1.593	1.393	1.193	1.193	1.593	1.393	1.193	1.193
Route 4	2300-2400	1638	1.638	1.178	1.178	1.178	1.785	1.351	1.598	1.476
Route 5	0900-1000	2602	2.602	1.392	2.272	2.272	1.708	1.344	2.875	1.475
Route 5	1000-1100	2992	2.992	1.392	2.538	2.438	1.981	1.372	2.685	1.446
Route 5	1100-1200	2838	2.838	1.488	2.718	2.718	1.981	1.372	2.685	1.446
Route 5	1200-1300	3162	3.162	1.872	2.728	2.728	1.735	1.477	3.988	1.475
Route 5	1300-1400	3172	3.172	1.892	2.738	2.738	1.735	1.477	3.988	1.475
Route 5	1400-1500	3242	3.242	1.812	2.738	2.738	1.735	1.477	3.988	1.475
Route 5	1500-1600	3212	3.212	1.808	2.708	2.708	1.811	1.532	4.611	1.508
Route 5	1600-1700	3568	3.568	1.828	2.958	2.958	1.811	1.532	4.611	1.508
Route 5	1700-1800	3512	3.512	1.812	2.738	2.738	1.811	1.532	4.611	1.508
Route 5	1800-1900	3942	3.942	1.392	2.708	2.708	1.811	1.532	4.611	1.508
Route 5	1900-2000	3568	3.568	1.828	2.958	2.958	1.811	1.532	4.611	1.508
Route 5	2000-2100	3512	3.512	1.812	2.738	2.738	1.811	1.532	4.611	1.508
Route 5	2100-2200	3942	3.942	1.392	2.708	2.708	1.811	1.532	4.611	1.508
Route 5	2200-2300	3568	3.568	1.828	2.958	2.958	1.811	1.532	4.611	1.508
Route 5	2300-2400	3512	3.512	1.812	2.738	2.738	1.811	1.532	4.611	1.508
Route 6	0900-1000	1352	1.352	1.252	1.888	1.948	1.426	1.111	1.718	1.825
Route 6	1000-1100	1842	1.842	1.798	2.542	2.542	1.426	1.111	1.718	1.825
Route 6	1100-1200	1872	1.872	1.196	3.368	1.712	1.047	1.308	3.845	1.287
Route 6	1200-1300	2142	2.142	1.938	3.788	1.938	1.298	1.611	1.725	1.175
Route 6	1300-1400	2192	2.192	1.862	3.788	1.938	1.298	1.611	1.725	1.175
Route 6	1400-1500	2142	2.142	1.938	3.788	1.938	1.298	1.611	1.725	1.175
Route 6	1500-1600	2192	2.192	1.862	3.788	1.938	1.298	1.611	1.725	1.175
Route 6	1600-1700	2142	2.142	1.938	3.788	1.938	1.298	1.611	1.725	1.175
Route 6	1700-1800	2192	2.192	1.862	3.788	1.938	1.298	1.611	1.725	1.175
Route 6	1800-1900	2142	2.142	1.938	3.788	1.938	1.298	1.611	1.725	1.175
Route 6	1900-2000	2192	2.192	1.862	3.788	1.938	1.298	1.611	1.725	1.175
Route 6	2000-2100	2142	2.142	1.938	3.788	1.938	1.298	1.611	1.725	1.175
Route 6	2100-2200	2192	2.192	1.862	3.788	1.938	1.298	1.611	1.725	1.175
Route 6	2200-2300	2142	2.142	1.938	3.788	1.938	1.298	1.611	1.725	1.175
Route 6	2300-2400	2192	2.192	1.862	3.788	1.938	1.298	1.611	1.725	1.175
Route 7	0900-1000	1352	1.352	1.252	1.888	1.948	1.426	1.111	1.718	1.825
Route 7	1000-1100	1842	1.842	1.798	2.542	2.542	1.426	1.111	1.718	1.825
Route 7	1100-1200	1872	1.872	1.196	3.368	1.712	1.047	1.308	3.845	1.287
Route 7	1200-1300	2142	2.142	1.938	3.788	1.938	1.298	1.611	1.725	1.175
Route 7	1300-1400	2192	2.192	1.862	3.788	1.938	1.298	1.611	1.725	1.175
Route 7	1400-1500	2142	2.142	1.938	3.788	1.938	1.298	1.611	1.725	1.175
Route 7	1500-1600	2192	2.192	1.862	3.788	1.938	1.298	1.611	1.725	1.175
Route 7	1600-1700	2142	2.142	1.938	3.788	1.938	1.298	1.611	1.725	1.175
Route 7	1700-1800	2192	2.192	1.862	3.788	1.938	1.298	1.611	1.725	1.175
Route 7	1800-1900	2142	2.142	1.938	3.788	1.938	1.298	1.611	1.725	1.175
Route 7	1900-2000	2192	2.192	1.862	3.788	1.938	1.298	1.611	1.725	1.175
Route 7	2000-2100	2142	2.142	1.938	3.788	1.938	1.298	1.611	1.725	1.175
Route 7	2100-2200	2192	2.192	1.862	3.788	1.938	1.298	1.611	1.725	1.175
Route 7	2200-2300	2142	2.142	1.938	3.788	1.938	1.298	1.611	1.725	1.175
Route 7	2300-2400	2192	2.192	1.862	3.788	1.938	1.298	1.611	1.725	1.175
Route 7	0400-0500	1126	1.126	0.947	1.029	1.248	0.758	0.992	2.305	0.707
Route 7	0500-0600	1252	1.252	0.988	1.029	1.248	0.758	0.992	2.305	0.707
Route 7	0600-0700	1162	1.162	0.988	1.029	1.248	0.758	0.992	2.305	0.707
Route 7	0700-0800	1272	1.272	1.568	1.192	1.996	0.733	1.042	1.802	1.211
Route 7	0800-0900	1272	1.272	1.568	1.192	1.996	0.733	1.042	1.802	1.211
Route 7	0900-1000	1272	1.272	1.568	1.192	1.996	0.733	1.042	1.802	1.211
Route 7	1000-1100	1272	1.272	1.568	1.192	1.996	0.733	1.042	1.802	1.211
Route 7	1100-1200	1272	1.272	1.568	1.192	1.996	0.733	1.042	1.802	1.211
Route 7	1200-1300	1272	1.272	1.568	1.192	1.996	0.733	1.042	1.802	1.211
Route 7	1300-1400	1272	1.272	1.568	1.192	1.996	0.733	1.042	1.802	1.211
Route 7	1400-1500	1272	1.272	1.568	1.192	1.996	0.733	1.042	1.802	1.211
Route 7	1500-1600	1272	1.272	1.568	1.192	1.996	0.733	1.042	1.802	1.211
Route 7	1600-1700	1272	1.272	1.568	1.192	1.996	0.733	1.042	1.802	1.211
Route 7	1700-1800	1272	1.272	1.568	1.192	1.996	0.733	1.042	1.802	1.211
Route 7	1800-1900	1272	1.272	1.568	1.192	1.996	0.733	1.042	1.802	1.211
Route 7	1900-2000	1272	1.272	1.568	1.192	1.996	0.733	1.042	1.802	1.211
Route 7	2000-2100	1272	1.272	1.568	1.192	1.996	0.733	1.042	1.802	1.211
Route 7	2100-2200	1272	1.272	1.568	1.192	1.996	0.733	1.042	1.802	1.211
Route 7	2200-2300	1272	1.272	1.568	1.192	1.996	0.733	1.042	1.802	1.211
Route 7	2300-2400	1272	1.272	1.568	1.192	1.996	0.733	1.042	1.802	1.211

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Open Road 24 hour Emission Factors for
AERMOD model (August) Year 2033

Road Name	Road ID	Hour	No. Emission												Road Name	Road ID	Hour	No. Emission													
			MonthlyHours				MonthlyHours				MonthlyHours							MonthlyHours				MonthlyHours									
			g/km/h	tonne/hour	g/km/h	tonne/hour	g/km/h	tonne/hour	g/km/h	tonne/hour	g/km/h	tonne/hour	g/km/h	tonne/hour				g/km/h	tonne/hour	g/km/h	tonne/hour	g/km/h	tonne/hour								
Road 24	24	0800-0900	1.531E-01	2.502E-07	7.317E-07	1.33E-01	2.57E-07	6.45E-07	5.70E-01	1.13E-06	2.77E-06	5.02E-01	9.73E-07	2.44E-06	Road 27	27	1600-1700	1.777E-01	4.532E-07	1.39E-06	1.42E-01	3.79E-07	1.17E-06	4.44E-01	1.64E-06	5.06E-06	5.40E-01	1.38E-06	4.24E-06		
Road 24	24	0900-1000	1.525E-01	2.333E-07	8.730E-07	1.36E-01	2.93E-07	7.65E-07	5.81E-01	1.10E-06	3.17E-06	5.14E-01	1.13E-06	2.88E-06	Road 27	27	1700-1800	1.520E-01	3.90E-07	1.08E-06	1.38E-01	2.94E-07	9.06E-07	3.15E-01	4.26E-06	3.87E-06	5.17E-01	1.38E-06	3.68E-06		
Road 24	24	1000-1100	1.658E-01	3.065E-07	1.040E-06	1.45E-01	3.05E-07	1.04E-06	6.10E-01	1.41E-06	3.67E-06	6.37E-01	1.41E-06	3.67E-06	Road 27	27	1800-1900	1.520E-01	3.90E-07	1.08E-06	1.38E-01	2.94E-07	9.06E-07	3.15E-01	4.26E-06	3.87E-06	5.17E-01	1.38E-06	3.68E-06		
Road 24	24	1100-1200	1.676E-01	3.346E-07	1.452E-06	1.63E-01	3.47E-07	1.452E-06	1.90E-01	3.72E-06	6.08E-01	1.27E-06	3.06E-06	5.27E-01	1.06E-06	2.65E-06	Road 27	27	1900-2000	1.229E-01	3.16E-07	3.87E-07	1.05E-01	1.08E-07	3.33E-07	4.92E-01	5.07E-07	1.56E-06	4.23E-07	3.64E-07	1.34E-06
Road 24	24	1200-1300	1.717E-01	3.58E-07	1.899E-07	1.50E-01	3.03E-07	7.60E-07	6.20E-01	1.23E-06	3.14E-06	5.24E-01	1.06E-06	2.66E-06	Road 27	27	2000-2100	1.154E-01	8.42E-08	2.90E-07	1.02E-01	8.35E-08	2.57E-07	4.76E-01	3.91E-07	1.50E-06	4.22E-07	3.47E-07	1.07E-06		
Road 24	24	1300-1400	1.676E-01	3.346E-07	1.452E-06	1.63E-01	3.47E-07	1.452E-06	1.90E-01	3.72E-06	6.08E-01	1.27E-06	3.06E-06	5.27E-01	1.06E-06	2.65E-06	Road 27	27	2100-2200	1.229E-01	3.16E-07	3.87E-07	1.05E-01	1.08E-07	3.33E-07	4.92E-01	5.07E-07	1.56E-06	4.23E-07	3.64E-07	1.34E-06
Road 24	24	1400-1500	1.676E-01	3.346E-07	1.452E-06	1.63E-01	3.47E-07	1.452E-06	1.90E-01	3.72E-06	6.08E-01	1.27E-06	3.06E-06	5.27E-01	1.06E-06	2.65E-06	Road 27	27	2200-2300	1.390E-01	9.45E-08	2.44E-07	1.10E-01	8.07E-08	2.48E-07	4.81E-01	5.17E-07	1.96E-06	4.07E-07	3.26E-07	1.02E-06
Road 24	24	1500-1600	1.676E-01	3.346E-07	1.452E-06	1.63E-01	3.47E-07	1.452E-06	1.90E-01	3.72E-06	6.08E-01	1.27E-06	3.06E-06	5.27E-01	1.06E-06	2.65E-06	Road 27	27	2300-2400	1.274E-01	9.67E-08	2.36E-07	1.11E-01	8.68E-08	2.40E-07	4.70E-01	2.84E-07	8.74E-07	4.09E-07	2.96E-07	7.61E-07
Road 24	24	1600-1700	1.676E-01	3.346E-07	1.452E-06	1.63E-01	3.47E-07	1.452E-06	1.90E-01	3.72E-06	6.08E-01	1.27E-06	3.06E-06	5.27E-01	1.06E-06	2.65E-06	Road 28	28	0800-0900	1.479E-01	8.42E-08	2.90E-07	1.02E-01	8.35E-08	2.57E-07	4.76E-01	3.91E-07	1.50E-06	4.22E-07	3.47E-07	1.07E-06
Road 24	24	1700-1800	1.676E-01	3.346E-07	1.452E-06	1.63E-01	3.47E-07	1.452E-06	1.90E-01	3.72E-06	6.08E-01	1.27E-06	3.06E-06	5.27E-01	1.06E-06	2.65E-06	Road 28	28	0900-1000	1.479E-01	8.42E-08	2.90E-07	1.02E-01	8.35E-08	2.57E-07	4.76E-01	3.91E-07	1.50E-06	4.22E-07	3.47E-07	1.07E-06
Road 24	24	1800-1900	1.216E-01	1.66E-07	4.13E-07	1.46E-07	3.66E-07	5.08E-07	6.31E-07	1.73E-06	4.40E-07	6.21E-07	1.53E-06	Road 28	28	0900-1000	1.66E-02	8.09E-06	4.59E-06	1.33E-02	7.43E-07	4.26E-06	1.53E-02	7.45E-07	4.26E-06	1.33E-02	7.43E-07	4.26E-06	1.33E-02	7.43E-07	
Road 24	24	1900-2000	1.20E-01	1.07E-07	2.68E-07	9.18E-08	2.30E-07	4.95E-07	4.32E-07	1.08E-06	4.16E-07	3.71E-07	9.26E-07	Road 28	28	0900-1000	1.82E-02	7.12E-06	4.04E-06	1.61E-02	6.31E-08	4.58E-06	8.60E-06	6.20E-07	3.52E-06	1.94E-07	5.44E-07	3.09E-06			
Road 24	24	2000-2100	1.17E-01	1.03E-07	2.60E-07	9.18E-08	2.30E-07	4.95E-07	4.32E-07	1.08E-06	4.16E-07	3.71E-07	9.26E-07	Road 28	28	0900-1000	1.82E-02	7.12E-06	4.04E-06	1.61E-02	6.31E-08	4.58E-06	8.60E-06	6.20E-07	3.52E-06	1.94E-07	5.44E-07	3.09E-06			
Road 24	24	2100-2200	1.17E-01	1.03E-07	2.60E-07	9.18E-08	2.30E-07	4.95E-07	4.32E-07	1.08E-06	4.16E-07	3.71E-07	9.26E-07	Road 28	28	0900-1000	1.82E-02	7.12E-06	4.04E-06	1.61E-02	6.31E-08	4.58E-06	8.60E-06	6.20E-07	3.52E-06	1.94E-07	5.44E-07	3.09E-06			
Road 24	24	2200-2300	1.17E-01	1.03E-07	2.60E-07	9.18E-08	2.30E-07	4.95E-07	4.32E-07	1.08E-06	4.16E-07	3.71E-07	9.26E-07	Road 28	28	0900-1000	1.82E-02	7.12E-06	4.04E-06	1.61E-02	6.31E-08	4.58E-06	8.60E-06	6.20E-07	3.52E-06	1.94E-07	5.44E-07	3.09E-06			
Road 24	24	2300-2400	1.17E-01	1.03E-07	2.60E-07	9.18E-08	2.30E-07	4.95E-07	4.32E-07	1.08E-06	4.16E-07	3.71E-07	9.26E-07	Road 28	28	0900-1000	1.82E-02	7.12E-06	4.04E-06	1.61E-02	6.31E-08	4.58E-06	8.60E-06	6.20E-07	3.52E-06	1.94E-07	5.44E-07	3.09E-06			
Road 25	25	0800-0900	1.11E-01	5.17E-08	1.26E-07	1.06E-01	4.62E-08	1.17E-07	4.39E-07	3.92E-07	1.71E-06	6.47E-07	Road 28	28	0900-1000	1.92E-02	7.07E-07	4.13E-06	1.29E-02	6.42E-07	5.62E-06	5.06E-06	5.68E-06	3.22E-04	1.31E-07	4.90E-07	2.97E-07	2.82E-04			
Road 25	25	0900-1000	1.11E-01	5.17E-08	1.26E-07	1.06E-01	4.62E-08	1.17E-07	4.39E-07	3.92E-07	1.71E-06	6.47E-07	Road 28	28	0900-1000	1.92E-02	7.07E-07	4.13E-06	1.29E-02	6.42E-07	5.62E-06	5.06E-06	5.68E-06	3.22E-04	1.31E-07	4.90E-07	2.97E-07	2.82E-04			
Road 25	25	0900-1000	1.11E-01	5.17E-08	1.26E-07	1.06E-01	4.62E-08	1.17E-07	4.39E-07	3.92E-07	1.71E-06	6.47E-07	Road 28	28	0900-1000	1.92E-02	7.07E-07	4.13E-06	1.29E-02	6.42E-07	5.62E-06	5.06E-06	5.68E-06	3.22E-04	1.31E-07	4.90E-07	2.97E-07	2.82E-04			
Road 25	25	0900-1000	1.11E-01	5.17E-08	1.26E-07	1.06E-01	4.62E-08	1.17E-07	4.39E-07	3.92E-07	1.71E-06	6.47E-07	Road 28	28	0900-1000	1.92E-02	7.07E-07	4.13E-06	1.29E-02	6.42E-07	5.62E-06	5.06E-06	5.68E-06	3.22E-04	1.31E-07	4.90E-07	2.97E-07	2.82E-04			
Road 25	25	0900-1000	1.11E-01	5.17E-08	1.26E-07	1.06E-01	4.62E-08	1.17E-07	4.39E-07	3.92E-07	1.71E-06	6.47E-07	Road 28	28	0900-1000	1.92E-02	7.07E-07	4.13E-06	1.29E-02	6.42E-07	5.62E-06	5.06E-06	5.68E-06	3.22E-04	1.31E-07	4.90E-07	2.97E-07	2.82E-04			
Road 25	25	0900-1000	1.11E-01	5.17E-08	1.26E-07	1.06E-01	4.62E-08	1.17E-07	4.39E-07	3.92E-07	1.71E-06	6.47E-07	Road 28	28	0900-1000	1.92E-02	7.07E-07	4.13E-06	1.29E-02	6.42E-07	5.62E-06	5.06E-06	5.68E-06	3.22E-04	1.31E-07	4.90E-07	2.97E-07	2.82E-04			
Road 25	25	0900-1000	1.11E-01	5.17E-08	1.26E-07	1.06E-01	4.62E-08	1.17E-07	4.39E-07	3.92E-07	1.71E-06	6.47E-07	Road 28	28	0900-1000	1.92E-02	7.07E-07	4.13E-06	1.29E-02	6.42E-07	5.62E-06	5.06E-06	5.68E-06	3.22E-04	1.31E-07	4.90E-07	2.97E-07	2.82E-04			
Road 25	25	0900-1000	1.11E-01	5.17E-08	1.26E-07	1.06E-01	4.62E-08	1.17E-07	4.39E-07	3.92E-07	1.71E-06	6.47E-07	Road 28	28	0900-1000	1.92E-02	7.07E-07	4.13E-06	1.29E-02	6.42E-07	5.62E-06	5.06E-06	5.68E-06	3.22E-04	1.31E-07	4.90E-07	2.97E-07	2.82E-04			
Road 25	25	0900-1000	1.11E-01	5.17E-08	1.26E-07	1.06E-01	4.62E-08	1.17E-07	4.39E-07	3.92E-07	1.71E-06	6.47E-07	Road 28	28	0900-1000	1.92E-02	7.07E-07	4.13E-06	1.29E-02	6.42E-07	5.62E-06	5.06E-06	5.68E-06	3.22E-04	1.31E-07	4.90E-07	2.97E-07	2.82E-04			
Road 25	25	0900-1000	1.11E-01	5.17E-08	1.26E-07	1.06E-01	4.62E-08	1.17E-07	4.39E-07	3.92E-07	1.71E-06	6.47E-07	Road 28	28	0900-1000	1.92E-02	7.07E-07	4.13E-06	1.29E-02	6.42E-07	5.62E-06	5.06E-06	5.68E-06	3.22E-04	1.31E-07	4.90E-07	2.97E-07	2.82E-04			
Road 25	25	0900-1000	1.11E-01	5.17E-08	1.26E-07	1.06E-01	4.62E-08	1.17E-07	4.39E-07	3.92E-07	1.71E-06	6.47E-07	Road 28	28	0900-1000	1.92E-02	7.07E-07	4.13E-06	1.29E-02	6.42E-07	5.62E-06	5.06E-06	5.68E-06	3.22E-04	1.31E-07	4.90E-07	2.97E-07	2.82E-04			
Road 25	25	0900-1000	1.11E-01	5.17E-08	1.26E-07	1.06E-01	4.62E-08	1.17E-07	4.39E-07	3.92E-07	1.71E-06	6.47E-07	Road 28	28	0900-1000	1.92E-02	7.07E-07	4.13E-06	1.29E-02	6.42E-07	5.62E-06	5.06E-06	5.68E-06	3.22E-04	1.31E-07	4.90E-07	2.97E-07	2.82E-04			
Road 25	25	0900-1000	1.11E-01	5.17E-08	1.26E-07	1.06E-01	4.62E-08	1.17E-07	4.39E-07	3.92E-07	1.71E-06	6.47E-07	Road 28	28	0900-1000	1.92E-02	7.07E-07	4.13E-06	1.29E-02	6.42E-07	5.62E-06	5.06E-06	5.68E-06	3.22E-04	1.31E-07	4.90E-07	2.97E-07	2.82E-04			
Road 25	25	0900-1000	1.11E-01	5.17E-08	1.26E-07	1.06E-01	4.62E-08	1.17E-07	4.39E-07	3.92E-07	1.71E-06	6.47E-07	Road 28	28	0900-1000	1.92E-02	7.07E-07	4.13E-06	1.29E-02	6.42E-07	5.62E-06	5.06E-06	5.68E-06	3.22E-04	1.31E-07	4.90E-07	2.97E-07	2.82E-04			
Road 25	25	0900-1000	1.11E-01	5.17E-08	1.26E-07	1.06E-01	4.62E-08	1.17E-07	4.39E-07	3.92E-07	1.71E-06	6.47E-07	Road 28	28	0900-1000	1.92E-02	7.07E-07	4.13E-06	1.29E-02	6.42E-07	5.62E-06	5.06E-06	5.68E-06	3.22E-04	1.31E-07	4.90E-07	2.97E-07	2.82E-04			
Road 25	25	0900-1000	1.11E-01	5.17E-08	1.26E-07	1.06E-01	4.62E-08	1.17E-07	4.39E-07	3.92E-07	1.71E-06	6.47E-07	Road 28	28	0900-1000	1.92E-02	7.07E-07	4.13E-06	1.29E-02	6.42E-07	5.62E-06	5.06E-06	5.68E-06	3.22E-04	1.31E-07	4.90E-07	2.97E-07	2.82E-04			
Road 25	25	0900-1000	1.11E-01	5.17E-08	1.26E-07	1.06E-01	4.62E-08																								

[illegible][illegible][illegible]

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Index 3.5.3 Emission Factor in 2033-S B.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for
Year 2033[illegible]

Tsing Yi North Underground Quarry
 Open Road 24 hour Emission Factors for ...

AERMOD model (August)						AERMOD model (August)						
Road Name	Road ID	Hour	NO _x Emission		NO Emission		Road Name	Road ID	Hour	NO _x Emission		
			Monthly (gour/m)	Monthly (gour/second)	Monthly (gour/m)	Monthly (gour/second)				Monthly (gour/m)	Monthly (gour/second)	

[illegible]

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

ion	AERMOD model (September)		Year 2003		NO _x Emission			
	Monthlyhourage		Monthlyhourin		Monthlyhourout		Monthlyhourage	
	g/m ² /sec	g/m ³ /timehour	g/m ² /sec	g/m ³ /timehour	g/m ² /sec	g/m ³ /timehour	g/m ² /sec	g/m ³ /timehour
1	6.162E-2	1.686E-6	4.044E-5					
2	5.096E-2	1.571E-6	3.79E-5					
3	3.995E-2	1.111E-6	2.995E-5					
4	3.814E-2	1.016E-6	2.945E-5					
5	4.571E-2	8.571E-6	2.058E-5					
6	4.044E-2	1.016E-6	2.995E-5					
7	4.077E-2	8.137E-7	1.966E-5					
8	4.136E-2	6.267E-7	1.531E-5					
9	4.136E-2	6.267E-7	1.531E-5					
10	5.704E-2	2.575E-7	1.966E-5					
11	5.872E-2	1.967E-7	4.005E-5					
12	6.242E-2	1.967E-7	4.005E-5					
13	6.242E-2	1.967E-7	4.005E-5					
14	6.496E-2	4.242E-7	6.986E-5					
15	6.731E-2	4.242E-7	6.986E-5					
16	6.956E-2	4.242E-7	6.986E-5					
17	6.956E-2	4.242E-7	6.986E-5					
18	6.956E-2	4.242E-7	6.986E-5					
19	6.956E-2	4.242E-7	6.986E-5					
20	6.956E-2	4.242E-7	6.986E-5					
21	6.956E-2	4.242E-7	6.986E-5					
22	6.956E-2	4.242E-7	6.986E-5					
23	6.956E-2	4.242E-7	6.986E-5					
24	6.956E-2	4.242E-7	6.986E-5					
25	6.956E-2	4.242E-7	6.986E-5					
26	6.956E-2	4.242E-7	6.986E-5					
27	6.956E-2	4.242E-7	6.986E-5					
28	6.956E-2	4.242E-7	6.986E-5					
29	6.956E-2	4.242E-7	6.986E-5					
30	6.956E-2	4.242E-7	6.986E-5					
31	6.956E-2	4.242E-7	6.986E-5					
32	6.956E-2	4.242E-7	6.986E-5					
33	6.956E-2	4.242E-7	6.986E-5					
34	6.956E-2	4.242E-7	6.986E-5					
35	6.956E-2	4.242E-7	6.986E-5					
36	6.956E-2	4.242E-7	6.986E-5					
37	6.956E-2	4.242E-7	6.986E-5					
38	6.956E-2	4.242E-7	6.986E-5					
39	6.956E-2	4.242E-7	6.986E-5					
40	6.956E-2	4.242E-7	6.986E-5					
41	6.956E-2	4.242E-7	6.986E-5					
42	6.956E-2	4.242E-7	6.986E-5					
43	6.956E-2	4.242E-7	6.986E-5					
44	6.956E-2	4.242E-7	6.986E-5					
45	6.956E-2	4.242E-7	6.986E-5					
46	6.956E-2	4.242E-7	6.986E-5					
47	6.956E-2	4.242E-7	6.986E-5					
48	6.956E-2	4.242E-7	6.986E-5					
49	6.956E-2	4.242E-7	6.986E-5					
50	6.956E-2	4.242E-7	6.986E-5					
51	6.956E-2	4.242E-7	6.986E-5					
52	6.956E-2	4.242E-7	6.986E-5					
53	6.956E-2	4.242E-7	6.986E-5					
54	6.956E-2	4.242E-7	6.986E-5					
55	6.956E-2	4.242E-7	6.986E-5					
56	6.956E-2	4.242E-7	6.986E-5					
57	6.956E-2	4.242E-7	6.986E-5					
58	6.956E-2	4.242E-7	6.986E-5					
59	6.956E-2	4.242E-7	6.986E-5					
60	6.956E-2	4.242E-7	6.986E-5					
61	6.956E-2	4.242E-7	6.986E-5					
62	6.956E-2	4.242E-7	6.986E-5					
63	6.956E-2	4.242E-7	6.986E-5					
64	6.956E-2	4.242E-7	6.986E-5					
65	6.956E-2	4.242E-7	6.986E-5					
66	6.956E-2	4.242E-7	6.986E-5					
67	6.956E-2	4.242E-7	6.986E-5					
68	6.956E-2	4.242E-7	6.986E-5					
69	6.956E-2	4.242E-7	6.986E-5					
70	6.956E-2	4.242E-7	6.986E-5					
71	6.956E-2	4.242E-7	6.986E-5					
72	6.956E-2	4.242E-7	6.986E-5					
73	6.956E-2	4.242E-7	6.986E-5					
74	6.956E-2	4.242E-7	6.986E-5					
75	6.956E-2	4.242E-7	6.986E-5					
76	6.956E-2	4.242E-7	6.986E-5					
77	6.956E-2	4.242E-7	6.986E-5					
78	6.956E-2	4.242E-7	6.986E-5					
79	6.956E-2	4.242E-7	6.986E-5					
80	6.956E-2	4.242E-7	6.986E-5					
81	6.956E-2	4.242E-7	6.986E-5					
82	6.956E-2	4.242E-7	6.986E-5					
83	6.956E-2	4.242E-7	6.986E-5					
84	6.956E-2	4.242E-7	6.986E-5					
85	6.956E-2	4.242E-7	6.986E-5					
86	6.956E-2	4.242E-7	6.986E-5					
87	6.956E-2	4.242E-7	6.986E-5					
88	6.956E-2	4.242E-7	6.986E-5					
89	6.956E-2	4.242E-7	6.986E-5					
90	6.956E-2	4.242E-7	6.986E-5					
91	6.956E-2	4.242E-7	6.986E-5					
92	6.956E-2	4.242E-7	6.986E-5					
93	6.956E-2	4.242E-7	6.986E-5					
94	6.956E-2	4.242E-7	6.986E-5					
95	6.956E-2	4.242E-7	6.986E-5					
96	6.956E-2	4.242E-7	6.986E-5					
97	6.956E-2	4.242E-7	6.986E-5					
98	6.956E-2	4.242E-7	6.986E-5					
99	6.956E-2	4.242E-7	6.986E-5					
100	6.956E-2	4.242E-7	6.986E-5					

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Using Yi North Underground Quarry
Open Road 24 hour Emission Factors for
AERMOD model (September) Year 2033

Road name	Road ID	Hour	N0 Emission						N0 Emission					
			MonthlyHourMin			MonthlyHourAverage			MonthlyHourMin			MonthlyHourAverage		
			g/km/h	tonne/hour	g/km/h	tonne/hour	g/km/h	tonne/hour	g/km/h	tonne/hour	g/km/h	tonne/hour	g/km/h	tonne/hour
Road 44	44	0000-0000	1.32e2	3.742e-1	2.311e2	1.112e2	1.414e-1	9.56e2	2.622e-1	1.744e-1	8.312e2	2.330e-1	1.442e2	4.000e-1
Road 44	44	0000-1000	1.472e2	3.462e-1	2.116e2	1.026e2	9.786e-2	1.676e2	4.648e-1	1.548e-1	8.036e2	2.076e-1	1.606e2	4.440e-1
Road 44	44	1000-2000	1.368e2	3.168e-1	2.016e2	9.181e-2	7.816e-2	1.586e2	4.348e-1	1.438e-1	7.546e2	1.926e-1	1.506e2	4.080e-1
Road 44	44	2000-3000	1.272e2	2.982e-1	1.944e2	1.336e2	2.538e-2	1.566e-1	1.172e-1	2.310e-1	1.311e-1	9.356e-2	1.786e-1	1.006e-1
Road 44	44	3000-1200	1.882e2	4.462e2	2.886e-1	3.966e2	1.366e2	4.236e-1	3.044e-1	1.886e-1	1.032e2	2.526e-1	1.576e2	4.240e-1
Road 44	44	1200-1500	1.882e2	4.462e2	2.886e-1	3.966e2	1.366e2	4.236e-1	3.044e-1	1.886e-1	1.032e2	2.526e-1	1.576e2	4.240e-1
Road 44	44	1500-1800	1.912e2	5.182e2	3.196e-1	4.652e2	1.386e2	7.016e-1	2.424e-1	3.336e-1	2.066e-1	1.036e2	2.796e-1	1.746e-1
Road 44	44	1800-1600	1.882e2	5.096e-1	3.196e-1	4.522e2	1.226e-1	6.156e-1	1.256e-1	4.436e-1	2.126e-1	2.811e2	1.476e-1	1.746e-1
Road 44	44	1600-1200	2.262e2	6.022e-1	4.426e-1	1.972e2	5.512e-1	4.406e-1	3.986e-1	4.426e-1	2.536e-1	1.126e-1	3.306e-1	2.046e-1
Road 44	44	1200-0900	2.262e2	7.482e-1	4.426e-1	1.972e2	5.512e-1	4.406e-1	3.986e-1	4.426e-1	2.536e-1	1.126e-1	3.306e-1	2.046e-1
Road 44	44	0900-2400	2.402e2	8.782e-1	4.642e2	1.872e2	2.722e-1	4.642e2	1.626e-1	5.936e-1	3.666e-1	1.936e-1	4.786e-1	2.096e-1
Road 44	44	2400-1200	1.022e2	2.832e-1	1.816e2	8.282e-1	2.412e2	4.642e2	1.036e-1	2.996e-1	1.886e-1	8.672e-1	2.411e2	1.446e-1
Road 44	44	1200-0900	2.262e2	7.482e-1	4.426e-1	1.972e2	5.512e-1	4.406e-1	3.986e-1	4.426e-1	2.536e-1	1.126e-1	3.306e-1	2.046e-1
Road 44	44	2100-2200	8.628e2	1.944e2	1.206e-1	6.062e2	5.966e2	9.836e2	1.022e2	2.306e-1	1.426e2	8.146e2	1.136e2	1.136e2
Road 44	44	2200-2300	8.526e2	1.876e2	1.136e2	6.062e2	5.936e2	9.486e2	1.042e2	2.306e-1	1.416e2	8.326e2	1.1836e2	1.116e2
Road 44	44	2300-0000	8.526e2	1.876e2	1.136e2	6.062e2	5.936e2	9.486e2	1.042e2	2.306e-1	1.416e2	8.326e2	1.1836e2	1.116e2
Road 45	45	0000-1000	9.242e2	6.036e2	6.371e2	7.842e2	6.992e2	5.211e2	4.612e2	9.702e2	7.272e2	8.956e2	7.712e2	7.312e2
Road 45	45	0100-0200	9.066e2	4.418e2	5.436e2	7.632e2	7.276e2	5.886e2	9.768e2	4.772e2	6.892e2	8.011e2	3.906e2	4.866e2
Road 45	45	0200-0300	9.242e2	6.036e2	6.371e2	7.842e2	6.992e2	5.211e2	4.612e2	9.702e2	7.272e2	8.956e2	7.712e2	7.312e2
Road 45	45	0300-0400	9.066e2	4.418e2	5.436e2	7.632e2	7.276e2	5.886e2	9.768e2	4.772e2	6.892e2	8.011e2	3.906e2	4.866e2
Road 45	45	0400-0500	1.112e2	3.438e-1	4.226e2	9.226e2	2.846e-1	3.456e2	1.036e-1	3.912e-1	3.911e-1	8.266e2	2.526e2	3.126e2
Road 45	45	0500-0600	1.262e2	3.512e-1	4.226e2	9.226e2	2.846e-1	3.456e2	1.036e-1	3.912e-1	3.911e-1	8.266e2	2.526e2	3.126e2
Road 45	45	0600-0700	1.262e2	1.411e2	4.226e2	9.226e2	1.097e-1	4.06e2	1.036e-1	1.206e2	1.476e2	8.606e2	9.806e2	1.216e2
Road 45	45	0700-0800	1.336e2	3.032e2	3.772e-1	1.112e2	2.566e2	3.156e-1	1.096e2	2.906e-1	3.086e2	8.846e2	2.046e2	2.511e2
Road 45	45	0800-1200	2.452e2	3.422e2	4.226e2	9.226e2	1.886e2	5.922e2	3.636e2	3.306e-1	1.816e2	2.186e2	2.666e2	3.446e2
Road 45	45	1200-1300	1.436e2	3.162e2	4.226e2	9.226e2	1.886e2	5.922e2	3.636e2	3.306e-1	1.816e2	2.186e2	2.666e2	3.446e2
Road 45	45	1300-1400	1.612e2	3.032e2	3.772e-1	1.112e2	2.566e2	3.156e-1	1.126e2	2.106e2	2.906e2	9.302e2	1.756e2	2.106e2
Road 45	45	1400-1500	1.226e2	2.712e2	3.772e-1	1.112e2	2.566e2	3.156e-1	1.116e2	1.996e2	2.446e2	9.302e2	1.666e2	2.046e2
Road 45	45	1500-1600	1.336e2	3.032e2	3.772e-1	1.112e2	2.566e2	3.156e-1	1.126e2	2.106e2	2.906e2	9.302e2	1.756e2	2.106e2
Road 45	45	1600-1700	1.826e2	4.062e2	4.986e2	1.544e2	4.226e2	1.244e2	1.244e2	2.756e-1	3.386e2	1.046e2	2.306e2	2.846e2
Road 45	45	1800-1900	1.826e2	4.062e2	5.416e2	1.572e2	4.736e2	4.596e2	1.244e2	3.626e2	1.046e2	2.466e2	3.006e2	3.446e2
Road 45	45	1900-2000	1.782e2	3.782e2	4.986e2	1.544e2	4.226e2	1.244e2	1.244e2	2.756e-1	3.386e2	1.046e2	2.306e2	2.846e2
Road 45	45	2000-1700	1.902e2	4.524e2	6.056e2	1.586e2	4.086e2	5.036e-1	1.272e2	3.396e2	4.056e2	1.036e2	2.686e2	3.306e2
Road 45	45	1700-1700	1.456e2	3.782e2	1.572e2	2.766e2	3.766e2	4.346e2	1.244e2	3.666e2	4.056e2	9.826e2	2.906e2	3.576e2
Road 45	45	1800-1900	1.526e2	4.262e2	6.056e2	1.244e2	3.666e2	4.056e2	1.244e2	3.666e2	4.056e2	9.826e2	2.906e2	3.576e2
Road 45	45	1900-2000	1.996e2	5.296e2	3.196e2	8.212e2	2.136e2	2.626e2	1.052e2	2.726e2	3.356e2	4.846e2	2.196e2	2.666e2
Road 45	45	2000-2100	9.776e2	1.976e2	2.426e2	7.946e2	6.606e2	9.766e2	1.276e2	2.786e2	3.892e2	1.886e2	2.216e2	2.666e2
Road 45	45	2100-2200	9.776e2	1.976e2	2.426e2	7.946e2	6.606e2	9.766e2	1.276e2	2.786e2	3.892e2	1.886e2	2.216e2	2.666e2
Road 45	45	2200-2300	8.416e2	1.647e2	2.026e2	6.886e2	1.344e2	1.656e2	1.076e2	2.086e2	2.956e2	1.616e2	1.666e2	2.096e2
Road 45	45	2300-0000	9.036e2	1.326e2	1.676e2	7.406e2	1.036e2	1.086e2	1.086e2	1.586e-1	1.946e2	8.622e2	1.266e2	1.956e2
Road 46	46	0000-1000	7.812e2	2.976e2	5.512e2	1.426e2	4.426e2	4.476e2	7.782e2	2.986e2	5.466e2	6.116e2	2.376e2	2.976e2
Road 46	46	1000-2000	7.812e2	2.976e2	5.512e2	1.426e2	4.426e2	4.476e2	7.782e2	2.986e2	5.466e2	6.116e2	2.376e2	2.976e2
Road 46	46	0200-0300	8.036e2	1.646e2	5.602e2	7.616e2	3.766e2	2.556e2	8.022e2	1.442e2	2.696e2	6.646e2	1.177e2	2.186e2
Road 46	46	0300-0400	8.856e2	1.411e2	5.612e2	8.16e2	1.166e2	1.016e2	8.252e2	1.116e2	2.186e2	6.856e2	9.396e2	1.746e2
Road 46	46	0400-0500	8.856e2	1.411e2	5.612e2	8.16e2	1.166e2	1.016e2	8.252e2	1.116e2	2.186e2	6.856e2	9.396e2	1.746e2
Road 46	46	0500-0600	1.136e2	3.056e2	5.612e2	9.336e2	5.266e2	7.076e2	8.586e2	2.336e2	4.326e2	6.866e2	1.867e2	3.466e2
Road 46	46	0600-0700	1.136e2	6.938e2	3.986e2	9.332e2	5.903e2	8.686e2	5.986e2	9.376e2	6.906e2	4.106e2	6.616e2	3.466e2
Road 46	46	0700-0800	1.272e2	1.676e2	3.986e2	1.036e2	4.406e2	6.066e2	8.066e2	1.106e2	2.046e2	6.606e2	9.006e2	1.676e2
Road 46	46	0800-1000	1.336e2	1.966e2	3.986e2	1.172e2	3.312e2	2.144e2	8.856e2	9.066e2	1.846e2	7.346e2	8.212e2	1.536e2
Road 46	46	1000-1100	1.336e2	1.966e2	3.986e2	1.172e2	3.312e2	2.144e2	8.856e2	9.066e2	1.846e2	7.346e2	8.212e2	1.536e2
Road 46	46	1100-1200	1.496e2	1.966e2	2.526e2	1.266e2	1.167e2	1.256e2	9.406e2	8.811e2	1.606e2	7.826e2	7.177e2	1.306e2
Road 46	46	1200-1300	1.212e2	1.767e2	3.216e2	1.026e2	1.476e2	2.736e2	8.416e2	1.306e2	2.246e2	6.976e2	9.886e2	1.856e2
Road 46	46	1300-1400	1.212e2	1.767e2	3.216e2	1.026e2	1.476e2	2.736e2	8.416e2	1.306e2	2.246e2	6.976e2	9.886e2	1.856e2
Road 46	46	1400-1500	1.252e2	1.946e2	3.611e2	1.026e2	1.656e2	3.006e2	8.546e2	1.336e2	2.476e2	7.056e2	1.106e2	2.046e2
Road 46	46	1500-1600	1.226e2	1.596e2	3.596e2	1.016e2	1.606e2	2.976e2	8.616e2	1.366e2	2.536e2	6.906e2	1.096e2	2.066e2
Road 46	46	1600-1700	1.336e2	2.262e2	3.772e2	1.126e2	1.956e2	3.626e2	8.656e2	1.366e2	2.786e2	6.906e2	1.206e2	2.226e2
Road 46	46	1700-1800	1.596e2	2.262e2	3.772e2	1.126e2	1.956e2	3.626e2	8.656e2	1.366e2	2.786e2	6.906e2	1.206e2	2.226e2
Road 46	46	1800-1900	7.576e2	1.772e2	3.296e2	8.176e2	4.576e2	6.696e2	8.344e2	1.426e2	2.766e2	4.686e2	1.177e2	2.116e2
Road 46	46	1900-2000	6.386e2	1.266e2	2.396e2	5.596e2	1.097e2	6.996e2	8.796e2	1.286e2	2.276e2	3.336e2	1.006e2	1.876e2
Road 46	46	2000-2100	6.386e2	1.266e2	2.396e2	5.596e2	1.097e2	6.996e2	8.796e2	1.286e2	2.276e2	3.336e2	1.006e2	1.876e2
Road 46	46	2100-2200	5.386e2	7.844e2	1.466e2	3.436e2	3.98e2	1.186e2	10.22e2	1.026e2	1.906e2	5.466e2	7.976e2	1.466e2
Road 46	46	2200-2300	5.226e2	7.411e2	3.396e2	4.212e2	3.986e2	1.116e2	1.142e2	1.026e2	1.896e2	5.566e2	7.926e2	1.476e2
Road 46	46	2300-0000	5.226e2	7.411e2	3.396e2	4.212e2	3.986e2	1.116e2	1.142e2	1.026e2	1.896e2	5.566e2	7.926e2	1.476e2
Road 47	47	0000-0100	1.786e2	2.576e2	8.026e2	1.472e2	1.216e2	6.616e2	1.011e2	1.466e2	5.606e2	8.036e2	1.116e2	3.626e2
Road 47	47	0100-0200	1.926e2	1.826e2	5.686e2	1.636e2	1.546e2	8.626e2	1.056e2	9.846e2	3.106e2	6.836e2	8.376e2	2.586e2
Road 47	47	0200-0300	1.926e2	1.826e2	5.686e2	1.636e2	1.546e2	8.626e2	1.056e2	9.846e2	3.106e2	6.836e2	8.376e2	2.586e2
Road 47	47	0300-0400	1.216e2	1.272e2	1.812e2	1.011e2	1.772e2	1.111e2	6.266e2	1.996e2	8.011e2	5.006e2	1.586e2	2.586e2
Road 47	47	0400-0500	2.312e2	1.448e2	4.506e2	1.922e2	2.008e2	7.577e2	2.166					

Tsing Yi North Underground Quarry
 Open Road 24 hour Emission Factors for
 AERMOD model (September) Year 2033

Road Name	Road ID	Hour	NO ₂ Emission										NO Emission									
			MonthlyHourly					MonthlyHourlyAverage					MonthlyHourly					MonthlyHourlyAverage				
			g/km/h	tonne/hour	g/km/h	tonne/hour	g/km/h	tonne/hour	g/km/h	tonne/hour	g/km/h	tonne/hour	g/km/h	tonne/hour	g/km/h	tonne/hour	g/km/h	tonne/hour	g/km/h	tonne/hour	g/km/h	tonne/hour
Road 47	47	1600-1700	1138.02	6.0987	1.9062	0.0202	5.0527	1.586	1.391	2.7026	8.438	1.1721	2.188	6.61	1.1721	2.188	6.61	1.1721	2.188	6.61	1.1721	2.188
Road 47	47	1700-1800	2254.02	12.567	3.5881	1.882	4.167	1.286	1.208	6.705	16.838	2.424	4.395	13.41	2.424	4.395	13.41	2.424	4.395	13.41	2.424	4.395
Road 47	47	1800-1900	1353.02	7.5127	2.263	0.0242	5.3977	1.638	1.413	2.8266	8.958	1.2452	2.295	7.05	1.2452	2.295	7.05	1.2452	2.295	7.05	1.2452	2.295
Road 47	47	1900-2000	1366.02	7.7727	2.3767	0.0246	5.4276	1.652	1.426	2.8566	9.052	1.2516	2.326	7.16	1.2516	2.326	7.16	1.2516	2.326	7.16	1.2516	2.326
Road 47	47	2000-2100	1224.02	6.7272	2.0008	0.022	4.932	1.5677	1.4878	2.686	8.1416	1.1416	2.144	6.911	1.1416	2.144	6.911	1.1416	2.144	6.911	1.1416	2.144
Road 47	47	2100-2200	1353.02	7.5127	2.263	0.0242	5.3977	1.638	1.413	2.8266	8.958	1.2452	2.295	7.05	1.2452	2.295	7.05	1.2452	2.295	7.05	1.2452	2.295
Road 47	47	2200-2300	9711.01	53.9617	1.4665	0.0165	3.8353	1.2117	2.796	4.864	2.968	5.031	6.471	9.9117	5.031	6.471	9.9117	5.031	6.471	9.9117	5.031	6.471
Road 47	47	2300-0000	1005.02	1.1467	3.565	0.8155	0.938	2.981	8.2142	9.3887	2.9278	6.338	2.7327	2.42	2.9278	6.338	2.7327	2.42	2.9278	6.338	2.7327	2.42
Road 48	48	0600-0100	8822.03	7.538	1.145	0.017	3.616	1.198	9.812	3.8837	2.864	7.786	1.762	6.692	1.762	6.692	1.762	6.692	1.762	6.692	1.762	6.692
Road 48	48	0100-0200	9005.03	3.297	3.5881	0.017	3.616	1.198	9.812	3.8837	2.864	7.786	1.762	6.692	1.762	6.692	1.762	6.692	1.762	6.692	1.762	6.692
Road 48	48	0200-0300	1005.02	1.0701	6.1447	6.4111	0.011	5.9267	1.068	4.067	6.178	8.176	3.3117	3.3117	8.176	3.3117	3.3117	8.176	3.3117	3.3117	8.176	3.3117
Road 48	48	0300-0400	1086.02	1.4358	5.2937	0.8333	2.885	4.317	1.023	2.2857	2.944	8.244	2.647	2.647	2.647	2.647	2.647	2.647	2.647	2.647	2.647	2.647
Road 48	48	0400-0500	1111.02	1.3527	2.865	0.8333	2.885	4.317	1.023	2.2857	2.944	8.244	2.647	2.647	2.647	2.647	2.647	2.647	2.647	2.647	2.647	2.647
Road 48	48	0500-0600	1211.02	1.7476	1.118	0.016	6.126	9.2307	1.067	6.4117	9.676	8.506	1.576	7.7	1.576	7.7	1.576	7.7	1.576	7.7	1.576	7.7
Road 48	48	0600-0700	1271.02	1.6571																		
Road 48	48	0700-0800	1296.02	3.9327	5.9226	1.0962	3.3027	4.886	9.7712	2.976	4.865	2.845	2.136	4.865	2.845	2.136	4.865	2.845	2.136	4.865	2.845	2.136
Road 48	48	0800-0900	1455.02	3.8267	5.4686	1.2387	3.077	4.638	10.66	6.656	6.005	8.842	2.206	3.33	6.656	6.005	8.842	2.206	3.33	6.656	6.005	8.842
Road 48	48	0900-1000	1462.02	3.9267	5.4686	1.2387	3.077	4.638	10.66	6.656	6.005	8.842	2.206	3.33	6.656	6.005	8.842	2.206	3.33	6.656	6.005	8.842
Road 48	48	1100-1200	1555.02	3.1621	4.776	1.3102	2.682	4.004	11.721	2.585	4.055	9.352	1.915	2.8	4.055	9.352	1.915	2.8	4.055	9.352	1.915	2.8
Road 48	48	1200-1300	3746.02	4.8827	7.326	3.155	4.1307	6.248	32.114	7.216	6.366	7.781	3.588	5.45	7.216	6.366	7.781	3.588	5.45	7.216	6.366	7.781
Road 48	48	1300-1400	3746.02	4.8827	7.326	3.155	4.1307	6.248	32.114	7.216	6.366	7.781	3.588	5.45	7.216	6.366	7.781	3.588	5.45	7.216	6.366	7.781
Road 48	48	1400-1500	3645.02	4.2257	7.876	3.1052	4.447	6.708	31.411	6.426	5.589	6.931	3.776	5.5	6.426	5.589	6.931	3.776	5.5	6.426	5.589	6.931
Road 48	48	1500-1600	3455.02	4.087	7.676	2.8862	4.227	6.376	30.701	4.526	6.825	7.541	3.745	5.4	4.526	6.825	7.541	3.745	5.4	4.526	6.825	7.541
Road 48	48	1600-1700	3645.02	4.5897	8.245	3.1052	4.447	6.708	31.411	6.426	5.589	6.931	3.776	5.5	6.426	5.589	6.931	3.776	5.5	6.426	5.589	6.931
Road 48	48	1700-1800	2888.02	4.2967	6.476	2.388	3.3027	5.396	3.698	5.026	8.204	3.041	4.535	6.6	5.026	8.204	3.041	4.535	6.6	5.026	8.204	3.041
Road 48	48	1800-1900	2938.02	4.3267	5.396	2.484	2.893	4.438	3.698	5.026	8.204	3.041	4.535	6.6	5.026	8.204	3.041	4.535	6.6	5.026	8.204	3.041
Road 48	48	1900-2000	2938.02	4.3267	5.396	2.484	2.893	4.438	3.698	5.026	8.204	3.041	4.535	6.6	5.026	8.204	3.041	4.535	6.6	5.026	8.204	3.041
Road 48	48	2000-2100	2806.02	2.5237	3.816	2.326	2.096	3.166	3.091	5.538	5.338	3.241	2.925	4.4	3.091	5.538	5.338	3.241	2.925	4.4	3.091	5.538
Road 48	48	2100-2200	2806.02	2.5237	3.816	2.326	2.096	3.166	3.091	5.538	5.338	3.241	2.925	4.4	3.091	5.538	5.338	3.241	2.925	4.4	3.091	5.538
Road 48	48	2200-2300	2806.02	2.5237	3.816	2.326	2.096	3.166	3.091	5.538	5.338	3.241	2.925	4.4	3.091	5.538	5.338	3.241	2.925	4.4	3.091	5.538
Road 48	48	2300-0000	2806.02	2.5237	3.816	2.326	2.096	3.166	3.091	5.538	5.338	3.241	2.925	4.4	3.091	5.538	5.338	3.241	2.925	4.4	3.091	5.538
Road 49	49	0600-0100	1271.02	6.9298	1.758	1.0402	5.688	1.436	1.626	4.707	2.156	2.88	6.988	1.7	1.626	4.707	2.156	2.88	6.988	1.7	1.626	4.707
Road 49	49	0100-0200	1254.02	6.428	1.111	0.068	3.788	1.436	1.626	4.707	2.156	2.88	6.988	1.7	1.626	4.707	2.156	2.88	6.988	1.7	1.626	4.707
Road 49	49	0200-0300	1311.02	6.167	8.682	1.3062	2.883	7.083	1.513	4.637	7.73	2.46	3.166	7.08	1.513	4.637	7.73	2.46	3.166	7.08	1.513	4.637
Road 49	49	0300-0400	1365.02	2.7489	6.9167	1.1232	2.276	3.737	1.526	3.057	7.708	2.238	2.487	6.9	3.057	7.708	2.238	2.487	6.9	3.057	7.708	2.238
Road 49	49	0400-0500	1488.02	3.7528	8.2057	1.2352	2.688	5.771	1.571	4.447	6.896	2.714	2.785	7.7	1.571	4.447	6.896	2.714	2.785	7.7	1.571	4.447
Road 49	49	0500-0600	1488.02	3.7528	8.2057	1.2352	2.688	5.771	1.571	4.447	6.896	2.714	2.785	7.7	1.571	4.447	6.896	2.714	2.785	7.7	1.571	4.447
Road 49	49	0600-0700	1971.02	1.5867	4.0056	1.6552	1.336	2.396	1.836	1.478	7.228	1.511	1.2116	6.6	1.478	7.228	1.511	1.2116	6.6	1.478	7.228	1.511
Road 49	49	0700-0800	2522.02	1.4807	1.038	2.1111	3.4117	8.6116	2.158	4.476	8.798	1.776	2.866	7.6	2.158	4.476	8.798	1.776	2.866	7.6	2.158	4.476
Road 49	49	0800-0900	2522.02	1.4807	1.038	2.1111	3.4117	8.6116	2.158	4.476	8.798	1.776	2.866	7.6	2.158	4.476	8.798	1.776	2.866	7.6	2.158	4.476
Road 49	49	0900-1000	2522.02	1.4807	1.038	2.1111	3.4117	8.6116	2.158	4.476	8.798	1.776	2.866	7.6	2.158	4.476	8.798	1.776	2.866	7.6	2.158	4.476
Road 49	49	1000-1100	2766.02	3.6517	8.176	2.341	2.927	7.7316	2.158	4.476	8.798	1.776	2.866	7.6	2.158	4.476	8.798	1.776	2.866	7.6	2.158	4.476
Road 49	49	1100-1200	2471.02	2.9467	7.4116	2.082	2.486	6.7716	2.086	4.488	6.7716	2.086	4.488	6.7716	2.086	4.488	6.7716	2.086	4.488	6.7716	2.086	4.488
Road 49	49	1200-1300	2471.02	2.9467	7.4116	2.082	2.486	6.7716	2.086	4.488	6.7716	2.086	4.488	6.7716	2.086	4.488	6.7716	2.086	4.488	6.7716	2.086	4.488
Road 49	49	1300-1400	3296.02	2.3267	8.145	2.786	2.7407	6.9258	2.436	3.388	6.025	2.058	2.0115	5.4	2.436	3.388	6.025	2.058	2.0115	5.4	2.436	3.388
Road 49	49	1400-1500	3455.02	3.4167	9.208	2.625	3.097	7.884	2.436	3.388	6.025	2.058	2.0115	5.4	2.436	3.388	6.025	2.058	2.0115	5.4	2.436	3.388
Road 49	49	1500-1600	3455.02	3.4167	9.208	2.625	3.097	7.884	2.436	3.388	6.025	2.058	2.0115	5.4	2.436	3.388	6.025	2.058	2.0115	5.4	2.436	3.388
Road 49	49	1600-1700	3565.02	3.1677	1.055	2.965	3.467	7.846	2.521	2.965	4.465	2.076	2.436	6.6	2.521	2.965	4.465	2.076	2.436	6.6	2.521	2.965
Road 49	49	1700-1800	2755.02	3.4757	9.455	2.2363	3.0414	7.6716	2.368	3.625	6.228	1.125	1.898	5.7	2.368	3.625	6.228	1.125	1.898	5.7	2.368	3.625
Road 49	49	1800-1900	2755.02	3.4757	9.455	2.2363	3.0414	7.6716	2.368	3.625	6.228	1.125	1.898	5.7	2.368	3.625	6.228	1.125	1.898	5.7	2.368	3.625
Road 49	49	1900-2000	1988.02	2.4717	6.238	1.6642	2.0417	5.146	2.136	2.655	6.06	7.783	2.166	5.4	2.136	2.655	6.06	7.783	2.166	5.4	2.136	2.655
Road 49	49	2000-2100	1855.02	1.7967	4.5216	1.531	1.467	3.696	2.188	1.1115	5.325	7.751	1.696	4.4	2.188	1.1115						

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
 Open Road 24 hour Emission Factors for
 AERMOD model (September) Year 2033

Road Name	Road ID	Hour	NO _x Emission				NO _x Emission							
			Monthly Burden		Monthly Average		Monthly Burden		Monthly Average					
			g/km/hr	tonne/hour	g/km/hr	tonne/hour	g/km/hr	tonne/hour	g/km/hr	tonne/hour				
Road S1	S1	0000-0100	8.45E-03	8.89E-12	2.06E-02	8.88E-03	5.90E-06	1.04E-06	9.81E-02	7.94E-07	1.46E-06	4.30E-11	1.77E-07	
Road S1	S1	0100-0200	8.86E-03	9.48E-12	8.82E-07	7.55E-03	3.98E-07	7.43E-07	8.68E-02	5.18E-07	1.94E-06	8.09E-07	4.82E-11	7.82E-07
Road S1	S1	0200-0300	8.86E-03	9.48E-12	8.82E-07	7.55E-03	3.98E-07	7.43E-07	8.68E-02	5.18E-07	1.94E-06	8.09E-07	4.82E-11	7.82E-07
Road S1	S1	0300-0400	1.03E-02	1.13E-11	8.83E-07	8.53E-03	2.59E-03	4.93E-07	1.02E-01	3.09E-07	5.76E-08	8.31E-07	2.49E-07	4.63E-11
Road S1	S1	0400-0500	1.03E-02	1.13E-11	8.83E-07	8.53E-03	2.59E-03	4.93E-07	1.02E-01	3.09E-07	5.76E-08	8.31E-07	2.49E-07	4.63E-11
Road S1	S1	0500-0600	1.22E-01	1.56E-10	7.98E-06	1.02E-02	2.36E-07	2.34E-06	1.95E-01	1.30E-06	2.42E-08	8.61E-02	1.06E-06	1.98E-10
Road S1	S1	0700-0800	1.29E-02	3.21E-07	5.79E-06	1.02E-02	2.67E-07	4.98E-06	1.08E-01	2.67E-06	4.98E-08	8.76E-07	2.12E-06	4.05E-10
Road S1	S1	0800-0900	1.25E-02	3.33E-07	5.68E-06	1.04E-02	2.67E-07	5.54E-06	1.07E-01	2.77E-06	5.17E-08	7.95E-07	2.29E-06	4.24E-10
Road S1	S1	0900-1000	1.25E-02	3.33E-07	5.68E-06	1.04E-02	2.67E-07	5.54E-06	1.07E-01	2.77E-06	5.17E-08	7.95E-07	2.29E-06	4.24E-10
Road S1	S1	1000-1100	1.55E-02	4.69E-07	8.57E-06	1.31E-02	2.62E-07	4.88E-06	1.11E-01	2.22E-06	4.18E-08	9.21E-07	1.92E-06	3.44E-10
Road S1	S1	1100-1200	1.46E-02	2.77E-07	5.16E-06	1.24E-02	2.39E-07	4.37E-06	1.11E-01	2.10E-06	3.95E-08	9.23E-07	1.75E-06	3.18E-10
Road S1	S1	1200-1300	1.72E-02	4.69E-07	8.57E-06	1.31E-02	2.62E-07	4.88E-06	1.11E-01	2.22E-06	4.18E-08	9.21E-07	1.92E-06	3.44E-10
Road S1	S1	1300-1400	3.63E-02	8.24E-07	9.34E-06	1.06E-02	4.17E-07	7.66E-06	3.08E-01	4.10E-06	7.64E-07	2.62E-06	1.43E-06	2.69E-10
Road S1	S1	1400-1500	3.66E-02	8.24E-07	9.34E-06	1.12E-02	4.27E-07	7.95E-06	3.12E-01	4.28E-06	7.90E-07	2.62E-06	1.83E-06	2.69E-10
Road S1	S1	1500-1600	3.66E-02	8.24E-07	9.34E-06	1.12E-02	4.27E-07	7.95E-06	3.12E-01	4.28E-06	7.90E-07	2.62E-06	1.83E-06	2.69E-10
Road S1	S1	1600-1700	3.66E-02	8.24E-07	9.34E-06	1.12E-02	4.27E-07	7.95E-06	3.12E-01	4.28E-06	7.90E-07	2.62E-06	1.83E-06	2.69E-10
Road S1	S1	1700-1800	3.22E-02	4.81E-07	6.98E-06	8.63E-02	3.92E-07	7.30E-06	3.02E-01	5.24E-06	9.77E-08	2.88E-06	4.24E-06	7.94E-10
Road S1	S1	1800-1900	3.22E-02	4.81E-07	6.98E-06	8.63E-02	3.92E-07	7.30E-06	3.02E-01	5.24E-06	9.77E-08	2.88E-06	4.24E-06	7.94E-10
Road S1	S1	1900-2000	2.96E-02	3.31E-07	6.15E-06	2.46E-02	7.43E-07	5.11E-06	4.51E-01	4.63E-06	8.94E-08	3.42E-06	3.83E-06	7.14E-10
Road S1	S1	2000-2100	2.88E-02	2.64E-07	4.92E-06	2.45E-02	2.17E-07	4.05E-06	4.26E-01	3.79E-07	6.17E-08	3.52E-06	3.11E-06	5.83E-10
Road S2	S2	0000-0100	8.86E-03	9.48E-12	8.82E-07	7.55E-03	3.98E-07	7.43E-07	8.68E-02	5.18E-07	1.94E-06	8.09E-07	4.82E-11	7.82E-07
Road S2	S2	0100-0200	8.86E-03	9.48E-12	8.82E-07	7.55E-03	3.98E-07	7.43E-07	8.68E-02	5.18E-07	1.94E-06	8.09E-07	4.82E-11	7.82E-07
Road S2	S2	0200-0300	8.86E-03	9.48E-12	8.82E-07	7.55E-03	3.98E-07	7.43E-07	8.68E-02	5.18E-07	1.94E-06	8.09E-07	4.82E-11	7.82E-07
Road S2	S2	0300-0400	6.51E-02	1.16E-10	8.03E-07	5.47E-02	1.32E-07	6.75E-06	2.46E-01	9.91E-08	3.02E-07	2.08E-07	4.97E-07	2.55E-10
Road S2	S2	0400-0500	6.51E-02	1.16E-10	8.03E-07	5.47E-02	1.32E-07	6.75E-06	2.46E-01	9.91E-08	3.02E-07	2.08E-07	4.97E-07	2.55E-10
Road S2	S2	0500-0600	6.75E-02	1.56E-10	8.62E-07	5.67E-02	2.98E-03	1.53E-07	2.64E-01	1.33E-07	6.84E-07	2.13E-07	1.12E-07	5.79E-10
Road S2	S2	0600-0700	6.95E-02	8.36E-07	4.87E-06	8.89E-02	3.63E-07	2.63E-01	3.14E-07	1.61E-07	2.21E-06	2.69E-07	1.36E-06	2.69E-10
Road S2	S2	0700-0800	7.19E-02	1.91E-07	7.62E-07	9.19E-02	3.75E-07	2.64E-01	3.14E-07	1.61E-07	2.21E-06	2.69E-07	1.36E-06	2.69E-10
Road S2	S2	0800-0900	7.43E-02	3.96E-07	1.18E-06	6.33E-02	1.96E-07	1.00E-06	2.86E-01	8.86E-07	4.54E-06	2.44E-07	7.54E-07	3.89E-10
Road S2	S2	0900-1000	7.73E-02	7.27E-07	3.99E-06	6.59E-02	2.31E-07	1.19E-06	3.00E-01	1.05E-06	3.95E-06	2.59E-07	8.47E-07	4.69E-10
Road S2	S2	1000-1100	7.73E-02	7.27E-07	3.99E-06	6.59E-02	2.31E-07	1.19E-06	3.00E-01	1.05E-06	3.95E-06	2.59E-07	8.47E-07	4.69E-10
Road S2	S2	1100-1200	8.14E-02	2.64E-07	1.36E-06	7.00E-02	2.29E-07	1.17E-06	3.02E-01	9.92E-07	5.03E-06	2.50E-07	8.45E-07	4.33E-10
Road S2	S2	1200-1300	8.15E-02	2.76E-07	1.41E-06	7.09E-02	2.39E-07	1.22E-06	3.02E-01	9.83E-07	5.04E-06	2.54E-07	8.50E-07	4.38E-10
Road S2	S2	1300-1400	8.15E-02	2.76E-07	1.41E-06	7.09E-02	2.39E-07	1.22E-06	3.02E-01	9.83E-07	5.04E-06	2.54E-07	8.50E-07	4.38E-10
Road S2	S2	1400-1500	8.31E-02	3.11E-07	1.60E-06	7.13E-02	2.68E-07	1.37E-06	3.02E-01	1.14E-06	5.82E-06	2.95E-07	9.72E-07	4.89E-10
Road S2	S2	1500-1600	7.62E-02	3.99E-07	1.57E-06	6.45E-02	2.53E-07	1.30E-06	3.03E-01	1.18E-06	6.09E-06	2.56E-07	1.01E-06	5.15E-10
Road S2	S2	1600-1700	7.83E-02	2.98E-07	1.48E-06	5.55E-02	2.38E-07	1.22E-06	3.06E-01	1.07E-06	5.59E-06	2.44E-07	8.85E-07	4.54E-10
Road S2	S2	1700-1800	7.83E-02	2.98E-07	1.48E-06	5.55E-02	2.38E-07	1.22E-06	3.06E-01	1.07E-06	5.59E-06	2.44E-07	8.85E-07	4.54E-10
Road S2	S2	1800-1900	8.96E-02	3.17E-07	1.62E-06	7.04E-02	2.48E-07	1.34E-06	2.95E-01	5.87E-07	3.01E-06	2.12E-07	8.47E-07	2.50E-10
Road S2	S2	1900-2000	5.53E-02	8.53E-07	4.37E-07	4.78E-02	1.21E-06	3.85E-07	2.34E-01	3.54E-07	1.82E-06	1.95E-07	1.51E-07	7.51E-10
Road S2	S2	2000-2100	5.53E-02	8.53E-07	4.37E-07	4.78E-02	1.21E-06	3.85E-07	2.34E-01	3.54E-07	1.82E-06	1.95E-07	1.51E-07	7.51E-10
Road S2	S2	2100-2200	5.59E-02	6.92E-06	3.55E-07	4.67E-02	5.78E-06	2.96E-07	2.37E-01	2.93E-07	1.50E-06	1.97E-06	2.44E-07	1.29E-10
Road S2	S2	2200-2300	6.02E-02	6.57E-07	3.37E-07	5.07E-02	5.59E-06	2.82E-07	2.37E-01	2.93E-07	1.29E-06	1.94E-07	2.11E-07	1.08E-10
Road S2	S2	2300-2400	6.02E-02	6.57E-07	3.37E-07	5.07E-02	5.59E-06	2.82E-07	2.37E-01	2.93E-07	1.29E-06	1.94E-07	2.11E-07	1.08E-10
Road S3	S3	0000-0100	8.81E-02	4.11E-06	8.56E-07	7.31E-02	3.41E-07	7.93E-07	3.64E-01	1.70E-07	3.95E-06	2.95E-07	3.38E-07	3.20E-10
Road S3	S3	0100-0200	8.71E-02	4.76E-06	8.38E-07	4.73E-02	2.34E-06	5.44E-07	3.58E-01	1.32E-07	2.62E-06	9.44E-07	2.91E-07	2.81E-10
Road S3	S3	0200-0300	8.71E-02	4.76E-06	8.38E-07	4.73E-02	2.34E-06	5.44E-07	3.58E-01	1.32E-07	2.62E-06	9.44E-07	2.91E-07	2.81E-10
Road S3	S3	0300-0400	3.66E-02	8.36E-07	1.83E-06	2.59E-02	7.89E-03	3.57E-07	3.79E-01	7.41E-07	3.12E-06	6.09E-06	1.42E-06	1.42E-10
Road S3	S3	0400-0500	3.66E-02	8.36E-07	1.83E-06	2.59E-02	7.89E-03	3.57E-07	3.79E-01	7.41E-07	3.12E-06	6.09E-06	1.42E-06	1.42E-10
Road S3	S3	0500-0600	3.95E-02	2.14E-06	4.98E-07	8.07E-02	4.76E-07	1.16E-07	3.88E-01	8.62E-08	2.90E-06	3.19E-07	7.08E-08	1.64E-10
Road S3	S3	0600-0700	3.95E-02	2.14E-06	4.98E-07	8.07E-02	4.76E-07	1.16E-07	3.88E-01	8.62E-08	2.90E-06	3.19E-07	7.08E-08	1.64E-10
Road S3	S3	0700-0800	1.14E-01	1.10E-08	2.39E-07	9.71E-02	8.57E-09	1.99E-04	4.49E-01	3.96E-07	9.20E-06	3.75E-07	3.31E-07	7.70E-10
Road S3	S3	0800-0900	1.29E-01	2.38E-07	5.56E-06	1.09E-01	2.01E-07	4.66E-06	5.09E-01	9.21E-07	2.14E-06	4.15E-07	8.67E-07	1.78E-10
Road S3	S3	0900-1000	1.29E-01	2.38E-07	5.56E-06	1.09E-01	2.01E-07	4.66E-06	5.09E-01	9.21E-07	2.14E-06	4.15E-07	8.67E-07	1.78E-10
Road S3	S3	1000-1100	1.35E-01	3.99E-07	7.17E-06	1.30E-02	2.62E-07	6.88E-06	5.76E-01	1.68E-06	2.69E-06	4.89E-07	8.76E-07	2.27E-10
Road S3	S3	1100-1200	1.50E-01	2.85E-07	6.03E-06	1.27E-02	2.42E-07	5.63E-06	5.98E-01	1.98E-06	2.51E-06	4.79E-07	8.12E-07	2.12E-10
Road S3	S3	1200-1300	1.50E-01	2.85E-07	6.03E-06	1.27E-02	2.42E-07	5.63E-06	5.98E-01	1.98E-06	2.51E-06	4.79E-07	8.12E-07	2.12E-10
Road S3	S3	1300-1400	1.95E-01	3.17E-07	7.36E-06	1.10E-02	2.70E-07	6.27E-06	4.93E-01	1.21E-06	2.80E-06	4.13E-07	1.02E-06	2.38E-10
Road S3	S3	1400-1500	1.95E-01	3.17E-07	7.36E-06	1.10E-02	2.70E-07	6.27E-06	4.93E-01	1.21E-06	2.82E-06	4.06E-07	1.03E-06	2.38E-10
Road S3	S3	1500-1600	2.13E-01	3.13E-07	7.21E-06	1.13E-02	2.69E-07	6.19E-06	5.09E-01	1.21E-06	2.82E-06	4.13E-07	1.02E-06	2.38E-10
Road S3	S3	1600-1700	2.14E-01	3.21E-07	7.45E-06	1.13E-02	2.67E-07	6.21E-06	4.97E-01	1.21E-06	2.81E-06	3.89E-07	9.99E-07	2.32E-10
Road S3	S3	1700-1800	9.67E-02	2.60E-07	4.05E-06	7.89E-02	1.22E-06	4.35E-06	4.11E-01	1.11E-06	2.57E-06	3.33E-07	8.92E-07	2.07E-10
Road S3	S3	1800-1900	9.67E-02	2.60E-07	4.05E-06	7.89E-02	1.22E-06	4.35E-06	4.11E-01	1.11E-06	2.57E-06	3.33E-07	8.92E-07	2.07E-10
Road S3	S3	1900-2000	6.24E-02	1.21E-07	2.81E-06	5.17E-02	1.00E-07	2.33E-06	2.78E-01	5.39E-07	1.29E-06	2.25E-07	4.37E-07	1.01E-10
Road S3	S3	2000-2100	6.13E-02	1.39E-07	3.17E-06	5.05E-02	7.69E-07	1.79E-06	2.88E-01	4.39E-07	1.02E-06	2.31E-07		

Tsing Yi North Underground Quarry
 Open Road 24 hour Emission Factors for
 AERMOD model (September)

Road Name	Road ID	Hour	NO Emission				MonthlyAverage				NO Emission			
			g/km/h	g/km	tonne/hour	g/km/h	g/km/h	g/km/h	tonne/hour	g/km/h	g/km/h	g/km/h	tonne/hour	
Road 54	54	0800-0800	1.095	4.07	0.792	9.2142	3.42	7.862	4.31	1.5316	3.608	3.602	1.352	0.368
Road 54	54	0900-1000	1.245	4.617	1.025	10.68	3.768	8.035	4.931	1.776	4.038	4.138	1.498	3.406
Road 54	54	1000-1100	1.365	4.957	1.125	11.85	4.032	8.748	5.356	1.956	4.398	4.508	1.658	3.738
Road 54	54	1100-1200	1.355	4.927	1.105	11.85	3.927	8.248	5.174	1.838	4.178	4.362	1.576	3.398
Road 54	54	1200-1200	1.685	6.011	1.625	14.26	4.384	10.067	6.748	5.998	1.726	3.798	5.508	1.106
Road 54	54	1300-1400	1.885	6.555	1.825	15.65	4.788	10.958	7.458	6.458	1.958	4.058	5.858	1.208
Road 54	54	1400-1500	1.665	6.011	1.555	13.016	4.181	9.367	7.671	6.008	1.438	3.268	5.058	1.216
Road 54	54	1500-1600	1.535	5.718	1.425	12.776	3.914	8.736	6.058	1.498	3.438	5.014	1.248	2.828
Road 54	54	1600-1700	1.615	5.677	1.495	13.48	3.367	7.211	5.958	1.948	4.008	4.938	1.168	2.608
Road 54	54	1700-1800	1.365	4.957	1.125	11.85	3.427	7.478	4.478	1.478	3.208	4.398	1.038	2.268
Road 54	54	1800-1900	1.105	3.557	0.885	8.906	1.707	3.783	3.488	1.748	1.998	3.208	0.818	1.638
Road 54	54	1900-2000	0.955	3.357	0.708	7.088	1.227	2.582	2.491	1.588	1.308	3.428	0.657	1.407
Road 54	54	2000-2100	0.815	2.957	0.608	6.008	1.027	2.227	2.027	1.328	1.108	3.028	0.557	1.207
Road 54	54	2100-2200	0.405	1.027	0.235	3.088	0.7812	0.848	0.908	0.448	0.427	1.028	0.338	0.6413
Road 54	54	2200-2300	0.735	2.625	0.195	0.815	0.796	1.825	0.923	3.875	0.8788	3.214	0.1612	0.3121
Road 54	54	2300-2400	0.855	2.957	0.205	0.855	0.796	1.825	0.923	3.875	0.8788	3.214	0.1612	0.3121
Road 101	101	0800-0800	0.895	3.045	0.495	2.935	6.855	6.058	4.208	6.338	5.687	2.215	4.491	4.338
Road 101	101	0900-0900	0.105	0.245	2.085	7.665	4.425	1.758	4.688	4.728	1.488	5.208	3.008	1.0318
Road 101	101	1000-1100	0.175	0.345	0.707	7.665	4.425	1.758	4.688	4.728	1.488	5.208	3.008	1.0318
Road 101	101	1200-1200	0.925	3.618	0.985	8.155	2.998	1.958	6.922	2.325	1.908	5.485	0.848	7.275
Road 101	101	1300-1400	1.155	2.288	1.695	9.805	3.548	1.608	11.552	2.647	4.078	5.658	2.058	8.268
Road 101	101	1400-1500	1.155	2.288	1.695	9.805	3.548	1.608	11.552	2.647	4.078	5.658	2.058	8.268
Road 101	101	1500-1600	0.925	3.618	0.985	8.155	2.998	1.958	6.922	2.325	1.908	5.485	0.848	7.275
Road 101	101	1600-1700	0.175	0.345	0.707	7.665	4.425	1.758	4.688	4.728	1.488	5.208	3.008	1.0318
Road 101	101	1700-1800	0.175	0.345	0.707	7.665	4.425	1.758	4.688	4.728	1.488	5.208	3.008	1.0318
Road 101	101	1800-1900	0.925	3.618	0.985	8.155	2.998	1.958	6.922	2.325	1.908	5.485	0.848	7.275
Road 101	101	1900-2000	0.925	3.618	0.985	8.155	2.998	1.958	6.922	2.325	1.908	5.485	0.848	7.275
Road 101	101	2000-2100	0.405	1.027	0.235	3.088	0.7812	0.848	0.908	0.448	0.427	1.028	0.338	0.6413
Road 101	101	2100-2200	0.735	2.625	0.195	0.815	0.796	1.825	0.923	3.875	0.8788	3.214	0.1612	0.3121
Road 101	101	2200-2300	0.855	2.957	0.205	0.855	0.796	1.825	0.923	3.875	0.8788	3.214	0.1612	0.3121
Road 101	101	2300-2400	0.925	3.618	0.985	8.155	2.998	1.958	6.922	2.325	1.908	5.485	0.848	7.275
Road 102	102	0800-0800	1.095	4.07	0.792	9.2142	3.42	7.862	4.31	1.5316	3.608	3.602	1.352	0.368
Road 102	102	0900-1000	1.245	4.617	1.025	10.68	3.768	8.035	4.931	1.776	4.038	4.138	1.498	3.406
Road 102	102	1000-1100	1.365	4.957	1.125	11.85	4.032	8.748	5.356	1.956	4.398	4.508	1.658	3.738
Road 102	102	1100-1200	1.355	4.927	1.105	11.85	3.927	8.248	5.174	1.838	4.178	4.362	1.576	3.398
Road 102	102	1200-1200	1.685	6.011	1.625	14.26	4.384	10.067	6.748	5.998	1.726	3.798	5.508	1.106
Road 102	102	1300-1400	1.885	6.555	1.825	15.65	4.788	10.958	7.458	6.458	1.958	4.058	5.858	1.208
Road 102	102	1400-1500	1.665	6.011	1.555	13.016	4.181	9.367	7.671	6.008	1.438	3.268	5.058	1.216
Road 102	102	1500-1600	1.535	5.718	1.425	12.776	3.914	8.736	6.058	1.498	3.438	5.014	1.248	2.828
Road 102	102	1600-1700	1.615	5.677	1.495	13.48	3.367	7.211	5.958	1.948	4.008	4.938	1.168	2.608
Road 102	102	1700-1800	1.365	4.957	1.125	11.85	3.427	7.478	4.478	1.478	3.208	4.398	1.038	2.268
Road 102	102	1800-1900	1.105	3.557	0.885	8.906	1.707	3.783	3.488	1.748	1.998	3.208	0.818	1.638
Road 102	102	1900-2000	0.955	3.357	0.708	7.088	1.227	2.582	2.491	1.588	1.308	3.428	0.657	1.407
Road 102	102	2000-2100	0.815	2.957	0.608	6.008	1.027	2.227	2.027	1.328	1.108	3.028	0.557	1.207
Road 102	102	2100-2200	0.405	1.027	0.235	3.088	0.7812	0.848	0.908	0.448	0.427	1.028	0.338	0.6413
Road 102	102	2200-2300	0.735	2.625	0.195	0.815	0.796	1.825	0.923	3.875	0.8788	3.214	0.1612	0.3121
Road 102	102	2300-2400	0.855	2.957	0.205	0.855	0.796	1.825	0.923	3.875	0.8788	3.214	0.1612	0.3121
Road 103	103	0800-0800	0.895	3.045	0.495	2.935	6.855	6.058	4.208	6.338	5.687	2.215	4.491	4.338
Road 103	103	0900-0900	0.105	0.245	2.085	7.665	4.425	1.758	4.688	4.728	1.488	5.208	3.008	1.0318
Road 103	103	1000-1100	0.175	0.345	0.707	7.665	4.425	1.758	4.688	4.728	1.488	5.208	3.008	1.0318
Road 103	103	1200-1200	0.925	3.618	0.985	8.155	2.998	1.958	6.922	2.325	1.908	5.485	0.848	7.275
Road 103	103	1300-1400	1.155	2.288	1.695	9.805	3.548	1.608	11.552	2.647	4.078	5.658	2.058	8.268
Road 103	103	1400-1500	1.155	2.288	1.695	9.805	3.548	1.608	11.552	2.647	4.078	5.658	2.058	8.268
Road 103	103	1500-1600	0.925	3.618	0.985	8.155	2.998	1.958	6.922	2.325	1.908	5.485	0.848	7.275
Road 103	103	1600-1700	0.175	0.345	0.707	7.665	4.425	1.758	4.688	4.728	1.488	5.208	3.008	1.0318
Road 103	103	1700-1800	0.175	0.345	0.707	7.665	4.425	1.758	4.688	4.728	1.488	5.208	3.008	1.0318
Road 103	103	1800-1900	0.925	3.618	0.985	8.155	2.998	1.958	6.922	2.325	1.908	5.485	0.848	7.275
Road 103	103	1900-2000	0.925	3.618	0.985	8.155	2.998	1.958	6.922	2.325	1.908	5.485	0.848	7.275
Road 103	103	2000-2100	0.405	1.027	0.235	3.088	0.7812	0.848	0.908	0.448	0.427	1.028	0.338	0.6413
Road 103	103	2100-2200	0.735	2.625	0.195	0.815	0.796	1.825	0.923	3.875	0.8788	3.214	0.1612	0.3121
Road 103	103	2200-2300	0.855	2.957	0.205	0.855	0.796	1.825	0.923	3.875	0.8788	3.214	0.1612	0.3121
Road 103	103	2300-2400	0.925	3.618	0.985	8.155	2.998	1.958	6.922	2.325	1.908	5.485	0.848	7.275
Road 104	104	0800-0800	1.095	4.07	0.792	9.2142	3.42	7.862	4.31	1.5316	3.608	3.602	1.352	0.368
Road 104	104	0900-1000	1.245	4.617	1.025	10.68	3.768	8.035	4.931	1.776	4.038	4.138	1.498	3.406
Road 104	104	1000-1100	1.365	4.957	1.125	11.85	4.032	8.748	5.356	1.956	4.398	4.508	1.658	3.738
Road 104	104	1100-1200	1.355	4.927	1.105	11.85	3.927	8.248	5.174	1.838	4.178	4.362	1.576	3.398
Road 104	104	1200-1200	1.685	6.011	1.625	14.26	4.384	10.067	6.748	5.998	1.726	3.798	5.508	1.106
Road 104	104	1300-1400	1.885	6.555	1.825	15.65	4.788	10.958	7.458	6.458	1.958	4.058	5.858	1.208
Road 104	104	1400-1500	1.665	6.011	1.555	13.016	4.181	9.367	7.671	6.008	1.438	3.268	5.058	1.216
Road 104	104	1500-1600	1.535	5.718	1.425	12.776	3.914	8.736	6.058	1.498	3.438	5.014	1.248	2.828
Road 104	104	1600-1700	1.615	5.677	1.495	13.48	3.367	7.211	5.958	1.948	4.008	4.938	1.168	2.608
Road 104	104	1700-1800	1.365	4.957	1.125	11.85	3.427	7.478	4.478	1.478	3.208	4.398	1.038	2.268
Road 104	104	1800-1900	1.105	3.557	0.885	8.906	1.707	3.783	3.488	1.748	1.998	3.208	0.818	1.638
Road 104	104	1900-2000	0.955	3.357	0.708	7.088	1.227	2.582	2.491	1.588	1.308	3.428	0.657	1.407
Road 104	104	2000-2100	0.815	2.957	0.608	6.008	1.027	2.227	2.027	1.328	1.108	3.028	0.557	1.207
Road 104	104	2100-2200	0.405	1.027	0.235	3.088	0.7812	0.848	0.908	0.448	0.427	1.028	0.338	0.6413
Road 104	104	2200-2300	0.735	2.625	0.195	0.815	0.796	1.825	0.923	3.875	0.8788	3.214	0.1612	0.3121
Road 104	104	2300-2400	0.855	2.957	0.205	0.855	0.796	1.825	0.923	3.875	0.8788	3.214	0.1612	0.3121
Road 105	105</													

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Using Yi North Underground Quarry
Open Road 24 hour Emission Factors for
AERMOD model (September) Year 2033

Road Name	Road ID	Hour	NO Emission						NO Emission					
			Monthly			Hourly			Monthly			Hourly		
			g/km/hr	g/km	tonne/hour	g/km/hr	g/km	tonne/hour	g/km/hr	g/km	tonne/hour	g/km/hr	g/km	tonne/hour
Road 103	103	1600-1700	1.811e-07	4.486e-07	1.251e-06	1.512e-07	4.144e-07	9.84e-06	6.422e-07	2.317e-06	5.575e-06	6.300e-07	1.870e-06	4.28e-06
Road 103	103	1700-1800	1.336e-06	4.026e-07	9.676e-06	1.026e-07	2.592e-07	8.924e-06	7.344e-07	2.271e-06	5.475e-05	5.708e-07	1.776e-06	4.28e-06
Road 103	103	1800-1900	1.336e-06	4.026e-07	9.676e-06	1.026e-07	2.592e-07	8.924e-06	7.344e-07	2.271e-06	5.475e-05	5.708e-07	1.776e-06	4.28e-06
Road 103	103	1900-2000	1.336e-06	4.026e-07	9.676e-06	1.026e-07	2.592e-07	8.924e-06	7.344e-07	2.271e-06	5.475e-05	5.708e-07	1.776e-06	4.28e-06
Road 103	103	2000-2100	7.965e-06	1.638e-07	3.916e-06	6.403e-07	1.727e-07	4.265e-06	6.120e-07	1.286e-06	3.076e-05	4.766e-06	9.806e-07	2.36e-06
Road 103	103	2100-2200	6.926e-06	1.447e-07	3.406e-06	5.616e-07	1.146e-07	2.796e-06	5.998e-07	1.228e-06	2.975e-05	4.626e-06	9.526e-07	2.16e-06
Road 103	103	2200-2300	6.926e-06	1.447e-07	3.406e-06	5.616e-07	1.146e-07	2.796e-06	5.998e-07	1.228e-06	2.975e-05	4.626e-06	9.526e-07	2.16e-06
Road 103	103	2300-2400	6.926e-06	1.447e-07	3.406e-06	5.616e-07	1.146e-07	2.796e-06	5.998e-07	1.228e-06	2.975e-05	4.626e-06	9.526e-07	2.16e-06
Road 104	104	0000-0100	1.326e-06	8.886e-08	1.8140e-07	1.0742e-07	3.311e-08	4.696e-06	7.556e-07	3.310e-07	1.095e-07	9.976e-07	4.076e-07	8.296e-06
Road 104	104	0100-0200	1.420e-06	9.406e-08	1.940e-07	1.130e-07	3.333e-08	4.696e-06	7.556e-07	3.310e-07	1.095e-07	9.976e-07	4.076e-07	8.296e-06
Road 104	104	0200-0300	1.506e-06	5.011e-08	1.260e-07	6.228e-08	1.606e-07	8.011e-07	2.686e-07	5.466e-06	6.546e-07	2.196e-07	4.416e-07	8.296e-06
Road 104	104	0300-0400	1.612e-06	4.326e-08	8.796e-07	3.142e-08	3.606e-08	3.836e-07	8.336e-07	2.424e-07	4.556e-06	6.726e-07	1.806e-07	3.61e-06
Road 104	104	0400-0500	1.712e-06	3.626e-08	7.596e-07	2.262e-08	2.606e-08	2.836e-07	6.836e-07	2.024e-07	3.886e-06	5.626e-07	1.496e-07	3.61e-06
Road 104	104	0500-0600	1.862e-06	9.496e-08	1.940e-07	1.506e-07	9.936e-08	1.611e-06	8.836e-07	2.456e-07	9.476e-06	1.176e-07	3.776e-07	7.61e-06
Road 104	104	0600-0700	1.886e-06	2.186e-07	4.406e-06	1.596e-07	1.826e-07	3.711e-06	9.006e-07	1.026e-06	2.106e-07	4.406e-07	8.886e-07	1.76e-06
Road 104	104	0700-0800	1.962e-06	4.666e-07	9.596e-06	1.676e-07	3.936e-07	8.006e-06	9.312e-07	2.186e-06	4.476e-06	7.626e-07	1.906e-06	3.69e-06
Road 104	104	0800-0900	1.962e-06	4.666e-07	9.596e-06	1.676e-07	3.936e-07	8.006e-06	9.312e-07	2.186e-06	4.476e-06	7.626e-07	1.906e-06	3.69e-06
Road 104	104	0900-1000	2.246e-06	5.626e-07	1.140e-06	1.912e-07	4.777e-07	9.726e-06	9.956e-07	2.496e-06	5.076e-06	8.830e-07	2.096e-06	4.24e-06
Road 104	104	1000-1100	2.246e-06	5.626e-07	1.140e-06	1.912e-07	4.777e-07	9.726e-06	9.956e-07	2.496e-06	5.076e-06	8.830e-07	2.096e-06	4.24e-06
Road 104	104	1100-1200	2.246e-06	5.626e-07	1.140e-06	1.912e-07	4.777e-07	9.726e-06	9.956e-07	2.496e-06	5.076e-06	8.830e-07	2.096e-06	4.24e-06
Road 104	104	1200-1300	2.246e-06	5.626e-07	1.140e-06	1.912e-07	4.777e-07	9.726e-06	9.956e-07	2.496e-06	5.076e-06	8.830e-07	2.096e-06	4.24e-06
Road 104	104	1300-1400	2.246e-06	5.626e-07	1.140e-06	1.912e-07	4.777e-07	9.726e-06	9.956e-07	2.496e-06	5.076e-06	8.830e-07	2.096e-06	4.24e-06
Road 104	104	1400-1500	2.246e-06	5.626e-07	1.140e-06	1.912e-07	4.777e-07	9.726e-06	9.956e-07	2.496e-06	5.076e-06	8.830e-07	2.096e-06	4.24e-06
Road 104	104	1500-1600	1.512e-07	3.477e-07	9.626e-06	1.252e-07	2.876e-07	5.856e-06	1.076e-07	1.856e-07	3.776e-06	4.686e-07	1.496e-07	3.60e-06
Road 104	104	1600-1700	1.626e-07	3.976e-07	8.086e-06	1.342e-07	3.256e-07	6.706e-06	8.876e-07	1.936e-06	3.936e-06	6.312e-07	1.556e-06	3.35e-06
Road 104	104	1700-1800	1.626e-07	3.976e-07	8.086e-06	1.342e-07	3.256e-07	6.706e-06	8.876e-07	1.936e-06	3.936e-06	6.312e-07	1.556e-06	3.35e-06
Road 104	104	1800-1900	1.626e-07	3.976e-07	8.086e-06	1.342e-07	3.256e-07	6.706e-06	8.876e-07	1.936e-06	3.936e-06	6.312e-07	1.556e-06	3.35e-06
Road 104	104	1900-2000	1.626e-07	3.976e-07	8.086e-06	1.342e-07	3.256e-07	6.706e-06	8.876e-07	1.936e-06	3.936e-06	6.312e-07	1.556e-06	3.35e-06
Road 104	104	2000-2100	1.626e-07	3.976e-07	8.086e-06	1.342e-07	3.256e-07	6.706e-06	8.876e-07	1.936e-06	3.936e-06	6.312e-07	1.556e-06	3.35e-06
Road 104	104	2100-2200	1.626e-07	3.976e-07	8.086e-06	1.342e-07	3.256e-07	6.706e-06	8.876e-07	1.936e-06	3.936e-06	6.312e-07	1.556e-06	3.35e-06
Road 104	104	2200-2300	1.626e-07	3.976e-07	8.086e-06	1.342e-07	3.256e-07	6.706e-06	8.876e-07	1.936e-06	3.936e-06	6.312e-07	1.556e-06	3.35e-06
Road 104	104	2300-2400	1.626e-07	3.976e-07	8.086e-06	1.342e-07	3.256e-07	6.706e-06	8.876e-07	1.936e-06	3.936e-06	6.312e-07	1.556e-06	3.35e-06
Road 105	105	0000-0100	1.326e-06	8.886e-08	1.8140e-07	1.0742e-07	3.311e-08	4.696e-06	7.556e-07	3.310e-07	1.095e-07	9.976e-07	4.076e-07	8.296e-06
Road 105	105	0100-0200	1.420e-06	9.406e-08	1.940e-07	1.130e-07	3.333e-08	4.696e-06	7.556e-07	3.310e-07	1.095e-07	9.976e-07	4.076e-07	8.296e-06
Road 105	105	0200-0300	1.506e-06	5.011e-08	1.260e-07	6.228e-08	1.606e-07	8.011e-07	2.686e-07	5.466e-06	6.546e-07	2.196e-07	4.416e-07	8.296e-06
Road 105	105	0300-0400	1.612e-06	4.326e-08	8.796e-07	3.142e-08	3.606e-08	3.836e-07	8.336e-07	2.424e-07	4.556e-06	6.726e-07	1.806e-07	3.61e-06
Road 105	105	0400-0500	1.712e-06	3.626e-08	7.596e-07	2.262e-08	2.606e-08	2.836e-07	6.836e-07	2.024e-07	3.886e-06	5.626e-07	1.496e-07	3.61e-06
Road 105	105	0500-0600	1.862e-06	9.496e-08	1.940e-07	1.506e-07	9.936e-08	1.611e-06	8.836e-07	2.456e-07	9.476e-06	1.176e-07	3.776e-07	7.61e-06
Road 105	105	0600-0700	1.886e-06	2.186e-07	4.406e-06	1.596e-07	1.826e-07	3.711e-06	9.006e-07	1.026e-06	2.106e-07	4.406e-07	8.886e-07	1.76e-06
Road 105	105	0700-0800	1.962e-06	4.666e-07	9.596e-06	1.676e-07	3.936e-07	8.006e-06	9.312e-07	2.186e-06	4.476e-06	7.626e-07	1.906e-06	3.69e-06
Road 105	105	0800-0900	1.962e-06	4.666e-07	9.596e-06	1.676e-07	3.936e-07	8.006e-06	9.312e-07	2.186e-06	4.476e-06	7.626e-07	1.906e-06	3.69e-06
Road 105	105	0900-1000	2.246e-06	5.626e-07	1.140e-06	1.912e-07	4.777e-07	9.726e-06	9.956e-07	2.496e-06	5.076e-06	8.830e-07	2.096e-06	4.24e-06
Road 105	105	1000-1100	2.246e-06	5.626e-07	1.140e-06	1.912e-07	4.777e-07	9.726e-06	9.956e-07	2.496e-06	5.076e-06	8.830e-07	2.096e-06	4.24e-06
Road 105	105	1100-1200	2.246e-06	5.626e-07	1.140e-06	1.912e-07	4.777e-07	9.726e-06	9.956e-07	2.496e-06	5.076e-06	8.830e-07	2.096e-06	4.24e-06
Road 105	105	1200-1300	1.026e-07	8.075e-07	3.366e-06	8.796e-07	6.886e-07	2.876e-06	3.646e-06	2.896e-06	1.186e-06	3.106e-07	2.426e-06	1.01e-06
Road 105	105	1300-1400	1.026e-07	8.075e-07	3.366e-06	8.796e-07	6.886e-07	2.876e-06	3.646e-06	2.896e-06	1.186e-06	3.106e-07	2.426e-06	1.01e-06
Road 105	105	1400-1500	1.026e-07	8.075e-07	3.366e-06	8.796e-07	6.886e-07	2.876e-06	3.646e-06	2.896e-06	1.186e-06	3.106e-07	2.426e-06	1.01e-06
Road 105	105	1500-1600	1.026e-07	8.075e-07	3.366e-06	8.796e-07	6.886e-07	2.876e-06	3.646e-06	2.896e-06	1.186e-06	3.106e-07	2.426e-06	1.01e-06
Road 105	105	1600-1700	1.026e-07	8.075e-07	3.366e-06	8.796e-07	6.886e-07	2.876e-06	3.646e-06	2.896e-06	1.186e-06	3.106e-07	2.426e-06	1.01e-06
Road 105	105	1700-1800	1.026e-07	8.075e-07	3.366e-06	8.796e-07	6.886e-07	2.876e-06	3.646e-06	2.896e-06	1.186e-06	3.106e-07	2.426e-06	1.01e-06
Road 105	105	1800-1900	1.026e-07	8.075e-07	3.366e-06	8.796e-07	6.886e-07	2.876e-06	3.646e-06	2.896e-06	1.186e-06	3.106e-07	2.426e-06	1.01e-06
Road 105	105	1900-2000	1.026e-07	8.075e-07	3.366e-06	8.796e-07	6.886e-07	2.876e-06	3.646e-06	2.896e-06	1.186e-06	3.106e-07	2.426e-06	1.01e-06
Road 105	105	2000-2100	1.026e-07	8.075e-07	3.366e-06	8.796e-07	6.886e-07	2.876e-06	3.646e-06	2.896e-06	1.186e-06	3.106e-07	2.426e-06	1.01e-06
Road 105	105	2100-2200	1.026e-07	8.075e-07	3.366e-06	8.796e-07	6.886e-07	2.876e-06	3.646e-06	2.896e-06	1.186e-06	3.106e-07	2.426e-06	1.01e-06
Road 105	105	2200-2300	1.026e-07	8.075e-07	3.366e-06	8.796e-07	6.886e-07	2.876e-06	3.646e-06	2.896e-06	1.186e-06	3.106e-07	2.426e-06	1.01e-06
Road 105	105	2300-2400	1.026e-07	8.075e-07	3.366e-06	8.796e-07	6.886e-07	2.876e-06	3.646e-06	2.896e-06	1.186e-06	3.106e-07	2.426e-06	1.01e-06
Road 106	106	0000-0100	1.326e-06	8.886e-08	1.8140e-07	1.0742e-07	3.311e-08	4.696e-06	7.556e-07	3.310e-07	1.095e-07	9.976e-07	4.076e-07	8.296e-06
Road 106	106	0100-0200	1.420e-06	9.406e-08	1.940e-07	1.130e-07	3.333e-08	4.696e-06	7.556e-07	3.310e-07	1.095e-07	9.976e-07	4.076e-07	8.296e-06
Road 106	106	0200-0300	1.506e-06	5.011e-08	1.260e-07	6.228e-08	1.606e-07	8.011e-07	2.686e-07	5.466e-06	6.546e-07	2.196e-07	4.416e-07	8.296e-06
Road 106	106	0300-0400	1.612e-06	4.326e-08	8.796e-07	3.142e-08	3.606e-08	3.836e-07	8.336e-07	2.424e-07	4.556e-06	6.726e-07	1.806e-07</	

Tsing Yi North Underground Quarry
 Open Road 24 hour Emission Factors for
 AERMOD model (October) Year 2033

Road Name	Road ID	Hour	NO ₂ Emission				NO ₂ Emission							
			MonthlyHourly		MonthlyHourlyAverage		MonthlyHourly		MonthlyHourlyAverage					
			g/min	tonne/hour	g/min	tonne/hour	g/min	tonne/hour	g/min	tonne/hour				
Road 1	1	0000-0100	9211.03	1.342E-07	6.822E-06	7.988E-03	1.071E-07	5.932E-06	1.062E-01	1.423E-05	7.833E-07	8.979E-02	1.211E-06	1.66E-06
Road 1	1	0100-0200	9611.03	1.428E-07	6.832E-06	7.988E-03	1.071E-07	5.932E-06	1.062E-01	1.423E-05	7.833E-07	8.979E-02	1.211E-06	1.66E-06
Road 1	1	0200-0300	9211.03	1.342E-07	6.822E-06	7.988E-03	1.071E-07	5.932E-06	1.062E-01	1.423E-05	7.833E-07	8.979E-02	1.211E-06	1.66E-06
Road 1	1	0300-0400	1110E-03	1.595E-08	3.076E-06	9.050E-03	5.011E-08	2.786E-06	1.062E-01	5.370E-07	9.665E-08	3.388E-02	4.759E-02	6.27E-06
Road 1	1	0400-0500	1168E-02	1.656E-08	3.555E-08	1.082E-05	5.868E-08	3.196E-07	1.062E-01	5.966E-07	3.288E-02	9.502E-02	5.277E-02	6.94E-06
Road 1	1	0500-0600	1240E-02	1.587E-07	3.662E-08	1.111E-07	1.071E-07	5.876E-08	1.112E-01	1.076E-08	8.988E-08	9.786E-02	9.309E-02	1.21E-06
Road 1	1	0600-0700	1322E-02	1.587E-07	3.662E-08	1.111E-07	1.071E-07	5.876E-08	1.112E-01	1.076E-08	8.988E-08	9.786E-02	9.309E-02	1.21E-06
Road 1	1	0700-0800	1405E-02	1.625E-07	3.205E-08	1.233E-02	5.120E-02	2.827E-08	1.112E-01	1.848E-08	2.665E-04	1.011E-01	4.180E-02	5.49E-06
Road 1	1	0800-0900	1338E-02	1.625E-07	3.205E-08	1.188E-02	5.670E-02	3.127E-08	1.044E-01	5.025E-08	7.676E-04	9.123E-02	4.389E-02	5.74E-06
Road 1	1	0900-1000	1423E-02	1.625E-07	3.205E-08	1.188E-02	5.670E-02	3.127E-08	1.044E-01	5.025E-08	7.676E-04	9.123E-02	4.389E-02	5.74E-06
Road 1	1	1000-1100	1656E-02	6.629E-07	3.105E-08	1.485E-02	5.059E-07	2.718E-08	1.112E-01	3.965E-06	2.17E-04	1.038E-01	3.511E-06	4.59E-06
Road 1	1	1100-1200	1575E-02	6.057E-07	2.796E-08	1.432E-02	4.627E-07	2.548E-08	1.112E-01	3.746E-06	2.05E-04	1.059E-01	3.389E-06	4.44E-06
Road 1	1	1200-1300	1423E-02	1.625E-07	3.205E-08	1.188E-02	5.670E-02	3.127E-08	1.044E-01	5.025E-08	7.676E-04	9.123E-02	4.389E-02	5.74E-06
Road 1	1	1300-1400	1725E-02	7.432E-07	4.096E-08	1.566E-02	6.767E-07	3.254E-08	1.212E-01	2.348E-08	2.884E-05	1.099E-01	4.972E-06	6.45E-06
Road 1	1	1400-1500	1756E-02	8.096E-07	4.456E-08	1.610E-02	7.396E-07	3.471E-08	1.212E-01	2.611E-08	3.09E-04	1.110E-01	5.089E-06	6.64E-06
Road 1	1	1500-1600	1665E-02	7.886E-07	4.335E-08	1.511E-02	7.150E-07	3.545E-08	1.212E-01	2.568E-08	3.127E-04	1.088E-01	5.125E-06	6.64E-06
Road 1	1	1600-1700	1575E-02	6.057E-07	2.796E-08	1.432E-02	4.627E-07	2.548E-08	1.112E-01	3.746E-06	2.05E-04	1.059E-01	3.389E-06	4.44E-06
Road 1	1	1700-1800	1322E-02	1.587E-07	3.662E-08	4.211E-02	1.202E-02	6.990E-07	3.828E-02	1.127E-02	4.476E-06	5.669E-04	0.011E-01	9.833E-03
Road 1	1	1800-1900	1011E-02	6.511E-07	3.988E-08	9.293E-02	5.989E-07	3.282E-02	1.127E-02	6.127E-06	3.174E-04	8.787E-02	5.696E-03	7.49E-06
Road 1	1	1900-2000	938E-02	5.165E-07	3.165E-08	1.165E-02	6.353E-07	3.127E-02	1.127E-02	6.127E-06	3.174E-04	8.787E-02	5.696E-03	7.49E-06
Road 1	1	2000-2100	9155E-03	3.647E-07	2.015E-08	8.283E-03	3.34E-07	1.84E-05	1.062E-01	4.315E-07	2.37E-04	9.62E-02	3.911E-06	5.09E-06
Road 1	1	2100-2200	7835E-03	3.145E-07	1.735E-07	6.328E-03	2.871E-07	1.588E-05	1.062E-01	3.697E-06	2.17E-04	9.023E-02	3.575E-06	4.59E-06
Road 1	1	2200-2300	8114E-03	3.287E-07	1.814E-07	6.521E-03	3.047E-07	1.682E-05	1.062E-01	3.722E-06	2.17E-04	9.023E-02	3.575E-06	4.59E-06
Road 2	2	0000-0100	9020E-03	2.566E-07	1.435E-07	7.985E-03	2.38E-07	1.252E-05	1.121E-02	3.22E-06	7.77E-04	9.58E-02	2.766E-06	3.59E-06
Road 2	2	0100-0200	9112E-02	1.587E-07	7.905E-06	9.755E-03	1.35E-07	6.892E-06	1.112E-01	6.608E-08	8.988E-08	9.786E-02	1.366E-06	6.64E-06
Road 2	2	0200-0300	1165E-02	1.656E-08	3.555E-08	1.082E-05	5.868E-08	3.196E-07	1.062E-01	5.966E-07	3.288E-02	9.502E-02	5.277E-02	6.94E-06
Road 2	2	0300-0400	1338E-02	7.045E-08	3.575E-08	1.202E-02	6.348E-08	3.215E-06	1.112E-01	6.113E-07	3.105E-06	1.029E-01	5.437E-02	7.19E-06
Road 2	2	0400-0500	1405E-02	8.117E-08	4.456E-08	1.285E-02	7.396E-08	3.738E-06	1.112E-01	6.816E-07	4.456E-08	1.048E-01	6.05E-02	7.94E-06
Road 2	2	0500-0600	1498E-02	8.117E-08	4.456E-08	1.285E-02	7.396E-08	3.738E-06	1.112E-01	6.816E-07	4.456E-08	1.048E-01	6.05E-02	7.94E-06
Road 2	2	0600-0700	1588E-02	6.455E-07	1.755E-06	1.045E-02	3.05E-07	1.528E-05	1.121E-02	3.105E-06	3.71E-04	9.888E-02	2.956E-06	1.11E-06
Road 2	2	0700-0800	1671E-02	7.932E-07	3.785E-07	1.476E-02	6.54E-07	3.311E-05	1.262E-01	5.615E-06	2.84E-04	1.09E-01	4.885E-02	6.45E-06
Road 2	2	0800-0900	1812E-02	7.932E-07	3.785E-07	1.476E-02	6.54E-07	3.311E-05	1.262E-01	5.615E-06	2.84E-04	1.09E-01	4.885E-02	6.45E-06
Road 2	2	0900-1000	1811E-02	7.932E-07	3.785E-07	1.476E-02	6.54E-07	3.311E-05	1.262E-01	5.615E-06	2.84E-04	1.09E-01	4.885E-02	6.45E-06
Road 2	2	1000-1100	2020E-02	7.678E-07	3.685E-08	1.811E-02	6.971E-07	3.536E-06	1.262E-01	5.895E-06	4.46E-04	1.27E-01	4.325E-02	5.74E-06
Road 2	2	1100-1200	1938E-02	7.678E-07	3.685E-08	1.776E-02	6.459E-07	3.348E-06	1.262E-01	5.895E-06	4.46E-04	1.27E-01	4.325E-02	5.74E-06
Road 2	2	1200-1300	2175E-02	9.535E-07	4.835E-08	1.975E-02	8.52E-07	4.427E-06	1.262E-01	5.446E-06	7.65E-04	1.27E-01	4.906E-02	6.45E-06
Road 2	2	1300-1400	2174E-02	9.875E-07	5.005E-08	1.975E-02	8.86E-07	4.592E-06	1.262E-01	5.665E-06	7.86E-04	1.27E-01	5.111E-02	6.64E-06
Road 2	2	1400-1500	2175E-02	9.875E-07	5.005E-08	1.975E-02	8.86E-07	4.592E-06	1.262E-01	5.665E-06	7.86E-04	1.27E-01	5.111E-02	6.64E-06
Road 2	2	1500-1600	2055E-02	1.0115E-05	5.115E-06	1.877E-02	9.25E-07	4.856E-06	1.273E-01	6.065E-06	9.07E-04	1.11E-01	5.48E-02	7.19E-06
Road 2	2	1600-1700	2138E-02	1.0105E-06	5.535E-06	1.944E-02	9.97E-07	5.056E-06	1.238E-01	6.336E-06	3.21E-04	1.12E-01	5.745E-02	7.19E-06
Road 2	2	1700-1800	1811E-02	9.111E-07	4.611E-06	1.866E-02	8.26E-07	4.196E-06	1.112E-01	6.415E-06	3.25E-04	1.029E-01	5.76E-02	7.19E-06
Road 2	2	1800-1900	1186E-02	5.165E-07	2.915E-08	8.283E-03	3.34E-07	1.84E-05	1.062E-01	4.315E-07	2.37E-04	9.62E-02	3.911E-06	5.09E-06
Road 2	2	1900-2000	1075E-02	5.010E-07	2.555E-08	9.611E-03	4.59E-07	2.32E-05	9.86E-02	4.690E-06	3.33E-04	8.89E-02	4.166E-06	5.09E-06
Road 2	2	2000-2100	1065E-02	3.875E-06	1.965E-05	9.885E-03	3.54E-07	1.798E-05	1.062E-01	3.845E-06	1.94E-04	9.52E-02	3.475E-06	4.59E-06
Road 2	2	2100-2200	963E-02	3.875E-06	1.965E-05	9.885E-03	3.54E-07	1.798E-05	1.062E-01	3.845E-06	1.94E-04	9.52E-02	3.475E-06	4.59E-06
Road 2	2	2200-2300	9305E-03	3.647E-07	2.015E-08	8.283E-03	3.34E-07	1.84E-05	1.062E-01	4.315E-07	2.37E-04	9.62E-02	3.911E-06	5.09E-06
Road 2	2	2300-0000	1105E-02	2.911E-07	1.475E-06	9.815E-03	2.54E-07	1.296E-05	1.062E-01	3.895E-06	4.45E-04	9.73E-02	2.48E-06	1.11E-06
Road 2	2	0000-0100	1182E-02	2.911E-07	1.475E-06	9.815E-03	2.54E-07	1.296E-05	1.062E-01	3.895E-06	4.45E-04	9.73E-02	2.48E-06	1.11E-06
Road 3	3	0000-0100	1188E-02	3.647E-07	2.015E-08	8.283E-03	3.34E-07	1.84E-05	1.062E-01	4.315E-07	2.37E-04	9.62E-02	3.911E-06	5.09E-06
Road 3	3	0100-0200	1260E-02	2.727E-08	1.8767E-07	1.332E-02	2.44E-08	1.567E-07	1.356E-01	2.656E-07	1.815E-06	2.21E-01	2.611E-01	3.33E-06
Road 3	3	0200-0300	1315E-02	2.727E-08	1.8767E-07	1.332E-02	2.44E-08	1.567E-07	1.356E-01	2.656E-07	1.815E-06	2.21E-01	2.611E-01	3.33E-06
Road 3	3	0300-0400	1396E-02	2.727E-08	1.8767E-07	1.332E-02	2.44E-08	1.567E-07	1.356E-01	2.656E-07	1.815E-06	2.21E-01	2.611E-01	3.33E-06
Road 3	3	0400-0500	1455E-02	4.705E-08	2.888E-07	1.250E-02	4.23E-08	2.598E-07	1.432E-01	4.627E-07	2.846E-07	2.71E-01	4.117E-02	5.49E-06
Road 3	3	0500-0600	1511E-02	1.025E-07	6.425E-07	1.35E-02	9.311E-08	5.71E-07	1.486E-01	1.010E-08	8.196E-06	2.96E-02	8.87E-07	1.11E-06
Road 3	3	0600-0700	1588E-02	1.025E-07	6.425E-07	1.35E-02	9.311E-08	5.71E-07	1.486E-01	1.010E-08	8.196E-06	2.96E-02	8.87E-07	1.11E-06
Road 3	3	0700-0800	1538E-02	1.487E-07	1.525E-07	1.375E-02	2.211E-06	1.368E-06	1.356E-01	2.175E-03	3.38E-03	1.19E-01	1.925E-01	2.48E-06
Road 3	3	0800-0900	1538E-02	1.487E-07	1.525E-07	1.375E-02	2.211E-06	1.368E-06	1.356E-01	2.175E-03	3.38E-03	1.19E-01	1.925E-01	2.48E-06
Road 3	3	0900-1000	1715E-02	2.296E-07	1.405E-06	1.538E-02	2.05E-07	1.286E-06	1.435E-01	9.167E-06	1.75E-05	1.27E-01	1.705E-01	2.48E-06
Road 3	3	1000-1100	1715E-02	2.296E-07	1.405E-06	1.538E-02	2.05E-07	1.286E-06	1.435E-01	9.167E-06	1.75E-05	1.27E-01	1.705E-01	2.48E-06
Road 3	3	1100-1200	1811E-02	2.996E-07	1.222E-06	1.646E-02	1.85E-07	1.112E-04	1.471E-01	1.625E-06	9.93E-06	3.38E-03	1.466E-03	1.88E-06
Road 3	3	1200-1300	2205E-02	3.076E-07	1.8885E-06	1.955E-02	2.78E-07	1.706E-06	1.666E-01	2.315E-04	4.25E-05	4.95E-01	2.08E-01	2.48E-06
Road 3	3	1300-1400	2205E-02	3.076E-07	1.8885E-06	1.955E-02	2.78E-07	1.706E-06	1.666E-01	2.315E-04	4.25E-05	4.95E-01	2.08E-01	2.48E-06
Road 3	3	1400-1500	221											

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
 Open Road 24 hour Emission Factors for
 AERMOD model (October) Year 2033

			NO ₂ Emission						NO _x Emission						
Road Name	Road ID	Hour	MonthlyAverage			MonthlyAverage			MonthlyAverage			MonthlyAverage			
			g/km/hr	tonne/hr	g/km/hr	tonne/hr	g/km/hr	tonne/hr	g/km/hr	tonne/hr	g/km/hr	tonne/hr	g/km/hr	tonne/hr	
Road 4	4	0800-0900	1.356	4.432	0.777	8.876	1.112	3.647	7.906	9.992	3.238	6.418	7.972	2.332	5.68
Road 4	4	0900-1000	1.292	4.086	0.718	8.328	1.056	3.438	7.278	9.078	2.888	5.748	8.848	2.528	5.04
Road 4	4	1000-1100	1.368	4.464	0.788	9.048	1.128	3.696	8.108	10.208	3.308	6.618	8.108	2.338	5.68
Road 4	4	1100-1200	1.488	4.512	0.708	8.648	1.348	4.188	6.988	10.028	2.438	4.868	9.178	2.188	4.38
Road 4	4	1300-1400	1.528	4.896	0.878	9.738	1.328	4.398	8.798	10.038	3.298	6.598	9.278	2.248	5.50
Road 4	4	1500-1600	1.518	4.688	0.878	9.738	1.278	4.048	8.898	10.038	3.028	6.058	9.258	2.298	5.50
Road 4	4	1700-1800	1.568	5.388	0.908	10.548	1.258	4.358	8.628	10.038	3.128	6.258	9.258	2.348	5.50
Road 4	4	1900-2000	1.528	5.268	0.0958	1.058	1.348	4.758	9.528	10.038	3.688	7.338	9.218	2.328	6.54
Road 4	4	2000-2100	1.598	5.068	0.1218	1.218	1.438	5.598	1.118	10.038	3.958	7.888	9.348	2.578	7.12
Road 4	4	2100-2200	1.518	5.118	0.1218	1.218	1.438	5.598	1.118	10.038	3.958	7.888	9.348	2.578	7.12
Road 4	4	2300-2400	0.848	3.318	0.378	1.578	2.278	2.478	5.768	6.048	3.228	6.658	7.298	2.888	6.08
Road 4	4	2400-2500	0.848	3.318	0.378	1.578	2.278	2.478	5.768	6.048	3.228	6.658	7.298	2.888	6.08
Road 4	4	2500-2600	0.6058	2.028	0.4058	1.608	1.898	3.708	8.158	2.468	5.008	7.318	2.248	4.49	
Road 4	4	2600-2700	0.7968	2.038	0.408	1.608	1.898	3.778	8.158	2.628	5.258	7.538	2.298	4.50	
Road 4	4	2800-2900	1.548	5.638	0.868	3.378	1.178	4.598	8.128	10.038	4.078	8.168	9.178	2.798	7.09
Road 4	4	2900-3000	1.548	5.638	0.868	3.378	1.178	4.598	8.128	10.038	4.078	8.168	9.178	2.798	7.09
Road 5	5	0100-0200	3.982	6.298	9.268	12.72	9.638	4.708	1.378	6.248	9.218	12.068	5.468	8.48	
Road 5	5	0200-0300	1.448	4.678	8.998	1.298	4.288	3.588	1.038	4.538	7.768	1.298	4.038	3.34	
Road 5	5	0300-0400	1.448	4.678	8.998	1.298	4.288	3.588	1.038	4.538	7.768	1.298	4.038	3.34	
Road 5	5	0400-0500	1.628	4.678	8.998	1.298	4.288	3.588	1.038	4.538	7.768	1.298	4.038	3.34	
Road 5	5	0500-0600	1.812	4.698	9.008	1.312	4.608	3.518	1.408	4.038	3.378	1.248	3.57	2.99	
Road 5	5	0600-0700	1.812	4.698	9.008	1.312	4.608	3.518	1.408	4.038	3.378	1.248	3.57	2.99	
Road 5	5	0700-0800	1.618	4.678	8.998	1.298	4.288	3.588	1.038	4.538	7.768	1.298	4.038	3.34	
Road 5	5	0800-0900	2.648	5.028	9.438	2.868	5.868	4.908	1.768	4.438	7.308	1.568	3.938	3.27	
Road 5	5	0900-1000	2.648	5.028	9.438	2.868	5.868	4.908	1.768	4.438	7.308	1.568	3.938	3.27	
Road 5	5	1000-1100	3.188	5.548	1.638	2.868	4.828	4.168	1.978	3.448	2.878	1.768	1.068	0.56	
Road 5	5	1100-1200	3.028	4.998	1.718	2.748	4.528	3.788	1.988	3.268	2.728	1.778	1.238	0.65	
Road 5	5	1300-1400	3.868	4.428	0.728	1.208	0.448	6.998	1.898	5.088	4.248	1.698	4.598	1.81	
Road 5	5	1500-1600	3.868	4.378	0.838	1.378	0.488	6.998	1.898	5.088	4.248	1.698	4.598	1.81	
Road 5	5	1700-1800	4.028	1.028	0.598	1.128	0.348	7.808	1.868	5.568	4.648	1.688	4.508	1.40	
Road 5	5	1900-2000	3.998	1.048	0.668	1.078	0.378	7.838	1.908	5.888	4.908	1.738	4.598	1.49	
Road 5	5	2000-2100	3.998	1.048	0.668	1.078	0.378	7.838	1.908	5.888	4.908	1.738	4.598	1.49	
Road 5	5	2100-2200	3.998	1.048	0.668	1.078	0.378	7.838	1.908	5.888	4.908	1.738	4.598	1.49	
Road 5	5	2300-2400	2.718	1.048	0.668	1.078	0.378	7.838	1.908	5.888	4.908	1.738	4.598	1.49	
Road 5	5	2400-2500	2.718	1.048	0.668	1.078	0.378	7.838	1.908	5.888	4.908	1.738	4.598	1.49	
Road 5	5	2500-2600	2.108	0.678	0.7588	0.938	0.338	6.698	1.408	6.048	5.068	1.278	4.688	1.06	
Road 5	5	2600-2700	2.108	0.678	0.7588	0.938	0.338	6.698	1.408	6.048	5.068	1.278	4.688	1.06	
Road 5	5	2700-2800	1.618	0.928	0.838	1.518	0.548	6.078	1.318	5.168	4.098	1.418	4.098	1.41	
Road 5	5	2800-2900	1.468	1.928	0.378	0.348	3.618	3.018	1.318	3.538	2.958	1.198	1.328	0.68	
Road 5	5	2900-3000	1.228	2.368	0.748	1.118	2.998	2.508	1.218	3.298	2.778	1.098	2.698	2.44	
Road 6	6	0100-0200	2.148	2.448	0.868	2.018	2.868	2.018	1.658	2.448	2.448	2.448	2.448	2.44	
Road 6	6	0200-0300	3.128	2.568	2.148	1.158	2.248	1.878	2.968	2.528	2.108	1.118	2.168	1.06	
Road 6	6	0300-0400	2.168	2.108	0.738	1.898	1.488	5.188	1.668	1.568	4.398	1.378	1.348	3.77	
Road 6	6	0400-0500	2.168	2.108	0.738	1.898	1.488	5.188	1.668	1.568	4.398	1.378	1.348	3.77	
Road 6	6	0500-0600	2.168	2.108	0.738	1.898	1.488	5.188	1.668	1.568	4.398	1.378	1.348	3.77	
Road 6	6	0600-0700	2.168	2.108	0.738	1.898	1.488	5.188	1.668	1.568	4.398	1.378	1.348	3.77	
Road 6	6	0700-0800	2.168	2.108	0.738	1.898	1.488	5.188	1.668	1.568	4.398	1.378	1.348	3.77	
Road 6	6	0800-0900	2.168	2.108	0.738	1.898	1.488	5.188	1.668	1.568	4.398	1.378	1.348	3.77	
Road 6	6	0900-1000	2.168	2.108	0.738	1.898	1.488	5.188	1.668	1.568	4.398	1.378	1.348	3.77	
Road 6	6	1000-1100	5.868	1.828	2.008	5.098	1.668	4.878	2.808	9.138	2.578	2.508	1.818	1.29	
Road 6	6	1100-1200	5.868	1.828	2.008	5.098	1.668	4.878	2.808	9.138	2.578	2.508	1.818	1.29	
Road 6	6	1300-1400	9.728	1.578	4.488	2.318	1.428	6.018	1.658	7.758	2.028	1.848	1.848	1.84	
Road 6	6	1500-1600	9.728	1.578	4.488	2.318	1.428	6.018	1.658	7.758	2.028	1.848	1.848	1.84	
Road 6	6	1700-1800	8.128	1.598	4.158	7.328	1.968	5.598	3.498	9.478	2.678	3.178	8.618	2.22	
Road 6	6	1900-2000	8.128	1.598	4.158	7.328	1.968	5.598	3.498	9.478	2.678	3.178	8.618	2.22	
Road 6	6	2000-2100	8.128	1.598	4.158	7.328	1.968	5.598	3.498	9.478	2.678	3.178	8.618	2.22	
Road 6	6	2100-2200	8.128	1.598	4.158	7.328	1.968	5.598	3.498	9.478	2.678	3.178	8.618	2.22	
Road 6	6	2300-2400	7.548	2.268	0.838	7.938	2.068	5.798	3.438	9.618	2.718	3.138	8.768	2.08	
Road 6	6	2400-2500	7.548	2.268	0.838	7.938	2.068	5.798	3.438	9.618	2.718	3.138	8.768	2.08	
Road 6	6	2500-2600	7.548	2.268	0.838	7.938	2.068	5.798	3.438	9.618	2.718	3.138	8.768	2.08	
Road 6	6	2600-2700	7.548	2.268	0.838	7.938	2.068	5.798	3.438	9.618	2.718	3.138	8.768	2.08	
Road 6	6	2700-2800	5.878	1.728	4.068	5.438	1.638	4.588	3.038	9.138	2.578	2.778	8.368	2.36	
Road 6	6	2800-2900	5.878	1.728	4.068	5.438	1.638	4.588	3.038	9.138	2.578	2.778	8.368	2.36	
Road 6	6	2900-3000	5.878	1.728	4.068	5.438	1.638	4.588	3.038	9.138	2.578	2.778	8.368	2.36	
Road 7	7	0100-0200	3.998	1.448	7.088	0.098	7.178	1.898	2.218	4.828	3.368	3.508	2.438	1.23	
Road 7	7	0200-0300	3.118	5.328	0.508	2.888	4.918	1.388	1.888	3.728	1.098	2.008	3.428	0.63	
Road 7	7	0300-0400	3.118	5.328	0.508	2.888	4.918	1.388	1.888	3.728	1.098	2.008	3.428	0.63	
Road 7	7	0400-0500	3.118	5.328	0.508	2.888	4.918	1.388	1.888	3.728	1.098	2.008	3.428	0.63	
Road 7	7	0500-0600	3.118	5.328	0.508	2.888	4.918	1.388	1.888	3.728	1.098	2.008	3.428	0.63	
Road 7	7	0600-0700	3.118	5.328	0.508	2.888	4.918	1.388	1.888	3.728	1.098	2.008	3.428	0.63	
Road 7	7	0700-0800	3.118	5.328	0.508	2.888	4.918	1.388	1.888	3.728	1.098	2.008	3.428	0.63	
Road 7	7	0800-0900	3.118	5.328	0.508	2.888	4.918	1.388	1.888	3.728	1.098	2.008	3.428	0.63	
Road 7	7	0900-1000	6.058	2.628	0.0778	1.438	2.248	2.758	1.228	2.008	3.648	1.088	1.778	2.08	
Road 7	7	1000-1100	6.058	2.628	0.0778	1.438	2.248	2.758	1.228	2.008	3.648	1.088	1.778	2.08	
Road 7	7	1100-1200	7.108	2.768	2.688	5.548	2.608	2.048	1.278	1.718	2.008	1.148	1.538	1.80	
Road 7	7	1300-1400	1.978	2.918	4.748	1.788	2.648	3.098	0.618	4.418	2.008	2.448	1.278	1.87	
Road 7	7	1500-1600	1.988	2.928	4.758	1.798	2.708	3.108	0.628	4.428	2.018	2.458	1.288	1.92	
Road 7	7	1700-1800	1.988	2.928	4.758	1.798	2.708	3.108	0.628	4.428	2.018	2.458	1.288	1.92	
Road 7	7	1900-2000	1.898	3.118	1.678	1.658	1.718	2.818	1.388	2.288	2.678	2.248	2.008	2.40	

1 | Secure/Emission_Profile/60733291.01Others/AllModel/Average/AllTraffic/Average/Appendix 3.5.3 Emission Factor in 2018-5.8.xls

Tsing Yi North Underground Quarry
 Open Road 24 hour Emission Factors for
 AERMOD model (October)

Road Name	Road ID	Hour	NO ₂ Emission						NO _x Emission					
			Monthly/mile			Monthly/average			Monthly/mile			Monthly/average		
			g/mile/h	g/mile/m	tonne/hour	g/mile/m	g/mile/m	tonne/hour	g/mile/h	g/mile/m	tonne/hour	g/mile/m	g/mile/m	tonne/hour
Road 7	7	1700-1800	1.9752	0.477	4.0656	1.8112	3.187	3.7356	1.4021	2.6666	2.888	1.261	2.242	2.636
Road 7	7	1800-1900	1.5112	0.367	3.5116	0.628	2.7482	3.372	3.001	2.588	2.088	1.118	2.352	2.668
Road 7	7	1900-2000	1.0452	0.267	2.4852	0.4282	2.0652	2.4482	2.0652	1.7482	1.4482	0.7482	1.6482	1.9482
Road 7	7	2000-2100	1.0712	0.347	2.1168	0.9688	1.6716	1.9642	1.2062	2.0966	2.4292	1.068	1.866	2.186
Road 7	7	2100-2200	1.0642	0.438	1.6782	1.9782	1.3242	1.5482	1.7262	2.0142	1.1732	1.5782	1.5782	1.842
Road 7	7	2200-2300	0.9322	0.267	1.4482	0.9312	1.4482	1.1482	1.5712	1.6782	1.8662	1.4482	1.4482	1.812
Road 7	7	2300-2400	1.0652	1.0452	1.1216	0.9312	1.4482	1.1482	1.5712	1.6782	1.8662	1.4482	1.4482	1.812
Road 8	8	0000-0100	2.2712	0.238	2.2482	1.9992	1.0712	2.1712	3.5882	1.9992	4.0242	3.2712	1.7382	3.3962
Road 8	8	0100-0200	1.2612	0.267	1.5712	1.9992	1.4482	1.4482	1.5712	1.6782	1.8662	1.4482	1.4482	1.812
Road 8	8	0200-0300	2.3052	0.9452	1.2062	0.2712	5.0452	1.0872	3.5882	5.1442	1.8952	3.1882	8.2062	3.662
Road 8	8	0300-0400	2.3552	0.4782	0.9362	2.1252	0.4282	0.7482	3.5882	1.7302	1.4482	3.1762	6.4742	1.6182
Road 8	8	0400-0500	2.3552	0.9452	1.2062	0.2712	5.0452	1.0872	3.5882	5.1442	1.8952	3.1882	8.2062	3.662
Road 8	8	0500-0600	2.5052	0.7652	1.9752	2.2352	1.8322	1.8742	3.5882	1.4052	2.8382	3.2712	2.3622	2.5452
Road 8	8	0600-0700	2.5582	0.2178	4.3362	0.2312	1.9482	3.6212	0.6212	3.0462	6.1582	3.2712	2.7112	4.0712
Road 8	8	0700-0800	2.6552	0.4582	5.1102	0.2312	1.9482	3.6212	0.6212	3.1562	1.2492	3.2612	3.2612	5.1102
Road 8	8	0800-0900	2.6552	0.9362	5.1102	0.2312	1.9482	3.6212	0.6212	3.1562	1.2492	3.2612	3.2612	5.1102
Road 8	8	0900-1000	2.6962	0.4118	8.9292	0.2312	1.9482	3.6212	0.6212	3.1562	1.1722	3.0212	3.9662	1.0212
Road 8	8	1000-1100	2.6962	2.0882	8.2922	0.2312	1.6742	3.3922	0.4322	3.3922	4.8222	3.7012	4.3322	8.7392
Road 8	8	1100-1200	1.1216	1.8862	1.1216	1.1216	1.1216	1.1216	1.1216	1.1216	1.1216	1.1216	1.1216	1.1216
Road 8	8	1200-1300	2.9852	1.1662	2.3352	2.7052	1.0622	2.1362	2.5052	0.9772	1.8982	2.2612	8.8352	1.9182
Road 8	8	1300-1400	2.9852	1.1662	2.3352	2.7052	1.0622	2.1362	2.5052	0.9772	1.8982	2.2612	8.8352	1.9182
Road 8	8	1400-1500	2.9852	1.1662	2.3352	2.7052	1.0622	2.1362	2.5052	0.9772	1.8982	2.2612	8.8352	1.9182
Road 8	8	1500-1600	2.7952	1.2227	2.4774	2.5252	1.1012	2.2362	2.3912	1.0552	2.1262	2.1612	9.4742	9.5112
Road 8	8	1600-1700	2.8852	0.3172	2.6552	2.6552	1.2062	2.4352	2.4352	1.1442	2.3312	2.2612	1.0462	2.1112
Road 8	8	1700-1800	1.9952	0.8052	1.9952	1.8352	0.9712	1.8352	2.4212	1.3062	2.4212	2.2712	1.062	2.2312
Road 8	8	1800-1900	1.9952	0.7738	1.5552	1.8052	1.7052	1.4282	2.6662	1.0462	2.1052	2.4412	9.4352	9.5112
Road 8	8	1900-2000	1.9952	0.5108	1.2352	1.8052	1.8442	1.1452	2.7712	0.5252	1.7422	2.5552	8.8552	1.9482
Road 8	8	2000-2100	1.9952	0.3352	1.0652	1.8052	1.8052	1.0652	2.7712	0.3352	1.0652	1.8052	1.8052	1.0652
Road 8	8	2100-2200	1.9952	0.7738	1.1652	1.7352	0.5052	1.0252	2.7682	0.6092	1.6722	2.4512	1.1212	1.1462
Road 8	8	2200-2300	2.0952	0.5718	9.2352	1.8352	4.0382	1.8352	2.8052	0.2312	0.2312	2.4652	4.6852	1.1052
Road 8	8	2300-2400	1.6652	0.5172	1.3752	1.8352	4.0382	1.8352	2.8052	0.2312	0.2312	2.4652	4.6852	1.1052
Road 9	9	0100-0200	1.6662	0.5178	3.7952	1.4852	4.5712	3.3952	4.0612	4.3062	3.1362	1.2312	3.7852	3.8712
Road 9	9	0200-0300	1.7652	0.3782	2.9552	1.5852	3.5712	2.6552	4.4012	3.1652	2.3342	1.2362	3.7852	2.0712
Road 9	9	0300-0400	1.9052	0.4022	2.4552	1.9152	3.1712	3.0652	2.4152	3.0652	2.4152	3.0652	2.4152	3.0652
Road 9	9	0400-0500	1.9952	0.9118	2.9052	1.7752	3.5252	1.6612	4.4552	2.8552	2.1152	1.2612	2.5252	1.8712
Road 9	9	0500-0600	2.1352	0.4418	5.5252	1.9712	6.6952	1.9652	1.5552	5.3052	3.3952	3.1882	4.7052	3.4852
Road 9	9	0600-0700	2.7552	0.2552	2.7552	1.9952	1.9952	1.9952	1.9952	2.7552	2.7552	2.7552	2.7552	2.7552
Road 9	9	0700-0800	1.6652	0.3952	4.0052	3.5552	4.7652	1.0352	3.3952	3.3952	2.9852	1.9522	1.8712	1.8312
Road 9	9	0800-0900	3.8112	0.6482	4.8112	3.4052	5.7852	4.3052	2.1512	3.7352	2.7752	1.9412	3.3052	2.4552
Road 9	9	0900-1000	4.1112	0.5812	4.3112	3.6952	5.2652	3.8952	3.3212	3.2752	2.4552	2.0612	2.9112	2.1652
Road 9	9	1000-1100	1.9952	0.3852	2.9952	1.9952	2.9952	2.9952	2.9952	1.9952	1.9952	1.9952	1.9952	1.9952
Road 9	9	1100-1200	4.1212	0.7472	3.5552	3.7452	4.3412	3.2252	2.7912	2.6652	1.9952	2.0012	4.4052	1.7852
Road 9	9	1200-1300	1.9952	0.1812	1.3452	1.9052	1.6452	1.2252	4.2452	1.7852	0.7052	3.8312	6.9452	5.1352
Road 9	9	1300-1400	1.9952	0.1812	1.3452	1.9052	1.6452	1.2252	4.2452	1.7852	0.7052	3.8312	6.9452	5.1352
Road 9	9	1400-1500	1.7712	0.5452	1.8852	1.1172	2.3252	1.7252	5.5052	1.0462	7.7752	4.4712	9.5252	7.0752
Road 9	9	1500-1600	1.9952	0.2552	1.5552	1.9052	1.1172	2.3252	1.7252	5.5052	1.1352	8.7752	4.9712	1.0252
Road 9	9	1600-1700	1.9952	0.3452	1.7952	1.9052	1.1172	2.3252	1.7252	5.5052	1.1352	8.7752	4.9712	1.0252
Road 9	9	1700-1800	1.0112	0.2338	1.6552	9.9212	1.0252	1.5252	4.8952	1.0952	8.0052	4.4452	8.9852	3.4452
Road 9	9	1800-1900	0.6712	1.2352	0.9152	5.2112	1.1352	0.6112	6.8352	0.5012	2.9752	2.8852	6.2652	4.6552
Road 9	9	1900-2000	1.7852	0.2712	4.6552	5.7612	4.2752	2.6912	2.6912	2.6912	2.6912	2.6912	2.6912	2.6912
Road 9	9	2000-2100	2.2852	0.1712	3.0352	1.7712	3.0352	1.7712	2.8852	2.8852	2.8852	2.8852	2.8852	2.8852
Road 9	9	2100-2200	2.1212	0.4072	3.0252	2.8852	3.7352	2.7712	2.1162	2.8252	2.0952	1.9612	1.5652	1.9052
Road 9	9	2200-2300	3.1412	0.9112	2.9852	2.7712	3.4652	2.9752	2.1812	2.7252	2.0252	1.9112	3.3852	1.7752
Road 9	9	2300-2400	2.2852	0.2712	4.6552	5.7612	4.2752	2.6912	2.6912	2.6912	2.6912	2.6912	2.6912	2.6912
Road 10	10	0000-0100	0.9445	0.5552	7.0552	0.6792	9.5352	0.8912	0.7112	4.1112	2.7612	2.4712	3.7412	2.5112
Road 10	10	0100-0200	0.5912	0.8052	5.7752	0.8852	7.9152	5.3052	0.7712	3.1312	0.2612	2.5512	2.8852	1.8052
Road 10	10	0200-0300	0.9445	0.5552	7.0552	0.6792	9.5352	0.8912	0.7112	4.1112	2.7612	2.4712	3.7412	2.5112
Road 10	10	0300-0400	0.9112	0.4718	4.9712	0.8192	6.8112	4.5812	2.9052	2.9052	2.4112	1.6252	2.6712	2.2212
Road 10	10	0400-0500	0.8852	0.8552	5.2652	0.8192	7.2252	4.8952	2.4612	2.6052	1.7742	2.7142	2.4052	1.6112
Road 10	10	0500-0600	0.9445	0.5552	7.0552	0.6792	9.5352	0.8912	0.7112	4.1112	2.7612	2.4712	3.7412	2.5112
Road 10	10	0600-0700	0.9712	0.8442	1.2352	4.7412	1.1712	1.1412	1.1652	1.7552	4.8952	2.9512	6.7412	4.5212
Road 10	10	0700-0800	0.9952	0.4042	3.6212	0.8192	4.4912	3.3212	0.5112	1.9052	1.2852	3.2712	1.7512	1.1712
Road 10	10	0800-0900	0.9952	0.8652	4.0712	0.8192	5.6552	4.0712	3.3212	0.5112	2.0852	3.3612	3.3212	1.9252
Road 10	10	0900-1000	1.1112	0.9112	1.1112	1.1112	1.1112	1.1112	1.1112	1.1112	1.1112	1.1112	1.1112	1.1112
Road 10	10	1000-1100	1.1445	0.5112	4.0552	1.0952	5.6112	3.7612	0.8352	1.9352	1.2262	3.3612	1.7612	1.2052
Road 10	10	1100-1200	1.1445	0.9312	3.9112	1.0712	5.6112	3.6952	0.8352	1.8852	1.2262	3.4912	1.7462	1.1852
Road 10	10	1200-1300	1.3452	1.3452	1.3452	1.3452	1.3452	1.3452	1.3452	1.3452	1.3452	1.3452	1.3452	1.3452
Road 10	10	1300-1400	1.3452	0.7712	3.2152	1.5612	4.4712	3.0052	0.6212	1.4052	0.9372	3.6612	1.3052	0.7452
Road 10	10	1400-1500	1.3452	0.7712	3.2152	1.5612	4.4712	3.0052	0.6212	1.4052	0.9372	3.6612	1.3052	0.7452
Road 10	10	1500-1600	1.3452	0.7712	3.2152	1.5612	4.4712	3.0052	0.6212	1.4052	0.9372	3.6612	1.3052	0.7452
Road 10	10	1600-1700	1.3052	0.7112	3.1612	1.2312	4.4212	2.9652	0.8212	1.3982	0.9282	3.5552	1.3052	0.8712
Road 10	10	1700-1800	1.2052	0.4352	2.9112	1.1412	4.0672	2.7412	3.7052	1.3452	8.9952	3.6412	1.2562	0.4452
Road 10	10	1800-1900	1.2052	0.4352	2.9112	1.1412	4.0672	2.7412	3.7052	1.3452	8.9952	3.6412	1.2562	0.4452
Road 10	10	1900-2000	0.9552	0.3852	2.9252	0.7392	1.3612	0.6912	0.8112	4.9352	3.3052	2.6412	6.0352	1.0712
Road 10</														

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tiesing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for	Year 2033
AERMOD model (October)	

Row Name	Road ID	Hour	No. Emission						Month/Ingress						No. Emission					
			g/m ³ /veh	g/m ³ /h	tonne/hour	g/m ³ /veh	g/m ³ /h	tonne/hour	g/m ³ /veh	g/m ³ /h	tonne/hour	g/m ³ /veh	g/m ³ /h	tonne/h	g/m ³ /veh	g/m ³ /h	tonne/h			
Row 11	11	00:00-01:00	3.53E-02	1.98E-07	7.99E-07	3.27E-02	1.82E-07	7.27E-07	2.62E-01	1.47E-06	5.62E-20	2.96E-06	1.33E-07	3.34E-06	1.11E-06	5.62E-20	2.96E-06	1.33E-07	3.34E-06	1.11E-06
Row 11	11	01:00-02:00	3.53E-02	1.98E-07	8.00E-07	3.27E-02	1.82E-07	7.27E-07	2.62E-01	1.47E-06	5.62E-20	2.96E-06	1.33E-07	3.34E-06	1.11E-06	5.62E-20	2.96E-06	1.33E-07	3.34E-06	1.11E-06
Row 11	11	02:00-03:00	3.53E-02	1.98E-07	8.00E-07	3.27E-02	1.82E-07	7.27E-07	2.62E-01	1.47E-06	5.62E-20	2.96E-06	1.33E-07	3.34E-06	1.11E-06	5.62E-20	2.96E-06	1.33E-07	3.34E-06	1.11E-06
Row 11	11	03:00-04:00	4.71E-02	1.08E-07	4.13E-07	4.39E-02	1.06E-07	3.85E-07	2.76E-01	6.31E-07	2.47E-20	5.56E-06	2.58E-07	2.58E-06	8.95E-07	2.47E-20	5.56E-06	2.58E-07	2.58E-06	8.95E-07
Row 11	11	04:00-05:00	4.83E-02	1.08E-07	4.62E-07	4.51E-02	1.12E-07	4.13E-07	2.62E-01	7.02E-07	2.70E-20	5.62E-06	2.58E-07	2.58E-06	8.95E-07	2.70E-20	5.62E-06	2.58E-07	2.58E-06	8.95E-07
Row 11	11	05:00-06:00	4.83E-02	1.08E-07	4.62E-07	4.51E-02	1.12E-07	4.13E-07	2.62E-01	7.02E-07	2.70E-20	5.62E-06	2.58E-07	2.58E-06	8.95E-07	2.70E-20	5.62E-06	2.58E-07	2.58E-06	8.95E-07
Row 11	11	06:00-07:00	5.09E-02	6.42E-07	1.68E-07	4.76E-02	4.07E-07	1.56E-06	1.91E-01	2.74E-06	1.05E-20	2.96E-06	1.33E-07	3.34E-06	1.11E-06	1.05E-20	2.96E-06	1.33E-07	3.34E-06	1.11E-06
Row 11	11	07:00-08:00	6.48E-02	1.18E-06	4.44E-06	5.98E-02	1.07E-06	1.10E-06	3.59E-02	6.42E-06	2.49E-20	3.28E-06	1.33E-07	3.34E-06	1.11E-06	2.49E-20	3.28E-06	1.33E-07	3.34E-06	1.11E-06
Row 11	11	08:00-09:00	6.48E-02	1.18E-06	4.44E-06	5.98E-02	1.07E-06	1.10E-06	3.59E-02	6.42E-06	2.49E-20	3.28E-06	1.33E-07	3.34E-06	1.11E-06	2.49E-20	3.28E-06	1.33E-07	3.34E-06	1.11E-06
Row 11	11	09:00-10:00	7.34E-02	1.28E-06	4.93E-06	6.88E-02	1.20E-06	1.40E-06	4.47E-01	6.09E-06	2.33E-20	3.27E-06	1.33E-07	3.34E-06	1.11E-06	2.33E-20	3.27E-06	1.33E-07	3.34E-06	1.11E-06
Row 11	11	10:00-11:00	7.62E-02	1.21E-06	4.83E-06	7.30E-02	1.13E-06	1.32E-06	3.49E-01	5.39E-06	2.07E-20	3.24E-06	1.33E-07	3.34E-06	1.11E-06	2.07E-20	3.24E-06	1.33E-07	3.34E-06	1.11E-06
Row 11	11	11:00-12:00	1.42E-02	2.05E-07	8.18E-08	1.42E-02	2.05E-07	8.18E-08	3.49E-01	5.39E-06	2.07E-20	3.24E-06	1.33E-07	3.34E-06	1.11E-06	2.07E-20	3.24E-06	1.33E-07	3.34E-06	1.11E-06
Row 11	11	12:00-13:00	1.16E-01	2.31E-06	8.87E-06	1.08E-01	2.17E-06	3.32E-06	4.47E-01	8.93E-06	3.43E-20	4.17E-06	1.83E-07	1.83E-06	6.41E-07	3.43E-20	4.17E-06	1.83E-07	1.83E-06	6.41E-07
Row 11	11	13:00-14:00	1.23E-01	2.36E-06	9.05E-06	1.10E-01	2.44E-06	3.38E-06	4.72E-01	9.98E-06	3.82E-20	4.42E-06	1.93E-07	1.93E-06	6.93E-07	3.82E-20	4.42E-06	1.93E-07	1.93E-06	6.93E-07
Row 11	11	14:00-15:00	1.42E-01	2.05E-07	8.18E-08	1.42E-01	2.05E-07	8.18E-08	3.49E-01	5.39E-06	2.07E-20	3.24E-06	1.33E-07	3.34E-06	1.11E-06	2.07E-20	3.24E-06	1.33E-07	3.34E-06	1.11E-06
Row 11	11	15:00-16:00	1.20E-01	2.70E-06	1.04E-05	1.13E-01	2.54E-06	7.68E-06	4.76E-01	1.07E-05	4.11E-20	4.44E-06	1.99E-07	1.99E-06	7.38E-07	4.11E-20	4.44E-06	1.99E-07	1.99E-06	7.38E-07
Row 11	11	16:00-17:00	1.13E-01	2.61E-06	1.00E-05	1.08E-01	2.47E-06	7.49E-06	4.56E-01	1.04E-05	3.98E-20	4.28E-06	1.97E-07	1.97E-06	7.37E-07	3.98E-20	4.28E-06	1.97E-07	1.97E-06	7.37E-07
Row 11	11	17:00-18:00	1.42E-01	2.05E-07	8.18E-08	1.42E-01	2.05E-07	8.18E-08	3.49E-01	5.39E-06	2.07E-20	3.24E-06	1.33E-07	3.34E-06	1.11E-06	2.07E-20	3.24E-06	1.33E-07	3.34E-06	1.11E-06
Row 11	11	18:00-19:00	7.00E-02	1.65E-06	6.32E-06	6.65E-06	1.56E-06	8.00E-06	4.54E-01	8.10E-06	3.11E-20	3.27E-06	1.33E-07	3.34E-06	1.11E-06	3.11E-20	3.27E-06	1.33E-07	3.34E-06	1.11E-06
Row 11	11	19:00-20:00	5.37E-02	9.41E-07	3.61E-06	5.08E-06	8.90E-07	3.42E-06	3.12E-01	5.47E-06	1.20E-20	2.92E-06	1.32E-07	3.33E-06	1.10E-06	1.20E-20	2.92E-06	1.32E-07	3.33E-06	1.10E-06
Row 11	11	20:00-21:00	5.37E-02	9.41E-07	3.61E-06	5.08E-06	8.90E-07	3.42E-06	3.12E-01	5.47E-06	1.20E-20	2.92E-06	1.32E-07	3.33E-06	1.10E-06	1.20E-20	2.92E-06	1.32E-07	3.33E-06	1.10E-06
Row 11	11	21:00-22:00	5.28E-02	7.27E-07	2.79E-06	5.02E-06	8.92E-07	2.66E-06	1.91E-01	4.39E-06	1.68E-20	3.00E-06	1.31E-07	3.30E-06	1.09E-06	1.68E-20	3.00E-06	1.31E-07	3.30E-06	1.09E-06
Row 11	11	22:00-23:00	4.28E-02	6.76E-07	2.46E-06	4.82E-06	5.97E-07	2.29E-06	3.12E-01	4.11E-06	1.56E-20	2.86E-06	1.29E-07	3.28E-06	1.07E-06	1.56E-20	2.86E-06	1.29E-07	3.28E-06	1.07E-06
Row 11	11	23:00-00:00	4.28E-02	6.76E-07	2.46E-06	4.82E-06	5.97E-07	2.29E-06	3.12E-01	4.11E-06	1.56E-20	2.86E-06	1.29E-07	3.28E-06	1.07E-06	1.56E-20	2.86E-06	1.29E-07	3.28E-06	1.07E-06
Row 12	12	00:00-01:00	2.92E-01	1.83E-07	4.51E-06	2.57E-01	1.61E-07	9.97E-06	6.81E-01	4.27E-07	1.05E-20	6.06E-06	3.76E-07	3.76E-06	1.27E-06	1.05E-20	6.06E-06	3.76E-07	3.76E-06	1.27E-06
Row 12	12	01:00-02:00	2.92E-01	1.77E-06	3.93E-06	2.63E-01	1.67E-07	9.97E-06	6.75E-01	4.09E-07	1.02E-06	6.06E-06	3.70E-07	3.70E-06	1.27E-06	1.02E-06	6.06E-06	3.70E-07	3.70E-06	1.27E-06
Row 12	12	02:00-03:00	2.92E-01	1.77E-06	3.93E-06	2.63E-01	1.67E-07	9.97E-06	6.75E-01	4.09E-07	1.02E-06	6.06E-06	3.70E-07	3.70E-06	1.27E-06	1.02E-06	6.06E-06	3.70E-07	3.70E-06	1.27E-06
Row 12	12	03:00-04:00	2.98E-01	1.76E-07	4.34E-06	2.68E-01	1.58E-07	9.91E-06	6.84E-01	4.04E-07	9.97E-06	6.11E-06	3.64E-07	3.64E-06	1.27E-06	9.97E-06	6.11E-06	3.64E-07	3.64E-06	1.27E-06
Row 12	12	04:00-05:00	2.98E-01	1.76E-07	4.37E-06	2.68E-01	1.61E-07	9.95E-06	6.84E-01	4.08E-07	1.01E-06	6.28E-06	3.70E-07	3.70E-06	1.27E-06	1.01E-06	6.28E-06	3.70E-07	3.70E-06	1.27E-06
Row 12	12	05:00-06:00	2.98E-01	1.76E-07	4.37E-06	2.68E-01	1.61E-07	9.95E-06	6.84E-01	4.08E-07	1.01E-06	6.28E-06	3.70E-07	3.70E-06	1.27E-06	1.01E-06	6.28E-06	3.70E-07	3.70E-06	1.27E-06
Row 12	12	06:00-07:00	2.98E-01	1.76E-07	4.37E-06	2.68E-01	1.61E-07	9.95E-06	6.84E-01	4.08E-07	1.01E-06	6.28E-06	3.70E-07	3.70E-06	1.27E-06	1.01E-06	6.28E-06	3.70E-07	3.70E-06	1.27E-06
Row 12	12	07:00-08:00	3.71E-01	8.85E-07	2.18E-06	3.25E-01	7.88E-07	9.95E-06	8.53E-01	2.04E-05	5.02E-05	1.57E-01	8.18E-06	4.46E-06	4.46E-06	5.02E-05	1.57E-01	8.18E-06	4.46E-06	4.46E-06
Row 12	12	08:00-09:00	3.71E-01	8.85E-07	2.18E-06	3.25E-01	7.88E-07	9.95E-06	8.53E-01	2.04E-05	5.02E-05	1.57E-01	8.18E-06	4.46E-06	4.46E-06	5.02E-05	1.57E-01	8.18E-06	4.46E-06	4.46E-06
Row 12	12	09:00-10:00	3.66E-01	8.84E-07	2.18E-06	3.32E-01	7.97E-07	9.96E-06	8.49E-01	2.04E-05	5.02E-05	1.64E-06	4.38E-06	4.38E-06	5.02E-05	1.64E-06	4.38E-06	4.38E-06	5.02E-05	1.64E-06
Row 12	12	10:00-11:00	3.76E-01	8.81E-07	2.17E-06	3.34E-01	7.94E-07	9.96E-06	8.50E-01	2.02E-05	4.99E-05	1.69E-06	4.38E-06	4.38E-06	5.02E-05	1.69E-06	4.38E-06	4.38E-06	5.02E-05	1.69E-06
Row 12	12	11:00-12:00	3.76E-01	8.81E-07	2.17E-06	3.34E-01	7.94E-07	9.96E-06	8.50E-01	2.02E-05	4.99E-05	1.69E-06	4.38E-06	4.38E-06	5.02E-05	1.69E-06	4.38E-06	4.38E-06	5.02E-05	1.69E-06
Row 12	12	12:00-13:00	3.67E-01	8.72E-07	2.15E-06	3.33E-01	7.94E-07	9.96E-06	8.41E-01	2.00E-05	4.93E-05	1.76E-06	4.32E-06	4.32E-06	5.02E-05	1.76E-06	4.32E-06	4.32E-06	5.02E-05	1.76E-06
Row 12	12	13:00-14:00	3.65E-01	8.71E-07	2.15E-06	3.34E-01	7.94E-07	9.96E-06	8.39E-01	2.01E-05	4.94E-05	1.67E-06	4.38E-06	4.38E-06	5.02E-05	1.67E-06	4.38E-06	4.38E-06	5.02E-05	1.67E-06
Row 12	12	14:00-15:00	3.65E-01	8.71E-07	2.15E-06	3.34E-01	7.94E-07	9.96E-06	8.39E-01	2.01E-05	4.94E-05	1.67E-06	4.38E-06	4.38E-06	5.02E-05	1.67E-06	4.38E-06	4.38E-06	5.02E-05	1.67E-06
Row 12	12	15:00-16:00	3.61E-01	8.86E-07	2.14E-06	3.30E-01	7.94E-07	9.96E-06	8.33E-01	2.00E-05	4.94E-05	1.76E-06	4.32E-06	4.32E-06	5.02E-05	1.76E-06	4.32E-06	4.32E-06	5.02E-05	1.76E-06
Row 12	12	16:00-17:00	3.59E-01	8.65E-07	2.13E-06	3.31E-01	7.98E-07	9.97E-06	8.27E-01	1.99E-05	4.91E-05	1.76E-06	4.38E-06	4.38E-06	5.02E-05	1.76E-06	4.38E-06	4.38E-06	5.02E-05	1.76E-06
Row 12	12	17:00-18:00	3.59E-01	8.65E-07	2.13E-06	3.31E-01	7.98E-07	9.97E-06	8.27E-01	1.99E-05	4.91E-05	1.76E-06	4.38E-06	4.38E-06	5.02E-05	1.76E-06	4.38E-06	4.38E-06	5.02E-05	1.76E-06
Row 12	12	18:00-19:00	3.44E-01	8.93E-07	2.07E-06	3.36E-01	7.70E-07	9.95E-06	8.09E-01	1.99E-05	4.92E-05	1.73E-06	4.37E-06	4.37E-06	5.02E-05	1.73E-06	4.37E-06	4.37E-06	5.02E-05	1.73E-06
Row 12	12	19:00-20:00	2.53E-01	1.90E-07	4.69E-06	2.31E-01	1.47E-07	2.28E-06	6.13E-01	4.63E-07	1.14E-06	5.60E-06	4.22E-07	4.04E-06	4.22E-07	1.14E-06	5.60E-06	4.22E-07	4.04E-06	4.22E-07
Row 12	12	20:00-21:00	2.53E-01	1.90E-07	4.69E-06	2.31E-01	1.47E-07	2.28E-06	6.13E-01	4.63E-07	1.14E-06	5.60E-06	4.22E-07	4.04E-06	4.22E-07	1.14E-06	5.60E-06	4.22E		

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tiesing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for	Year 2033
AERMOD model (October)	

Row Name	Road ID	Hour	No. Emission						Month/throughput						No. Emission					
			g/km/h	g/m ³	tonne/hour	g/km/h	g/m ³	tonne/hour	g/km/h	g/m ³	tonne/hour	g/km/h	g/m ³	tonne/hour	g/km/h	g/m ³	tonne/hour			
Row 24	24	09:00-09:00	1.656	0.31	3.277	0.8197	1.5252	0.2944	7.3667	6.3881	1.2482	0.106	5.7381	1.1116	0.26	1.4413	3.1208	0.96	2.7278	2.1986
Row 24	24	09:00-09:00	1.708	0.31	3.277	0.8197	1.3308	0.3387	0.7047	6.3881	1.4413	0.26	5.7381	1.1116	0.26	1.4413	3.1208	0.96	2.7278	2.1986
Row 24	24	09:00-09:00	1.656	0.31	3.277	0.8197	1.5252	0.2944	7.3667	6.3881	1.2482	0.106	5.7381	1.1116	0.26	1.4413	3.1208	0.96	2.7278	2.1986
Row 24	24	11:00-12:00	1.756	0.31	3.5847	0.8987	1.7013	0.3227	0.8078	6.5281	1.3116	0.298	5.8681	1.186	0.2952	1.4813	3.288	0.96	2.8681	2.2952
Row 24	24	12:00-12:00	1.693	0.31	3.4787	0.9807	1.6013	0.3478	0.9887	6.7471	1.3116	0.298	5.8681	1.186	0.2952	1.4813	3.288	0.96	2.8681	2.2952
Row 24	24	12:00-12:00	1.756	0.31	3.5847	0.8987	1.7013	0.3227	0.8078	6.5281	1.3116	0.298	5.8681	1.186	0.2952	1.4813	3.288	0.96	2.8681	2.2952
Row 24	24	14:00-15:00	1.906	0.41	4.067	1.088	1.575	0.3957	0.9171	6.7581	1.5296	0.3878	6.2171	1.4056	0.3512	1.5813	3.588	0.96	3.1681	2.5552
Row 24	24	15:00-15:00	1.726	0.4087	1.0258	1.7578	0.3957	0.9267	0.7047	6.3881	1.5896	0.398	6.0681	1.4468	0.3681	1.4468	3.6081	0.96	3.1681	2.5552
Row 24	24	15:00-15:00	1.756	0.41	4.067	1.088	1.575	0.3957	0.9171	6.7581	1.5296	0.3878	6.2171	1.4056	0.3512	1.5813	3.588	0.96	3.1681	2.5552
Row 24	24	17:00-18:00	1.5116	0.267	7.4887	1.3301	0.3387	0.8078	0.5116	1.2116	0.3048	1.5681	1.106	0.2768	1.4413	3.1208	0.96	2.7278	2.1986	2.1986
Row 24	24	18:00-18:00	1.3381	0.1817	4.3337	0.7778	1.6557	0.4147	0.5752	7.8781	0.978	0.098	5.9381	0.9387	0.22	1.4413	3.1208	0.96	2.7278	2.1986
Row 24	24	18:00-18:00	1.3381	0.1817	4.3337	0.7778	1.6557	0.4147	0.5752	7.8781	0.978	0.098	5.9381	0.9387	0.22	1.4413	3.1208	0.96	2.7278	2.1986
Row 24	24	20:00-21:00	1.1181	0.4148	2.1117	1.0987	1.7308	0.9147	0.9461	3.5117	0.8902	0.4578	4.3221	0.8221	0.81	1.4413	3.1208	0.96	2.7278	2.1986
Row 24	24	21:00-22:00	1.2108	0.8478	2.2097	0.7101	0.8038	0.0478	0.4961	3.6027	0.9779	0.4538	0.3117	0.8221	0.81	1.4413	3.1208	0.96	2.7278	2.1986
Row 24	24	22:00-23:00	1.2108	0.8478	2.2097	0.7101	0.8038	0.0478	0.4961	3.6027	0.9779	0.4538	0.3117	0.8221	0.81	1.4413	3.1208	0.96	2.7278	2.1986
Row 24	24	23:00-00:00	1.4056	0.7328	1.8487	1.2248	0.6488	0.6387	0.5124	2.7378	0.6827	0.4611	0.2417	0.6038	0.22	1.4413	3.1208	0.96	2.7278	2.1986
Row 25	25	00:00-00:00	1.383	0.4621	0.5478	1.2454	1.2454	0.5478	0.6681	5.1381	1.0967	0.707	4.5711	0.9517	0.2882	1.4413	3.1208	0.96	2.7278	2.1986
Row 25	25	02:00-03:00	1.373	0.31	3.38	8.9088	1.238	0.106	0.6681	5.1381	1.2467	0.3182	4.5711	1.1116	0.2482	1.4413	3.1208	0.96	2.7278	2.1986
Row 25	25	03:00-03:00	1.383	0.2865	7.288	1.2454	2.5758	0.5478	0.6681	5.1381	1.0967	0.707	4.5711	0.9517	0.2882	1.4413	3.1208	0.96	2.7278	2.1986
Row 25	25	04:00-04:00	1.383	0.2865	7.288	1.2454	2.5758	0.5478	0.6681	5.1381	1.0967	0.707	4.5711	0.9517	0.2882	1.4413	3.1208	0.96	2.7278	2.1986
Row 25	25	05:00-06:00	1.484	0.6682	1.1717	1.383	0.698	1.484	0.5116	2.4767	0.6239	0.4982	2.2387	0.5702	0.76	1.4413	3.1208	0.96	2.7278	2.1986
Row 25	25	06:00-07:00	1.595	0.637	1.635	4.037	1.428	1.4587	0.7487	0.8778	6.0087	1.5388	0.526	0.8587	0.387	1.4413	3.1208	0.96	2.7278	2.1986
Row 25	25	07:00-08:00	1.4621	0.7651	0.4621	1.4621	0.7651	0.4621	0.7651	0.8778	6.0087	1.5388	0.526	0.8587	0.387	1.4413	3.1208	0.96	2.7278	2.1986
Row 25	25	08:00-09:00	1.785	0.4577	1.196	1.605	1.4267	0.0716	0.6112	6.715	1.786	0.4588	6.038	1.588	0.4058	1.4413	3.1208	0.96	2.7278	2.1986
Row 25	25	09:00-10:00	1.785	0.2875	1.356	1.625	0.4787	0.2126	0.6112	6.715	2.015	0.56	6.1281	1.8116	0.6112	1.4413	3.1208	0.96	2.7278	2.1986
Row 25	25	10:00-11:00	1.785	0.2875	1.356	1.625	0.4787	0.2126	0.6112	6.715	2.015	0.56	6.1281	1.8116	0.6112	1.4413	3.1208	0.96	2.7278	2.1986
Row 25	25	11:00-12:00	1.886	0.5127	1.3116	1.886	0.4617	0.1716	0.6112	6.8581	1.886	0.4758	6.186	1.6776	0.4776	1.4413	3.1208	0.96	2.7278	2.1986
Row 25	25	12:00-13:00	1.975	0.567	1.3968	1.886	0.4907	0.256	0.6112	6.8581	1.886	0.4758	6.186	1.6776	0.4776	1.4413	3.1208	0.96	2.7278	2.1986
Row 25	25	13:00-14:00	1.975	0.567	1.3968	1.886	0.4907	0.256	0.6112	6.8581	1.886	0.4758	6.186	1.6776	0.4776	1.4413	3.1208	0.96	2.7278	2.1986
Row 25	25	14:00-15:00	1.926	0.547	1.498	1.775	0.3757	0.3776	0.6112	6.8581	2.076	0.56	6.276	1.926	0.4612	1.4413	3.1208	0.96	2.7278	2.1986
Row 25	25	15:00-16:00	1.745	0.5117	1.4116	1.886	0.5027	0.0716	0.6112	6.7581	2.145	0.568	6.1281	1.958	0.4976	1.4413	3.1208	0.96	2.7278	2.1986
Row 25	25	16:00-17:00	1.745	0.5117	1.4116	1.886	0.5027	0.0716	0.6112	6.7581	2.145	0.568	6.1281	1.958	0.4976	1.4413	3.1208	0.96	2.7278	2.1986
Row 25	25	17:00-18:00	1.626	0.347	1.0987	1.4754	0.3877	0.8778	0.6387	6.5381	1.738	0.4396	5.946	1.5687	0.3982	1.4413	3.1208	0.96	2.7278	2.1986
Row 25	25	18:00-18:00	1.436	0.2387	0.6957	1.3116	0.2387	0.9987	0.6778	6.1078	2.076	0.7788	4.5821	0.8117	0.268	1.4413	3.1208	0.96	2.7278	2.1986
Row 25	25	19:00-20:00	1.3116	0.2387	0.6957	1.3116	0.2387	0.9987	0.6778	6.1078	2.076	0.7788	4.5821	0.8117	0.268	1.4413	3.1208	0.96	2.7278	2.1986
Row 25	25	20:00-21:00	1.282	0.103	3.0587	1.188	0.1107	0.8087	0.5321	4.9587	1.258	0.4887	4.5821	0.7165	1.165	1.4413	3.1208	0.96	2.7278	2.1986
Row 25	25	21:00-22:00	1.305	0.12587	3.1887	1.188	0.1147	0.8107	0.5321	5.1117	1.305	0.4887	4.5821	0.7165	1.165	1.4413	3.1208	0.96	2.7278	2.1986
Row 25	25	22:00-23:00	1.282	0.103	3.0587	1.188	0.1107	0.8087	0.5321	4.9587	1.258	0.4887	4.5821	0.7165	1.165	1.4413	3.1208	0.96	2.7278	2.1986
Row 25	25	23:00-00:00	1.458	0.948	2.5337	1.282	0.808	0.2487	0.5381	6.038	1.926	0.4758	4.758	0.7267	0.808	1.4413	3.1208	0.96	2.7278	2.1986
Row 26	26	00:00-00:00	1.458	0.948	2.5337	1.282	0.808	0.2487	0.5381	6.038	1.926	0.4758	4.758	0.7267	0.808	1.4413	3.1208	0.96	2.7278	2.1986
Row 26	26	01:00-01:00	1.458	0.948	2.5337	1.282	0.808	0.2487	0.5381	6.038	1.926	0.4758	4.758	0.7267	0.808	1.4413	3.1208	0.96	2.7278	2.1986
Row 26	26	02:00-03:00	1.383	0.5988	1.1587	1.258	0.7778	0.0478	0.5116	1.3116	1.4413	0.26	4.821	0.038	3.982	1.4413	3.1208	0.96	2.7278	2.1986
Row 26	26	03:00-04:00	1.405	0.2468	0.9888	1.286	0.2378	0.8988	0.5188	0.978	1.3677	0.6578	0.8778	0.3982	1.4413	3.1208	0.96	2.7278	2.1986	
Row 26	26	04:00-05:00	1.383	0.5988	1.1587	1.258	0.7778	0.0478	0.5116	1.3116	1.4413	0.26	4.821	0.038	3.982	1.4413	3.1208	0.96	2.7278	2.1986
Row 26	26	05:00-06:00	1.405	0.2468	0.9888	1.286	0.2378	0.8988	0.5188	0.978	1.3677	0.6578	0.8778	0.3982	1.4413	3.1208	0.96	2.7278	2.1986	
Row 26	26	06:00-07:00	1.6116	0.5087	0.5487	1.4263	1.3387	0.9887	0.9116	5.5387	0.2688	0.528	4.8887	0.8187	0.388	1.4413	3.1208	0.96	2.7278	2.1986
Row 26	26	07:00-08:00	1.6116	0.5087	0.5487	1.4263	1.3387	0.9887	0.9116	5.5387	0.2688	0.528	4.8887	0.8187	0.388	1.4413	3.1208	0.96	2.7278	2.1986
Row 26	26	08:00-09:00	1.805	0.4237	1.828	1.6116	0.3887	0.458	6.7781	1.638	0.6108	6.108	1.458	0.568	1.4413	3.1208	0.96	2.7278	2.1986	
Row 26	26	09:00-10:00	1.805	0.4887	1.838	1.612	0.4047	0.658	6.6481	1.886	0.698	6.174	1.678	0.276	1.4413	3.1208	0.96	2.7278	2.1986	
Row 26	26	10:00-11:00	1.805	0.4887	1.838	1.612	0.4047	0.658	6.6481	1.886	0.698	6.174	1.678	0.276	1.4413	3.1208	0.96	2.7278	2.1986	
Row 26	26	11:00-12:00	1.898	0.4787	1.788	1.728	0.4307	0.618	0.6778	1.728	0.698	6.288	1.588	0.388	1.4413	3.1208	0.96	2.7278	2.1986	
Row 26	26	12:00-13:00	1.878	0.4787	1.888	1.728	0.4307	0.618	0.6778	1.728	0.698	6.288	1.588	0.388	1.4413	3.1208	0.96	2.7278	2.1986	
Row 26	26	13:00-14:00	1.878	0.4787	1.888	1.728	0.4307	0.618	0.6778	1.728	0.698	6.288	1.588	0.388	1.4413	3.1208	0.96	2.7278	2.1986	
Row 26	26	14:00-15:00	1.838	0.5417	2.038	1.681	0.4977	0.878	0.688	1.926	0.56	7.2116	1.988	0.96	1.4413	3.1208	0.96	2.7278	2.1986	
Row 26	26																			

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for AERMOD model (October)	Year 2033

Road Name	Road ID	NO ₂ Emission						NO Emission						
		g/m ³ /veh	g/m ³	tonne/veh	g/m ³ /veh	g/m ³	tonne/veh	g/m ³ /veh	g/m ³	tonne/veh	g/m ³ /veh	g/m ³	tonne/veh	
Road 17	17	1600-1700	4.6762	1.6762	4.6986	0.1712	1.556	4.5245	2.8951	0.7146	2.0984	0.2361	0.6976	
Road 17	17	1700-1800	6.8862	1.7086	6.8986	4.4212	6.128	3.3436	2.423	0.2886	1.8864	0.1944	0.5838	
Road 17	17	1800-1900	2.8862	1.7412	2.8986	1.6112	1.6112	3.3436	2.423	0.2886	1.8864	0.1944	0.5838	
Road 17	17	1900-2000	1.8272	1.3447	1.9756	1.6662	0.3072	0.8866	1.9036	2.3862	6.9716	0.1186	0.1256	
Road 17	17	2000-2100	1.0272	2.4407	0.7024	1.5476	2.2116	0.4376	1.3024	1.8636	5.5606	0.1086	0.1736	
Road 17	17	2100-2200	1.1272	1.2076	1.2376	1.6112	0.3072	0.8866	1.9036	2.3862	6.9716	0.1186	0.1256	
Road 17	17	2200-2300	1.8862	2.2767	6.6686	1.4562	0.5026	5.9246	1.3116	0.1776	5.2736	0.1156	0.1726	
Road 17	17	2300-2400	1.7962	1.8767	6.6686	1.4562	0.5026	5.9246	1.3116	0.1776	5.2736	0.1156	0.1726	
Road 17	17	2400-2500	1.7962	1.8767	6.6686	1.4562	0.5026	5.9246	1.3116	0.1776	5.2736	0.1156	0.1726	
Road 18	18	0100-0200	1.2362	4.6326	1.8116	1.1106	1.156	1.6276	1.1386	0.4272	1.6716	0.1006	0.3786	
Road 18	18	0200-0300	1.3462	3.7726	1.4816	1.2026	2.346	1.0306	1.1926	3.2676	1.0276	0.1026	0.2886	
Road 18	18	0300-0400	1.4362	1.3036	1.4816	1.2026	2.346	1.0306	1.1926	3.2676	1.0276	0.1026	0.2886	
Road 18	18	0400-0500	1.5262	3.0866	1.4816	1.386	3.3446	1.1316	0.2056	2.9076	1.1316	0.0716	0.2607	
Road 18	18	0500-0600	1.5362	6.3386	2.486	1.386	3.7426	2.2216	0.5026	1.9967	1.0686	0.4317	0.6717	
Road 18	18	0600-0700	1.5362	6.3386	2.486	1.386	3.7426	2.2216	0.5026	1.9967	1.0686	0.4317	0.6717	
Road 18	18	0700-0800	1.5362	6.3386	2.486	1.386	3.7426	2.2216	0.5026	1.9967	1.0686	0.4317	0.6717	
Road 18	18	0800-0900	1.6262	3.4026	1.2316	1.5126	2.7386	1.1966	1.1066	2.4466	5.9336	0.1036	0.2186	
Road 18	18	0900-1000	1.6262	3.4026	1.2316	1.5126	2.7386	1.1966	1.1066	2.4466	5.9336	0.1036	0.2186	
Road 18	18	1000-1100	2.0462	3.1567	1.2736	1.8462	2.8576	1.1116	0.2056	2.9076	1.1316	0.0806	0.2607	
Road 18	18	1100-1200	1.9862	2.9056	1.1736	1.7876	2.6257	1.0206	1.3116	1.9166	7.4656	0.1716	0.7166	
Road 18	18	1200-1300	2.9362	2.9056	1.1736	1.7876	2.6257	1.0206	1.3116	1.9166	7.4656	0.1716	0.7166	
Road 18	18	1300-1400	2.9362	2.9056	1.1736	1.7876	2.6257	1.0206	1.3116	1.9166	7.4656	0.1716	0.7166	
Road 18	18	1400-1500	2.9362	2.9056	1.1736	1.7876	2.6257	1.0206	1.3116	1.9166	7.4656	0.1716	0.7166	
Road 18	18	1500-1600	2.9362	2.9056	1.1736	1.7876	2.6257	1.0206	1.3116	1.9166	7.4656	0.1716	0.7166	
Road 18	18	1600-1700	2.8162	6.2416	2.3	1.7876	2.6257	1.0206	1.3116	1.9166	7.4656	0.1716	0.7166	
Road 18	18	1700-1800	2.8162	6.2416	2.3	1.7876	2.6257	1.0206	1.3116	1.9166	7.4656	0.1716	0.7166	
Road 18	18	1800-1900	2.8162	6.2416	2.3	1.7876	2.6257	1.0206	1.3116	1.9166	7.4656	0.1716	0.7166	
Road 18	18	1900-2000	2.8162	6.2416	2.3	1.7876	2.6257	1.0206	1.3116	1.9166	7.4656	0.1716	0.7166	
Road 18	18	2000-2100	2.8162	6.2416	2.3	1.7876	2.6257	1.0206	1.3116	1.9166	7.4656	0.1716	0.7166	
Road 18	18	2100-2200	2.8162	6.2416	2.3	1.7876	2.6257	1.0206	1.3116	1.9166	7.4656	0.1716	0.7166	
Road 18	18	2200-2300	2.8162	6.2416	2.3	1.7876	2.6257	1.0206	1.3116	1.9166	7.4656	0.1716	0.7166	
Road 18	18	2300-2400	2.8162	6.2416	2.3	1.7876	2.6257	1.0206	1.3116	1.9166	7.4656	0.1716	0.7166	
Road 18	18	2400-2500	2.8162	6.2416	2.3	1.7876	2.6257	1.0206	1.3116	1.9166	7.4656	0.1716	0.7166	
Road 19	19	0100-0200	1.2776	7.746	2.7336	1.416	6.966	2.006	9.866	0.6037	1.746	0.7112	5.3367	
Road 19	19	0200-0300	1.6216	6.2116	1.786	1.276	5.876	1.606	1.0116	4.567	0.3176	3.886	0.4017	1.1367
Road 19	19	0300-0400	1.4626	1.386	1.336	1.386	1.386	1.386	1.386	1.386	1.386	1.386	1.386	
Road 19	19	0400-0500	1.5562	6.236	1.806	1.426	5.556	1.536	1.066	4.227	1.226	0.9476	3.7767	1.07
Road 19	19	0500-0600	1.6262	1.126	3.276	1.456	3.007	2.896	1.086	7.476	2.186	6.606	6.6367	1.67
Road 19	19	0600-0700	1.6262	1.126	3.276	1.456	3.007	2.896	1.086	7.476	2.186	6.606	6.6367	1.67
Road 19	19	0700-0800	1.6262	1.126	3.276	1.456	3.007	2.896	1.086	7.476	2.186	6.606	6.6367	1.67
Road 19	19	0800-0900	1.6262	1.126	3.276	1.456	3.007	2.896	1.086	7.476	2.186	6.606	6.6367	1.67
Road 19	19	0900-1000	1.6262	1.126	3.276	1.456	3.007	2.896	1.086	7.476	2.186	6.606	6.6367	1.67
Road 19	19	1000-1100	2.3062	6.336	1.706	2.006	6.326	1.626	1.546	3.366	3.666	1.116	0.3016	8.67
Road 19	19	1100-1200	2.1962	5.606	1.616	1.986	5.076	1.466	1.236	3.146	0.906	1.106	2.836	8.16
Road 19	19	1200-1300	3.3062	5.606	1.616	1.986	5.076	1.466	1.236	3.146	0.906	1.106	2.836	8.16
Road 19	19	1300-1400	3.3062	5.606	1.616	1.986	5.076	1.466	1.236	3.146	0.906	1.106	2.836	8.16
Road 19	19	1400-1500	3.3062	5.606	1.616	1.986	5.076	1.466	1.236	3.146	0.906	1.106	2.836	8.16
Road 19	19	1500-1600	3.3062	5.606	1.616	1.986	5.076	1.466	1.236	3.146	0.906	1.106	2.836	8.16
Road 19	19	1600-1700	3.3062	5.606	1.616	1.986	5.076	1.466	1.236	3.146	0.906	1.106	2.836	8.16
Road 19	19	1700-1800	3.3062	5.606	1.616	1.986	5.076	1.466	1.236	3.146	0.906	1.106	2.836	8.16
Road 19	19	1800-1900	3.3062	5.606	1.616	1.986	5.076	1.466	1.236	3.146	0.906	1.106	2.836	8.16
Road 19	19	1900-2000	3.3062	5.606	1.616	1.986	5.076	1.466	1.236	3.146	0.906	1.106	2.836	8.16
Road 19	19	2000-2100	3.3062	5.606	1.616	1.986	5.076	1.466	1.236	3.146	0.906	1.106	2.836	8.16
Road 19	19	2100-2200	3.3062	5.606	1.616	1.986	5.076	1.466	1.236	3.146	0.906	1.106	2.836	8.16
Road 19	19	2200-2300	3.3062	5.606	1.616	1.986	5.076	1.466	1.236	3.146	0.906	1.106	2.836	8.16
Road 19	19	2300-2400	3.3062	5.606	1.616	1.986	5.076	1.466	1.236	3.146	0.906	1.106	2.836	8.16
Road 19	19	2400-2500	3.3062	5.606	1.616	1.986	5.076	1.466	1.236	3.146	0.906	1.106	2.836	8.16
Road 19	19	2500-2600	3.3062	5.606	1.616	1.986	5.076	1.466	1.236	3.146	0.906	1.106	2.836	8.16
Road 19	19	2600-2700	3.3062	5.606	1.616	1.986	5.076	1.466	1.236	3.146	0.906	1.106	2.836	8.16
Road 19	19	2700-2800	3.3062	5.606	1.616	1.986	5.076	1.466	1.236	3.146	0.906	1.106	2.836	8.16
Road 19	19	2800-2900	3.3062	5.606	1.616	1.986	5.076	1.466	1.236	3.146	0.906	1.106	2.836	8.16
Road 19	19	2900-3000	3.3062	5.606	1.616	1.986	5.076	1.466	1.236	3.146	0.906	1.106	2.836	8.16
Road 19	19	3000-3100	3.3062	5.606	1.616	1.986	5.076	1.466	1.236	3.146	0.906	1.106	2.836	8.16
Road 19	19	3100-3200	3.3062	5.606	1.616	1.986	5.076	1.466	1.236	3.146	0.906	1.106	2.836	8.16
Road 19	19	3200-3300	3.3062	5.606	1.616	1.986	5.076	1.466	1.236	3.146	0.906	1.106	2.836	8.16
Road 19	19	3300-3400	3.3062	5.606	1.616	1.986	5.076	1.466	1.236	3.146	0.906	1.106	2.836	8.16
Road 19	19	3400-3500	3.3062	5.606	1.616	1.986	5.076	1.466	1.236	3.146	0.906	1.106	2.836	8.16
Road 19	19	3500-3600	3.3062	5.606	1.616	1.986	5.076	1.466	1.236	3.146	0.906	1.106	2.836	8.16
Road 19	19	3600-3700	3.3062	5.606	1.616	1.986	5.076	1.466	1.236	3.146	0.906	1.106	2.836	8.16
Road 19	19	3700-3800	3.3062	5.606	1.616	1.986	5.076	1.466	1.236	3.146	0.906	1.106	2.836	8.16
Road 19	19	3800-3900	3.3062	5.606	1.616	1.986	5.076	1.466	1.236	3.146	0.906	1.106	2.836	8.16
Road 19	19	3900-4000	3.3062	5.606	1.616	1.986	5.076	1.466	1.236	3.146	0.906	1.106	2.836	8.16
Road 19	19	4000-4100	3.3062	5.606	1.616	1.986	5.076	1.466	1.236	3.146	0.906	1.106	2.836	8.16
Road 19	19	4100-4200	3.3062	5.606	1.616	1.986	5.076	1.466	1.236	3.146	0.906	1.106	2.836	8.16
Road 19	19	4200-4300	3.3062	5.606	1.616	1.986	5.076	1.466	1.236	3.146	0.906	1.106	2.836	8.16
Road 19	19	4300-4400	3.3062	5.606	1.616	1.986	5.076	1.466	1.236	3.146	0.906	1.106	2.836	8.16
Road 19	19	4400-4500	3.3062	5.606	1.616	1.986	5.076	1.466	1.236	3.146	0.906	1.106	2.836	8.16
Road 19	19	4500-4600	3.3062	5.606	1.616	1.986	5.076	1.466	1.236	3.146	0.906	1.106	2.836	8.16
Road 19	19	4600-4700	3.3062	5.606	1.616	1.986	5.076	1.466	1.236	3.146	0.906	1.106	2.836	8.16
Road 19	19													

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for AERMOD model (October)	Year 2033

Road Name	Road ID	NO ₂ Emission										NO Emission										
		Month/Year					Month/Year					Month/Year					Month/Year					
		g/m ² /veh	g/m ²	tonne/veh	g/m ² /veh	g/m ²	tonne/veh	g/m ² /veh	g/m ²	tonne/veh	g/m ² /veh	g/m ²	tonne/veh	g/m ² /veh	g/m ²	tonne/veh	g/m ² /veh	g/m ²	tonne/veh	g/m ² /veh	g/m ²	tonne/veh
Road 31	31	0000-1000	2.733E-02	4.898E	4.37E-07	2.212E-02	4.28E-08	3.83E-07	1.933E	0.903E-07	3.486E-06	1.678E-01	3.39E-07	2.13E-06	1.05E-06	2.09E-07	2.13E-06	1.05E-06	2.09E-07	2.13E-06	1.05E-06	2.09E-07
Road 31	31	1000-0200	2.412E-02	3.78E-08	3.33E-08	2.426E-02	3.49E-08	3.03E-07	1.898E-01	2.643E-07	2.36E-08	1.88E-01	2.643E-07	2.36E-08	1.88E-01	2.643E-07	2.36E-08	1.88E-01	2.643E-07	2.36E-08	1.88E-01	2.643E-07
Road 31	31	0200-0400	2.733E-02	4.898E	4.37E-07	2.212E-02	4.28E-08	3.83E-07	1.933E	0.903E-07	3.486E-06	1.678E-01	3.39E-07	2.13E-06	1.05E-06	2.09E-07	2.13E-06	1.05E-06	2.09E-07	2.13E-06	1.05E-06	2.09E-07
Road 31	31	0400-0600	3.311E-02	3.02E-08	2.78E-07	2.98E-02	2.72E-08	2.47E-07	1.89E-01	1.774E-07	1.548E-07	1.60E-01	1.55E-07	1.60E-01	1.55E-07	1.60E-01	1.55E-07	1.60E-01	1.55E-07	1.60E-01	1.55E-07	1.60E-01
Road 31	31	0600-0800	2.328E-02	3.23E-08	2.80E-07	2.42E-02	2.91E-08	2.80E-07	1.89E-01	1.870E-07	1.678E-07	1.69E-01	1.69E-07	1.69E-01	1.69E-07	1.69E-01	1.69E-07	1.69E-01	1.69E-07	1.69E-01	1.69E-07	1.69E-01
Road 31	31	0800-1000	2.902E-02	2.90E-08	2.58E-07	2.58E-02	2.58E-08	2.58E-07	1.89E-01	1.89E-07	1.89E-07	1.89E-01	1.89E-07	1.89E-01	1.89E-07	1.89E-01	1.89E-07	1.89E-01	1.89E-07	1.89E-01	1.89E-07	1.89E-01
Road 31	31	1000-1200	2.622E-02	8.36E-07	1.85E-06	2.34E-02	7.47E-08	6.67E-07	1.94E-01	1.710E-07	5.51E-07	1.72E-01	5.66E-07	1.72E-01	5.66E-07	1.72E-01	5.66E-07	1.72E-01	5.66E-07	1.72E-01	5.66E-07	1.72E-01
Road 31	31	1200-1300	2.622E-02	2.07E-07	1.875E-06	2.66E-02	1.54E-07	1.44E-07	1.95E-01	1.34E-08	1.26E-08	1.72E-01	1.13E-08	1.16E-08	1.16E-08	1.16E-08	1.16E-08	1.16E-08	1.16E-08	1.16E-08	1.16E-08	1.16E-08
Road 31	31	1300-1400	2.902E-02	2.90E-08	2.58E-07	2.58E-02	2.58E-08	2.58E-07	1.89E-01	1.89E-07	1.89E-07	1.89E-01	1.89E-07	1.89E-01	1.89E-07	1.89E-01	1.89E-07	1.89E-01	1.89E-07	1.89E-01	1.89E-07	1.89E-01
Road 31	31	1400-1500	3.311E-02	2.21E-07	1.978E-06	2.78E-02	9.98E-07	1.77E-06	1.84E-01	1.31E-07	1.117E-07	1.65E-01	1.17E-07	1.65E-01	1.17E-07	1.65E-01	1.17E-07	1.65E-01	1.17E-07	1.65E-01	1.17E-07	1.65E-01
Road 31	31	1500-1600	3.39E-02	2.18E-07	1.995E-06	3.02E-02	1.95E-07	1.75E-06	1.85E-01	1.20E-07	1.07E-06	1.65E-01	1.08E-06	1.65E-01	1.08E-06	1.65E-01	1.08E-06	1.65E-01	1.08E-06	1.65E-01	1.08E-06	1.65E-01
Road 31	31	1600-1700	3.02E-02	1.48E-06	3.04E-06	3.04E-02	3.04E-06	3.04E-06	1.89	1.89E-07	1.89E-07	1.89E-01	1.89E-07	1.89E-01	1.89E-07	1.89E-01	1.89E-07	1.89E-01	1.89E-07	1.89E-01	1.89E-07	1.89E-01
Road 31	31	1700-1800	3.311E-02	3.02E-08	2.78E-07	2.98E-02	2.72E-08	2.47E-07	1.89E-01	1.774E-07	1.548E-07	1.60E-01	1.55E-07	1.60E-01	1.55E-07	1.60E-01	1.55E-07	1.60E-01	1.55E-07	1.60E-01	1.55E-07	1.60E-01
Road 31	31	1800-1900	2.733E-02	4.898E	4.37E-07	2.212E-02	4.28E-08	3.83E-07	1.933E	0.903E-07	3.486E-06	1.678E-01	3.39E-07	2.13E-06	1.05E-06	2.09E-07	2.13E-06	1.05E-06	2.09E-07	2.13E-06	1.05E-06	2.09E-07
Road 31	31	1900-2000	2.412E-02	3.78E-08	3.33E-08	2.426E-02	3.49E-08	3.03E-07	1.898E-01	2.643E-07	2.36E-08	1.88E-01	2.643E-07	2.36E-08	1.88E-01	2.643E-07	2.36E-08	1.88E-01	2.643E-07	2.36E-08	1.88E-01	2.643E-07
Road 31	31	2000-2100	2.733E-02	4.898E	4.37E-07	2.212E-02	4.28E-08	3.83E-07	1.933E	0.903E-07	3.486E-06	1.678E-01	3.39E-07	2.13E-06	1.05E-06	2.09E-07	2.13E-06	1.05E-06	2.09E-07	2.13E-06	1.05E-06	2.09E-07
Road 31	31	2100-2200	2.412E-02	3.78E-08	3.33E-08	2.426E-02	3.49E-08	3.03E-07	1.898E-01	2.643E-07	2.36E-08	1.88E-01	2.643E-07	2.36E-08	1.88E-01	2.643E-07	2.36E-08	1.88E-01	2.643E-07	2.36E-08	1.88E-01	2.643E-07
Road 31	31	2200-2300	2.733E-02	4.898E	4.37E-07	2.212E-02	4.28E-08	3.83E-07	1.933E	0.903E-07	3.486E-06	1.678E-01	3.39E-07	2.13E-06	1.05E-06	2.09E-07	2.13E-06	1.05E-06	2.09E-07	2.13E-06	1.05E-06	2.09E-07
Road 31	31	2300-2400	2.412E-02	3.78E-08	3.33E-08	2.426E-02	3.49E-08	3.03E-07	1.898E-01	2.643E-07	2.36E-08	1.88E-01	2.643E-07	2.36E-08	1.88E-01	2.643E-07	2.36E-08	1.88E-01	2.643E-07	2.36E-08	1.88E-01	2.643E-07
Road 31	31	2400-0100	2.733E-02	4.898E	4.37E-07	2.212E-02	4.28E-08	3.83E-07	1.933E	0.903E-07	3.486E-06	1.678E-01	3.39E-07	2.13E-06	1.05E-06	2.09E-07	2.13E-06	1.05E-06	2.09E-07	2.13E-06	1.05E-06	2.09E-07
Road 31	31	0100-0200	2.412E-02	3.78E-08	3.33E-08	2.426E-02	3.49E-08	3.03E-07	1.898E-01	2.643E-07	2.36E-08	1.88E-01	2.643E-07	2.36E-08	1.88E-01	2.643E-07	2.36E-08	1.88E-01	2.643E-07	2.36E-08	1.88E-01	2.643E-07
Road 31	31	0200-0300	2.733E-02	4.898E	4.37E-07	2.212E-02	4.28E-08	3.83E-07	1.933E	0.903E-07	3.486E-06	1.678E-01	3.39E-07	2.13E-06	1.05E-06	2.09E-07	2.13E-06	1.05E-06	2.09E-07	2.13E-06	1.05E-06	2.09E-07
Road 31	31	0300-0400	3.311E-02	3.02E-08	2.78E-07	2.98E-02	2.72E-08	2.47E-07	1.89E-01	1.774E-07	1.548E-07	1.60E-01	1.55E-07	1.60E-01	1.55E-07	1.60E-01	1.55E-07	1.60E-01	1.55E-07	1.60E-01	1.55E-07	1.60E-01
Road 31	31	0400-0500	2.328E-02	3.23E-08	2.80E-07	2.42E-02	2.91E-08	2.80E-07	1.89E-01	1.870E-07	1.678E-07	1.69E-01	1.69E-07	1.69E-01	1.69E-07	1.69E-01	1.69E-07	1.69E-01	1.69E-07	1.69E-01	1.69E-07	1.69E-01
Road 31	31	0500-0600	2.902E-02	2.90E-08	2.58E-07	2.58E-02	2.58E-08	2.58E-07	1.89E-01	1.89E-07	1.89E-07	1.89E-01	1.89E-07	1.89E-01	1.89E-07	1.89E-01	1.89E-07	1.89E-01	1.89E-07	1.89E-01	1.89E-07	1.89E-01
Road 31	31	0600-0700	2.622E-02	8.36E-07	1.85E-06	2.34E-02	7.47E-08	6.67E-07	1.94E-01	1.710E-07	5.51E-07	1.72E-01	5.66E-07	1.72E-01	5.66E-07	1.72E-01	5.66E-07	1.72E-01	5.66E-07	1.72E-01	5.66E-07	1.72E-01
Road 31	31	0700-0800	2.622E-02	2.07E-07	1.875E-06	2.66E-02	1.54E-07	1.44E-07	1.95E-01	1.34E-08	1.26E-08	1.72E-01	1.13E-08	1.16E-08	1.16E-08	1.16E-08	1.16E-08	1.16E-08	1.16E-08	1.16E-08	1.16E-08	1.16E-08
Road 31	31	0800-0900	2.902E-02	2.90E-08	2.58E-07	2.58E-02	2.58E-08	2.58E-07	1.89E-01	1.89E-07	1.89E-07	1.89E-01	1.89E-07	1.89E-01	1.89E-07	1.89E-01	1.89E-07	1.89E-01	1.89E-07	1.89E-01	1.89E-07	1.89E-01
Road 31	31	0900-1000	3.311E-02	2.21E-07	1.978E-06	2.78E-02	9.98E-07	1.77E-06	1.84E-01	1.31E-07	1.117E-07	1.65E-01	1.17E-07	1.65E-01	1.17E-07	1.65E-01	1.17E-07	1.65E-01	1.17E-07	1.65E-01	1.17E-07	1.65E-01
Road 31	31	1000-1100	3.39E-02	2.18E-07	1.995E-06	3.02E-02	1.95E-07	1.75E-06	1.85E-01	1.20E-07	1.07E-06	1.65E-01	1.08E-06	1.65E-01	1.08E-06	1.65E-01	1.08E-06	1.65E-01	1.08E-06	1.65E-01	1.08E-06	1.65E-01
Road 31	31	1100-1200	3.02E-02	1.48E-06	3.04E-06	3.04E-02	3.04E-06	3.04E-06	1.89	1.89E-07	1.89E-07	1.89E-01	1.89E-07	1.89E-01	1.89E-07	1.89E-01	1.89E-07	1.89E-01	1.89E-07	1.89E-01	1.89E-07	1.89E-01
Road 31	31	1200-1300	3.311E-02	2.21E-07	1.978E-06	2.78E-02	9.98E-07	1.77E-06	1.84E-01	1.31E-07	1.117E-07	1.65E-01	1.17E-07	1.65E-01	1.17E-07	1.65E-01	1.17E-07	1.65E-01	1.17E-07	1.65E-01	1.17E-07	1.65E-01
Road 31	31	1300-1400	3.39E-02	2.18E-07	1.995E-06	3.02E-02	1.95E-07	1.75E-06	1.85E-01	1.20E-07	1.07E-06	1.65E-01	1.08E-06	1.65E-01	1.08E-06	1.65E-01	1.08E-06	1.65E-01	1.08E-06	1.65E-01	1.08E-06	1.65E-01
Road 31	31	1400-1500	3.02E-02	1.48E-06	3.04E-06	3.04E-02	3.04E-06	3.04E-06	1.89	1.89E-07	1.89E-07	1.89E-01	1.89E-07	1.89E-01	1.89E-07	1.89E-01	1.89E-07	1.89E-01	1.89E-07	1.89E-01	1.89E-07	1.89E-01
Road 31	31	1500-1600	3.311E-02	2.21E-07	1.978E-06	2.78E-02	9.98E-07	1.77E-06	1.84E-01	1.31E-07	1.117E-07	1.65E-01	1.17E-07	1.65E-01	1.17E-07	1.65E-01	1.17E-07	1.65E-01	1.17E-07	1.65E-01	1.17E-07	1.65E-01
Road 31	31	1600-1700	3.39E-02	2.18E-07	1.995E-06	3.02E-02	1.95E-07	1.75E-06	1.85E-01	1.20E-07	1.07E-06	1.65E-01	1.08E-06	1.65E-01	1.08E-06	1.65E-01	1.08E-06	1.65E-01	1.08E-06	1.65E-01	1.08E-06	1.65E-01
Road 31	31	1700-1800	3.02E-02	1.48E-06	3.04E-06	3.04E-02	3.04E-06	3.04E-06	1.89	1.89E-07	1.89E-07	1.89E-01	1.89E-07	1.89E-01	1.89E-07	1.89E-01	1.89E-07	1.89E-01	1.89E-07	1.89E-01	1.89E-07	1.89E-01
Road 31	31	1800-1900	3.311E-02	2.21E-07	1.978E-06	2.78E-02	9.98E-07	1.77E-06	1.84E-01	1.31E-07	1.117E-07	1.65E-01	1.17E-07	1.65E-01	1.17E-07	1.65E-01	1.17E-07	1.65E-01	1.17E-07	1.65E-01	1.17E-07	1.65E-01
Road 31	31	1900-2000	2.733E-02	4.898E	4.37E-07	2.212E-02	4.28E-08	3.83E-07	1.933E	0.903E-07	3.486E-06	1.678E-01	3.39E-07	2.13E-06	1.05E-06	2.09E-07	2.13E-06	1.05E-06	2.09E-07	2.13E-06	1.05E-06	2.09E-07
Road 31	31	2000-2100	2.412E-02	3.78E-08	3.33E-08	2.426E-02	3.49E-08	3.03E-07	1.898E-01	2.643E-07	2.36E-08	1.88E-01	2.643E-07	2.36E-08	1.88E-01	2.643E-07	2.36E-08	1.88E-01	2.643E-07	2.36E-08	1.88E-01	2.643E-07
Road 31	31	2100-2200	2.733E-02	4.898E	4.37E-07	2.212E-02	4.28E-08	3.83E-07	1.933E	0.903E-07	3.486E-06	1.678E-01										

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Appendix\Appendix 3.5.3 Emission Factor in 2033-S B.xlsx

Tsing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for AERMOD model (October)	Year 2033

Road Name	Road ID	Hour	Northbound					Eastbound					Northbound					Eastbound				
			Month/year					Month/year					Month/year					Month/year				
			g/km/h	g/s	tonne/h	g/km/h	tonne/h	g/km/h	g/s	tonne/h	g/km/h	tonne/h	g/km/h	g/s	tonne/h	g/km/h	tonne/h	g/km/h	g/s	tonne/h	g/km/h	tonne/h
Road 21	21	0900-1000	1.3462	0.8446	1.306	0.816	8.6568	0.8164	0.5114	3.0221	0.7472	9.8886	0.8796	0.5437	3.0221							
Road 21	21	1000-1200	0.4242	0.2646	0.8076	0.1882	0.6178	0.3267	0.1011	0.4987	0.4987	8.8902	0.6247	0.4387	8.5082							
Road 21	21	0300-0400	1.6562	0.7478	6.7526	1.4762	4.2298	0.6037	0.1092	3.0952	0.4242	9.3562	0.2686	0.5527								
Road 21	21	0400-0500	0.7362	0.5068	0.7276	1.0478	5.0318	0.6037	1.086	0.4927	4.5082	0.7476	0.3027	1.1062								
Road 21	21	0500-0600	1.8112	0.7276	1.6962	0.6962	7.0522	0.6962	1.1962	1.3962	1.8112	0.7276	0.6962	1.1962								
Road 21	21	0600-0700	1.9062	0.2717	0.6036	1.6962	0.2717	2.6716	0.1161	1.3962	1.9062	1.0773	0.6247	1.2296	0.6178							
Road 21	21	0700-0800	0.1962	0.5767	0.6336	0.6962	4.5082	0.6037	1.2296	0.3011	0.6962	1.0773	0.6247	0.4987	1.2296							
Road 21	21	0800-0900	0.2716	0.5068	0.6962	0.6962	4.5082	0.6037	1.2296	0.3011	0.6962	1.0773	0.6247	0.4987	1.2296							
Road 21	21	0900-1000	0.4562	0.8112	0.2116	2.2062	0.5962	1.7396	0.3016	3.3016	0.4562	1.1862	0.2996	0.6962								
Road 21	21	1000-1100	0.6162	0.9217	0.7876	0.2696	5.3962	0.7176	1.1926	0.3006	0.6962	1.1862	0.2996	0.6962								
Road 21	21	1100-1200	0.2696	0.5068	0.6962	0.6962	4.5082	0.6037	1.2296	0.3011	0.6962	1.0773	0.6247	0.4987	1.2296							
Road 21	21	1200-1300	0.4062	0.6247	0.8496	0.3116	0.5962	0.7876	1.5716	0.2976	0.9326	1.4426	0.2716	0.5962								
Road 21	21	1300-1400	0.4242	0.9217	0.2116	0.3416	0.6178	0.8476	0.0636	0.2606	0.4062	1.4776	0.2996	0.6962								
Road 21	21	1400-1500	0.3416	0.7876	0.2116	0.3416	0.6178	0.8476	0.0636	0.2606	0.4062	1.4776	0.2996	0.6962								
Road 21	21	1500-1600	0.3196	0.8996	0.9106	0.2916	0.2747	0.8296	0.5816	0.3416	0.4516	1.4426	0.3006	0.6962								
Road 21	21	1600-1700	0.2696	0.9217	0.9196	0.3026	0.6426	0.9296	0.5556	0.3316	0.6962	1.4296	0.3006	0.6962								
Road 21	21	1700-1800	0.3196	0.7876	0.2116	0.3416	0.6178	0.8476	0.0636	0.2606	0.4062	1.4776	0.2996	0.6962								
Road 21	21	1800-1900	0.2006	0.9217	0.7526	0.8162	3.6807	4.7968	1.2667	2.4966	0.2006	3.7966	1.1402	0.2776	0.9962							
Road 21	21	1900-2000	0.7606	0.4767	0.3446	0.6162	2.3807	0.4768	0.2447	1.8366	0.4016	1.1276	0.6696	0.2196	0.9962							
Road 21	21	2000-2100	0.7606	0.4767	0.3446	0.6162	2.3807	0.4768	0.2447	1.8366	0.4016	1.1276	0.6696	0.2196	0.9962							
Road 21	21	2100-2200	0.6962	0.9662	0.2662	0.5962	1.9807	0.2376	0.2447	1.4466	0.6962	1.1276	0.3006	0.6962								
Road 21	21	2200-2300	0.7606	0.4767	0.3446	0.6162	2.3807	0.4768	0.2447	1.8366	0.4016	1.1276	0.6696	0.2196	0.9962							
Road 21	21	2300-2400	0.6962	0.9662	0.2662	0.5962	1.9807	0.2376	0.2447	1.4466	0.6962	1.1276	0.3006	0.6962								
Road 22	22	0900-1000	1.4162	0.7117	3.0652	1.2406	1.5167	0.7296	0.2566	6.4007	1.4162	4.6306	0.5602	0.0102								
Road 22	22	1000-1200	0.3196	0.3416	0.1406	0.2006	1.0267	0.1836	0.4996	4.2927	0.7576	4.6982	0.8262	0.8262								
Road 22	22	0300-0400	1.3462	0.7478	6.7526	1.4762	4.2298	0.6037	0.1092	3.0952	0.4242	9.3562	0.2686	0.5527								
Road 22	22	0400-0500	0.7362	0.5068	0.7276	1.0478	5.0318	0.6037	1.086	0.4927	4.5082	0.7476	0.3027	1.1062								
Road 22	22	0500-0600	1.8112	0.7276	1.6962	0.6962	7.0522	0.6962	1.1962	1.3962	1.8112	0.7276	0.6962	1.1962								
Road 22	22	0600-0700	1.9062	0.2717	0.6036	1.6962	0.2717	2.6716	0.1161	1.3962	1.9062	1.0773	0.6247	1.2296	0.6178							
Road 22	22	0700-0800	0.1962	0.5767	0.6336	0.6962	4.5082	0.6037	1.2296	0.3011	0.6962	1.0773	0.6247	0.4987	1.2296							
Road 22	22	0800-0900	0.2716	0.5068	0.6962	0.6962	4.5082	0.6037	1.2296	0.3011	0.6962	1.0773	0.6247	0.4987	1.2296							
Road 22	22	0900-1000	0.4562	0.8112	0.2116	2.2062	0.5962	1.7396	0.3016	3.3016	0.4562	1.1862	0.2996	0.6962								
Road 22	22	1000-1100	0.6162	0.9217	0.7876	0.2696	5.3962	0.7176	1.1926	0.3006	0.6962	1.1862	0.2996	0.6962								
Road 22	22	1100-1200	0.2696	0.5068	0.6962	0.6962	4.5082	0.6037	1.2296	0.3011	0.6962	1.0773	0.6247	0.4987	1.2296							
Road 22	22	1200-1300	0.4062	0.6247	0.8496	0.3116	0.5962	0.7876	1.5716	0.2976	0.9326	1.4426	0.2716	0.5962								
Road 22	22	1300-1400	0.4242	0.9217	0.2116	0.3416	0.6178	0.8476	0.0636	0.2606	0.4062	1.4776	0.2996	0.6962								
Road 22	22	1400-1500	0.3416	0.7876	0.2116	0.3416	0.6178	0.8476	0.0636	0.2606	0.4062	1.4776	0.2996	0.6962								
Road 22	22	1500-1600	0.3196	0.8996	0.9106	0.2916	0.2747	0.8296	0.5816	0.3416	0.4516	1.4426	0.3006	0.6962								
Road 22	22	1600-1700	0.2696	0.9217	0.9196	0.3026	0.6426	0.9296	0.5556	0.3316	0.6962	1.4296	0.3006	0.6962								
Road 22	22	1700-1800	0.3196	0.7876	0.2116	0.3416	0.6178	0.8476	0.0636	0.2606	0.4062	1.4776	0.2996	0.6962								
Road 22	22	1800-1900	0.2006	0.9217	0.7526	0.8162	3.6807	4.7968	1.2667	2.4966	0.2006	3.7966	1.1402	0.2776	0.9962							
Road 22	22	1900-2000	0.7606	0.4767	0.3446	0.6162	2.3807	0.4768	0.2447	1.8366	0.4016	1.1276	0.6696	0.2196	0.9962							
Road 22	22	2000-2100	0.7606	0.4767	0.3446	0.6162	2.3807	0.4768	0.2447	1.8366	0.4016	1.1276	0.6696	0.2196	0.9962							
Road 22	22	2100-2200	0.6962	0.9662	0.2662	0.5962	1.9807	0.2376	0.2447	1.4466	0.6962	1.1276	0.3006	0.6962								
Road 22	22	2200-2300	0.7606	0.4767	0.3446	0.6162	2.3807	0.4768	0.2447	1.8366	0.4016	1.1276	0.6696	0.2196	0.9962							
Road 22	22	2300-2400	0.6962	0.9662	0.2662	0.5962	1.9807	0.2376	0.2447	1.4466	0.6962	1.1276	0.3006	0.6962								
Road 23	23	0900-1000	1.3462	0.7478	6.7526	1.4762	4.2298	0.6037	0.1092	3.0952	0.4242	9.3562	0.2686	0.5527								
Road 23	23	1000-1200	0.4242	0.2646	0.8076	0.1882	0.6178	0.3267	0.1011	0.4987	0.4987	8.8902	0.6247	0.4387	8.5082							
Road 23	23	0300-0400	1.6562	0.7478	6.7526	1.4762	4.2298	0.6037	0.1092	3.0952	0.4242	9.3562	0.2686	0.5527								
Road 23	23	0400-0500	0.7362	0.5068	0.7276	1.0478	5.0318	0.6037	1.086	0.4927	4.5082	0.7476	0.3027	1.1062								
Road 23	23	0500-0600	1.8112	0.7276	1.6962	0.6962	7.0522	0.6962	1.1962	1.3962	1.8112	0.7276	0.6962	1.1962								
Road 23	23	0600-0700	1.9062	0.2717	0.6036	1.6962	0.2717	2.6716	0.1161	1.3962	1.9062	1.0773	0.6247	1.2296	0.6178							
Road 23	23	0700-0800	0.1962	0.5767	0.6336	0.6962	4.5082	0.6037	1.2296	0.3011	0.6962	1.0773	0.6247	0.4987	1.2296							
Road 23	23	0800-0900	0.2716	0.5068	0.6962	0.6962	4.5082	0.6037	1.2296	0.3011	0.6962	1.0773	0.6247	0.4987	1.2296							
Road 23	23	0900-1000	0.4562	0.8112	0.2116	2.2062	0.5962	1.7396	0.3016	3.3016	0.4562	1.1862	0.2996	0.6962								
Road 23	23	1000-1100	0.6162	0.9217	0.7876	0.2696	5.3962	0.7176	1.1926	0.3006	0.6962	1.1862	0.2996	0.6962								
Road 23	23	1100-1200	0.2696	0.5068	0.6962	0.6962	4.5082	0.6037	1.2296	0.3011	0.6962	1.0773	0.6247	0.4987	1.2296							
Road 23	23	1200-1300	0.4062	0.6247	0.8496	0.3116	0.5962	0.7876	1.5716	0.2976	0.9326	1.4426	0.2716	0.5962								
Road 23	23	1300-1400	0.4242	0.9217	0.2116	0.3416	0.6178	0.8476	0.0636	0.2606	0.4062	1.4776	0.2996	0.6962								
Road 23	23	1400-1500	0.3416	0.7876	0.2116	0.3416	0.6178	0.8476	0.0636	0.2606	0.4062	1.4776	0.2996	0.6962								
Road 23	23	1500-1600	0.3196	0.89																		

Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Appendix\Appendix 3.5.3 Emission Factor in 2033-S B.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
 Open Road 24 hour Emission Factors for
 AERMOD model (November)

Road Name	Road ID	Hour	NO ₂ Emission												NO Emission											
			Monthly/mph						Monthly/bourgeoisie						Monthly/mph						Monthly/bourgeoisie					
			g/km/h	tonne/h	g/km/h	tonne/h	g/km/h	tonne/h	g/km/h	tonne/h	g/km/h	tonne/h	g/km/h	tonne/h	g/km/h	tonne/h	g/km/h	tonne/h								
Road 4	4	0800-0900	1.131E-02	4.424E-07	9.303E-06	1.138E-02	4.242E-07	5.502E-06	9.729E-02	3.488E-06	6.939E-02	8.632E-02	3.776E-06	6.132E-02	1.000E-02	1.495E-06	4.627E-07	8.476E-06	3.384E-07	8.077E-06	3.444E-06	6.592E-06	4.772E-06	5.454E-06	1.000E-02	1.495E-06
Road 4	4	1000-1100	1.131E-02	4.424E-07	9.303E-06	1.138E-02	4.242E-07	5.502E-06	9.729E-02	3.488E-06	6.939E-02	8.632E-02	3.776E-06	6.132E-02	1.000E-02	1.495E-06	4.627E-07	8.476E-06	3.384E-07	8.077E-06	3.444E-06	6.592E-06	4.772E-06	5.454E-06	1.000E-02	1.495E-06
Road 4	4	1100-1200	1.131E-02	4.424E-07	9.303E-06	1.138E-02	4.242E-07	5.502E-06	9.729E-02	3.488E-06	6.939E-02	8.632E-02	3.776E-06	6.132E-02	1.000E-02	1.495E-06	4.627E-07	8.476E-06	3.384E-07	8.077E-06	3.444E-06	6.592E-06	4.772E-06	5.454E-06	1.000E-02	1.495E-06
Road 4	4	1200-1300	1.131E-02	4.424E-07	9.303E-06	1.138E-02	4.242E-07	5.502E-06	9.729E-02	3.488E-06	6.939E-02	8.632E-02	3.776E-06	6.132E-02	1.000E-02	1.495E-06	4.627E-07	8.476E-06	3.384E-07	8.077E-06	3.444E-06	6.592E-06	4.772E-06	5.454E-06	1.000E-02	1.495E-06
Road 4	4	1400-1500	1.131E-02	4.424E-07	9.303E-06	1.138E-02	4.242E-07	5.502E-06	9.729E-02	3.488E-06	6.939E-02	8.632E-02	3.776E-06	6.132E-02	1.000E-02	1.495E-06	4.627E-07	8.476E-06	3.384E-07	8.077E-06	3.444E-06	6.592E-06	4.772E-06	5.454E-06	1.000E-02	1.495E-06
Road 4	4	1600-1700	1.131E-02	4.424E-07	9.303E-06	1.138E-02	4.242E-07	5.502E-06	9.729E-02	3.488E-06	6.939E-02	8.632E-02	3.776E-06	6.132E-02	1.000E-02	1.495E-06	4.627E-07	8.476E-06	3.384E-07	8.077E-06	3.444E-06	6.592E-06	4.772E-06	5.454E-06	1.000E-02	1.495E-06
Road 4	4	1800-1900	1.131E-02	4.424E-07	9.303E-06	1.138E-02	4.242E-07	5.502E-06	9.729E-02	3.488E-06	6.939E-02	8.632E-02	3.776E-06	6.132E-02	1.000E-02	1.495E-06	4.627E-07	8.476E-06	3.384E-07	8.077E-06	3.444E-06	6.592E-06	4.772E-06	5.454E-06	1.000E-02	1.495E-06
Road 4	4	2000-2100	1.131E-02	4.424E-07	9.303E-06	1.138E-02	4.242E-07	5.502E-06	9.729E-02	3.488E-06	6.939E-02	8.632E-02	3.776E-06	6.132E-02	1.000E-02	1.495E-06	4.627E-07	8.476E-06	3.384E-07	8.077E-06	3.444E-06	6.592E-06	4.772E-06	5.454E-06	1.000E-02	1.495E-06
Road 4	4	2200-2300	1.131E-02	4.424E-07	9.303E-06	1.138E-02	4.242E-07	5.502E-06	9.729E-02	3.488E-06	6.939E-02	8.632E-02	3.776E-06	6.132E-02	1.000E-02	1.495E-06	4.627E-07	8.476E-06	3.384E-07	8.077E-06	3.444E-06	6.592E-06	4.772E-06	5.454E-06	1.000E-02	1.495E-06
Road 5	5	0800-0900	1.131E-02	4.424E-07	9.303E-06	1.138E-02	4.242E-07	5.502E-06	9.729E-02	3.488E-06	6.939E-02	8.632E-02	3.776E-06	6.132E-02	1.000E-02	1.495E-06	4.627E-07	8.476E-06	3.384E-07	8.077E-06	3.444E-06	6.592E-06	4.772E-06	5.454E-06	1.000E-02	1.495E-06
Road 5	5	1000-1100	1.131E-02	4.424E-07	9.303E-06	1.138E-02	4.242E-07	5.502E-06	9.729E-02	3.488E-06	6.939E-02	8.632E-02	3.776E-06	6.132E-02	1.000E-02	1.495E-06	4.627E-07	8.476E-06	3.384E-07	8.077E-06	3.444E-06	6.592E-06	4.772E-06	5.454E-06	1.000E-02	1.495E-06
Road 5	5	1100-1200	1.131E-02	4.424E-07	9.303E-06	1.138E-02	4.242E-07	5.502E-06	9.729E-02	3.488E-06	6.939E-02	8.632E-02	3.776E-06	6.132E-02	1.000E-02	1.495E-06	4.627E-07	8.476E-06	3.384E-07	8.077E-06	3.444E-06	6.592E-06	4.772E-06	5.454E-06	1.000E-02	1.495E-06
Road 5	5	1200-1300	1.131E-02	4.424E-07	9.303E-06	1.138E-02	4.242E-07	5.502E-06	9.729E-02	3.488E-06	6.939E-02	8.632E-02	3.776E-06	6.132E-02	1.000E-02	1.495E-06	4.627E-07	8.476E-06	3.384E-07	8.077E-06	3.444E-06	6.592E-06	4.772E-06	5.454E-06	1.000E-02	1.495E-06
Road 5	5	1400-1500	1.131E-02	4.424E-07	9.303E-06	1.138E-02	4.242E-07	5.502E-06	9.729E-02	3.488E-06	6.939E-02	8.632E-02	3.776E-06	6.132E-02	1.000E-02	1.495E-06	4.627E-07	8.476E-06	3.384E-07	8.077E-06	3.444E-06	6.592E-06	4.772E-06	5.454E-06	1.000E-02	1.495E-06
Road 5	5	1600-1700	1.131E-02	4.424E-07	9.303E-06	1.138E-02	4.242E-07	5.502E-06	9.729E-02	3.488E-06	6.939E-02	8.632E-02	3.776E-06	6.132E-02	1.000E-02	1.495E-06	4.627E-07	8.476E-06	3.384E-07	8.077E-06	3.444E-06	6.592E-06	4.772E-06	5.454E-06	1.000E-02	1.495E-06
Road 5	5	1800-1900	1.131E-02	4.424E-07	9.303E-06	1.138E-02	4.242E-07	5.502E-06	9.729E-02	3.488E-06	6.939E-02	8.632E-02	3.776E-06	6.132E-02	1.000E-02	1.495E-06	4.627E-07	8.476E-06	3.384E-07	8.077E-06	3.444E-06	6.592E-06	4.772E-06	5.454E-06	1.000E-02	1.495E-06
Road 5	5	2000-2100	1.131E-02	4.424E-07	9.303E-06	1.138E-02	4.242E-07	5.502E-06	9.729E-02	3.488E-06	6.939E-02	8.632E-02	3.776E-06	6.132E-02	1.000E-02	1.495E-06	4.627E-07	8.476E-06	3.384E-07	8.077E-06	3.444E-06	6.592E-06	4.772E-06	5.454E-06	1.000E-02	1.495E-06
Road 5	5	2200-2300	1.131E-02	4.424E-07	9.303E-06	1.138E-02	4.242E-07	5.502E-06	9.729E-02	3.488E-06	6.939E-02	8.632E-02	3.776E-06	6.132E-02	1.000E-02	1.495E-06	4.627E-07	8.476E-06	3.384E-07	8.077E-06	3.444E-06	6.592E-06	4.772E-06	5.454E-06	1.000E-02	1.495E-06
Road 6	6	0800-0900	1.131E-02	4.424E-07	9.303E-06	1.138E-02	4.242E-07	5.502E-06	9.729E-02	3.488E-06	6.939E-02	8.632E-02	3.776E-06	6.132E-02	1.000E-02	1.495E-06	4.627E-07	8.476E-06	3.384E-07	8.077E-06	3.444E-06	6.592E-06	4.772E-06	5.454E-06	1.000E-02	1.495E-06
Road 6	6	1000-1100	1.131E-02	4.424E-07	9.303E-06	1.138E-02	4.242E-07	5.502E-06	9.729E-02	3.488E-06	6.939E-02	8.632E-02	3.776E-06	6.132E-02	1.000E-02	1.495E-06	4.627E-07	8.476E-06	3.384E-07	8.077E-06	3.444E-06	6.592E-06	4.772E-06	5.454E-06	1.000E-02	1.495E-06
Road 6	6	1100-1200	1.131E-02	4.424E-07	9.303E-06	1.138E-02	4.242E-07	5.502E-06	9.729E-02	3.488E-06	6.939E-02	8.632E-02	3.776E-06	6.132E-02	1.000E-02	1.495E-06	4.627E-07	8.476E-06	3.384E-07	8.077E-06	3.444E-06	6.592E-06	4.772E-06	5.454E-06	1.000E-02	1.495E-06
Road 6	6	1200-1300	1.131E-02	4.424E-07	9.303E-06	1.138E-02	4.242E-07	5.502E-06	9.729E-02	3.488E-06	6.939E-02	8.632E-02	3.776E-06	6.132E-02	1.000E-02	1.495E-06	4.627E-07	8.476E-06	3.384E-07	8.077E-06	3.444E-06	6.592E-06	4.772E-06	5.454E-06	1.000E-02	1.495E-06
Road 6	6	1400-1500	1.131E-02	4.424E-07	9.303E-06	1.138E-02	4.242E-07	5.502E-06	9.729E-02	3.488E-06	6.939E-02	8.632E-02	3.776E-06	6.132E-02	1.000E-02	1.495E-06	4.627E-07	8.476E-06	3.384E-07	8.077E-06	3.444E-06	6.592E-06	4.772E-06	5.454E-06	1.000E-02	1.495E-06
Road 6	6	1600-1700	1.131E-02	4.424E-07	9.303E-06	1.138E-02	4.242E-07	5.502E-06	9.729E-02	3.488E-06	6.939E-02	8.632E-02	3.776E-06	6.132E-02	1.000E-02	1.495E-06	4.627E-07	8.476E-06	3.384E-07	8.077E-06	3.444E-06	6.592E-06	4.772E-06	5.454E-06	1.000E-02	1.495E-06
Road 6	6	1800-1900	1.131E-02	4.424E-07	9.303E-06	1.138E-02	4.242E-07	5.502E-06	9.729E-02	3.488E-06	6.939E-02	8.632E-02	3.776E-06	6.132E-02	1.000E-02	1.495E-06	4.627E-07	8.476E-06	3.384E-07	8.077E-06	3.444E-06	6.592E-06	4.772E-06	5.454E-06	1.000E-02	1.495E-06
Road 6	6	2000-2100	1.131E-02	4.424E-07	9.303E-06	1.138E-02	4.242E-07	5.502E-06	9.729E-02	3.488E-06	6.939E-02	8.632E-02	3.776E-06	6.132E-02	1.000E-02	1.495E-06	4.627E-07	8.476E-06	3.384E-07	8.077E-06	3.444E-06	6.592E-06	4.772E-06	5.454E-06	1.000E-02	1.495E-06
Road 6	6	2200-2300	1.131E-02	4.424E-07	9.303E-06	1.138E-02	4.242E-07	5.502E-06	9.729E-02	3.488E-06	6.939E-02	8.632E-02	3.776E-06	6.132E-02	1.000E-02	1.495E-06	4.627E-07	8.476E-06	3.384E-07	8.077E-06	3.444E-06	6.592E-06	4.772E-06	5.454E-06	1.000E-02	1.495E-06
Road 7	7	0800-0900	1.131E-02	4.424E-07	9.303E-06	1.138E-02	4.242E-07	5.502E-06	9.729E-02	3.488E-06	6.939E-02	8.632E-02	3.776E-06	6.132E-02	1.000E-02	1.495E-06	4.627E-07	8.476E-06	3.384E-07	8.077E-06	3.444E-06	6.592E-06	4.772E-06	5.454E-06	1.000E-02	1.495E-06
Road 7	7	1000-1100	1.131E-02	4.424E-07	9.303E-06	1.138E-02	4.242E-07	5.502E-06	9.729E-02	3.488E-06	6.939E-02	8.632E-02	3.776E-06	6.132E-02	1.000E-02	1.495E-06	4.627E-07	8.476E-06	3.384E-07	8.077E-06	3.444E-06	6.592E-06	4.772E-06	5.454E-06	1.000E-02	1.495E-06
Road 7	7	1100-1200	1.131E-02	4.424E-07	9.303E-06	1.138E-02	4.242E-07	5.502E-06	9.729E-02	3.488E-06	6.939E-02	8.632E-02	3.776E-06	6.132E-02	1.000E-02	1.495E-06	4.627E-07	8.476E-06	3.384E-07	8.077E-06	3.444E-06	6.592E-06	4.772E-06	5.454E-06	1.000E-02	1.495E-06
Road 7	7	1200-1300	1.131E-02	4.424E-07	9.303E-06	1.138E-02	4.242E-07	5.502E-06	9.729E-02	3.488E-06	6.939E-02	8.632E-02	3.776E-06	6.132E-02	1.000E-02	1.495E-06	4.627E-07	8.476E-06	3.384E-07	8.077E-06	3.444E-06	6.592E-06	4.772E-06	5.454E-06	1.000E-02	1.495E-06
Road 7	7	1400-1500	1.131E-02	4.424E-07	9.303E-06	1.138E-02	4.242E-07	5.502E-06	9.729E-02	3.488E-06	6.939E-02	8.632E-02	3.776E-06	6.132E-02	1.000E-02	1.495E-06	4.627E-07	8.476E-06	3.384E-07	8.077E-06	3.444E-06	6.592E-06	4.772E-06	5.454E-06	1.000E-02	1.495E-06
Road 7	7	1600-1700	1.131E-02	4.424E-07	9.303E-06	1.138E-02	4.242E-07	5.502E-06	9.729E-02	3.488E-06	6.939E-02	8.632E-02	3.776E-06	6.132E-02	1.000E-02	1.495E-06	4.627E-07	8.476E-06	3.384E-07	8.077E-06	3.444E-06	6.592E-06	4.772E-06	5.454E-06	1.000E-02</	

Tsing Yi North Underground Quarry
 Open Road 24 hour Emission Factors for
 AERMOD model (November)

Road Name	Road ID	Hour	NO ₂ Emission										NO ₂ Emission									
			g/km/h					Monthly Average					Monthly Average					Monthly Average				
			g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	
Road 7	7	1500-1700	2.075	2.047	4.276	1.911	2.332	3.367	1.946	1.981	2.598	3.264	1.352	1.381	2.386	2.982	2.982	2.982	2.982	2.982	2.982	
Road 7	7	1800-2000	1.611	1.611	3.746	1.611	2.964	2.964	2.964	1.386	2.776	3.026	1.386	1.386	2.496	2.496	2.496	2.496	2.496	2.496	2.496	
Road 7	7	2100-2300	1.911	1.911	4.276	1.911	2.332	3.367	1.946	1.981	2.598	3.264	1.352	1.381	2.386	2.982	2.982	2.982	2.982	2.982	2.982	
Road 7	7	1900-2000	1.175	1.027	2.376	1.056	1.822	1.372	1.326	1.326	2.296	2.486	1.175	1.175	2.036	2.386	2.386	2.386	2.386	2.386	2.386	
Road 7	7	2000-2100	1.175	1.027	1.844	1.044	1.411	1.656	1.426	1.426	1.932	2.236	1.175	1.175	1.636	1.636	1.636	1.636	1.636	1.636	1.636	
Road 7	7	2100-2200	1.175	1.027	1.844	1.044	1.411	1.656	1.426	1.426	1.932	2.236	1.175	1.175	1.636	1.636	1.636	1.636	1.636	1.636	1.636	
Road 7	7	2200-2300	1.036	1.047	1.976	1.036	1.926	1.217	1.426	1.366	1.366	1.776	2.076	1.036	1.036	1.586	1.586	1.586	1.586	1.586	1.586	
Road 7	7	2300-2400	1.111	1.087	1.276	1.076	1.026	1.776	1.156	1.386	1.386	1.386	1.386	1.386	1.386	1.386	1.386	1.386	1.386	1.386	1.386	
Road 8	8	0000-0100	2.336	2.336	2.598	2.336	2.336	1.146	2.317	1.776	2.096	2.446	2.336	2.336	2.496	2.496	2.496	2.496	2.496	2.496	2.496	
Road 8	8	0100-0200	2.336	2.336	2.598	2.336	2.336	1.146	2.317	1.776	2.096	2.446	2.336	2.336	2.496	2.496	2.496	2.496	2.496	2.496	2.496	
Road 8	8	0200-0300	2.446	2.296	1.276	2.226	1.856	1.006	1.176	3.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	
Road 8	8	0300-0400	2.506	2.511	1.036	2.436	2.436	1.496	1.496	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	
Road 8	8	0400-0500	2.506	2.511	1.036	2.436	2.436	1.496	1.496	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	
Road 8	8	0500-0600	2.626	2.106	1.026	2.076	2.436	1.506	1.926	1.776	1.476	2.976	1.446	1.346	2.616	2.616	2.616	2.616	2.616	2.616	2.616	
Road 8	8	0600-0700	2.696	2.256	1.036	2.486	2.486	2.086	1.426	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	
Road 8	8	0700-0800	2.756	2.316	1.046	2.546	2.546	2.146	1.436	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	
Road 8	8	0800-0900	2.816	2.386	1.026	2.606	2.606	2.426	1.346	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	
Road 8	8	0900-1000	2.806	2.396	1.036	2.676	2.676	2.346	1.426	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	
Road 8	8	1000-1100	2.806	2.396	1.036	2.676	2.676	2.346	1.426	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	
Road 8	8	1100-1200	2.916	2.386	1.056	2.786	2.786	1.396	1.446	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	1.776	
Road 8	8	1200-1300	3.116	2.226	2.466	2.916	2.416	1.146	2.306	1.616	1.406	2.066	2.446	1.936	1.936	1.936	1.936	1.936	1.936	1.936	1.936	
Road 8	8	1300-1400	3.116	2.226	2.466	2.916	2.416	1.146	2.306	1.616	1.406	2.066	2.446	1.936	1.936	1.936	1.936	1.936	1.936	1.936	1.936	
Road 8	8	1400-1500	3.106	2.236	2.476	2.926	2.226	1.226	1.476	1.306	1.506	2.066	2.446	1.936	1.936	1.936	1.936	1.936	1.936	1.936	1.936	
Road 8	8	1500-1600	2.906	2.276	2.576	2.686	1.176	1.176	1.386	1.606	1.506	2.126	2.346	1.936	1.936	1.936	1.936	1.936	1.936	1.936	1.936	
Road 8	8	1600-1700	2.906	2.276	2.576	2.686	1.176	1.176	1.386	1.606	1.506	2.126	2.346	1.936	1.936	1.936	1.936	1.936	1.936	1.936	1.936	
Road 8	8	1700-1800	2.546	2.246	2.916	2.616	1.136	1.136	1.226	1.606	1.266	2.246	2.446	1.936	1.936	1.936	1.936	1.936	1.936	1.936	1.936	
Road 8	8	1800-1900	2.156	2.056	1.256	1.946	1.846	1.636	1.596	1.616	1.306	2.616	2.346	1.936	1.936	1.936	1.936	1.936	1.936	1.936	1.936	
Road 8	8	1900-2000	2.166	2.056	1.176	1.956	1.826	1.546	1.546	1.611	1.146	2.396	2.626	1.026	1.026	1.026	1.026	1.026	1.026	1.026	1.026	
Road 8	8	2000-2100	2.176	2.056	1.176	1.956	1.826	1.546	1.546	1.611	1.146	2.396	2.626	1.026	1.026	1.026	1.026	1.026	1.026	1.026	1.026	
Road 8	8	2100-2200	2.056	2.056	1.226	1.826	1.506	1.116	1.116	1.786	1.416	2.176	2.526	1.606	1.546	1.606	1.546	1.606	1.546	1.606	1.546	
Road 8	8	2200-2300	2.066	2.056	1.226	1.836	1.506	1.116	1.116	1.786	1.416	2.176	2.526	1.606	1.546	1.606	1.546	1.606	1.546	1.606	1.546	
Road 8	8	2300-2400	2.166	2.056	1.176	1.956	1.826	1.546	1.546	1.611	1.146	2.396	2.626	1.026	1.026	1.026	1.026	1.026	1.026	1.026	1.026	
Road 9	9	0000-0100	1.746	1.826	6.116	1.746	1.746	1.426	1.516	1.566	1.7376	1.746	1.386	1.496	1.746	1.746	1.746	1.746	1.746	1.746	1.746	
Road 9	9	0100-0200	1.756	1.826	4.006	1.611	1.611	1.426	1.496	1.496	1.606	1.746	1.386	1.496	1.746	1.746	1.746	1.746	1.746	1.746	1.746	
Road 9	9	0200-0300	1.876	1.826	3.186	1.746	1.746	1.426	1.496	1.496	1.606	1.746	1.386	1.496	1.746	1.746	1.746	1.746	1.746	1.746	1.746	
Road 9	9	0300-0400	2.036	2.036	3.646	2.786	1.886	1.336	1.476	1.556	2.786	2.076	1.386	1.496	1.746	1.746	1.746	1.746	1.746	1.746	1.746	
Road 9	9	0400-0500	2.126	2.036	3.186	3.056	1.976	1.376	1.486	1.486	3.056	2.076	1.386	1.496	1.746	1.746	1.746	1.746	1.746	1.746	1.746	
Road 9	9	0500-0600	2.126	2.036	3.186	3.056	1.976	1.376	1.486	1.486	3.056	2.076	1.386	1.496	1.746	1.746	1.746	1.746	1.746	1.746	1.746	
Road 9	9	0600-0700	2.766	2.076	1.546	3.626	1.916	1.426	1.496	1.556	1.916	1.426	1.026	1.746	1.776	1.746	1.746	1.746	1.746	1.746	1.746	
Road 9	9	0700-0800	3.816	2.606	1.466	3.516	1.566	1.476	1.486	1.356	3.466	2.576	1.216	1.386	1.936	1.936	1.936	1.936	1.936	1.936	1.936	
Road 9	9	0800-0900	3.816	2.606	1.466	3.516	1.566	1.476	1.486	1.356	3.466	2.576	1.216	1.386	1.936	1.936	1.936	1.936	1.936	1.936	1.936	
Road 9	9	0900-1000	4.286	2.046	1.496	3.956	1.586	1.416	1.426	1.426	3.436	2.526	1.226	1.136	1.936	1.936	1.936	1.936	1.936	1.936	1.936	
Road 9	9	1000-1100	4.486	2.046	1.496	4.086	1.556	1.406	1.786	1.416	2.986	2.266	1.216	1.716	1.936	1.936	1.936	1.936	1.936	1.936	1.936	
Road 9	9	1100-1200	4.486	2.046	1.496	4.086	1.556	1.406	1.786	1.416	2.986	2.266	1.216	1.716	1.936	1.936	1.936	1.936	1.936	1.936	1.936	
Road 9	9	1200-1300	1.046	1.886	1.406	1.956	1.786	1.176	1.316	1.436	1.606	2.596	1.436	1.496	1.936	1.936	1.936	1.936	1.936	1.936	1.936	
Road 9	9	1300-1400	1.206	2.106	1.816	1.716	1.136	1.216	1.606	1.536	1.606	2.296	1.476	1.936	1.936	1.936	1.936	1.936	1.936	1.936	1.936	
Road 9	9	1400-1500	1.346	2.076	1.986	1.346	1.246	1.846	1.536	1.106	1.106	2.496	1.516	1.026	1.936	1.936	1.936	1.936	1.936	1.936	1.936	
Road 9	9	1500-1600	1.346	2.076	1.986	1.346	1.246	1.846	1.536	1.106	1.106	2.496	1.516	1.026	1.936	1.936	1.936	1.936	1.936	1.936	1.936	
Road 9	9	1600-1700	1.406	2.016	2.926	2.176	1.306	2.706	2.006	1.586	1.126	1.936	1.936	1.936	1.936	1.936	1.936	1.936	1.936	1.936	1.936	
Road 9	9	1700-1800	1.076	2.176	2.926	1.786	1.306	2.706	2.006	1.586	1.126	1.936	1.936	1.936	1.936	1.936	1.936	1.936	1.936	1.936	1.936	
Road 9	9	1800-1900	1.116	2.176	2.926	1.826	1.306	2.706	2.006	1.586	1.126	1.936	1.936	1.936	1.936	1.936	1.936	1.936	1.936	1.936	1.936	
Road 9	9	1900-2000	1.106	2.176	2.926	1.826	1.306	2.706	2.006	1.586	1.126	1.936	1.936	1.936	1.936	1.936	1.936	1.936	1.936	1.936	1.936	
Road 9	9	2000-2100	3.596	4.096	3.486	3.026	2.416	1.716	1.716	2.536	3.306	2.456	2.246	2.926	2.926	2.926	2.926	2.926	2.926	2.926	2.926	
Road 9	9	2100-2200	3.186	4.096	3.186	3.186	2.416	1.716	1.716	2.536	3.306	2.456	2.246	2.926	2.926	2.926	2.926	2.926	2.926	2.926	2.926	
Road 9	9	2200-2300	3.116	4.196	3.076	3.026	3.076	1.786														

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
 Open Road 24 hour Emission Factors for
 AERMOD model (November)

Road Name	Road ID	Hour	No Emission				Monthly overcharge				No Emission			
			g/km/h	tonne/h	g/km/h	tonne/h	g/km/h	tonne/h	g/km/h	tonne/h	g/km/h	tonne/h		
Row 11	11	0000-0100	5.632E-02	1.707E-07	7.80E-07	3.384E-02	1.89E-07	5.72E-07	2.70E-01	1.544E-06	5.92E-06	2.511E-01	1.411E-06	5.70E-06
Row 11	11	0100-0200	4.025E-02	1.252E-07	5.83E-07	3.384E-02	1.444E-07	5.27E-07	2.80E-01	1.056E-06	4.502E-06	2.611E-01	9.77E-07	5.70E-06
Row 11	11	0200-0300	4.025E-02	1.252E-07	5.83E-07	3.384E-02	1.444E-07	5.27E-07	2.80E-01	1.056E-06	4.502E-06	2.611E-01	9.77E-07	5.70E-06
Row 11	11	0300-0400	4.945E-02	1.132E-07	4.34E-07	4.655E-02	1.06E-07	4.08E-07	2.97E-01	6.79E-07	2.611E-06	2.710E-01	6.76E-07	2.00E-06
Row 11	11	0400-0500	5.065E-02	1.26E-07	4.84E-07	4.811E-02	1.20E-07	4.60E-07	3.03E-01	7.54E-07	2.880E-06	2.838E-01	6.50E-07	2.71E-06
Row 11	11	0500-0600	4.405E-02	1.102E-07	4.04E-07	4.405E-02	1.102E-07	4.04E-07	2.70E-01	6.10E-07	2.355E-06	2.411E-01	6.10E-07	2.355E-06
Row 11	11	0600-0700	5.242E-02	1.49E-07	4.78E-07	6.97E-02	4.27E-07	1.44E-06	3.80E-01	2.90E-06	1.110E-05	3.121E-01	2.68E-06	1.30E-06
Row 11	11	0700-0800	6.665E-02	1.91E-06	4.57E-06	4.29E-02	1.12E-06	4.32E-06	3.78E-01	6.77E-06	2.669E-05	3.602E-01	6.27E-06	2.41E-06
Row 11	11	0800-0900	6.644E-02	1.37E-06	5.23E-06	4.29E-02	1.29E-06	4.94E-06	4.81E-01	7.09E-06	2.769E-05	3.22E-01	6.62E-06	2.50E-06
Row 11	11	0900-1000	6.644E-02	1.37E-06	5.23E-06	4.29E-02	1.29E-06	4.94E-06	4.81E-01	7.09E-06	2.769E-05	3.22E-01	6.62E-06	2.50E-06
Row 11	11	1000-1100	8.055E-02	2.46E-06	4.77E-06	7.648E-02	1.19E-06	4.52E-06	3.65E-01	5.644E-06	2.16E-05	3.410E-01	5.26E-06	2.02E-06
Row 11	11	1100-1200	8.045E-02	1.18E-06	4.58E-06	7.659E-02	1.12E-06	4.31E-06	3.68E-01	5.39E-07	2.07E-05	3.45E-01	5.08E-06	1.92E-06
Row 11	11	1200-1300	1.28E-01	2.28E-06	5.01E-06	1.28E-01	2.28E-06	5.01E-06	4.08E-01	1.08E-05	3.99E-05	4.42E-01	1.08E-05	3.99E-05
Row 11	11	1300-1400	1.26E-01	2.67E-06	1.02E-05	1.21E-01	2.59E-06	9.78E-06	4.08E-01	1.08E-05	3.99E-05	4.42E-01	9.78E-06	3.79E-06
Row 11	11	1400-1500	1.24E-01	2.70E-06	1.04E-05	1.18E-01	2.57E-06	9.88E-06	4.81E-01	1.09E-05	4.04E-05	4.54E-01	9.52E-06	3.81E-06
Row 11	11	1500-1600	1.35E-01	2.70E-06	1.04E-05	1.35E-01	2.70E-06	1.04E-05	4.81E-01	1.09E-05	4.04E-05	4.54E-01	9.52E-06	3.81E-06
Row 11	11	1600-1700	1.17E-01	2.70E-06	1.04E-05	1.13E-01	2.56E-06	9.84E-06	4.73E-01	1.08E-05	4.14E-05	4.44E-01	1.02E-05	3.90E-06
Row 11	11	1700-1800	1.07E-01	2.44E-06	9.39E-06	1.05E-01	2.30E-06	8.84E-06	4.60E-01	1.10E-05	4.24E-05	4.29E-01	1.03E-05	3.98E-06
Row 11	11	1800-1900	1.07E-01	2.44E-06	9.39E-06	1.05E-01	2.30E-06	8.84E-06	4.60E-01	1.10E-05	4.24E-05	4.29E-01	1.03E-05	3.98E-06
Row 11	11	1900-2000	5.67E-02	9.44E-07	3.82E-05	5.33E-02	9.33E-07	3.53E-05	3.37E-01	5.01E-06	2.27E-01	3.10E-01	5.43E-06	2.08E-06
Row 11	11	2000-2100	5.69E-02	8.37E-07	3.00E-05	5.47E-02	7.36E-07	2.82E-05	3.33E-01	4.88E-06	2.32E-01	3.44E-01	1.70E-05	1.70E-05
Row 11	11	2100-2200	5.66E-02	6.66E-07	2.58E-05	5.73E-02	6.27E-07	2.41E-05	3.30E-01	4.34E-06	1.67E-05	3.92E-01	3.01E-05	3.01E-05
Row 11	11	2200-2300	5.55E-02	5.39E-07	2.07E-05	5.60E-02	5.06E-07	1.94E-05	3.33E-01	3.35E-06	1.29E-05	3.06E-01	3.08E-05	1.18E-05
Row 11	11	2300-0000	5.55E-02	5.39E-07	2.07E-05	5.60E-02	5.06E-07	1.94E-05	3.33E-01	3.35E-06	1.29E-05	3.06E-01	3.08E-05	1.18E-05
Row 12	12	0000-0100	3.10E-01	1.85E-07	4.57E-06	2.88E-02	1.17E-07	4.24E-06	7.15E-01	4.27E-07	1.05E-06	6.64E-01	3.96E-07	7.70E-07
Row 12	12	0100-0200	3.15E-01	1.86E-07	4.59E-06	2.91E-02	1.17E-07	4.24E-06	7.15E-01	4.27E-07	1.05E-06	6.69E-01	3.95E-07	8.74E-07
Row 12	12	0200-0300	3.14E-01	1.86E-07	4.59E-06	2.91E-02	1.17E-07	4.24E-06	7.15E-01	4.27E-07	1.05E-06	6.69E-01	3.95E-07	8.74E-07
Row 12	12	0300-0400	3.09E-01	1.89E-07	4.67E-06	2.88E-02	1.17E-07	4.25E-06	7.15E-01	4.40E-07	1.05E-06	6.69E-01	4.10E-07	1.01E-07
Row 12	12	0400-0500	3.07E-01	2.02E-07	5.05E-06	2.87E-02	1.91E-07	4.72E-06	7.38E-01	4.87E-07	1.20E-06	6.82E-01	4.92E-07	1.12E-07
Row 12	12	0500-0600	3.07E-01	2.02E-07	5.05E-06	2.87E-02	1.91E-07	4.72E-06	7.38E-01	4.87E-07	1.20E-06	6.82E-01	4.92E-07	1.12E-07
Row 12	12	0600-0700	3.79E-01	9.11E-07	2.26E-05	3.51E-02	4.84E-07	2.06E-05	7.51E-01	2.12E-06	5.22E-06	8.09E-01	1.96E-06	4.83E-06
Row 12	12	0700-0800	3.62E-01	9.17E-07	2.28E-05	3.53E-02	4.83E-07	2.05E-05	8.81E-01	2.11E-06	5.22E-06	8.19E-01	1.97E-06	4.84E-06
Row 12	12	0800-0900	3.62E-01	9.17E-07	2.28E-05	3.53E-02	4.83E-07	2.05E-05	8.81E-01	2.11E-06	5.22E-06	8.19E-01	1.97E-06	4.84E-06
Row 12	12	0900-1000	3.85E-01	9.12E-07	2.25E-05	3.58E-02	4.81E-07	2.04E-05	8.85E-01	2.10E-06	5.16E-06	8.28E-01	1.95E-06	4.80E-06
Row 12	12	1000-1100	3.83E-01	9.11E-07	2.25E-05	3.58E-02	4.84E-07	2.11E-05	8.79E-01	2.09E-06	5.16E-06	8.24E-01	1.96E-06	4.83E-06
Row 12	12	1100-1200	3.83E-01	9.11E-07	2.25E-05	3.58E-02	4.84E-07	2.11E-05	8.79E-01	2.09E-06	5.16E-06	8.24E-01	1.96E-06	4.83E-06
Row 12	12	1200-1300	3.81E-01	9.14E-07	2.23E-05	3.54E-02	4.86E-07	2.06E-05	8.77E-01	2.10E-06	5.19E-06	8.15E-01	1.99E-06	4.82E-06
Row 12	12	1300-1400	3.78E-01	9.10E-07	2.24E-05	3.50E-02	4.83E-07	2.08E-05	8.73E-01	2.10E-06	5.18E-06	8.08E-01	1.98E-06	4.80E-06
Row 12	12	1400-1500	3.78E-01	9.10E-07	2.24E-05	3.50E-02	4.83E-07	2.08E-05	8.73E-01	2.10E-06	5.18E-06	8.08E-01	1.98E-06	4.80E-06
Row 12	12	1500-1600	3.75E-01	9.10E-07	2.24E-05	3.43E-02	4.83E-07	2.05E-05	8.68E-01	2.11E-06	5.19E-06	7.95E-01	1.99E-06	4.75E-06
Row 12	12	1600-1700	3.71E-01	9.00E-07	2.22E-05	3.37E-02	4.81E-07	2.01E-05	8.54E-01	2.07E-06	5.19E-06	7.74E-01	1.88E-06	4.63E-06
Row 12	12	1700-1800	3.69E-01	9.00E-07	2.22E-05	3.37E-02	4.81E-07	2.01E-05	8.54E-01	2.07E-06	5.19E-06	7.74E-01	1.88E-06	4.63E-06
Row 12	12	1800-1900	2.86E-01	2.04E-05	5.05E-05	2.59E-02	1.84E-07	4.55E-05	6.90E-01	4.91E-07	1.21E-06	6.24E-01	4.44E-07	1.09E-07
Row 12	12	1900-2000	2.84E-01	2.03E-05	5.02E-05	2.60E-02	1.85E-07	4.57E-05	6.88E-01	4.89E-07	1.20E-06	6.27E-01	4.47E-07	1.10E-07
Row 12	12	2000-2100	2.85E-01	2.01E-05	4.99E-05	2.61E-02	1.84E-07	4.55E-05	6.84E-01	4.88E-07	1.20E-06	6.27E-01	4.43E-07	1.09E-07
Row 12	12	2100-2200	2.85E-01	2.01E-05	4.99E-05	2.61E-02	1.84E-07	4.55E-05	6.84E-01	4.88E-07	1.20E-06	6.27E-01	4.43E-07	1.09E-07
Row 12	12	2200-2300	2.98E-01	1.86E-06	4.66E-05	2.711E-02	1.70E-07	4.52E-06	6.86E-01	4.30E-07	1.08E-06	6.28E-01	3.92E-07	9.00E-08
Row 12	12	2300-0000	3.04E-01	1.85E-06	4.61E-05	2.843E-02	1.72E-07	4.29E-06	6.99E-01	4.24E-07	1.05E-06	6.48E-01	3.94E-07	9.00E-08
Row 12	12	0000-0100	3.04E-01	1.85E-06	4.61E-05	2.843E-02	1.72E-07	4.29E-06	6.99E-01	4.24E-07	1.05E-06	6.48E-01	3.94E-07	9.00E-08
Row 12	12	0100-0200	3.04E-01	1.85E-06	4.61E-05	2.843E-02	1.72E-07	4.29E-06	6.99E-01	4.24E-07	1.05E-06	6.48E-01	3.94E-07	9.00E-08
Row 12	12	0200-0300	3.14E-01	1.85E-06	4.63E-05	2.90E-02	1.717E-07	4.29E-06	7.18E-01	4.24E-07	1.06E-06	6.38E-01	3.92E-07	9.79E-08
Row 12	12	0300-0400	3.12E-01	1.85E-06	4.64E-05	2.92E-02	1.74E-07	4.24E-06	7.15E-01	4.25E-07	1.05E-06	6.69E-01	3.97E-07	9.92E-08
Row 12	12	0400-0500	3.12E-01	1.85E-06	4.64E-05	2.92E-02	1.74E-07	4.24E-06	7.15E-01	4.25E-07	1.05E-06	6.69E-01	3.97E-07	9.92E-08
Row 12	12	0500-0600	3.02E-01	2.02E-05	5.04E-06	2.83E-02	1.88E-07	4.70E-06	6.80E-01	4.76E-07	1.17E-06	5.58E-01	4.38E-07	1.10E-07
Row 12	12	0600-0700	3.79E-01	9.09E-07	2.26E-05	3.51E-02	4.83E-07	2.06E-05	8.69E-01	2.07E-06	5.17E-06	8.02E-01	1.91E-06	4.78E-06
Row 12	12	0700-0800	3.79E-01	9.09E-07	2.26E-05	3.51E-02	4.83E-07	2.06E-05	8.69E-01	2.07E-06	5.17E-06	8.02E-01	1.91E-06	4.78E-06
Row 12	12	0800-0900	3.79E-01	9.09E-07	2.26E-05	3.51E-02	4.83E-07	2.06E-05	8.69E-01	2.07E-06	5.17E-06	8.02E-01	1.91E-06	4.78E-06
Row 12	12	0900-1000	3.78E-01	9.08E-07	2.27E-05	3.52E-02	4.84E-07	2.11E-05	8.67E-01	2.08E-06	5.20E-06	8.05E-01	1.93E-06	4.83E-06
Row 12	12	1000-1100	3.80E-01	9.09E-07	2.27E-05	3.53E-02	4.84E-07	2.11E-05	8.74E-01	2.08E-06	5.19E-06	8.11E-01	1.93E-06	4.82E-06
Row 12	12	1100-1200	3.80E-01	9.09E-07	2.27E-05	3.53E-02	4.84E-07	2.11E-05	8.74E-01	2.08E-06	5.19E-06	8.11E-01	1.93E-06	4.82E-06
Row 12	12	1200-1300	3.80E-01	9.03E-07	2.26E-05	3.56E-02	4.87E-07	2.12E-05	8.67E-01	2.06E-06	5.19E-06	8.11E-01	1.92E-06	4.83E-06
Row 12	12	1300-1400	3.78E-01	9.03E-07	2.26E-05	3.54E-02	4.81E-07	2.10E-05	8.64E-01	2.07E-06	5.16E-06	8.05E-01	1.92E-06	4.81E-06
Row 12	12	1400-1500	3.78E-01	9.03E-07	2.26E-05	3.54E-02	4.81E-07	2.10E-05	8.64E-01	2.07E-06	5.16E-06	8.05E-01	1.92E-06	4.81E-06
Row 12	12	1500-1600	3.78E-01	9.03E-07	2.26E-05	3.54E-02	4.81E-07	2.10E-05	8.64E-01	2.07E-06	5.16E-06	8.05E-01	1.92E-06	4.81E-06
Row 12														

Tsing Yi North Underground Quarry
 Open Road 24 hour Emission Factors for
 AERMOD model (November)

Road Name	Road ID	Hour	NO ₂ Emission						NO Emission					
			Monthlyhourly			Monthlybussurage			Monthlyhourly			Monthlybussurage		
			g/km/h	g/km/h	tonne/hour	g/km/h	g/km/h	tonne/hour	g/km/h	g/km/h	tonne/hour	g/km/h	g/km/h	tonne/hour
Road 14	14	0800-0900	4.446	8.057	1.5426	4.076	8.317	1.4245	3.181	4.446	8.057	1.5426	4.076	8.317
Road 14	14	0900-1000	4.446	8.057	1.4745	4.076	7.966	1.3765	2.395	4.086	7.956	1.3765	2.395	7.956
Road 14	14	1000-1100	4.446	8.057	1.3307	4.076	7.166	1.2307	1.666	4.086	7.166	1.2307	1.666	7.166
Road 14	14	1100-1200	5.266	7.647	1.306	4.086	7.067	1.2145	2.04	3.696	5.995	2.221	3.696	5.995
Road 14	14	1200-1300	8.111	6.066	2.726	7.596	4.466	2.566	3.286	6.466	1.104	2.071	6.466	1.104
Road 14	14	1300-1400	7.396	7.067	2.066	7.596	4.466	2.566	3.286	6.466	1.104	2.071	6.466	1.104
Road 14	14	1400-1500	8.376	6.066	3.076	7.766	4.676	2.656	4.04	7.356	1.294	3.156	7.356	1.294
Road 14	14	1500-1600	7.756	2.726	2.936	7.176	4.596	2.716	3.366	7.466	1.274	3.106	7.466	1.274
Road 14	14	1600-1700	7.906	2.776	3.026	7.306	4.646	2.796	3.306	7.406	1.294	3.046	7.406	1.294
Road 14	14	1700-1800	7.396	2.776	3.026	7.306	4.646	2.796	3.306	7.406	1.294	3.046	7.406	1.294
Road 14	14	1800-1900	4.786	2.116	1.886	4.366	9.076	1.706	2.476	5.686	9.696	2.221	5.686	9.696
Road 14	14	1900-2000	3.506	2.596	1.026	3.506	5.426	0.546	2.206	3.776	6.436	1.971	3.776	6.436
Road 14	14	2000-2100	3.506	2.596	1.026	3.506	5.426	0.546	2.206	3.776	6.436	1.971	3.776	6.436
Road 14	14	2100-2200	3.506	2.726	1.236	2.886	5.836	0.576	2.066	2.811	6.476	1.971	2.811	6.476
Road 14	14	2200-2300	3.106	2.016	1.006	3.106	5.746	0.536	2.016	2.706	6.416	1.886	2.706	6.416
Road 14	14	2300-2400	3.506	2.596	1.026	3.506	5.426	0.546	2.206	3.776	6.436	1.971	3.776	6.436
Road 15	15	0800-0900	4.116	5.976	5.536	3.756	5.446	5.046	1.626	2.356	2.106	1.456	2.106	1.456
Road 15	15	0900-1000	4.896	5.246	4.696	4.036	4.866	4.506	1.676	1.856	1.724	1.616	1.696	1.576
Road 15	15	1000-1100	4.896	5.246	4.696	4.036	4.866	4.506	1.676	1.856	1.724	1.616	1.696	1.576
Road 15	15	1100-1200	6.626	4.866	4.506	6.126	4.506	4.166	2.076	1.526	1.416	1.866	1.396	1.976
Road 15	15	1200-1300	6.426	5.016	4.646	6.106	4.696	4.346	2.056	1.606	1.466	1.886	1.486	1.376
Road 15	15	1300-1400	6.426	5.016	4.646	6.106	4.696	4.346	2.056	1.606	1.466	1.886	1.486	1.376
Road 15	15	1400-1500	4.416	6.816	5.816	3.676	6.226	6.716	0.727	3.656	3.306	1.574	3.306	1.574
Road 15	15	1500-1600	6.256	3.036	2.811	6.756	2	1.966	1.066	8.836	1.966	1.966	1.966	1.966
Road 15	15	1600-1700	6.256	3.036	2.811	6.756	2	1.966	1.066	8.836	1.966	1.966	1.966	1.966
Road 15	15	1700-1800	6.256	3.036	2.811	6.756	2	1.966	1.066	8.836	1.966	1.966	1.966	1.966
Road 15	15	1800-1900	6.256	3.036	2.811	6.756	2	1.966	1.066	8.836	1.966	1.966	1.966	1.966
Road 15	15	1900-2000	6.256	3.036	2.811	6.756	2	1.966	1.066	8.836	1.966	1.966	1.966	1.966
Road 15	15	2000-2100	6.256	3.036	2.811	6.756	2	1.966	1.066	8.836	1.966	1.966	1.966	1.966
Road 15	15	2100-2200	6.256	3.036	2.811	6.756	2	1.966	1.066	8.836	1.966	1.966	1.966	1.966
Road 15	15	2200-2300	6.256	3.036	2.811	6.756	2	1.966	1.066	8.836	1.966	1.966	1.966	1.966
Road 15	15	2300-2400	6.256	3.036	2.811	6.756	2	1.966	1.066	8.836	1.966	1.966	1.966	1.966
Road 16	16	0800-0900	1.306	4.496	1.526	1.206	4.576	1.406	1.26	4.636	4.426	1.196	4.636	4.426
Road 16	16	0900-1000	1.306	4.496	1.526	1.206	4.576	1.406	1.26	4.636	4.426	1.196	4.636	4.426
Road 16	16	1000-1100	1.306	4.496	1.526	1.206	4.576	1.406	1.26	4.636	4.426	1.196	4.636	4.426
Road 16	16	1100-1200	1.306	4.496	1.526	1.206	4.576	1.406	1.26	4.636	4.426	1.196	4.636	4.426
Road 16	16	1200-1300	1.306	4.496	1.526	1.206	4.576	1.406	1.26	4.636	4.426	1.196	4.636	4.426
Road 16	16	1300-1400	1.306	4.496	1.526	1.206	4.576	1.406	1.26	4.636	4.426	1.196	4.636	4.426
Road 16	16	1400-1500	1.306	4.496	1.526	1.206	4.576	1.406	1.26	4.636	4.426	1.196	4.636	4.426
Road 16	16	1500-1600	1.306	4.496	1.526	1.206	4.576	1.406	1.26	4.636	4.426	1.196	4.636	4.426
Road 16	16	1600-1700	1.306	4.496	1.526	1.206	4.576	1.406	1.26	4.636	4.426	1.196	4.636	4.426
Road 16	16	1700-1800	1.306	4.496	1.526	1.206	4.576	1.406	1.26	4.636	4.426	1.196	4.636	4.426
Road 16	16	1800-1900	1.306	4.496	1.526	1.206	4.576	1.406	1.26	4.636	4.426	1.196	4.636	4.426
Road 16	16	1900-2000	1.306	4.496	1.526	1.206	4.576	1.406	1.26	4.636	4.426	1.196	4.636	4.426
Road 16	16	2000-2100	1.306	4.496	1.526	1.206	4.576	1.406	1.26	4.636	4.426	1.196	4.636	4.426
Road 16	16	2100-2200	1.306	4.496	1.526	1.206	4.576	1.406	1.26	4.636	4.426	1.196	4.636	4.426
Road 16	16	2200-2300	1.306	4.496	1.526	1.206	4.576	1.406	1.26	4.636	4.426	1.196	4.636	4.426
Road 16	16	2300-2400	1.306	4.496	1.526	1.206	4.576	1.406	1.26	4.636	4.426	1.196	4.636	4.426
Road 17	17	0000-0100	1.246	1.416	3.346	1.126	1.046	3.036	1.056	9.726	2.846	9.266	8.586	2.516
Road 17	17	0100-0200	1.346	1.136	2.586	1.226	1.7516	2.196	1.056	6.456	1.676	5.956	5.626	1.076
Road 17	17	0200-0300	1.486	1.486	3.346	1.486	1.486	3.346	1.486	1.486	3.346	1.486	1.486	3.346
Road 17	17	0300-0400	1.586	1.586	3.646	1.586	1.586	3.646	1.586	1.586	3.646	1.586	1.586	3.646
Road 17	17	0400-0500	1.686	1.686	3.946	1.686	1.686	3.946	1.686	1.686	3.946	1.686	1.686	3.946
Road 17	17	0500-0600	1.786	1.786	4.246	1.786	1.786	4.246	1.786	1.786	4.246	1.786	1.786	4.246
Road 17	17	0600-0700	1.786	2.446	7.716	1.676	2.446	7.716	2.066	1.776	5.156	1.106	1.616	4.726
Road 17	17	0700-0800	2.426	2.776	3.706	3.086	3.176	4.416	2.166	6.6116	1.906	1.906	1.896	1.726
Road 17	17	0800-0900	2.426	2.776	3.706	3.086	3.176	4.416	2.166	6.6116	1.906	1.906	1.896	1.726
Road 17	17	0900-1000	2.426	2.776	3.706	3.086	3.176	4.416	2.166	6.6116	1.906	1.906	1.896	1.726
Road 17	17	1000-1100	2.426	2.776	3.706	3.086	3.176	4.416	2.166	6.6116	1.906	1.906	1.896	1.726
Road 17	17	1100-1200	2.426	2.776	3.706	3.086	3.176	4.416	2.166	6.6116	1.906	1.906	1.896	1.726
Road 17	17	1200-1300	2.426	2.776	3.706	3.086	3.176	4.416	2.166	6.6116	1.906	1.906	1.896	1.726
Road 17	17	1300-1400	2.426	2.776	3.706	3.086	3.176	4.416	2.166	6.6116	1.906	1.906	1.896	1.726
Road 17	17	1400-1500	2.426	2.776	3.706	3.086	3.176	4.416	2.166	6.6116	1.906	1.906	1.896	1.726
Road 17	17	1500-1600	2.426	2.776	3.706	3.086	3.176	4.416	2.166	6.6116	1.906	1.906	1.896	1.726
Road 17	17	1600-1700	2.426	2.776	3.706	3.086	3.176	4.416	2.166	6.6116	1.906	1.906	1.896	1.726
Road 17	17	1700-1800	2.426	2.776	3.706	3.086	3.176	4.416	2.166	6.6116	1.906	1.906	1.896	1.726
Road 17	17	1800-1900	2.426	2.776	3.706	3.086	3.176	4.416	2.166	6.6116	1.906	1.906	1.896	1.726
Road 17	17	1900-2000	2.426	2.776	3.706	3.086	3.176	4.416	2.166	6.6116	1.906	1.906	1.896	1.726
Road 17	17	2000-2100	2.426	2.776	3.706	3.086	3.176	4.416	2.166	6.6116	1.906	1.906	1.896	1.726
Road 17	17	2100-2200	2.426	2.776	3.706	3.086	3.176	4.416	2.166	6.6116	1.906	1.906	1.896	1.726
Road 17	17	2200-2300	2.426	2.776	3.706	3.086	3.176	4.416	2.166	6.6116	1.906	1.906	1.896	1.726
Road 17	17	2300-2400	2.426	2.776	3.706	3.086	3.176	4.416	2.166	6.6116	1.906	1.906	1.896	1.726

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
 Open Road 24 hour Emission Factors for
 AERMOD model (November)

Road Name	Road ID	Hour	NO ₂ Emission												NO Emission											
			Monthlyturnover						Monthlybourgeoisie						Monthlyturnover						Monthlybourgeoisie					
			g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h
			turnover	turnover	turnover	turnover	turnover	turnover	turnover	turnover	turnover	turnover	turnover	turnover	turnover	turnover	turnover	turnover	turnover	turnover	turnover	turnover	turnover	turnover	turnover	turnover
Road 17	17	1600-1700	7.02E-02	1.78E-04	5.14E-05	6.75E-02	1.63E-06	7.86E-05	5.09E-01	7.51E-06	2.20E-04	2.77E-01	6.94E-06	2.08E-06	1.70E-02	1.96E-06	2.30E-04	2.77E-01	6.94E-06	2.08E-06	1.70E-02	1.96E-06	2.30E-04	2.77E-01	6.94E-06	2.08E-06
Road 17	17	1700-1800	5.17E-02	1.34E-04	3.82E-05	4.78E-02	1.23E-06	5.68E-05	3.59E-01	6.70E-06	1.96E-04	2.33E-01	5.93E-06	1.68E-06	1.40E-02	1.68E-06	2.00E-04	2.33E-01	5.93E-06	1.68E-06	1.40E-02	1.68E-06	2.00E-04	2.33E-01	5.93E-06	1.68E-06
Road 17	17	1800-1900	1.80E-02	4.50E-05	1.27E-05	1.60E-02	4.00E-07	1.07E-05	6.65E-01	2.30E-06	6.90E-05	8.33E-01	2.10E-06	6.00E-07	5.00E-03	6.00E-07	7.00E-05	8.33E-01	2.10E-06	6.00E-07	5.00E-03	6.00E-07	7.00E-05	8.33E-01	2.10E-06	6.00E-07
Road 17	17	1900-2000	1.99E-02	5.64E-07	1.06E-05	1.76E-02	3.28E-07	6.05E-06	1.44E-01	2.63E-06	7.95E-05	1.28E-01	2.53E-06	8.86E-07	1.00E-02	1.20E-06	1.30E-05	1.28E-01	2.53E-06	8.86E-07	1.00E-02	1.20E-06	1.30E-05	1.28E-01	2.53E-06	8.86E-07
Road 17	17	2000-2100	1.63E-02	2.62E-07	7.66E-06	1.44E-02	3.64E-07	6.76E-06	1.46E-01	2.09E-06	6.13E-05	1.38E-01	1.86E-06	6.44E-07	7.00E-02	8.40E-07	9.00E-05	1.38E-01	2.53E-06	8.86E-07	1.00E-02	1.20E-06	1.30E-05	1.28E-01	2.53E-06	8.86E-07
Road 17	17	2100-2200	1.71E-02	2.94E-07	7.95E-06	1.61E-02	7.20E-07	4.44E-06	1.40E-01	1.91E-06	5.95E-05	1.26E-01	1.72E-06	6.05E-07	7.00E-02	8.40E-07	9.00E-05	1.26E-01	2.53E-06	8.86E-07	1.00E-02	1.20E-06	1.30E-05	1.28E-01	2.53E-06	8.86E-07
Road 17	17	2200-2300	1.86E-02	1.94E-07	5.67E-06	1.70E-02	1.17E-07	5.18E-06	1.40E-01	1.48E-06	4.29E-05	1.26E-01	1.32E-06	3.86E-07	7.00E-02	8.40E-07	9.00E-05	1.26E-01	2.53E-06	8.86E-07	1.00E-02	1.20E-06	1.30E-05	1.28E-01	2.53E-06	8.86E-07
Road 18	18	0000-0100	1.19E-02	6.79E-08	2.68E-06	1.07E-02	6.13E-08	4.40E-06	2.30E-01	6.89E-07	2.26E-06	1.06E-01	8.10E-07	2.30E-06	1.10E-02	1.30E-06	1.40E-05	1.06E-01	8.10E-07	2.30E-06	1.10E-02	1.30E-06	1.40E-05	1.06E-01	8.10E-07	2.30E-06
Road 18	18	0100-0200	1.33E-02	7.50E-08	2.85E-06	1.19E-02	7.16E-08	5.00E-06	2.60E-01	7.69E-07	2.50E-06	1.10E-01	8.10E-07	2.30E-06	1.10E-02	1.30E-06	1.40E-05	1.10E-01	8.10E-07	2.30E-06	1.10E-02	1.30E-06	1.40E-05	1.06E-01	8.10E-07	2.30E-06
Road 18	18	0200-0300	1.42E-02	8.94E-08	3.64E-06	1.51E-02	1.04E-07	1.64E-06	4.29E-01	1.24E-06	3.45E-07	1.39E-01	1.12E-07	1.22E-06	1.20E-02	1.40E-06	1.50E-05	1.39E-01	1.12E-07	1.22E-06	1.20E-02	1.40E-06	1.50E-05	1.39E-01	1.12E-07	1.22E-06
Road 18	18	0300-0400	1.55E-02	1.04E-08	4.34E-06	1.42E-02	1.34E-08	2.28E-06	1.27E-01	1.41E-07	2.81E-07	1.10E-01	1.14E-07	2.53E-07	1.40E-02	1.60E-06	1.70E-05	1.10E-01	1.14E-07	2.53E-07	1.40E-02	1.60E-06	1.70E-05	1.10E-01	1.14E-07	2.53E-07
Road 18	18	0400-0500	1.65E-02	1.16E-08	4.70E-06	1.48E-02	1.48E-08	2.50E-06	1.30E-01	1.53E-07	3.00E-07	1.10E-01	1.14E-07	2.53E-07	1.40E-02	1.60E-06	1.70E-05	1.10E-01	1.14E-07	2.53E-07	1.40E-02	1.60E-06	1.70E-05	1.10E-01	1.14E-07	2.53E-07
Road 18	18	0500-0600	1.61E-02	6.70E-08	2.62E-06	1.40E-02	8.20E-08	4.24E-06	1.30E-01	1.43E-07	2.12E-07	1.10E-01	1.14E-07	2.53E-07	1.40E-02	1.60E-06	1.70E-05	1.10E-01	1.14E-07	2.53E-07	1.40E-02	1.60E-06	1.70E-05	1.10E-01	1.14E-07	2.53E-07
Road 18	18	0600-0700	1.63E-02	1.04E-08	5.64E-06	1.51E-02	1.34E-07	2.32E-06	1.32E-01	1.17E-08	4.57E-08	1.26E-01	1.09E-08	1.96E-08	1.50E-02	1.70E-06	1.80E-05	1.26E-01	1.09E-08	1.96E-08	1.50E-02	1.70E-06	1.80E-05	1.26E-01	1.09E-08	1.96E-08
Road 18	18	0700-0800	1.75E-02	1.20E-08	5.95E-06	1.58E-02	1.50E-07	2.55E-06	1.35E-01	1.58E-08	5.67E-08	1.26E-01	1.14E-08	2.00E-08	1.60E-02	1.80E-06	1.90E-05	1.26E-01	1.14E-08	2.00E-08	1.60E-02	1.80E-06	1.90E-05	1.26E-01	1.14E-08	2.00E-08
Road 18	18	0800-0900	1.86E-02	1.53E-07	1.38E-05	1.55E-02	1.36E-07	2.27E-06	1.22E-01	2.58E-08	1.00E-08	1.31E-01	1.33E-08	2.30E-08	1.60E-02	1.80E-06	1.90E-05	1.31E-01	1.33E-08	2.30E-08	1.60E-02	1.80E-06	1.90E-05	1.31E-01	1.33E-08	2.30E-08
Road 18	18	0900-1000	1.92E-02	1.38E-07	1.52E-05	1.78E-02	1.31E-07	2.22E-06	1.32E-01	2.34E	1.02E-08	1.22E-01	1.33E-08	2.30E-08	1.60E-02	1.80E-06	1.90E-05	1.22E-01	1.33E-08	2.30E-08	1.60E-02	1.80E-06	1.90E-05	1.22E-01	1.33E-08	2.30E-08
Road 18	18	1000-1100	2.00E-02	1.50E-07	1.67E-05	1.88E-02	1.40E-07	2.30E-06	1.36E-01	2.50E-08	7.95E-08	1.26E-01	1.48E-08	2.50E-08	1.60E-02	1.80E-06	1.90E-05	1.26E-01	1.48E-08	2.50E-08	1.60E-02	1.80E-06	1.90E-05	1.26E-01	1.48E-08	2.50E-08
Road 18	18	1100-1200	3.05E-02	5.67E-07	2.29E-05	2.88E-02	5.41E-07	1.55E-05	1.66E-01	3.38E-08	1.23E-08	1.55E-01	1.95E-08	3.40E-08	1.60E-02	1.80E-06	1.90E-05	1.55E-01	1.95E-08	3.40E-08	1.60E-02	1.80E-06	1.90E-05	1.55E-01	1.95E-08	3.40E-08
Road 18	18	1200-1300	3.05E-02	5.67E-07	2.29E-05	2.88E-02	5.41E-07	1.55E-05	1.66E-01	3.38E-08	1.23E-08	1.55E-01	1.95E-08	3.40E-08	1.60E-02	1.80E-06	1.90E-05	1.55E-01	1.95E-08	3.40E-08	1.60E-02	1.80E-06	1.90E-05	1.55E-01	1.95E-08	3.40E-08
Road 18	18	1300-1400	3.05E-02	5.67E-07	2.29E-05	2.88E-02	5.41E-07	1.55E-05	1.66E-01	3.38E-08	1.23E-08	1.55E-01	1.95E-08	3.40E-08	1.60E-02	1.80E-06	1.90E-05	1.55E-01	1.95E-08	3.40E-08	1.60E-02	1.80E-06	1.90E-05	1.55E-01	1.95E-08	3.40E-08
Road 18	18	1400-1500	3.05E-02	5.67E-07	2.29E-05	2.88E-02	5.41E-07	1.55E-05	1.66E-01	3.38E-08	1.23E-08	1.55E-01	1.95E-08	3.40E-08	1.60E-02	1.80E-06	1.90E-05	1.55E-01	1.95E-08	3.40E-08	1.60E-02	1.80E-06	1.90E-05	1.55E-01	1.95E-08	3.40E-08
Road 18	18	1500-1600	2.88E-02	6.18E-07	2.42E-05	2.67E-02	5.74E-07	2.44E-05	1.65E-01	3.54E-08	1.38E-08	1.52E-01	2.28E-08	3.40E-08	1.60E-02	1.80E-06	1.90E-05	1.52E-01	2.28E-08	3.40E-08	1.60E-02	1.80E-06	1.90E-05	1.52E-01	2.28E-08	3.40E-08
Road 18	18	1600-1700	2.88E-02	6.18E-07	2.42E-05	2.67E-02	5.74E-07	2.44E-05	1.65E-01	3.54E-08	1.38E-08	1.52E-01	2.28E-08	3.40E-08	1.60E-02	1.80E-06	1.90E-05	1.52E-01	2.28E-08	3.40E-08	1.60E-02	1.80E-06	1.90E-05	1.52E-01	2.28E-08	3.40E-08
Road 18	18	1700-1800	2.38E-02	5.45E-07	2.13E-05	2.16E-02	4.97E-07	1.99E-05	1.38E-01	3.63E-08	1.42E-08	1.45E-01	2.40E-08	3.40E-08	1.60E-02	1.80E-06	1.90E-05	1.45E-01	2.40E-08	3.40E-08	1.60E-02	1.80E-06	1.90E-05	1.45E-01	2.40E-08	3.40E-08
Road 18	18	1800-1900	1.86E-02	4.16E-07	1.63E-05	1.68E-02	3.71E-07	1.47E-05	1.42E-01	3.18E-08	1.27E-08	1.24E-01	2.86E-08	1.12E-08	1.60E-02	1.80E-06	1.90E-05	1.24E-01	2.86E-08	1.12E-08	1.60E-02	1.80E-06	1.90E-05	1.24E-01	2.86E-08	1.12E-08
Road 18	18	1900-2000	1.65E-02	2.69E-07	1.13E-05	1.53E-02	2.61E-07	1.07E-05	1.42E-01	2.55E-08	9.96E-08	1.33E-01	2.71E-08	3.40E-08	1.60E-02	1.80E-06	1.90E-05	1.33E-01	2.71E-08	3.40E-08	1.60E-02	1.80E-06	1.90E-05	1.33E-01	2.71E-08	3.40E-08
Road 18	18	2000-2100	1.65E-02	2.69E-07	1.13E-05	1.53E-02	2.61E-07	1.07E-05	1.42E-01	2.55E-08	9.96E-08	1.33E-01	2.71E-08	3.40E-08	1.60E-02	1.80E-06	1.90E-05	1.33E-01	2.71E-08	3.40E-08	1.60E-02	1.80E-06	1.90E-05	1.33E-01	2.71E-08	3.40E-08
Road 18	18	2100-2200	1.56E-02	2.12E-07	8.28E-06	1.44E-02	1.98E-07	7.54E-06	1.47E-01	1.97E-08	7.67E-08	1.33E-01	2.77E-08	3.40E-08	1.60E-02	1.80E-06	1.90E-05	1.33E-01	2.77E-08	3.40E-08	1.60E-02	1.80E-06	1.90E-05	1.33E-01	2.77E-08	3.40E-08
Road 18	18	2200-2300	1.61E-02	2.08E-07	8.04E-06	1.47E-02	1.88E-07	7.33E-06	1.52E-01	1.98E-08	7.57E-08	1.37E-01	2.74E-08	3.40E-08	1.60E-02	1.80E-06	1.90E-05	1.37E-01	2.74E-08	3.40E-08	1.60E-02	1.80E-06	1.90E-05	1.37E-01	2.74E-08	3.40E-08
Road 18	18	2300-0000	1.72E-02	2.29E-07	8.70E-06	1.58E-02	2.21E-07	8.96E-06	1.54E-01	2.10E-08	8.00E-08	1.40E-01	3.01E-08	3.40E-08	1.60E-02	1.80E-06	1.90E-05	1.40E-01	3.01E-08	3.40E-08	1.60E-02	1.80E-06	1.90E-05	1.40E-01	3.01E-08	3.40E-08
Road 19	19	0000-0100	1.23E-02	1.15E-07	3.30E-06	1.12E-02	1.04E-07	3.96E-06	1.05E-01	9.78E-07	2.80E-05	9.22E-02	8.58E-07	2.49E-07	1.40E-02	1.60E-06	1.70E-05	9.22E-02	8.58E-07	2.49E-07	1.40E-02	1.60E-06	1.70E-05	9.22E-02	8.58E-07	2.49E-07
Road 19	19	0100-0200	1.24E-02	1.17E-07	3.35E-06	1.24E-02	1.05E-07	4.19E-06	1.06E-01	6.48E-07	1.87E-05	9.57E-02	8.68E-07	2.49E-07	1.40E-02	1.60E-06	1.70E-05	9.57E-02	8.68E-07	2.49E-07	1.40E-02	1.60E-06	1.70E-05	9.57E-02	8.68E-07	2.49E-07
Road 19	19	0200-0300	1.65E-02	1.59E-07	1.98E-05	1.34E-02	8.07E-07	7.92E-06	1.06E-01	1.98E-08	7.49E-08	1.40E-01	3.40E-08	3.40E-08	1.60E-02	1.80E-06	1.90E-05	1.40E-01	3.40E-08	3.40E-08	1.60E-02	1.80E-06	1.90E-05	1.40E-01	3.40E-08	3.40E-08
Road 19	19	0300-0400	1.56E-02	1.69E-08	1.64E-05	1.48E-02	5.28E																			

Tsing Yi North Underground Quarry
 Open Road 24 hour Emission Factors for
 AERMOD model (November)

Road Name	Road ID	Hour	NO Emission				MonthlyAverage				MonthlyMedian				NO Emission			
			g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	
Road 21	21	0000-0100	1.395	0.021	1.346	1.286	0.718	1.256	1.071	1.784	1.071	1.406	1.942	0.927	0.914			
Road 21	21	0100-0200	1.025	1.232	0.955	0.67	0.708	0.886	1.084	0.246	0.604	0.802	4.755	0.67	4.755	0.67		
Road 21	21	0200-0300	1.025	1.232	0.955	0.67	0.708	0.886	1.084	0.246	0.604	0.802	4.755	0.67	4.755	0.67		
Road 21	21	0300-0400	1.755	0.025	0.645	1.611	0.418	1.016	1.151	0.331	0.477	1.036	1.796	0.392	1.796	0.392		
Road 21	21	0400-0500	1.835	0.815	0.788	0.707	0.542	0.688	1.167	1.174	0.717	4.931	0.061	3.396	4.747			
Road 21	21	0500-0600	1.965	0.925	0.311	0.625	0.228	2.187	0.806	1.235	0.471	1.476	1.194	3.336	1.756			
Road 21	21	0700-0800	2.195	0.285	1.387	1.712	0.025	0.947	0.556	0.904	3.185	0.425	1.271	2.876	0.736			
Road 21	21	0800-0900	2.365	0.675	0.932	1.025	0.434	0.737	0.296	1.296	0.714	0.985	1.166	1.371	3.446			
Road 21	21	0900-1000	2.365	0.675	0.932	1.025	0.434	0.737	0.296	1.296	0.714	0.985	1.166	1.371	3.446			
Road 21	21	1000-1100	2.725	0.212	0.811	0.215	0.238	0.577	0.629	0.346	0.465	1.165	1.271	0.896	0.625			
Road 21	21	1100-1200	2.595	0.457	1.785	0.413	0.516	0.895	0.885	0.381	0.915	0.855	1.254	0.705	3.636			
Road 21	21	1200-1300	2.595	0.457	1.785	0.413	0.516	0.895	0.885	0.381	0.915	0.855	1.254	0.705	3.636			
Road 21	21	1300-1400	3.585	0.282	0.935	0.385	0.622	0.610	1.074	1.074	0.411	0.495	1.516	1.188	4.205			
Road 21	21	1400-1500	3.605	0.71	0.915	0.935	0.379	0.703	0.926	0.685	1.475	0.585	1.595	2.245	0.705			
Road 21	21	1500-1600	3.585	0.282	0.935	0.385	0.622	0.610	1.074	1.074	0.411	0.495	1.516	1.188	4.205			
Road 21	21	1600-1700	3.445	0.735	0.985	0.315	0.678	0.795	0.865	1.645	0.505	0.425	1.525	0.736	4.275			
Road 21	21	1700-1800	2.795	0.607	0.615	0.255	0.544	0.574	0.325	0.965	1.385	0.465	1.424	0.075	4.005			
Road 21	21	1800-1900	2.795	0.607	0.615	0.255	0.544	0.574	0.325	0.965	1.385	0.465	1.424	0.075	4.005			
Road 21	21	1900-2000	1.925	0.845	0.735	1.745	0.565	0.376	0.376	1.375	2.015	0.655	1.221	1.805	0.235			
Road 21	21	2000-2100	1.915	0.212	0.202	1.725	0.987	0.625	0.643	1.665	0.625	1.295	1.274	0.474	1.945			
Road 21	21	2100-2200	1.915	0.212	0.202	1.725	0.987	0.625	0.643	1.665	0.625	1.295	1.274	0.474	1.945			
Road 22	22	0000-0100	1.365	0.019	1.078	1.628	0.171	0.828	1.508	1.121	3.405	0.078	0.704	4.174	3.157	0.628		
Road 22	22	0100-0200	1.395	1.785	1.995	1.275	0.718	1.398	0.525	1.211	2.911	0.525	1.895	4.895	0.697	0.78		
Road 22	22	0200-0300	1.395	1.785	1.995	1.275	0.718	1.398	0.525	1.211	2.911	0.525	1.895	4.895	0.697	0.78		
Road 22	22	0300-0400	1.865	1.866	0.385	1.475	1.078	1.344	1.048	0.863	7.011	0.125	0.544	0.524	1.617			
Road 22	22	0400-0500	1.865	1.866	0.385	1.475	1.078	1.344	1.048	0.863	7.011	0.125	0.544	0.524	1.617			
Road 22	22	0500-0600	1.775	0.477	0.845	0.601	0.466	0.799	0.685	1.768	3.139	0.038	0.638	0.638	2.911			
Road 22	22	0600-0700	1.965	0.965	0.311	0.625	0.228	2.187	0.806	1.235	0.471	1.476	1.194	3.336	1.756			
Road 22	22	0800-0900	2.025	1.405	0.265	1.885	1.306	0.315	0.315	7.535	5.205	0.9275	0.681	0.826	0.585			
Road 22	22	0900-1000	2.095	1.585	0.282	1.835	1.475	0.615	0.615	8.025	6.035	0.645	1.725	0.495	0.885			
Road 22	22	1000-1100	2.095	1.585	0.282	1.835	1.475	0.615	0.615	8.025	6.035	0.645	1.725	0.495	0.885			
Road 22	22	1100-1200	2.205	1.535	0.265	2.785	0.601	1.435	0.545	0.511	5.485	0.975	0.785	1.512	0.915			
Road 22	22	1200-1300	2.265	1.615	0.285	2.885	0.215	1.055	0.585	0.785	5.555	0.965	0.765	1.518	0.925			
Road 22	22	1300-1400	2.265	1.615	0.285	2.885	0.215	1.055	0.585	0.785	5.555	0.965	0.765	1.518	0.925			
Road 22	22	1400-1500	2.725	0.212	0.785	3.145	0.207	1.055	0.945	0.775	6.175	0.135	0.734	0.775	1.005			
Road 22	22	1500-1600	2.005	1.655	0.265	1.885	1.545	0.765	0.665	6.855	6.135	0.824	1.735	0.515	1.055			
Road 22	22	1600-1700	2.005	1.655	0.265	1.885	1.545	0.765	0.665	6.855	6.135	0.824	1.735	0.515	1.055			
Road 22	22	1700-1800	1.825	1.315	0.235	2.335	1.075	1.205	1.135	0.285	5.225	0.931	0.665	1.785	0.855			
Road 22	22	1800-1900	1.845	1.765	0.135	1.365	1.301	0.677	0.225	0.955	3.135	0.615	0.545	0.855	0.505			
Road 22	22	1900-2000	1.845	1.765	0.135	1.365	1.301	0.677	0.225	0.955	3.135	0.615	0.545	0.855	0.505			
Road 22	22	2000-2100	1.325	0.575	0.695	1.165	1.385	0.377	0.605	5.525	1.575	0.285	0.497	0.414	2.525			
Road 22	22	2100-2200	1.335	0.885	0.685	1.225	0.335	0.625	0.505	1.005	1.605	0.285	0.502	1.465	0.265			
Road 22	22	2200-2300	1.435	0.315	0.615	1.111	1.345	0.767	0.685	1.395	2.465	0.285	0.492	1.275	0.275			
Road 22	22	2300-0000	1.435	0.315	0.615	1.111	1.345	0.767	0.685	1.395	2.465	0.285	0.492	1.275	0.275			
Road 23	23	0000-0100	1.885	1.885	0.745	0.745	1.261	0.485	0.425	0.515	1.425	0.258	0.495	0.307	2.395			
Road 23	23	0100-0200	1.395	0.705	0.985	1.295	0.251	0.445	0.447	0.585	1.011	0.015	0.855	0.824	0.965	0.78		
Road 23	23	0200-0300	1.395	0.705	0.985	1.295	0.251	0.445	0.447	0.585	1.011	0.015	0.855	0.824	0.965	0.78		
Road 23	23	0300-0400	1.365	1.775	0.365	1.765	1.635	0.108	0.107	0.695	6.985	1.225	0.470	0.608	0.182			
Road 23	23	0400-0500	1.445	1.885	0.025	1.355	2.045	0.877	0.747	0.345	8.115	0.585	0.505	0.585	0.785	1.405		
Road 23	23	0500-0600	1.445	1.885	0.025	1.355	2.045	0.877	0.747	0.345	8.115	0.585	0.505	0.585	0.785	1.405		
Road 23	23	0600-0700	1.545	0.805	1.815	0.445	0.935	1.165	0.605	0.605	3.635	0.765	0.535	0.385	0.675			
Road 23	23	0700-0800	1.805	0.267	4.535	0.665	1.227	0.715	0.695	0.895	0.975	1.665	0.695	0.835	0.575			
Road 23	23	0800-0900	1.805	0.267	4.535	0.665	1.227	0.715	0.695	0.895	0.975	1.665	0.695	0.835	0.575			
Road 23	23	0900-1000	1.755	0.305	0.915	1.635	0.297	0.485	0.605	1.225	0.265	0.265	0.611	1.135	2.055			
Road 23	23	1000-1100	1.865	0.334	0.615	1.765	0.310	0.747	0.675	0.675	1.214	0.245	0.625	1.135	0.905			
Road 23	23	1100-1200	1.865	0.334	0.615	1.765	0.310	0.747	0.675	0.675	1.214	0.245	0.625	1.135	0.905			
Road 23	23	1200-1300	1.925	0.325	0.615	1.795	0.304	0.915	0.625	1.145	0.235	0.235	0.625	1.135	2.065			
Road 23	23	1300-1400	1.835	0.305	0.645	1.715	0.327	0.407	0.675	1.285	0.265	0.265	0.625	1.135	2.065			
Road 23	23	1400-1500	1.835	0.305	0.645	1.715	0.327	0.407	0.675	1.285	0.265	0.265	0.625	1.135	2.065			
Road 23	23	1500-1600	1.695	0.335	0.615	1.855	0.327	0.705	0.605	1.425	0.315	0.245	0.611	1.125	2.055			
Road 23	23	1600-1700	1.815	0.313	0.612	1.685	0.307	0.575	0.675	0.615	1.215	0.235	0.612	1.125	2.075			
Road 23	23	1700-1800	1.595	0.245	0.875	1.465	0.245	0.747	0.675	1.075	1.065	0.285	0.525	0.925	1.825			
Road 23	23	1800-1900	1.595	0.245	0.875	1.465	0.245	0.747	0.675	1.075	1.065	0.285	0.525	0.925	1.825			
Road 23	23	1900-2000	1.295	0.825	0.815	1.175	0.805	1.245	0.245	0.395	0.775	0.747	0.474	0.811	0.67			
Road 23	23	2000-2100	1.265	0.745	0.835	1.415	0.895	0.675	0.675	0.325	0.295	0.595	0.475	0.887	0.525			
Road 23	23	2100-2200	1.265	0.745	0.835	1.415	0.895	0.675	0.675	0.325	0.295	0.595	0.475	0.887	0.525			
Road 23	23	2200-2300	1.395	0.7575	1.405	1.275	0.614	1.268	1.055	1.515	2.835	0.525	0.474	0.595	0.747			
Road 23	23	2300-0000	1.395	0.7575	1.405	1.275	0.614	1.268	1.055	1.515	2.835	0.525	0.474	0.595	0.747			
Road 23	23	0000-0100	1.425	0.345	0.8125	1.325	0.325	0.575	0.757	0.675	1.265	0.205	0.497	1.12				

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
 Open Road 24 hour Emission Factors for
 AERMOD model (November)

Road Name	Road ID	Hour	No Emission				No Emission							
			Monthlyturnover		Monthlyaverage		Monthlyturnover		Monthlyaverage					
			g/km/h	tonne/hour	g/km/h	tonne/hour	g/km/h	tonne/hour	g/km/h	tonne/hour				
Road 24	24	0800-0900	1.752e-01	5.395	8.436e-07	1.622e-01	5.314	7.886	6.725e-01	1.788	3.222	6.141	1.196	2.96
Road 24	24	0900-1000	1.776e-01	5.387	8.646e-07	1.646e-01	5.356	7.874	6.621e-01	1.747	3.068	6.286	1.096	3.41e-01
Road 24	24	1000-1100	1.765e-01	5.392	8.646e-07	1.646e-01	5.356	7.874	6.621e-01	1.747	3.068	6.286	1.096	3.41e-01
Road 24	24	1100-1200	1.865e-01	5.717	9.336e-07	1.783e-01	5.474	8.706	7.077e-01	1.936e-01	3.418	6.321	1.276	3.18
Road 24	24	1200-1300	1.935e-01	5.921	9.806e-07	1.838e-01	5.656	9.344	6.765e-01	1.973e-01	3.438	6.311	1.268	3.30e-01
Road 24	24	1300-1400	1.995e-01	5.947	1.133e-06	1.895e-01	5.686	1.231e-06	7.055e-01	1.996e-01	4.009	6.611	1.406	3.74e-01
Road 24	24	1400-1500	1.765e-01	4.232	1.006e-06	1.673e-01	5.344	8.876	6.781e-01	1.646e-01	4.170e-06	5.158	1.436	3.48e-01
Road 24	24	1600-1700	1.835e-01	4.896	9.971e-07	1.745e-01	5.396	9.326	6.707e-01	1.646e-01	3.464	6.186	1.304	3.47e-01
Road 24	24	1700-1800	1.835e-01	4.896	9.971e-07	1.745e-01	5.396	9.326	6.707e-01	1.646e-01	3.464	6.186	1.304	3.47e-01
Road 24	24	1800-1900	1.422e-01	1.936	4.833e-07	1.298e-01	1.756	4.732	3.941e-01	8.096e-07	2.038	5.646	1.347	1.84e-01
Road 24	24	1900-2000	1.396e-01	1.238	3.116e-07	1.259e-01	1.122	2.868	3.506e-01	4.996e-07	1.258e-06	5.071	4.526	1.47e-01
Road 24	24	2000-2100	1.396e-01	1.238	3.116e-07	1.259e-01	1.122	2.868	3.506e-01	4.996e-07	1.258e-06	5.071	4.526	1.47e-01
Road 24	24	2100-2200	1.396e-01	1.486	2.386e-07	1.138e-01	1.676	2.078	3.363e-01	3.911e-07	1.486	4.974	3.571	6.96e-01
Road 24	24	2200-2300	1.436e-01	1.936	2.296e-07	1.311e-01	1.836	2.098	3.526e-01	3.386e-07	1.869	4.871	1.016	7.77e-01
Road 24	24	2300-2400	1.436e-01	1.936	2.296e-07	1.311e-01	1.836	2.098	3.526e-01	3.386e-07	1.869	4.871	1.016	7.77e-01
Road 25	25	0000-0100	1.422e-01	6.222e-06	1.956e-07	1.306e-01	5.676	1.458	2.536e-01	2.316e-07	5.966	4.824	2.111e-07	5.77e-01
Road 25	25	0100-0200	1.422e-01	6.222e-06	1.956e-07	1.306e-01	5.676	1.458	2.536e-01	2.316e-07	5.966	4.824	2.111e-07	5.77e-01
Road 25	25	0200-0300	1.422e-01	6.222e-06	1.956e-07	1.306e-01	5.676	1.458	2.536e-01	2.316e-07	5.966	4.824	2.111e-07	5.77e-01
Road 25	25	0300-0400	1.466e-01	3.402e-08	7.696e-09	1.336e-01	2.798	1.118	5.426e-01	1.126e-07	2.866	5.011e-06	1.03e-06	2.64e-01
Road 25	25	0400-0500	1.476e-01	3.566e-08	9.076e-08	1.376e-01	3.338	4.408	1.058e-07	1.342e-07	3.366e-08	5.006	1.238e-06	1.51e-01
Road 25	25	0500-0600	1.466e-01	3.402e-08	7.696e-09	1.336e-01	2.798	1.118	5.426e-01	1.126e-07	2.866	5.011e-06	1.03e-06	2.64e-01
Road 25	25	0600-0700	1.466e-01	3.402e-08	7.696e-09	1.336e-01	2.798	1.118	5.426e-01	1.126e-07	2.866	5.011e-06	1.03e-06	2.64e-01
Road 25	25	0700-0800	1.836e-01	4.017e-07	1.026e-06	1.691e-01	3.708	7.444	6.696e-01	1.466e-01	5.746	6.186	1.356	4.46e-01
Road 25	25	0800-0900	1.836e-01	4.017e-07	1.026e-06	1.691e-01	3.708	7.444	6.696e-01	1.466e-01	5.746	6.186	1.356	4.46e-01
Road 25	25	0900-1000	1.876e-01	5.502e-06	1.406e-06	1.736e-01	5.017e-06	1.306e-06	7.096e-01	2.096e-06	5.326e-07	1.946e-06	1.946e-06	4.94e-01
Road 25	25	1000-1100	1.986e-01	5.747e-07	1.466e-06	1.846e-01	5.336e-06	1.366e-06	7.146e-01	2.076e-06	5.296e-06	1.936e-06	4.91e-01	4.91e-01
Road 25	25	1100-1200	1.986e-01	5.747e-07	1.466e-06	1.846e-01	5.336e-06	1.366e-06	7.146e-01	2.076e-06	5.296e-06	1.936e-06	4.91e-01	4.91e-01
Road 25	25	1200-1300	1.986e-01	5.747e-07	1.466e-06	1.846e-01	5.336e-06	1.366e-06	7.146e-01	2.076e-06	5.296e-06	1.936e-06	4.91e-01	4.91e-01
Road 25	25	1300-1400	1.951e-01	6.016e-06	1.536e-06	1.836e-01	5.626e-07	1.436e-06	7.126e-01	2.196e-06	5.576e-06	1.666e-06	1.056e-06	5.211e-01
Road 25	25	1400-1500	2.011e-01	8.111e-07	1.566e-06	1.886e-01	5.717e-06	1.466e-06	7.126e-01	2.196e-06	5.576e-06	1.666e-06	1.056e-06	5.211e-01
Road 25	25	1500-1600	2.011e-01	8.111e-07	1.566e-06	1.886e-01	5.717e-06	1.466e-06	7.126e-01	2.196e-06	5.576e-06	1.666e-06	1.056e-06	5.211e-01
Road 25	25	1600-1700	1.946e-01	5.686e-07	1.456e-06	1.806e-01	5.276e-07	1.346e-06	7.056e-01	2.066e-06	5.296e-06	1.654e-06	1.916e-06	4.88e-01
Road 25	25	1700-1800	1.726e-01	4.527e-07	1.136e-06	1.576e-01	4.426e-07	1.096e-06	6.946e-01	1.836e-06	4.666e-06	1.367e-06	1.676e-06	4.27e-01
Road 25	25	1800-1900	1.536e-01	2.746e-07	6.96e-07	1.246e-01	2.497e-07	5.96e-07	3.876e-01	1.346e-06	2.966e-06	1.046e-06	1.246e-06	3.06e-01
Road 25	25	1900-2000	1.506e-01	1.766e-07	4.466e-07	1.286e-01	1.596e-07	4.056e-07	6.046e-01	7.066e-07	1.896e-07	5.476e-07	6.396e-07	1.63e-01
Road 25	25	2000-2100	1.396e-01	3.306e-07	3.326e-07	1.366e-01	1.176e-07	5.996e-07	5.796e-01	5.406e-07	1.366e-06	5.226e-07	4.876e-07	1.24e-01
Road 25	25	2100-2200	1.396e-01	3.306e-07	3.326e-07	1.366e-01	1.176e-07	5.996e-07	5.796e-01	5.406e-07	1.366e-06	5.226e-07	4.876e-07	1.24e-01
Road 25	25	2200-2300	1.506e-01	1.736e-07	3.026e-07	1.426e-01	1.916e-07	4.036e-07	6.176e-01	7.176e-07	1.226e-06	5.246e-07	4.396e-07	1.12e-01
Road 25	25	2300-2400	1.506e-01	1.736e-07	3.026e-07	1.426e-01	1.916e-07	4.036e-07	6.176e-01	7.176e-07	1.226e-06	5.246e-07	4.396e-07	1.12e-01
Road 25	25	0000-0100	1.446e-01	6.016e-06	1.536e-06	1.836e-01	5.626e-07	1.436e-06	7.126e-01	2.196e-06	5.576e-06	1.666e-06	1.056e-06	5.211e-01
Road 25	25	0100-0200	1.446e-01	6.016e-06	1.536e-06	1.836e-01	5.626e-07	1.436e-06	7.126e-01	2.196e-06	5.576e-06	1.666e-06	1.056e-06	5.211e-01
Road 25	25	0200-0300	1.446e-01	6.016e-06	1.536e-06	1.836e-01	5.626e-07	1.436e-06	7.126e-01	2.196e-06	5.576e-06	1.666e-06	1.056e-06	5.211e-01
Road 25	25	0300-0400	1.486e-01	3.286e-08	1.276e-07	1.396e-01	3.076e-08	1.156e-07	5.456e-01	1.276e-07	4.576e-07	5.146e-07	1.146e-07	4.77e-01
Road 25	25	0400-0500	1.486e-01	3.286e-08	1.276e-07	1.396e-01	3.076e-08	1.156e-07	5.456e-01	1.276e-07	4.576e-07	5.146e-07	1.146e-07	4.77e-01
Road 25	25	0500-0600	1.506e-01	6.146e-08	2.311e-07	1.396e-01	5.726e-08	2.156e-07	5.556e-01	2.286e-07	8.546e-07	1.166e-06	2.126e-07	9.76e-01
Road 25	25	0600-0700	1.656e-01	1.546e-07	5.776e-08	1.446e-01	1.446e-07	5.411e-07	6.686e-01	5.676e-07	2.156e-06	5.871e-07	1.311e-07	1.99e-01
Road 25	25	0700-0800	1.656e-01	1.546e-07	5.776e-08	1.446e-01	1.446e-07	5.411e-07	6.686e-01	5.676e-07	2.156e-06	5.871e-07	1.311e-07	1.99e-01
Road 25	25	0800-0900	1.866e-01	4.477e-07	1.686e-06	1.738e-01	4.147e-06	1.556e-06	7.016e-01	1.686e-06	6.326e-06	6.006e-06	1.566e-06	5.86e-01
Road 25	25	0900-1000	1.866e-01	4.477e-07	1.686e-06	1.738e-01	4.147e-06	1.556e-06	7.016e-01	1.686e-06	6.326e-06	6.006e-06	1.566e-06	5.86e-01
Road 25	25	1000-1100	1.876e-01	5.086e-06	1.946e-06	1.746e-01	4.717e-07	1.676e-06	7.096e-01	1.926e-06	7.211e-06	6.666e-06	1.796e-06	6.11e-01
Road 25	25	1100-1200	1.866e-01	5.086e-06	1.946e-06	1.746e-01	4.717e-07	1.676e-06	7.096e-01	1.926e-06	7.211e-06	6.666e-06	1.796e-06	6.11e-01
Road 25	25	1200-1300	1.916e-01	5.977e-07	1.846e-06	1.838e-01	5.457e-07	1.726e-06	7.146e-01	1.786e-06	6.706e-06	6.646e-06	1.666e-06	6.23e-01
Road 25	25	1300-1400	1.956e-01	5.186e-07	1.956e-06	1.838e-01	4.866e-07	1.826e-06	7.026e-01	1.831e-06	6.856e-06	6.396e-06	1.706e-06	6.37e-01
Road 25	25	1400-1500	1.956e-01	5.186e-07	1.956e-06	1.838e-01	4.866e-07	1.826e-06	7.026e-01	1.831e-06	6.856e-06	6.396e-06	1.706e-06	6.37e-01
Road 25	25	1500-1600	1.926e-01	5.686e-07	2.136e-06	1.786e-01	5.246e-07	1.956e-06	6.826e-01	2.026e-06	7.586e-06	6.396e-06	1.886e-06	6.06e-01
Road 25	25	1600-1700	1.736e-01	5.336e-07	2.006e-06	1.606e-01	4.956e-07	1.856e-06	6.456e-01	2.086e-06	6.816e-06	5.926e-06	1.936e-06	5.29e-01
Road 25	25	1700-1800	1.736e-01	5.336e-07	2.006e-06	1.606e-01	4.956e-07	1.856e-06	6.456e-01	2.086e-06	6.816e-06	5.926e-06	1.936e-06	5.29e-01
Road 25	25	1800-1900	1.596e-01	4.211e-06	1.586e-06	1.466e-01	3.866e-07	1.456e-06	6.756e-01	1.716e-06	6.426e-06	5.506e-06	1.566e-06	5.87e-01
Road 25	25	1900-2000	1.346e-01	2.286e-07	8.686e-07	1.224e-01	2.346e-07	8.176e-07	5.636e-01	1.086e-06	4.076e-06	5.516e-06	9.811e-06	3.77e-01
Road 25	25	2000-2100	1.346e-01	2.286e-07	8.686e-07	1.224e-01	2.346e-07	8.176e-07	5.636e-01	1.086e-06	4.076e-06	5.516e-06	9.811e-06	3.77e-01
Road 25	25	2100-2200	1.196e-01	1.225e-07	4.576e-07	1.106e-01	1.136e-07	4.136e-07	5.016e-01	5.146e-07	1.907e-06	4.526e-07	4.646e-07	1.74e-01
Road 25	25	2200-2300	1.206e-01	1.226e-07	4.576e-07	1.106e-01	1.136e-07	4.136e-07	5.016e-01	5.256e-07	1.976e-06	4.526e-07	4.796e-07	1.80e-01
Road 25	25	2300-2400	1.206e-01	1.226e-07	4.576e-07	1.106e-01	1.136e-07	4.136e-07	5.016e-01	5.256e-07	1.976e-06	4.526e-07	4.796e-07	1.80e-01
Road 26	26	0000-0100												

Tsing Yi North Underground Quarry
 Open Road 24 hour Emission Factors for
 AERMOD model (November)

Road Name	Road ID	Hour	NO ₂ Emission						NO Emission					
			Monthly traffic			Monthly bus/cargo			Monthly traffic			Monthly bus/cargo		
			g/km/h	tonne/hour	g/km/h	tonne/hour	g/km/h	tonne/hour	g/km/h	tonne/hour	g/km/h	tonne/hour	g/km/h	tonne/hour
Road 27	27	1600-1700	1.932E+1	4.932E+7	1.512E+6	1.758E+1	4.367E+7	1.436E+6	7.900E+1	1.799E+6	4.506E+6	6.482E+1	1.656E+6	4.096E+6
Road 27	27	1700-1800	1.713E+1	4.932E+7	1.211E+6	1.586E+1	3.668E+7	1.116E+6	6.900E+1	1.506E+6	4.886E+6	6.931E+6	1.456E+6	4.476E+6
Road 27	27	1800-1900	1.882E+1	4.932E+7	1.211E+6	1.586E+1	3.668E+7	1.116E+6	6.900E+1	1.506E+6	4.886E+6	6.931E+6	1.456E+6	4.476E+6
Road 27	27	1900-2000	1.414E+1	1.456E+7	4.48E+6	1.286E+1	3.027E+7	4.056E+7	7.000E+1	5.876E+7	1.810E+6	5.16E+1	3.07E+6	1.54E+6
Road 27	27	2000-2100	1.37E+1	1.13E+7	3.47E+6	1.246E+1	3.037E+7	4.047E+7	6.716E+1	4.69E+7	1.446E+6	5.16E+1	3.42E+6	1.30E+6
Road 27	27	2100-2200	1.468E+1	1.076E+7	3.70E+6	1.346E+1	9.835E+6	3.037E+7	5.41E+1	3.98E+7	1.229E+6	4.96E+1	3.64E+6	1.32E+6
Road 27	27	2200-2300	1.476E+1	8.906E+6	2.74E+7	1.338E+1	8.189E+6	2.52E+7	4.47E+1	3.30E+7	1.027E+6	5.02E+1	3.03E+7	9.33E+6
Road 27	27	0000-0100	1.76E+1	1.076E+7	3.98E+6	1.622E+1	1.606E+7	3.08E+6	9.00E+1	1.88E+6	1.06E+6	1.76E+1	1.06E+6	9.31E+6
Road 27	27	0100-0200	1.468E+1	1.076E+7	3.98E+6	1.622E+1	1.606E+7	3.08E+6	9.00E+1	1.88E+6	1.06E+6	1.76E+1	1.06E+6	9.31E+6
Road 28	28	0200-0300	2.02E+1	9.86E+6	5.59E+6	1.888E+1	9.148E+6	5.196E+6	1.90E+1	9.24E+7	5.246E+7	1.74E+1	8.47E+1	8.81E+6
Road 28	28	0300-0400	2.17E+1	8.48E+6	4.81E+6	2.002E+1	7.815E+6	4.43E+6	1.92E+1	7.53E+7	4.27E+7	1.75E+1	8.86E+1	3.30E+6
Road 28	28	0400-0500	2.17E+1	8.48E+6	4.81E+6	2.002E+1	7.815E+6	4.43E+6	1.92E+1	7.53E+7	4.27E+7	1.75E+1	8.86E+1	3.30E+6
Road 28	28	0500-0600	2.22E+1	8.55E+6	9.36E+6	2.08E+1	5.12E+7	8.71E+6	1.94E+1	1.456E+6	8.20E+7	1.78E+1	3.36E+7	7.32E+6
Road 28	28	0600-0700	2.22E+1	8.55E+6	2.01E+6	2.07E+1	3.32E+7	1.88E+6	1.93E+1	3.08E+6	1.75E+7	1.78E+1	2.85E+6	6.67E+6
Road 28	28	0700-0800	2.17E+1	8.48E+6	4.81E+6	2.002E+1	7.815E+6	4.43E+6	1.92E+1	7.53E+7	4.27E+7	1.75E+1	8.86E+1	3.30E+6
Road 28	28	0800-0900	2.26E+1	2.85E+7	4.88E+6	2.06E+1	7.91E+7	4.49E+6	1.93E+1	6.77E+6	3.84E+6	1.64E+1	6.20E+6	5.2E+6
Road 28	28	0900-1000	2.51E+1	8.41E+1	4.77E+6	2.33E+1	7.82E+7	4.44E+6	1.84E+1	6.18E+6	3.64E+6	1.78E+1	5.69E+6	3.2E+6
Road 28	28	1000-1100	2.51E+1	8.41E+1	4.77E+6	2.33E+1	7.82E+7	4.44E+6	1.84E+1	6.18E+6	3.64E+6	1.78E+1	5.69E+6	3.2E+6
Road 28	28	1100-1200	2.70E+1	7.68E+7	4.36E+6	2.51E+1	7.17E+7	4.05E+6	1.87E+1	5.33E+6	3.02E+6	1.78E+1	4.92E+6	2.79E+6
Road 28	28	1200-1300	2.53E+1	5.96E+7	2.95E+6	2.35E+1	4.87E+7	2.76E+6	1.55E+1	3.13E+6	1.81E+6	1.45E+1	2.98E+6	1.96E+

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Open Road 24 Hour Emission Factors for
AERMOD model (November) Year 2033[illegible]

Open Road 24 hour Emission Factors for Year 2033

10/02/97	97	10/02/1000	1.000E+04	0.000E+00	1.000E+04	1.000E+04	0.000E+00	1.000E+04	1.000E+04	0.000E+00	0.000E+00	1.000E+04	1.000E+04	0.000E+00
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Open Road 24 Hour Emission Factors for
AERMOD model (November) Year 2033

[illegible]

Open Road 24 hour Emission Factors for Year 2033

[illegible]

Open Road 24 hour Emission Factors for
AERMOD model (November) Year 2033

[illegible]

Open Road 24 hour Emission Factors for Year 2033

Rural SP	SP	0700-0000	4.496°S	47.785°W	16.271°S	4.506°S	47.811°W	7.243°S	5.233°S	4.795°S	16.273°S	5.233°S	4.506°S	16.273°S
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Open Road 24 hour Emission Factors for
AERMOD model (November) Year 2033

11/02/99	99	07/02/0000	4.766% '04	0.000% '07	4.400% '00	4.044% '04	0.444% '07	4.000% '00	4.400% '04	0.000% '00	4.700% '02	4.000% '04	4.000% '00	4.070% '02
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Open Road 24 hour Emission Factors for Year 2033

10000 100	100	1000 1000	1.745e-06	9.995e-07	1.000e-02	1.000e-06	9.995e-07	1.000e-02	0.000e-06	1.000e-02	1.000e-02	1.000e-06	1.000e-02	9.995e-07
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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24-hour Emission Factors for

AERMOD model (November)		Year 2033		NO _x Emission		PM ₁₀ Emission		PM _{2.5} Emission		SO ₂ Emission		NH ₃ Emission		H ₂ O Emission	
Road Name	Road ID	Hour	10min	15min	30min	1hour	15min	30min	1hour	15min	30min	1hour	15min	30min	1hour
Road 103	103	1600-1700	1.81e-07	1.48e-07	1.20e-05	1.67e-02	4.59e-07	1.10e-05	8.35e-03	2.29e-06	5.52e-05	7.62e-02	2.09e-06	5.0e-05	1.91e-02
Road 103	103	1700-1800	3.90e-08	4.03e-08	7.70e-06	1.18e-02	3.66e-07	8.89e-06	7.54e-02	2.27e-06	4.68e-05	6.51e-02	2.03e-06	4.8e-05	3.48e-02
Road 103	103	1800-1900	3.58e-08	3.58e-08	7.10e-06	1.07e-02	3.35e-07	8.19e-06	6.97e-02	2.12e-06	4.34e-05	6.02e-02	1.92e-06	4.4e-05	3.16e-02
Road 103	103	1900-2000	8.33e-03	7.21e-07	5.31e-06	7.47e-03	1.98e-07	4.76e-07	5.77e-02	1.53e-05	3.68e-05	4.97e-02	1.30e-06	3.0e-05	1.02e-03
Road 103	103	2000-2100	8.10e-03	1.67e-07	4.01e-07	6.21e-03	1.48e-07	3.57e-06	8.60e-02	1.32e-06	3.17e-05	3.46e-02	1.12e-06	2.7e-05	9.40e-03
Road 103	103	2100-2200	8.10e-03	1.67e-07	4.01e-07	6.21e-03	1.48e-07	3.57e-06	8.60e-02	1.32e-06	3.17e-05	3.46e-02	1.12e-06	2.7e-05	9.40e-03
Road 103	103	2200-2300	8.10e-03	1.38e-07	3.13e-06	6.21e-03	1.24e-07	2.98e-06	6.18e-02	1.12e-06	2.79e-05	3.34e-02	1.07e-06	2.5e-05	8.70e-03
Road 104	104	0800-0900	7.72e-03	1.51e-05	2.78e-06	6.93e-03	1.04e-07	2.49e-06	6.47e-02	8.68e-06	2.33e-05	5.53e-02	8.77e-07	1.9e-05	6.71e-03
Road 104	104	0900-1000	3.44e-03	1.94e-06	1.86e-06	1.21e-02	8.27e-06	1.68e-06	7.93e-02	5.41e-07	1.10e-05	4.91e-02	4.71e-07	1.0e-05	3.48e-03
Road 104	104	1000-1100	1.66e-03	1.49e-06	1.49e-06	1.21e-02	4.00e-06	8.27e-07	3.69e-02	2.49e-07	5.10e-06	2.26e-02	2.12e-07	4.7e-06	1.62e-03
Road 104	104	0200-0300	1.56e-03	1.49e-06	1.06e-06	1.49e-02	4.78e-06	9.37e-07	8.49e-02	2.84e-07	5.81e-06	2.55e-02	5.56e-07	1.2e-05	4.24e-03
Road 104	104	0300-0400	1.66e-03	1.49e-06	1.06e-06	1.52e-02	4.09e-06	8.32e-07	8.74e-02	2.84e-07	5.81e-06	2.55e-02	5.56e-07	1.2e-05	4.24e-03
Road 104	104	0400-0500	1.76e-03	1.49e-06	1.06e-06	1.52e-02	4.09e-06	8.32e-07	8.74e-02	2.84e-07	5.81e-06	2.55e-02	5.56e-07	1.2e-05	4.24e-03
Road 104	104	0500-0600	1.87e-03	1.49e-06	1.06e-06	1.73e-02	5.12e-06	1.08e-06	9.34e-02	4.92e-07	1.00e-05	8.43e-02	4.44e-07	1.0e-05	3.48e-03
Road 104	104	0600-0700	1.97e-03	2.05e-07	6.81e-06	1.94e-02	2.09e-07	4.26e-06	9.68e-02	1.11e-06	2.26e-05	8.66e-02	9.84e-07	2.0e-05	6.71e-03
Road 104	104	0700-0800	2.07e-03	2.05e-07	6.81e-06	2.17e-02	2.19e-07	4.52e-06	9.97e-02	1.11e-06	2.26e-05	8.66e-02	9.84e-07	2.0e-05	6.71e-03
Road 104	104	0800-0900	2.01e-02	5.66e-07	1.13e-05	1.85e-02	5.10e-07	1.04e-05	9.33e-02	2.58e-06	5.29e-05	8.36e-02	2.31e-06	4.7e-05	1.62e-03
Road 104	104	0900-1000	2.31e-02	5.76e-07	1.18e-05	2.41e-02	5.35e-07	1.09e-05	1.03e-02	2.58e-06	5.29e-05	8.40e-02	2.36e-06	4.7e-05	1.62e-03
Road 104	104	1000-1100	2.52e-03	4.04e-07	1.05e-05	2.47e-02	5.02e-07	1.02e-05	1.00e-02	2.73e-06	4.72e-05	9.9e-02	1.12e-06	2.7e-05	9.40e-03
Road 104	104	1100-1200	5.25e-07	3.23e-07	6.58e-04	1.34e-02	3.02e-07	6.15e-06	7.88e-02	1.62e-06	3.30e-05	2.8e-02	5.0e-06	1.30e-05	4.3e-03
Road 104	104	1200-1300	5.25e-07	3.23e-07	6.58e-04	1.34e-02	3.02e-07	6.15e-06	7.88e-02	1.62e-06	3.30e-05	2.8e-02	5.0e-06	1.30e-05	4.3e-03
Road 104	104	1400-1500	1.62e-03	1.63e-06	9.97e-06	1.49e-02	4.35e-07	6.84e-06	8.12e-02	1.82e-06	3.11e-05	1.73e-02	4.3e-06	1.67e-05	3.3e-03
Road 104	104	1500-1600	1.62e-03	1.38e-07	3.08e-06	1.49e-02	4.31e-07	6.52e-06	8.02e-02	1.84e-06	3.14e-05	1.73e-02	4.3e-06	1.68e-05	3.3e-03
Road 104	104	1600-1700	1.62e-03	1.38e-07	3.08e-06	1.49e-02	4.35e-07	6.84e-06	8.12e-02	1.82e-06	3.11e-05	1.73e-02	4.3e-06	1.67e-05	3.3e-03
Road 104	104	1700-1800	1.38e-03	1.38e-07	3.08e-06	1.49e-02	4.35e-07	6.84e-06	8.12e-02	1.82e-06	3.11e-05	1.73e-02	4.3e-06	1.67e-05	3.3e-03
Road 104	104	1800-1900	3.38e-03	2.61e-07	2.32e-06	7.66e-03	2.36e-07	4.80e-06	5.21e-02	1.63e-06	3.23e-05	4.58e-02	1.43e-06	2.9e-05	1.02e-03
Road 104	104	1900-2000	4.05e-03	1.85e-07	3.76e-06	6.67e-03	1.65e-07	3.30e-06	5.69e-06	1.96e-06	2.77e-05	4.72e-02	1.37e-06	2.7e-05	9.40e-03
Road 104	104	2000-2100	2.20e-03	1.11e-07	2.32e-06	5.47e-03	1.05e-07	2.14e-06	3.91e-06	1.39e-06	2.42e-05	4.31e-02	1.26e-06	2.6e-05	8.70e-03
Road 104	104	2100-2200	6.08e-03	1.17e-07	3.38e-06	5.47e-03	1.05e-07	2.14e-06	3.91e-06	1.39e-06	3.30e-05	4.72e-02	1.37e-06	2.7e-05	9.40e-03
Road 104	104	2200-2300	9.91e-03	1.11e-07	2.53e-06	5.31e-03	9.93e-08	2.02e-06	3.92e-06	1.11e-06	2.93e-05	5.11e-02	9.54e-07	1.8e-05	6.71e-03
Road 105	105	0800-0900	1.64e-03	2.29e-06	2.29e-06	1.11e-02	3.11e-06	6.22e-07	3.11e-02	1.11e-06	2.26e-05	8.66e-02	9.84e-07	2.0e-05	6.71e-03
Road 105	105	0900-1000	2.31e-02	5.66e-07	1.13e-05	2.09e-02	6.20e-07	1.20e-05	1.03e-02	2.58e-06	5.29e-05	8.40e-02	2.31e-06	4.7e-05	1.62e-03
Road 105	105	0100-0200	4.24e-03	4.85e-09	6.02e-02	2.29e-02	4.49e-09	1.87e-07	1.24e-02	2.43e-01	1.01e-06	1.2e-01	2.21e-09	3.8e-05	1.28e-02
Road 105	105	0200-0300	4.85e-03	4.85e-09	6.02e-02	2.29e-02	4.49e-09	1.87e-07	1.24e-02	2.43e-01	1.01e-06	1.2e-01	2.21e-09	3.8e-05	1.28e-02
Road 105	105	0300-0400	8.28e-03	3.33e-09	3.9e-07	5.97e-02	3.05e-09	1.27e-07	1.93e-02	1.68e-06	6.95e-07	1.21e-01	1.43e-09	5.5e-05	1.91e-02
Road 105	105	0400-0500	9.41e-03	3.33e-09	3.9e-07	6.24e-02	3.69e-09	1.52e-07	1.39e-02	1.84e-06	7.68e-07	1.27e-01	1.68e-09	6.0e-05	2.12e-02
Road 105	105	0500-0600	1.47e-03	1.47e-06	1.47e-06	1.21e-02	4.00e-06	8.27e-07	3.69e-02	2.49e-07	5.10e-06	2.26e-02	2.12e-07	4.7e-06	1.62e-03
Road 105	105	0600-0700	2.41e-03	1.74e-06	2.65e-07	1.51e-02	1.61e-06	6.79e-07	1.54e-02	7.87e-06	2.88e-06	3.9e-01	7.12e-06	2.5e-05	8.70e-03
Road 105	105	0700-0800	2.57e-03	1.74e-06	2.65e-07	1.51e-02	3.47e-06	1.45e-06	1.59e-02	1.67e-07	8.12e-06	4.4e-01	1.51e-07	6.3e-05	2.12e-02
Road 105	105	0800-0900	8.50e-03	4.85e-09	6.02e-02	3.30e-02	4.49e-09	1.70e-06	1.59e-02	1.97e-07	8.12e-06	1.42e-01	1.76e-07	7.0e-05	2.48e-02
Road 105	105	0900-1000	1.4e-03	1.47e-06	1.47e-06	1.21e-02	4.00e-06	8.27e-07	3.69e-02	2.49e-07	5.10e-06	2.26e-02	2.12e-07	4.7e-06	1.62e-03
Road 105	105	1000-1100	1.64e-03	1.47e-06	1.03e-06	1.21e-02	4.29e-06	4.51e-06	1.88e-02	1.98e-07	4.72e-06	7.78e-01	1.82e-07	7.0e-05	2.48e-02
Road 105	105	1100-1200	1.38e-03	4.33e-06	8.03e-06	1.47e-02	4.02e-06	1.88e-06	3.82e-02	1.00e-07	7.49e-06	1.98e-01	1.69e-07	6.3e-05	2.12e-02
Road 105	105	1200-1300	1.56e-03	4.33e-06	8.03e-06	1.47e-02	4.02e-06	1.88e-06	3.82e-02	1.00e-07	7.49e-06	1.98e-01	1.69e-07	6.3e-05	2.12e-02
Road 105	105	1300-1400	1.04e-03	1.04e-06	1.04e-06	1.21e-02	4.00e-06	8.27e-07	3.69e-02	2.49e-07	5.10e-06	2.26e-02	2.12e-07	4.7e-06	1.62e-03
Road 105	105	1400-1500	1.07e-03	9.38e-07	9.38e-07	9.70e-02	8.56e-07	3.67e-06	3.84e-02	3.37e-06	4.00e-04	5.9e-01	3.11e-06	1.3e-05	4.3e-03
Road 105	105	1500-1600	1.07e-03	9.38e-07	9.38e-07	9.70e-02	8.56e-07	3.67e-06	3.84e-02	3.37e-06	4.00e-04	5.9e-01	3.11e-06	1.3e-05	4.3e-03
Road 105	105	1600-1700	9.44e-03	3.87e-09	4.59e-05	9.18e-02	7.74e-07	3.29e-06	3.50e-01	3.08e-06	1.28e-04	3.71e-01	2.84e-06	1.0e-05	3.48e-03
Road 105	105	1700-1800	4.24e-03	4.33e-07	4.68e-06	7.69e-02	5.87e-07	2.48e-06	2.63e-01	1.10e-04	3.14e-04	2.40e-06	1.0e-05	3.48e-03	1.28e-02
Road 105	105	1800-1900	6.70e-03	3.27e-06	3.66e-06	6.02e-02	2.10e-07	6.73e-06	2.79e-02	9.52e-07	2.98e-05	2.48e-01	8.60e-05	3.7e-05	1.28e-02
Road 105	105	1900-2000	2.10e-02	6.10e-07	1.68e-07	6.02e-02	5.52e-07	1.37e-06	2.59e-02	7.14e-07	9.97e-05	2.33e-01	6.44e-07	1.6e-05	5.52e-03
Road 105	105	2000-2100	6.37e-03	1.81e-07	1.67e-06	5.81e-02	1.65e-07	6.86e-06	2.67e-02	7.58e-06	1.15e-05	2.43e-01	6.88e-07	2.4e-05	8.70e-03
Road 105	105	2100-2200	6.37e-03	1.81e-07	1.67e-06	5.81e-02	1.65e-07	6.86e-06	2.67e-02	7.58e-06	1.15e-05	2.43e-01	6.88e-07	2.4e-05	8.70e-03
Road 105	105	2200-2300	6.37e-03	1.51e-07	3.64e-06	6.02e-02	1.23e-07	5.14e-06	2.59e-02	7.14e-07	9.97e-05	2.31e-01	6.99e-07	1.6e-05	5.52e-03
Road 106	106	0000-0100	1.78e-03	8.38e-08	7.01e-06	1.88e-02	5.70e-08	1.92e-06	3.62e-02	1.21e-06	2.62e-05	1.92e-02	3.32e-07	1.0e-05	3.48e-03
Road 106	106	0100-0200	1.78e-03	8.38e-08	7.01e-06	1.88e-02	5.70e-08	1.92e-06	3.62e-02	1.21e-06	2.62e-05	1.92e-02	3.32e-07	1.0e-05	3.48e-03
Road 106	106	0200-0300	1.78e-03	8.38e-08	7.01e-06	1.88e-02	5.70e-08	1.92e-06	3.62e-02	1.21e-06	2.62e-05	1.92e-02	3.32e-07	1.0e-05	3.48e-03
Road 106	106	0300-0400	1.78e-03	8.38e-08	7.01e-06	1.88e-02	5.70e-08	1.92e-06	3.62e-02	1.21e-06	2.62e-05	1.92e-02	3.32e-07	1.0e-05	3.48e-03
Road 106	106	0400-0500	1.78e-03	8.38e-08	7.01e-06	1.88e-02	5.70e-08	1.92e-06	3.62e-02	1.21e-06	2.62e-05	1.92e-02	3.32e-07	1.0e-05	3.48e-03
Road 106	106	0500-0600	1.78e-03	8.38e-08	7.01e-06	1.88e-02	5.70e-08								

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

AERMOD model (December)		Year 2033		NO _x Emission						NO Emission					
Road Name	Road ID	Hour	Month	g/min/hour	g/min/hour	g/min/hour	g/min/hour	g/min/hour	g/min/hour	g/min/hour	g/min/hour	g/min/hour	g/min/hour		
				g/min/hour	g/min/hour	g/min/hour	g/min/hour	g/min/hour	g/min/hour	g/min/hour	g/min/hour	g/min/hour	g/min/hour		
Road 1	1	0000-0100	1.02e-02	1.37e-07	7.52e-06	9.02e-03	1.21e-07	6.68e-06	1.21e-07	1.63e-06	8.99e-05	1.04e-07	1.40e-06	7.70e-05	
Road 1	1	0100-0200	1.10e-02	9.99e-08	5.28e-06	9.73e-03	8.51e-08	6.88e-06	1.22e-08	1.08e-05	9.94e-05	9.01e-07	6.32e-07	5.08e-05	
Road 1	1	0200-0300	1.10e-02	1.78e-08	4.00e-06	9.73e-03	1.00e-08	6.88e-06	1.22e-08	1.08e-05	9.94e-05	1.00e-07	1.00e-07	5.08e-05	
Road 1	1	0300-0400	1.26e-02	6.86e-08	3.51e-06	1.12e-03	5.71e-08	3.15e-06	1.26e-07	1.48e-07	5.56e-05	1.01e-07	5.58e-07	3.07e-05	
Road 1	1	0400-0500	1.33e-02	3.86e-08	4.07e-06	1.19e-03	6.63e-08	3.65e-06	1.26e-07	1.31e-07	3.95e-05	1.21e-07	3.02e-07	3.41e-05	
Road 1	1	0500-0600	1.33e-02	3.86e-08	4.07e-06	1.19e-03	6.63e-08	3.65e-06	1.26e-07	1.31e-07	3.95e-05	1.21e-07	3.02e-07	3.41e-05	
Road 1	1	0600-0700	1.46e-02	1.00e-07	1.65e-05	1.31e-02	2.68e-07	4.48e-06	1.31e-07	2.73e-08	5.00e-05	1.15e-07	2.35e-06	1.30e-04	
Road 1	1	0700-0800	1.54e-02	6.38e-07	3.51e-05	1.38e-02	5.72e-07	3.15e-03	1.31e-07	5.54e-06	3.05e-04	1.15e-07	4.79e-06	2.63e-04	
Road 1	1	0800-0900	1.46e-02	7.01e-07	3.86e-05	1.38e-02	6.33e-07	3.48e-03	1.15e-07	5.71e-06	1.14e-04	1.04e-07	4.99e-06	2.76e-04	
Road 1	1	0900-1000	1.33e-02	3.86e-08	4.07e-06	1.19e-03	6.63e-08	3.65e-06	1.26e-07	1.31e-07	3.95e-05	1.21e-07	3.02e-07	3.41e-05	
Road 1	1	1000-1100	1.79e-02	1.12e-07	3.37e-05	1.62e-02	5.54e-07	2.08e-03	1.29e-07	4.41e-08	4.23e-04	1.14e-07	3.88e-06	2.14e-04	
Road 1	1	1100-1200	1.73e-02	5.58e-07	3.07e-05	1.62e-02	5.05e-07	2.70e-03	1.31e-07	4.42e-08	3.38e-04	1.15e-07	3.72e-06	2.05e-04	
Road 1	1	1200-1300	1.33e-02	3.86e-08	4.07e-06	1.19e-03	6.63e-08	3.65e-06	1.26e-07	1.31e-07	3.95e-05	1.21e-07	3.02e-07	3.41e-05	
Road 1	1	1300-1400	1.90e-02	8.28e-07	4.53e-05	1.71e-02	7.41e-07	4.40e-03	1.37e-07	5.93e-06	3.26e-04	1.20e-07	5.21e-06	2.87e-04	
Road 1	1	1400-1500	1.93e-02	9.74e-07	4.50e-05	1.74e-02	8.07e-07	4.44e-03	1.36e-07	5.92e-06	3.48e-04	1.21e-07	5.58e-06	3.07e-04	
Road 1	1	1500-1600	1.73e-02	5.58e-07	3.07e-05	1.62e-02	5.05e-07	2.70e-03	1.31e-07	4.42e-08	3.38e-04	1.15e-07	3.72e-06	2.05e-04	
Road 1	1	1600-1700	1.96e-02	9.55e-07	5.48e-05	1.75e-02	8.89e-07	4.90e-03	1.36e-07	7.01e-06	3.86e-04	1.21e-07	6.12e-06	3.37e-04	
Road 1	1	1700-1800	1.88e-02	9.69e-07	4.78e-05	1.62e-02	7.87e-07	4.22e-03	1.26e-07	7.45e-06	3.10e-04	1.12e-07	6.49e-06	3.57e-04	
Road 1	1	1800-1900	1.73e-02	5.58e-07	3.07e-05	1.62e-02	5.05e-07	2.70e-03	1.31e-07	4.42e-08	3.38e-04	1.15e-07	3.72e-06	2.05e-04	
Road 1	1	1900-2000	1.70e-02	5.50e-07	3.03e-05	9.55e-03	4.89e-07	2.06e-03	1.29e-07	4.15e-05	3.35e-04	1.04e-07	5.32e-06	2.93e-04	
Road 1	1	2000-2100	1.07e-02	5.25e-07	2.34e-06	9.49e-03	3.78e-07	2.08e-03	1.36e-07	5.18e-06	2.85e-04	1.31e-07	4.50e-06	2.48e-04	
Road 2	2	0000-0100	1.23e-02	1.61e-07	8.81e-06	1.03e-02	1.34e-07	7.75e-06	1.31e-07	1.82e-06	2.89e-05	1.19e-07	1.57e-06	7.96e-05	
Road 2	2	0100-0200	1.23e-02	1.10e-08	5.92e-06	1.03e-02	3.34e-07	4.48e-06	1.31e-07	1.82e-06	2.89e-05	1.19e-07	1.57e-06	7.96e-05	
Road 2	2	0200-0300	1.23e-02	4.86e-08	4.80e-06	1.27e-02	6.85e-08	4.28e-06	1.30e-07	1.40e-07	5.58e-05	1.17e-07	7.77e-07	3.60e-05	
Road 2	2	0300-0400	1.51e-02	8.02e-08	4.96e-06	1.36e-02	7.20e-08	3.95e-06	1.35e-07	2.72e-07	1.48e-05	1.19e-07	6.32e-07	3.20e-05	
Road 2	2	0400-0500	1.51e-02	3.90e-08	4.96e-06	1.36e-02	7.20e-08	3.95e-06	1.35e-07	2.72e-07	1.48e-05	1.19e-07	6.32e-07	3.20e-05	
Road 2	2	0500-0600	1.67e-02	8.61e-07	6.56e-06	1.46e-02	1.51e-07	7.67e-06	1.41e-07	1.43e-08	7.22e-05	1.22e-07	1.44e-06	6.27e-05	
Road 2	2	0600-0700	1.74e-02	8.85e-07	1.93e-05	1.57e-02	3.42e-07	1.73e-05	1.47e-07	3.16e-05	1.74e-04	1.21e-07	1.37e-05	6.71e-05	
Road 2	2	0700-0800	1.74e-02	1.11e-06	1.93e-05	1.57e-02	3.42e-07	1.73e-05	1.47e-07	3.16e-05	1.74e-04	1.21e-07	1.37e-05	6.71e-05	
Road 2	2	0800-0900	1.75e-02	1.00e-07	4.56e-05	1.95e-02	8.17e-07	4.14e-06	1.36e-07	6.68e-06	3.80e-04	1.14e-07	5.89e-06	2.98e-04	
Road 2	2	0900-1000	1.88e-02	6.64e-07	4.88e-05	1.79e-02	7.83e-07	3.97e-06	1.37e-07	6.01e-06	3.65e-04	1.21e-07	5.30e-06	2.68e-04	
Road 2	2	1000-1100	1.88e-02	6.64e-07	4.88e-05	1.79e-02	7.83e-07	3.97e-06	1.37e-07	6.01e-06	3.65e-04	1.21e-07	5.30e-06	2.68e-04	
Road 2	2	1100-1200	2.13e-02	1.71e-07	3.92e-05	1.93e-02	1.07e-05	3.55e-06	1.42e-07	5.15e-06	2.61e-04	1.35e-07	4.56e-06	2.31e-04	
Road 2	2	1200-1300	2.39e-02	1.05e-06	5.32e-05	2.11e-02	9.53e-07	4.83e-05	1.39e-07	6.11e-06	3.10e-04	1.24e-07	4.45e-06	2.78e-04	
Road 2	2	1300-1400	2.41e-02	1.05e-06	5.32e-05	2.11e-02	9.53e-07	4.83e-05	1.39e-07	6.11e-06	3.10e-04	1.24e-07	4.45e-06	2.78e-04	
Road 2	2	1400-1500	2.41e-02	1.05e-06	5.32e-05	2.11e-02	9.53e-07	4.83e-05	1.39e-07	6.11e-06	3.10e-04	1.24e-07	4.45e-06	2.78e-04	
Road 2	2	1500-1600	2.27e-02	1.12e-06	5.66e-05	2.04e-02	1.00e-06	5.09e-06	1.36e-07	6.18e-06	3.45e-04	1.22e-07	6.01e-06	3.04e-04	
Road 2	2	1600-1700	2.37e-02	1.22e-06	6.17e-05	2.12e-02	1.09e-06	5.52e-06	1.40e-07	7.19e-06	3.64e-04	1.23e-07	6.30e-06	3.18e-04	
Road 2	2	1700-1800	2.02e-02	1.02e-06	4.91e-05	1.81e-02	8.45e-07	4.24e-06	1.31e-07	5.43e-06	2.83e-04	1.17e-07	4.36e-06	2.36e-04	
Road 2	2	1800-1900	1.37e-02	1.16e-07	4.13e-05	1.22e-02	7.27e-06	3.66e-06	1.12e-07	6.67e-06	3.30e-04	9.74e-07	5.81e-06	2.94e-04	
Road 2	2	1900-2000	1.24e-02	5.81e-07	2.95e-05	1.11e-02	5.18e-07	2.62e-05	1.17e-07	5.48e-06	2.78e-04	1.01e-07	4.91e-06	2.41e-04	
Road 2	2	2000-2100	1.24e-02	5.81e-07	2.95e-05	1.11e-02	5.18e-07	2.62e-05	1.17e-07	5.48e-06	2.78e-04	1.01e-07	4.91e-06	2.41e-04	
Road 2	2	2100-2200	1.11e-02	4.06e-07	2.00e-06	9.87e-03	3.01e-07	1.82e-05	1.10e-07	4.33e-06	1.91e-04	1.02e-07	3.71e-06	1.88e-04	
Road 2	2	2200-2300	1.12e-02	9.66e-07	2.00e-06	9.87e-03	3.51e-07	1.78e-05	1.22e-07	4.33e-06	2.00e-04	1.06e-07	3.78e-06	1.89e-04	
Road 2	2	2300-2400	1.12e-02	9.66e-07	2.00e-06	9.87e-03	3.51e-07	1.78e-05	1.22e-07	4.33e-06	2.00e-04	1.06e-07	3.78e-06	1.89e-04	
Road 3	3	0000-0100	1.23e-02	5.56e-08	3.43e-07	1.10e-02	4.97e-08	3.06e-07	1.56e-07	7.07e-07	3.43e-06	3.95e-07	6.12e-07	3.76e-06	
Road 3	3	0100-0200	1.32e-02	6.28e-08	2.40e-07	1.18e-02	3.49e-08	2.14e-07	1.56e-07	6.46e-07	7.88e-07	3.74e-07	4.04e-07	2.48e-06	
Road 3	3	0200-0300	1.32e-02	6.28e-08	2.40e-07	1.18e-02	3.49e-08	2.14e-07	1.56e-07	6.46e-07	7.88e-07	3.74e-07	4.04e-07	2.48e-06	
Road 3	3	0300-0400	1.53e-02	4.09e-08	1.61e-07	1.38e-02	2.36e-08	1.46e-07	1.69e-07	3.78e-07	1.71e-06	4.34e-07	2.24e-07	1.50e-06	
Road 3	3	0400-0500	1.59e-02	2.92e-08	1.83e-07	1.43e-02	2.70e-08	1.65e-07	1.64e-07	3.08e-07	1.89e-06	1.44e-07	1.17e-07	1.66e-06	
Road 3	3	0500-0600	1.62e-02	2.56e-08	3.22e-07	1.49e-02	4.73e-08	1.90e-07	1.65e-07	3.54e-07	2.38e-06	1.45e-07	8.89e-07	2.87e-06	
Road 3	3	0600-0700	1.62e-02	2.56e-08	3.22e-07	1.49e-02	4.73e-08	1.90e-07	1.65e-07	3.54e-07	2.38e-06	1.45e-07	8.89e-07	2.87e-06	
Road 3	3	0700-0800	1.77e-02	4.44e-07	5.52e-06	1.96e-02	2.23e-07	1.37e-06	1.66e-07	2.38e-06	1.54e-07	1.47e-07	2.06e-06	1.27e-05	
Road 3	3	0800-0900	1.68e-02	2.72e-07	1.67e-06	1.82e-02	2.47e-07	1.51e-06	1.55e-07	2.45e-06	1.50e-05	1.94e-07	1.21e-06	1.33e-05	
Road 3	3	0900-1000	1.68e-02	2.72e-07	1.67e-06	1.82e-02	2.47e-07	1.51e-06	1.55e-07	2.45e-06	1.50e-05	1.94e-07	1.21e-06	1.33e-05	
Road 3	3	1000-1100	2.04e-02	3.73e-07	4.56e-06	1.85e-02	2.14e-07	1.31e-06	1.62e-08	1.88e-06	1.15e-04	1.47e-07	1.67e-06	1.02e-05	
Road 3	3	1100-1200	1.98e-02	3.18e-07	1.34e-06	1.79e-02	1.97e-07	1.21e-06	1.66e-07	1.81e-06	1.11e-04	1.49e-07	1.88e-06	9.84e-06	
Road 3	3	1200-1300	1.98e-02	3.18e-07	1.34e-06	1.79e-02	1.97e-07	1.21e-06	1.66e-07	1.81e-06	1.11e-04	1.49e-07	1.88e-06	9.84e-06	
Road 3	3	1300-1400	2.43e-02	4.48e-07	2.14e-06	2.20e-02	3.15e-07	2.28e-06	1.85e-07	2.64e-06	1.62e-04	1.64e-07	2.35e-06	1.44e-05	
Road 3	3	1400-1500	2.44e-02	4.71e-07	2.27e-06	2.22e-02	3.37e-07	2.27e-06	1.88e-07	2.78e-07	1.71e-05	1.64e-07	2.49e-06	1.53e-05	
Road 3	3	1500-1600	2.43e-02	4.48e-07	2.14e-06	2.20e-02	3.15e-07	2.28e-06	1.85e-07	2.64e-06	1.62e-04	1.64e-07	2.35e-06	1.44e-05	
Road 3	3	1600-1700	2.52e-02	4.14e-07	2.54e-06	2.26e-02	3.72e-07	2.28e-06	1.90e-07	3.12e-06	1.91e-05	1.67e-07	2.76e-06	1.69e-05	
Road 3	3	1700-1800	2.01e-02	3.76e-07	2.27e-06	1.79e-02	3.31e-07	2.08e-06	1.81e-07	1.34e-06	2.05e-05	1.59e-07	2.84e-06	1.80e-05	
Road 3	3	1800-1900	1.96e-02	3.28e-07	2.27e-06	1.79e-02	3.31e-07	2.08e-06	1.81e-07	1.34e-06	2.05e-05	1.59e-07	2.84e-06	1.80e-05	
Road 3	3	1900-2000	1.43e-02	2.06e-07	3.										

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

AEMC model (December)		Year 2023		NO Emission										NO Emission									
Road Name	Road ID	Monthly/hourly					Monthly/hourly					Monthly/hourly					Monthly/hourly						
		g/km/h	g/h	g/km/h	g/h	g/km/h	g/h	g/km/h	g/h	g/km/h	g/h	g/km/h	g/h	g/km/h	g/h	g/km/h	g/h	g/km/h	g/h				
Road #4	0	0800-0900	1.376e2	4.886e-7	9.75e-06	1.24e-2	4.406e-7	1.01e-08	1.06e-2	3.72e-06	7.46e-05	9.09e-2	3.93e-06	6.04e-05	1.00e-08	1.06e-2	3.72e-06	7.46e-05	9.09e-2	3.93e-06			
Road #4	0	0900-1200	5.276e-2	4.432e-7	8.88e-06	1.07e-2	3.988e-7	7.99e-06	1.110e-2	3.240e-05	9.620e-05	9.620e-05	2.800e-05	5.00e-05	1.04e-2	3.240e-05	9.620e-05	9.620e-05	2.800e-05	5.00e-05			
Road #4	0	1200-1500	1.044e-2	4.250e-7	8.88e-06	1.07e-2	3.988e-7	7.99e-06	1.110e-2	3.240e-05	9.620e-05	9.620e-05	2.800e-05	5.00e-05	1.04e-2	3.240e-05	9.620e-05	9.620e-05	2.800e-05	5.00e-05			
Road #4	0	1500-1200	1.622e-2	3.862e-7	8.88e-06	1.07e-2	3.988e-7	7.99e-06	1.110e-2	3.240e-05	9.620e-05	9.620e-05	2.800e-05	5.00e-05	1.04e-2	3.240e-05	9.620e-05	9.620e-05	2.800e-05	5.00e-05			
Road #4	0	1200-1300	1.688e-2	3.962e-7	1.07e-05	1.55e-2	4.828e-7	9.670e-06	1.170e-2	3.780e-05	1.020e-04	1.020e-04	3.200e-05	6.00e-05	1.330e-2	3.780e-05	1.020e-04	1.020e-04	3.200e-05	6.00e-05			
Road #4	0	1300-1400	1.376e-2	4.886e-7	1.07e-05	1.55e-2	4.828e-7	9.670e-06	1.170e-2	3.780e-05	1.020e-04	1.020e-04	3.200e-05	6.00e-05	1.330e-2	3.780e-05	1.020e-04	1.020e-04	3.200e-05	6.00e-05			
Road #4	0	1400-1700	1.722e-2	5.966e-7	1.07e-05	1.55e-2	5.608e-07	1.087e-06	1.170e-2	4.090e-05	1.150e-05	1.030e-05	3.300e-05	7.00e-05	1.440e-2	4.090e-05	1.150e-05	1.030e-05	3.300e-05	7.00e-05			
Road #4	0	1500-1800	1.644e-2	5.811e-7	1.160e-05	1.45e-2	5.242e-7	1.051e-06	1.160e-2	4.120e-05	1.070e-05	1.020e-05	3.300e-05	7.00e-05	1.440e-2	4.120e-05	1.070e-05	1.020e-05	3.300e-05	7.00e-05			
Road #4	0	1800-1700	1.772e-2	6.776e-7	1.300e-06	1.58e-2	6.040e-7	1.210e-06	1.180e-2	4.940e-05	1.030e-05	1.020e-05	3.300e-05	7.00e-05	1.440e-2	4.940e-05	1.030e-05	1.020e-05	3.300e-05	7.00e-05			
Road #4	0	1700-1800	1.772e-2	6.776e-7	1.300e-06	1.58e-2	6.040e-7	1.210e-06	1.180e-2	4.940e-05	1.030e-05	1.020e-05	3.300e-05	7.00e-05	1.440e-2	4.940e-05	1.030e-05	1.020e-05	3.300e-05	7.00e-05			
Road #4	0	1800-2000	1.020e-2	6.030e-7	1.010e-05	9.25e-03	4.448e-7	8.971e-06	9.272e-05	4.567e-04	1.140e-04	7.970e-04	3.340e-05	6.00e-05	1.04e-2	8.971e-06	9.272e-05	4.567e-04	1.140e-04	7.970e-04			
Road #4	0	2000-2100	9.276e-03	5.670e-7	1.340e-06	9.25e-03	3.250e-05	6.150e-06	9.780e-07	3.480e-06	7.750e-07	8.270e-07	3.310e-06	6.00e-05	1.04e-2	6.150e-06	9.780e-07	3.480e-06	7.750e-07	8.270e-07			
Road #4	0	2100-2300	2.010e-2	8.350e-7	1.340e-06	9.25e-03	7.260e-05	1.400e-06	1.060e-06	3.900e-06	1.050e-06	1.100e-06	4.400e-06	6.00e-05	1.04e-2	1.400e-06	1.060e-06	3.900e-06	1.050e-06	1.100e-06			
Road #4	0	2300-2200	7.788e-03	3.280e-7	4.770e-06	6.840e-03	2.090e-07	4.200e-06	1.010e-07	3.080e-07	1.170e-07	8.500e-06	2.00e-06	5.20e-06	1.04e-2	4.200e-06	1.010e-07	3.080e-07	1.17	8.500e-06			
Road #5	0	0800-0900	1.458e-02	1.050e-06	8.75e-07	1.33e-2	9.325e-08	7.790e-07	1.620e-1	1.450e-06	3.900e-06	1.39e-07	5.76e-07	8.10e-07	1.458e-02	1.050e-06	8.75e-07	1.33e-2	9.325e-08	7.790e-07			
Road #5	0	0900-1200	5.665e-02	1.812e-06	9.950e-07	1.39e-2	6.340e-08	5.300e-07	1.620e-1	3.770e-06	1.620e-06	1.39e-07	5.76e-07	8.10e-07	5.665e-02	1.812e-06	9.950e-07	1.39e-2	6.340e-08	5.300e-07			
Road #5	0	1200-1500	1.252e-02	1.717e-06	1.120e-06	1.55e-2	2.286e-07	1.911e-09	1.250e-1	2.050e-06	7.100e-07	1.780e-07	1.780e-07	1.252e-02	1.717e-06	1.120e-06	1.55e-2	2.286e-07	1.911e-09	1.250e-1			
Road #5	0	1500-1800	2.926e-02	6.280e-07	5.240e-06	2.636e-02	5.658e-07	4.720e-06	2.170e-06	6.910e-06	3.900e-07	1.890e-07	4.070e-07	3.40e-06	2.926e-02	6.280e-07	5.240e-06	2.636e-02	5.658e-07	4.720e-06			
Road #5	0	1800-1700	2.896e-02	6.186e-07	6.030e-06	2.623e-02	6.520e-07	5.550e-06	2.620e-06	5.020e-06	3.190e-07	1.780e-07	4.420e-07	3.30e-06	2.896e-02	6.186e-07	6.030e-06	2.623e-02	6.520e-07	5.550e-06			
Road #5	0	1700-1800	2.960e-02	6.420e-07	6.090e-06	2.623e-02	6.580e-07	5.590e-06	2.620e-06	5.020e-06	3.190e-07	1.780e-07	4.420e-07	3.30e-06	2.960e-02	6.420e-07	6.090e-06	2.623e-02	6.580e-07	5.590e-06			
Road #5	0	1800-2000	1.470e-02	3.047e-07	8.050e-06	4.110e-02	5.470e-07	4.570e-06	2.290e-06	3.830e-06	2.020e-06	1.940e-07	3.30e-06	2.80e-06	1.470e-02	3.047e-07	8.050e-06	4.110e-02	5.470e-07	4.570e-06			
Road #5	0	2000-2100	3.312e-02	5.470e-07	5.570e-06	3.020e-02	4.890e-07	4.140e-06	2.210e-06	3.650e-06	1.950e-06	1.950e-07	3.20e-06	2.80e-06	3.312e-02	5.470e-07	5.570e-06	3.020e-02	4.890e-07	4.140e-06			
Road #5	0	2100-2300	7.110e-02	1.201e-07	1.940e-06	1.240e-02	9.300e-07	7.820e-06	2.140e-06	3.910e-06	2.040e-06	1.870e-07	3.10e-06	4.30e-06	7.110e-02	1.201e-07	1.940e-06	1.240e-02	9.300e-07	7.820e-06			
Road #5	0	2300-2200	1.840e-02	7.110e-07	1.130e-06	4.30e-02	1.030e-08	8.580e-06	2.090e-06	2.620e-06	2.200e-06	2.80e-07	5.50e-06	4.00e-06	1.840e-02	7.110e-07	1.130e-06	4.30e-02	1.030e-08	8.580e-06			
Road #5	0	2200-2300	1.540e-02	7.110e-07	1.130e-06	4.30e-02	1.030e-08	8.580e-06	2.090e-06	2.620e-06	2.200e-06	2.80e-07	5.50e-06	4.00e-06	1.540e-02	7.110e-07	1.130e-06	4.30e-02	1.030e-08	8.580e-06			
Road #5	0	2100-2200	4.1110e-02	3.560e-06	1.130e-06	3.696e-02	1.272e-02	1.020e-05	2.180e-05	7.250e-06	2.060e-06	1.920e-06	5.30e-06	4.30e-06	4.1110e-02	3.560e-06	1.130e-06	3.696e-02	1.272e-02	1.020e-05			
Road #5	0	1700-1800	5.040e-02	6.160e-06	8.720e-06	2.720e-02	1.040e-06	8.690e-07	1.970e-06	7.550e-06	3.310e-06	1.710e-06	6.560e-06	4.40e-06	5.040e-02	6.160e-06	8.720e-06	2.720e-02	1.040e-06	8.690e-07			
Road #5	0	1800-1700	4.260e-02	6.160e-06	8.720e-06	2.720e-02	1.040e-06	8.690e-07	1.970e-06	7.550e-06	3.310e-06	1.710e-06	6.560e-06	4.40e-06	4.260e-02	6.160e-06	8.720e-06	2.720e-02	1.040e-06	8.690e-07			
Road #5	0	1700-1800	4.260e-02	6.666e-07	5.560e-06	1.710e-02	5.010e-07	4.940e-06	1.570e-06	4.550e-06	3.550e-06	1.890e-07	3.40e-06	4.260e-02	6.666e-07	5.560e-06	1.710e-02	5.010e-07	4.940e-06	1.570e-06			
Road #5	0	2000-2100	1.960e-02	4.568e-07	8.810e-06	1.150e-02	4.070e-07	3.400e-06	1.590e-06	4.280e-06	2.580e-06	1.370e-07	3.690e-06	1.960e-02	4.568e-07	8.810e-06	1.150e-02	4.070e-07	3.400e-06	1.590e-06			
Road #5	0	2100-2300	4.320e-02	1.240e-07	1.940e-06	1.240e-02	9.300e-07	7.820e-06	2.140e-06	3.910e-06	2.040e-06	1.870e-07	3.10e-06	4.320e-02	1.240e-07	1.940e-06	1.240e-02	9.300e-07	7.820e-06	2.140e-06			
Road #5	0	2300-2200	1.410e-02	6.690e-06	1.050e-06	1.250e-02	3.370e-07	2.730e-06	1.540e-06	4.030e-06	3.650e-06	1.310e-07	3.420e-06	1.410e-02	6.690e-06	1.050e-06	1.250e-02	3.370e-07	2.730e-06	1.540e-06			
Road #5	0	2300-0800	1.456e-02	2.840e-07	2.370e-06	2.19e-02	2.530e-07	2.110e-06	1.590e-06	2.930e-06	4.450e-06	2.98e-07	2.500e-06	4.00e-06	1.456e-02	2.840e-07	2.370e-06	2.19e-02	2.530e-07	2.110e-06			
Road #5	0	0800-0900	2.366e-02	3.360e-07	6.470e-06	2.110e-02	2.090e-07	2.570e-06	1.810e-06	1.760e-07	1.470e-06	1.570e-06	1.530e-06	4.00e-06	2.366e-02	3.360e-07	6.470e-06	2.110e-02	2.090e-07	2.570e-06			
Road #5	0	0900-1200	4.140e-02	5.484e-07	5.340e-06	2.490e-02	2.490e-07	2.730e-06	1.810e-06	1.760e-07	1.470e-06	1.570e-06	1.530e-06	4.00e-06	4.140e-02	5.484e-07	5.340e-06	2.490e-02	2.490e-07	2.730e-06			
Road #5	0	1200-1500	5.230e-02	1.200e-07	3.370e-06	2.260e-02	4.170e-07	3.011e-06	1.890e-06	4.830e-07	3.950e-05	1.550e-07	7.320e-07	2.00e-06	5.230e-02	1.200e-07	3.370e-06	2.260e-02	4.170e-07	3.011e-06			
Road #5	0	1500-1800	2.711e-02	1.020e-07	3.880e-06	2.430e-02	9.230e-08	2.600e-06	1.840e-06	8.690e-07	3.950e-05	1.610e-06	1.070e-07	1.70e-06	2.711e-02	1.020e-07	3.880e-06	2.430e-02	9.230e-08	2.600e-06			
Road #5	0	1800-1700	2.711e-02	1.020e-07	3.880e-06	2.430e-02	9.230e-08	2.600e-06	1.840e-06	8.690e-07	3.950e-05	1.610e-06	1.070e-07	1.70e-06	2.711e-02	1.020e-07	3.880e-06	2.430e-02	9.230e-08	2.600e-06			
Road #5	0	1700-1800	3.144e-02	2.280e-07	6.420e-06	2.840e-02	2.090e-07	5.811e-06	1.890e-06	1.440e-06	1.050e-06	1.750e-07	1.270e-06	3.144e-02	2.280e-07	6.420e-06	2.840e-02	2.090e-07	5.811e-06	1.890e-06			
Road #5	0	1800-1700	3.830e-02	2.280e-07	6.100e-06	3.460e-02	5.420e-07	1.590e-06	2.260e-06	3.990e-06	1.010e-04	2.100e-06	1.330e-06	8.80e-06	3.830e-02	2.280e-07	6.100e-06	3.460e-02	5.420e-07	1.590e-06			
Road #5	0	2100-2300	2.260e-02	2.280e-07	6.100e-06	3.460e-02	5.420e-07	1.590e-06	2.260e-06	3.990e-06	1.010e-04	2.100e-06	1.330e-06	8.80e-06	2.260e-02	2.280e-07	6.100e-06	3.460e-02	5.420e-07	1.590e-06			
Road #5	0	2300-2200	5.470e-02	2.040e-06	5.740e-05	4.98e-02	1.866e-06	5.270e-06	2.860e-06	1.070e-05	4.000e-06	2.550e-06	9.510e-06	2.00e-06	5.470e-02	2.040e-06	5.740e-05	4.98e-02	1.866e-06	5.270e-06			
Road #5	0	2200-2300	0.186e-02	2.010e-06	5.650e-05	4.98e-02	1.832e-06	5.120e-06	3.160e-05	1.840e-06	2.760e-06	8.800e-06	2.50e-06	0.186e-02	2.010e-06	5.650e-05	4.98e-02	1.832e-06	5.120e-06	3.160e-05			
Road #5	0	2100-2200	0.186e-02	2.010e-06	5.650e-05	4.98e-02	1.832e-06																

Tsing Yi North Underground Quarry
Open Road 24-hour Emission Factors for

AERMOD model (December)		Year 2023		NO _x Emission				NO Emission						
Row Name	Row ID	Hour	Month/Year	g/min	lb/min	g/min	lb/min	g/min	lb/min	g/min	lb/min			
Row 7	7	1600-1700	2,206.02	3,866.07	4,526.06	1,976.02	3,466.07	4,056.06	1,596.01	7,796.07	3,276.05	2,456.06	2,876.05	
Row 7	7	1700-1800	1,696.02	3,176.07	3,996.06	1,516.02	3,013.07	3,536.06	1,446.04	2,976.06	1,486.05	3,906.01	3,646.05	
Row 7	7	1800-1900	1,302.02	2,312.07	3,112.06	1,262.02	2,182.07	1,786.06	1,156.04	2,886.05	1,356.05	2,886.05	2,986.05	
Row 7	7	1900-2000	1,232.02	2,172.07	2,496.06	1,056.02	1,886.07	2,216.06	1,111.04	2,346.05	1,286.05	2,126.06	2,486.05	
Row 7	7	2000-2100	1,238.02	1,666.07	1,946.06	1,106.02	1,486.07	1,746.06	1,526.05	2,026.06	1,406.05	3,386.01	1,736.06	2,106.05
Row 7	7	2100-2200	1,066.02	1,406.07	1,666.06	1,116.02	1,246.07	1,446.06	1,716.05	1,466.04	1,716.05	1,466.04	1,716.05	1,466.04
Row 7	7	2200-2300	1,126.02	1,106.07	1,686.06	9,776.03	1,276.07	1,496.06	1,486.05	1,926.06	2,266.05	1,676.06	1,966.05	1,966.05
Row 8	8	2300-0000	1,186.02	1,156.07	1,356.06	1,056.02	1,026.07	1,206.06	1,496.05	1,446.05	1,706.05	3,306.01	1,686.05	1,486.05
Row 8	8	0000-0100	2,476.02	1,336.07	2,896.07	2,226.02	1,706.07	2,426.06	2,076.05	2,176.07	1,936.05	1,986.07	3,926.06	1,926.06
Row 8	8	0100-0200	1,826.02	1,386.07	2,186.06	1,686.02	1,616.07	2,046.06	1,746.05	1,846.07	1,746.05	1,846.07	1,746.05	1,846.07
Row 8	8	0200-0300	2,596.02	1,896.07	1,956.07	2,236.02	2,596.07	1,211.07	4,036.04	1,046.07	2,106.06	1,586.01	2,416.06	1,876.06
Row 8	8	0300-0400	2,656.02	5,426.09	1,106.07	2,421.02	4,811.09	9,946.08	4,026.03	8,226.08	1,686.06	3,626.01	3,986.08	1,506.08
Row 8	8	0400-0500	1,626.02	2,586.07	2,456.07	1,626.02	1,626.07	2,456.06	1,626.05	2,456.06	1,626.05	2,456.06	1,626.05	2,456.06
Row 8	8	0500-0600	2,776.02	1,086.07	1,196.07	2,516.02	9,806.09	1,986.07	4,006.01	1,566.07	1,166.06	1,606.01	1,476.06	2,846.06
Row 8	8	0600-0700	2,636.02	2,386.08	4,811.07	2,566.02	2,126.08	4,386.07	4,006.06	3,966.07	1,796.06	1,596.01	1,011.07	6,096.06
Row 8	8	0700-0800	1,866.02	1,866.07	2,456.07	1,866.02	1,866.07	2,456.06	1,866.05	1,866.06	1,866.05	1,866.06	1,866.05	1,866.06
Row 8	8	0800-0900	2,726.02	5,246.08	1,066.06	2,486.02	4,786.06	9,666.07	3,626.01	6,886.07	1,416.05	3,286.01	6,326.07	1,386.05
Row 8	8	0900-1000	2,926.02	9,766.08	9,686.07	2,656.02	4,346.08	8,786.07	3,686.06	6,076.07	1,226.05	3,626.01	5,456.07	1,266.05
Row 8	8	1000-1100	1,446.02	1,446.07	1,446.07	1,446.02	1,446.07	1,446.06	1,446.05	1,446.06	1,446.05	1,446.06	1,446.05	1,446.06
Row 8	8	1100-1200	3,066.02	1,186.06	5,446.07	2,786.02	3,806.08	6,786.07	3,796.01	5,126.07	1,046.05	3,866.01	4,626.07	9,346.06
Row 8	8	1200-1300	3,286.02	2,386.07	2,556.06	2,966.02	1,166.07	2,346.07	2,776.06	1,186.05	2,456.01	9,716.07	1,146.05	1,146.05
Row 8	8	1300-1400	2,566.02	2,566.07	2,566.07	2,566.02	2,566.07	2,566.06	2,566.05	2,566.06	2,566.05	2,566.06	2,566.05	2,566.06
Row 8	8	1400-1500	3,252.02	3,386.07	2,806.06	2,966.02	1,266.07	2,556.06	2,696.01	1,196.05	3,336.01	2,336.01	4,046.06	2,966.05
Row 8	8	1500-1600	3,076.02	1,346.07	2,716.06	2,776.02	1,211.07	2,246.06	2,456.01	1,166.05	2,356.01	2,386.01	4,046.06	2,116.05
Row 8	8	1600-1700	3,236.02	1,456.07	2,926.06	2,886.02	1,366.07	2,246.06	2,811.04	1,276.05	2,576.01	5,511.04	1,146.06	2,366.05
Row 8	8	1700-1800	3,116.02	1,476.07	3,116.07	2,886.02	1,011.07	2,606.06	2,811.04	1,276.05	2,576.01	5,511.04	1,146.06	2,366.05
Row 8	8	1800-1900	2,276.02	1,126.07	2,276.06	2,266.02	1,011.07	2,046.06	2,786.01	3,386.06	2,786.01	4,486.06	1,236.06	2,966.05
Row 8	8	1900-2000	2,266.02	9,836.08	1,796.02	2,026.02	7,806.08	1,866.06	3,966.01	2,846.04	2,456.05	2,726.01	1,066.06	2,156.05
Row 8	8	2000-2100	2,266.02	9,836.08	1,796.02	2,026.02	7,806.08	1,866.06	3,966.01	2,846.04	2,456.05	2,726.01	1,066.06	2,156.05
Row 8	8	2100-2200	2,116.02	6,936.08	1,296.06	1,886.02	5,766.08	1,136.06	2,966.01	1,896.07	1,811.05	2,626.01	7,911.07	1,806.05
Row 8	8	2200-2300	2,186.02	6,406.08	1,296.06	1,966.02	5,756.08	1,186.06	3,126.01	3,156.07	1,896.05	2,786.01	1,851.06	1,696.05
Row 9	9	0000-0100	1,066.02	1,066.07	1,066.07	1,066.02	1,066.07	1,066.06	1,066.05	1,066.06	1,066.05	1,066.06	1,066.05	1,066.06
Row 9	9	0100-0200	1,856.02	8,756.08	6,496.07	1,656.02	7,796.07	1,866.07	3,711.05	3,986.07	1,476.01	6,926.07	5,146.06	5,146.06
Row 9	9	0200-0300	1,876.02	5,766.08	4,286.07	1,676.02	5,156.08	3,862.07	1,864.07	5,076.07	1,766.04	4,146.01	4,966.07	3,726.06
Row 9	9	0300-0400	1,066.02	1,066.07	1,066.07	1,066.02	1,066.07	1,066.06	1,066.05	1,066.06	1,066.05	1,066.06	1,066.05	1,066.06
Row 9	9	0400-0500	2,156.02	8,886.08	2,886.07	1,956.02	3,496.08	2,586.07	1,706.07	3,066.07	2,276.06	4,486.01	2,966.07	1,976.06
Row 9	9	0500-0600	2,026.02	4,466.08	3,311.07	2,026.02	4,026.08	2,996.07	1,736.04	3,046.07	2,526.05	5,116.01	2,876.07	2,026.02
Row 9	9	0600-0700	1,446.02	1,446.07	1,446.07	1,446.02	1,446.07	1,446.06	1,446.05	1,446.06	1,446.05	1,446.06	1,446.05	1,446.06
Row 9	9	0700-0800	3,026.02	1,196.07	1,626.06	2,726.02	1,576.07	1,586.06	2,126.01	1,146.05	1,446.01	9,906.06	1,906.06	1,906.06
Row 9	9	0800-0900	2,026.02	4,466.08	3,311.07	2,026.02	4,026.08	2,996.07	1,736.04	3,046.07	2,526.05	5,116.01	2,876.07	2,026.02
Row 9	9	0900-1000	1,446.02	1,446.07	1,446.07	1,446.02	1,446.07	1,446.06	1,446.05	1,446.06	1,446.05	1,446.06	1,446.05	1,446.06
Row 9	9	1000-1100	4,666.02	4,746.07	4,266.06	4,246.02	5,211.07	3,876.06	2,596.01	3,136.06	2,326.05	2,266.01	2,786.06	2,066.05
Row 9	9	1100-1200	4,136.02	5,246.07	3,896.06	4,066.02	4,756.07	3,536.06	2,596.01	2,986.01	2,216.05	2,276.01	2,646.06	1,966.05
Row 9	9	1200-1300	3,156.02	4,156.07	3,456.06	3,626.02	4,156.07	3,156.06	2,596.01	2,986.01	2,216.05	2,276.01	2,646.06	1,966.05
Row 9	9	1300-1400	1,276.02	1,446.06	1,811.05	1,156.01	2,216.06	1,646.05	5,461.05	1,056.05	7,776.05	4,911.01	9,406.06	6,786.05
Row 9	9	1400-1500	1,441.02	2,806.06	2,071.05	1,286.01	2,056.06	1,866.05	5,862.01	1,056.05	5,956.05	2,686.01	1,066.06	1,166.05
Row 9	9	1500-1600	1,211.02	1,211.07	1,211.07	1,211.02	1,211.07	1,211.06	1,211.05	1,211.06	1,211.05	1,211.06	1,211.05	1,211.06
Row 9	9	1600-1700	1,486.01	3,086.08	2,296.05	1,331.01	2,776.06	2,066.05	6,211.02	1,056.05	5,555.01	1,156.05	8,576.05	1,156.05
Row 9	9	1700-1800	1,136.02	1,466.06	1,856.05	1,101.01	2,246.06	1,666.05	5,511.01	1,226.05	9,906.05	1,086.05	8,036.05	1,086.05
Row 9	9	1800-1900	1,456.02	1,456.07	1,456.07	1,456.02	1,456.07	1,456.06	1,456.05	1,456.06	1,456.05	1,456.06	1,456.05	1,456.06
Row 9	9	1900-2000	4,296.02	1,616.07	5,311.06	3,846.02	6,411.07	4,756.06	2,796.01	4,666.04	4,666.04	4,466.01	4,106.06	3,546.05
Row 9	9	2000-2100	3,776.02	4,126.07	3,656.06	3,986.02	4,426.07	3,786.06	2,686.01	3,506.01	2,606.01	3,096.05	2,306.05	2,306.05
Row 9	9	2100-2200	3,066.02	4,496.07	3,486.06	3,211.02	4,156.07	3,116.05	2,596.01	3,346.06	2,486.05	2,446.01	2,936.05	2,066.05
Row 9	9	2200-2300	2,336.02	3,411.07	3,411.07	2,336.02	3,411.07	2,336.06	2,336.05	2,336.06	2,336.05	2,336.06	2,336.05	2,336.06
Row 9	9	2300-0000	3,536.02	3,536.07	3,536.07	3,536.02	3,536.07	3,536.06	3,536.05	3,536.06	3,536.05	3,536.06	3,536.05	3,536.06
Row 10	10	0000-0100	7,411.02	1,121.07	7,526.07	6,841.02	1,061.07	6,946.07	3,026.01	4,576.07	3,076.04	7,736.01	4,131.07	2,776.06
Row 10	10	0100-0200	9,126.02	1,256.07	7,526.07	6,841.02	1,061.07	6,946.07	3,026.01	4,576.07	3,076.04	7,736.01	4,131.07	2,776.06
Row 10	10	0200-0300	9,186.02	1,846.07	5,796.07	6,841.02	7,916.08	3,306.01	3,211.02	3,026.01	2,036.06	2,886.01	2,716.07	1,826.06
Row 10	10	0300-0400	9,896.02	8,196.08	5,496.07	9,066.02	7,966.08	5,076.07	3,296.01	2,737.01	3,866.06	3,006.01	2,486.07	1,671.06
Row 10	10	0400-0500	9,126.02	1,256.07	7,526.07	6,841.02	1,061.07	6,946.07	3,026.01	4,576.07	3,076.04	7,736.01	4,131.07	2,776.06
Row 10	10	0500-0600	9,176.02	1,166.07	7,786.07	8,536.02	1,066.07	7,236.01	3,411.01	3,411.07	2,886.06	3,126.01	3,946.07	2,646.06
Row 10	10	0600-0700	8,496.02	9,666.07	1,311.06	7,936.02	1,836.07	1,226.06	3,526.01	8,106.07	4,136.06	2,056.01	7,736.01	4,646.06
Row 10	10	0700-0800	8,496.02	9,666.07	1,311.06	7,936.02	1,836.07	1,226.06	3,526.01	8,106.07	4,136.06	2,056.01	7,736.01	4,646.06
Row 10	10	0800-0900	1,061.01	6,466.07	4,336.06	9,906.02	6,046.07	4,066.06	3,746.01	2,866.06	1,536.05	4,436.01	2,096.06	1,406.05
Row 10	10	0900-1000	1,186.01	6,211.07	4,506.06	1,146.01	6,266.07	4,296.06	3,996.01	2,626.06	1,516.05	6,216.01	2,076.06	1,396.05
Row 10	10	1000-1100	1,186.01											

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24-hour Emission Factors for

AEMC model (December)		Year 2033		NO _x Emission										NO ₂ Emission									
Row Name	Row ID	Month/hour/km		Month/hour/km		Month/hour/km		Month/hour/km		Month/hour/km		Month/hour/km		Month/hour/km		Month/hour/km		Month/hour/km		Month/hour/km		Month/hour/km	
		g/km	hour	g/km	hour	g/km	hour	g/km	hour	g/km	hour	g/km	hour	g/km	hour	g/km	hour	g/km	hour	g/km	hour	g/km	hour
Row 1	1	0300-0400	3.80E-02	2.13E-07	8.16E-07	3.51E-02	1.97E-07	7.59E-07	2.99E-07	1.67E-06	6.41E-06	2.66E-07	1.96E-06	5.71E-07	2.10E-06	1.18E-06	4.27E-07	1.18E-06	4.27E-07	1.18E-06	4.27E-07	1.18E-06	4.27E-07
Row 11	11	0100-0200	4.22E-02	1.99E-07	6.12E-07	3.94E-02	1.47E-07	5.60E-07	3.04E-07	1.14E-06	3.79E-06	2.72E-07	1.02E-06	3.27E-07	1.14E-06	3.79E-06	2.72E-07	1.02E-06	3.27E-07	1.14E-06	3.79E-06	2.72E-07	1.02E-06
Row 12	12	0200-0300	4.22E-02	1.99E-07	6.12E-07	3.94E-02	1.47E-07	5.60E-07	3.04E-07	1.14E-06	3.79E-06	2.72E-07	1.02E-06	3.27E-07	1.14E-06	3.79E-06	2.72E-07	1.02E-06	3.27E-07	1.14E-06	3.79E-06	2.72E-07	1.02E-06
Row 13	13	0300-0400	5.18E-02	1.19E-07	4.55E-07	4.81E-02	1.10E-07	4.23E-07	3.20E-07	1.73E-06	2.81E-06	2.89E-07	6.02E-07	2.52E-07	1.73E-06	2.81E-06	2.89E-07	6.02E-07	2.52E-07	1.73E-06	2.81E-06	2.89E-07	6.02E-07
Row 14	14	0400-0500	5.31E-02	1.32E-07	5.98E-07	4.49E-02	1.23E-07	4.78E-07	3.27E-07	1.81E-06	3.12E-06	2.96E-07	7.37E-07	2.28E-07	1.81E-06	3.12E-06	2.96E-07	7.37E-07	2.28E-07	1.81E-06	3.12E-06	2.96E-07	7.37E-07
Row 15	15	0500-0600	5.31E-02	1.18E-07	5.49E-07	4.49E-02	1.23E-07	4.78E-07	3.27E-07	1.81E-06	3.12E-06	2.96E-07	7.37E-07	2.28E-07	1.81E-06	3.12E-06	2.96E-07	7.37E-07	2.28E-07	1.81E-06	3.12E-06	2.96E-07	7.37E-07
Row 16	16	0600-0700	6.45E-02	1.46E-07	6.88E-07	5.08E-02	1.43E-07	1.67E-06	3.11E-06	1.19E-06	3.25E-07	2.76E-07	1.06E-06	3.25E-07	1.19E-06	3.25E-07	2.76E-07	1.06E-06	3.25E-07	1.19E-06	3.25E-07	2.76E-07	1.06E-06
Row 17	17	0700-0800	6.72E-02	1.24E-07	6.58E-07	5.28E-02	1.15E-07	1.41E-06	4.02E-06	1.22E-06	2.77E-05	3.63E-07	6.69E-07	2.44E-07	1.22E-06	2.77E-05	3.63E-07	6.69E-07	2.44E-07	1.22E-06	2.77E-05	3.63E-07	6.69E-07
Row 18	18	0800-0900	6.72E-02	1.18E-07	6.58E-07	5.28E-02	1.15E-07	1.41E-06	4.02E-06	1.22E-06	2.77E-05	3.63E-07	6.69E-07	2.44E-07	1.22E-06	2.77E-05	3.63E-07	6.69E-07	2.44E-07	1.22E-06	2.77E-05	3.63E-07	6.69E-07
Row 19	19	0900-1000	7.60E-02	1.36E-07	7.53E-07	7.28E-02	1.27E-06	4.89E-06	3.84E-07	1.57E-06	5.58E-07	3.47E-07	6.06E-07	3.47E-07	1.57E-06	5.58E-07	3.47E-07	6.06E-07	3.47E-07	1.57E-06	5.58E-07	3.47E-07	6.06E-07
Row 20	20	1000-1100	8.31E-02	1.68E-07	8.92E-06	7.77E-02	1.20E-06	4.60E-06	3.85E-07	1.51E-06	5.38E-07	3.49E-07	5.38E-07	3.49E-07	1.51E-06	5.38E-07	3.49E-07	5.38E-07	3.49E-07	1.51E-06	5.38E-07	3.49E-07	5.38E-07
Row 21	21	1100-1200	9.24E-02	1.74E-07	9.47E-06	8.11E-02	1.25E-06	8.85E-07	4.87E-07	1.93E-06	7.37E-07	4.82E-07	6.92E-07	4.82E-07	1.93E-06	7.37E-07	4.82E-07	6.92E-07	4.82E-07	1.93E-06	7.37E-07	4.82E-07	6.92E-07
Row 22	22	1300-1400	3.11E-02	2.77E-06	1.06E-05	1.23E-02	2.89E-06	9.98E-06	8.34E-07	1.09E-05	4.17E-06	4.78E-07	8.99E-06	3.88E-07	1.09E-05	4.17E-06	4.78E-07	8.99E-06	3.88E-07	1.09E-05	4.17E-06	4.78E-07	8.99E-06
Row 23	23	1400-1500	3.11E-02	2.44E-06	9.18E-06	1.08E-02	2.89E-06	9.98E-06	8.34E-07	1.09E-05	4.17E-06	4.78E-07	8.99E-06	3.88E-07	1.09E-05	4.17E-06	4.78E-07	8.99E-06	3.88E-07	1.09E-05	4.17E-06	4.78E-07	8.99E-06
Row 24	24	1500-1600	2.72E-02	2.87E-06	1.01E-05	1.20E-02	2.69E-06	9.05E-06	5.13E-07	1.16E-05	4.45E-07	4.76E-07	1.07E-05	4.41E-07	1.16E-05	4.45E-07	4.76E-07	1.07E-05	4.41E-07	1.16E-05	4.45E-07	4.76E-07	1.07E-05
Row 25	25	1600-1700	2.32E-02	2.80E-06	1.08E-05	1.15E-02	2.61E-06	9.10E-06	4.99E-07	1.14E-05	4.36E-07	4.56E-07	1.04E-05	4.30E-07	1.14E-05	4.36E-07	4.56E-07	1.04E-05	4.30E-07	1.14E-05	4.36E-07	4.56E-07	1.04E-05
Row 26	26	1700-1800	1.68E-02	1.09E-06	4.01E-06	8.71E-03	2.07E-06	6.39E-07	8.35E-07	4.93E-07	1.14E-06	4.76E-07	4.18E-07	1.09E-06	4.01E-06	8.71E-03	2.07E-06	6.39E-07	8.35E-07	4.93E-07	1.14E-06	4.76E-07	4.18E-07
Row 27	27	1800-1900	1.64E-02	1.00E-06	3.89E-06	8.95E-06	7.12E-02	1.67E-06	6.43E-06	3.98E-07	9.11E-06	5.05E-07	4.54E-07	1.00E-06	3.89E-06	8.95E-06	7.12E-02	1.67E-06	6.43E-06	3.98E-07	9.11E-06	5.05E-07	4.54E-07
Row 28	28	1900-2000	8.85E-02	1.03E-06	3.94E-06	5.46E-02	5.98E-07	3.67E-06	3.67E-06	3.45E-06	8.20E-06	4.38E-07	5.62E-07	1.03E-06	3.94E-06	5.46E-02	5.98E-07	3.67E-06	3.67E-06	3.45E-06	8.20E-06	4.38E-07	5.62E-07
Row 29	29	2000-2100	8.85E-02	1.03E-06	3.94E-06	5.46E-02	5.98E-07	3.67E-06	3.67E-06	3.45E-06	8.20E-06	4.38E-07	5.62E-07	1.03E-06	3.94E-06	5.46E-02	5.98E-07	3.67E-06	3.67E-06	3.45E-06	8.20E-06	4.38E-07	5.62E-07
Row 30	30	2100-2200	5.77E-02	7.96E-07	3.05E-06	5.39E-02	7.42E-07	2.85E-06	3.54E-06	6.03E-06	3.33E-06	4.56E-07	1.03E-06	3.94E-06	5.46E-02	5.98E-07	3.67E-06	3.67E-06	3.45E-06	8.20E-06	4.38E-07	5.62E-07	1.03E-06
Row 31	31	2200-2300	5.27E-02	6.84E-07	2.66E-06	4.92E-02	6.47E-07	2.48E-06	3.55E-06	4.67E-06	1.79E-05	3.21E-06	4.22E-06	1.03E-06	3.94E-06	5.46E-02	5.98E-07	3.67E-06	3.67E-06	3.45E-06	8.20E-06	4.38E-07	5.62E-07
Row 32	32	2300-0000	5.54E-02	5.98E-07	2.14E-06	5.18E-02	5.27E-07	2.00E-06	3.54E-06	3.56E-06	1.73E-05	3.22E-06	4.22E-06	1.03E-06	3.94E-06	5.46E-02	5.98E-07	3.67E-06	3.67E-06	3.45E-06	8.20E-06	4.38E-07	5.62E-07
Row 33	33	0000-0100	5.27E-02	6.84E-07	2.66E-06	4.92E-02	6.47E-07	2.48E-06	3.55E-06	4.67E-06	1.79E-05	3.21E-06	4.22E-06	1.03E-06	3.94E-06	5.46E-02	5.98E-07	3.67E-06	3.67E-06	3.45E-06	8.20E-06	4.38E-07	5.62E-07
Row 34	34	0100-0200	3.24E-02	1.96E-07	4.84E-06	2.93E-02	1.78E-07	4.39E-07	3.50E-07	4.55E-07	1.12E-05	6.79E-07	4.12E-07	1.03E-06	3.94E-06	5.46E-02	5.98E-07	3.67E-06	3.67E-06	3.45E-06	8.20E-06	4.38E-07	5.62E-07
Row 35	35	0200-0300	3.24E-02	1.96E-07	4.84E-06	2.93E-02	1.78E-07	4.39E-07	3.50E-07	4.55E-07	1.12E-05	6.79E-07	4.12E-07	1.03E-06	3.94E-06	5.46E-02	5.98E-07	3.67E-06	3.67E-06	3.45E-06	8.20E-06	4.38E-07	5.62E-07
Row 36	36	0300-0400	3.38E-02	1.97E-07	4.85E-06	2.98E-02	1.78E-07	4.39E-07	3.51E-07	4.54E-07	1.12E-05	6.81E-07	4.10E-07	1.03E-06	3.94E-06	5.46E-02	5.98E-07	3.67E-06	3.67E-06	3.45E-06	8.20E-06	4.38E-07	5.62E-07
Row 37	37	0400-0500	3.38E-02	1.97E-07	4.85E-06	2.98E-02	1.78E-07	4.39E-07	3.51E-07	4.54E-07	1.12E-05	6.81E-07	4.10E-07	1.03E-06	3.94E-06	5.46E-02	5.98E-07	3.67E-06	3.67E-06	3.45E-06	8.20E-06	4.38E-07	5.62E-07
Row 38	38	0500-0600	3.24E-02	1.96E-07	4.84E-06	2.93E-02	1.78E-07	4.39E-07	3.50E-07	4.55E-07	1.12E-05	6.79E-07	4.12E-07	1.03E-06	3.94E-06	5.46E-02	5.98E-07	3.67E-06	3.67E-06	3.45E-06	8.20E-06	4.38E-07	5.62E-07
Row 39	39	0600-0700	3.24E-02	1.96E-07	4.84E-06	2.93E-02	1.78E-07	4.39E-07	3.50E-07	4.55E-07	1.12E-05	6.79E-07	4.12E-07	1.03E-06	3.94E-06	5.46E-02	5.98E-07	3.67E-06	3.67E-06	3.45E-06	8.20E-06	4.38E-07	5.62E-07
Row 40	40	0700-0800	3.99E-02	1.93E-07	5.35E-06	3.46E-02	6.68E-07	2.14E-06	9.21E-07	2.20E-06	4.42E-06	4.83E-07	2.00E-06	3.99E-02	1.93E-07	5.35E-06	3.46E-02	6.68E-07	2.14E-06	9.21E-07	2.20E-06	4.42E-06	4.83E-07
Row 41	41	0800-0900	3.99E-02	1.93E-07	5.35E-06	3.46E-02	6.68E-07	2.14E-06	9.21E-07	2.20E-06	4.42E-06	4.83E-07	2.00E-06	3.99E-02	1.93E-07	5.35E-06	3.46E-02	6.68E-07	2.14E-06	9.21E-07	2.20E-06	4.42E-06	4.83E-07
Row 42	42	0900-1000	4.02E-02	1.95E-07	5.35E-06	3.46E-02	6.68E-07	2.14E-06	9.21E-07	2.20E-06	4.42E-06	4.83E-07	2.00E-06	4.02E-02	1.95E-07	5.35E-06	3.46E-02	6.68E-07	2.14E-06	9.21E-07	2.20E-06	4.42E-06	4.83E-07
Row 43	43	1000-1100	4.02E-02	1.95E-07	5.35E-06	3.46E-02	6.68E-07	2.14E-06	9.21E-07	2.20E-06	4.42E-06	4.83E-07	2.00E-06	4.02E-02	1.95E-07	5.35E-06	3.46E-02	6.68E-07	2.14E-06	9.21E-07	2.20E-06	4.42E-06	4.83E-07
Row 44	44	1100-1200	4.04E-02	1.95E-07	5.35E-06	3.46E-02	6.68E-07	2.14E-06	9.21E-07	2.20E-06	4.42E-06	4.83E-07	2.00E-06	4.04E-02	1.95E-07	5.35E-06	3.46E-02	6.68E-07	2.14E-06	9.21E-07	2.20E-06	4.42E-06	4.83E-07
Row 45	45	1200-1300	4.04E-02	1.95E-07	5.35E-06	3.46E-02	6.68E-07	2.14E-06	9.21E-07	2.20E-06	4.42E-06	4.83E-07	2.00E-06	4.04E-02	1.95E-07	5.35E-06	3.46E-02	6.68E-07	2.14E-06	9.21E-07	2.20E-06	4.42E-06	4.83E-07
Row 46	46	1300-1400	3.98E-02	1.96E-07	5.35E-06	3.46E-02	6.68E-07	2.14E-06	9.21E-07	2.20E-06	4.42E-06	4.83E-07	2.00E-06	3.98E-02	1.96E-07	5.35E-06	3.46E-02	6.68E-07	2.14E-06	9.21E-07	2.20E-06	4.42E-06	4.83E-07
Row 47	47	1400-1500	3.98E-02	1.96E-07	5.35E-06	3.46E-02	6.68E-07	2.14E-06	9.21E-07	2.20E-06	4.42E-06	4.83E-07	2.00E-06	3.98E-02	1.96E-07	5.35E-06	3.46E-02	6.68E-07	2.14E-06	9.21E-07	2.20E-06	4.42E-06	4.83E-07
Row 48	48	1500-1600	3.98E-02	1.96E-07	5.35E-06	3.46E-02	6.68E-07	2.14E-06	9.21E-07	2.20E-06	4.42E-06	4.83E-07	2.00E-06	3.98E-02	1.96E-07	5.35E-06	3.46E-02	6.68E-07	2.14E-06	9.21E-07	2.20E-06	4.42E-06	4.83E-07
Row 49	49																						

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

AERMOD model (December)			Year 2033		NO _x Emission										NO Emission									
Road Name	Road ID	Hour	MonthlyHourlyMin		MonthlyHourlyMax		MonthlyHourlyAverage		MonthlyHourlyMin		MonthlyHourlyMax		MonthlyHourlyAverage											
			g/min/hour	g/min ² /hour	g/min/hour	g/min ² /hour	g/min/hour	g/min ² /hour	g/min/hour	g/min ² /hour	g/min/hour	g/min ² /hour	g/min/hour	g/min ² /hour										
Road 14	14	0800-0900	4.62E-02	9.43E-07	1.61E-05	4.22E-02	8.60E-07	1.47E-05	2.31E-01	4.70E-06	8.02E-05	2.05E-01	4.18E-06	7.13E-05										
Road 14	14	1000-1200	5.18E-02	8.88E-07	1.53E-05	4.70E-02	8.14E-07	1.32E-05	2.56E-01	4.32E-06	9.73E-05	2.21E-01	3.82E-06	6.52E-05										
Road 14	14	1400-1600	5.54E-02	9.58E-07	1.65E-05	5.03E-02	8.85E-07	1.39E-05	2.75E-01	4.68E-06	1.07E-04	2.27E-01	3.94E-06	6.76E-05										
Road 14	14	1100-1200	5.54E-02	8.04E-07	1.37E-05	4.03E-02	7.31E-07	1.29E-05	2.56E-01	3.72E-06	8.23E-05	2.29E-01	3.32E-06	5.66E-05										
Road 14	14	1300-1400	5.54E-02	8.04E-07	1.37E-05	4.03E-02	7.31E-07	1.29E-05	2.56E-01	3.72E-06	8.23E-05	2.29E-01	3.32E-06	5.66E-05										
Road 14	14	1400-1500	5.54E-02	8.04E-07	1.37E-05	4.03E-02	7.31E-07	1.29E-05	2.56E-01	3.72E-06	8.23E-05	2.29E-01	3.32E-06	5.66E-05										
Road 14	14	1400-1500	5.54E-02	8.04E-07	1.37E-05	4.03E-02	7.31E-07	1.29E-05	2.56E-01	3.72E-06	8.23E-05	2.29E-01	3.32E-06	5.66E-05										
Road 14	14	1400-1500	5.54E-02	8.04E-07	1.37E-05	4.03E-02	7.31E-07	1.29E-05	2.56E-01	3.72E-06	8.23E-05	2.29E-01	3.32E-06	5.66E-05										
Road 14	14	1400-1500	5.54E-02	8.04E-07	1.37E-05	4.03E-02	7.31E-07	1.29E-05	2.56E-01	3.72E-06	8.23E-05	2.29E-01	3.32E-06	5.66E-05										
Road 14	14	2000-2100	3.58E-02	8.02E-07	8.21E-06	3.22E-02	4.34E-07	7.73E-06	2.40E-01	3.23E-05	5.11E-04	2.12E-01	2.86E-06	4.97E-05										
Road 14	14	2200-2300	3.22E-02	4.47E-07	7.83E-06	2.97E-02	4.03E-07	6.82E-06	2.24E-01	3.01E-05	3.14E-06	1.86E-01	2.66E-06	4.48E-05										
Road 14	14	2300-0000	3.22E-02	4.47E-07	7.83E-06	2.97E-02	4.03E-07	6.82E-06	2.24E-01	3.01E-05	3.14E-06	1.86E-01	2.66E-06	4.48E-05										
Road 14	14	2200-0000	3.48E-02	4.47E-07	5.83E-06	3.13E-02	3.08E-07	5.22E-06	2.22E-01	2.79E-05	3.73E-05	1.92E-01	3.92E-06	3.27E-05										
Road 15	15	0000-0100	4.34E-02	5.31E-08	5.84E-07	3.92E-02	5.69E-08	5.27E-07	1.76E-01	2.55E-07	2.36E-06	1.54E-01	3.23E-07	2.06E-05										
Road 15	15	0100-0200	4.34E-02	5.31E-08	5.84E-07	3.92E-02	5.69E-08	5.27E-07	1.76E-01	2.55E-07	2.36E-06	1.54E-01	3.23E-07	2.06E-05										
Road 15	15	0200-0300	6.24E-02	3.63E-08	4.91E-07	5.63E-02	4.78E-08	4.34E-07	2.09E-01	1.67E-07	1.65E-06	8.64E-01	1.56E-07	1.45E-06										
Road 15	15	0300-0400	7.01E-02	5.15E-08	4.77E-07	6.39E-02	4.70E-08	4.33E-07	2.22E-01	1.64E-07	1.52E-06	2.00E-01	1.47E-07	1.36E-06										
Road 15	15	0400-0500	6.45E-02	5.15E-08	4.77E-07	6.39E-02	4.70E-08	4.33E-07	2.22E-01	1.64E-07	1.52E-06	2.00E-01	1.47E-07	1.36E-06										
Road 15	15	0500-0600	5.64E-02	5.15E-08	4.96E-07	5.12E-02	5.85E-08	5.04E-07	2.02E-01	1.61E-07	1.16E-06	1.81E-01	2.07E-07	1.91E-06										
Road 15	15	0600-0700	4.40E-02	9.34E-08	8.65E-07	8.93E-02	8.47E-08	7.84E-07	1.87E-01	3.97E-07	3.68E-06	1.64E-01	3.46E-07	3.23E-06										
Road 15	15	0700-0800	6.54E-02	1.17E-07	2.26E-06	5.58E-02	2.88E-07	2.67E-07	2.35E-01	3.19E-06	5.56E-06	2.06E-01	1.00E-07	9.26E-06										
Road 15	15	0800-0900	4.28E-02	9.34E-08	8.17E-07	5.72E-02	2.89E-07	2.22E-07	2.22E-01	3.21E-06	3.12E-06	1.15E-01	1.06E-07	1.00E-06										
Road 15	15	0900-1000	3.66E-02	3.31E-07	3.06E-06	6.25E-02	3.02E-07	2.79E-06	2.36E-01	1.15E-06	1.00E-06	2.13E-01	9.03E-07	9.53E-06										
Road 15	15	1000-1100	7.56E-02	3.63E-07	3.07E-06	6.88E-02	3.02E-07	2.79E-06	2.51E-01	1.15E-06	1.02E-06	2.26E-01	9.93E-07	9.18E-06										
Road 15	15	1100-1200	3.33E-02	3.31E-07	3.06E-06	6.25E-02	3.02E-07	2.79E-06	2.36E-01	1.15E-06	1.00E-06	2.13E-01	9.03E-07	9.53E-06										
Road 15	15	1200-1300	8.64E-02	6.99E-07	5.27E-06	7.83E-02	5.16E-07	4.97E-06	2.91E-01	1.92E-06	1.77E-05	2.61E-01	1.72E-06	1.59E-05										
Road 15	15	1300-1400	8.52E-02	6.99E-07	5.46E-06	7.79E-02	5.38E-07	4.97E-06	2.95E-01	2.06E-06	1.89E-05	2.66E-01	1.84E-06	1.71E-05										
Road 15	15	1400-1500	7.60E-02	6.99E-07	7.01E-06	7.01E-02	5.16E-07	4.97E-06	2.95E-01	2.06E-06	1.89E-05	2.66E-01	1.84E-06	1.71E-05										
Road 15	15	1500-1600	8.25E-02	6.04E-07	5.99E-06	7.50E-02	5.50E-07	5.06E-06	2.97E-01	2.17E-06	2.01E-05	2.68E-01	1.96E-06	1.82E-05										
Road 15	15	1600-1700	8.36E-02	6.17E-07	5.71E-06	7.55E-02	5.57E-07	5.10E-06	2.89E-01	2.13E-06	1.97E-05	2.58E-01	1.91E-06	1.76E-05										
Road 15	15	1700-1800	6.02E-02	6.17E-07	6.22E-06	6.22E-02	5.17E-07	4.62E-06	2.89E-01	2.13E-06	1.97E-05	2.58E-01	1.91E-06	1.76E-05										
Road 15	15	1800-1900	5.78E-02	3.64E-07	4.02E-06	5.22E-02	3.93E-07	3.64E-06	2.14E-01	1.61E-06	1.49E-05	1.91E-01	1.46E-06	1.33E-05										
Road 15	15	1900-2000	3.40E-02	7.9E-07	1.63E-06	3.05E-02	1.58E-07	1.44E-06	1.62E-01	9.62E-07	7.74E-06	1.42E-01	7.92E-07	6.78E-06										
Road 15	15	2000-2100	3.40E-02	7.9E-07	1.63E-06	3.05E-02	1.58E-07	1.44E-06	1.62E-01	9.62E-07	7.74E-06	1.42E-01	7.92E-07	6.78E-06										
Road 15	15	2100-2200	3.36E-02	3.36E-07	1.28E-06	3.02E-02	1.24E-07	1.13E-06	1.67E-01	8.86E-07	3.63E-06	1.45E-01	8.69E-07	5.54E-06										
Road 15	15	2200-2300	3.43E-02	3.36E-07	1.25E-06	3.09E-02	1.22E-07	1.13E-06	1.67E-01	8.86E-07	3.63E-06	1.45E-01	8.69E-07	5.54E-06										
Road 15	15	2300-0000	3.43E-02	3.36E-07	1.25E-06	3.09E-02	1.22E-07	1.13E-06	1.67E-01	8.86E-07	3.63E-06	1.45E-01	8.69E-07	5.54E-06										
Road 16	16	0000-0100	1.27E-02	7.35E-02	2.25E-06	1.13E-02	6.55E-06	2.00E-01	1.32E-01	7.66E-07	3.36E-05	1.14E-01	6.60E-07	2.02E-05										
Road 16	16	0100-0200	1.02E-02	7.35E-02	1.62E-06	1.24E-02	4.73E-06	1.42E-06	1.34E-01	5.32E-07	5.66E-05	1.95E-01	4.40E-07	1.35E-05										
Road 16	16	0200-0300	1.27E-02	7.35E-02	2.25E-06	1.13E-02	6.55E-06	2.00E-01	1.32E-01	7.66E-07	3.36E-05	1.14E-01	6.60E-07	2.02E-05										
Road 16	16	0300-0400	1.65E-02	3.71E-04	1.14E-06	1.45E-02	3.34E-06	1.10E-06	1.42E-01	3.17E-07	6.61E-06	1.22E-01	2.74E-07	8.39E-06										
Road 16	16	0400-0500	1.71E-02	4.12E-04	1.29E-06	1.55E-02	3.80E-06	1.19E-06	1.41E-01	3.47E-07	6.05E-06	1.29E-01	3.03E-07	9.30E-06										
Road 16	16	0500-0600	1.71E-02	4.12E-04	1.29E-06	1.55E-02	3.80E-06	1.19E-06	1.41E-01	3.47E-07	6.05E-06	1.29E-01	3.03E-07	9.30E-06										
Road 16	16	0600-0700	1.74E-02	1.57E-07	4.80E-06	1.57E-02	1.41E-07	4.32E-06	1.42E-01	3.18E-06	4.00E-05	1.26E-01	1.13E-06	3.49E-05										
Road 16	16	0700-0800	2.01E-02	1.74E-07	1.13E-06	1.81E-02	1.33E-07	1.05E-06	1.55E-01	2.78E-06	5.53E-06	3.26E-01	2.42E-06	7.43E-05										
Road 16	16	0800-0900	2.01E-02	1.74E-07	1.13E-06	1.81E-02	1.33E-07	1.05E-06	1.55E-01	2.78E-06	5.53E-06	3.26E-01	2.42E-06	7.43E-05										
Road 16	16	0900-1000	2.18E-02	1.89E-07	1.19E-06	1.98E-02	1.53E-07	1.08E-06	1.47E-01	2.63E-06	9.05E-06	3.30E-01	2.33E-06	7.13E-05										
Road 16	16	1000-1100	2.33E-02	1.89E-07	1.12E-06	2.12E-02	1.33E-07	1.09E-06	1.48E-01	2.34E-06	7.16E-06	3.26E-01	2.67E-06	7.63E-05										
Road 16	16	1100-1200	2.33E-02	1.89E-07	1.12E-06	2.12E-02	1.33E-07	1.09E-06	1.48E-01	2.34E-06	7.16E-06	3.26E-01	2.67E-06	7.63E-05										
Road 16	16	1200-1300	4.38E-02	4.43E-07	2.58E-06	3.95E-02	7.63E-07	2.34E-06	2.15E-01	4.15E-06	1.27E-04	1.93E-01	3.72E-06	1.14E-04										
Road 16	16	1300-1400	4.74E-02	4.43E-07	2.97E-06	4.31E-02	8.79E-07	2.69E-06	2.30E-01	4.70E-06	1.44E-04	2.07E-01	4.23E-06	1.30E-04										
Road 16	16	1400-1500	4.87E-02	4.03E-06	3.15E-05	4.43E-02	9.37E-07	2.87E-06	2.30E-01	4.49E-06	1.51E-04	2.10E-01	4.43E-06	1.36E-04										
Road 16	16	1500-1600	4.87E-02	4.03E-06	3.15E-05	4.43E-02	9.37E-07	2.87E-06	2.30E-01	4.49E-06	1.51E-04	2.10E-01	4.43E-06	1.36E-04										
Road 16	16	1600-1700	4.93E-02	4.03E-06	3.15E-05	4.43E-02	9.81E-07	2.91E-06	2.41E-01	5.25E-06	1.63E-04	2.15E-01	4.75E-06	1.46E-04										
Road 16	16	1700-1800	3.76E-02	8.75E-07	2.68E-06	3.38E-02	7.88E-07	2.42E-06	2.13E-01	5.00E-06	1.96E-04	1.94E-01	3.50E-06	1.08E-04										
Road 16	16	1800-1900	3.76E-02	8.75E-07	2.68E-06	3.38E-02	7.88E-07	2.42E-06	2.13E-01	5.00E-06	1.96E-04	1.94E-01	3.50E-06	1.08E-04										
Road 16	16	1900-2000	1.89E-02	3.22E-07	9.99E-06	1.69E-02	2.92E-07	8.96E-06	1.63E-01	2.82E-06	8.64E-05	1.44E-01	2.48E-06	7.61E-05										
Road 16	16	2000-2100	1.82E-02	2.47E-07	7.56E-06	1.44E-02	2.22E-07	8.01E-06	1.71E-01	2.31E-06	7.09E-05	1.51E-01	2.05E-06	6.27E-05										
Road 16	16	2100-2200	1.82E-02	2.47E-07	7.56E-06	1.44E-02	2.22E-07	8.01E-06	1.71E-01	2.31E-06	7.09E-05	1.51E-01	2.05E-06	6.27E-05										
Road 16	16	2200-2300	1.72E-02	2.23E-07	6.82E-06	1.55E-02	2.00E-07	6.13E-06	1.65E-01	2.14E-06	5.55E-05	1.45E-01	1.88E-06	5.79E-05										
Road 16	16	2300-0000	1.83E-02	1.86E-07	5.53E-06	1.62E-02	1.67E-07	4.98E-06	1.66E-01	1.63E-06	5.00E-05	1.45E-01	1.44E-06	4.40E-05										
Road 17	17	0000-0100	1.43E-02	7.02E-07	3.89E-06	1.43E-02	3.89E-06	1.43E-06	1.63E-01	1.63E-06	5.00E-05	1.45E-01	1.44E-06	4.40E-05										
Road 17	17	0100-0200	1.43E-02	7.02E-07	3.89E-06	1.43E-02	3.89E-06	1.43E-06	1.63E-01	1.63E-06	5.00E-05	1.45E-01	1.44E-06	4.40E-05										
Road 17	17	0200-0300	1.56E-02	7.02E-07	2.05E-06	1.93E-02	6.26E-08																	

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

AEMC model (December)		Year 2033		NO Emission				NO Emission						
RoS Name	RoS ID	Monthly/Average				Monthly/Average				Monthly/Average				
		g/mwh	g/mwh	g/mwh	g/mwh	g/mwh	g/mwh	g/mwh	g/mwh	g/mwh	g/mwh	g/mwh	g/mwh	
Row 17	17	1700-1700	7.42E-02	1.866E-04	5.84E-05	6.70E-02	1.608E-06	4.91E-06	3.19E-01	8.00E-06	2.34E-04	2.86E-01	7.16E-06	2.00E-01
Row 17	17	1700-1800	5.43E-02	1.414E-06	4.12E-05	4.88E-02	1.27E-06	3.70E-06	2.74E-01	7.09E-07	2.04E-04	2.43E-01	6.30E-06	1.80E-01
Row 17	17	1800-1900	5.21E-02	7.82E-07	2.22E-05	4.68E-02	1.22E-06	3.62E-06	2.69E-01	7.09E-07	2.04E-04	2.43E-01	6.30E-06	1.80E-01
Row 17	17	1700-2000	2.08E-01	6.86E-01	1.111E-05	1.87E-02	3.42E-07	9.90E-05	1.52E-01	7.79E-06	8.14E-04	1.34E-01	2.54E-06	7.16E-01
Row 17	17	2000-2100	1.92E-02	2.78E-07	6.09E-07	1.78E-02	2.48E-07	7.25E-05	1.52E-02	2.32E-06	6.51E-07	3.74E-01	1.97E-05	5.00E-01
Row 17	17	2100-2200	1.91E-02	2.78E-07	6.09E-07	1.78E-02	2.48E-07	7.25E-05	1.52E-02	2.32E-06	6.51E-07	3.74E-01	1.97E-05	5.00E-01
Row 17	17	2200-2300	1.88E-02	2.56E-07	5.67E-07	1.69E-02	2.30E-07	6.73E-06	1.52E-01	2.07E-06	6.05E-05	1.33E-01	1.81E-06	5.31E-01
Row 17	17	2300-2400	1.96E-05	2.05E-07	5.00E-07	1.77E-02	1.85E-07	5.40E-05	1.51E-01	1.58E-06	4.67E-05	1.33E-01	1.39E-06	4.00E-01
Row 18	18	0000-0000	1.96E-05	2.05E-07	5.00E-07	1.77E-02	1.85E-07	5.40E-05	1.51E-01	1.58E-06	4.67E-05	1.33E-01	1.39E-06	4.00E-01
Row 18	18	0100-0200	2.39E-02	5.23E-08	2.04E-04	2.42E-02	4.67E-08	1.82E-04	3.34E-01	5.03E-07	9.77E-05	1.15E-01	4.31E-07	1.00E-01
Row 18	18	0200-0300	5.52E-02	4.23E-08	6.65E-05	1.34E-02	3.17E-08	1.47E-04	1.37E-01	3.80E-07	4.84E-05	1.18E-01	8.27E-07	1.00E-01
Row 18	18	0300-0400	1.65E-02	1.65E-08	1.65E-05	3.95E-02	7.17E-08	3.28E-04	1.37E-01	1.10E-07	1.10E-05	1.18E-01	8.27E-07	1.00E-01
Row 18	18	0400-0500	1.71E-02	1.15E-08	1.62E-06	1.54E-02	3.75E-08	1.44E-04	1.41E-02	1.42E-07	3.46E-05	1.23E-01	2.99E-07	1.00E-01
Row 18	18	0500-0600	1.71E-02	1.12E-08	1.78E-06	1.54E-02	6.42E-08	2.51E-04	1.42E-01	5.93E-07	3.32E-04	1.24E-01	5.17E-07	2.00E-01
Row 18	18	0600-0700	7.43E-02	1.48E-08	3.37E-05	1.58E-02	1.58E-07	7.17E-04	1.42E-01	6.55E-05	1.03E-04	1.27E-01	6.31E-07	2.00E-01
Row 18	18	0700-0800	8.85E-02	1.76E-07	3.71E-07	1.45E-05	1.95E-07	3.34E-07	1.33E-01	1.75E-06	1.08E-04	1.15E-01	2.40E-06	9.00E-01
Row 18	18	0800-0900	2.22E-02	1.44E-07	3.44E-07	1.45E-05	3.12E-07	1.23E-05	1.33E-01	1.75E-06	1.08E-04	1.15E-01	2.40E-06	9.00E-01
Row 18	18	1000-1100	2.37E-02	1.44E-07	3.44E-07	1.45E-05	3.12E-07	1.23E-05	1.33E-01	1.75E-06	1.08E-04	1.15E-01	2.40E-06	9.00E-01
Row 18	18	1100-1200	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	1200-1300	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	1300-1400	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	1400-1500	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	1500-1600	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	1600-1700	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	1700-1800	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	1800-1900	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	1900-2000	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	2000-2100	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	2100-2200	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	2200-2300	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	2300-2400	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	0000-0000	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	0100-0200	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	0200-0300	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	0300-0400	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	0400-0500	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	0500-0600	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	0600-0700	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	0700-0800	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	0800-0900	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	0900-1000	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	1000-1100	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	1100-1200	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	1200-1300	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	1300-1400	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	1400-1500	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	1500-1600	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	1600-1700	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	1700-1800	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	1800-1900	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	1900-2000	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	2000-2100	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	2100-2200	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	2200-2300	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	2300-2400	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	0000-0000	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	0100-0200	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	0200-0300	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	0300-0400	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	0400-0500	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	0500-0600	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	0600-0700	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	0700-0800	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05	1.29E-01	1.88E-07	7.00E-01
Row 18	18	0800-0900	2.17E-02	1.317E-07	3.17E-07	1.45E-05	2.88E-07	1.12E-05	1.40E-01	1.24E-06	1.07E-05</			

Tsing Yi North Underground Quarry
Open Road 24-hour Emission Factors for

AERMOD model (December)		Year 2033		NO _x Emission						NO _x NonEmission					
Row Name	Row ID	Hour	Monthly/gm/hr	Monthly/gm/hr	Monthly/gm/hr	Monthly/gm/hr	Monthly/gm/hr	Monthly/gm/hr	Monthly/gm/hr	Monthly/gm/hr	Monthly/gm/hr	Monthly/gm/hr	Monthly/gm/hr		
Row 21	21	0000-0100	1.486E-2	1.086E-7	1.436E-6	1.326E-2	9.676E-8	1.286E-6	1.186E-2	8.606E-7	1.146E-6	1.016E-1	7.386E-7		
Row 21	21	0100-0200	1.606E-2	1.736E-8	1.026E-6	1.632E-8	6.032E-8	9.132E-7	1.326E-6	5.786E-7	6.736E-8	1.036E-1	9.476E-7		
Row 21	21	0200-0300	1.626E-2	1.756E-8	1.046E-6	1.652E-8	6.052E-8	9.152E-7	1.346E-6	5.806E-7	6.756E-8	1.036E-1	9.496E-7		
Row 21	21	0300-0400	1.866E-2	5.356E-8	7.076E-7	1.676E-2	4.786E-6	6.326E-7	1.266E-6	1.366E-7	4.786E-6	1.086E-1	3.116E-7		
Row 21	21	0400-0500	1.952E-2	6.036E-8	8.256E-7	1.786E-2	5.026E-6	6.732E-7	1.286E-6	1.436E-7	4.936E-6	1.126E-1	3.576E-7		
Row 21	21	0500-0600	2.038E-2	6.716E-8	8.936E-7	1.896E-2	5.506E-6	7.482E-7	1.306E-6	1.566E-7	5.086E-6	1.166E-1	3.936E-7		
Row 21	21	0600-0700	2.060E-2	6.296E-7	3.296E-6	1.866E-2	2.756E-7	2.976E-6	1.336E-6	1.606E-1	1.116E-1	1.166E-1	3.986E-7		
Row 21	21	0700-0800	2.306E-2	6.546E-7	7.446E-6	2.066E-2	5.116E-7	6.756E-6	1.396E-6	1.626E-6	4.526E-2	1.226E-1	2.956E-6		
Row 21	21	0800-0900	2.382E-2	6.826E-7	7.726E-6	2.146E-2	5.396E-7	7.036E-6	1.416E-6	1.646E-6	4.546E-2	1.246E-1	3.076E-6		
Row 21	21	0900-1000	2.656E-2	6.736E-7	8.906E-6	2.426E-2	6.136E-7	8.026E-6	1.441E-6	1.656E-6	4.836E-2	1.286E-1	3.296E-6		
Row 21	21	1000-1100	2.852E-2	6.496E-7	8.576E-6	2.596E-2	5.906E-7	7.796E-6	1.466E-6	1.336E-6	4.406E-2	1.306E-1	3.606E-6		
Row 21	21	1100-1200	2.852E-2	6.496E-7	8.576E-6	2.596E-2	5.906E-7	7.796E-6	1.466E-6	1.336E-6	4.406E-2	1.306E-1	3.606E-6		
Row 21	21	1200-1300	3.746E-2	7.086E-7	9.356E-6	3.406E-2	6.436E-7	8.506E-6	1.742E-6	1.306E-6	5.756E-2	1.576E-1	2.976E-6		
Row 21	21	1300-1400	3.796E-2	7.226E-7	1.026E-6	3.416E-2	6.946E-7	9.186E-6	1.766E-6	1.646E-6	4.816E-2	1.586E-1	3.426E-6		
Row 21	21	1400-1500	3.846E-2	7.366E-7	1.046E-6	3.436E-2	7.066E-7	9.306E-6	1.786E-6	1.666E-6	4.836E-2	1.596E-1	3.446E-6		
Row 21	21	1500-1600	3.516E-2	6.756E-7	1.005E-6	3.205E-2	6.906E-7	9.126E-6	1.756E-6	1.376E-6	4.996E-2	1.586E-1	3.416E-6		
Row 21	21	1600-1700	3.636E-2	7.736E-7	1.025E-6	3.286E-2	7.006E-7	9.256E-6	1.756E-6	1.376E-6	4.926E-2	1.566E-1	3.346E-6		
Row 21	21	1700-1800	3.636E-2	7.736E-7	1.025E-6	3.286E-2	7.006E-7	9.256E-6	1.756E-6	1.376E-6	4.926E-2	1.566E-1	3.346E-6		
Row 21	21	1800-1900	2.266E-2	6.446E-7	5.926E-6	2.026E-2	4.036E-7	5.336E-6	1.446E-6	2.866E-7	3.786E-2	1.266E-1	2.546E-6		
Row 21	21	1900-2000	2.026E-2	2.886E-7	3.936E-6	1.816E-2	2.676E-7	2.536E-6	1.456E-6	2.136E-6	2.826E-2	1.276E-1	1.886E-6		
Row 21	21	2000-2100	1.946E-2	2.826E-7	3.876E-6	1.756E-2	2.616E-7	2.476E-6	1.436E-6	2.076E-6	2.746E-2	1.256E-1	1.826E-6		
Row 21	21	2100-2200	1.946E-2	2.826E-7	3.876E-6	1.756E-2	2.616E-7	2.476E-6	1.436E-6	2.076E-6	2.746E-2	1.256E-1	1.826E-6		
Row 21	21	2200-2300	1.996E-2	2.186E-7	2.886E-6	1.786E-2	1.986E-7	2.596E-6	1.496E-6	1.536E-6	2.166E-2	1.316E-1	1.446E-6		
Row 21	21	2300-2400	2.116E-2	1.786E-7	2.266E-6	1.916E-2	1.616E-7	2.126E-6	1.506E-6	1.276E-6	1.666E-2	1.302E-1	1.176E-6		
Row 22	22	0000-0100	1.486E-2	1.086E-7	1.436E-6	1.326E-2	9.676E-8	1.286E-6	1.186E-2	8.606E-7	1.146E-6	1.016E-1	7.386E-7		
Row 22	22	0100-0200	1.486E-2	1.086E-7	1.436E-6	1.326E-2	9.676E-8	1.286E-6	1.186E-2	8.606E-7	1.146E-6	1.016E-1	7.386E-7		
Row 22	22	0200-0300	1.486E-2	1.086E-7	1.436E-6	1.326E-2	9.676E-8	1.286E-6	1.186E-2	8.606E-7	1.146E-6	1.016E-1	7.386E-7		
Row 22	22	0300-0400	1.866E-2	5.356E-8	7.076E-7	1.676E-2	4.786E-6	6.326E-7	1.266E-6	1.366E-7	4.786E-6	1.086E-1	3.116E-7		
Row 22	22	0400-0500	1.952E-2	6.036E-8	8.256E-7	1.786E-2	5.026E-6	6.732E-7	1.286E-6	1.436E-7	4.936E-6	1.126E-1	3.576E-7		
Row 22	22	0500-0600	2.038E-2	6.716E-8	8.936E-7	1.896E-2	5.506E-6	7.482E-7	1.306E-6	1.566E-7	5.086E-6	1.166E-1	3.936E-7		
Row 22	22	0600-0700	2.060E-2	6.296E-7	3.296E-6	1.866E-2	2.756E-7	2.976E-6	1.336E-6	1.606E-1	1.116E-1	1.166E-1	3.986E-7		
Row 22	22	0700-0800	2.306E-2	6.546E-7	7.446E-6	2.066E-2	5.116E-7	6.756E-6	1.396E-6	1.626E-6	4.526E-2	1.226E-1	2.956E-6		
Row 22	22	0800-0900	2.382E-2	6.826E-7	7.726E-6	2.146E-2	5.396E-7	7.036E-6	1.416E-6	1.646E-6	4.546E-2	1.246E-1	3.076E-6		
Row 22	22	0900-1000	2.656E-2	6.736E-7	8.906E-6	2.426E-2	6.136E-7	8.026E-6	1.441E-6	1.656E-6	4.836E-2	1.286E-1	3.296E-6		
Row 22	22	1000-1100	2.852E-2	6.496E-7	8.576E-6	2.596E-2	5.906E-7	7.796E-6	1.466E-6	1.336E-6	4.406E-2	1.306E-1	3.606E-6		
Row 22	22	1100-1200	2.852E-2	6.496E-7	8.576E-6	2.596E-2	5.906E-7	7.796E-6	1.466E-6	1.336E-6	4.406E-2	1.306E-1	3.606E-6		
Row 22	22	1200-1300	3.746E-2	7.086E-7	9.356E-6	3.406E-2	6.436E-7	8.506E-6	1.742E-6	1.306E-6	5.756E-2	1.576E-1	2.976E-6		
Row 22	22	1300-1400	3.796E-2	7.226E-7	1.026E-6	3.416E-2	6.946E-7	9.186E-6	1.766E-6	1.646E-6	4.816E-2	1.586E-1	3.426E-6		
Row 22	22	1400-1500	3.846E-2	7.366E-7	1.046E-6	3.436E-2	7.066E-7	9.306E-6	1.786E-6	1.666E-6	4.836E-2	1.596E-1	3.446E-6		
Row 22	22	1500-1600	3.516E-2	6.756E-7	1.005E-6	3.205E-2	6.906E-7	9.126E-6	1.756E-6	1.376E-6	4.996E-2	1.586E-1	3.416E-6		
Row 22	22	1600-1700	3.636E-2	7.736E-7	1.025E-6	3.286E-2	7.006E-7	9.256E-6	1.756E-6	1.376E-6	4.926E-2	1.566E-1	3.346E-6		
Row 22	22	1700-1800	3.636E-2	7.736E-7	1.025E-6	3.286E-2	7.006E-7	9.256E-6	1.756E-6	1.376E-6	4.926E-2	1.566E-1	3.346E-6		
Row 22	22	1800-1900	2.266E-2	6.446E-7	5.926E-6	2.026E-2	4.036E-7	5.336E-6	1.446E-6	2.866E-7	3.786E-2	1.266E-1	2.546E-6		
Row 22	22	1900-2000	2.026E-2	2.886E-7	3.936E-6	1.816E-2	2.676E-7	2.536E-6	1.456E-6	2.136E-6	2.826E-2	1.276E-1	1.886E-6		
Row 22	22	2000-2100	1.946E-2	2.826E-7	3.876E-6	1.756E-2	2.616E-7	2.476E-6	1.436E-6	2.076E-6	2.746E-2	1.256E-1	1.826E-6		
Row 22	22	2100-2200	1.946E-2	2.826E-7	3.876E-6	1.756E-2	2.616E-7	2.476E-6	1.436E-6	2.076E-6	2.746E-2	1.256E-1	1.826E-6		
Row 22	22	2200-2300	1.996E-2	2.186E-7	2.886E-6	1.786E-2	1.986E-7	2.596E-6	1.496E-6	1.536E-6	2.166E-2	1.316E-1	1.446E-6		
Row 22	22	2300-2400	2.116E-2	1.786E-7	2.266E-6	1.916E-2	1.616E-7	2.126E-6	1.506E-6	1.276E-6	1.666E-2	1.302E-1	1.176E-6		
Row 23	23	0000-0100	1.486E-2	1.086E-7	1.436E-6	1.326E-2	9.676E-8	1.286E-6	1.186E-2	8.606E-7	1.146E-6	1.016E-1	7.386E-7		
Row 23	23	0100-0200	1.486E-2	1.086E-7	1.436E-6	1.326E-2	9.676E-8	1.286E-6	1.186E-2	8.606E-7	1.146E-6	1.016E-1	7.386E-7		
Row 23	23	0200-0300	1.486E-2	1.086E-7	1.436E-6	1.326E-2	9.676E-8	1.286E-6	1.186E-2	8.606E-7	1.146E-6	1.016E-1	7.386E-7		
Row 23	23	0300-0400	1.866E-2	5.356E-8	7.076E-7	1.676E-2	4.786E-6	6.326E-7	1.266E-6	1.366E-7	4.786E-6	1.086E-1	3.116E-7		
Row 23	23	0400-0500	1.952E-2	6.036E-8	8.256E-7	1.786E-2	5.026E-6	6.732E-7	1.286E-6	1.436E-7	4.936E-6	1.126E-1	3.576E-7		
Row 23	23	0500-0600	2.038E-2	6.716E-8	8.936E-7	1.896E-2	5.506E-6	7.482E-7	1.306E-6	1.566E-7	5.086E-6	1.166E-1	3.936E-7		
Row 23	23	0600-0700	2.060E-2	6.296E-7	3.296E-6	1.866E-2	2.756E-7	2.976E-6	1.336E-6	1.606E-1	1.116E-1	1.166E-1	3.986E-7		
Row 23	23	0700-0800	2.306E-2	6.546E-7	7.446E-6	2.066E-2	5.116E-7	6.756E-6	1.396E-6	1.626E-6	4.526E-2	1.226E-1	2.956E-6		
Row 23	23	0800-0900	2.382E-2	6.826E-7	7.726E-6	2.146E-2	5.396E-7	7.036E-6	1.416E-6	1.646E-6	4.546E-2	1.246E-1	3.076E-6		
Row 23	23	0900-1000	2.656E-2	6.736E-7	8.906E-6	2.426E-2	6.136E-7	8.026E-6	1.441E-6	1.656E-6	4.836E-2	1.286E-1	3.296E-6		
Row 23	23	1000-1100	2.852E-2	6.496E-7	8.576E-6	2.596E-2	5.906E-7	7.796E-6	1.466E-6	1.336E-6	4.406E-2	1.306E-1	3.606E-6		
Row 23	23	1100-1200	2.852E-2	6.496E-7	8.576E-6	2.596E-2	5.906E-7	7.796E-6	1.466E-6	1.336E-6	4.406E-2	1.306E-1	3.606E-6		
Row 23	23	1200-1300	3.746E-2	7.086E-7	9.356E-6	3.406E-2	6.436E-7	8.506E-6	1.742E-6	1.306E-6	5.756E-2	1.576E-1	2.976E-6		
Row 23	23	1300-1400	3.796E-2	7.226E-7	1.026E-6	3.416E-2	6.946E-7	9.186E-6	1.766E-6	1.646E-6	4.816E-2	1.586E-1	3.426E-6		
Row 23	23	1400-1500	3.846E-2	7.366E-7	1.046E-6	3.436E-2	7.066E-7	9.306E-6	1.786E-6	1.666E-6	4.836E-2	1.596E-1	3.446E-6		
Row 23	23	1500-1600	3.516E-2	6.756E-7	1.005E-6	3.205E-2	6.906E-7	9.126E-6	1.756E-6	1.376E-6	4.996E-2	1.586E-1	3.416E-6		
Row 23	23	1600-1700	3.636E-2	7.736E-7	1.025E-6	3.286E-2	7.006E-7	9.256E-6	1.756E-6	1.376E-6	4.926E-2	1.566E-1	3.346E-6		
Row 23	23	1700-1800	3.636E-2	7.736E-7	1.025E-6	3.286E-2	7.006E-7	9.256E-6	1.756E-6	1.376E-6	4.926E-2	1.566E-1	3.346E-6		
Row 23	23	1800-1900	2.266E-2	6.446E-7	5.926E-6	2.026E-2	4.036E-7	5.336E-6	1.446E-6	2.866E-7	3.786E-2	1.266E-1	2.546E-6		
Row 23	23	1900-2000	2.026E-2	2.886E-7	3.936E-6	1.816E-2	2.676E-7	2.536E-6	1.456E-6	2.136E-6	2.826E-2	1.276E-1	1.886E-6		
Row 23	23	2000-2100	1.946E-2	2.826E-7	3.876E-6	1.756E-2	2.616E-7	2.476E-6	1.436E-6	2.076E-6	2.746E-2	1.256			

1-1-Security/Equipment - Project/60722220/1-01/Other/Air/Modelling/Appendix/Traffic/Appendix/Appendix 3.5.2 Emission Factor in 2022.5 B.ulev

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Open Road 24 hour Emission Factors for
 AEDT 2022 model (OpenRoad) Year 2033

Open Road 24 hour Emission Factors for Year 2033

Open Road 24 hour Emission Factors for
AFR140B model (Bosch) Year 2033

24 hour Emission Factors for
@# model @# context

Year 2033

Open Road 24 hour Emission Factors for
 AEDT 2022 model (Grossbook) Year 2033

Open Road 24 hour Emission Factors for Year 2033

Open Road 24 hour Emission Factors for
AFRL 100 model (2000) Year 203324 hour Emission Factors for
 2010 model (lb/mmmbtu) Year 2033

Open Road 24 hour Emission Factors
for AERMOD model (Summary) Year 2038

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for AERMOD model (Summary)		Year 2038

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Open Road 24 hour Emission Factors
for AERMOD model (Summary) Year 2038

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for AERMOD model (Summary) Year 2036

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Open Road 24 hour Emission Factors
for AERMOD model (Summary) Year 2038

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for AERMOD model (Summary)		Year 2036	

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hour Emission Factors
D model (Summary) Year 2038

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D model (Summary)		Year 2038	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry

Open Road 24 hour Emission Factors
for AERMOD model (Summary) Year 2038

Road Name	Road ID	Hour	NO _x Emission				PM _{2.5} Emission				PM ₁₀ Emission			
			Annual		No Emission		Annual		No Emission		Annual		No Emission	
			g/km ² /h	g/km ² /year	g/km ² /h	g/km ² /year	g/km ² /h	g/km ² /year	g/km ² /h	g/km ² /year	g/km ² /h	g/km ² /year	g/km ² /h	g/km ² /year
Road 35	35	1200-1300	7.29E-02	1.71E-07	1.52E-04	1.89E-01	4.44E-07	3.95E-04	1.00E-02	2.39E-05	1.09E-02	2.59E-08	2.27E-05	
Road 35	35	1240-1300	7.24E-02	1.73E-07	1.54E-04	1.91E-01	4.57E-07	4.05E-04	1.00E-02	2.39E-05	1.09E-02	2.60E-08	2.31E-05	
Road 35	35	1400-1500	7.73E-02	1.81E-07	1.61E-04	1.92E-01	4.77E-07	4.23E-04	9.92E-03	2.45E-05	2.19E-05	1.08E-02	2.68E-08	2.38E-05
Road 35	35	1500-1600	7.13E-02	1.80E-07	1.60E-04	1.90E-01	4.83E-07	4.29E-04	9.73E-03	2.46E-05	2.17E-05	1.08E-02	2.67E-08	2.37E-05
Road 35	35	1600-1700	6.25E-02	1.74E-07	1.63E-04	1.86E-01	4.83E-07	4.29E-04	9.63E-03	2.51E-05	2.23E-05	1.08E-02	2.73E-08	2.43E-05
Road 35	35	1700-1800	5.01E-02	1.74E-07	1.59E-04	1.69E-01	4.75E-07	4.22E-04	8.45E-03	2.37E-05	2.11E-05	9.21E-03	2.59E-08	2.30E-05
Road 35	35	1800-1900	5.61E-02	1.36E-07	1.47E-04	1.48E-01	4.37E-07	4.05E-04	7.24E-05	2.24E-05	1.99E-05	8.24E-03	2.46E-08	2.10E-05
Road 35	35	1900-2000	2.81E-02	5.14E-08	4.56E-05	1.95E-02	1.76E-07	1.55E-04	4.20E-07	6.81E-06	4.57E-03	8.34E-09	7.41E-06	
Road 35	35	2000-2100	3.12E-02	4.69E-08	4.16E-05	1.90E-01	1.60E-07	1.42E-04	4.64E-03	6.83E-06	6.07E-06	5.04E-03	7.34E-09	6.00E-06
Road 35	35	2100-2200	3.08E-02	4.54E-08	4.03E-05	1.07E-01	1.58E-07	1.41E-04	4.44E-03	6.59E-01	5.81E-06	4.82E-03	7.12E-09	6.32E-06
Road 35	35	2200-2300	3.12E-02	4.48E-08	3.98E-05	1.08E-01	1.55E-07	1.37E-04	4.43E-03	6.96E-05	5.65E-06	4.81E-03	6.91E-09	6.14E-06
Road 35	35	2300-0000	3.63E-02	4.18E-08	3.98E-05	1.16E-01	1.32E-07	1.18E-04	5.27E-05	5.30E-06	5.70E-03	6.58E-09	5.77E-06	
Road 36	36	0000-0100	4.74E-02	7.24E-08	6.66E-05	2.04E-01	3.11E-07	2.86E-04	8.30E-03	1.29E-06	1.16E-05	9.03E-03	1.38E-08	1.26E-05
Road 36	36	0100-0200	4.04E-02	6.04E-08	5.56E-05	2.15E-01	2.33E-07	2.14E-04	9.38E-03	1.02E-09	9.12E-03	1.11E-08	1.02E-05	
Road 36	36	0200-0300	6.35E-02	5.55E-08	5.05E-05	2.26E-01	1.98E-07	1.82E-04	1.04E-02	9.08E-09	8.35E-01	1.12E-03	9.89E-09	9.05E-06
Road 36	36	0300-0400	7.01E-02	5.26E-08	4.84E-05	2.35E-01	1.76E-07	1.62E-04	1.12E-04	8.42E-09	7.74E-06	1.22E-02	9.17E-09	8.43E-06
Road 36	36	0400-0500	6.97E-02	5.99E-08	5.58E-05	2.39E-01	1.91E-07	1.76E-04	1.13E-03	9.06E-09	8.33E-06	1.23E-02	9.87E-09	9.07E-06
Road 36	36	0500-0600	6.17E-02	7.38E-08	6.78E-05	2.39E-01	2.88E-07	2.63E-04	1.06E-02	1.27E-06	1.17E-05	1.16E-02	1.38E-07	1.27E-05
Road 36	36	0600-0700	5.58E-02	1.27E-07	1.16E-04	2.46E-01	5.59E-07	5.14E-04	1.02E-02	1.12E-05	2.12E-06	1.11E-02	2.51E-08	2.31E-05
Road 36	36	0700-0800	7.21E-02	6.38E-07	3.39E-04	2.73E-01	1.39E-06	1.29E-03	1.16E-02	5.93E-05	5.45E-05	1.26E-02	6.45E-08	5.93E-05
Road 36	36	0800-0900	6.94E-02	4.01E-07	3.69E-04	2.51E-01	1.45E-06	1.32E-03	9.94E-05	5.74E-06	5.28E-05	1.08E-02	6.25E-08	5.74E-05
Road 36	36	0900-1000	7.09E-02	4.07E-07	3.74E-04	2.69E-01	1.37E-06	1.26E-03	9.68E-03	4.95E-05	4.55E-05	1.05E-02	5.38E-08	4.95E-05
Road 36	36	1000-1100	8.56E-02	3.97E-07	3.69E-04	2.75E-01	1.28E-06	1.17E-03	9.49E-04	4.62E-04	4.24E-05	1.08E-02	5.02E-08	4.61E-05
Road 36	36	1100-1200	8.56E-02	3.97E-07	3.69E-04	2.75E-01	1.28E-06	1.17E-03	9.49E-04	4.62E-04	4.24E-05	1.08E-02	5.02E-08	4.61E-05
Road 36	36	1200-1300	9.35E-02	3.75E-07	3.42E-04	2.96E-01	1.09E-06	9.68E-04	1.12E-04	4.00E-06	3.68E-05	1.22E-04	4.34E-08	3.99E-05
Road 36	36	1300-1400	1.02E-01	3.79E-07	3.48E-04	3.07E-01	1.14E-06	1.05E-03	1.11E-02	4.12E-04	3.79E-05	1.21E-04	4.47E-08	4.11E-05
Road 36	36	1400-1500	9.34E-02	3.79E-07	3.48E-04	3.00E-01	1.14E-06	1.05E-03	1.11E-02	4.28E-04	3.93E-05	1.22E-02	4.65E-08	4.27E-05
Road 36	36	1500-1600	1.01E-01	3.91E-07	3.60E-04	3.10E-01	1.21E-06	1.11E-03	1.08E-02	4.29E-04	3.89E-05	1.18E-02	4.60E-08	4.23E-05
Road 36	36	1600-1700	1.01E-01	3.91E-07	3.60E-04	3.10E-01	1.21E-06	1.11E-03	1.08E-02	4.29E-04	3.89E-05	1.18E-02	4.60E-08	4.23E-05
Road 36	36	1700-1800	7.12E-02	3.61E-07	3.31E-04	2.89E-01	1.20E-06	1.10E-03	1.17E-02	4.83E-04	4.44E-05	1.27E-02	5.25E-08	4.83E-05
Road 36	36	1800-1900	7.21E-02	2.94E-07	2.70E-04	2.34E-01	9.65E-07	8.87E-04	1.01E-03	3.84E-05	1.10E-04	5.45E-08	4.47E-05	
Road 36	36	1900-2000	4.72E-02	1.04E-07	9.96E-06	2.06E-01	4.41E-07	4.07E-04	7.47E-05	6.82E-06	8.12E-03	7.78E-08	1.56E-09	
Road 36	36	2000-2100	4.82E-02	1.04E-07	9.95E-06	2.08E-01	4.41E-07	4.06E-04	7.47E-05	6.82E-06	8.12E-03	7.78E-08	1.58E-09	
Road 36	36	2100-2200	4.87E-02	1.04E-07	9.54E-05	2.10E-01	4.48E-07	4.12E-04	7.61E-03	1.62E-06	1.49E-05	8.29E-03	1.76E-06	1.62E-05
Road 36	36	2200-2300	4.58E-02	9.38E-08	8.62E-05	2.01E-01	4.12E-07	3.79E-04	7.27E-03	1.49E-05	1.37E-05	7.91E-03	1.62E-09	1.49E-05
Road 36	36	2300-0000	5.21E-02	8.43E-08	7.75E-05	2.13E-01	3.43E-07	3.16E-04	8.11E-03	1.31E-08	1.21E-05	8.83E-03	1.43E-08	1.31E-05
Road 37	37	0000-0100	3.68E-02	1.70E-09	1.43E-06	2.03E-01	9.15E-09	7.63E-06	1.20E-05	2.43E-07	7.71E-03	3.16E-10	2.65E-07	
Road 37	37	0100-0200	4.17E-02	1.72E-09	1.62E-06	2.15E-01	9.28E-09	5.29E-06	7.05E-03	1.62E-06	1.72E-07	8.78E-03	2.24E-10	1.98E-07
Road 37	37	0200-0300	4.58E-02	9.74E-10	8.16E-07	2.27E-01	9.05E-09	4.10E-06	7.51E-03	1.65E-06	1.36E-07	8.19E-03	1.77E-10	1.48E-07
Road 37	37	0300-0400	4.81E-02	8.34E-10	6.99E-07	2.35E-01	4.08E-09	3.42E-06	7.13E-03	1.16E-07	8.68E-03	1.50E-10	1.26E-07	
Road 37	37	0400-0500	5.12E-02	9.87E-10	8.27E-07	2.44E-01	4.71E-09	3.99E-06	8.40E-03	1.62E-10	1.36E-07	9.16E-03	1.77E-10	1.48E-07
Road 37	37	0500-0600	5.41E-02	1.04E-09	8.54E-06	2.52E-01	8.59E-09	7.19E-06	8.40E-03	1.20E-03	2.52E-07	9.46E-03	3.28E-10	2.75E-07
Road 37	37	0600-0700	5.70E-02	1.12E-09	9.24E-06	2.63E-01	9.18E-09	7.61E-06	8.40E-03	1.20E-03	2.52E-07	9.46E-03	3.28E-10	2.75E-07
Road 37	37	0700-0800	5.95E-02	9.08E-09	7.61E-06	2.69E-01	8.40E-09	3.42E-06	8.98E-03	1.47E-09	1.23E-06	1.06E-02	1.60E-09	1.34E-06
Road 37	37	0800-0900	6.01E-02	1.07E-08	8.91E-06	2.90E-01	4.48E-08	3.78E-05	8.15E-03	1.45E-09	1.22E-06	8.88E-03	1.58E-09	1.32E-06
Road 37	37	0900-1000	7.11E-02	1.14E-08	9.58E-06	2.72E-01	4.38E-08	3.67E-05	7.71E-03	1.24E-09	1.04E-06	8.39E-03	1.35E-09	1.13E-06
Road 37	37	1000-1100	7.59E-02	1.10E-08	9.25E-06	2.77E-01	4.03E-08	3.37E-05	7.87E-03	1.15E-09	9.95E-07	8.37E-03	1.25E-09	1.04E-06
Road 37	37	1100-1200	7.61E-02	1.04E-08	8.75E-06	2.86E-01	3.84E-08	3.22E-05	7.61E-03	1.05E-09	8.76E-07	8.29E-03	1.44E-09	9.35E-07
Road 37	37	1200-1300	7.23E-02	1.06E-08	8.84E-06	2.64E-01	3.86E-08	3.23E-05	7.82E-03	1.14E-09	9.56E-07	8.03E-03	1.24E-09	1.04E-06
Road 37	37	1300-1400	7.76E-02	1.18E-08	9.93E-06	2.80E-01	4.31E-08	3.61E-05	7.84E-03	1.21E-09	1.01E-06	8.52E-03	1.31E-09	1.10E-06
Road 37	37	1400-1500	7.49E-02	1.14E-08	9.94E-06	2.71E-01	4.35E-08	3.65E-05	8.09E-03	1.30E-09	1.08E-06	8.83E-03	1.41E-09	1.18E-06
Road 37	37	1500-1600	7.19E-02	1.26E-08	1.06E-06	2.85E-01	4.71E-08	3.94E-05	8.71E-03	1.27E-09	1.07E-06	8.93E-03	1.39E-09	1.18E-06
Road 37	37	1600-1700	7.17E-02	1.21E-08	1.01E-06	2.86E-01	4.51E-08	3.78E-05	8.37E-03	1.41E-09	1.18E-06	9.11E-03	1.35E-09	1.29E-06
Road 37	37	1700-1800	6.12E-02	1.10E-08	9.24E-06	2.62E-01	4.72E-08	3.95E-06	9.08E-03	1.64E-09	1.37E-09	9.90E-03	1.78E-09	1.49E-06
Road 37	37	1800-1900	4.38E-02	7.44E-09	6.23E-06	1.92E-01	3.47E-08	2.90E-05	7.07E-03	1.27E-09	1.07E-06	7.70E-03	1.39E-09	1.16E-06
Road 37	37	1900-2000	3.48E-02	4.82E-09	4.03E-06	1.78E-01	2.44E-08	2.06E-05	6.03E-03	8.35E-10	6.99E-07	8.37E-03	1.90E-09	1.61E-07
Road 37	37	2000-2100	3.52E-02	3.79E-09	3.18E-06	1.95E-01	2.11E-08	1.77E-06	6.04E-05	6.55E-10	5.48E-07	6.58E-03	7.13E-10	5.97E-07
Road 37	37	2200-2300	3.11E-02	3.22E-09	2.76E-06	1.84E-01	1.91E-08	1.60E-05	5.57E-05	5.77E-10	4.84E-07	6.07E-03	6.29E-10	5.27E-07
Road 37	37	2300-0000	3.42E-02	2.69E-09	2.26E-06	1.93E-01	1.52E-08	1.27E-06	6.06E-03	4.76E-10	3.98E-07	6.60E-03	6.51E-10	4.34E-07
Road 38	38	0000-0100	6.32E-02	1.00E-07	2.99E-04	2.30E-01	3.64E-07	1.92E-05	9.52E-03	4.50E-04	1.05E-02	1.64E-06	4.90E-06	
Road 38	38	0100-0200	6.32E-02	1.00E-07	2.99E-04	2.30E-01	3.64E-07	1.92E-05	9.52E-03	4.50E-04	1.05E-02	1.64E-06	4.90E	

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors
for AERMOD model (January)

Road Name	Road ID	Hour	NO _x Emission			PM _{2.5} Emission			PM ₁₀ Emission		
			Annual/Average			Annual/Average			Annual/Average		
			g/min	g/s	tonne/year	g/min	g/s	tonne/year	g/min	g/s	tonne/year
Road 104	104	1200-1400	1.45E+02	2.42E+03	6.59E+06	1.50E+06	1.11E+02	3.32E+03	7.95E+06	5.61E+04	3.16E+03
Road 104	104	1400-1600	1.45E+02	3.25E+07	6.59E+06	1.50E+06	1.16E+02	3.32E+03	7.95E+06	5.61E+04	3.16E+03
Road 104	104	1400-1500	1.43E+02	3.54E+07	6.23E+06	1.66E+06	1.24E+02	3.42E+03	8.49E+06	6.31E+04	3.72E+03
Road 104	104	1500-1600	1.43E+02	3.41E+07	6.23E+06	1.67E+06	1.26E+02	3.43E+03	8.49E+06	6.31E+04	3.72E+03
Road 104	104	1600-1700	1.43E+02	3.38E+07	6.23E+06	1.67E+06	1.31E+02	3.44E+03	8.49E+06	6.31E+04	3.72E+03
Road 104	104	1700-1800	1.01E+02	3.12E+07	4.23E+06	1.37E+06	1.31E+02	2.47E+06	5.67E+04	2.68E+03	8.79E+06
Road 104	104	1800-1900	1.36E+03	2.50E+07	1.86E+06	4.33E+06	1.10E+02	1.81E+03	6.22E+06	4.63E+04	9.76E+06
Road 104	104	1900-2000	1.01E+02	1.74E+07	1.29E+06	4.40E+06	1.20E+06	8.91E+03	1.53E+03	1.17E+06	4.52E+06
Road 104	104	2000-2100	1.43E+02	3.38E+07	6.23E+06	1.67E+06	1.31E+02	3.44E+03	8.49E+06	6.31E+04	3.72E+03
Road 104	104	2100-2200	1.43E+02	3.12E+07	6.23E+06	1.67E+06	1.31E+02	3.44E+03	8.49E+06	6.31E+04	3.72E+03
Road 104	104	2200-2300	5.18E+06	1.06E+07	7.91E+04	4.89E+06	1.06E+07	7.47E+04	1.14E+03	2.34E+06	1.88E+04
Road 104	104	2300-2400	5.18E+06	8.90E+06	6.01E+04	5.04E+06	7.73E+07	5.73E+03	1.29E+06	1.47E+04	2.15E+06
Road 105	105	0000-0100	1.69E+02	1.86E+08	1.82E+04	0.98E+02	1.51E+07	1.53E+03	2.89E+03	4.83E+05	3.15E+03
Road 105	105	0100-0200	1.69E+02	1.86E+08	1.82E+04	0.98E+02	1.51E+07	1.53E+03	2.89E+03	4.83E+05	3.15E+03
Road 105	105	0200-0300	1.69E+02	1.86E+08	1.82E+04	0.98E+02	1.51E+07	1.53E+03	2.89E+03	4.83E+05	3.15E+03
Road 105	105	0300-0400	2.13E+02	9.11E+09	1.94E+04	1.05E+04	4.50E+08	6.88E+04	3.56E+09	1.56E+09	3.97E+03
Road 105	105	0400-0500	2.27E+02	1.08E+08	1.64E+04	1.09E+04	5.30E+08	7.89E+04	3.89E+09	2.82E+04	2.02E+09
Road 105	105	0500-0600	2.40E+02	2.01E+08	1.64E+04	1.13E+08	9.43E+08	1.43E+04	4.55E+09	5.25E+05	3.70E+09
Road 105	105	0600-0700	2.40E+02	2.01E+08	1.64E+04	1.13E+08	9.43E+08	1.43E+04	4.55E+09	5.25E+05	3.70E+09
Road 105	105	0700-0800	3.02E+02	1.12E+07	1.71E+03	1.34E+08	4.97E+07	7.54E+03	1.80E+08	2.73E+04	5.27E+03
Road 105	105	0800-0900	2.94E+02	1.28E+07	1.94E+03	1.28E+08	5.55E+07	8.44E+03	4.77E+07	2.01E+08	3.15E+04
Road 105	105	0900-1000	3.47E+02	1.34E+07	2.04E+03	1.48E+08	5.71E+07	8.71E+03	4.86E+07	2.16E+08	3.58E+04
Road 105	105	1000-1100	3.47E+02	1.28E+07	2.04E+03	1.48E+08	5.55E+07	8.44E+03	4.77E+07	2.01E+08	3.15E+04
Road 105	105	1100-1200	3.47E+02	1.28E+07	2.04E+03	1.48E+08	5.55E+07	8.44E+03	4.77E+07	2.01E+08	3.15E+04
Road 105	105	1200-1300	8.26E+02	4.04E+07	2.15E+03	2.85E+08	1.24E+08	2.12E+02	3.85E+08	8.90E+04	1.03E+07
Road 105	105	1300-1400	8.19E+02	4.51E+07	6.96E+03	2.94E+08	1.63E+08	2.44E+02	1.18E+08	9.87E+04	1.06E+07
Road 105	105	1400-1500	8.19E+02	4.57E+07	6.96E+03	2.94E+08	1.63E+08	2.44E+02	1.18E+08	9.87E+04	1.06E+07
Road 105	105	1500-1600	7.55E+02	4.38E+07	2.93E+03	2.93E+08	1.67E+08	2.54E+02	1.20E+08	9.95E+04	1.08E+07
Road 105	105	1600-1700	8.19E+02	4.57E+07	6.96E+03	2.94E+08	1.63E+08	2.44E+02	1.18E+08	9.87E+04	1.06E+07
Road 105	105	1700-1800	8.19E+02	4.57E+07	6.96E+03	2.94E+08	1.63E+08	2.44E+02	1.18E+08	9.87E+04	1.06E+07
Road 105	105	1800-1900	5.41E+02	1.88E+07	2.86E+03	2.38E+08	1.79E+08	1.92E+02	1.06E+08	9.39E+04	5.36E+04
Road 105	105	1900-2000	5.41E+02	1.88E+07	2.86E+03	2.38E+08	1.79E+08	1.92E+02	1.06E+08	9.39E+04	5.36E+04
Road 105	105	2000-2100	5.41E+02	1.88E+07	2.86E+03	2.38E+08	1.79E+08	1.92E+02	1.06E+08	9.39E+04	5.36E+04
Road 105	105	2100-2200	5.41E+02	1.88E+07	2.86E+03	2.38E+08	1.79E+08	1.92E+02	1.06E+08	9.39E+04	5.36E+04
Road 105	105	2200-2300	5.68E+02	9.15E+08	1.49E+03	2.13E+08	3.49E+07	5.29E+03	1.61E+08	2.30E+04	1.64E+07
Road 105	105	2300-0000	5.68E+02	9.15E+08	1.49E+03	2.13E+08	3.49E+07	5.29E+03	1.61E+08	2.30E+04	1.64E+07
Road 106	106	0000-0100	1.62E+02	6.76E+08	7.79E+04	0.94E+02	3.81E+07	4.39E+03	2.62E+03	4.05E+06	1.25E+04
Road 106	106	0100-0200	1.71E+02	4.69E+08	5.40E+04	0.93E+02	2.54E+07	2.94E+03	1.76E+04	3.06E+03	8.41E+09
Road 106	106	0200-0300	1.81E+02	3.64E+08	4.20E+04	0.962E+02	1.94E+07	2.23E+03	3.04E+03	1.71E+03	6.67E+09
Road 106	106	0300-0400	3.12E+02	3.12E+08	6.00E+04	1.00E+01	1.61E+07	1.82E+03	5.26E+06	6.06E+05	3.57E+03
Road 106	106	0400-0500	2.08E+02	7.30E+08	4.26E+04	1.04E+01	1.85E+07	2.13E+03	3.51E+03	6.82E+06	7.83E+06
Road 106	106	0500-0600	2.32E+02	7.10E+08	4.86E+04	1.10E+01	3.49E+07	3.96E+03	7.12E+06	1.11E+03	1.28E+08
Road 106	106	0600-0700	2.32E+02	7.10E+08	4.86E+04	1.10E+01	3.49E+07	3.96E+03	7.12E+06	1.11E+03	1.28E+08
Road 106	106	0700-0800	3.61E+02	4.95E+07	1.27E+03	1.57E+03	2.15E+08	2.49E+02	4.89E+07	8.70E+04	8.42E+03
Road 106	106	0800-0900	3.61E+02	4.95E+07	1.27E+03	1.57E+03	2.15E+08	2.49E+02	4.89E+07	8.70E+04	8.42E+03
Road 106	106	0900-1000	3.61E+02	4.95E+07	1.27E+03	1.57E+03	2.15E+08	2.49E+02	4.89E+07	8.70E+04	8.42E+03
Road 106	106	1000-1100	4.78E+02	5.94E+07	6.89E+03	1.88E+03	2.54E+08	2.70E+02	6.31E+08	9.11E+04	8.90E+03
Road 106	106	1100-1200	4.78E+02	5.94E+07	6.89E+03	1.88E+03	2.54E+08	2.70E+02	6.31E+08	9.11E+04	8.90E+03
Road 106	106	1200-1300	4.78E+02	5.94E+07	6.89E+03	1.88E+03	2.54E+08	2.70E+02	6.31E+08	9.11E+04	8.90E+03
Road 106	106	1300-1400	8.26E+02	1.21E+09	1.36E+02	2.50E+01	4.38E+08	5.05E+02	8.12E+02	1.64E+03	8.83E+03
Road 106	106	1400-1500	8.26E+02	1.21E+09	1.36E+02	2.50E+01	4.38E+08	5.05E+02	8.12E+02	1.64E+03	8.83E+03
Road 106	106	1500-1600	8.26E+02	1.21E+09	1.36E+02	2.50E+01	4.38E+08	5.05E+02	8.12E+02	1.64E+03	8.83E+03
Road 106	106	1600-1700	8.26E+02	1.21E+09	1.36E+02	2.50E+01	4.38E+08	5.05E+02	8.12E+02	1.64E+03	8.83E+03
Road 106	106	1700-1800	8.26E+02	1.21E+09	1.36E+02	2.50E+01	4.38E+08	5.05E+02	8.12E+02	1.64E+03	8.83E+03
Road 106	106	1800-1900	8.26E+02	1.21E+09	1.36E+02	2.50E+01	4.38E+08	5.05E+02	8.12E+02	1.64E+03	8.83E+03
Road 106	106	1900-2000	8.26E+02	1.21E+09	1.36E+02	2.50E+01	4.38E+08	5.05E+02	8.12E+02	1.64E+03	8.83E+03
Road 106	106	2000-2100	8.26E+02	1.21E+09	1.36E+02	2.50E+01	4.38E+08	5.05E+02	8.12E+02	1.64E+03	8.83E+03
Road 106	106	2100-2200	8.26E+02	1.21E+09	1.36E+02	2.50E+01	4.38E+08	5.05E+02	8.12E+02	1.64E+03	8.83E+03
Road 106	106	2200-2300	8.26E+02	1.21E+09	1.36E+02	2.50E+01	4.38E+08	5.05E+02	8.12E+02	1.64E+03	8.83E+03
Road 106	106	2300-0000	8.26E+02	1.21E+09	1.36E+02	2.50E+01	4.38E+08	5.05E+02	8.12E+02	1.64E+03	8.83E+03

Open Road Yr 24 Undermination Quarry														
Open Road Yr 24 Emission Factors for														
AERMOD Model (hourly)														
Road Name	Road ID	Year	NO _x Emission						PM Emission					
			Monthly/Average			Monthly/Average			Monthly/Average		Monthly/Average			
			g/min	g/s	tonne/hour	g/min	g/s	tonne/hour	g/min	g/s	tonne/hour	g/min	g/s	tonne/hour
Road 1	1	0000-0100	4.41E+02	8.96E+02	1.29E+06	6.21E+03	1.73E+06	4.29E+06	3.14E+02	6.88E+02	1.77E+05	1.97E+02	5.51E+02	3.03E+05
Road 1	1	0100-0200	7.07E+03	1.05E+09	1.92E+07	1.05E+04	1.05E+09	1.92E+07	3.14E+02	6.88E+02	1.77E+05	1.97E+02	5.51E+02	3.03E+05
Road 1	1	0200-0300	7.07E+03	5.09E+08	2.80E+06	6.21E+03	4.51E+08	2.48E+06	5.29E+04	9.47E+04	1.92E+05	4.36E+02	2.88E+02	1.59E+05
Road 1	1	0300-0400	8.96E+03	8.96E+08	2.41E+06	7.92E+03	3.07E+08	2.18E+06	5.40E+02	2.86E+05	1.75E+05	4.51E+02	2.39E+02	1.30E+05
Road 1	1	0400-0500	8.96E+03	8.96E+08	2.41E+06	7.92E+03	3.07E+08	2.18E+06	5.40E+02	2.86E+05	1.75E+05	4.51E+02	2.39E+02	1.30E+05
Road 1	1	0500-0600	8.96E+03	8.96E+08	2.41E+06	7.92E+03	3.07E+08	2.18E+06	5.40E+02	2.86E+05	1.75E+05	4.51E+02	2.39E+02	1.30E+05
Road 1	1	0600-0700	8.96E+03	8.96E+08	2.41E+06	7.92E+03	3.07E+08	2.18E+06	5.40E+02	2.86E+05	1.75E+05	4.51E+02	2.39E+02	1.30E+05
Road 1	1	0700-0800	9.99E+02	2.09E+07	1.15E+05	8.35E+03	1.87E+07	1.05E+05	5.89E+02	1.24E+06	6.95E+05	4.09E+02	1.04E+05	5.71E+05
Road 1	1	0800-0900	9.99E+02	2.09E+07	1.15E+05	8.35E+03	1.87E+07	1.05E+05	5.89E+02	1.24E+06	6.95E+05	4.09E+02	1.04E+05	5.71E+05
Road 1	1	0900-1000	9.99E+02	4.48E+07	2.72E+05	9.48E+03	4.48E+07	2.47E+05	5.24E+05	1.99E+06	1.43E+06	5.56E+02	2.75E+02	1.24E+06
Road 1	1	1000-1100	1.38E+02	4.47E+07	2.46E+05	1.05E+04	4.17E+07	2.30E+05	5.74E+03	2.33E+06	1.38E+06	5.02E+02	2.04E+05	1.12E+06
Road 1	1	1100-1200	1.22E+02	4.07E+07	2.22E+05	1.10E+04	3.66E+07	2.01E+05	6.07E+02	2.01E+06	1.11E+06	5.28E+02	1.79E+05	9.64E+05
Road 1	1	1200-1300	1.51E+02	4.47E+07	3.72E+05	1.37E+04	6.26E+07	3.42E+05	6.63E+06	3.09E+06	1.65E+06	6.85E+02	2.66E+06	1.44E+06
Road 1	1	1300-1400	1.51E+02	4.47E+07	3.72E+05	1.37E+04	6.26E+07	3.42E+05	6.63E+06	3.09E+06	1.65E+06	6.85E+02	2.66E+06	1.44E+06
Road 1	1	1400-1500	1.51E+02	4.47E+07	3.72E+05	1.37E+04	6.26E+07	3.42E+05	6.63E+06	3.09E+06	1.65E+06	6.85E+02	2.66E+06	1.44E+06
Road 1	1	1500-1600	1.46E+02	7.37E+07	4.05E+05	1.30E+02	6.38E+07	3.63E+05	3.94E+05	3.50E+05	3.98E+05	6.02E+02	3.04E+05	1.67E+06
Road 1	1	1600-1700	1.54E+02	8.34E+07	4.54E+05	1.38E+02	7.40E+07	4.07E+05	6.72E+02	3.61E+06	4.98E+06	5.98E+02	3.14E+06	1.78E+06
Road 1	1	1700-1800	1.51E+02	8.34E+07	4.54E+05	1.38E+02	7.40E+07	4.07E+05	6.72E+02	3.61E+06	4.98E+06	5.98E+02	3.14E+06	1.78E+06
Road 1	1	1800-1900	1.51E+02	8.34E+07	4.54E+05	1.38E+02	7.40E+07	4.07E+05	6.72E+02	3.61E+06	4.98E+06	5.98E+02	3.14E+06	1.78E+06
Road 1	1	1900-2000	7.11E+02	1.47E+07	2.09E+05	6.34E+03	3.33E+07	1.84E+05	4.35E+02	2.59E+05	1.26E+06	4.39E+02	1.94E+05	1.07E+06
Road 1	1	2000-2100	2.63E+02	2.63E+07	5.11E+05	2.11E+03	2.74E+07	3.98E+05	4.75E+02	1.99E+06	1.07E+06	1.43E+02	8.93E+04	5.19E+05
Road 1	1	2100-2200	5.97E+02	2.34E+07	3.45E+05	3.13E+03	2.17E+07	1.19E+06	4.25E+02	1.89E+06	1.02E+06	3.62E+02	1.56E+05	8.50E+05
Road 1	1	2200-2300	6.09E+02	2.38E+07	3.13E+05	3.13E+03	2.10E+07	1.11E+06	4.66E+02	1.85E+06	1.02E+06	3.89E+02	1.54E+05	8.48E+05
Road 1	1	2300-2400	1.98E+02	1.98E+07	1.05E+05	5.88E+03	1.17E+07	9.63E+05	4.44E+02	1.44E+05	7.93E+05	1.30E+02	6.62E+04	3.62E+05
Road 2	2	0000-0100	8.57E+02	1.17E+07	5.94E+05	7.52E+03	1.03E+07	5.22E+05	5.46E+02	1.47E+07	7.38E+04	4.67E+02	1.12E+07	3.10E+05
Road 2	2	0100-0200	8.96E+03	8.41E+08	6.78E+06	8.72E+03	7.41E+08	6.17E+06	5.71E+03	5.12E+07	4.97E+05	4.70E+02	4.21E+07	2.18E+05
Road 2	2	0200-0300	1.01E+02	1.01E+07	5.47E+05	9.27E+03	1.01E+07	5.47E+05	5.88E+02	5.88E+02	5.88E+02	5.88E+02	5.88E+02	5.88E+02
Road 2	2	0300-0400	1.39E+02	1.39E+07	7.91E+05	6.87E+03	5.10E+06	2.58E+06	6.31E+02	5.12E+07	1.62E+05	5.11E+02	2.98E+07	1.39E+05
Road 2	2	0400-0500	1.16E+02	6.78E+06	4.13E+04	1.03E+02	5.98E+06	3.03E+06	6.28E+03	6.32E+07	1.84E+05	5.27E+02	3.05E+07	1.54E+05
Road 2	2	0500-0600	1.22E+02	1.22E+07	6.30E+06	1.09E+02	1.09E+07	5.54E+06	5.98E+02	6.43E+07	1.93E+05	4.42E+02	4.46E+07	1.76E+05
Road 2	2	0600-0700	1.28E+02	1.28E+07	6.48E+06	1.16E+02	1.16E+07	5.88E+06	6.28E+03	6.72E+07	2.03E+05	4.70E+02	4.70E+07	1.86E+05
Road 2	2	0700-0800	1.39E+02	1.39E+07	7.91E+05	1.22E+02	5.38E+07	2.73E+06	6.72E+02	2.96E+06	1.50E+06	8.00E+02	2.56E+06	1.30E+06
Road 2	2	0800-0900	1.22E+02	1.22E+07	6.30E+06	1.09E+02	1.09E+07	5.54E+06	5.98E+02	6.43E+07	1.93E+05	4.42E+02	4.46E+07	1.76E+05
Road 2	2	0900-1000	1.39E+02	1.39E+07	7.91E+05	1.22E+02	5.38E+07	2.73E+06	6.72E+02	2.96E+06	1.50E+06	8.00E+02	2.56E+06	1.30E+06
Road 2	2	1000-1100	1.69E+02	1.69E+07	9.47E+06	1.41E+02	6.03E+07	3.12E+06	6.13E+02	3.14E+06	1.59E+06	5.39E+02	2.76E+06	1.40E+06
Road 2	2	1100-1200	1.69E+02	1.69E+07	9.47E+06	1.41E+02	6.03E+07	3.12E+06	6.13E+02	3.14E+06	1.59E+06	5.39E+02	2.76E+06	1.40E+06
Road 2	2	1200-1300	1.69E+02	1.69E+07	9.47E+06	1.41E+02	6.03E+07	3.12E+06	6.13E+02	3.14E+06	1.59E+06	5.39E+02	2.76E+06	1.40E+06
Road 2	2	1300-1400	1.69E+02	1.69E+07	9.47E+06	1.41E+02	6.03E+07	3.12E+06	6.13E+02	3.14E+06	1.59E+06	5.39E+02	2.76E+06	1.40E+06
Road 2	2	1400-1500	1.69E+02	1.69E+07	9.47E+06	1.41E+02	6.03E+07	3.12E+06	6.13E+02	3.14E+06	1.59E+06	5.39E+02	2.76E+06	1.40E+06
Road 2	2	1500-1600	1.69E+02	1.69E+07	9.47E+06	1.41E+02	6.03E+07	3.12E+06	6.13E+02	3.14E+06	1.59E+06	5.39E+02	2.76E+06	1.40E+06
Road 2	2	1600-1700	1.69E+02	1.69E+07	9.47E+06	1.41E+02	6.03E+07	3.12E+06	6.13E+02	3.14E+06	1.59E+06	5.39E+02	2.76E+06	1.40E+06
Road 2	2	1700-1800	1.69E+02	1.69E+07	9.47E+06	1.41E+02	6.03E+07	3.12E+06	6.13E+02	3.14E+06	1.59E+06	5.39E+02	2.76E+06	1.40E+06
Road 2	2	1800-1900	1.69E+02	1.69E+07	9.47E+06	1.41E+02	6.03E+07	3.12E+06	6.13E+02	3.14E+06	1.59E+06	5.39E+02	2.76E+06	1.40E+06
Road 2	2	1900-2000	1.69E+02	1.69E+07	9.47E+06	1.41E+02	6.03E+07	3.12E+06	6.13E+02	3.14E+06	1.59E+06	5.39E+02	2.76E+06	1.40E+06
Road 2	2	2000-2100	1.69E+02	1.69E+07	9.47E+06	1.41E+02	6.03E+07	3.12E+06	6.13E+02	3.14E+06	1.59E+06	5.39E+02	2.76E+06	1.40E+06
Road 2	2	2100-2200	1.69E+02	1.69E+07	9.47E+06	1.41E+02	6.03E+07	3.12E+06	6.13E+02	3.14E+06	1.59E+06	5.39E+02	2.76E+06	1.40E+06
Road 2	2	2200-2300	1.69E+02	1.69E+07	9.47E+06	1.41E+02	6.03E+07	3.12E+06	6.13E+02	3.14E+06	1.59E+06	5.39E+02	2.76E+06	1.40E+06
Road 2	2	2300-2400	1.69E+02	1.69E+07	9.47E+06	1.41E+02	6.03E+07	3.12E+06	6.13E+02	3.14E+06	1.59E+06	5.39E+02	2.76E+06	1.40E+06
Road 3	3	0000-0100	3.55E+03	3.54E+08	2.17E+07	6.41E+03	3.09E+08	1.90E+07	5.21E+02	2.51E+07	1.54E+06	2.21E+02	2.03E+07	1.25E+06
Road 3	3	0100-0200	3.55E+03	3.54E+08	2.17E+07	6.41E+03	3.09E+08	1.90E+07	5.21E+02	2.51E+07	1.54E+06	2.21E+02	2.03E+07	1.25E+06
Road 3	3	0200-0300	3.55E+03	3.54E+08	2.17E+07	6.41E+03	3.09E+08	1.90E+07	5.21E+02	2.51E+07	1.54E+06	2.21E+02	2.03E+07	1.25E+06
Road 3	3	0300-0400	3.55E+03	3.54E+08	2.17E+07	6.41E+03	3.09E+08	1.90E+07	5.21E+02	2.51E+07	1.54E+06	2.21E+02	2.03E+07	1.25E+06
Road 3	3	0400-0500	3.55E+03	3.54E+08	2.17E+07	6.41E+03	3.09E+08	1.90E+07	5.21E+02	2.51E+07	1.54E+06	2.21E+02	2.03E+07	1.25E+06
Road 3	3	0500-0600	3.55E+03	3.54E+08	2.17E+07	6.41E+03	3.09E+08	1.90E+07	5.21E+02	2.51E+07	1.54E+06	2.21E+02	2.03E+07	1.25E+06
Road 3	3	0600-0700	3.55E+03	3.54E+08	2.17E+07	6.41E+03	3.09E+08	1.90E+07	5.21E+02	2.51E+07	1.54E+06	2.21E+02	2.03E+07	1.25E+06
Road 3	3	0700-0800	3.55E+03	3.54E+08	2.17E+07	6.41E+03	3.09E+08	1.90E+07	5.21E+02	2.51E+07	1.54E+06	2.21E+02	2.03E+07	1.25E+06
Road 3	3	0800-0900	3.55E+03	3.54E+08	2.17E+07	6.41E+03	3.09E+08	1.90E+07	5.21E+02	2.51E+07	1.54E+06	2.21E+02	2.03E+07	1.25E+06
Road 3	3	0900-1000	3.55E+03	3.54E+08	2.17E+07	6.41E+03	3.09E+08	1.90E+07	5.21E+02	2.51E+07	1.54E+06	2.21E+02	2.03E+07	1.25E+06
Road 3	3	1000-1100	3.55E+03	3.54E+08	2.17E+07	6.41E+03	3.09E+08	1.90E+07	5.21E+02	2.51E+07	1.54E+06	2.21E+02	2.03E+07	1.25E+06
Road 3	3	1100-1200	3.55E+03	3.54E+08	2.17E+07	6.41E+03	3.09E+08	1.90E+07	5.21E+02	2.51E+07	1.54E+06	2.21E+02	2.03E+07	1.25E+06
Road 3	3	1200-1300	3.55E+03	3.54E+08	2.17E+07	6.41E+03	3.09E+08	1.90E+07	5.21E+02	2.51E+07	1.54E+06	2.21E+02	2.03E+07	1.25E+06
Road 3	3	1300-1400	3.55E+03	3.54E+08	2.17E+07	6.41E+03	3.09E+08	1.90E+07	5.21E+02	2.51E+07	1.54E+06	2.21E+02	2.03E+07	1.25E+06
Road 3	3	1400-1500	3.55E+03	3.54E+08	2.17E+07	6.41E+03	3.09E+08	1.90E+07	5.21E+02	2.51E+07	1.54E+06	2.21E+02	2.03E+07	1.25E+06
Road 3	3	1500-1600	3.55E+03	3.54E+08	2.17E+07	6.41E+03	3.09E+08	1.90E+07	5.21E+02	2.51E+07	1.54E+06	2.21E+02	2.03E+07	1.25E+06
Road 3	3	1600-1700	3.55E+03	3.54E+08	2.17E+0									

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

AERMOD model (January)		Year 2038	
	MP's Emission		MP's Emission
Open Road 24 hour Emission Factors for			

Road Name	Road ID	Hour	MonthlyHourMin			MonthlyHourMax			MonthlyHourMin			MonthlyHourMax		
			g/km/h	g/s/m	tonne/hour	g/km/h	g/s/m	tonne/hour	g/km/h	g/s/m	tonne/hour	g/km/h	g/s/m	tonne/hour
Road 24	24	0800-0900	1.586	3.058	7.667	1.457	2.895	7.037	3.866	1.138	2.846	6.571	1.0446	2.6106
Road 24	24	0900-1000	1.569	3.043	7.640	1.440	2.878	7.010	3.849	1.130	2.827	6.544	1.0370	2.5930
Road 24	24	1000-1100	1.550	3.027	7.614	1.422	2.859	6.983	3.832	1.122	2.808	6.517	1.0294	2.5754
Road 24	24	1100-1200	1.696	3.399	8.547	1.545	3.085	7.738	4.056	1.216	3.046	7.503	1.1006	2.7606
Road 24	24	1200-1300	1.686	3.384	8.520	1.535	3.069	7.711	4.039	1.208	3.027	7.476	1.0930	2.7430
Road 24	24	1300-1400	1.786	3.626	9.157	1.630	3.261	8.326	4.260	1.292	3.206	7.990	1.1742	2.9392
Road 24	24	1400-1500	1.836	3.644	9.146	1.676	3.306	8.387	4.354	1.336	3.246	8.056	1.2062	2.9962
Road 24	24	1500-1600	1.836	3.644	9.146	1.676	3.306	8.387	4.354	1.336	3.246	8.056	1.2062	2.9962
Road 24	24	1600-1700	1.868	3.662	9.179	1.702	3.331	8.426	4.389	1.316	3.266	8.082	1.1862	2.9602
Road 24	24	1700-1800	1.474	2.896	7.247	1.336	2.615	6.645	3.876	1.146	2.906	6.531	1.0446	2.6106
Road 24	24	1800-1900	1.464	2.880	7.220	1.326	2.600	6.618	3.860	1.136	2.890	6.504	1.0370	2.5930
Road 24	24	1900-2000	1.256	1.112	2.802	1.136	0.617	2.537	0.982	0.447	1.116	0.566	0.4017	1.017
Road 24	24	2000-2100	1.166	1.856	2.077	1.046	1.416	1.866	0.746	0.404	0.852	0.426	0.3047	0.7637
Road 24	24	2100-2200	1.166	1.856	2.077	1.046	1.416	1.866	0.746	0.404	0.852	0.426	0.3047	0.7637
Road 24	24	2200-2300	1.316	1.836	2.077	1.186	1.546	1.886	0.776	0.304	0.762	0.276	0.2736	0.6936
Road 24	24	2300-0000	1.336	1.646	1.747	1.206	1.266	1.576	0.836	0.252	0.632	0.436	0.2767	0.6967
Road 25	25	0000-0100	1.336	1.646	1.747	1.206	1.266	1.576	0.836	0.252	0.632	0.436	0.2767	0.6967
Road 25	25	0100-0200	1.336	1.646	1.747	1.206	1.266	1.576	0.836	0.252	0.632	0.436	0.2767	0.6967
Road 25	25	0200-0300	1.336	1.646	1.747	1.206	1.266	1.576	0.836	0.252	0.632	0.436	0.2767	0.6967
Road 25	25	0300-0400	1.336	1.646	1.747	1.206	1.266	1.576	0.836	0.252	0.632	0.436	0.2767	0.6967
Road 25	25	0400-0500	1.426	1.636	1.636	1.266	1.786	1.476	0.916	0.211	0.582	0.466	0.206	0.521
Road 25	25	0500-0600	1.426	1.636	1.636	1.266	1.786	1.476	0.916	0.211	0.582	0.466	0.206	0.521
Road 25	25	0600-0700	1.426	1.636	1.636	1.266	1.786	1.476	0.916	0.211	0.582	0.466	0.206	0.521
Road 25	25	0700-0800	1.636	1.636	1.636	1.326	1.326	1.636	0.956	0.166	0.466	0.606	0.5006	1.2866
Road 25	25	0800-0900	1.676	1.476	1.156	1.536	0.417	0.026	0.516	0.626	0.416	0.566	0.1486	0.3766
Road 25	25	0900-1000	1.686	1.466	1.146	1.546	0.407	0.016	0.526	0.616	0.406	0.576	0.1386	0.3666
Road 25	25	1000-1100	1.696	1.456	1.136	1.556	0.397	0.006	0.536	0.606	0.396	0.586	0.1286	0.3566
Road 25	25	1100-1200	1.786	1.786	1.786	1.636	0.636	0.166	0.936	1.136	0.636	0.936	0.166	0.466
Road 25	25	1200-1300	1.786	1.786	1.786	1.636	0.636	0.166	0.936	1.136	0.636	0.936	0.166	0.466
Road 25	25	1300-1400	1.836	1.836	1.836	1.676	0.676	0.176	0.986	1.186	0.676	0.986	0.176	0.476
Road 25	25	1400-1500	1.836	1.836	1.836	1.676	0.676	0.176	0.986	1.186	0.676	0.986	0.176	0.476
Road 25	25	1500-1600	1.856	1.856	1.856	1.696	0.696	0.186	1.006	1.206	0.696	1.006	0.186	0.486
Road 25	25	1600-1700	1.866	1.866	1.866	1.706	0.706	0.196	1.016	1.216	0.706	1.016	0.196	0.496
Road 25	25	1700-1800	1.576	1.416	1.096	1.426	0.736	0.196	0.546	0.646	0.416	0.546	0.136	0.376
Road 25	25	1800-1900	1.566	1.406	1.086	1.416	0.726	0.186	0.536	0.636	0.406	0.536	0.126	0.366
Road 25	25	1900-2000	1.266	1.116	2.806	1.136	0.616	2.536	0.986	0.446	1.116	0.566	0.4016	1.016
Road 25	25	2000-2100	1.166	1.856	2.076	1.046	1.416	1.866	0.746	0.404	0.852	0.426	0.3046	0.7636
Road 25	25	2100-2200	1.166	1.856	2.076	1.046	1.416	1.866	0.746	0.404	0.852	0.426	0.3046	0.7636
Road 25	25	2200-2300	1.316	1.836	2.076	1.186	1.546	1.886	0.776	0.304	0.762	0.276	0.2736	0.6936
Road 25	25	2300-0000	1.336	1.646	1.746	1.206	1.266	1.576	0.836	0.252	0.632	0.436	0.2766	0.6966
Road 26	26	0000-0100	1.356	1.666	1.766	1.226	1.276	1.596	0.856	0.262	0.642	0.446	0.2867	0.7067
Road 26	26	0100-0200	1.356	1.666	1.766	1.226	1.276	1.596	0.856	0.262	0.642	0.446	0.2867	0.7067
Road 26	26	0200-0300	1.356	1.666	1.766	1.226	1.276	1.596	0.856	0.262	0.642	0.446	0.2867	0.7067
Road 26	26	0300-0400	1.356	1.666	1.766	1.226	1.276	1.596	0.856	0.262	0.642	0.446	0.2867	0.7067
Road 26	26	0400-0500	1.446	1.656	1.656	1.276	1.776	1.486	0.906	0.222	0.592	0.476	0.216	0.546
Road 26	26	0500-0600	1.446	1.656	1.656	1.276	1.776	1.486	0.906	0.222	0.592	0.476	0.216	0.546
Road 26	26	0600-0700	1.446	1.656	1.656	1.276	1.776	1.486	0.906	0.222	0.592	0.476	0.216	0.546
Road 26	26	0700-0800	1.656	1.656	1.656	1.326	1.326	1.656	0.956	0.166	0.466	0.606	0.5006	1.2866
Road 26	26	0800-0900	1.686	1.456	1.136	1.556	0.407	0.006	0.536	0.606	0.396	0.586	0.1286	0.3566
Road 26	26	0900-1000	1.696	1.446	1.126	1.566	0.397	0.006	0.546	0.596	0.386	0.596	0.1186	0.3466
Road 26	26	1000-1100	1.696	1.436	1.116	1.566	0.387	0.006	0.556	0.586	0.376	0.606	0.1086	0.3366
Road 26	26	1100-1200	1.786	1.786	1.786	1.636	0.636	0.166	0.936	1.136	0.636	0.936	0.166	0.466
Road 26	26	1200-1300	1.786	1.786	1.786	1.636	0.636	0.166	0.936	1.136	0.636	0.936	0.166	0.466
Road 26	26	1300-1400	1.836	1.836	1.836	1.676	0.676	0.176	0.986	1.186	0.676	0.986	0.176	0.476
Road 26	26	1400-1500	1.836	1.836	1.836	1.676	0.676	0.176	0.986	1.186	0.676	0.986	0.176	0.476
Road 26	26	1500-1600	1.856	1.856	1.856	1.696	0.696	0.186	1.006	1.206	0.696	1.006	0.186	0.486
Road 26	26	1600-1700	1.866	1.866	1.866	1.706	0.706	0.196	1.016	1.216	0.706	1.016	0.196	0.496
Road 26	26	1700-1800	1.576	1.416	1.096	1.426	0.736	0.196	0.546	0.646	0.416	0.546	0.136	0.376
Road 26	26	1800-1900	1.566	1.406	1.086	1.416	0.726	0.186	0.536	0.636	0.406	0.536	0.126	0.366
Road 26	26	1900-2000	1.266	1.116	2.806	1.136	0.616	2.536	0.986	0.446	1.116	0.566	0.4016	1.016
Road 26	26	2000-2100	1.166	1.856	2.076	1.046	1.416	1.866	0.746	0.404	0.852	0.426	0.3046	0.7636
Road 26	26	2100-2200	1.166	1.856	2.076	1.046	1.416	1.866	0.746	0.404	0.852	0.426	0.3046	0.7636
Road 26	26	2200-2300	1.316	1.836	2.076	1.186	1.546	1.886	0.776	0.304	0.762	0.276	0.2736	0.6936
Road 26	26	2300-0000	1.336	1.646	1.746	1.206	1.266	1.576	0.836	0.252	0.632	0.436	0.2766	0.6966
Road 27	27	0000-0100	1.376	1.676	1.776	1.246	1.296	1.616	0.876	0.272	0.662	0.456	0.2967	0.7167
Road 27	27	0100-0200	1.376	1.676	1.776	1.246	1.296	1.616	0.876	0.272	0.662	0.456	0.2967	0.7167
Road 27	27	0200-0300	1.376	1.676	1.776	1.246	1.296	1.616	0.876	0.272	0.662	0.456	0.2967	0.7167
Road 27	27	0300-0400	1.376	1.676	1.776	1.246	1.296	1.616	0.876	0.272	0.662	0.456	0.2967	0.7167
Road 27	27	0400-0500	1.466	1.666	1.666	1.296	1.796	1.496	0.916	0.232	0.602	0.486	0.226	0.556
Road 27	27	0500-0600	1.466	1.666	1.666	1.296	1.796	1.496	0.916	0.232	0.602	0.486	0.226	0.556
Road 27	27	0600-0700	1.466	1.666	1.666	1.296	1.796	1.496	0.916	0.232	0.602	0.486	0.226	0.556
Road 27	27	0700-0800	1.666	1.666	1.666	1.346	1.346	1.666	0.966	0.172	0.472	0.616	0.5106	1.2906
Road 27	27	0800-0900	1.676	1.466	1.146	1.566	0.402	0.006	0.546	0.596	0.386	0.596	0.1186	0.3466
Road 27	27	0900-1000	1.686	1.456	1.136	1.576	0.392	0.006	0.556	0.586	0.376	0.606	0.1086	0.3366
Road 27	27	1000-1100	1.686	1.446	1.126	1.576	0.382	0.006	0.566	0.576	0.366	0.616	0.0986	0.3266
Road 27	27	1100-1200	1.786	1.786	1.786	1.636	0.636	0.166	0.936	1.136	0.636	0.936	0.166	0.466
Road 27	27	1200-1300	1.786	1.786	1.786	1.636	0.636	0.166	0.936	1.136	0.636	0.936	0.166	0.466
Road 27	27	1300-1400	1.836	1.836	1.836	1.676	0.676	0.176	0.986	1.186	0.676	0.986	0.176	0.476
Road 27	27	1400-1500	1.836	1.836	1.836	1.676	0.676	0.17						

Secure\\Environment Projects\\60733229\\1_01\\Others\\Air Modelling\\Appendix\\Traffic\\Appendix\\Appendix 3.5.4 Emission Factor in 2038-S.B.xlsx I:\\Secure\\Environ

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
 Open Road 24 hour Emission Factors for
 AERMOD model (January)

Year 2038

Road Name	Road ID	Hour	N0_Emission						N0_Emission					
			MonthlyHourMin			MonthlyHourAverage			MonthlyHourMin			MonthlyHourAverage		
			g/km/h	g/km/h	tonne/hour	g/km/h	g/km/h	tonne/hour	g/km/h	g/km/h	tonne/hour	g/km/h	g/km/h	tonne/hour
Road 37	37	1600-1700	7.07E-02	1.13E-08	2.73E-08	6.72E-02	1.13E-08	2.60E-08	2.63E-01	4.43E-08	1.02E-07	2.45E-01	4.13E-08	9.40E-01
Road 37	37	1700-1800	6.06E-02	1.09E-08	2.56E-08	5.70E-02	1.04E-08	2.39E-08	2.57E-01	4.43E-08	1.06E-07	2.45E-01	4.32E-08	9.56E-01
Road 37	37	1800-1900	4.83E-02	7.71E-09	2.04E-08	4.58E-02	7.88E-09	2.04E-08	1.98E-01	3.40E-08	7.91E-08	1.80E-01	4.00E-08	9.00E-01
Road 37	37	1900-2000	3.43E-02	5.44E-09	1.46E-08	3.26E-02	5.22E-09	1.04E-08	1.73E-02	2.40E-08	5.51E-08	1.51E-02	2.78E-08	6.27E-01
Road 37	37	2000-2100	3.44E-02	3.77E-09	8.86E-09	3.32E-02	3.95E-09	8.82E-09	1.87E-02	2.62E-08	4.63E-08	1.73E-02	1.88E-08	4.27E-01
Road 37	37	2100-2200	3.43E-02	3.77E-09	8.86E-09	3.32E-02	3.95E-09	8.82E-09	1.87E-02	2.62E-08	4.63E-08	1.73E-02	1.88E-08	4.27E-01
Road 37	37	2200-2300	3.06E-02	3.17E-09	7.77E-09	2.90E-02	3.00E-09	6.88E-09	1.78E-02	1.84E-08	4.27E-08	1.35E-02	1.69E-08	3.80E-01
Road 37	37	2300-2400	3.36E-02	2.65E-09	6.80E-09	3.20E-02	2.51E-09	5.77E-09	1.87E-02	1.47E-08	3.37E-08	1.72E-02	1.35E-08	3.00E-01
Road 37	37	0100-0200	7.15E-02	8.48E-08	6.91E-07	6.62E-02	7.76E-08	3.97E-07	3.37E-02	2.79E-07	2.38E-06	2.54E-02	2.54E-07	2.00E-01
Road 38	38	0200-0300	7.77E-02	7.54E-08	6.11E-07	7.12E-02	6.92E-08	5.67E-07	2.42E-02	2.96E-07	1.93E-06	2.20E-02	2.14E-07	1.73E-01
Road 38	38	0300-0400	7.15E-02	8.48E-08	6.91E-07	6.62E-02	7.76E-08	3.97E-07	3.37E-02	2.79E-07	2.38E-06	2.54E-02	2.54E-07	2.00E-01
Road 38	38	0400-0500	6.35E-02	7.60E-08	6.22E-07	7.64E-02	9.96E-08	5.69E-07	2.54E-02	2.31E-07	9.99E-06	2.31E-02	2.10E-07	1.71E-01
Road 38	38	0500-0600	7.77E-02	1.01E-07	8.33E-07	1.18E-07	9.43E-08	7.72E-07	1.61E-02	4.42E-07	2.80E-06	2.80E-02	1.13E-07	2.56E-01
Road 38	38	0600-0700	7.15E-02	8.48E-08	6.91E-07	6.62E-02	7.76E-08	3.97E-07	3.37E-02	2.79E-07	2.38E-06	2.54E-02	2.54E-07	2.00E-01
Road 38	38	0700-0800	6.35E-02	5.04E-07	4.15E-06	8.41E-07	7.73E-07	4.87E-06	1.97E-02	1.67E-06	1.37E-05	1.75E-02	1.55E-06	1.27E-01
Road 38	38	0800-0900	8.95E-02	5.66E-07	4.45E-06	4.14E-06	5.32E-07	3.35E-06	2.88E-02	1.62E-06	1.45E-05	2.68E-02	1.70E-06	1.39E-01
Road 38	38	0900-1000	1.01E-02	5.66E-07	4.45E-06	9.45E-06	5.96E-07	3.55E-06	1.12E-02	1.63E-06	1.50E-05	2.99E-02	1.70E-06	1.39E-01
Road 38	38	1000-1100	1.01E-02	5.66E-07	4.45E-06	9.45E-06	5.96E-07	3.55E-06	1.12E-02	1.63E-06	1.50E-05	2.99E-02	1.70E-06	1.39E-01
Road 38	38	1100-1200	1.05E-02	5.49E-07	4.29E-06	7.94E-06	3.10E-07	1.18E-06	1.14E-02	1.64E-06	1.53E-05	2.89E-02	1.51E-06	1.24E-01
Road 38	38	1200-1300	1.31E-02	4.44E-07	3.47E-06	1.22E-06	1.394E-07	1.22E-06	1.40E-06	1.12E-06	9.17E-06	3.21E-06	1.04E-06	8.95E-06
Road 38	38	1300-1400	1.31E-02	4.44E-07	3.47E-06	1.22E-06	1.394E-07	1.22E-06	1.40E-06	1.12E-06	9.17E-06	3.21E-06	1.04E-06	8.95E-06
Road 38	38	1400-1500	1.59E-02	4.61E-07	3.69E-06	1.20E-06	1.30E-07	1.25E-06	1.62E-06	1.20E-06	9.65E-06	3.15E-06	1.15E-06	9.65E-06
Road 38	38	1500-1600	1.36E-02	4.77E-07	3.89E-06	1.26E-06	1.43E-07	1.32E-06	1.74E-06	1.31E-06	1.08E-06	3.44E-06	1.22E-06	9.95E-06
Road 38	38	1600-1700	1.32E-02	4.44E-07	3.47E-06	1.22E-06	1.394E-07	1.22E-06	1.40E-06	1.12E-06	9.17E-06	3.21E-06	1.04E-06	8.95E-06
Road 38	38	1700-1800	1.21E-02	4.21E-07	3.36E-06	1.17E-06	1.30E-07	1.20E-06	1.52E-06	1.11E-06	9.60E-06	3.25E-06	1.09E-06	8.88E-06
Road 38	38	1800-1900	1.18E-02	3.51E-07	2.87E-06	1.08E-06	1.22E-07	1.24E-06	1.19E-06	9.48E-06	2.74E-06	2.92E-06	8.67E-06	7.10E-06
Road 38	38	1900-2000	1.29E-02	4.44E-07	3.47E-06	1.22E-06	1.394E-07	1.22E-06	1.40E-06	1.12E-06	9.17E-06	3.21E-06	1.04E-06	8.95E-06
Road 38	38	2000-2100	1.66E-02	1.17E-07	9.52E-07	8.92E-09	1.09E-07	8.91E-07	3.43E-07	3.57E-07	2.92E-06	2.72E-03	3.30E-07	2.71E-01
Road 38	38	2100-2200	1.92E-02	1.17E-07	9.52E-07	8.92E-09	1.09E-07	8.91E-07	3.43E-07	3.57E-07	2.94E-06	2.75E-03	3.34E-07	2.78E-01
Road 38	38	2200-2300	2.32E-02	1.17E-07	9.52E-07	8.92E-09	1.09E-07	8.91E-07	3.43E-07	3.57E-07	2.94E-06	2.75E-03	3.34E-07	2.78E-01
Road 38	38	2300-2400	2.32E-02	1.17E-07	9.52E-07	8.92E-09	1.09E-07	8.91E-07	3.43E-07	3.57E-07	2.94E-06	2.75E-03	3.34E-07	2.78E-01
Road 38	38	2300-0000	9.63E-02	9.54E-08	7.81E-07	8.93E-07	8.83E-08	7.28E-07	2.79E-02	2.77E-07	2.27E-06	2.57E-02	2.56E-07	2.00E-01
Road 38	38	0000-1000	1.02E-02	2.35E-08	2.04E-07	5.93E-02	2.24E-08	1.99E-07	3.38E-01	7.93E-08	6.75E-07	1.51E-02	7.93E-08	6.26E-02
Road 38	38	1000-1300	1.03E-02	2.35E-08	2.04E-07	5.93E-02	2.24E-08	1.99E-07	3.38E-01	7.93E-08	6.75E-07	1.51E-02	7.93E-08	6.26E-02
Road 38	38	0000-0000	1.14E-02	1.34E-08	1.14E-01	1.01E-01	2.68E-09E-07	3.51E-04E-06	3.79E-07	3.30E-06	4.18E-06	3.36E-02	4.18E-06	3.36E-02
Road 38	38	0300-0400	1.06E-02	1.15E-08	7.96E-08	1.03E-08	1.09E-08	3.05E-07	3.78E-02	3.37E-07	3.35E-06	3.59E-06	3.35E-06	3.59E-06
Road 38	38	0400-0500	1.11E-02	1.34E-08	1.14E-01	1.01E-01	2.68E-09E-07	3.51E-04E-06	3.79E-07	3.30E-06	4.18E-06	3.36E-02	4.18E-06	3.36E-02
Road 38	38	0500-0600	1.11E-02	1.34E-08	1.14E-01	1.01E-01	2.68E-09E-07	3.51E-04E-06	3.79E-07	3.30E-06	4.18E-06	3.36E-02	4.18E-06	3.36E-02
Road 38	38	0600-0700	1.16E-02	1.84E-08	4.97E-07	1.06E-08	1.08E-08	7.93E-07	7.93E-01	1.63E-06	3.53E-06	3.80E-01	1.52E-06	1.24E-01
Road 38	38	0700-0800	1.16E-02	1.84E-08	4.97E-07	1.06E-08	1.08E-08	7.93E-07	7.93E-01	1.63E-06	3.53E-06	3.80E-01	1.52E-06	1.24E-01
Road 38	38	0800-0900	1.16E-02	1.84E-08	4.97E-07	1.06E-08	1.08E-08	7.93E-07	7.93E-01	1.63E-06	3.53E-06	3.80E-01	1.52E-06	1.24E-01
Road 38	38	0900-1000	1.53E-02	1.33E-08	1.14E-01	4.74E-07	2.58E-06	2.58E-06	4.47E-07	4.73E-06	3.95E-02	4.73E-02	4.73E-02	4.73E-02
Road 38	38	0900-1000	1.24E-02	1.76E-07	1.49E-06	1.20E-06	1.68E-07	4.34E-06	9.99E-06	6.06E-07	4.77E-06	3.80E-03	5.33E-07	4.54E-06
Road 38	38	1000-1100	1.24E-02	1.76E-07	1.49E-06	1.20E-06	1.68E-07	4.34E-06	9.99E-06	6.06E-07	4.77E-06	3.80E-03	5.33E-07	4.54E-06
Road 38	38	1100-1200	1.24E-02	1.76E-07	1.49E-06	1.20E-06	1.68E-07	4.34E-06	9.99E-06	6.06E-07	4.77E-06	3.80E-03	5.33E-07	4.54E-06
Road 38	38	1200-1300	5.78E-02	1.75E-08	1.47E-07	5.51E-04	1.64E-08	4.40E-07	2.28E-07	6.79E-08	5.78E-07	2.12E-03	6.31E-08	5.36E-02
Road 38	38	1300-1400	5.78E-02	1.75E-08	1.47E-07	5.51E-04	1.64E-08	4.40E-07	2.28E-07	6.79E-08	5.78E-07	2.12E-03	6.31E-08	5.36E-02
Road 38	38	1400-1500	5.99E-02	1.99E-08	1.66E-07	5.97E-06	1.86E-08	1.98E-07	3.38E-07	7.79E-08	6.00E-07	2.21E-03	7.20E-08	6.13E-02
Road 38	38	1500-1600	6.28E-02	2.08E-08	1.77E-07	5.92E-06	1.98E-08	1.65E-07	2.48E-07	8.31E-08	7.67E-07	2.31E-03	7.72E-08	6.59E-02
Road 38	38	1600-1700	6.28E-02	2.08E-08	1.77E-07	5.92E-06	1.98E-08	1.65E-07	2.48E-07	8.31E-08	7.67E-07	2.31E-03	7.72E-08	6.59E-02
Road 38	38	1700-1800	6.28E-02	2.08E-08	1.77E-07	5.92E-06	1.98E-08	1.65E-07	2.48E-07	8.31E-08	7.67E-07	2.31E-03	7.72E-08	6.59E-02
Road 38	38	1800-1900	6.28E-02	2.08E-08	1.77E-07	5.92E-06	1.98E-08	1.65E-07	2.48E-07	8.31E-08	7.67E-07	2.31E-03	7.72E-08	6.59E-02
Road 38	38	1900-2000	6.28E-02	2.08E-08	1.77E-07	5.92E-06	1.98E-08	1.65E-07	2.48E-07	8.31E-08	7.67E-07	2.31E-03	7.72E-08	6.59E-02
Road 38	38	2000-2100	6.28E-02	2.08E-08	1.77E-07	5.92E-06	1.98E-08	1.65E-07	2.48E-07	8.31E-08	7.67E-07	2.31E-03	7.72E-08	6.59E-02
Road 40	40	0000-0100	5.64E-02	1.67E-07	8.12E-07	5.14E-02	1.52E-07	4.71E-07	2.17E-02	6.42E-07	3.13E-06	1.94E-07	5.75E-07	2.89E-06
Road 40	40	0100-0200	6.32E-02	1.43E-07	6.89E-07	6.08E-02	1.62E-07	5.41E-07	2.30E-02	6.98E-07	2.42E-06	2.09E-07	4.52E-07	2.28E-06
Road 40	40	0200-0300	6.32E-02	1.43E-07	6.89E-07	6.08E-02	1.62E-07	5.41E-07	2.30E-02	6.98E-07	2.42E-06	2.09E-07	4.52E-07	2.28E-06
Road 40	40	0300-0400	7.98E-02	1.72E-07	5.91E-07	7.22E-02	1.11E-07	4.14E-07	2.46E-02	3.78E-07	1.84E-06	2.22E-02	3.42E-07	1.66E-06
Road 40	40	0400-0500	7.98E-02	1.72E-07	5.91E-07	7.22E-02	1.11E-07	4.14E-07	2.46E-02	3.78E-07	1.84E-06	2.22E-02	3.42E-07	1.66E-06
Road 40	40	0500-0600	7.98E-02	1.72E-07	5.91E-07	7.22E-02	1.11E-07	4.14E-07	2.46E-02	3.78E-07	1.84E-06	2.22E-02	3.42E-07	1.66E-06
Road 40	40	0600-0700	6.71E-02	2.98E-07	1.45E-06	6.26E-02	7.78E-07	3.35E-06	2.66E-01	1.18E-06	5.75E-06	2.42E-02	1.08E-06	5.23E-06
Road 40	40	0700-0800	9.41E-02	9.63E-07	4.86E-06	8.61E-02	1.38E-06	5.13E-06	1.34E-05	1.52E-05	2.93E-03	3.00E-04	9.97E-04	4.94E-04
Road 40	40	0800-0900	9.41E-02	9.63E-07	4.86E-06	8.61E-02	1.38E-06	5.13E-06	1.34E-05	1.52E-05	2.93E-03	3.00E-04	9.97E-04	4.94E-04
Road 40	40	0900-1000	1.03E-01	1.07E-06	5.26E-06	9.65E-02	1.01E-06	4.22E-06	3.23E-03	3.99E-06	1.65E-06	2.99		

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry		Open Road 24 hour Emission Factors for		Year 2038	
AERMOD model (January)		NO _x Emission		NO _x Emission	

Road Name	Road ID	Hour	Monthly/Range			Monthly/Average			Monthly/Range			Monthly/Average		
			g/m ³ /h	g/s/m ³	tonne/hour	g/m ³ /h	g/s/m ³	tonne/hour	g/m ³ /h	g/s/m ³	tonne/hour	g/m ³ /h	g/s/m ³	tonne
Road 1	1	0000-0100	1.916	0.42	1.686	1.692	0.378	3.242	0.741	1.595	1.427	0.635	1.392	1.211
Road 1	1	0100-0200	2.352	0.52	2.040	2.352	0.52	2.040	2.352	0.52	2.040	2.352	0.52	2.040
Road 1	1	0200-0300	2.562	0.56	2.976	2.562	0.56	2.976	2.562	0.56	2.976	2.562	0.56	2.976
Road 1	1	0300-0400	2.852	0.62	2.776	2.448	0.55	2.448	2.226	0.474	1.815	0.947	7.986	7.788
Road 1	1	0400-0500	2.852	0.62	2.776	2.448	0.55	2.448	2.226	0.474	1.815	0.947	7.986	7.788
Road 1	1	0500-0600	2.426	0.54	2.108	2.186	0.478	2.338	1.896	0.417	1.320	0.756	1.276	1.115
Road 1	1	0600-0700	2.136	0.47	1.716	1.626	0.427	1.926	1.686	0.372	1.286	0.682	2.576	2.706
Road 1	1	0700-0800	2.136	0.47	1.716	1.626	0.427	1.926	1.686	0.372	1.286	0.682	2.576	2.706
Road 1	1	0800-0900	2.302	0.50	1.976	2.106	0.461	1.826	1.816	0.402	1.706	0.370	7.306	7.346
Road 1	1	0900-1000	2.986	0.59	2.076	1.846	0.396	1.886	1.686	0.360	1.726	0.646	8.156	6.496
Road 1	1	1000-1100	2.986	0.59	2.076	1.846	0.396	1.886	1.686	0.360	1.726	0.646	8.156	6.496
Road 1	1	1100-1200	2.846	0.58	1.976	2.566	0.577	1.596	1.906	0.420	1.676	0.586	8.536	9.530
Road 1	1	1200-1300	2.706	0.52	1.706	1.396	0.456	1.376	1.236	0.366	1.496	0.486	7.806	4.386
Road 1	1	1300-1400	2.706	0.52	1.706	1.396	0.456	1.376	1.236	0.366	1.496	0.486	7.806	4.386
Road 1	1	1400-1500	2.676	0.52	1.676	2.416	0.547	1.306	1.876	0.477	4.406	0.786	7.476	4.25
Road 1	1	1500-1600	2.536	0.517	1.406	2.286	0.474	1.786	0.862	0.546	0.486	7.786	4.836	4.14
Road 1	1	1600-1700	2.536	0.517	1.406	2.286	0.474	1.786	0.862	0.546	0.486	7.786	4.836	4.14
Road 1	1	1700-1800	2.096	0.42	1.306	1.876	0.430	1.146	1.596	0.377	0.716	4.716	6.686	4.637
Road 1	1	1800-1900	1.746	0.32	1.176	1.556	0.352	1.127	0.976	0.270	0.636	5.396	5.396	3.877
Road 1	1	1900-2000	1.886	0.36	1.286	1.626	0.36	1.066	1.066	0.24	0.756	5.206	5.206	2.13
Road 1	1	2000-2100	2.426	0.51	1.516	1.406	0.372	1.486	0.976	0.770	2.136	4.906	2.706	1.83
Road 1	1	2100-2200	1.166	0.25	0.786	1.246	0.477	0.811	0.596	0.526	2.206	0.406	4.836	1.986
Road 1	1	2200-2300	1.426	0.31	0.946	1.076	0.423	0.786	0.786	0.576	0.286	0.486	0.966	1.174
Road 1	1	2300-0000	1.716	0.37	1.276	1.716	0.37	1.276	1.716	0.37	1.276	1.716	0.37	1.276
Road 2	2	0000-0100	1.152	0.24	1.076	0.876	0.190	0.646	0.532	0.578	0.382	0.427	0.476	0.316
Road 2	2	0100-0200	1.026	0.22	0.786	0.836	0.190	0.506	0.426	0.361	0.388	0.256	0.3116	0.337
Road 2	2	0200-0300	2.06	0.57	1.836	2.136	0.583	1.626	1.246	0.322	0.646	0.526	0.646	0.426
Road 2	2	0300-0400	1.286	0.28	0.486	0.326	0.14	0.346	0.286	0.064	0.2476	0.1646	0.5476	0.206
Road 2	2	0400-0500	1.356	0.32	0.576	0.386	0.126	0.296	0.386	0.062	0.2811	0.1976	0.5896	0.236
Road 2	2	0500-0600	1.606	0.38	0.636	0.436	0.176	0.416	0.386	0.074	0.3416	0.2316	0.6816	0.266
Road 2	2	0600-0700	1.496	0.32	0.586	0.356	0.134	0.246	0.376	0.026	0.1126	0.0676	0.1626	0.036
Road 2	2	0700-0800	1.546	0.34	0.596	0.356	0.141	0.241	0.396	0.046	0.2586	0.1536	0.2276	0.066
Road 2	2	0800-0900	1.606	0.38	0.636	0.436	0.176	0.416	0.386	0.074	0.3416	0.2316	0.6816	0.266
Road 2	2	0900-1000	1.726	0.37	0.806	0.576	0.152	0.276	0.466	0.076	0.246	0.1636	0.536	0.216
Road 2	2	1000-1100	1.946	0.43	0.876	0.586	0.176	0.296	0.486	0.136	0.236	0.1546	0.696	0.276
Road 2	2	1100-1200	1.966	0.43	0.876	0.586	0.176	0.296	0.486	0.136	0.236	0.1546	0.696	0.276
Road 2	2	1200-1300	1.756	0.37	0.746	0.486	0.158	0.38	0.246	0.056	0.236	0.1406	0.676	0.26
Road 2	2	1300-1400	1.766	0.37	0.746	0.486	0.158	0.38	0.246	0.056	0.236	0.1406	0.676	0.26
Road 2	2	1400-1500	1.666	0.32	0.676	0.436	0.156	0.286	0.256	0.076	0.1726	0.1086	0.596	0.246
Road 2	2	1500-1600	1.666	0.32	0.676	0.436	0.156	0.286	0.256	0.076	0.1726	0.1086	0.596	0.246
Road 2	2	1600-1700	1.736	0.32	0.746	0.486	0.158	0.38	0.246	0.056	0.236	0.1406	0.676	0.26
Road 2	2	1700-1800	1.736	0.32	0.746	0.486	0.158	0.38	0.246	0.056	0.236	0.1406	0.676	0.26
Road 2	2	1800-1900	0.976	0.23	0.776	0.116	0.046	0.246	0.1416	0.056	0.1406	0.296	0.406	0.16
Road 2	2	1900-2000	0.846	0.19	0.676	0.096	0.046	0.146	0.156	0.046	0.0966	0.246	0.406	0.16
Road 2	2	2000-2100	0.976	0.23	0.776	0.116	0.046	0.246	0.1416	0.056	0.1406	0.296	0.406	0.16
Road 2	2	2100-2200	0.716	0.13	0.876	0.546	0.186	0.746	0.432	0.886	0.596	0.436	1.757	0.53
Road 2	2	2200-2300	0.966	0.23	0.776	0.116	0.046	0.246	0.1416	0.056	0.1406	0.296	0.406	0.16
Road 2	2	2300-0000	0.966	0.23	0.776	0.116	0.046	0.246	0.1416	0.056	0.1406	0.296	0.406	0.16
Road 3	3	0000-0100	1.326	0.28	1.267	0.956	0.176	1.136	1.706	0.636	0.636	0.536	5.536	5.37
Road 3	3	0100-0200	1.546	0.30	1.076	1.516	0.386	0.896	1.396	0.706	0.467	0.926	0.696	0.936
Road 3	3	0200-0300	1.546	0.30	1.076	1.516	0.386	0.896	1.396	0.706	0.467	0.926	0.696	0.936
Road 3	3	0300-0400	1.966	0.48	1.866	1.186	0.76	1.026	1.096	0.736	0.316	0.486	0.806	0.776
Road 3	3	0400-0500	1.976	0.48	1.866	1.316	0.76	1.026	1.176	0.804	0.356	0.546	0.916	0.907
Road 3	3	0500-0600	1.976	0.48	1.866	1.316	0.76	1.026	1.176	0.804	0.356	0.546	0.916	0.907
Road 3	3	0600-0700	1.686	0.36	1.626	0.946	0.516	0.926	0.3546	0.776	1.2116	0.676	1.046	1.046
Road 3	3	0700-0800	1.876	0.41	0.816	1.716	0.586	0.806	0.806	0.2616	0.386	0.7176	0.236	0.349
Road 3	3	0800-0900	1.786	0.37	0.716	1.016	0.586	0.616	0.726	0.2826	0.4516	0.3716	0.516	0.37
Road 3	3	0900-1000	1.786	0.37	0.716	1.016	0.586	0.616	0.726	0.2826	0.4516	0.3716	0.516	0.37
Road 3	3	1000-1100	2.316	0.52	0.976	1.056	0.236	0.636	0.936	0.846	0.706	0.406	0.8016	0.216
Road 3	3	1100-1200	2.286	0.52	0.976	1.016	0.236	0.636	0.896	0.706	0.386	0.746	0.276	0.406
Road 3	3	1200-1300	2.286	0.52	0.976	1.016	0.236	0.636	0.896	0.706	0.386	0.746	0.276	0.406
Road 3	3	1300-1400	2.716	0.52	1.756	1.156	0.246	0.7166	1.086	1.026	0.2976	0.486	0.9166	0.276
Road 3	3	1400-1500	2.716	0.52	1.756	1.156	0.246	0.7166	1.086	1.026	0.2976	0.486	0.9166	0.276
Road 3	3	1500-1600	2.626	0.52	1.626	1.226	0.236	0.726	1.126	1.026	0.3116	0.486	0.896	0.276
Road 3	3	1600-1700	2.626	0.52	1.626	1.226	0.236	0.726	1.126	1.026	0.3116	0.486	0.896	0.276
Road 3	3	1700-1800	2.086	0.42	0.876	1.026	0.896	0.676	0.946	0.896	0.286	0.296	0.786	0.236
Road 3	3	1800-1900	2.316	0.48	0.776	1.256	0.896	0.716	0.946	0.896	0.286	0.296	0.786	0.236
Road 3	3	1900-2000	2.086	0.42	0.876	1.026	0.896	0.676	0.946	0.896	0.286	0.296	0.786	0.236
Road 3	3	2000-2100	2.316	0.48	0.776	1.256	0.896	0.716	0.946	0.896	0.286	0.296	0.786	0.236
Road 3	3	2100-2200	2.726	0.52	1.756	1.156	0.246	0.7166	1.086	1.026	0.2976	0.486	0.9166	0.276
Road 3	3	2200-2300	2.726	0.52	1.756	1.156	0.246	0.7166	1.086	1.026	0.2976	0.486	0.9166	0.276
Road 3	3	2300-0000	1.416	0.31	0.916	0.896	0.236	0.716	0.2376	0.686	0.9286	0.146	0.596	0.796
Road 3	3	0000-0100	1.416	0.31	0.916	0.896	0.236	0.716	0.2376	0.686	0.9286	0.146	0.596	0.796
Road 3	3	0100-0200	0.816	0.19	0.516	1.096	0.566	0.676	0.5376	0.2617	0.6406	0.4776	0.216	0.570
Road 3	3	0200-0300	0.976	0.23	0.476	0.936	0.396	0.686	0.686	0.592	0.0306	0.4696	0.1667	0.408
Road 3	3	0300-0400	1.126	0.24	0.486	1.126	0.326	0.806	0.806	0.672	0.026	0.186	0.916	0.506
Road 3	3	0400-0500	0.956	0.22	0.486	0.946	0.346	0.946	0.946	0.3167	0.8296	0.496	0.2667	0.692
Road 3	3	0500-0600	0.956	0.22	0.486	0.946	0.346	0.946	0.946	0.3167	0.8296	0.496	0.2667	0.692
Road 3	3	0600-0700	1.156	0.26	0.676	0.896	0.056	0.2407	0.6776	0.6076	1.396	0.366	0.2776	0.216

Secure\Environment Projects\60733229\1.01\Others\Air Modelling\Appendix\Traffic\Appendix\Appendix 3.5.4 Emission Factor in 2038-S.B.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Open Road 24 hour Emission Factors for
AERMOD model (January)

Road Name	Road ID	Hour	NO Emission						NO Emission					
			Monthly Bourdon			Monthly Average			Monthly Bourdon			Monthly Average		
			g/km/h	g/km/h	tonne/hour	g/km/h	g/km/h	tonne/hour	g/km/h	g/km/h	tonne/hour	g/km/h	g/km/h	tonne/hour
Road #4	44	0800-0900	9.9862	8.8967	1.786	9.076	2.6307	1.6326	5.5962	1.5562	0.956	4.6862	1.362	0.89
Road #4	44	0900-1200	13.1762	2.8967	0.6486	1.0262	4.0267	1.486	5.6862	1.386	8.6362	5.0662	1.062	7.39
Road #4	44	1200-1500	1.9562	2.3167	1.426	0.676	2.076	1.286	6.0662	1.1762	7.2362	5.2062	1.006	6.20
Road #4	44	1500-1800	5.0262	3.7367	2.346	3.8662	4.0267	2.1166	6.7862	1.7146	10.086	5.9462	1.466	9.23
Road #4	44	1800-2100	1.9562	2.3167	1.426	0.676	2.076	1.286	5.1362	1.0662	6.1362	4.5862	0.986	5.89
Road #4	44	1900-2100	1.9562	2.3167	1.426	0.676	2.076	1.286	7.1762	1.0762	12.1262	6.7262	1.176	10.6
Road #4	44	2100-2400	4.4862	4.1567	2.5666	1.3362	3.7826	2.3066	7.2462	2.0662	12.7562	6.3862	1.766	11.0
Road #4	44	2400-0100	1.9562	2.3167	1.426	0.676	2.076	1.286	5.1362	1.0662	6.1362	4.5862	0.986	5.89
Road #4	44	1700-1800	2.9562	2.0667	1.3066	1.8962	3.3267	3.3066	9.9062	3.3662	2.076	8.6162	2.926	1.80
Road #4	44	1800-1900	2.2062	4.1667	5.0466	1.5962	7.2667	4.486	6.8862	3.6766	2.2766	8.5362	3.166	2.01
Road #4	44	1900-2000	1.9562	2.3167	1.426	0.676	2.076	1.286	5.1362	1.0662	6.1362	4.5862	0.986	5.89
Road #4	44	2000-2100	6.8462	1.5667	3.6167	6.0166	1.3867	8.5267	4.0262	1.1066	6.8062	4.9262	9.276	5.70
Road #4	44	2100-2200	1.7862	1.3367	0.7462	5.1866	1.7347	4.5662	1.0466	6.4386	3.8862	8.0862	4.6062	5.43
Road #4	44	2200-2300	1.9562	2.3167	1.426	0.676	2.076	1.286	5.1362	1.0662	6.1362	4.5862	0.986	5.89
Road #4	44	2300-0000	6.4762	1.0867	6.0667	5.7366	9.5366	5.8967	4.8362	8.0467	4.9762	6.0662	5.7062	4.41
Road #5	45	0000-0100	6.0262	4.5466	5.5967	5.2266	3.8466	4.8567	4.0262	3.6867	4.5266	3.5962	2.5462	3.62
Road #5	45	0100-0200	1.9562	1.2266	0.9967	6.8166	2.8466	3.5067	5.0162	2.4462	3.0062	4.4462	2.6862	2.90
Road #5	45	0200-0300	1.7862	1.1566	0.3266	3.1866	3.2866	3.3866	5.5962	1.9562	1.9562	1.9562	1.9562	1.9562
Road #5	45	0300-0400	7.6762	2.1966	2.6967	6.8466	1.9366	2.3767	5.0262	1.5267	1.8766	4.4162	1.2462	1.53
Road #5	45	0400-0500	6.8362	2.5866	1.1867	7.3766	2.2866	2.8867	5.5362	1.7162	2.1066	4.2566	1.4462	1.66
Road #5	45	0500-0600	1.7862	1.1566	0.3266	3.1866	3.2866	3.3866	5.5962	1.9562	1.9562	1.9562	1.9562	1.9562
Road #5	45	0600-0700	9.4962	0.9767	1.3466	8.4566	0.8666	1.1866	5.6262	6.6662	8.2066	4.6362	5.5362	6.80
Road #5	45	0700-0800	1.9162	2.2367	2.8966	9.1466	2.1116	2.8066	5.3966	1.3866	1.6966	5.1066	1.1866	1.45
Road #5	45	0800-0900	1.9162	2.2367	2.8966	9.1466	2.1116	2.8066	5.3966	1.3866	1.6966	5.1066	1.1866	1.45
Road #5	45	0900-1000	1.9162	2.2367	2.8966	9.1466	2.1116	2.8066	5.3966	1.3866	1.6966	5.1066	1.1866	1.45
Road #5	45	1000-1100	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	1100-1200	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	1200-1300	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	1300-1400	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	1400-1500	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	1500-1600	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	1600-1700	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	1700-1800	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	1800-1900	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	1900-2000	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	2000-2100	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	2100-2200	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	2200-2300	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	2300-0000	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	0000-0100	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	0100-0200	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	0200-0300	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	0300-0400	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	0400-0500	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	0500-0600	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	0600-0700	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	0700-0800	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	0800-0900	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	0900-1000	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	1000-1100	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	1100-1200	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	1200-1300	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	1300-1400	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	1400-1500	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	1500-1600	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	1600-1700	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	1700-1800	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	1800-1900	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	1900-2000	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	2000-2100	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	2100-2200	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	2200-2300	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	2300-0000	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	0000-0100	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	0100-0200	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	0200-0300	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	0300-0400	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	0400-0500	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	0500-0600	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	0600-0700	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	0700-0800	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	0800-0900	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	0900-1000	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	1000-1100	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.0966	1.34
Road #5	45	1100-1200	1.4262	2.3167	2.8966	8.8666	1.2167	2.6566	5.7766	1.2866	1.5966	5.0066	1.	

Year 2038	
AERMOD model (January)	NO _x Emissions
	NO _x Emissions

Name	Road	ID	Hour	MonthlyHourMin				MonthlyHourAverage				MonthlyHourAverage			
				g/km/hv	g/m	time/hour	g/km/hv	g/m	time/hour	g/km/hv	g/m	time/hour	g/km/hv	g/m	time/hour
Road 34	34	0000-0000	1.00E-02	2.6657	7.47E-06	9.284E-04	2.6647	6.015E-06	1.62E-02	1.41E-06	3.70E-05	4.66E-02	1.23E-06	3.22E-05	
Road 34	34	0000-0100	2.44E-02	2.6657	7.47E-06	9.284E-04	2.6647	6.015E-06	1.62E-02	1.41E-06	3.70E-05	4.66E-02	1.23E-06	3.22E-05	
Road 34	34	1000-1100	1.30E-02	2.6657	6.80E-06	1.29E-03	2.35E-07	6.18E-06	1.62E-02	1.17E-06	3.07E-05	5.48E-02	1.02E-06	2.68E-05	
Road 34	34	1100-1200	1.34E-02	2.38E-07	6.82E-06	1.21E-02	2.13E-07	5.58E-06	3.00E-02	1.12E-06	2.92E-05	5.42E-02	9.60E-07	2.51E-05	
Road 34	34	1200-1300	1.34E-02	2.38E-07	6.82E-06	1.21E-02	2.13E-07	5.58E-06	3.00E-02	1.12E-06	2.92E-05	5.42E-02	9.60E-07	2.51E-05	
Road 34	34	1300-1400	2.31E-02	3.47E-07	9.00E-06	2.10E-03	3.12E-08	7.12E-06	8.47E-02	1.77E-06	3.38E-05	1.33E-06	1.14E-06	2.98E-05	
Road 34	34	1400-1500	2.32E-02	3.65E-07	9.54E-06	2.10E-03	3.29E-08	8.43E-02	1.32E-06	3.40E-05	3.47E-02	1.17E-06	3.09E-05		
Road 34	34	1500-1600	2.31E-02	3.65E-07	9.54E-06	2.10E-03	3.29E-08	8.43E-02	1.32E-06	3.40E-05	3.47E-02	1.17E-06	3.09E-05		
Road 34	34	1600-1700	2.21E-02	3.67E-07	9.62E-06	1.98E-03	3.29E-08	8.61E-02	1.02E-06	3.33E-05	3.46E-02	7.06E-02	1.17E-06	3.07E-05	
Road 34	34	1700-1800	1.75E-02	1.12E-07	8.14E-06	1.07E-02	2.86E-07	7.32E-06	7.13E-02	1.27E-06	3.33E-05	6.26E-02	1.12E-06	2.92E-05	
Road 34	34	1800-1900	1.32E-02	1.12E-07	8.14E-06	1.07E-02	2.86E-07	7.32E-06	7.13E-02	1.27E-06	3.33E-05	6.26E-02	1.12E-06	2.92E-05	
Road 34	34	1900-2000	1.13E-02	1.66E-07	4.35E-07	1.07E-02	1.50E-07	6.23E-06	3.38E-02	1.93E-05	4.60E-02	1.63E-07	1.68E-07		
Road 34	34	2000-2100	1.13E-02	1.32E-07	3.44E-06	1.07E-02	1.18E-07	3.08E-06	5.65E-02	6.23E-07	1.63E-06	4.53E-07	5.37E-07	1.41E-07	
Road 34	34	2100-2200	1.13E-02	1.32E-07	3.44E-06	1.07E-02	1.18E-07	3.08E-06	5.65E-02	6.23E-07	1.63E-06	4.53E-07	5.37E-07	1.41E-07	
Road 34	34	2200-2300	1.13E-02	1.12E-07	3.16E-06	1.04E-02	1.07E-07	2.95E-07	5.85E-07	1.53E-05	4.79E-02	5.07E-07	1.32E-07		
Road 34	34	2300-0000	1.25E-02	4.09E-08	2.61E-06	1.12E-02	8.65E-08	2.33E-06	5.81E-02	4.63E-07	1.21E-05	4.99E-02	3.98E-07	1.04E-07	
Road 35	35	0000-0100	1.48E-02	4.09E-08	2.61E-06	1.12E-02	8.65E-08	2.33E-06	5.81E-02	4.63E-07	1.21E-05	4.99E-02	3.98E-07	1.04E-07	
Road 35	35	0100-0200	4.77E-02	6.98E-08	9.95E-08	4.29E-06	1.46E-07	8.66E-07	1.36E-06	1.19E-07	2.89E-07	1.22E-06	1.90E-07	2.55E-07	
Road 35	35	0200-0300	5.59E-02	3.89E-08	8.47E-08	5.03E-06	1.351E-08	8.53E-05E	1.53E-07	1.67E-07	2.60E-07	1.83E-06	9.44E-08	2.30E-07	
Road 35	35	0300-0400	6.09E-02	5.58E-08	1.16E-07	5.42E-06	1.31E-08	8.53E-05E	1.66E-07	1.00E-07	2.77E-07	2.56E-06	1.26E-07	2.16E-07	
Road 35	35	0400-0500	6.09E-02	6.08E-08	9.83E-08	4.29E-06	1.34E-08	8.53E-05E	1.66E-07	1.00E-07	2.77E-07	2.56E-06	1.26E-07	2.16E-07	
Road 35	35	0500-0600	4.60E-02	4.55E-08	1.11E-07	4.37E-06	4.42E-08	9.56E-06	1.44E-06	1.36E-07	3.00E-07	1.27E-06	1.20E-07	2.51E-07	
Road 35	35	0600-0700	3.70E-02	6.98E-08	1.69E-07	4.29E-06	5.58E-08	1.05E-05	1.33E-06	2.76E-07	5.35E-07	1.14E-06	1.99E-07	4.84E-07	
Road 35	35	0700-0800	3.70E-02	6.98E-08	1.69E-07	4.29E-06	5.58E-08	1.05E-05	1.33E-06	2.76E-07	5.35E-07	1.14E-06	1.99E-07	4.84E-07	
Road 35	35	0800-0900	5.20E-02	2.24E-07	5.69E-07	4.76E-02	2.14E-07	5.21E-07	1.56E-07	7.01E-07	1.71E-06	1.41E-06	6.31E-07	1.54E-06	
Road 35	35	0900-1000	5.68E-02	2.39E-07	5.58E-07	4.29E-02	2.16E-07	5.35E-07	1.71E-06	8.68E-07	1.67E-06	1.54E-06	8.22E-07	1.51E-06	
Road 35	35	1000-1100	5.68E-02	2.39E-07	5.58E-07	4.29E-02	2.16E-07	5.35E-07	1.71E-06	8.68E-07	1.67E-06	1.54E-06	8.22E-07	1.51E-06	
Road 35	35	1100-1200	6.31E-02	2.23E-07	5.44E-07	5.69E-02	2.02E-07	4.91E-07	1.53E-06	6.48E-07	1.58E-06	1.63E-06	5.79E-07	1.41E-06	
Road 35	35	1200-1300	7.00E-02	1.66E-07	4.04E-07	6.98E-02	1.36E-07	3.65E-07	1.02E-06	4.29E-07	1.04E-06	1.64E-06	3.89E-07	9.37E-07	
Road 35	35	1300-1400	7.00E-02	1.66E-07	4.04E-07	6.98E-02	1.36E-07	3.65E-07	1.02E-06	4.29E-07	1.04E-06	1.64E-06	3.89E-07	9.37E-07	
Road 35	35	1400-1500	7.13E-02	1.77E-07	4.31E-07	6.64E-02	1.60E-07	3.98E-07	1.87E-06	4.65E-07	1.13E-06	1.66E-06	4.16E-07	1.01E-06	
Road 35	35	1500-1600	6.98E-02	1.77E-07	4.29E-07	6.28E-02	1.58E-07	3.83E-07	1.87E-06	4.71E-07	1.14E-06	1.67E-06	4.13E-07	1.02E-06	
Road 35	35	1600-1700	6.98E-02	1.77E-07	4.29E-07	6.28E-02	1.58E-07	3.83E-07	1.87E-06	4.71E-07	1.14E-06	1.67E-06	4.13E-07	1.02E-06	
Road 35	35	1700-1800	6.03E-02	1.68E-07	4.12E-07	5.48E-02	1.52E-07	3.37E-07	1.64E-06	4.60E-07	1.12E-06	1.45E-06	4.08E-07	9.94E-07	
Road 35	35	1800-1900	5.44E-02	1.61E-07	3.91E-07	4.80E-02	1.44E-07	3.05E-07	1.43E-06	4.29E-07	1.06E-06	1.38E-06	3.78E-07	9.08E-07	
Road 35	35	1900-2000	5.44E-02	1.61E-07	3.91E-07	4.80E-02	1.44E-07	3.05E-07	1.43E-06	4.29E-07	1.06E-06	1.38E-06	3.78E-07	9.08E-07	
Road 35	35	2000-2100	3.06E-02	4.54E-08	1.10E-07	2.76E-02	4.07E-08	9.90E-08	1.04E-07	1.54E-07	3.74E-07	9.08E-02	1.34E-07	3.26E-07	
Road 35	35	2100-2200	2.94E-02	4.34E-08	1.05E-07	2.69E-02	3.92E-08	9.53E-08	1.01E-06	1.49E-07	3.62E-07	8.85E-02	1.31E-07	3.18E-07	
Road 35	35	2200-2300	2.94E-02	4.34E-08	1.05E-07	2.69E-02	3.92E-08	9.53E-08	1.01E-06	1.49E-07	3.62E-07	8.85E-02	1.31E-07	3.18E-07	
Road 35	35	2300-0000	3.54E-02	4.08E-08	9.80E-08	3.17E-03	3.61E-08	1.36E-06	1.12E-07	1.07E-07	1.06E-06	1.71E-07	2.70E-07		
Road 35	35	0000-0100	4.68E-02	7.14E-08	1.80E-07	4.27E-03	6.51E-08	1.84E-06	2.00E-07	3.95E-07	7.67E-07	1.78E-07	2.71E-07	6.84E-07	
Road 35	35	0100-0200	4.68E-02	7.14E-08	1.80E-07	4.27E-03	6.51E-08	1.84E-06	2.00E-07	3.95E-07	7.67E-07	1.78E-07	2.71E-07	6.84E-07	
Road 35	35	0200-0300	6.21E-02	6.54E-08	1.37E-07	5.76E-02	1.49E-08	1.26E-07	2.30E-07	1.93E-07	4.98E-07	1.99E-07	1.74E-07	4.96E-07	
Road 35	35	0300-0400	6.87E-02	6.54E-08	1.30E-07	6.27E-02	4.71E-08	1.19E-07	2.30E-07	7.38E-07	4.98E-07	2.07E-07	1.56E-07	4.36E-07	
Road 35	35	0400-0500	6.87E-02	6.54E-08	1.30E-07	6.27E-02	4.71E-08	1.19E-07	2.30E-07	7.38E-07	4.98E-07	2.07E-07	1.56E-07	4.36E-07	
Road 35	35	0500-0600	6.03E-02	7.22E-08	1.82E-07	5.58E-02	6.68E-08	1.66E-06	2.33E-07	2.79E-07	7.02E-07	2.12E-06	2.53E-07	6.38E-07	
Road 35	35	0600-0700	5.68E-02	7.22E-08	1.32E-07	5.58E-02	1.16E-07	2.91E-07	2.44E-07	4.64E-07	1.37E-06	2.17E-06	1.94E-07	1.24E-06	
Road 35	35	0700-0800	7.00E-02	7.22E-08	1.32E-07	5.58E-02	1.16E-07	2.91E-07	2.44E-07	4.64E-07	1.37E-06	2.17E-06	1.94E-07	1.24E-06	
Road 35	35	0800-0900	6.73E-02	3.99E-07	9.00E-03	6.23E-02	3.65E-07	9.21E-07	2.14E-07	3.96E-05	3.51E-06	2.24E-06	1.29E-06	3.50E-06	
Road 35	35	0900-1000	7.76E-02	3.97E-07	1.00E-02	7.29E-02	3.74E-07	9.39E-07	2.61E-07	1.33E-06	3.66E-06	2.42E-06	1.23E-06	3.11E-06	
Road 35	35	1000-1100	7.76E-02	3.97E-07	1.00E-02	7.29E-02	3.74E-07	9.39E-07	2.61E-07	1.33E-06	3.66E-06	2.42E-06	1.23E-06	3.11E-06	
Road 35	35	1100-1200	8.26E-02	3.67E-07	9.25E-07	7.68E-03	3.41E-07	8.00E-07	2.66E-06	1.18E-06	2.98E-06	2.44E-06	1.08E-06	2.78E-06	
Road 35	35	1200-1300	9.74E-02	3.67E-07	8.73E-07	9.07E-03	3.23E-07	8.13E-07	2.88E-06	1.03E-06	2.58E-06	2.66E-06	9.48E-07	2.39E-06	
Road 35	35	1300-1400	9.74E-02	3.67E-07	8.73E-07	9.07E-03	3.23E-07	8.13E-07	2.88E-06	1.03E-06	2.58E-06	2.66E-06	9.48E-07	2.39E-06	
Road 35	35	1400-1500	9.76E-02	3.75E-07	9.38E-07	9.05E-03	3.46E-07	8.72E-07	2.99E-06	1.12E-06	3.63E-06	2.72E-06	1.04E-06	2.61E-06	
Road 35	35	1500-1600	9.88E-02	3.67E-07	8.69E-07	9.21E-03	3.59E-07	8.05E-07	3.05E-06	1.16E-06	2.99E-06	2.81E-06	1.10E-06	2.76E-06	
Road 35	35	1600-1700	1.05E-02	3.75E-07	9.43E-07	8.80E-03	3.47E-07	8.74E-07	2.99E-06	1.17E-06	3.06E-06	2.67E-06	1.05E-06	2.62E-06	
Road 35	35	1700-1800	1.05E-02	3.75E-07	9.43E-07	8.80E-03	3.47E-07	8.74E-07	2.99E-06	1.17E-06	3.06E-06	2.67E-06	1.05E-06	2.62E-06	
Road 35	35	1800-1900	6.97E-02	2.88E-07	7.29E-07	6.04E-02	2.65E-07	6.67E-07	2.32E-06	9.42E-07	2.37E-06	2.08E-06	8.61E-07	2.17E-06	
Road 35	35	1900-2000	4.62E-02	1.02E-07	3.08E-07	4.63E-02	1.14E-07	2.88E-07	1.01E-07	5.05E-07	1.27E-06	1.08E-07	6.66E-07	1.17E-06	
Road 35	35	2000-2100	4.62E-02	1.02E-07	3.08E-07	4.63E-02	1.14E-07	2.88E-07	1.01E-07	5.05E-07	1.27E-06	1.08E-07	6.66E-07	1.17E-06	
Road 35	35	2100-2200	4.73E-02	1.01E-07	2.54E-07	4.43E-02	9.44E-08	2.38E-07	2.02E-07	4.30E-07	1.08E-06	1.86E-07	9.47E-07	1.05E-06	
Road 35	35	2200-2300	4.99E-02	9.18E-08	2.31E-07	4.17E-02	8.53E-08	2.15E-07	1.95E-07	3.99E-07	1.08E-06	1.78E-07	9.65E-07	1.08E-06	
Road 35	35	2300-0000</													

\\Environment Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Appendix\Appendix 3.5.4 Emission Factor in 2038-S.B.xlsx

g Yi North Underground Quarry
en Road 24 hour Emission Factors for Year 2038
AERMOD model (January)

Bad Date	Row ID	Hour	NO Emission									NO Emission								
			MonthlyHours			MonthlyAverage			MonthlyHours			MonthlyHours			MonthlyAverage					
			g/min	ton/hour	ton/hour	g/min	ton/hour	ton/hour	g/min	ton/hour	ton/hour	g/min	ton/hour	ton/hour	g/min	ton/hour	ton/hour			
Row 47	47	1000-1700	2.7662	4.5767	1.6556	2.4552	4.7272	1.4825	1.1526	2.2006	6.8805	9.9602	1.9816	5.9745						
Row 47	47	1700-1800	1.9662	3.5371	1.3665	1.7565	3.9672	1.2255	8.8362	2.1662	6.8305	8.4895	6.8492	1.8865	5.8995					
Row 47	47	1800-1900	1.8172	3.2571	1.2571	1.6172	3.6572	1.1672	7.7872	2.0672	6.7872	8.3872	6.7872	1.8872	5.8872					
Row 47	47	1900-2000	1.1362	2.3662	7.7446	1.0662	2.1362	6.6562	6.8762	4.2362	1.3065	5.8662	1.1462	1.3675						
Row 47	47	2000-2100	1.0662	1.8852	5.1356	9.4145	1.4662	6.5762	1.1362	1.2662	6.4365	6.0562	6.9862	1.9262	2.9465					
Row 47	47	2100-2200	1.8172	3.2571	1.2571	1.6172	3.6572	1.1672	7.7872	2.0672	6.7872	8.3872	6.7872	1.8872	5.8872					
Row 47	47	2200-2300	8.7295	1.5275	3.9255	7.7345	1.1717	3.4765	6.7362	1.0256	1.1658	5.6162	6.8362	7.6565						
Row 47	47	2300-0000	8.7765	1.6315	3.0955	6.7545	8.7676	2.7462	6.7362	7.5562	2.3765	5.6162	6.3862	1.9865						
Row 48	48	0000-0100	8.6072	1.6272	3.5565	6.6255	1.9358	1.9257	5.1362	8.9962	3.9762	4.2562	6.3565	1.9265						
Row 48	48	0100-0200	3.1365	3.1365	4.7362	6.7462	2.7662	4.4962	5.5262	2.1962	3.3162	4.6962	1.8162	2.7865						
Row 48	48	0200-0300	1.7765	1.7765	2.7765	2.7765	2.7765	2.7765	2.7765	2.7765	2.7765	2.7765	2.7765	2.7765						
Row 48	48	0400-0500	8.8365	1.5365	4.7562	8.7165	2.7862	4.2062	5.6662	2.0262	3.0462	4.6662	6.6662	2.5165						
Row 48	48	0500-0600	9.3865	3.5765	8.7462	8.3365	5.1565	7.7862	5.7662	5.5662	5.7662	4.8162	2.9762	4.8865						
Row 48	48	0600-0700	8.9862	1.6862	3.7062	6.7362	1.6862	2.6862	6.7362	1.6862	2.6862	6.7362	1.6862	2.6862						
Row 48	48	0700-0800	1.0562	2.0262	4.7265	9.5155	2.5462	3.8365	5.9362	1.5862	2.3965	5.1362	1.3762	2.0765						
Row 48	48	0800-0900	9.9465	3.0762	4.6362	9.0362	2.7962	4.1262	5.2362	1.6262	2.4465	4.5562	1.4562	2.2365						
Row 48	48	0900-1000	1.1362	2.6662	4.3162	1.0662	2.9662	6.9162	1.9662	4.7462	2.2162	6.9362	1.2762	1.9365						
Row 48	48	1000-1100	1.1362	2.6662	4.3162	1.0662	2.9662	6.9162	1.9662	4.7462	2.2162	6.9362	1.2762	1.9365						
Row 48	48	1100-1200	1.2116	2.5117	3.7765	1.0962	2.2562	3.4065	6.1362	1.2762	1.9165	5.2662	1.0265	1.6465						
Row 48	48	1200-1300	2.1762	3.6262	5.4765	1.3765	3.3862	4.9562	6.0462	1.3462	2.0265	7.1862	1.1862	1.8065						
Row 48	48	1300-1400	1.8462	3.4462	5.3962	1.8462	3.4462	5.3962	1.8462	3.4462	5.3962	1.8462	3.4462	5.3962						
Row 48	48	1400-1500	2.2062	3.9762	6.0265	1.9862	3.6562	5.4362	6.8462	1.2465	2.2665	5.1362	1.3362	2.0265						
Row 48	48	1500-1600	2.0262	3.7962	5.7265	1.8362	3.4315	5.1462	6.3062	1.5362	2.2365	7.2562	1.3465	2.0465						
Row 48	48	1600-1700	1.7062	3.1662	5.0562	1.6562	3.2662	4.7462	5.8462	1.4662	2.1765	6.8462	1.2662	1.9365						
Row 48	48	1700-1800	1.6262	3.0562	5.0962	1.4662	3.0162	5.4562	6.4462	1.4462	2.1665	6.0962	1.2662	1.9365						
Row 48	48	1800-1900	1.2262	2.6962	4.3762	1.1116	2.3242	3.4962	5.4362	1.1362	1.7116	4.7116	1.4017	1.4865						
Row 48	48	1900-2000	1.1362	2.6662	4.3162	1.0662	2.9662	6.9162	1.9662	4.7462	2.2162	6.9362	1.2762	1.9365						
Row 48	48	2000-2100	1.1362	2.6662	4.3162	1.0662	2.9662	6.9162	1.9662	4.7462	2.2162	6.9362	1.2762	1.9365						
Row 48	48	2100-2200	1.0662	1.3716	2.0765	9.6862	1.2262	1.8662	5.4362	6.9162	1.4762	4.7262	6.0362	6.9365						
Row 48	48	2200-2300	1.0662	1.3716	2.0765	9.6862	1.2262	1.8662	5.4362	6.9162	1.4762	4.7262	6.0362	6.9365						
Row 48	48	2300-0000	1.1862	1.1062	1.6665	1.0665	1.9862	4.9862	5.6862	5.3062	8.0062	4.4862	4.5562	6.9765						
Row 49	49	0000-0100	8.8465	4.6562	1.1765	7.3362	4.0462	1.0265	6.4462	3.5562	8.9562	1.5665	2.8462	1.7165						
Row 49	49	0100-0200	9.0065	4.6562	1.1765	7.3362	4.0462	1.0265	6.4462	3.5562	8.9562	1.5665	2.8462	1.7165						
Row 49	49	0200-0300	9.0065	4.6562	1.1765	7.3362	4.0462	1.0265	6.4462	3.5562	8.9562	1.5665	2.8462	1.7165						
Row 49	49	0300-0400	9.7865	1.9565	5.0362	8.6362	1.7662	4.0462	6.6362	1.3962	3.4165	5.4362	1.1117	1.7965						
Row 49	49	0400-0500	9.7865	1.9565	5.0362	8.6362	1.7662	4.0462	6.6362	1.3962	3.4165	5.4362	1.1117	1.7965						
Row 49	49	0500-0600	1.1362	2.6662	4.3162	1.0662	2.9662	6.9162	1.9662	4.7462	2.2162	6.9362	1.2762	1.9365						
Row 49	49	0600-0700	1.1362	2.6662	4.3162	1.0662	2.9662	6.9162	1.9662	4.7462	2.2162	6.9362	1.2762	1.9365						
Row 49	49	0700-0800	1.4862	3.2117	3.0562	1.3262	1.0662	2.7262	8.7362	6.8362	1.7265	9.6762	5.6962	1.4465						
Row 49	49	0800-0900	1.4862	3.2117	3.0562	1.3262	1.0662	2.7262	8.7362	6.8362	1.7265	9.6762	5.6962	1.4465						
Row 49	49	0900-1000	1.9662	1.7617	9.4862	1.8112	3.4212	8.6362	3.3462	1.7662	4.9562	5.9162	1.3862	3.9865						
Row 49	49	1000-1100	1.9762	1.6862	7.7446	1.7462	2.6862	6.7362	6.9362	1.4462	3.6262	8.3462	1.2562	3.3365						
Row 49	49	1100-1200	1.9762	1.6862	7.7446	1.7462	2.6862	6.7362	6.9362	1.4462	3.6262	8.3462	1.2562	3.3365						
Row 49	49	1200-1300	1.6962	2.2862	5.7762	1.7062	3.0512	5.1762	5.9362	1.5962	8.9862	8.1262	9.8362	7.2865						
Row 49	49	1300-1400	2.3262	2.7317	5.8862	2.0962	2.0962	5.2862	1.0116	1.0116	2.5565	8.8462	8.8462	2.2365						
Row 49	49	1400-1500	2.3262	2.7317	5.8862	2.0962	2.0962	5.2862	1.0116	1.0116	2.5565	8.8462	8.8462	2.2365						
Row 49	49	1500-1600	2.5062	2.1162	6.8462	2.2562	2.4362	7.1462	6.0162	1.1862	2.9762	9.7462	1.0362	2.5965						
Row 49	49	1600-1700	2.3862	2.8362	6.6462	2.1462	2.3862	5.9562	1.0116	1.2116	3.0565	9.5162	1.0562	2.6565						
Row 49	49	1700-1800	2.3862	2.8362	6.6462	2.1462	2.3862	5.9562	1.0116	1.2116	3.0565	9.5162	1.0562	2.6565						
Row 49	49	1800-1900	1.5262	2.4762	6.4262	1.1662	2.3862	5.9562	1.0116	1.2116	3.0565	9.5162	1.0562	2.6565						
Row 49	49	1900-2000	1.5262	2.4762	6.4262	1.1662	2.3862	5.9562	1.0116	1.2116	3.0565	9.5162	1.0562	2.6565						
Row 49	49	2000-2100	8.8962	8.8362	2.2362	9.4762	7.9662	2.0116	6.4162	6.4162	1.6262	5.4262	5.4262	1.3765						
Row 49	49	2100-2200	8.8465	8.8362	2.2362	7.8362	7.1762	1.9862	6.9362	6.4962	1.6462	5.3662	5.4262	1.3765						
Row 49	49	2200-2300	8.8465	8.8362	2.2362	7.8362	7.1762	1.9862	6.9362	6.4962	1.6462	5.3662	5.4262	1.3765						
Row 50	50	0000-0100	4.3116	6.2362	2.8962	3.8362	1.8662	2.5762	1.5716	7.4062	1.9662	1.3862	6.4762	9.7267						
Row 50	50	0100-0200	4.8062	1.5362	2.1862	4.1262	1.3862	1.9562	1.6116	3.3462	7.6262	1.4362	6.7562	6.7867						
Row 50	50	0200-0300	4.8062	1.5362	2.1862	4.1262	1.3862	1.9562	1.6116	3.3462	7.6262	1.4362	6.7562	6.7867						
Row 50	50	0300-0400	5.3362	1.1862	1.6962	4.7762	1.0716	1.5262	1.7762	1.9062	6.2962	1.5562	3.6662	4.9467						
Row 50	50	0400-0500	5.2962	1.3262	1.8962	4.7762	1.1362	1.8962	1.7716	4.4116	6.5762	1.5716	3.9162	5.9867						
Row 50	50	0500-0600	4.7762	1.2562	1.5262	4.7762	1.1362	1.8962	1.7716	4.4116	6.5762	1.5716	3.9162	5.9867						
Row 50	50	0600-0700	4.7762	1.2562	1.5262	4.7762	1.1362	1.8962	1.7716	4.4116	6.5762	1.5716	3.9162	5.9867						
Row 50	50	0700-0800	5.4216	1.0562	1.1062	4.8662	1.9662	1.8662	1.9316	3.7116	6.3062	1.7562	3.4017	4.8365						
Row 50	50	0800-0900	5.4216	1.0562	1.1062	4.8662	1.9662	1.8662	1.9316	3.7116	6.3062	1.7562	3.4017	4.8365						
Row 50	50	0900-1000	5.7562	1.3417	1.9116	5.2962	1.2217	1.7562	2.1062	1.8862	6.9662	1.9162	4.4462	6.3465						
Row 50	50	1000-1100	6.0362	1.3417	1.9116	5.2962	1.2217	1.7562	2.1062	1.8862	6.9662	1.9162	4.4462	6.3465						
Row 50	50	1100-1200	7.3062	1.7675	1.0116	6.6562	6.4116	5.1416	2.3116	2.2716	3.5116	2.0962	1.6017	2.8765						
Row 50	50	1200-1300	7.0262	1.7662	1.0962	6.3862	6.7862	9.6862	3.2116	2.4916	3.5116	2.0962	1.2362	3.1865						
Row 50	50	1300-1400	7.3062	1.7675	1.0116	6.6562	6.4116	5.1416	2.3116	2.2716	3.5116	2.0962	1.6017	2.8765						
Row 50	50	14																		

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for	Year 2038
AERMOD model (January)	

Row Name	Row ID	Hour	NO ₂ Emission						NO ₂ Emission					
			Month/Year			Month/Year			Month/Year			Month/Year		
			g/km/h	g/m ³	tonne/hour	g/km/h	g/m ³	tonne/hour	g/km/h	g/m ³	tonne/hour	g/km/h	g/m ³	tonne/hour
Row 01	01	0000-0200	6.1636	0.5048	0.9267	5.2968	0.4386	0.8152	4.9112	0.4079	0.7552	4.9322	0.3242	0.6106
Row 01	01	0000-0200	6.1636	0.5048	0.9267	5.2968	0.4386	0.8152	4.9112	0.4079	0.7552	4.9322	0.3242	0.6106
Row 01	01	0000-0200	6.1636	0.5048	0.9267	5.2968	0.4386	0.8152	4.9112	0.4079	0.7552	4.9322	0.3242	0.6106
Row 01	01	0300-0400	7.7796	0.2405	0.4487	6.8707	0.1272	0.5957	5.9362	0.1667	0.3102	4.9422	0.3362	0.5476
Row 01	01	0400-0600	3.3636	2.8205	5.2821	3.7638	2.4986	4.6047	3.5452	1.8777	3.4882	4.5522	2.5427	2.8856
Row 01	01	0600-0800	3.9369	3.1200	5.6309	4.2868	2.4861	3.9252	4.2861	2.4861	3.9252	4.2861	2.4861	3.9252
Row 01	01	0700-0900	9.4735	1.1827	2.2116	8.6424	1.0527	0.9672	8.6272	0.7772	1.3965	4.8322	0.6025	1.0712
Row 01	01	0700-1100	3.9369	3.9369	2.9525	4.9525	9.0272	2.2747	2.2456	3.7392	1.4862	2.7252	1.2805	2.3352
Row 01	01	0700-1300	2.3324	1.3324	2.3324	2.3324	1.3324	2.3324	1.3324	2.3324	1.3324	2.3324	1.3324	2.3324
Row 01	01	0900-1000	1.0652	2.5312	0.4274	9.6127	2.2747	2.2456	5.5592	1.3232	2.4712	4.8322	1.1442	2.1302
Row 01	01	1000-1100	1.1268	2.4257	4.5512	1.0862	2.1967	4.0905	1.0205	1.2025	2.2325	3.1232	1.0424	1.9412
Row 01	01	1000-1200	1.3324	2.3324	1.3324	1.3324	2.3324	1.3324	2.3324	1.3324	2.3324	1.3324	2.3324	1.3324
Row 01	01	1200-1300	2.1182	3.4827	6.4805	1.9712	3.1527	5.8715	8.0552	1.2825	2.3935	7.1712	1.4124	2.1302
Row 01	01	1300-1400	2.1182	3.4827	6.4805	1.9712	3.1527	5.8715	8.0552	1.2825	2.3935	7.1712	1.4124	2.1302
Row 01	01	1400-1500	2.1182	3.4827	6.4805	1.9712	3.1527	5.8715	8.0552	1.2825	2.3935	7.1712	1.4124	2.1302
Row 01	01	1500-1600	2.0424	3.5447	6.7805	1.8327	3.2747	6.0352	8.2022	1.4735	2.7352	3.3002	2.0412	3.5447
Row 01	01	1600-1700	2.2222	3.8922	7.1082	1.3727	3.4525	6.9452	7.8442	1.4525	2.7102	6.9302	1.2712	2.3752
Row 01	01	1700-1800	2.2222	3.8922	7.1082	1.3727	3.4525	6.9452	7.8442	1.4525	2.7102	6.9302	1.2712	2.3752
Row 01	01	1800-1900	1.2262	2.4827	4.6442	1.1122	2.2272	4.1452	5.4442	1.0262	2.0225	4.1712	9.3927	1.7622
Row 01	01	1900-2000	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	2000-2100	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	2100-2200	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	2200-2300	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	2300-2400	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	2400-0100	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	0100-0200	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	0200-0300	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	0300-0400	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	0400-0500	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	0500-0600	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	0600-0700	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	0700-0800	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	0800-0900	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	0900-1000	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	1000-1100	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	1100-1200	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	1200-1300	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	1300-1400	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	1400-1500	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	1500-1600	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	1600-1700	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	1700-1800	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	1800-1900	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	1900-2000	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	2000-2100	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	2100-2200	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	2200-2300	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	2300-2400	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	2400-0100	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	0100-0200	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	0200-0300	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	0300-0400	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	0400-0500	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	0500-0600	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	0600-0700	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	0700-0800	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	0800-0900	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	0900-1000	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	1000-1100	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	1100-1200	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	1200-1300	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	1300-1400	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	1400-1500	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	1500-1600	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	1600-1700	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	1700-1800	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	1800-1900	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	1900-2000	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	2000-2100	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	2100-2200	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	2200-2300	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	2300-2400	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01	2400-0100	1.1268	1.8324	3.4112	0.5272	1.6557	3.0725	8.2322	8.2322	1.5335	4.5552	7.1082	1.3727
Row 01	01													

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
 Open Road 24 hour Emission Factors for
 AERMOD model (February) Year 2038

Road Name	Road ID	Hour	NO Emission						NO Emission					
			MonthlyHourMin			MonthlyHourAverage			MonthlyHourMin			MonthlyHourAverage		
			g/km/hr	g/km	tonne/hour	g/km/hr	g/km	tonne/hour	g/km/hr	g/km	tonne/hour	g/km/hr	g/km	tonne/hour
Road 1	4	0800-0900	0.992	3.7240	6.471E-06	9.214E-06	9.925E-07	8.865E-06	4.732E-07	1.913E-06	3.402E-05	4.112E-07	1.440E-05	2.968E-06
Road 1	4	0900-1000	1.031E-03	2.966E-07	5.806E-06	9.214E-06	9.214E-06	9.214E-06	5.135E-07	1.511E-06	3.027E-05	4.864E-07	1.338E-05	2.680E-06
Road 1	4	1000-1100	1.031E-03	2.966E-07	5.806E-06	9.214E-06	9.214E-06	9.214E-06	5.135E-07	1.511E-06	3.027E-05	4.864E-07	1.338E-05	2.680E-06
Road 1	4	1100-1200	1.031E-03	2.966E-07	5.806E-06	9.214E-06	9.214E-06	9.214E-06	5.135E-07	1.511E-06	3.027E-05	4.864E-07	1.338E-05	2.680E-06
Road 1	4	1200-1300	1.228E-02	3.774E-07	7.481E-06	1.114E-07	6.832E-06	5.545E-07	1.702E-06	4.039E-05	4.972E-05	1.520E-06	3.006E-06	5.970E-07
Road 1	4	1300-1400	1.228E-02	3.774E-07	7.481E-06	1.114E-07	6.832E-06	5.545E-07	1.702E-06	4.039E-05	4.972E-05	1.520E-06	3.006E-06	5.970E-07
Road 1	4	1400-1500	1.228E-02	3.774E-07	7.481E-06	1.114E-07	6.832E-06	5.545E-07	1.702E-06	4.039E-05	4.972E-05	1.520E-06	3.006E-06	5.970E-07
Road 1	4	1500-1600	1.118E-02	4.005E-07	8.027E-06	1.096E-07	6.996E-07	7.402E-07	5.711E-07	1.844E-06	3.895E-05	5.112E-07	1.760E-05	3.546E-06
Road 1	4	1600-1700	1.276E-02	4.005E-07	8.027E-06	1.116E-07	7.222E-07	7.640E-07	5.895E-07	2.044E-06	4.088E-05	5.292E-07	1.803E-05	3.660E-06
Road 1	4	1700-1800	1.896E-02	4.005E-07	8.027E-06	1.116E-07	7.222E-07	7.640E-07	5.895E-07	2.044E-06	4.088E-05	5.292E-07	1.803E-05	3.660E-06
Road 1	4	1800-1900	3.675E-02	4.005E-07	8.027E-06	1.116E-07	7.222E-07	7.640E-07	5.895E-07	2.044E-06	4.088E-05	5.292E-07	1.803E-05	3.660E-06
Road 1	4	1900-2000	5.768E-03	2.153E-07	4.327E-06	5.538E-06	1.988E-07	3.974E-06	3.665E-07	1.390E-06	2.745E-05	3.252E-07	1.221E-05	2.470E-06
Road 1	4	2000-2100	5.768E-03	2.153E-07	4.327E-06	5.538E-06	1.988E-07	3.974E-06	3.665E-07	1.390E-06	2.745E-05	3.252E-07	1.221E-05	2.470E-06
Road 1	4	2100-2200	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	2200-2300	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	2300-2400	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	2400-0100	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	0100-0200	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	0200-0300	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	0300-0400	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	0400-0500	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	0500-0600	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	0600-0700	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	0700-0800	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	0800-0900	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	0900-1000	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	1000-1100	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	1100-1200	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	1200-1300	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	1300-1400	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	1400-1500	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	1500-1600	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	1600-1700	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	1700-1800	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	1800-1900	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	1900-2000	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	2000-2100	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	2100-2200	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	2200-2300	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	2300-2400	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	2400-0100	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	0100-0200	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	0200-0300	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	0300-0400	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	0400-0500	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	0500-0600	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	0600-0700	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	0700-0800	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	0800-0900	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	0900-1000	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	1000-1100	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	1100-1200	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	1200-1300	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	1300-1400	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	1400-1500	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	1500-1600	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	1600-1700	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	1700-1800	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	1800-1900	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	1900-2000	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	2000-2100	4.623E-03	1.631E-07	3.261E-06	4.245E-06	2.28E-07	4.456E-06	3.768E-07	1.061E-06	2.186E-05	3.364E-07	9.720E-07	1.952E-06
Road 1	4	2100-220												

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for AERMOD model (January)	Year 2038

Road Name	Road ID	Hour	NO Emission						NO Emission					
			Month/Highway			Month/Highway			Month/Highway			Month/Highway		
			g/km ³ /h	g/m ³	tonne/hour	g/km ³ /h	g/m ³	tonne/hour	g/km ³ /h	g/m ³	tonne/hour	g/km ³ /h	g/m ³	tonne/hour
Road 103	103	1900-1700	1.5562	5.6987	1.377E-06	1.396E	5.0767E-07	1.222E-05	1.684E-02	2.511E-06	6.042E-05	5.914E-02	2.377E-06	
Road 103	103	1700-1800	1.5562	4.5770	1.110E-06	9.652E-07	4.778E-05	8.989E-02	1.684E-02	2.511E-06	5.914E-02	5.914E-02	2.377E-06	
Road 103	103	1800-1900	1.5562	7.8602	1.377E-06	1.396E	5.0767E-07	1.222E-05	1.684E-02	2.511E-06	6.042E-05	5.914E-02	2.377E-06	
Road 103	103	1900-2000	6.8062	2.4257	5.822E-06	6.077E-03	2.102E-06	3.38E-02	1.566E-05	3.750E-05	3.77E-02	1.324E-05		
Road 103	103	2000-2100	6.8062	1.8627	4.377E-06	5.822E-06	1.616E-03	8.495E-02	1.566E-05	3.750E-05	3.77E-02	1.324E-05		
Road 103	103	2100-2200	6.8062	1.8627	4.377E-06	5.822E-06	1.616E-03	8.495E-02	1.566E-05	3.750E-05	3.77E-02	1.324E-05		
Road 103	103	2200-2300	5.6662	1.5387	3.677E-06	5.013E-03	1.350E-02	3.24E-06	4.777E-02	2.88E-05	3.0E-05	3.977E-02	1.077E-06	
Road 103	103	2300-0000	6.8062	1.8627	4.377E-06	5.822E-06	1.616E-03	7.717E-06	1.566E-05	3.750E-05	3.77E-02	1.324E-05		
Road 104	104	0000-0100	1.1357	4.8949	1.135E-06	1.135E	4.8949E-07	1.135E-05	1.684E-02	2.511E-06	6.042E-05	5.914E-02	2.377E-06	
Road 104	104	0100-0200	1.212E	7.115E	1.440E-06	1.396E	5.0767E-07	1.306E-05	5.532E-02	3.857E-07	7.840E-05	5.571E-02	3.79E-07	
Road 104	104	0200-0300	1.212E	5.707E	1.186E-06	1.186E	5.096E-06	1.546E-05	6.79E-02	3.857E-07	6.050E-05	5.780E-02	2.43E-06	
Road 104	104	0300-0400	1.486E	3.5949	2.220E-06	2.220E	8.888E-07	2.220E-05	6.79E-02	3.857E-07	6.050E-05	5.780E-02	2.43E-06	
Road 104	104	0400-0500	1.486E	5.779E	1.186E-06	1.323E-03	5.168E-06	1.05E-06	2.72E-02	2.440E-04	5.796E-05	6.193E-02	2.42E-06	
Road 104	104	0500-0600	1.486E	1.077E	2.118E-06	1.46E-06	9.616E-06	1.95E-05	6.43E-02	5.111E-07	1.040E-05	6.930E-02	4.60E-07	
Road 104	104	0600-0700	1.486E	1.077E	2.118E-06	1.46E-06	9.616E-06	1.95E-05	6.43E-02	5.111E-07	1.040E-05	6.930E-02	4.60E-07	
Road 104	104	0700-0800	1.486E	1.077E	2.118E-06	1.46E-06	9.616E-06	1.95E-05	6.43E-02	5.111E-07	1.040E-05	6.930E-02	4.60E-07	
Road 104	104	0800-0900	1.486E	1.077E	2.118E-06	1.46E-06	9.616E-06	1.95E-05	6.43E-02	5.111E-07	1.040E-05	6.930E-02	4.60E-07	
Road 104	104	0900-1000	1.486E	1.077E	2.118E-06	1.46E-06	9.616E-06	1.95E-05	6.43E-02	5.111E-07	1.040E-05	6.930E-02	4.60E-07	
Road 104	104	1000-1100	2.164E	6.3407	1.276E-06	1.96E-07	1.176E-05	5.076E-02	2.536E-05	5.140E-05	7.67E-02	2.75E-06		
Road 104	104	1100-1200	2.164E	5.839E	1.110E-06	1.596E-07	5.56E-07	1.075E-05	5.58E-02	5.840E-05	4.88E-05	5.74E-02	2.10E-06	
Road 104	104	1200-1300	2.164E	5.839E	1.110E-06	1.596E-07	5.56E-07	1.075E-05	5.58E-02	5.840E-05	4.88E-05	5.74E-02	2.10E-06	
Road 104	104	1300-1400	1.362E	3.1447	6.390E-06	1.276E-02	2.84E-07	7.78E-06	6.44E-02	1.462E-06	3.04E-05	5.64E-02	1.31E-06	
Road 104	104	1400-1500	1.362E	3.4567	6.709E-06	1.276E-02	3.10E-07	8.17E-06	6.57E-02	1.62E-06	3.29E-05	5.65E-02	1.40E-06	
Road 104	104	1500-1600	1.362E	3.4567	6.709E-06	1.276E-02	3.10E-07	8.17E-06	6.57E-02	1.62E-06	3.29E-05	5.65E-02	1.40E-06	
Road 104	104	1600-1700	1.362E	3.767E	7.677E-06	1.276E-02	3.36E-07	8.64E-06	6.28E-02	1.70E-06	3.46E-05	5.62E-02	1.46E-06	
Road 104	104	1700-1800	9.743E	3.0207	6.126E-06	8.26E-07	4.59E-06	1.48E-05	1.69E-04	3.44E-05	4.46E-02	1.44E-06		
Road 104	104	1800-1900	7.683E	2.891E	5.822E-06	6.077E-03	2.102E-06	3.38E-02	1.566E-05	3.750E-05	3.77E-02	1.324E-05		
Road 104	104	1900-2000	6.173E	1.68E-02	3.426E-06	5.56E-03	1.50E-07	1.05E-06	4.18E-02	1.14E-05	2.32E-05	3.35E-02	9.61E-07	
Road 104	104	2000-2100	5.566E	1.29E-02	2.575E-06	5.26E-03	1.12E-07	2.27E-06	4.67E-02	9.87E-07	2.01E-05	3.93E-02	8.22E-07	
Road 104	104	2100-2200	5.566E	1.29E-02	2.575E-06	5.26E-03	1.12E-07	2.27E-06	4.67E-02	9.87E-07	2.01E-05	3.93E-02	8.22E-07	
Road 104	104	2200-2300	5.002E	1.03E-02	2.00E-06	4.411E-03	1.05E-06	1.84E-06	4.60E-02	9.44E-07	1.92E-05	3.81E-02	7.82E-07	
Road 104	104	2300-0000	5.613E	8.60E-03	1.76E-06	4.96E-04	7.58E-08	1.54E-05	6.75E-02	7.26E-07	1.48E-05	3.93E-02	6.04E-07	
Road 104	104	0000-0100	1.1357	4.8949	1.135E-06	1.135E	4.8949E-07	1.135E-05	1.684E-02	2.511E-06	6.042E-05	5.914E-02	2.377E-06	
Road 104	104	0100-0200	1.756E	3.203E	1.038E-06	5.411E-07	1.61E-06	4.84E-06	3.30E-02	6.721E-08	2.80E-06	7.99E-02	5.79E-08	
Road 104	104	0200-0300	1.620E	1.038E	4.04E-07	1.77E-06	9.89E-07	7.74E-02	6.27E-08	2.17E-06	8.86E-06	3.47E-08		
Road 104	104	0300-0400	1.620E	1.038E	4.04E-07	1.77E-06	9.89E-07	7.74E-02	6.27E-08	2.17E-06	8.86E-06	3.47E-08		
Road 104	104	0400-0500	2.212E	1.038E	4.04E-07	1.77E-06	9.89E-07	7.74E-02	6.27E-08	2.17E-06	8.86E-06	3.47E-08		
Road 104	104	0500-0600	2.332E	1.99E-06	8.13E-07	2.16E-07	1.93E-08	2.06E-07	1.05E-05	9.07E-08	3.78E-06	9.08E-02	4.32E-08	
Road 104	104	0600-0700	2.332E	1.99E-06	8.13E-07	2.16E-07	1.93E-08	2.06E-07	1.05E-05	9.07E-08	3.78E-06	9.08E-02	4.32E-08	
Road 104	104	0700-0800	2.912E	1.038E	4.04E-07	1.77E-06	9.89E-07	7.74E-02	6.27E-08	2.17E-06	8.86E-06	3.47E-08		
Road 104	104	0800-0900	2.824E	1.228E	4.510E-06	2.58E-02	1.12E-07	4.67E-06	3.21E-04	5.25E-07	2.19E-05	1.10E-01	4.71E-07	
Road 104	104	0900-1000	2.824E	1.228E	4.510E-06	2.58E-02	1.12E-07	4.67E-06	3.21E-04	5.25E-07	2.19E-05	1.10E-01	4.71E-07	
Road 104	104	1000-1100	3.812E	1.038E	4.04E-07	1.77E-06	9.89E-07	7.74E-02	6.27E-08	2.17E-06	8.86E-06	3.47E-08		
Road 104	104	1100-1200	3.962E	1.18E-06	4.96E-06	3.26E-07	1.00E-07	4.42E-06	1.47E-04	4.80E-07	2.00E-05	1.30E-01	4.26E-07	
Road 104	104	1200-1300	3.962E	1.18E-06	4.96E-06	3.26E-07	1.00E-07	4.42E-06	1.47E-04	4.80E-07	2.00E-05	1.30E-01	4.26E-07	
Road 104	104	1300-1400	7.932E	4.332E	1.82E-06	7.21E-07	3.97E-05	1.05E-05	2.87E-08	1.58E-05	2.90E-01	1.43E-06		
Road 104	104	1400-1500	8.186E	4.44E-07	1.86E-06	7.78E-07	4.02E-07	1.68E-05	4.87E-08	1.57E-06	6.53E-05	2.69E-01	1.41E-06	
Road 104	104	1500-1600	8.186E	4.44E-07	1.86E-06	7.78E-07	4.02E-07	1.68E-05	4.87E-08	1.57E-06	6.53E-05	2.69E-01	1.41E-06	
Road 104	104	1600-1700	7.78E-01	4.44E-07	1.73E-06	7.07E-07	3.77E-07	1.55E-06	4.84E-04	1.50E-05	6.25E-05	2.54E-01	1.35E-06	
Road 104	104	1700-1800	6.574E	3.16E-07	1.37E-05	5.91E-02	2.84E-07	1.15E-06	1.66E-01	1.28E-06	5.34E-05	2.36E-01	1.15E-06	
Road 104	104	1800-1900	6.574E	3.16E-07	1.37E-05	5.91E-02	2.84E-07	1.15E-06	1.66E-01	1.28E-06	5.34E-05	2.36E-01	1.15E-06	
Road 104	104	1900-2000	6.24E-01	1.18E-07	4.91E-06	4.77E-06	1.00E-07	4.43E-06	1.12E-07	4.77E-07	1.99E-05	1.91E-01	4.50E-07	
Road 104	104	2000-2100	6.24E-01	8.83E-08	3.69E-06	4.44E-07	7.94E-08	3.31E-06	1.08E-08	3.72E-07	1.55E-05	1.86E-01	3.33E-07	
Road 104	104	2100-2200	6.24E-01	8.83E-08	3.69E-06	4.44E-07	7.94E-08	3.31E-06	1.08E-08	3.72E-07	1.55E-05	1.86E-01	3.33E-07	
Road 104	104	2200-2300	5.532E-01	8.91E-08	3.71E-06	4.98E-07	8.03E-08	3.34E-07	3.07E-03	1.39E-06	1.86E-01	2.95E-07		
Road 104	104	2300-0000	6.462E	7.17E-08	2.99E-06	4.51E-08	6.45E-08	7.69E-06	2.04E-04	3.68E-07	1.12E-05	1.83E-01	2.40E-07	
Road 104	104	0000-0100	1.1357	4.8949	1.135E-06	1.135E	4.8949E-07	1.135E-05	1.684E-02	2.511E-06	6.042E-05	5.914E-02	2.377E-06	
Road 104	104	0100-0200	1.656E	4.290E	1.450E-06	1.52E-06	4.10E-06	1.29E-04	9.04E-02	2.47E-07	7.80E-07	7.73E-02	2.11E-07	
Road 104	104	0200-0300	1.746E	3.54E-08	1.17E-05	1.57E-07	3.17E-06	1.09E-06	8.26E-02	1.87E-07	5.89E-06	7.90E-02	1.59E-07	
Road 104	104	0300-0400	1.746E	3.54E-08	1.17E-05	1.57E-07	3.17E-06	1.09E-06	8.26E-02	1.87E-07	5.89E-06	7.90E-02	1.59E-07	
Road 104	104	0400-0500	2.025E	3.61E-04	1.47E-06	1.81E-02	3.22E-07	1.02E-06	1.01E-07	1.79E-07	5.66E-06	1.13E-02	1.16E-07	
Road 104	104	0500-0600	2.212E	6.89E-08	2.17E-06	1.99E-06	1.82E-06	1.95E-06	1.06E-01	3.30E-07	1.04E-05	1.91E-02	2.85E-07	
Road 104	104	0600-0700	2.771E	1.86E-08	2.46E-06	2.68E-07	1.68E-07	2.53E-06	2.88E-01	8.46E-07	2.67E-05	1.08E-01	1.33E-07	
Road 104	104	0700-0800	3.471E	3.47E-07	1.46E-06	1.81E-02	3.22E-07	1.02E-06	1.01E-07	1.79E-07	5.66E-06	1.13E-02	1.16E-07	
Road 104	104	0800-0900	3.642E	5.89E-07	1.85E-06	3.32E-03	3.59E-07	1.65E-05	1.52E-04	2.47E-06	7.69E-05	1.36E-01	2.18E-06	
Road 104	104	0900-1000	4.25E-02	5.87E-07	1.85E-06	3.83E-06	3.96E-07	1.69E-05	1.74E-03	2.43E-06	7.69E-05	1.56E-01	2.98E-06	
Road 104	104	1000-1100	4.25E-02	5.87E-07	1.85E-06	3.83E-06	3.96E-07	1.69E-05	1.74E-03	2.43E-06	7.69E-05	1.56E-01	2.98E-06	
Road 104														

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Open Road 24 hour Emission Factors for
AERMOD model (February) Year 2038

Road Name	Road ID	Hour	NO Emission						NO Emission					
			Monthly/Hours			Monthly/Average			Monthly/Hours			Monthly/Average		
			g/kwh	tonne/hour	g/kwh	tonne/hour	g/kwh	tonne/hour	g/kwh	tonne/hour	g/kwh	tonne/hour	g/kwh	tonne/hour
Road 11	11	0000-0100	2.97E-02	1.59E-02	7.42E-07	2.78E-02	1.82E-07	1.67E-07	1.68E-01	4.21E-06	1.51E-01	1.61E-06		
		0100-0200	3.96E-02	1.43E-07	5.48E-07	3.08E-02	3.14E-07	5.14E-07	1.74E-01	7.55E-07	2.90E-06	1.05E-01	6.88E-07	
Road 11	11	0200-0300	4.13E-02	1.31E-07	5.18E-07	3.18E-02	3.18E-07	5.18E-07	1.74E-01	7.55E-07	2.90E-06	1.05E-01	6.88E-07	
		0300-0400	4.05E-02	1.06E-07	4.08E-07	3.76E-02	3.93E-07	3.81E-07	1.89E-01	5.00E-07	1.92E-07	1.57E-01	4.61E-07	
Road 11	11	0400-0500	4.19E-02	1.21E-07	4.63E-07	3.88E-02	1.12E-07	4.30E-07	1.87E-01	5.71E-07	2.13E-06	1.81E-01	5.21E-07	
		0500-0600	4.27E-02	1.09E-07	4.27E-07	4.05E-02	1.07E-07	1.27E-07	2.02E-01	6.12E-07	9.12E-07	1.91E-01	5.12E-07	
Road 11	11	0600-0700	4.40E-02	1.01E-07	4.17E-07	4.23E-02	1.05E-07	1.27E-07	2.23E-01	2.24E-06	8.80E-06	2.07E-01	5.12E-06	
		0700-0800	4.57E-02	1.19E-07	4.57E-06	5.39E-02	1.12E-06	1.29E-06	2.56E-01	5.84E-06	2.05E-06	2.38E-01	4.93E-06	
Road 11	11	0800-0900	5.17E-02	1.37E-07	5.27E-06	5.37E-02	1.29E-06	1.49E-06	3.17E-01	5.71E-06	2.28E-06	2.13E-01	5.29E-06	
		0900-1000	5.68E-02	1.66E-07	5.68E-06	6.08E-02	1.49E-06	1.77E-06	3.52E-01	7.23E-06	2.73E-06	2.43E-01	5.92E-06	
Road 11	11	1000-1100	7.12E-02	1.27E-06	4.99E-06	6.66E-02	1.21E-06	4.48E-06	6.63E-01	4.75E-06	1.82E-06	2.42E-01	4.38E-06	
		1100-1200	1.11E-02	1.22E-06	4.69E-06	8.70E-02	1.15E-06	4.42E-06	2.84E-01	4.53E-06	1.74E-06	2.45E-01	4.21E-06	
Road 11	11	1200-1300	1.03E-02	1.03E-06	4.03E-06	7.20E-02	1.03E-06	4.03E-06	2.01E-01	3.16E-06	1.16E-06	2.16E-01	3.16E-06	
		1300-1400	1.10E-01	2.33E-06	8.90E-06	9.76E-02	2.12E-06	4.48E-06	3.51E-01	7.95E-06	3.03E-06	3.29E-01	7.47E-06	
Road 11	11	1400-1500	1.03E-01	2.42E-06	9.29E-06	9.74E-02	2.29E-06	8.80E-06	3.49E-01	8.24E-06	3.18E-06	3.29E-01	7.79E-06	
		1500-1600	1.02E-01	2.42E-06	9.29E-06	9.74E-02	2.29E-06	8.80E-06	3.49E-01	8.24E-06	3.18E-06	3.29E-01	7.79E-06	
Road 11	11	1600-1700	9.72E-02	2.47E-06	9.33E-06	9.26E-02	2.29E-06	8.80E-06	3.37E-01	8.35E-06	3.21E-06	3.17E-01	7.85E-06	
		1700-1800	8.16E-02	2.18E-06	8.29E-06	7.88E-02	2.07E-06	7.93E-06	1.16E-01	3.86E-06	3.21E-06	2.99E-01	7.93E-06	
Road 11	11	1800-1900	1.02E-01	2.42E-06	9.29E-06	9.74E-02	2.29E-06	8.80E-06	3.49E-01	8.24E-06	3.18E-06	3.29E-01	7.79E-06	

g Yi North Underground Quarry	
Open Road 24 hour Emission Factors for	Year 2038
AERMOD model (February)	

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g Yi North Underground Quarry
 en Road 24 hour Emission Factors for
 AERMOD model (February) Year 2038

Bad Date	Road ID	Hour	NO Emission						NO Emission					
			Monthly/Route			Monthly/Average			Monthly/Route			Monthly/Average		
			g/mile	tonne/hour	tonne/hour	g/mile	tonne/hour	tonne/hour	g/mile	tonne/hour	tonne/hour	g/mile	tonne/hour	tonne/hour
Road 14	14	0000-0900	3.61E-02	8.83E-07	1.47E-05	3.75E-02	7.86E-07	1.34E-05	3.41E-02	1.19E-06	5.44E-05	1.20E-01	2.88E-06	4.86E-05
Road 14	14	0900-1200	4.10E-02	8.63E-07	1.42E-05	3.75E-02	7.63E-07	1.30E-05	1.51E-01	3.07E-06	5.44E-05	1.37E-01	2.78E-06	4.74E-05
Road 14	14	1200-1500	4.53E-02	8.57E-07	1.41E-05	3.75E-02	7.63E-07	1.30E-05	1.51E-01	3.07E-06	5.44E-05	1.37E-01	2.78E-06	4.74E-05
Road 14	14	1500-1800	4.41E-02	7.52E-07	1.29E-05	4.01E-02	6.84E-07	1.17E-05	1.58E-01	2.70E-06	4.60E-05	1.42E-01	4.23E-06	4.14E-05
Road 14	14	1800-2100	6.50E-02	1.79E-07	2.39E-05	5.99E-02	1.27E-06	2.17E-05	2.19E-01	4.66E-06	7.90E-05	2.00E-01	4.23E-06	7.28E-05
Road 14	14	2100-2400	6.71E-02	1.87E-07	2.48E-05	6.21E-02	1.35E-06	2.30E-05	2.31E-01	5.07E-06	8.16E-05	2.12E-01	4.39E-06	8.00E-05
Road 14	14	2400-0100	6.74E-02	1.87E-07	2.48E-05	6.21E-02	1.35E-06	2.30E-05	2.31E-01	5.07E-06	8.16E-05	2.12E-01	4.39E-06	8.00E-05
Road 14	14	0100-0600	6.27E-02	1.45E-07	2.54E-05	5.75E-02	1.38E-06	2.35E-05	2.29E-01	5.49E-06	9.39E-05	2.11E-01	5.06E-06	8.62E-05
Road 14	14	0600-0900	6.30E-02	1.54E-07	2.62E-05	5.79E-02	1.43E-06	2.41E-05	2.27E-01	5.90E-06	9.83E-05	1.98E-01	4.84E-06	8.25E-05
Road 14	14	0900-1200	6.49E-02	1.64E-07	2.69E-05	5.95E-02	1.48E-06	2.46E-05	2.30E-01	6.31E-06	1.03E-04	1.96E-01	4.79E-06	7.83E-05
Road 14	14	1200-1500	3.55E-02	9.88E-07	1.57E-05	3.75E-02	8.47E-07	1.44E-05	1.34E-01	4.49E-06	9.59E-05	1.22E-01	3.16E-06	5.44E-05
Road 14	14	1500-1800	2.42E-02	5.17E-07	8.14E-06	2.25E-02	4.47E-07	7.51E-06	1.04E-01	2.04E-06	4.48E-05	9.48E-02	1.98E-06	3.17E-05
Road 14	14	1800-2100	2.25E-02	4.84E-07	7.65E-06	2.25E-02	4.47E-07	7.51E-06	1.04E-01	2.04E-06	4.48E-05	9.48E-02	1.98E-06	3.17E-05
Road 14	14	2100-2400	2.13E-02	3.47E-07	5.57E-06	1.94E-02	3.16E-07	5.19E-06	9.97E-02	1.53E-06	3.62E-05	8.14E-02	1.41E-06	2.40E-05
Road 14	14	2400-0100	2.12E-02	3.13E-07	5.34E-06	2.00E-02	2.98E-07	5.08E-06	9.49E-02	1.40E-06	2.39E-05	8.92E-02	1.33E-06	2.24E-05
Road 15	15	0000-0100	2.92E-02	1.17E-07	4.76E-06	2.65E-02	4.68E-07	7.93E-06	1.72E-02	1.07E-06	8.64E-02	1.53E-01	4.41E-06	7.38E-05
Road 15	15	0100-0600	3.78E-02	4.37E-07	3.40E-07	4.27E-02	3.99E-07	1.13E-02	4.42E-07	1.31E-06	1.01E-01	1.01E-02	1.67E-06	1.17E-05
Road 15	15	0600-0900	4.28E-02	4.84E-07	3.84E-07	4.67E-02	4.53E-07	1.33E-02	4.93E-07	1.37E-06	1.15E-01	1.15E-02	1.92E-06	1.32E-05
Road 15	15	0900-1200	4.99E-02	4.25E-06	3.94E-07	4.47E-02	3.81E-07	3.25E-02	3.16E-07	1.07E-06	7.02E-05	2.02E-01	1.02E-07	4.95E-07
Road 15	15	1200-1500	4.40E-02	4.86E-06	4.08E-07	4.34E-02	3.64E-07	3.44E-02	1.22E-07	1.13E-06	1.18E-01	1.07E-07	9.93E-07	2.96E-06
Road 15	15	1500-1800	3.55E-02	9.88E-07	1.57E-05	3.75E-02	8.47E-07	1.44E-05	1.34E-01	4.49E-06	9.59E-05	1.22E-01	3.16E-06	5.44E-05
Road 15	15	0000-0100	3.02E-02	7.84E-07	7.20E-07	2.74E-02	7.12E-06	9.99E-07	1.08E-07	2.79E-07	2.58E-05	8.55E-02	2.48E-07	2.93E-07
Road 15	15	0700-0800	4.78E-02	2.17E-07	2.55E-06	4.33E-02	2.51E-07	2.32E-06	1.45E-03	8.38E-07	7.74E-06	1.29E-01	4.67E-07	6.93E-08
Road 15	15	0800-0900	4.56E-02	2.59E-07	2.77E-06	4.19E-02	2.73E-07	2.53E-06	1.39E-03	9.09E-07	8.42E-06	1.25E-01	6.18E-07	7.57E-08
Road 15	15	0900-1000	4.49E-02	2.64E-07	2.84E-06	4.14E-02	2.80E-07	2.59E-06	1.37E-03	9.27E-07	8.72E-06	1.24E-01	7.02E-07	7.38E-08
Road 15	15	1000-1100	5.45E-02	2.76E-07	2.58E-06	4.99E-02	2.54E-07	2.35E-06	1.60E-03	8.70E-07	8.60E-06	1.45E-01	7.40E-07	6.86E-08
Road 15	15	1100-1200	5.89E-02	2.69E-07	2.49E-06	5.10E-02	2.48E-07	2.28E-06	1.62E-03	7.62E-07	7.42E-06	1.48E-01	7.73E-07	6.84E-08
Road 15	15	1200-1300	6.49E-02	2.69E-07	2.49E-06	5.10E-02	2.48E-07	2.28E-06	1.62E-03	7.62E-07	7.42E-06	1.48E-01	7.73E-07	6.84E-08
Road 15	15	1300-1400	6.68E-02	5.17E-07	6.76E-06	6.11E-07	4.27E-07	4.37E-06	2.12E-01	1.64E-06	1.52E-05	1.93E-01	1.90E-06	1.38E-05
Road 15	15	1400-1500	6.62E-02	5.17E-07	6.76E-06	6.11E-07	4.27E-07	4.37E-06	2.12E-01	1.66E-06	1.54E-05	1.98E-01	1.93E-06	1.40E-05
Road 15	15	1500-1600	6.62E-02	5.17E-07	6.76E-06	6.11E-07	4.27E-07	4.37E-06	2.12E-01	1.66E-06	1.54E-05	1.98E-01	1.93E-06	1.40E-05
Road 15	15	1600-1700	6.26E-02	5.11E-07	4.82E-06	5.74E-06	4.78E-07	4.42E-06	1.97E-01	1.64E-06	1.52E-05	1.80E-01	1.50E-06	1.38E-05
Road 15	15	1700-1800	5.13E-02	4.51E-07	4.18E-06	4.71E-06	4.14E-07	3.83E-06	1.74E-01	1.53E-06	1.41E-05	1.58E-01	1.39E-06	1.28E-05
Road 15	15	1800-1900	4.51E-02	4.51E-07	4.18E-06	4.71E-06	4.14E-07	3.83E-06	1.74E-01	1.53E-06	1.41E-05	1.58E-01	1.39E-06	1.28E-05
Road 15	15	1900-2000	4.51E-02	4.51E-07	4.18E-06	4.71E-06	4.14E-07	3.83E-06	1.74E-01	1.53E-06	1.41E-05	1.58E-01	1.39E-06	1.28E-05
Road 15	15	2000-2100	2.47E-02	1.20E-07	1.11E-06	2.25E-02	1.09E-07	1.01E-06	1.02E-01	4.95E-07	4.59E-06	1.98E-02	4.44E-07	4.12E-06
Road 15	15	2100-2200	2.47E-02	1.20E-07	1.11E-06	2.25E-02	1.09E-07	1.01E-06	1.02E-01	4.95E-07	4.59E-06	1.98E-02	4.44E-07	4.12E-06
Road 15	15	2200-2300	2.27E-02	1.06E-07	9.79E-07	2.17E-02	1.01E-07	9.34E-07	9.10E-02	4.26E-07	5.52E-06	8.87E-02	5.44E-07	5.03E-06
Road 15	15	2300-0000	2.57E-02	8.12E-08	8.44E-07	2.41E-02	8.66E-08	8.02E-07	9.64E-02	3.47E-07	3.22E-06	9.07E-02	3.27E-07	3.02E-06
Road 15	15	0000-0100	3.18E-02	8.12E-08	8.44E-07	2.41E-02	8.66E-08	8.02E-07	9.64E-02	3.47E-07	3.22E-06	9.07E-02	3.27E-07	3.02E-06
Road 15	15	0100-0200	9.10E-02	4.05E-06	1.25E-06	8.13E-02	3.60E-06	1.04E-05	5.25E-02	2.31E-07	7.59E-06	4.55E-02	2.00E-07	6.14E-06
Road 16	16	0000-0100	1.02E-02	3.30E-08	1.01E-06	9.67E-08	2.94E-08	9.02E-07	5.57E-02	1.81E-07	5.04E-06	4.75E-02	1.54E-07	4.72E-06
Road 16	16	0100-0200	1.12E-02	2.89E-08	8.87E-07	9.99E-08	2.59E-08	7.87E-07	5.82E-05	5.07E-07	4.61E-06	4.98E-02	2.87E-07	3.93E-06
Road 16	16	0200-0300	1.25E-02	2.89E-08	8.87E-07	9.99E-08	2.59E-08	7.87E-07	5.82E-05	5.07E-07	4.61E-06	4.98E-02	2.87E-07	3.93E-06
Road 16	16	0300-0400	1.18E-02	5.76E-08	1.77E-06	1.04E-02	5.11E-07	1.58E-06	6.09E-02	8.88E-07	9.44E-06	5.15E-02	2.54E-07	7.79E-06
Road 16	16	0400-0500	1.20E-02	1.29E-07	3.89E-06	1.09E-02	1.14E-07	3.42E-06	6.29E-02	6.93E-07	2.01E-06	5.48E-02	5.73E-07	1.79E-05
Road 16	16	0500-0600	1.20E-02	1.29E-07	3.89E-06	1.09E-02	1.14E-07	3.42E-06	6.29E-02	6.93E-07	2.01E-06	5.48E-02	5.73E-07	1.79E-05
Road 16	16	0600-0700	1.83E-02	4.53E-07	1.39E-06	1.67E-02	4.13E-07	1.27E-06	8.08E-02	2.00E-06	5.13E-06	7.18E-02	1.78E-06	5.44E-05
Road 16	16	0800-0900	1.87E-02	4.53E-07	1.39E-06	1.67E-02	4.13E-07	1.27E-06	8.08E-02	2.00E-06	5.13E-06	7.18E-02	1.78E-06	5.44E-05
Road 16	16	0900-1000	1.76E-02	3.05E-07	9.39E-06	1.60E-02	7.78E-07	2.15E-06	8.78E-02	1.74E-06	5.33E-06	4.46E-02	1.59E-06	4.79E-05
Road 16	16	1000-1100	1.76E-02	3.05E-07	9.39E-06	1.60E-02	7.78E-07	2.15E-06	8.78E-02	1.74E-06	5.33E-06	4.46E-02	1.59E-06	4.79E-05
Road 16	16	1200-1300	3.20E-02	6.59E-07	2.02E-05	2.90E-02	5.96E-07	1.83E-06	1.20E-01	2.48E-06	7.95E-05	1.08E-01	2.78E-06	6.84E-05
Road 16	16	1300-1400	3.20E-02	6.59E-07	2.02E-05	2.90E-02	5.96E-07	1.83E-06	1.20E-01	2.48E-06	7.95E-05	1.08E-01	2.78E-06	6.84E-05
Road 16	16	1400-1500	3.65E-02	6.24E-07	2.53E-05	3.33E-02	7.45E-07	2.32E-06	1.37E-01	1.01E-06	9.50E-05	1.24E-01	2.98E-06	8.59E-05
Road 16	16	1500-1600	3.48E-02	8.07E-07	2.47E-05	3.17E-02	7.38E-07	2.25E-06	1.41E-01	3.26E-06	1.01E-04	1.28E-01	2.97E-06	9.11E-05
Road 16	16	1600-1700	3.48E-02	8.07E-07	2.47E-05	3.17E-02	7.38E-07	2.25E-06	1.41E-01	3.26E-06	1.01E-04	1.28E-01	2.97E-06	9.11E-05
Road 16	16	1700-1800	2.75E-02	6.69E-07	2.14E-05	2.50E-02	6.37E-07	1.95E-06	1.18E-01	3.00E-06	9.20E-05	1.07E-01	2.71E-06	8.31E-05
Road 16	16	1800-1900	1.81E-02	4.61E-07	1.41E-05	1.67E-02	4.26E-07	1.30E-06	1.02E-01	2.04E-06	6.26E-05	7.31E-02	1.86E-06	5.71E-05
Road 16	16	1900-2000	1.14E-02	2.42E-07	6.87E-06	1.41E-02	3.69E-07	1.09E-06	5.76E-02	1.19E-06	4.49E-05	5.23E-02	1.06E-06	3.19E-05
Road 16	16	2000-2100	9.30E-03	1.43E-07	4.37E-06	8.65E-03	1.53E-07	4.06E-06	5.45E-02	8.36E-07	2.56E-06	4.96E-02	7.61E-07	2.33E-05
Road 16	16	2200-2300	9.22E-03	1.43E-07	4.37E-06	8.65E-03	1.53E-07	4.06E-06	5.45E-02	8.36E-07	2.56E-06	4.96E-02	7.61E-07	2.33E-05
Road 16	16	2300-0000	8.62E-03	1.62E-08	4.92E-06	9.89E-03	1.62E-08	4.92E-06	9.89E-03	1.62E-08	4.92E-06	9.89E-03	1.62E-08	4.92E-06
Road 17	17	0000-0100	9.96E-03	6.62E-08	2.52E-06	8.99E-07	7.76E-08	2.27E-06	5.44E-02	8.86E-07	1.43E-06	4.92E-02	4.26E-07	1.24E-05
Road 17	17	0100-0200	1.10E-02	6.28E-08	1.83E-06	8.99E-08	5.65E-08	1.58E-06	3.35E-02	9.81E-05	5.13E-02	2.97E-07	8.65E-06	2.55E-05
Road 17														

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for AERMOD model (February)	Year 2038

Road Name	Road ID	Hour	No. Emissions						No Emission					
			Month/Year/mile			Month/Year/mile			Month/Year/mile			Month/Year/mile		
			g/kWh	g/m ³	tonne/hour	g/kWh	g/m ³	tonne/hour	g/kWh	g/m ³	tonne/hour	g/kWh	g/m ³	tonne/hour
Road 27	27	1600-1700	1.6761	4.2667	1.3110E-06	1.5267E-06	3.9157E-07	1.0267E-06	3.9441E-06	9.5116E-06	4.6656E-06	5.4461E-06	1.3963E-06	4.2727E-06
Road 27	27	1700-1800	1.6653	4.2607	1.038E-06	1.3363E-06	3.0768E-07	8.976E-07	3.796E-06	1.336E-06	4.1805E-06	5.2681E-06	1.223E-06	3.740E-06
Road 27	27	1800-1900	1.7279	4.2607	1.086E-06	1.386E-06	3.714E-07	9.426E-07	4.046E-06	1.336E-06	4.1805E-06	5.2681E-06	1.223E-06	3.740E-06
Road 27	27	1900-2000	1.7181	4.2607	1.122E-06	1.376E-07	1.106E-06	1.136E-07	4.486E-07	4.836E-07	1.496E-06	4.366E-07	1.496E-06	1.386E-07
Road 27	27	2000-2100	1.6216	4.1806	8.26E-06	2.92E-07	8.70E-06	1.076E-07	4.72E-07	3.88E-07	1.196E-06	4.336E-07	3.96E-07	1.10E-06
Road 27	27	2100-2200	1.6181	4.1806	8.96E-06	3.04E-07	9.48E-06	1.12E-07	5.28E-07	4.33E-07	1.296E-06	4.336E-07	4.19E-07	1.19E-06
Road 27	27	2200-2300	1.207E-06	8.84E-08	2.77E-07	1.15E-06	8.44E-08	2.60E-07	4.36E-07	3.20E-07	8.86E-07	4.16E-07	3.05E-07	9.41E-07
Road 27	27	2300-0000	1.221E-06	8.73E-08	2.25E-07	1.16E-06	8.99E-08	2.51E-07	4.42E-07	2.66E-07	8.18E-07	4.19E-07	2.53E-07	7.78E-07
Road 28	28	0000-0100	1.207E-06	8.84E-08	2.77E-07	1.15E-06	8.44E-08	2.60E-07	4.36E-07	3.20E-07	8.86E-07	4.16E-07	3.05E-07	9.41E-07
Road 28	28	0100-0200	1.206E-06	8.870E-08	4.87E-08	1.06E-07	7.65E-08	1.34E-06	5.94E-07	4.01E-07	2.78E-06	4.93E-07	3.51E-07	1.99E-06
Road 28	28	0200-0300	1.32E-07	6.95E-08	3.96E-06	1.18E-07	8.23E-08	3.54E-06	5.99E-07	3.17E-07	1.80E-06	5.17E-07	2.97E-07	1.65E-06
Road 28	28	0300-0400	1.45E-07	7.43E-08	4.50E-06	1.24E-07	8.61E-08	3.89E-06	6.46E-07	3.47E-07	2.06E-06	5.28E-07	3.19E-07	1.86E-06
Road 28	28	0400-0500	1.64E-06	6.97E-08	3.96E-06	1.33E-06	8.26E-08	3.26E-06	6.42E-07	3.02E-07	1.71E-05	5.54E-07	2.60E-07	1.48E-06
Road 28	28	0500-0600	1.47E-06	1.20E-07	6.89E-06	1.33E-06	1.07E-07	6.95E-06	6.47E-07	5.29E-07	2.68E-06	5.98E-07	4.83E-07	2.97E-06
Road 28	28	0600-0700	1.45E-06	1.20E-07	6.89E-06	1.33E-06	1.07E-07	6.95E-06	6.47E-07	5.29E-07	2.68E-06	5.98E-07	4.83E-07	2.97E-06
Road 28	28	0700-0800	1.56E-06	5.68E-07	3.22E-05	1.44E-05	5.17E-07	9.29E-05	6.79E-07	4.42E-06	1.37E-04	5.95E-07	2.31E-06	1.21E-04
Road 28	28	0800-0900	1.53E-06	5.62E-07	3.59E-06	1.39E-06	5.77E-07	9.29E-05	6.42E-07	2.66E-06	5.11E-07	5.72E-06	2.37E-06	1.34E-04
Road 28	28	0900-1000	1.46E-06	5.62E-07	3.59E-06	1.39E-06	5.77E-07	9.29E-05	6.42E-07	2.66E-06	5.11E-07	5.72E-06	2.37E-06	1.34E-04
Road 28	28	1000-1100	1.97E-06	6.47E-07	3.67E-07	1.19E-06	5.88E-07	3.36E-05	5.54E-07	2.48E-06	1.41E-04	6.79E-07	2.23E-06	1.27E-04
Road 28	28	1100-1200	1.96E-06	6.01E-07	3.41E-06	1.76E-06	5.48E-07	3.15E-05	7.59E-06	2.95E-06	1.33E-04	6.80E-07	2.12E-06	1.20E-04
Road 28	28	1200-1300	1.96E-06	6.01E-07	3.41E-06	1.76E-06	5.48E-07	3.15E-05	7.59E-06	2.95E-06	1.33E-04	6.80E-07	2.12E-06	1.20E-04
Road 28	28	1300-1400	1.86E-06	4.44E-07	2.50E-06	1.46E-06	4.04E-07	2.30E-05	3.13E-06	1.76E-06	9.98E-07	5.62E-07	1.89E-06	8.89E-05
Road 28	28	1400-1500	1.81E-06	4.71E-07	2.67E-06	1.66E-06	4.24E-07	2.46E-05	7.09E-06	1.84E-06	1.05E-06	6.37E-07	1.66E-06	9.41E-05
Road 28	28	1500-1600	1.74E-06	4.66E-07	2.50E-06	1.46E-06	4.04E-07	2.30E-05	3.13E-06	1.76E-06	9.98E-07	5.62E-07	1.89E-06	8.89E-05
Road 28	28	1600-1700	1.74E-06	4.44E-07	2.50E-06	1.46E-06	4.04E-07	2.30E-05	3.13E-06	1.76E-06	9.98E-07	5.62E-07	1.89E-06	8.89E-05
Road 28	28	1700-1800	1.36E-06	4.80E-07	2.77E-06	1.68E-06	4.67E-07	2.52E-05	8.89E-06	1.80E-06	1.02E-06	5.29E-07	1.62E-06	9.19E-05
Road 28	28	1800-1900	1.36E-06	4.80E-07	2.77E-06	1.68E-06	4.67E-07	2.52E-05	8.89E-06	1.80E-06	1.02E-06	5.29E-07	1.62E-06	9.19E-05
Road 28	28	1900-2000	1.31E-07	7.07E-07	1.18E-05	7.52E-07	1.92E-07	1.05E-05	4.37E-07	1.61E-06	6.15E-06	3.66E-07	7.97E-07	5.55E-05
Road 28	28	2000-2100	8.13E-07	1.61E-07	9.16E-06	4.76E-07	1.47E-06	3.84E-06	4.71E-06	3.96E-07	5.31E-06	4.44E-07	8.28E-07	4.67E-05
Road 28	28	2100-2200	8.13E-07	1.61E-07	9.16E-06	4.76E-07	1.47E-06	3.84E-06	4.71E-06	3.96E-07	5.31E-06	4.44E-07	8.28E-07	4.67E-05
Road 28	28	2200-2300	7.15E-07	1.37E-07	7.78E-07	6.79E-07	1.38E-06	3.32E-07	8.79E-07	4.70E-06	4.04E-07	7.78E-07	4.38E-07	4.38E-05
Road 28	28	2300-0000	7.92E-07	1.44E-07	6.48E-06	1.08E-07	6.13E-06	4.50E-06	6.50E-07	3.69E-06	4.19E-06	6.04E-07	3.43E-06	4.38E-05
Road 28	28	0000-0100	7.92E-07	1.44E-07	6.48E-06	1.08E-07	6.13E-06	4.50E-06	6.50E-07	3.69E-06	4.19E-06	6.04E-07	3.43E-06	4.38E-05
Road 28	28	0100-0200	7.92E-07	1.37E-08	3.26E-06	7.13E-07	1.22E-06	2.92E-06	4.17E-07	8.90E-07	9.59E-06	4.05E-07	1.66E-06	1.66E-05
Road 28	28	0200-0300	9.87E-06	2.74E-08	6.08E-08	3.54E-08	4.48E-06	5.03E-07	2.20E-07	1.52E-06	4.29E-06	1.88E-07	1.28E-05	1.28E-05
Road 28	28	0300-0400	9.87E-06	2.74E-08	6.08E-08	3.54E-08	4.48E-06	5.03E-07	2.20E-07	1.52E-06	4.29E-06	1.88E-07	1.28E-05	1.28E-05
Road 28	28	0400-0500	1.05E-06	3.99E-08	2.75E-06	9.31E-05	2.44E-06	3.38E-05	2.05E-07	1.41E-05	4.55E-07	1.78E-07	1.15E-05	1.15E-05
Road 28	28	0500-0600	1.01E-06	4.39E-08	4.51E-06	8.58E-06	5.78E-06	3.99E-06	3.56E-07	3.47E-07	3.69E-06	4.51E-07	2.02E-06	2.02E-06
Road 28	28	0600-0700	1.01E-06	4.39E-08	4.51E-06	8.58E-06	5.78E-06	3.99E-06	3.56E-07	3.47E-07	3.69E-06	4.51E-07	2.02E-06	2.02E-06
Road 28	28	0700-0800	1.05E-06	3.99E-08	2.75E-06	9.31E-05	2.44E-06	3.38E-05	2.05E-07	1.41E-05	4.55E-07	1.78E-07	1.15E-05	1.15E-05
Road 28	28	0800-0900	1.01E-06	4.39E-08	4.51E-06	8.58E-06	5.78E-06	3.99E-06	3.56E-07	3.47E-07	3.69E-06	4.51E-07	2.02E-06	2.02E-06
Road 28	28	0900-1000	1.01E-06	4.39E-08	4.51E-06	8.58E-06	5.78E-06	3.99E-06	3.56E-07	3.47E-07	3.69E-06	4.51E-07	2.02E-06	2.02E-06
Road 28	28	1000-1100	1.32E-06	3.03E-08	2.09E-06	1.26E-06	7.57E-06	1.90E-06	1.33E-06	1.15E-05	5.15E-06	1.18E-06	8.12E-05	8.12E-05
Road 28	28	1100-1200	1.29E-06	2.77E-07	1.91E-06	1.25E-06	7.52E-07	1.94E-06	8.81E-06	1.26E-06	8.60E-05	5.17E-07	1.12E-06	7.78E-05
Road 28	28	1200-1300	2.15E-06	4.42E-07	3.09E-06	1.68E-06	1.01E-06	1.56E-06	1.06E-06	1.06E-06	1.17E-06	1.06E-06	1.33E-06	1.06E-06
Road 28	28	1300-1400	2.15E-06	4.42E-07	3.09E-06	1.68E-06	1.01E-06	1.56E-06	1.06E-06	1.06E-06	1.17E-06	1.06E-06	1.33E-06	1.06E-06
Road 28	28	1400-1500	2.16E-06	4.61E-07	3.19E-06	1.97E-06	1.22E-06	2.91E-06	1.76E-06	1.15E-06	7.05E-06	1.93E-06	1.04E-06	1.04E-06
Road 28	28	1500-1600	2.05E-06	4.66E-07	3.05E-06	1.69E-06	1.01E-06	1.77E-06	1.70E-06	1.17E-06	1.06E-06	1.33E-06	1.06E-06	1.06E-06
Road 28	28	1600-1700	2.05E-06	4.66E-07	3.05E-06	1.69E-06	1.01E-06	1.77E-06	1.70E-06	1.17E-06	1.06E-06	1.33E-06	1.06E-06	1.06E-06
Road 28	28	1700-1800	1.60E-06	3.91E-07	2.70E-06	1.44E-07	3.57E-06	1.49E-06	6.49E-06	1.58E-06	1.05E-06	5.87E-06	1.43E-06	9.98E-06
Road 28	28	1800-1900	1.25E-07	3.07E-07	2.12E-06	1.18E-06	1.83E-07	9.05E-06	6.09E-06	1.24E-06	8.59E-06	4.60E-06	1.18E-06	7.68E-06
Road 28	28	1900-2000	1.25E-07	3.07E-07	2.12E-06	1.18E-06	1.83E-07	9.05E-06	6.09E-06	1.24E-06	8.59E-06	4.60E-06	1.18E-06	7.68E-06
Road 28	28	2000-2100	1.06E-06	1.64E-07	1.13E-06	9.95E-07	1.05E-06	1.04E-06	7.71E-07	3.52E-06	4.45E-06	6.88E-07	4.74E-06	4.74E-06
Road 28	28	2100-2200	1.01E-06	1.50E-07	1.06E-06	9.38E-07	1.16E-06	8.87E-06	7.23E-07	4.99E-06	4.95E-06	6.95E-07	4.55E-06	4.55E-06
Road 28	28	2200-2300	1.01E-06	1.50E-07	1.06E-06	9.38E-07	1.16E-06	8.87E-06	7.23E-07	4.99E-06	4.95E-06	6.95E-07	4.55E-06	4.55E-06
Road 28	28	2300-0000	1.09E-06	1.20E-07	8.25E-06	1.04E-06	1.11E-07	7.83E-06	4.34E-07	3.97E-06	3.72E-06	4.62E-06	5.95E-07	3.98E-06
Road 30	30	0000-0100	1.11E-06	1.11E-06	1.11E-06	1.04E-07	1.04E-06	5.70E-06	5.90E-06	3.78E-06	4.97E-06	3.14E-07	5.03E-06	5.03E-06
Road 30	30	0100-0200	1.11E-06	1.11E-06	1.11E-06	1.04E-07	1.04E-06	5.70E-06	5.90E-06	3.78E-06	4.97E-06	3.14E-07	5.03E-06	5.03E-06
Road 30	30	0200-0300	1.42E-06	7.55E-08	7.36E-07	1.311E-06	8.67E-08	8.67E-08	4.34E-07	3.34E-07	3.72E-06	5.64E-07	3.92E-07	2.87E-06
Road 30	30	0300-0400	1.62E-06	8.81E-08	6.67E-06	1.46E-06	6.13E-06	6.06E-07	7.9E-07	2.86E-07	2.86E-06	3.93E-07	2.44E-06	2.44E-06
Road 30	30	0400-0500	1.62E-06	8.81E-08	6.67E-06	1.46E-06	6.13E-06	6.06E-07	7.9E-07	2.86E-07	2.86E-06	3.93E-07	2.44E-06	2.44E-06
Road 30	30	0500-0600	1.62E-06	1.22E-06	1.20E-06	1.38E-06	1.06E-06	1.06E-06	9.54E-07	5.33E-06	5.96E-06	4.66E-07	4.57E-06	4.57E-06
Road 30	30	0600-0700	1.49E-06	2.47E-07	2.41E-06	1.35E-06	2.22E-07	1.18E-06	8.92E-06	1.15E-06	1.12E-06	8.07E-06	1.01E-06	9.84E-06
Road 30	30	0700-0800	1.49E-06	2.47E-07	2.41E-06	1.35E-06	2.22E-07	1.18E-06	8.92E-06					

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
 Open Road 24 hour Emission Factors for
 AERMOD model (February)

Road Name	Road ID	Hour	NO Emission				MonthlyAverage				NO Emission				MonthlyAverage			
			g/kwh	g/kwh	tonne/hour	g/kwh	g/kwh	tonne/hour	g/kwh	g/kwh	tonne/hour	g/kwh	g/kwh	tonne/hour	g/kwh	g/kwh	tonne/hour	
Road #1	41	0000-0100	2.13E-02	4.43E-04	4.00E-07	1.95E-02	1.92E-08	1.68E-07	1.75E-02	1.45E-07	1.36E-06	6.30E-02	1.59E-07	1.70E-06				
Road #1	41	0100-0200	2.71E-02	4.58E-04	3.78E-07	2.64E-02	1.66E-08	3.43E-07	3.18E-02	1.21E-07	1.14E-06	7.24E-02	1.80E-07	1.01E-06				
Road #1	41	0200-0300	3.53E-02	4.58E-04	3.53E-07	3.53E-02	1.66E-08	3.33E-07	3.53E-02	1.03E-07	1.03E-06	1.03E-02	1.03E-07	1.03E-06				
Road #1	41	0300-0400	3.60E-02	3.81E-08	3.58E-07	3.24E-02	1.44E-08	3.23E-07	3.70E-02	1.03E-07	1.02E-07	8.61E-02	1.93E-07	8.57E-07				
Road #1	41	0400-0500	3.55E-02	3.54E-08	3.76E-07	3.12E-02	1.52E-08	3.30E-07	3.70E-02	1.08E-07	1.05E-06	8.49E-02	8.49E-08	8.90E-07				
Road #1	41	0500-0600	3.55E-02	3.54E-08	3.76E-07	3.12E-02	1.52E-08	3.30E-07	3.70E-02	1.08E-07	1.05E-06	8.49E-02	8.49E-08	8.90E-07				
Road #1	41	0600-0700	2.70E-02	5.81E-08	5.44E-07	1.93E-02	2.56E-08	1.94E-07	2.82E-02	1.12E-07	9.97E-07	6.48E-02	1.16E-07	1.11E-06				
Road #1	41	0700-0800	2.42E-02	6.70E-08	1.69E-06	2.45E-02	1.64E-07	1.54E-06	8.45E-02	5.64E-07	5.30E-06	7.50E-02	5.01E-07	4.70E-06				
Road #1	41	0800-0900	2.49E-02	1.86E-07	1.74E-06	2.26E-02	1.69E-07	1.59E-06	7.72E-02	5.76E-07	5.46E-06	8.90E-02	5.13E-07	4.83E-06				
Road #1	41	0900-1000	2.81E-02	1.86E-07	1.84E-06	2.58E-02	1.68E-07	1.57E-06	8.72E-02	5.72E-07	5.42E-06	9.10E-02	5.13E-07	4.83E-06				
Road #1	41	1000-1100	3.13E-02	1.84E-07	1.72E-06	2.87E-02	1.66E-07	1.55E-06	1.02E-02	5.40E-07	5.07E-06	8.18E-02	4.81E-07	4.51E-06				
Road #1	41	1100-1200	3.14E-02	1.78E-07	1.67E-06	2.86E-02	1.61E-07	1.52E-06	9.23E-02	5.22E-07	4.90E-06	8.29E-02	4.69E-07	4.40E-06				
Road #1	41	1200-1300	3.46E-02	2.12E-07	2.04E-06	3.14E-02	1.94E-07	1.84E-06	1.23E-02	6.16E-07	5.82E-06	9.10E-02	5.13E-07	4.83E-06				
Road #1	41	1300-1400	3.46E-02	2.12E-07	2.04E-06	3.14E-02	1.94E-07	1.84E-06	1.04E-02	6.50E-07	6.10E-06	9.46E-02	5.68E-07	5.56E-06				
Road #1	41	1400-1500	3.46E-02	2.20E-07	2.07E-06	3.14E-02	2.03E-07	1.92E-06	1.02E-02	6.59E-07	6.17E-06	9.29E-02	6.03E-07	5.66E-06				
Road #1	41	1500-1600	3.46E-02	2.20E-07	2.07E-06	3.14E-02	2.03E-07	1.92E-06	1.02E-02	6.59E-07	6.17E-06	9.29E-02	6.03E-07	5.66E-06				
Road #1	41	1600-1700	3.26E-02	2.18E-07	2.06E-06	2.99E-02	2.01E-07	1.89E-06	1.02E-02	6.67E-07	6.16E-06	9.50E-02	5.97E-07	5.62E-06				
Road #1	41	1700-1800	2.81E-02	2.06E-07	1.88E-06	2.66E-02	1.85E-07	1.74E-06	8.99E-02	6.33E-07	5.94E-06	8.19E-02	5.83E-07	5.47E-06				
Road #1	41	1800-1900	2.42E-02	1.86E-07	1.84E-06	2.58E-02	1.68E-07	1.57E-06	8.72E-02	5.72E-07	5.42E-06	9.10E-02	5.13E-07	4.83E-06				
Road #1	41	1900-2000	1.45E-02	6.90E-06	6.47E-07	1.57E-02	8.35E-08	8.97E-07	8.96E-02	2.73E-07	2.56E-06	5.45E-02	2.47E-07	2.32E-06				
Road #1	41	2000-2100	1.62E-02	6.01E-06	5.64E-07	1.49E-02	5.53E-08	5.91E-07	8.50E-02	2.41E-07	2.27E-06	5.84E-02	2.71E-07	2.03E-06				
Road #1	41	2100-2200	1.55E-02	5.50E-06	5.12E-07	1.46E-02	5.09E-08	5.29E-07	8.20E-02	2.25E-07	2.12E-06	5.45E-02	2.50E-07	1.85E-06				
Road #1	41	2200-2300	1.55E-02	5.50E-06	5.12E-07	1.46E-02	5.09E-08	5.29E-07	8.20E-02	2.25E-07	2.12E-06	5.45E-02	2.50E-07	1.85E-06				
Road #1	41	2300-0000	1.82E-02	6.14E-06	4.83E-07	1.75E-02	4.90E-08	4.60E-07	6.61E-02	1.87E-07	1.75E-06	6.22E-02	1.87E-07	1.69E-06				
Road #2	42	0000-0100	3.86E-02	8.99E-07	2.27E-06	3.51E-02	8.11E-08	2.06E-06	1.51E-02	2.95E-07	6.73E-06	1.03E-02	2.96E-07	5.98E-06				
Road #2	42	0100-0200	4.78E-02	8.14E-08	1.84E-06	4.29E-02	7.73E-08	1.87E-06	3.30E-02	3.18E-07	3.02E-06	1.03E-02	2.96E-07	5.98E-06				
Road #2	42	0200-0300	5.64E-02	7.87E-08	2.00E-06	5.11E-02	7.13E-08	1.81E-06	1.46E-02	2.94E-07	5.16E-06	1.31E-02	1.82E-07	4.63E-06				
Road #2	42	0300-0400	6.34E-02	7.24E-08	1.96E-06	5.73E-02	6.98E-08	1.77E-06	1.95E-02	1.94E-07	4.92E-06	1.42E-02	1.73E-07	4.39E-06				
Road #2	42	0400-0500	6.21E-02	6.88E-08	1.92E-06	5.60E-02	6.73E-08	1.75E-06	1.95E-02	1.94E-07	4.92E-06	1.42E-02	1.73E-07	4.39E-06				
Road #2	42	0500-0600	6.48E-02	8.89E-08	2.25E-06	5.94E-02	7.90E-08	2.00E-06	3.36E-02	2.48E-07	6.29E-06	1.19E-02	2.16E-07	5.49E-06				
Road #2	42	0600-0700	3.72E-02	1.22E-07	3.06E-06	3.37E-02	1.10E-07	2.79E-06	3.30E-02	3.91E-07	9.10E-06	1.06E-02	3.47E-07	8.76E-06				
Road #2	42	0700-0800	3.72E-02	1.22E-07	3.06E-06	3.37E-02	1.10E-07	2.79E-06	3.30E-02	3.91E-07	9.10E-06	1.06E-02	3.47E-07	8.76E-06				
Road #2	42	0800-0900	5.76E-02	1.49E-07	1.25E-05	5.07E-02	1.44E-07	1.14E-05	1.60E-02	1.36E-06	3.45E-05	1.44E-02	1.29E-06	3.11E-05				
Road #2	42	0900-1000	6.58E-02	4.92E-07	1.24E-05	6.07E-02	1.49E-07	1.14E-05	8.00E-02	1.34E-06	3.41E-05	1.64E-02	1.22E-06	3.03E-05				
Road #2	42	1000-1100	7.65E-02	4.17E-07	1.21E-05	6.83E-02	1.32E-07	1.09E-05	1.09E-02	1.29E-06	3.38E-05	1.54E-02	1.15E-06	2.97E-05				
Road #2	42	1100-1200	7.99E-02	4.52E-07	1.17E-05	6.45E-02	1.40E-07	1.09E-05	1.09E-02	1.24E-06	3.14E-05	1.71E-02	1.12E-06	2.83E-05				
Road #2	42	1200-1300	9.13E-02	4.44E-07	1.18E-05	6.36E-02	1.25E-07	1.05E-05	3.34E-02	1.19E-06	3.02E-05	2.14E-02	1.09E-06	2.76E-05				
Road #2	42	1300-1400	9.13E-02	4.44E-07	1.18E-05	6.36E-02	1.25E-07	1.05E-05	3.34E-02	1.19E-06	3.02E-05	2.14E-02	1.09E-06	2.76E-05				
Road #2	42	1400-1500	9.21E-02	4.98E-07	1.29E-05	6.84E-02	1.457E-07	1.16E-05	2.41E-02	1.30E-06	3.28E-05	2.21E-02	1.19E-06	2.93E-05				
Road #2	42	1500-1600	8.85E-02	4.46E-07	1.22E-05	6.14E-02	1.14E-07	1.10E-05	3.30E-02	1.33E-06	3.31E-05	2.20E-02	1.20E-06	3.06E-05				
Road #2	42	1600-1700	8.87E-02	4.59E-07	1.23E-05	6.16E-02	1.14E-07	1.10E-05	3.32E-02	1.29E-06	3.24E-05	2.13E-02	1.17E-06	2.97E-05				
Road #2	42	1700-1800	7.18E-02	4.54E-07	1.16E-05	5.42E-02	1.09E-07	1.07E-05	2.48E-02	1.29E-06	3.19E-05	1.89E-02	1.10E-06	2.82E-05				
Road #2	42	1800-1900	7.18E-02	4.01E-07	1.02E-05	6.61E-02	3.70E-07	8.40E-06	1.89E-02	1.04E-06	2.63E-05	1.70E-02	9.52E-07	2.41E-05				
Road #2	42	1900-2000	3.76E-02	1.19E-07	3.02E-05	3.46E-02	1.03E-07	2.79E-06	3.18E-02	3.76E-07	9.54E-06	1.08E-02	3.46E-07	8.72E-06				
Road #2	42	2000-2100	3.76E-02	1.19E-07	3.02E-05	3.46E-02	1.03E-07	2.79E-06	3.18E-02	3.76E-07	9.54E-06	1.08E-02	3.46E-07	8.72E-06				
Road #2	42	2100-2200	3.86E-02	1.01E-07	2.56E-06	3.60E-02	9.41E-08	2.36E-06	3.22E-02	3.18E-07	8.06E-06	1.12E-02	2.94E-07	7.44E-06				
Road #2	42	2200-2300	3.92E-02	9.88E-07	2.51E-06	3.74E-02	9.40E-08	2.38E-06	3.19E-02	3.00E-07	7.61E-06	1.13E-02	2.83E-07	7.19E-06				
Road #2	42	2300-0000	4.29E-02	9.88E-07	2.51E-06	3.74E-02	9.40E-08	2.38E-06	3.25E-02	3.18E-07	7.61E-06	1.13E-02	2.83E-07	7.19E-06				
Road #3	43	0000-0100	1.46E-02	4.08E-08	4.18E-06	1.32E-02	1.68E-07	3.73E-07	5.72E-02	1.67E-08	1.71E-07	4.97E-02	1.48E-08	1.49E-07				
Road #3	43	0100-0200	1.86E-02	3.78E-08	3.87E-08	1.74E-02	1.42E-08	5.33E-07	6.52E-02	1.33E-07	1.37E-07	5.72E-02	1.18E-08	1.20E-07				
Road #3	43	0200-0300	1.86E-02	3.78E-08	3.87E-08	1.74E-02	1.42E-08	5.33E-07	6.52E-02	1.33E-07	1.37E-07	5.72E-02	1.18E-08	1.20E-07				
Road #3	43	0300-0400	2.62E-02	3.50E-08	3.63E-08	2.36E-02	3.20E-08	3.27E-08	7.90E-02	1.07E-08	1.09E-07	9.66E-02	9.41E-09	9.63E-08				
Road #3	43	0400-0500	2.56E-02	3.69E-09	3.77E-08	2.26E-02	3.28E-09	3.38E-08	7.92E-02	1.14E-08	1.17E-07	8.65E-02	8.98E-09	1.01E-07				
Road #3	43	0500-0600	2.56E-02	3.69E-09	3.77E-08	2.26E-02	3.28E-09	3.38E-08	7.92E-02	1.14E-08	1.17E-07	8.65E-02	8.98E-09	1.01E-07				
Road #3	43	0600-0700	1.39E-02	5.76E-06	5.90E-08	1.25E-02	3.20E-08	3.35E-08	8.09E-02	2.91E-08	2.57E-07	5.24E-02	1.27E-08	2.22E-07				
Road #3	43	0700-0800	1.91E-02	1.74E-07	1.78E-07	1.87E-02	1.58E-07	1.61E-07	8.89E-02	6.32E-08	6.44E-07	6.04E-02	5.51E-08	5.74E-07				
Road #3	43	0800-0900	1.74E-02	1.86E-07	1.86E-07	1.96E-02	1.63E-07	1.67E-07	8.13E-02	6.32E-08	6.44E-07	5.41E-02	5.13E-08	5.71E-07				
Road #3	43	0900-1000	1.74E-02	1.71E-07	1.75E-07	1.82E-02	1.53E-07	1.56E-07	8.13E-02	6.32E-08	6.44E-07	5.41E-02	5.13E-08	5.71E-07				
Road #3	43	1000-1100	2.27E-02	1.70E-07	1.74E-07	2.04E-02	1.53E-07	1.57E-07	7.37E-02	5.52E-08	5.65E-07	6.49E-02	4.87E-08	4.98E-07				
Road #3	43	1100-1200	2.27E-02	1.63E-08	1.67E-07	2.06E-02	1.48E-08	1.51E-07	7.37E-02	5.31E-08	5.43E-07	5.98E-02	4.78E-08	4.88E-07				
Road #3	43	1200-1300	2.56E-02	1.96E-07	1.96E-07	2.26E-02	1.69E-07	1.73E-07	8.08E-02	6.32E-08	6.44E-07	6.04E-02	5.51E-08	5.74E-07				
Road #3	43	1300-1400	1.97E-02	5.61E-08	5.74E-07	1.81E-02	1.54E-08	1.56E-07	7.62E-02	2.22E-07	2.28E-07	7.06E-02	2.01E-07	2.06E-06				
Road #3	43	1400-1500	1.96E-02	5.88E-08	5.88E-08	6.02E-02	1.54E-08	1.54E-07	7.62E-02	2.20E-07	2.20E-07	6.99E-02	2.01E-07	2.05E-06				
Road #3	43	1500-1600	1.96E-02	5.88E-08	5.88E-08	6.02E-02	1.54E-08	1.54E-07	7.62E-02	2.20E-07	2.20E-07	6.99E-02	2.01E-07	2.05E-06				
Road #3	43	1600-1700	1.88E-02	6.02E-08	6.17E-07	1.74E-02</												

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Open Road Yr 24 Undermination Factors for															
ASHTO Road ID (Hourly)		Year 2038													
		No Emission						No Emission							
Road Name	Road ID	MonthlyHours		g/km/hour		g/m ² /hour		MonthlyHours		g/km/hour		g/m ² /hour			
		g/km/hour	g/m ² /hour	g/km/hour	g/m ² /hour	g/km/hour	g/m ² /hour	g/km/hour	g/m ² /hour	g/km/hour	g/m ² /hour				
Road 44	44	0900-0900	1.056	2.486	1.538	9.585	2.266	1.408	6.520	1.266	7.766	6.716	1.116	6.886	
Road 44	44	1000-1100	1.186	2.446	1.506	10.766	2.186	1.356	5.666	1.156	12.266	4.496	1.006	6.216	
Road 44	44	1100-1200	1.116	2.176	1.326	11.866	2.116	1.386	5.166	1.186	11.866	4.416	1.036	6.546	
Road 44	44	1200-1300	1.416	2.566	1.206	1.296	3.256	1.016	6.236	1.576	1.686	5.616	1.416	8.716	
Road 44	44	1300-1400	1.436	2.686	1.276	1.316	3.366	2.086	6.626	1.676	1.036	5.886	1.516	9.306	
Road 44	44	1400-1500	1.436	2.686	1.276	1.316	3.366	2.086	6.626	1.676	1.036	5.886	1.516	9.306	
Road 44	44	1500-1600	1.376	3.856	1.376	1.276	3.556	1.296	6.636	1.856	1.156	6.096	1.696	1.056	
Road 44	44	1600-1700	1.636	2.476	1.636	1.686	2.016	4.096	7.706	2.236	1.426	1.966	2.086	1.286	
Road 44	44	1700-1800	1.196	2.526	1.196	1.526	1.526	1.526	1.526	1.526	1.526	1.526	1.526	1.526	
Road 44	44	1800-1900	2.026	7.496	1.636	1.686	6.906	1.256	8.856	1.236	2.036	1.806	2.996	1.646	
Road 44	44	1900-2000	1.436	1.516	1.436	1.516	1.756	1.086	3.956	1.126	1.796	3.526	1.046	6.416	
Road 44	44	2000-2100	2.226	4.446	1.626	1.676	1.306	1.096	4.266	1.976	1.046	1.746	1.596	1.106	
Road 44	44	2100-2200	3.316	1.216	1.796	1.796	1.316	1.716	1.316	1.716	1.316	1.716	1.316	1.716	
Road 44	44	2200-2300	1.116	1.576	1.106	1.976	1.096	6.746	3.906	6.686	1.366	6.616	6.036	4.966	
Road 44	44	2300-2400	5.916	9.476	5.916	9.476	5.916	9.476	5.916	9.476	5.916	9.476	5.916	9.476	
Road 44	44	0000-0100	1.316	1.416	1.316	1.416	1.416	2.646	3.256	4.376	2.146	2.636	3.786	1.836	2.256
Road 44	44	0100-0200	1.316	1.416	1.316	1.416	1.416	2.646	3.256	4.376	2.146	2.636	3.786	1.836	2.256
Road 44	44	0200-0300	1.316	1.416	1.316	1.416	1.416	2.646	3.256	4.376	2.146	2.636	3.786	1.836	2.256
Road 44	44	0300-0400	1.316	1.416	1.316	1.416	1.416	2.646	3.256	4.376	2.146	2.636	3.786	1.836	2.256
Road 44	44	0400-0500	1.316	1.416	1.316	1.416	1.416	2.646	3.256	4.376	2.146	2.636	3.786	1.836	2.256
Road 44	44	0500-0600	1.316	1.416	1.316	1.416	1.416	2.646	3.256	4.376	2.146	2.636	3.786	1.836	2.256
Road 44	44	0600-0700	1.316	1.416	1.316	1.416	1.416	2.646	3.256	4.376	2.146	2.636	3.786	1.836	2.256
Road 44	44	0700-0800	1.316	1.416	1.316	1.416	1.416	2.646	3.256	4.376	2.146	2.636	3.786	1.836	2.256
Road 44	44	0800-0900	1.316	1.416	1.316	1.416	1.416	2.646	3.256	4.376	2.146	2.636	3.786	1.836	2.256
Road 44	44	0900-1000	1.186	2.126	1.186	2.686	1.046	1.966	1.126	5.626	1.146	1.446	1.016	6.106	
Road 44	44	1000-1100	1.186	2.126	1.186	2.686	1.046	1.966	1.126	5.626	1.146	1.446	1.016	6.106	
Road 44	44	1100-1200	1.186	2.126	1.186	2.686	1.046	1.966	1.126	5.626	1.146	1.446	1.016	6.106	
Road 44	44	1200-1300	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.886	1.166	
Road 44	44	1300-1400	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	1400-1500	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	1500-1600	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	1600-1700	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	1700-1800	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	1800-1900	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	1900-2000	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	2000-2100	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	2100-2200	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	2200-2300	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	2300-2400	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	0000-0100	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	0100-0200	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	0200-0300	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	0300-0400	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	0400-0500	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	0500-0600	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	0600-0700	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	0700-0800	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	0800-0900	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	0900-1000	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	1000-1100	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	1100-1200	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	1200-1300	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	1300-1400	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	1400-1500	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	1500-1600	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	1600-1700	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	1700-1800	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	1800-1900	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	1900-2000	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	2000-2100	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	2100-2200	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	2200-2300	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	2300-2400	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	0000-0100	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	0100-0200	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	0200-0300	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	0300-0400	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	0400-0500	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	0500-0600	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	0600-0700	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	0700-0800	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	0800-0900	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	0900-1000	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	1000-1100	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	1100-1200	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	1200-1300	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	1300-1400	1.356	2.946	1.626	1.666	1.246	2.066	3.316	6.036	1.316	1.666	1.888	1.166	
Road 44	44	1400-1500	1.356	2.946	1.626	1.666	1.246	2.066	3.316						

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for[illegible]

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Open Road Yr 24 Undermin Factors for ASPH/MDT Hourly		Year 2038		No Emulsion										No Emulsion									
Road Name	Road ID	Frequency	Monthly/Hours					Monthly/Average					Monthly/Hours					Monthly/Average					
			g/km/h	g/m ²	g/m ² /hr	g/km/h	g/m ²	g/m ² /hr	g/km/h	g/m ²	g/m ² /hr	g/km/h	g/m ²	g/m ² /hr	g/km/h	g/m ²	g/m ² /hr						
Road S1	S1	0000-0200	0.1110	3.268	0.103	3.107	4.548	2.928	4.508	4.380	2.356	4.380	4.380	2.356	4.380	4.380	2.356	4.380					
Road S1	S1	0200-0300	0.6225	0.938	4.838	0.975	2.535	4.838	4.327	4.572	0.717	1.926	4.572	0.717	1.926	4.572	0.717	1.926					
Road S1	S1	0300-0400	0.7603	2.633	1.213	4.172	2.121	3.872	2.121	3.872	2.121	3.872	2.121	3.872	2.121	3.872	2.121	3.872					
Road S1	S1	0400-0500	0.7603	2.633	1.213	4.172	0.885	2.528	4.326	4.326	1.667	3.095	4.326	1.667	3.095	4.326	1.667	3.095					
Road S1	S1	0500-0600	0.3443	4.878	0.088	0.738	4.328	4.288	7.886	5.066	2.957	5.515	4.216	2.446	4.216	2.446	4.216	2.446					
Road S1	S1	0600-0700	0.0903	0.983	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000					
Road S1	S1	0700-0800	0.3553	2.367	0.000	0.000	8.422	2.126	0.975	5.266	1.235	2.475	4.216	1.145	4.216	1.145	4.216	1.145					
Road S1	S1	0800-0900	1.8862	2.587	1.811	0.602	2.346	0.735	4.585	4.686	1.536	7.525	0.648	1.182	0.648	1.182	0.648	1.182					
Road S1	S1	0900-1000	0.0903	0.983	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000					
Road S1	S1	1000-1100	1.1336	2.307	2.307	4.488	1.025	2.066	3.856	5.486	1.151	2.075	1.048	0.676	1.048	0.676	1.048	0.676					
Road S1	S1	1100-1200	0.0903	0.983	0.000	0.000	1.858	0.435	1.858	4.596	1.046	1.935	4.756	1.145	4.756	1.145	4.756	1.145					
Road S1	S1	1200-1300	1.0562	2.376	0.116	1.886	2.995	0.589	4.586	4.586	1.196	2.236	0.796	0.000	0.796	0.000	0.000	0.000					
Road S1	S1	1300-1400	0.2562	4.458	0.386	3.386	1.856	0.386	4.458	4.458	1.456	2.456	1.456	2.456	1.456	2.456	1.456	2.456					
Road S1	S1	1400-1500	0.2562	3.586	0.586	1.856	1.856	0.326	6.146	7.676	1.336	2.476	2.476	0.966	2.476	0.966	2.476	0.966					
Road S1	S1	1500-1600	0.9962	3.376	0.676	0.976	1.126	0.316	5.816	7.526	1.336	2.506	0.906	1.236	0.906	1.236	0.906	1.236					
Road S1	S1	1600-1700	0.3443	2.962	0.386	1.686	1.686	0.386	4.386	4.386	1.686	2.486	1.686	2.486	1.686	2.486	1.686	2.486					
Road S1	S1	1700-1800	0.5562	2.986	0.556	1.986	2.166	0.136	5.136	6.336	1.256	2.346	3.816	1.136	2.346	1.136	2.346	1.136					
Road S1	S1	1800-1900	1.5526	2.276	2.276	1.056	0.216	7.336	4.896	0.747	1.835	0.456	0.895	0.456	0.895	0.456	0.895	0.456					
Road S1	S1	1900-2000	0.0903	0.983	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000					
Road S1	S1	2000-2100	0.0903	1.376	0.246	0.436	9.756	1.216	2.256	5.036	2.474	1.165	0.506	0.576	0.576	1.045	0.576	1.045					
Road S2	S2	0000-0200	0.9303	1.177	2.186	0.435	6.435	0.971	2.075	4.755	5.547	1.035	0.000	0.000	0.000	0.000	0.000	0.000					
Road S2	S2	0200-0300	1.5562	2.486	1.456	0.717	1.002	8.846	1.676	4.856	4.337	0.000	0.000	0.000	0.000	0.000	0.000	0.000					
Road S2	S2	0300-0400	0.6862	2.866	0.466	1.576	2.606	0.338	2.086	1.005	0.967	3.867	0.856	0.905	0.856	0.905	0.856	0.905					
Road S2	S2	0400-0500	0.7062	2.036	0.000	0.000	1.856	0.466	2.096	7.446	1.816	0.000	0.000	0.000	0.000	0.000	0.000	0.000					
Road S2	S2	0500-0600	0.5562	1.576	0.000	0.000	5.036	1.426	7.296	2.046	0.156	4.536	4.846	5.216	0.000	4.846	5.216	0.000					
Road S2	S2	0600-0700	0.5962	1.436	0.886	0.586	0.516	1.716	6.236	2.056	4.596	2.567	0.856	0.456	0.856	0.456	0.856	0.456					
Road S2	S2	0700-0800	0.6662	1.616	0.000	0.000	3.066	0.126	2.075	5.886	0.016	0.667	0.666	0.000	0.666	0.000	0.666	0.000					
Road S2	S2	0800-0900	0.8662	0.000	0.000	0.000	1.766	1.416	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000					
Road S2	S2	0900-1000	0.6262	0.726	0.716	0.716	0.606	0.336	2.206	2.647	0.356	2.506	2.046	0.416	2.046	0.416	2.046	0.416					
Road S2	S2	1000-1100	0.8362	0.646	0.606	0.606	0.936	1.511	7.736	2.311	0.956	0.956	1.126	0.446	1.126	0.446	1.126	0.446					
Road S2	S2	1100-1200	0.3462	1.866	1.806	1.806	1.806	0.000	1.806	1.806	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000					
Road S2	S2	1200-1300	0.9903	0.552	2.316	0.116	0.046	2.126	0.106	2.496	0.876	0.486	2.296	0.836	0.486	2.296	0.836	0.486					
Road S2	S2	1300-1400	0.7462	2.446	0.296	0.296	0.606	2.226	1.146	2.536	0.876	0.486	2.306	0.786	0.486	2.306	0.786	0.486					
Road S2	S2	1400-1500	0.8662	0.226	1.156	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000					
Road S2	S2	1500-1600	0.7962	0.296	0.296	0.296	0.486	2.186	1.126	2.456	1.876	0.246	2.246	0.756	2.246	0.756	2.246	0.756					
Road S2	S2	1600-1700	0.7862	0.546	0.546	0.546	0.616	2.446	1.256	2.566	0.917	0.886	2.326	0.836	0.886	2.326	0.836	0.886					
Road S2	S2	1700-1800	0.2462	2.726	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000					
Road S2	S2	1800-1900	0.6742	0.546	1.306	0.626	2.326	0.126	2.156	2.511	0.886	0.666	0.306	0.000	0.666	0.306	0.000	0.000					
Road S2	S2	1900-2000	1.6862	0.246	0.246	0.246	0.156	2.246	1.136	2.426	0.876	0.506	2.236	0.836	0.506	2.236	0.836	0.506					
Road S2	S2	2000-2100	0.2462	0.546	0.546	0.546	0.616	2.446	1.256	2.566	0.917	0.886	2.326	0.836	0.886	2.326	0.836	0.886					
Road S2	S2	0000-0200	0.5162	0.466	1.147	0.846	4.556	0.567	2.556	2.006	0.406	2.465	0.916	0.346	0.916	0.346	0.916	0.346					
Road S2	S2	0200-0300	1.8902	0.686	0.708	0.636	0.476	0.596	0.386	1.906	2.386	0.146	1.766	0.217	1.766	0.217	1.766	0.217					
Road S2	S2	0300-0400	0.5262	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546					
Road S2	S2	0400-0500	0.4542	0.526	0.886	0.886	0.456	0.596	0.706	1.896	2.376	1.376	1.176	0.217	1.176	0.217	1.176	0.217					
Road S2	S2	0500-0600	0.9162	0.976	0.336	0.776	0.776	0.516	2.466	1.896	2.006	1.026	1.766	1.917	0.776	1.917	0.776	0.776					
Road S2	S2	0600-0700	0.5262	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546					
Road S2	S2	0700-0800	0.5262	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546	0.546					
Road S2	S2	0800-0900	0.9162	0.976	0.336	0.776	0.776	0.516	2.466	1.896	2.006	1.026	1.766	1.917	0.776	1.917	0.776	0.776					
Road S2	S2	0900-1000	0.9162	0.976	0.336	0.776	0.776	0.516	2.466	1.896	2.006	1.026	1.766	1.917	0.776	1.917	0.776	0.776					
Road S2	S2	1000-1100	0.9162	0.976	0.336	0.776	0.776	0.516	2.466	1.896	2.006	1.026	1.766	1.917	0.776	1.917	0.776	0.776					
Road S2	S2	1100-1200	0.9162	0.976	0.336	0.776	0.776	0.516	2.466	1.896	2.006	1.026	1.766	1.917	0.776	1.917	0.776	0.776					
Road S2	S2	1200-1300	0.9162	0.976	0.336	0.776	0.776	0.516	2.466	1.896	2.006	1.026	1.766	1.917	0.776	1.917	0.776	0.776					
Road S2	S2	1300-1400	0.9162	0.976	0.336	0.776	0.776	0.516	2.466	1.896	2.006	1.026	1.766	1.917	0.776	1.917	0.776	0.776					
Road S2	S2	1400-1500	0.9162	0.976	0.336	0.776	0.776	0.516	2.466	1.896	2.006	1.026	1.766	1.917	0.776	1.917	0.776	0.776					
Road S2	S2	1500-1600	0.9162	0.976	0.336	0.776	0.776	0.516	2.466	1.896	2.006	1.026	1.766	1.917	0.776	1.917	0.776	0.776					
Road S2	S2	1600-1700	0.9162	0.976	0.336	0.776	0.776	0.516	2.466	1.896	2.006	1.026	1.766	1.917	0.776	1.917	0.776	0.776					
Road S2	S2	1700-1800	0.9162	0.976	0.336	0.776	0.776	0.516	2.466	1.896	2.006	1.026	1.766	1.917	0.776	1.917	0.776	0.776					
Road S2	S2	1800-1900	0.9162	0.976	0.336	0.776	0.776	0.516	2.466	1.896	2.006	1.026	1.766	1.917	0.776	1.917	0.776	0.776					
Road S2	S2	1900-2000	0.9162	0.976	0.336	0.776	0.776	0.516	2.466	1.896	2.006	1.026	1.766	1.917	0.776	1.917	0.776	0.776					
Road S2	S2	2000-2100	0.9162	0.976	0.336	0.776	0.776	0.516	2.466	1.896	2.006	1.026	1.766	1.917	0.776	1.917	0.776	0.776					
Road S2	S2	0000-0200	0.9162	0.976	0.336	0.776	0.776	0.516	2.466	1.896	2.006	1.026	1.766	1.917	0.776	1.917	0.776	0.776					
Road S2	S2	0200-0300	0.9162	0.976	0.336	0.776	0.776	0.516	2.466	1.896	2.006	1.026	1.766	1.917	0.776	1.917	0.776	0.776					
Road S2	S2	0300-0400	0.9162	0.976	0.336	0.776	0.776																

Open Road Yr 24 Hour Emission Factors for AASHTO Model (Hourly)														
		Year 2008												
		No. Emission						No. Emission						
Road Name	Road ID	Hour	Monthly/ton			Monthly/vehicle			Monthly/ton			Monthly/vehicle		
			g/km/vh	g/vh	tonne/hr	g/km/vh	g/vh	tonne/hr	g/km/vh	g/vh	tonne/hr	g/km/vh	g/vh	tonne/hr
Road 54	54	0800-0900	1.066	1.322	1.956	1.006	1.306	2.116	1.006	1.306	2.116	1.006	1.306	2.116
Road 54	54	0900-1000	1.236	1.472	2.272	1.136	1.376	2.376	1.136	1.376	2.376	1.136	1.376	2.376
Road 54	54	1000-1100	1.236	1.472	2.272	1.136	1.376	2.376	1.136	1.376	2.376	1.136	1.376	2.376
Road 54	54	1100-1200	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 54	54	1200-1300	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 54	54	1300-1400	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 54	54	1400-1500	1.326	1.642	2.386	1.226	1.506	2.516	1.226	1.506	2.516	1.226	1.506	2.516
Road 54	54	1500-1600	1.396	1.692	2.496	1.276	1.556	2.626	1.276	1.556	2.626	1.276	1.556	2.626
Road 54	54	1600-1700	1.396	1.692	2.496	1.276	1.556	2.626	1.276	1.556	2.626	1.276	1.556	2.626
Road 54	54	1700-1800	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 54	54	1800-1900	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 54	54	1900-2000	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 54	54	2000-2100	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 54	54	2100-2200	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 54	54	2200-2300	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 54	54	2300-2400	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 101	101	0800-0900	1.066	1.322	1.956	1.006	1.306	2.116	1.006	1.306	2.116	1.006	1.306	2.116
Road 101	101	0900-1000	1.236	1.472	2.272	1.136	1.376	2.376	1.136	1.376	2.376	1.136	1.376	2.376
Road 101	101	1000-1100	1.236	1.472	2.272	1.136	1.376	2.376	1.136	1.376	2.376	1.136	1.376	2.376
Road 101	101	1100-1200	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 101	101	1200-1300	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 101	101	1300-1400	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 101	101	1400-1500	1.326	1.642	2.386	1.226	1.506	2.516	1.226	1.506	2.516	1.226	1.506	2.516
Road 101	101	1500-1600	1.396	1.692	2.496	1.276	1.556	2.626	1.276	1.556	2.626	1.276	1.556	2.626
Road 101	101	1600-1700	1.396	1.692	2.496	1.276	1.556	2.626	1.276	1.556	2.626	1.276	1.556	2.626
Road 101	101	1700-1800	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 101	101	1800-1900	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 101	101	1900-2000	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 101	101	2000-2100	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 101	101	2100-2200	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 101	101	2200-2300	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 101	101	2300-2400	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 101	101	0800-0900	1.066	1.322	1.956	1.006	1.306	2.116	1.006	1.306	2.116	1.006	1.306	2.116
Road 101	101	0900-1000	1.236	1.472	2.272	1.136	1.376	2.376	1.136	1.376	2.376	1.136	1.376	2.376
Road 101	101	1000-1100	1.236	1.472	2.272	1.136	1.376	2.376	1.136	1.376	2.376	1.136	1.376	2.376
Road 101	101	1100-1200	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 101	101	1200-1300	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 101	101	1300-1400	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 101	101	1400-1500	1.326	1.642	2.386	1.226	1.506	2.516	1.226	1.506	2.516	1.226	1.506	2.516
Road 101	101	1500-1600	1.396	1.692	2.496	1.276	1.556	2.626	1.276	1.556	2.626	1.276	1.556	2.626
Road 101	101	1600-1700	1.396	1.692	2.496	1.276	1.556	2.626	1.276	1.556	2.626	1.276	1.556	2.626
Road 101	101	1700-1800	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 101	101	1800-1900	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 101	101	1900-2000	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 101	101	2000-2100	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 101	101	2100-2200	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 101	101	2200-2300	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 101	101	2300-2400	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 101	101	0800-0900	1.066	1.322	1.956	1.006	1.306	2.116	1.006	1.306	2.116	1.006	1.306	2.116
Road 101	101	0900-1000	1.236	1.472	2.272	1.136	1.376	2.376	1.136	1.376	2.376	1.136	1.376	2.376
Road 101	101	1000-1100	1.236	1.472	2.272	1.136	1.376	2.376	1.136	1.376	2.376	1.136	1.376	2.376
Road 101	101	1100-1200	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 101	101	1200-1300	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 101	101	1300-1400	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 101	101	1400-1500	1.326	1.642	2.386	1.226	1.506	2.516	1.226	1.506	2.516	1.226	1.506	2.516
Road 101	101	1500-1600	1.396	1.692	2.496	1.276	1.556	2.626	1.276	1.556	2.626	1.276	1.556	2.626
Road 101	101	1600-1700	1.396	1.692	2.496	1.276	1.556	2.626	1.276	1.556	2.626	1.276	1.556	2.626
Road 101	101	1700-1800	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 101	101	1800-1900	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 101	101	1900-2000	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 101	101	2000-2100	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 101	101	2100-2200	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 101	101	2200-2300	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 101	101	2300-2400	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 101	101	0800-0900	1.066	1.322	1.956	1.006	1.306	2.116	1.006	1.306	2.116	1.006	1.306	2.116
Road 101	101	0900-1000	1.236	1.472	2.272	1.136	1.376	2.376	1.136	1.376	2.376	1.136	1.376	2.376
Road 101	101	1000-1100	1.236	1.472	2.272	1.136	1.376	2.376	1.136	1.376	2.376	1.136	1.376	2.376
Road 101	101	1100-1200	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 101	101	1200-1300	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 101	101	1300-1400	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 101	101	1400-1500	1.326	1.642	2.386	1.226	1.506	2.516	1.226	1.506	2.516	1.226	1.506	2.516
Road 101	101	1500-1600	1.396	1.692	2.496	1.276	1.556	2.626	1.276	1.556	2.626	1.276	1.556	2.626
Road 101	101	1600-1700	1.396	1.692	2.496	1.276	1.556	2.626	1.276	1.556	2.626	1.276	1.556	2.626
Road 101	101	1700-1800	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 101	101	1800-1900	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 101	101	1900-2000	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 101	101	2000-2100	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786	1.346	1.586	2.786
Road 101	101	2100-2200	1.446	1.722	2.572	1.346	1.586	2.786	1.346	1.586	2.786			

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Open Road North 24 Hour Emission Factors for AERMOD model (February)													
Year 2008		NO _x Emission						NO ₂ Emission					
Route Name	Route ID	Monthly/Route/km			Monthly/Route/km			Monthly/Route/km			Monthly/Route/km		
		g/km/hour	g/km	tonne/hour	g/km/hour	g/km	tonne/hour	g/km/hour	g/km	tonne/hour	g/km/hour	g/km	tonne/hour
Route 103	1600-1700	1.43E-02	5.27E-07	1.27E-05	1.31E-02	4.83E-07	1.18E-05	6.22E-02	2.23E-06	5.48E-05	5.59E-02	2.00E-06	4.95E-05
Route 103	1700-1800	1.42E-02	5.22E-07	1.26E-05	1.30E-02	4.78E-07	1.17E-05	6.19E-02	2.20E-06	5.44E-05	5.56E-02	1.98E-06	4.91E-05
Route 103	1800-1900	7.22E-03	2.36E-07	5.83E-06	6.53E-03	2.99E-07	7.43E-06	3.98E-02	1.37E-06	3.42E-05	5.38E-02	1.62E-06	3.88E-05
Route 103	1900-2000	6.28E-03	2.23E-07	5.58E-06	5.75E-03	2.05E-07	4.92E-06	3.50E-02	1.19E-06	3.04E-05	3.47E-02	1.24E-06	2.97E-05
Route 103	2000-2100	5.84E-03	1.61E-07	4.03E-06	5.30E-03	1.82E-07	4.37E-06	3.12E-02	1.07E-06	2.71E-05	3.10E-02	1.10E-06	2.65E-05
Route 103	2100-2200	5.15E-03	1.43E-07	3.43E-06	4.73E-03	1.52E-07	3.16E-06	4.01E-02	1.11E-06	2.67E-05	3.60E-02	9.81E-07	2.40E-05
Route 103	2200-2300	6.02E-03	2.15E-07	5.24E-06	4.75E-03	1.27E-07	3.05E-06	3.99E-02	1.05E-06	2.55E-05	3.66E-02	9.81E-07	2.36E-05
Route 103	2300-2400	5.84E-03	1.61E-07	4.03E-06	5.30E-03	1.82E-07	4.37E-06	3.12E-02	1.07E-06	2.71E-05	3.10E-02	1.10E-06	2.65E-05
Route 104	0000-0100	1.04E-02	3.92E-06	9.89E-06	9.36E-03	8.36E-06	1.70E-05	5.62E-02	5.02E-07	1.02E-05	4.90E-02	4.37E-07	8.91E-06
Route 104	0100-0200	1.31E-02	4.64E-06	1.18E-05	1.01E-02	5.97E-06	1.22E-05	5.84E-02	3.44E-07	7.01E-06	1.10E-02	6.01E-07	1.31E-05
Route 104	0200-0300	1.58E-02	5.28E-06	1.35E-05	1.16E-02	6.82E-06	1.45E-05	6.59E-02	3.94E-07	8.03E-06	1.26E-02	6.82E-07	1.45E-05
Route 104	0300-0400	1.29E-02	4.54E-06	1.14E-05	1.07E-02	6.05E-06	1.27E-05	6.29E-02	3.72E-07	7.49E-06	1.08E-02	5.48E-07	1.29E-05
Route 104	0400-0500	1.39E-02	5.45E-06	1.11E-05	1.23E-02	4.82E-06	8.91E-07	6.61E-02	3.59E-07	5.27E-06	1.16E-02	6.92E-07	1.42E-05
Route 104	0500-0600	1.47E-02	1.01E-07	2.58E-06	1.30E-02	8.69E-06	1.88E-05	6.82E-02	4.04E-07	8.59E-06	1.68E-02	4.03E-07	8.18E-06
Route 104	0600-0700	1.54E-02	1.31E-07	3.30E-06	1.35E-02	9.10E-06	1.92E-05	7.12E-02	4.29E-07	8.96E-06	1.74E-02	4.29E-07	8.77E-06
Route 104	0700-0800	1.65E-02	1.45E-07	3.00E-06	1.45E-02	4.47E-07	1.80E-05	7.12E-02	2.19E-06	4.54E-06	1.62E-02	1.93E-06	3.93E-05
Route 104	0800-0900	1.55E-02	5.90E-07	1.45E-06	1.41E-02	5.09E-07	1.04E-05	6.70E-02	2.23E-06	4.89E-06	6.02E-02	2.17E-06	4.42E-05
Route 104	0900-1000	1.78E-02	7.78E-07	1.94E-06	1.58E-02	5.84E-07	1.21E-05	5.12E-02	2.32E-06	4.79E-06	6.70E-02	2.32E-06	4.79E-06
Route 104	1000-1100	2.05E-02	6.03E-07	1.23E-06	1.85E-02	5.44E-07	1.11E-05	8.70E-02	2.38E-06	4.84E-06	1.21E-02	1.16E-06	4.36E-05
Route 104	1100-1200	1.99E-02	5.50E-07	1.12E-06	1.80E-02	5.00E-07	1.02E-05	7.99E-02	2.22E-06	4.51E-06	1.17E-02	1.99E-06	4.05E-05
Route 104	1200-1300	2.12E-02	2.86E-07	7.15E-07	1.97E-02	6.87E-07	1.62E-05	8.49E-02	2.42E-06	5.06E-06	1.30E-02	1.24E-06	3.00E-05
Route 104	1300-1400	2.28E-02	3.67E-07	9.02E-07	1.76E-02	5.70E-07	1.38E-05	5.92E-02	1.73E-06	7.79E-06	1.33E-02	1.28E-06	2.51E-05
Route 104	1400-1500	2.36E-02	3.72E-07	9.55E-07	1.96E-02	6.03E-07	1.45E-05	6.02E-02	1.74E-06	7.99E-06	1.33E-02	1.33E-06	2.70E-05
Route 104	1500-1600	2.12E-02	3.07E-07	7.65E-07	2.06E-02	7.16E-07	1.62E-05	5.98E-02	1.48E-06	3.02E-05	1.33E-02	1.25E-06	2.76E-05
Route 104	1600-1700	1.26E-02	3.49E-07	8.71E-06	1.18E-02	3.20E-07	5.67E-06	1.54E-02	3.13E-06	7.58E-06	1.28E-02	2.81E-06	6.70E-06
Route 104	1700-1800	5.89E-02	7.78E-07	1.97E-06	6.31E-02	2.57E-07	5.28E-06	4.87E-02	1.65E-06	3.70E-06	4.42E-02	1.37E-06	2.78E-05
Route 104	1800-1900	3.46E-02	2.13E-07	5.31E-06	3.23E-02	1.24E-07	2.48E-06	3.68E-02	1.23E-06	2.59E-06	3.53E-02	1.03E-06	2.27E-05
Route 104	1900-2000	6.68E-02	1.55E-07	3.87E-06	8.21E-02	1.42E-07	2.99E-06	3.71E-02	1.01E-06	2.09E-06	4.22E-02	8.96E-07	1.82E-05
Route 104	2000-2100	5.47E-02	1.31E-07	3.25E-06	4.88E-02	1.05E-07	2.14E-06	4.14E-02	8.74E-07	1.78E-06	3.62E-02	7.64E-07	1.56E-05
Route 104	2100-2200	5.59E-02	1.35E-07	3.38E-06	4.99E-02	1.08E-07	2.22E-06	4.23E-02	8.96E-07	1.83E-06	3.68E-02	7.81E-07	1.60E-05
Route 104	2200-2300	4.43E-02	9.03E-08	2.25E-06	4.15E-02	8.53E-08	2.14E-06	3.76E-02	7.78E-07	1.59E-06	3.07E-02	6.67E-07	1.46E-05
Route 104	2300-0100	4.91E-02	7.53E-08	1.89E-06	4.64E-02	7.12E-08	1.45E-06	3.90E-02	5.99E-07	1.22E-06	3.62E-02	5.66E-07	1.13E-05
Route 105	0000-0100	1.54E-02	1.89E-06	7.03E-07	1.39E-02	1.52E-06	3.87E-06	7.99E-02	8.76E-07	2.19E-06	8.99E-02	7.98E-07	3.02E-06
Route 105	0100-0200	1.71E-02	2.06E-06	7.82E-07	1.52E-02	1.69E-06	4.25E-06	8.62E-02	9.64E-07	2.41E-06	9.99E-02	8.89E-07	3.25E-06
Route 105	0200-0300	1.80E-02	2.62E-06	9.01E-07	1.62E-02	1.86E-06	3.62E-06	8.74E-02	4.68E-06	1.19E-05	8.09E-02	4.12E-06	1.72E-05
Route 105	0300-0400	1.83E-02	3.82E-06	1.44E-07	1.73E-02	7.42E-06	3.99E-06	9.14E-02	5.13E-06	1.33E-05	8.01E-02	4.43E-06	1.43E-05
Route 105	0400-0500	2.08E-02	3.89E-06	1.27E-06	1.89E-02	8.82E-06	4.72E-06	1.01E-02	5.43E-06	1.38E-05	8.91E-02	4.73E-06	1.54E-05
Route 105	0500-0600	2.20E-02	1.84E-06	8.76E-07	1.95E-02	1.63E-06	4.06E-06	1.00E-02	5.38E-06	8.85E-06	7.22E-03	3.01E-06	
Route 105	0600-0700	2.39E-02	4.33E-06	1.81E-06	2.16E-02	3.92E-06	1.63E-06	1.06E-02	1.92E-06	6.01E-06	3.91E-02	7.07E-06	
Route 105	0700-0800	2.74E-02	1.02E-06	2.55E-06	2.42E-02	7.92E-07	1.93E-06	1.23E-02	1.63E-06	4.08E-06	4.50E-02	9.50E-06	
Route 105	0800-0900	2.66E-02	1.16E-07	4.82E-06	2.43E-02	1.05E-07	3.99E-06	1.13E-02	4.91E-07	2.04E-06	1.01E-02	4.97E-06	1.85E-05
Route 105	0900-1000	1.15E-02	1.22E-07	3.07E-06	2.89E-02	1.11E-07	4.64E-06	3.32E-02	5.99E-07	2.12E-06	1.19E-02	4.61E-07	1.92E-05
Route 105	1000-1100	1.46E-02	1.31E-07	3.28E-06	3.25E-02	1.24E-07	5.16E-06	3.62E-02	6.13E-07	2.43E-06	1.39E-02	5.13E-07	2.22E-05
Route 105	1100-1200	1.33E-02	1.11E-07	2.83E-06	3.08E-02	1.01E-07	4.20E-06	1.37E-02	4.97E-07	1.87E-06	1.23E-02	4.04E-07	1.68E-05
Route 105	1200-1300	5.38E-02	3.69E-07	1.54E-06	5.00E-02	3.37E-07	1.41E-06	2.60E-02	1.27E-06	3.30E-06	3.38E-01	1.16E-06	4.88E-05
Route 105	1300-1400	7.46E-02	4.28E-07	1.07E-06	6.95E-02	4.24E-07	1.74E-06	3.42E-02	1.76E-06	4.40E-06	4.23E-02	1.76E-06	6.95E-05
Route 105	1400-1500	6.66E-02	4.18E-07	1.04E-06	7.06E-02	3.85E-07	1.61E-06	2.69E-02	1.47E-06	3.61E-06	3.48E-02	1.56E-06	5.93E-05
Route 105	1500-1600	8.85E-02	3.90E-07	1.63E-06	8.34E-02	3.81E-07	1.55E-06	2.65E-02	1.51E-06	3.83E-06	2.45E-01	1.40E-06	5.82E-05
Route 105	1600-1700	3.36E-02	1.67E-07	4.61E-06	3.14E-02	3.56E-07	1.49E-06	2.64E-02	1.40E-06	3.81E-06	4.43E-01	1.26E-06	5.34E-05
Route 105	1700-1800	5.46E-02	2.48E-07	6.10E-06	5.14E-02	3.45E-07	1.42E-06	2.84E-02	1.51E-06	3.59E-06	3.69E-01	1.46E-06	5.85E-05
Route 105	1800-1900	4.86E-02	1.66E-07	4.10E-06	4.57E-02	1.55E-07	6.47E-06	2.08E-02	7.07E-07	2.29E-06	1.92E-01	6.22E-07	2.72E-05
Route 105	1900-2000	4.87E-02	1.01E-07	2.58E-06	4.50E-02	1.01E-07	4.21E-06	1.97E-02	4.37E-07	1.89E-06	1.48E-01	4.09E-07	1.74E-05
Route 105	2000-2100	4.79E-02	8.33E-07	2.08E-06	4.43E-02	9.41E-08	3.45E-06	2.44E-02	3.84E-07	1.55E-06	1.79E-01	3.43E-07	1.43E-05
Route 105	2100-2200	5.45E-02	3.86E-06	9.89E-06	4.25E-02	7.80E-06	3.22E-06	1.89E-02	1.43E-06	3.44E-06	1.76E-01	3.29E-07	1.30E-05
Route 105	2200-2300	4.97E-02	8.01E-06	3.44E-06	4.73E-02	7.62E-06	3.18E-06	1.88E-02	2.98E-07	1.24E-06	1.76E-01	2.83E-07	1.18E-05
Route 105	2300-0100	4.62E-02	6.14E-06	1.57E-06	4.37E-02	6.94E-06	2.81E-06	1.76E-02	2.42E-06	5.94E-06	1.63E-01	2.42E-07	1.03E-05
Route 106	0000-0100	1.47E-02	1.64E-06	9.44E-06	1.33E-02	5.53E-06	1.75E-05	7.51E-02	3.30E-06	8.10E-06	6.91E-02	2.88E-07	9.06E-05
Route 106	0100-0200	5.56E-02	4.25E-06	1.08E-05	4.24E-02	3.84E-06	1.22E-05	8.10E-02	2.21E-07	6.99E-06	9.99E-02	1.94E-07	6.12E-06
Route 106	0200-0300	5.84E-02	4.25E-06	1.08E-05	4.24E-02	3.84E-06	1.22E-05	8.10E-02	2.21E-07	6.99E-06	9.99E-02	1.94E-07	6.12E-06
Route 106	0300-0400	7.65E-02	2.83E-06	7.13E-07	1.58E-02	2.54E-06	8.02E-06	8.85E-02	1.37E-06	3.39E-06	7.55E-02	1.21E-07	3.86E-06
Route 106	0400-0500	9.95E-02	3.39E-07	8.54E-06	1.66E-02	3.01E-06	9.50E-07	9.18E-02	1.63E-06	4.07E-06	1.15E-02	8.88E-07	4.04E-06
Route 106	0500-0600	1.09E-02	1.21E-07	3.03E-06	1.01E-02	5.76E-07	1.42E-06	1.01E-02	5.76E-07	1.42E-06	1.01E-02	5.76E-07	1.42E-06
Route 106	0600-0700	2.61E-02	1.75E-07	5.04E-06	2.35E-02	1.59E-07	5.01E-06	1.13E-02	7.78E-07	2.45E-06	1.02E-02	6.96E-07	2.16E-06
Route 106	0700-0800	3.25E-02	4.51E-07	1.42E-06	2.97E-02	4.08E-07	1.29E-06	1.38E-02	1.90E-06	5.09E-06	1.23E-01	1.68E-06	5.32E-05
Route 106	0800-0900	4.44E-02	5.92E-07	1.49E-06	4.01E-02	5.53E-07	1.51E-06	1.51E-02	2.02E-06	5.65E-06	1.27E-01	1.74E-06	5.58E-05
Route 106	0900-1000	5.92E-02	5.52E-07	1.47E-06	5.32E-02	5.06E-07	1.60E-06	1.82E-02	2.29E-06	5.59E-06	1.47E-01	2.05E-06	6.48E-05

Open Road Yd North Underway Quarry														
Open Road Yd 24 Hour Emission Factors for AERMOD model (Month)														
Road Name	Road ID	Monthly/Quarterly	NO _x Emission						NO ₂ Emission					
			g/m ³ /veh	g/m ³ /t _{gross}	g/m ³ /t _{gross}	g/m ³ /veh	g/m ³ /t _{gross}	g/m ³ /t _{gross}	g/m ³ /veh	g/m ³ /t _{gross}	g/m ³ /t _{gross}	g/m ³ /veh	g/m ³ /t _{gross}	
Road1	1	0000-0000	5.7863	7.9462	4.3862	6.1763	7.1882	3.8998	4.1382	5.7867	3.1708	5.3762	4.9967	2.7829
Road1	1	0000-0000	3.3633	3.7713	1.8553	2.6243	3.0363	1.5998	1.6832	2.3667	1.3818	2.1162	1.9667	1.0669
Road1	1	0000-0000	5.7863	7.9462	4.3862	6.1763	7.1882	3.8998	4.1382	5.7867	3.1708	5.3762	4.9967	2.7829
Road1	1	0000-0000	7.4543	8.0442	2.2226	6.8403	3.6088	3.8998	4.7892	5.2027	3.8872	4.0712	3.1371	1.1765
Road1	1	0000-0000	3.3633	3.7713	1.8553	2.6243	3.0363	1.5998	1.6832	2.3667	1.3818	2.1162	1.9667	1.0669
Road1	1	0600-0600	8.8962	8.7868	1.8446	5.7763	7.7006	4.3248	5.2026	5.1471	2.8382	5.3262	4.7477	2.9365
Road1	1	0600-0700	9.5553	2.0267	2.1116	8.2776	1.7567	9.6385	5.6925	1.1536	3.4343	4.4562	9.4467	5.2035
Road1	1	0700-0800	1.0082	1.4942	4.8852	2.4843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843
Road1	1	0800-0900	9.8782	4.6877	2.6955	8.5513	4.2337	2.7338	5.0092	2.5258	3.9064	4.2102	2.0886	1.1150
Road1	1	0900-1000	1.0082	1.4942	4.8852	6.8103	3.9067	4.2102	5.4762	6.2238	1.2254	1.6119	1.6878	1.0204
Road1	1	1000-1100	1.0082	1.4942	4.8852	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843
Road1	1	1100-1200	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843
Road1	1	1200-1300	1.4652	3.6352	1.0242	1.0242	5.8582	3.2228	6.3325	2.8886	5.5882	1.4546	2.4746	1.3804
Road1	1	1300-1400	1.4652	3.6352	1.0242	3.3042	6.0462	3.3202	6.0462	3.3202	6.0462	3.3202	6.0462	3.3202
Road1	1	1400-1500	1.4652	3.6352	1.0242	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843
Road1	1	1500-1600	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843
Road1	1	1500-1600	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843
Road1	1	1600-1700	1.4652	3.6352	1.0242	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843
Road1	1	1700-1800	1.4652	3.6352	1.0242	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843
Road1	1	1800-1900	7.6763	5.8026	1.8002	6.9062	4.5767	2.5226	6.1328	2.7482	5.1504	5.4082	2.2952	1.3104
Road1	1	1900-2000	6.6763	5.5157	1.9392	5.4562	3.1382	1.7292	3.9862	2.1688	1.5542	1.5402	1.7982	9.8462
Road1	1	2000-2100	2.6672	2.6412	4.6422	4.7862	2.7862	3.3262	3.3262	1.8552	3.3262	1.8552	3.3262	1.8552
Road1	1	2100-2200	5.5662	2.7752	2.0562	5.0382	2.0562	1.1102	4.1102	1.1688	0.2256	3.5662	4.4268	7.9965
Road1	1	2200-2300	5.5113	2.1267	2.0255	3.4842	1.9667	1.0805	4.1222	1.6326	0.9952	5.5292	4.4008	7.9865
Road1	1	2300-2400	1.8927	1.9315	0.9253	1.9437	1.8392	0.9326	4.2462	1.2926	0.9326	1.6652	0.9326	5.9705
Road2	2	0000-0000	7.7123	1.0562	1.3552	6.9852	9.5568	4.8862	4.6552	6.3672	3.2226	4.0552	5.5427	2.8115
Road2	2	0100-0200	5.2325	7.6382	6.8872	7.8582	6.8842	3.4716	4.9242	4.4047	2.3425	4.2262	3.7867	1.9225
Road2	2	0200-0300	2.9862	3.3332	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843
Road2	2	0300-0400	1.0122	5.3152	2.6962	0.8582	4.7762	0.8582	4.9322	2.8357	1.4352	4.5527	4.2467	1.2325
Road2	2	0400-0500	1.0922	6.3228	3.2052	9.6762	5.5892	2.8382	5.6882	3.2967	0.7652	4.8112	4.7872	1.4415
Road2	2	0500-0600	1.0922	6.3228	3.2052	1.1022	1.1022	1.1022	1.1022	1.1022	1.1022	1.1022	1.1022	1.1022
Road2	2	0600-0700	2.3222	2.6682	3.0352	0.9712	0.9712	1.1882	6.1402	1.3426	7.9652	5.1122	2.1716	5.6225
Road2	2	0700-0800	3.2922	5.8272	2.9542	1.1122	5.0067	2.5382	6.4052	2.8222	1.4392	5.2742	2.3226	1.3805
Road2	2	0800-0900	2.2822	6.5562	3.3252	1.1122	5.7072	0.8582	5.9962	3.3622	0.5542	5.0382	2.5862	1.3935
Road2	2	0900-1000	4.7122	4.9252	2.3352	1.3843	1.3843	1.3843	4.8462	4.8462	1.3843	1.3843	1.3843	1.3843
Road2	2	1000-1100	1.8442	6.3462	3.2142	0.4622	5.6362	2.8892	6.8982	2.6962	1.3402	3.9882	2.3116	1.1764
Road2	2	1100-1200	1.5882	5.7742	2.6222	1.4122	5.1402	0.6062	6.8112	2.4662	2.9542	1.6852	1.1062	1.1062
Road2	2	1200-1300	1.7222	7.2222	3.9312	1.3843	1.3843	1.3843	1.7222	1.7222	1.3843	1.3843	1.3843	1.3843
Road2	2	1300-1400	1.7222	7.9762	4.0422	1.5442	7.1442	3.6222	7.2562	3.3716	1.7042	0.3392	2.9716	5.0624
Road2	2	1400-1500	1.7222	7.9582	4.0342	1.5442	7.6112	3.6222	7.3892	3.3962	1.8234	3.9332	3.1116	5.0624
Road2	2	1500-1600	1.6112	6.0262	3.0622	1.3843	1.3843	1.3843	1.6112	1.6112	1.3843	1.3843	1.3843	1.3843
Road2	2	1600-1700	1.6882	8.8112	4.6822	1.4542	7.8582	3.3962	6.9442	1.6562	0.8572	6.0712	3.1932	1.6274
Road2	2	1700-1800	2.2222	6.2222	3.0662	1.0882	6.2392	3.1182	6.0222	3.6022	1.6742	5.2112	3.0362	1.5404
Road2	2	1800-1900	1.7222	7.9582	4.0342	1.5442	7.6112	3.6222	7.3892	3.3962	1.8234	3.9332	3.1116	5.0624
Road2	2	1900-2000	1.7222	7.9582	4.0342	1.5442	7.6112	3.6222	7.3892	3.3962	1.8234	3.9332	3.1116	5.0624
Road2	2	2000-2100	1.7222	7.9582	4.0342	1.5442	7.6112	3.6222	7.3892	3.3962	1.8234	3.9332	3.1116	5.0624
Road2	2	2100-2200	1.7222	7.9582	4.0342	1.5442	7.6112	3.6222	7.3892	3.3962	1.8234	3.9332	3.1116	5.0624
Road2	2	2200-2300	1.7222	7.9582	4.0342	1.5442	7.6112	3.6222	7.3892	3.3962	1.8234	3.9332	3.1116	5.0624
Road2	2	2300-2400	1.7222	7.9582	4.0342	1.5442	7.6112	3.6222	7.3892	3.3962	1.8234	3.9332	3.1116	5.0624
Road3	3	0000-0000	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843
Road3	3	0000-0000	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843
Road3	3	0000-0000	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843
Road3	3	0000-0000	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843
Road3	3	0000-0000	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843
Road3	3	0000-0000	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843
Road3	3	0000-0000	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843
Road3	3	0000-0000	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843
Road3	3	0000-0000	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843
Road3	3	0000-0000	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843
Road3	3	0000-0000	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843
Road3	3	0000-0000	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843
Road3	3	0000-0000	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843
Road3	3	0000-0000	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843
Road3	3	0000-0000	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843
Road3	3	0000-0000	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843
Road3	3	0000-0000	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843
Road3	3	0000-0000	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843
Road3	3	0000-0000	1.3843	1.3843	1.3843	1.3843	1.3843	1.3843						

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Open Road Yr 24 Northbound Quarry															
Open Road Yr 24 East Union Factors for															
AERMOD model (hour)															
Road Name	Road ID	Month	NO _x Emission						NO ₂ Emission						
			Monthly/km ³ in			Monthly/km ³ average			Monthly/km ³ in			Monthly/km ³ average			
			g/km ³ /hr	g/km ³ /hr	g/km ³ /hr	g/km ³ /hr	g/km ³ /hr	g/km ³ /hr	g/km ³ /hr	g/km ³ /hr	g/km ³ /hr	g/km ³ /hr	g/km ³ /hr	g/km ³ /hr	g/km ³ /hr
1	0000-0000	1	9.3463	3.3967	8.796	8.0863	2.5907	8.0226	9.0006	3.8268	3.6088	4.0862	1.4761	2.9405	
1	0000-0000	2	1.6562	0.7023	3.0175	1.0175	1.4761	1.4761	1.4761	1.4761	1.4761	1.4761	1.4761	1.4761	
1	0000-0000	3	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	4	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	5	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	6	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	7	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	8	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	9	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	10	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	11	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	12	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	13	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	14	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	15	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	16	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	17	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	18	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	19	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	20	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	21	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	22	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	23	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	24	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	25	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	26	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	27	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	28	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	29	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	30	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	31	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	32	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	33	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	34	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	35	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	36	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	37	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	38	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	39	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	40	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	41	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	42	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	43	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	44	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	45	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	46	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	47	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	48	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	49	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	50	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	51	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	52	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	53	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	54	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	55	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	56	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	57	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	58	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	59	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	60	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	61	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	62	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	63	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	64	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	65	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	66	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	67	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	68	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	69	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	70	1.1000-11.0000	1.3016	0.7018	1.4761	2.6376	5.2776	5.2776	1.4761	1.4761	2.8965	0.4761	1.236	
1	0000-0000	71	1.1000-11.0000	1.3016	0.7018</										

Open Road Yr 24 Uniform Factors													
Open Road Yr 24 Emission Factors for AERMOD model (hourly)													
Road Name	Road ID	NO _x Emission						NO ₂ Emission					
		Monthly/km/h			Monthly/km/average			Monthly/km/h			Monthly/km/average		
		g/km/h	g/h	tonne/hour	g/km/h	g/h	tonne/hour	g/km/h	g/h	tonne/hour	g/km/h	g/h	tonne/hour
Road 7	1600-1700	1.796E-02	4.18E-07	4.99E-06	1.60E-02	3.74E-07	4.38E-06	7.61E-02	1.77E-06	2.08E-05	6.69E-02	1.59E-06	1.83E-05
Road 7	1700-1800	3.34E-02	7.48E-07	8.95E-06	2.91E-02	6.59E-07	7.80E-06	1.30E-01	3.02E-06	3.53E-05	1.10E-01	2.53E-06	2.95E-05
Road 7	1800-1900	9.00E-03	2.72E-07	3.19E-06	8.91E-03	2.45E-07	2.87E-06	5.05E-02	1.39E-06	1.63E-05	4.14E-02	1.21E-06	1.42E-05
Road 7	1900-2000	7.80E-03	1.69E-07	1.99E-06	8.95E-03	1.50E-07	1.76E-06	4.49E-02	9.17E-07	1.14E-05	3.86E-02	9.47E-07	9.78E-06
Road 7	2000-2100	7.40E-03	1.27E-07	1.51E-06	8.95E-03	1.10E-07	1.26E-06	4.49E-02	6.85E-07	8.46E-06	3.86E-02	6.15E-07	6.99E-06
Road 7	2100-2200	6.77E-03	1.14E-07	1.33E-06	8.91E-03	1.00E-07	1.21E-06	4.61E-07	1.17E-07	7.08E-06	4.03E-02	6.78E-07	7.93E-06
Road 7	2200-2300	7.72E-03	1.09E-07	1.28E-06	6.03E-03	9.81E-08	1.15E-06	4.59E-02	7.42E-07	8.70E-06	3.02E-02	6.86E-07	7.88E-06
Road 7	2300-2400	2.38E-03	3.17E-08	3.80E-07	1.99E-03	2.91E-08	3.49E-07	1.30E-02	1.97E-08	2.36E-07	4.03E-02	6.15E-08	7.38E-07
Road 8	0100-0200	9.18E-03	5.10E-07	5.95E-06	8.32E-03	4.70E-09	5.59E-08	4.59E-02	2.59E-08	2.42E-07	4.10E-02	2.27E-08	4.00E-07
Road 8	0200-0300	7.72E-03	3.61E-09	3.30E-08	8.30E-03	3.24E-09	6.50E-08	4.82E-07	2.18E-08	1.62E-07	3.13E-02	1.54E-07	3.11E-07
Road 8	0300-0400	1.04E-02	4.66E-08	4.29E-07	7.95E-03	2.11E-08	4.22E-07	6.50E-07	2.71E-08	2.05E-07	4.10E-02	1.71E-07	3.44E-07
Road 8	0400-0500	1.11E-02	2.38E-08	8.20E-08	9.55E-03	2.13E-09	4.31E-08	5.29E-02	1.13E-09	2.29E-07	4.56E-02	7.99E-09	1.97E-07
Road 8	0500-0600	1.18E-02	7.78E-08	5.62E-08	1.02E-03	2.47E-09	4.99E-08	5.49E-02	3.30E-09	2.62E-07	4.70E-02	1.11E-08	2.24E-07
Road 8	0600-0700	1.49E-02	5.10E-08	3.60E-08	1.10E-03	4.00E-09	9.03E-08	5.07E-02	2.34E-07	1.87E-07	8.69E-02	4.00E-08	8.03E-07
Road 8	0700-0800	1.33E-02	1.17E-08	8.36E-09	1.20E-03	2.14E-09	4.34E-08	6.23E-02	1.12E-07	2.23E-06	5.14E-02	9.22E-08	1.87E-06
Road 8	0800-0900	1.49E-02	2.75E-08	2.55E-07	1.14E-03	2.37E-09	4.70E-07	5.85E-02	1.10E-07	2.41E-06	8.84E-02	9.94E-08	2.01E-06
Road 8	0900-1000	1.31E-02	3.21E-08	2.34E-07	1.20E-03	2.14E-09	4.34E-08	6.23E-02	1.12E-07	2.23E-06	5.14E-02	9.22E-08	1.87E-06
Road 8	1000-1100	1.69E-02	2.59E-08	2.42E-07	1.48E-03	2.28E-09	4.60E-07	6.89E-02	1.06E-07	2.14E-06	9.59E-02	1.33E-07	1.85E-06
Road 8	1100-1200	1.49E-02	2.40E-08	1.85E-07	1.44E-03	2.10E-09	4.25E-07	6.88E-02	1.00E-07	2.03E-06	9.59E-02	8.63E-08	1.75E-06
Road 8	1200-1300	1.21E-02	8.91E-08	6.47E-08	1.20E-03	2.14E-09	4.34E-08	6.23E-02	1.12E-07	2.23E-06	5.14E-02	9.22E-08	1.87E-06
Road 8	1300-1400	1.20E-02	9.85E-08	7.75E-08	1.44E-03	2.28E-09	4.60E-07	6.89E-02	1.06E-07	2.14E-06	9.59E-02	1.33E-07	1.85E-06
Road 8	1400-1500	1.11E-02	2.38E-08	8.20E-08	9.55E-03	2.13E-09	4.31E-08	5.29E-02	1.13E-09	2.29E-07	4.56E-02	7.99E-09	1.97E-07
Road 8	1500-1600	1.04E-02	4.66E-08	4.29E-07	7.95E-03	2.11E-08	4.22E-07	6.50E-07	2.71E-08	2.05E-07	4.10E-02	1.71E-07	3.44E-07
Road 8	1600-1700	1.86E-02	5.37E-08	3.90E-08	1.77E-02	8.39E-09	1.77E-06	7.79E-02	3.69E-07	4.46E-06	8.88E-02	3.21E-07	6.90E-06
Road 8	1700-1800	1.51E-02	7.69E-08	5.56E-08	1.34E-02	6.87E-08	1.60E-06	6.80E-02	3.47E-07	7.02E-06	3.59E-02	3.06E-07	6.18E-06
Road 8	1800-1900	1.33E-02	1.17E-08	8.36E-09	1.20E-03	2.14E-09	4.34E-08	6.23E-02	1.12E-07	2.23E-06	5.14E-02	9.22E-08	1.87E-06
Road 8	1900-2000	1.03E-02	4.20E-08	4.96E-07	9.22E-03	3.76E-08	7.61E-07	4.91E-02	2.00E-07	4.95E-06	4.27E-02	1.74E-07	3.33E-06
Road 8	2000-2100	1.01E-02	3.42E-08	3.55E-07	9.18E-03	2.99E-08	5.95E-07	5.20E-02	1.67E-07	3.37E-06	4.60E-02	1.48E-07	2.98E-06
Road 8	2100-2200	1.46E-02	3.99E-08	3.69E-07	1.20E-03	2.14E-09	4.34E-08	6.23E-02	1.12E-07	2.23E-06	5.14E-02	9.22E-08	1.87E-06
Road 8	2200-2300	1.56E-02	2.93E-09	9.27E-07	8.62E-04	2.64E-08	5.34E-07	4.98E-02	1.07E-07	3.08E-06	3.42E-02	3.27E-07	2.98E-06
Road 8	2300-2400	1.02E-02	2.36E-08	2.78E-07	9.28E-03	2.14E-08	4.34E-07	5.14E-02	1.19E-07	2.40E-06	4.54E-02	1.05E-07	2.12E-06
Road 9	0100-0200	1.26E-02	5.59E-08	4.12E-07	1.68E-02	6.56E-08	1.67E-07	7.12E-02	4.02E-07	2.99E-06	6.23E-02	3.32E-07	2.61E-06
Road 9	0200-0300	1.46E-02	6.99E-08	5.09E-07	1.99E-02	7.49E-08	1.94E-07	8.10E-02	4.52E-07	3.33E-06	6.84E-02	3.69E-07	2.90E-06
Road 9	0300-0400	1.24E-02	8.95E-08	6.86E-07	1.26E-02	3.42E-08	2.54E-07	7.39E-02	2.00E-07	1.49E-06	6.29E-02	3.70E-07	1.27E-06
Road 9	0400-0500	1.52E-02	3.28E-08	4.43E-07	1.35E-02	2.38E-08	2.38E-07	7.66E-02	1.65E-07	1.22E-06	6.99E-02	1.42E-07	1.05E-06
Road 9	0500-0600	1.66E-02	3.69E-08	5.32E-07	1.46E-02	2.64E-08	2.64E-07	8.44E-02	1.84E-07	1.34E-06	7.59E-02	1.59E-07	1.20E-06
Road 9	0600-0700	1.85E-02	5.76E-08	8.61E-07	1.63E-02	6.67E-08	6.67E-07	8.89E-02	3.63E-07	2.69E-06	7.55E-02	3.06E-07	2.29E-06
Road 9	0700-0800	2.40E-02	2.10E-08	5.66E-07	2.09E-02	1.83E-08	1.38E-06	1.10E-01	9.39E-07	1.26E-06	2.11E-01	8.04E-07	5.97E-06
Road 9	0800-0900	2.21E-02	2.62E-08	7.09E-07	2.09E-02	1.83E-08	1.38E-06	1.10E-01	9.39E-07	1.26E-06	2.11E-01	8.04E-07	5.97E-06
Road 9	0900-1000	3.94E-02	1.80E-08	6.01E-06	4.02E-02	6.99E-07	5.75E-06	1.61E-01	3.31E-06	2.44E-05	3.36E-01	2.79E-06	2.07E-05
Road 9	1000-1100	2.90E-02	4.25E-07	3.25E-07	4.33E-02	6.49E-07	4.74E-06	1.76E-01	3.02E-06	2.24E-05	2.51E-01	2.60E-06	1.93E-05
Road 9	1100-1200	3.69E-02	4.63E-07	3.49E-07	4.95E-02	7.46E-07	5.59E-06	2.16E-01	3.35E-06	2.47E-05	3.26E-01	3.30E-06	2.44E-05
Road 9	1200-1300	4.01E-02	5.68E-07	4.22E-06	5.22E-02	4.98E-07	3.70E-06	1.62E-01	2.79E-06	7.05E-05	3.60E-01	3.98E-06	1.47E-05
Road 9	1300-1400	7.88E-02	1.94E-06	1.44E-05	8.65E-02	1.69E-06	1.27E-05	3.45E-01	6.86E-06	5.09E-05	5.88E-01	5.91E-06	4.39E-05
Road 9	1400-1500	8.63E-02	2.15E-06	1.59E-05	9.49E-02	1.83E-06	1.37E-05	3.81E-01	7.59E-06	5.61E-05	6.41E-01	6.49E-06	4.74E-05
Road 9	1500-1600	1.37E-01	3.60E-06	2.69E-05	2.22E-02	1.21E-05	8.63E-06	1.99E-01	4.71E-05	3.62E-05	6.12E-01	8.98E-06	6.66E-05
Road 9	1600-1700	3.25E-01	2.97E-06	2.29E-05	1.18E-01	2.64E-06	1.98E-05	4.09E-01	1.10E-05	8.14E-05	1.43E-01	9.71E-06	7.20E-05
Road 9	1700-1800	1.55E-01	3.56E-06	2.64E-05	6.30E-01	3.18E-06	2.37E-05	5.19E-01	1.15E-05	8.89E-05	4.63E-01	1.05E-05	7.89E-05
Road 9	1800-1900	3.17E-01	2.78E-06	2.14E-05	1.26E-01	2.45E-06	1.81E-05	3.94E-01	8.69E-06	6.49E-05	1.00E-01	1.02E-05	7.80E-05
Road 9	1900-2000	1.54E-02	1.63E-06	1.21E-05	5.91E-01	1.47E-06	1.09E-05	2.57E-01	6.40E-06	4.79E-05	2.30E-01	5.72E-06	4.24E-05
Road 9	2000-2100	1.68E-02	1.68E-07	1.23E-06	6.42E-01	1.48E-06	5.46E-07	4.05E-01	1.39E-06	7.88E-06	1.99E-01	2.38E-06	1.75E-05
Road 9	2100-2200	2.59E-02	2.36E-07	1.75E-06	9.78E-01	2.76E-07	2.04E-06	6.19E-01	2.19E-06	1.50E-05	2.99E-01	3.59E-06	2.64E-05
Road 9	2200-2300	2.37E-02	3.55E-07	2.63E-06	2.16E-02	3.23E-07	2.40E-06	1.17E-01	1.77E-06	3.30E-05	1.04E-01	1.56E-06	1.16E-05
Road 9	2300-2400	2.98E-02	3.42E-07	2.54E-06	2.15E-02	3.09E-07	2.29E-06	1.12E-01	1.61E-06	3.20E-05	9.85E-02	1.42E-06	1.05E-05
Road 10	0100-0200	2.39E-02	2.31E-07	1.73E-06	9.78E-01	2.76E-07	2.04E-06	6.19E-01	2.19E-06	1.50E-05	2.99E-01	3.59E-06	2.64E-05
Road 10	0200-0300	6.14E-02	5.29E-08	2.00E-07	7.17E-02	8.63E-08	5.76E-07	2.13E-01	3.21E-07	2.15E-06	1.97E-01	2.97E-07	1.99E-06
Road 10	0300-0400	8.88E-02	7.68E-08	2.90E-07	6.39E-02	1.17E-08	4.81E-07	2.21E-01	2.90E-07	1.67E-06	2.03E-01	2.92E-07	1.53E-06
Road 10	0400-0500	7.02E-02	6.01E-08	2.22E-07	5.19E-02	9.44E-08	3.62E-07	1.74E-01	2.27E-07	1.34E-06	1.66E-01	2.30E-07	1.47E-06
Road 10	0500-0600	6.23E-02	6.83E-08	2.48E-07	5.55E-02	6.20E-08	4.20E-07	2.29E-01	2.39E-07	1.37E-06	2.19E-01	1.82E-07	1.22E-06
Road 10	0600-0700	7.97E-02	7.29E-08	2.69E-07	7.55E-02	6.66E-08	4.46E-07	2.45E-01	2.16E-07	1.45E-06	2.32E-01	1.97E-07	1.32E-06
Road 10	0700-0800	6.08E-02	6.99E-08	2.54E-07	5.95E-02	6.56E-08	4.46E-07	2.45E-01	2.16E-07	1.45E-06	2.32E-01	1.97E-07	1.32E-06
Road 10	0800-0900	2.32E-02	7.07E-08	1.44E-06	5.76E-02	1.56E-08	1.16E-06	2.66E-01	2.62E-07	1.10E-06	4.24E-01	5.97E-07	3.73E-06
Road 10	0900-1000	3.79E-02	1.04E-07	7.80E-06	9.68E-02	5.10E-07	3.47E-06	3.12E-01	3.17E-07	1.12E-06	1.84E-01	1.52E-06	1.02E-05
Road 10	1000-1100	1.07E-01	3.48E-07	8.67E-06	1.87E-02	5.00E-07	3.38E-06	3.12E-01	1.62E-06	1.08E-06	2.89E-01	1.47E-06	9.84E-06
Road 10	1100-1200	1.38E-01	3.81E-07	9.67E-06	2.38E-02	6.25E-07	4.14E-06	3.12E-01	1.62E-06	1.08E-06	2.89E-01	1.47E-06	9.84E-06
Road 10	1200-1300	1.41E-01	4.01E-07	6.99E-06	1.08E-01	3.64E-07	2.44E-06	3.22E-01	1.09E-06	7.28E-06	2.92E-01	9.83E-07	6.95E-06
Road 10	1300-1400	1.17E-01	4.00E-07	6.98E-06	1.04E-01								

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tiesing Yi North Underground Quarry		Open Road 24 hour Emission Factors for		Year 2038	
AERMOD model (March)		NO _x Emission		NO _x Emission	

Read Name	Read ID	Hour	MonthlyHour			MonthlyHourAvg			MonthlyHourMin			MonthlyHourMax				
			g/s/min	g/s/m	tonne/hour	g/s/min	g/s/m	tonne/hour	g/s/min	g/s/m	tonne/hour	g/s/min	g/s/m	tonne/hour		
Row 11	11	0000-0000	2.942	0.527	7.327	0.747	2.748	7.797	6.895	1.661	0.588	4.135	3.531	8.996	3.627	
Row 11	11	01-00-00	3.262	1.424	7.527	0.747	2.748	7.797	6.895	1.661	0.588	4.135	3.531	8.996	3.627	
Row 11	11	0200-0000	3.262	1.424	7.527	0.747	2.748	7.797	6.895	1.661	0.588	4.135	3.531	8.996	3.627	
Row 11	11	0300-0400	4.044	0.704	4.074	3.772	0.374	3.772	4.894	3.825	1.911	0.595	1.945	0.715	4.624	0.707
Row 11	11	0400-0000	4.224	1.224	4.224	1.224	1.224	4.224	1.224	1.224	4.224	1.224	4.224	1.224	4.224	1.224
Row 11	11	0500-0000	4.224	2.044	7.852	1.932	0.902	7.206	2.097	1.004	3.852	1.908	9.150	9.150	9.150	9.150
Row 11	11	0600-0000	4.596	0.596	4.596	0.716	1.786	4.224	2.247	1.636	0.276	2.246	8.756	0.205	2.095	0.705
Row 11	11	0700-0000	5.882	0.282	5.882	0.282	0.282	5.882	0.282	0.282	5.882	0.282	5.882	0.282	5.882	0.282
Row 11	11	0800-0000	5.882	1.426	5.882	1.536	0.336	5.266	0.464	2.444	5.882	2.252	2.182	5.244	2.001	5.244
Row 11	11	0900-0000	6.782	1.386	6.316	6.282	0.276	8.886	0.298	5.526	0.246	0.246	2.382	4.836	1.866	4.836
Row 11	11	1000-0000	6.782	1.386	6.316	6.282	0.276	8.886	0.298	5.526	0.246	0.246	2.382	4.836	1.866	4.836
Row 11	11	1100-1200	7.226	1.226	7.226	1.226	1.226	7.226	1.226	1.226	7.226	1.226	7.226	1.226	7.226	1.226
Row 11	11	1200-1300	7.226	1.226	7.226	1.226	1.226	7.226	1.226	1.226	7.226	1.226	7.226	1.226	7.226	1.226
Row 11	11	1300-1400	7.226	1.226	7.226	1.226	1.226	7.226	1.226	1.226	7.226	1.226	7.226	1.226	7.226	1.226
Row 11	11	1400-1500	1.052	2.448	0.956	9.952	0.664	7.748	0.598	8.486	3.326	3.326	3.326	7.706	0.296	7.706
Row 11	11	1500-1800	1.048	2.526	0.968	9.868	0.356	9.026	0.876	8.916	3.426	3.386	8.186	3.164	3.164	8.186
Row 11	11	1800-1900	1.048	2.526	0.968	9.868	0.356	9.026	0.876	8.916	3.426	3.386	8.186	3.164	3.164	8.186
Row 11	11	1700-1800	2.262	2.198	0.846	7.732	0.256	8.866	0.216	8.956	3.256	3.966	7.856	3.016	3.016	7.856
Row 11	11	1800-1900	5.996	1.576	6.016	5.526	0.476	6.648	0.386	6.326	2.436	2.706	5.836	2.246	2.246	5.836
Row 11	11	1900-2000	6.646	1.646	6.646	1.646	1.646	6.646	1.646	1.646	6.646	1.646	6.646	1.646	6.646	1.646
Row 11	11	2000-2100	4.516	6.596	0.256	6.596	0.376	6.176	0.276	6.016	6.326	1.216	6.066	2.926	1.216	6.066
Row 11	11	2100-2200	4.076	6.386	0.246	6.386	0.066	6.336	0.016	6.346	1.211	0.346	1.211	0.296	0.346	1.211
Row 11	11	2200-2300	4.076	6.386	0.246	6.386	0.066	6.336	0.016	6.346	1.2	0.346	1.2	0.296	0.346	1.2
Row 11	11	2300-0000	9.956	0.256	9.956	0.376	6.176	0.276	6.016	6.326	1.216	6.066	2.926	1.216	6.066	2.926
Row 12	12	0000-0000	2.942	0.527	7.327	0.747	2.748	7.797	6.895	1.661	0.588	4.135	3.531	8.996	3.627	8.996
Row 12	12	01-00-00	3.262	1.424	7.527	0.747	2.748	7.797	6.895	1.661	0.588	4.135	3.531	8.996	3.627	8.996
Row 12	12	0200-0000	3.262	1.424	7.527	0.747	2.748	7.797	6.895	1.661	0.588	4.135	3.531	8.996	3.627	8.996
Row 12	12	0300-0400	4.044	0.704	4.074	3.772	0.374	3.772	4.894	3.825	1.911	0.595	1.945	0.715	4.624	0.707
Row 12	12	0400-0000	4.224	1.224	4.224	1.224	1.224	4.224	1.224	1.224	4.224	1.224	4.224	1.224	4.224	1.224
Row 12	12	0500-0000	4.224	2.044	7.852	1.932	0.902	7.206	2.097	1.004	3.852	1.908	9.150	9.150	9.150	9.150
Row 12	12	0600-0000	4.596	0.596	4.596	0.716	1.786	4.224	2.247	1.636	0.276	2.246	8.756	0.205	2.095	0.705
Row 12	12	0700-0000	5.882	0.282	5.882	0.282	0.282	5.882	0.282	0.282	5.882	0.282	5.882	0.282	5.882	0.282
Row 12	12	0800-0000	5.882	1.426	5.882	1.536	0.336	5.266	0.464	2.444	5.882	2.252	2.182	5.244	2.001	5.244
Row 12	12	0900-0000	6.782	1.386	6.316	6.282	0.276	8.886	0.298	5.526	0.246	0.246	2.382	4.836	1.866	4.836
Row 12	12	1000-0000	6.782	1.386	6.316	6.282	0.276	8.886	0.298	5.526	0.246	0.246	2.382	4.836	1.866	4.836
Row 12	12	1100-1200	7.226	1.226	7.226	1.226	1.226	7.226	1.226	1.226	7.226	1.226	7.226	1.226	7.226	1.226
Row 12	12	1200-1300	7.226	1.226	7.226	1.226	1.226	7.226	1.226	1.226	7.226	1.226	7.226	1.226	7.226	1.226
Row 12	12	1300-1400	7.226	1.226	7.226	1.226	1.226	7.226	1.226	1.226	7.226	1.226	7.226	1.226	7.226	1.226
Row 12	12	1400-1500	1.052	2.448	0.956	9.952	0.664	7.748	0.598	8.486	3.326	3.326	3.326	7.706	0.296	7.706
Row 12	12	1500-1800	1.048	2.526	0.968	9.868	0.356	9.026	0.876	8.916	3.426	3.386	8.186	3.164	3.164	8.186
Row 12	12	1800-1900	1.048	2.526	0.968	9.868	0.356	9.026	0.876	8.916	3.426	3.386	8.186	3.164	3.164	8.186
Row 12	12	1700-1800	2.262	2.198	0.846	7.732	0.256	8.866	0.216	8.956	3.256	3.966	7.856	3.016	3.016	7.856
Row 12	12	1800-1900	5.996	1.576	6.016	5.526	0.476	6.648	0.386	6.326	2.436	2.706	5.836	2.246	2.246	5.836
Row 12	12	1900-2000	6.646	1.646	6.646	1.646	1.646	6.646	1.646	1.646	6.646	1.646	6.646	1.646	6.646	1.646
Row 12	12	2000-2100	4.516	6.596	0.256	6.596	0.376	6.176	0.276	6.016	6.326	1.216	6.066	2.926	1.216	6.066
Row 12	12	2100-2200	4.076	6.386	0.246	6.386	0.066	6.336	0.016	6.346	1.211	0.346	1.211	0.296	0.346	1.211
Row 12	12	2200-2300	4.076	6.386	0.246	6.386	0.066	6.336	0.016	6.346	1.2	0.346	1.2	0.296	0.346	1.2
Row 12	12	2300-0000	9.956	0.256	9.956	0.376	6.176	0.276	6.016	6.326	1.216	6.066	2.926	1.216	6.066	2.926
Row 13	13	0000-0000	2.942	0.527	7.327	0.747	2.748	7.797	6.895	1.661	0.588	4.135	3.531	8.996	3.627	8.996
Row 13	13	01-00-00	3.262	1.424	7.527	0.747	2.748	7.797	6.895	1.661	0.588	4.135	3.531	8.996	3.627	8.996
Row 13	13	0200-0000	3.262	1.424	7.527	0.747	2.748	7.797	6.895	1.661	0.588	4.135	3.531	8.996	3.627	8.996
Row 13	13	0300-0400	4.044	0.704	4.074	3.772	0.374	3.772	4.894	3.825	1.911	0.595	1.945	0.715	4.624	0.707
Row 13	13	0400-0000	4.224	1.224	4.224	1.224	1.224	4.224	1.224	1.224	4.224	1.224	4.224	1.224	4.224	1.224
Row 13	13	0500-0000	4.224	2.044	7.852	1.932	0.902	7.206	2.097	1.004	3.852	1.908	9.150	9.150	9.150	9.150
Row 13	13	0600-0000	4.596	0.596	4.596	0.716	1.786	4.224	2.247	1.636	0.276	2.246	8.756	0.205	2.095	0.705
Row 13	13	0700-0000	5.882	0.282	5.882	0.282	0.282	5.882	0.282	0.282	5.882	0.282	5.882	0.282	5.882	0.282
Row 13	13	0800-0000	5.882	1.426	5.882	1.536	0.336	5.266	0.464	2.444	5.882	2.252	2.182	5.244	2.001	5.244
Row 13	13	0900-0000	6.782	1.386	6.316	6.282	0.276	8.886	0.298	5.526	0.246	0.246	2.382	4.836	1.866	4.836
Row 13	13	1000-0000	6.782	1.386	6.316	6.282	0.276	8.886	0.298	5.526	0.246	0.246	2.382	4.836	1.866	4.836
Row 13	13	1100-1200	7.226	1.226	7.226	1.226	1.226	7.226	1.226	1.226	7.226	1.226	7.226	1.226	7.226	1.226
Row 13	13	1200-1300	7.226	1.226	7.226	1.226	1.226	7.226	1.226	1.226	7.226	1.226	7.226	1.226	7.226	1.226
Row 13	13	1300-1400	7.226	1.226	7.226	1.226	1.226	7.226	1.226	1.226	7.226	1.226	7.226	1.226	7.226	1.226
Row 13	13	1400-1500	1.052	2.448	0.956	9.952	0.664	7.748	0.598	8.486	3.326	3.326	3.326	7.706	0.296	7.706
Row 13	13	1500-1800	1.048	2.526	0.968	9.868	0.356	9.026	0.876	8.916	3.426	3.386	8.186	3.164	3.164	8.186
Row 13	13	1800-1900	1.048	2.526	0.968	9.868	0.356	9.026	0.876	8.916	3.426	3.386	8.186	3.164	3.164	8.186
Row 13	13	1700-1800	2.262	2.198	0.846	7.732	0.256	8.866	0.216	8.956	3.256	3.966	7.856	3.016	3.016	7.856
Row 13	13	1800-1900	5.996	1.576	6.016	5.526	0.476	6.648	0.386	6.326	2.436	2.706	5.836	2.246	2.246	5.836
Row 13	13	1900-2000	6.646	1.646	6.646	1.646	1.646	6.646	1.646	1.646	6.646	1.646	6.646	1.646	6.646	1.646
Row 13	13	2000-2100	4.516	6.596	0.256	6.596	0.376	6.176	0.276	6.016	6.326	1.216	6.066	2.926	1.216	6.066
Row 13	13	2100-2200	4.076	6.386	0.246	6.386	0.066	6.336	0.016	6.346	1.211	0.346	1.211	0.296	0.346	1.211
Row 13	13	2200-2300	4.076	6.386	0.246	6.3										

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tiesing Yi North Underground Quarry		Open Road 24 hour Emission Factors for		Year 2038	
AERMOD model (March)		NO _x Emission		NO _x Emission	

Read Name	Read ID	Hour	Month/January						Month/February						Month/March					
			g1/m1/h1	g1/m1/h2	tone/hour	g1/m1/h1	g1/m1/h2	tone/hour	g1/m1/h1	g1/m1/h2	tone/hour	g1/m1/h1	g1/m1/h2	tone/hour						
Read 24	24	0000-0000	1.566	3.016	7.877	1.566	3.016	7.877	1.566	3.016	7.877	1.566	3.016	7.877	1.566	3.016	7.877			
Read 24	24	0000-1000	1.566	3.016	7.877	1.566	3.016	7.877	1.566	3.016	7.877	1.566	3.016	7.877	1.566	3.016	7.877			
Read 24	24	1000-1000	1.566	3.016	7.877	1.566	3.016	7.877	1.566	3.016	7.877	1.566	3.016	7.877	1.566	3.016	7.877			
Read 24	24	1100-1200	1.656	3.316	8.377	1.656	3.316	8.377	1.656	3.316	8.377	1.656	3.316	8.377	1.656	3.316	8.377			
Read 24	24	1200-1300	1.566	3.016	7.877	1.566	3.016	7.877	1.566	3.016	7.877	1.566	3.016	7.877	1.566	3.016	7.877			
Read 24	24	1300-1400	1.776	3.592	9.377	1.776	3.592	9.377	1.776	3.592	9.377	1.776	3.592	9.377	1.776	3.592	9.377			
Read 24	24	1400-1500	1.776	3.592	9.377	1.776	3.592	9.377	1.776	3.592	9.377	1.776	3.592	9.377	1.776	3.592	9.377			
Read 24	24	1500-1600	1.566	3.016	7.877	1.566	3.016	7.877	1.566	3.016	7.877	1.566	3.016	7.877	1.566	3.016	7.877			
Read 24	24	1600-1700	1.616	3.316	8.377	1.616	3.316	8.377	1.616	3.316	8.377	1.616	3.316	8.377	1.616	3.316	8.377			
Read 24	24	1700-1800	1.566	3.016	7.877	1.566	3.016	7.877	1.566	3.016	7.877	1.566	3.016	7.877	1.566	3.016	7.877			
Read 24	24	1800-1900	1.226	1.616	4.077	1.226	1.616	4.077	1.226	1.616	4.077	1.226	1.616	4.077	1.226	1.616	4.077			
Read 24	24	1900-2000	1.066	1.276	2.877	1.066	1.276	2.877	1.066	1.276	2.877	1.066	1.276	2.877	1.066	1.276	2.877			
Read 24	24	2000-2100	1.096	1.776	3.877	1.096	1.776	3.877	1.096	1.776	3.877	1.096	1.776	3.877	1.096	1.776	3.877			
Read 24	24	2100-2200	1.166	2.076	4.877	1.166	2.076	4.877	1.166	2.076	4.877	1.166	2.076	4.877	1.166	2.076	4.877			
Read 24	24	2200-2300	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 24	24	2300-0000	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 25	25	0000-0100	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 25	25	0100-0200	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 25	25	0200-0300	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 25	25	0300-0400	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 25	25	0400-0500	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 25	25	0500-0600	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 25	25	0600-0700	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 25	25	0700-0800	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 25	25	0800-0900	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 25	25	0900-1000	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 25	25	1000-1100	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 25	25	1100-1200	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 25	25	1200-1300	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 25	25	1300-1400	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 25	25	1400-1500	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 25	25	1500-1600	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 25	25	1600-1700	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 25	25	1700-1800	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 25	25	1800-1900	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 25	25	1900-2000	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 25	25	2000-2100	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 25	25	2100-2200	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 25	25	2200-2300	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 25	25	2300-0000	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 26	26	0000-0100	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 26	26	0100-0200	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 26	26	0200-0300	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 26	26	0300-0400	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 26	26	0400-0500	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 26	26	0500-0600	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 26	26	0600-0700	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 26	26	0700-0800	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 26	26	0800-0900	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 26	26	0900-1000	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 26	26	1000-1100	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 26	26	1100-1200	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 26	26	1200-1300	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 26	26	1300-1400	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 26	26	1400-1500	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 26	26	1500-1600	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 26	26	1600-1700	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 26	26	1700-1800	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 26	26	1800-1900	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 26	26	1900-2000	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 26	26	2000-2100	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 26	26	2100-2200	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 26	26	2200-2300	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 26	26	2300-0000	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 27	27	0000-0100	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 27	27	0100-0200	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877	1.226	2.376	5.877			
Read 27	27	0200-0300	1.226	2.37																

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry		Open Road 24 hour Emission Factors for AERMOD model (March)		Year 2038	
		NO _x Emission		NO _x Emission	

Road Name	Road ID	Hour	Month/May/turn				Month/June/Average				Month/July/Average			
			g/m ² /veh	g/m ² /min	g/m ² /veh	g/m ² /min	g/m ² /veh	g/m ² /min	g/m ² /veh	g/m ² /min	g/m ² /veh	g/m ² /min	g/m ² /veh	g/m ² /min
Road 17	17	1800-1700	6.5982	1.7136	5.0058	2.5852	1.5244	4.4445	2.3710	6.1865	1.8954	2.0961	5.4446	1.6616
Road 17	17	1800-1900	4.4812	1.2197	4.0412	1.1249	2.9812	0.8124	2.1688	5.7283	1.6283	1.8312	4.8962	1.3312
Road 17	17	1800-1900	2.4762	0.6706	1.8445	0.5232	1.5688	0.4445	1.0701	2.7386	0.9655	0.9532	2.4363	0.7706
Road 17	17	1900-2000	1.4852	0.4107	8.2382	0.3123	2.5340	0.7448	7.0442	3.3565	0.9555	0.6192	1.1396	0.3306
Road 17	17	1900-2000	1.4852	0.4107	8.2382	0.3123	2.5340	0.7448	7.0442	3.3565	0.9555	0.6192	1.1396	0.3306
Road 17	17	2100-2200	1.1362	1.8007	0.5716	1.0362	1.6447	4.8112	0.5512	5.8332	0.8762	0.5322	8.7862	0.7706
Road 17	17	2200-2300	1.2052	1.7205	0.5045	1.0955	1.0572	4.1582	6.2682	0.9707	0.6332	0.5542	7.8462	0.7706
Road 17	17	2300-2400	1.2052	1.7205	0.5045	1.0955	1.0572	4.1582	6.2682	0.9707	0.6332	0.5542	7.8462	0.7706
Road 18	18	0000-0100	7.9202	0.5325	2.0592	7.1382	0.4752	1.3582	4.8612	3.2112	2.5202	0.2322	2.8002	1.1106
Road 18	18	0100-0200	8.8952	0.8328	1.8528	8.0082	0.3562	1.3718	5.1662	2.4442	0.7782	0.4442	1.9302	0.7706
Road 18	18	0200-0300	9.8952	0.8328	1.8528	8.0082	0.3562	1.3718	5.1662	2.4442	0.7782	0.4442	1.9302	0.7706
Road 18	18	0300-0400	1.1102	2.8352	1.1002	9.8002	0.5325	9.7702	5.7702	1.4602	0.6692	0.8442	1.7422	0.7706
Road 18	18	0400-0500	1.1842	3.3112	1.2782	1.0422	2.8582	1.1442	6.0442	0.6692	0.6202	0.5122	1.4442	0.7706
Road 18	18	0500-0600	1.1842	3.3112	1.2782	1.0422	2.8582	1.1442	6.0442	0.6692	0.6202	0.5122	1.4442	0.7706
Road 18	18	0600-0700	1.7442	1.9207	4.9882	1.0742	1.1102	4.3362	6.4462	0.6692	0.6202	0.3362	5.5322	0.7706
Road 18	18	0700-0800	1.3542	2.4822	1.8112	1.1172	2.4602	9.6542	6.7742	4.4362	0.5882	0.5622	1.1802	0.4442
Road 18	18	0800-0900	1.3542	2.4822	1.8112	1.1172	2.4602	9.6542	6.7742	4.4362	0.5882	0.5622	1.1802	0.4442
Road 18	18	0900-1000	1.4962	3.0902	1.2212	1.3112	2.7102	1.0682	6.9842	4.4362	0.5882	0.5992	1.2442	0.4442
Road 18	18	1000-1100	1.6862	4.0762	1.2002	1.5882	2.1702	1.0592	7.4462	0.5882	0.5992	0.6242	1.1172	0.4442
Road 18	18	1100-1200	1.6862	4.0762	1.2002	1.5882	2.1702	1.0592	7.4462	0.5882	0.5992	0.6242	1.1172	0.4442
Road 18	18	1200-1300	2.2552	4.8602	1.7792	1.9882	4.0252	1.0572	8.0102	0.8362	1.1552	0.7822	1.5992	0.6602
Road 18	18	1300-1400	2.2552	4.8602	1.7792	1.9882	4.0252	1.0572	8.0102	0.8362	1.1552	0.7822	1.5992	0.6602
Road 18	18	1400-1500	2.2552	4.8602	1.7792	1.9882	4.0252	1.0572	8.0102	0.8362	1.1552	0.7822	1.5992	0.6602
Road 18	18	1500-1600	2.0862	4.7602	1.8862	1.8552	4.2402	1.0652	8.1502	0.8362	1.1552	0.8062	1.8562	0.7706
Road 18	18	1600-1700	2.1242	4.8702	1.9402	1.8882	4.4202	1.1722	8.5442	0.8362	1.1552	0.7662	1.7782	0.6602
Road 18	18	1700-1800	1.8662	4.0202	1.5702	1.4462	3.6102	1.4142	7.9602	0.8362	1.1552	0.6862	1.6862	0.6602
Road 18	18	1800-1900	2.4862	4.9202	1.9362	1.9462	4.2402	1.1722	8.5442	0.8362	1.1552	0.7662	1.7782	0.6602
Road 18	18	1900-2000	1.0112	0.9202	1.7602	0.6902	0.9362	1.1762	6.5862	1.5302	1.0302	0.6112	8.9362	0.3702
Road 18	18	2000-2100	0.9712	1.4962	0.5842	0.8482	1.3402	0.5282	0.6512	8.5862	0.3622	0.4872	0.7082	0.3702
Road 18	18	2100-2200	0.9712	1.4962	0.5842	0.8482	1.3402	0.5282	0.6512	8.5862	0.3622	0.4872	0.7082	0.3702
Road 18	18	2200-2300	0.9242	0.5142	0.5402	0.8172	0.1272	0.3742	5.3102	0.7142	0.0102	0.6662	0.6772	0.2702
Road 18	18	2300-2400	0.0112	1.1312	0.4302	0.9172	1.0312	0.3942	0.5062	0.0602	0.3712	0.4892	0.5332	0.2702
Road 19	19	0000-0100	1.0862	0.6202	1.7792	0.9732	0.5602	1.5812	5.7522	0.3312	0.5452	0.0002	2.2262	0.8702
Road 19	19	0200-0300	1.1362	0.5042	1.6962	0.5452	1.3312	0.6002	5.6672	0.3702	0.2382	0.2282	0.7702	0.8702
Road 19	19	0300-0400	1.1362	0.5042	1.6962	0.5452	1.3312	0.6002	5.6672	0.3702	0.2382	0.2282	0.7702	0.8702
Road 19	19	0400-0500	1.3962	0.5252	1.5102	1.2382	0.4692	1.3402	6.7382	0.5502	0.3492	0.5762	0.2182	0.6702
Road 19	19	0500-0600	1.4302	0.9382	2.7102	1.2382	0.8712	2.3862	6.9302	0.4382	0.3112	0.3892	0.3872	0.6702
Road 19	19	0600-0700	1.4302	0.9382	2.7102	1.2382	0.8712	2.3862	6.9302	0.4382	0.3112	0.3892	0.3872	0.6702
Road 19	19	0700-0800	1.6662	0.4872	1.3902	1.4442	0.4182	1.2062	7.8702	0.2702	0.5582	0.5562	0.9112	0.6602
Road 19	19	0800-0900	1.6662	0.5372	1.6312	1.4222	0.4832	1.3082	7.5502	0.5282	0.3862	0.6542	0.2152	0.6602
Road 19	19	0900-1000	1.6662	0.5372	1.6312	1.4222	0.4832	1.3082	7.5502	0.5282	0.3862	0.6542	0.2152	0.6602
Road 19	19	1000-1100	2.1062	0.5072	1.6312	1.8402	0.4912	1.4282	8.8602	0.3702	0.6112	0.6862	0.2052	0.6602
Road 19	19	1100-1200	1.9862	0.5072	1.4952	1.7462	0.4392	1.2862	8.8602	0.3702	0.6112	0.7452	1.0862	0.6602
Road 19	19	1200-1300	2.8362	0.5072	1.9862	1.8402	0.4392	1.2862	8.8602	0.3702	0.6112	0.7452	1.0862	0.6602
Road 19	19	1300-1400	2.6862	0.5072	1.8862	2.3462	0.5762	1.6622	1.0712	0.6462	0.6062	0.9642	2.3062	0.6602
Road 19	19	1400-1500	2.6862	0.7302	1.9462	2.3462	0.5962	1.7742	1.0712	0.6962	0.6462	0.9212	2.3462	0.6602
Road 19	19	1500-1600	2.6862	0.7302	1.9462	2.3462	0.5962	1.7742	1.0712	0.6962	0.6462	0.9212	2.3462	0.6602
Road 19	19	1600-1700	2.5062	0.5462	0.7862	2.2262	0.5812	1.6752	9.4402	0.6062	0.5062	0.8742	2.2962	0.6602
Road 19	19	1700-1800	1.9362	0.5292	1.5112	1.7412	0.4742	1.3082	8.8362	0.4062	0.5162	0.7842	2.1362	0.6602
Road 19	19	1800-1900	1.9362	0.5292	1.5112	1.7412	0.4742	1.3082	8.8362	0.4062	0.5162	0.7842	2.1362	0.6602
Road 19	19	1900-2000	1.7262	0.2302	0.6862	1.1062	0.2142	0.6182	6.1212	1.1962	0.4262	0.5372	1.0462	0.3302
Road 19	19	2000-2100	1.2052	1.8252	0.5252	1.0882	1.6442	0.4742	6.0462	0.7262	0.8062	0.6052	8.5112	0.2702
Road 19	19	2100-2200	1.2052	1.8252	0.5252	1.0882	1.6442	0.4742	6.0462	0.7262	0.8062	0.6052	8.5112	0.2702
Road 19	19	2200-2300	1.1772	0.1862	0.4892	1.0362	1.5202	0.4402	6.0702	0.7652	0.5202	0.6652	7.7122	0.2702
Road 19	19	2300-0000	1.2862	1.1962	0.4012	1.1552	1.2702	0.6682	6.9262	0.9572	0.5062	0.5382	6.6172	0.1702
Road 20	20	0000-0100	1.1772	0.1862	0.4892	1.0362	1.5202	0.4402	6.0702	0.7652	0.5202	0.6652	7.7122	0.2702
Road 20	20	0100-0200	4.1552	0.3022	0.5562	0.7762	0.2742	0.5022	1.6012	0.1212	0.1552	0.4442	1.0502	0.1702
Road 20	20	0200-0300	4.2762	2.4002	4.4362	3.3882	2.1882	0.4022	1.6412	0.1612	0.1702	0.7062	4.8302	0.1702
Road 20	20	0300-0400	4.2762	2.4002	4.4362	3.3882	2.1882	0.4022	1.6412	0.1612	0.1702	0.7062	4.8302	0.1702
Road 20	20	0400-0500	4.6362	0.2512	0.6202	4.1232	0.2242	0.4172	1.7612	0.5452	0.7652	0.5562	1.6462	0.1702
Road 20	20	0500-0600	4.7942	0.4862	0.8642	4.2262	0.4162	0.7612	1.8012	0.7482	0.2862	0.5562	1.5712	0.2702
Road 20	20	0600-0700	4.7942	0.4862	0.8642	4.2262	0.4162	0.7612	1.8012	0.7482	0.2862	0.5562	1.5712	0.2702
Road 20	20	0700-0800	5.5362	0.2762	0.5142	5.1762	0.2452	0.4472	2.2612	0.0402	0.0512	0.9112	8.9712	0.1702
Road 20	20	0800-0900	5.5362	0.2762	0.5142	5.1762	0.2452	0.4472	2.2612	0.0402	0.0512	0.9112	8.9712	0.1702
Road 20	20	0900-1000	6.5962	0.3982	0.7402	6.0862	0.3502	0.6442	2.5112	0.4462	0.6662	0.2002	2.2662	0.2702
Road 20	20	1000-1100	6.5962	0.3982	0.7402	6.0862	0.3502	0.6442	2.5112	0.4462	0.6662	0.2002	2.2662	0.2702
Road 20	20	1100-1200	6.6462	0.3982	0.6002	5.8302	0.3142	0.5792	2.4912	0.3112	0.4412	0.2132	1.1362	0.2702
Road 20	20	1200-1300	6.9202	0.5462	0.6322	0.6062	0.3122	0.5792	2.4712	0.2462	0.2862	0.1312	1.0862	0.2702
Road 20	20	1300-1400	6.9202	0.5462	0.6322	0.6062	0.3122	0.5792	2.4712	0.2462	0.2862	0.1312	1.0862	0.2702
Road 20	20	1400-1500	7.0262	0.3592	0.7362	6.2882	0.3642	0.6562	2.4962	0.1412	0.1612	0.2222	0.2662	0.2702
Road 20	20	1500-1600	6.3062	0.3472	0.6862	5.6382	0.3642	0.6162	2.4612	0.4862	0.6962	0.2002	1.3062	0.2702
Road 20	20	1600-1700	6.3062	0.3472	0.6862	5.6382	0.3642	0.6162	2.4612	0.4862	0.6962	0.2002	1.3062	0.2702
Road 20	20	1700-1800	5.5362	2.8112	0.5172	0.4802	2.5262	0.5742	1.1912	0.1562	0.1272	0.9712	1.0462	0.1702
Road 20														

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry		Open Road 24 hour Emission Factors for AERMOD model (March)		Year 2038	
		NO _x Emission		NO _x Emission	

Road Name	Road ID	Hour	Month/Myr/Average			Month/Myr/Average			Month/Myr/Average			Month/Myr/Average		
			g/m ² /h	g/m ² /min	tonne/hour	g/m ² /h	g/m ² /min	tonne/hour	g/m ² /h	g/m ² /min	tonne/hour	g/m ² /h	g/m ² /min	tonne/hour
Road 31	31	0000-0100	1.735E-02	2.77E-06	3.33E-07	1.535E-02	3.39E-06	3.33E-07	6.52E-02	4.40E-07	1.29E-01	8.60E-07	1.29E-01	
Road 31	31	0100-0200	2.07E-02	3.27E-06	4.09E-07	2.17E-02	3.91E-06	3.91E-07	1.29E-01	8.60E-07	1.29E-01	8.60E-07	1.29E-01	
Road 31	31	0200-0300	2.38E-02	3.77E-06	4.47E-07	2.18E-02	2.47E-06	2.21E-07	9.06E-01	9.25E-07	8.64E-02	7.96E-07	8.64E-02	
Road 31	31	0300-0400	2.68E-02	4.06E-06	2.32E-07	2.33E-02	2.53E-06	2.08E-07	8.39E-02	8.18E-08	3.16E-07	7.41E-02	7.23E-08	
Road 31	31	0400-0500	2.99E-02	4.36E-06	2.02E-07	2.54E-02	2.83E-06	2.33E-07	9.10E-02	7.41E-08	3.16E-07	7.41E-02	7.23E-08	
Road 31	31	0500-0600	3.31E-02	3.99E-06	3.52E-07	2.504E-02	3.50E-06	3.12E-07	8.36E-02	7.39E-08	3.16E-07	7.41E-02	7.23E-08	
Road 31	31	0600-0700	2.06E-02	1.70E-06	6.43E-07	1.80E-02	6.39E-06	5.62E-07	7.86E-02	7.47E-08	4.55E-06	6.69E-02	3.33E-07	
Road 31	31	0700-0800	2.37E-02	1.91E-06	7.00E-07	2.06E-02	6.79E-06	5.93E-07	8.13E-02	7.59E-08	4.55E-06	6.69E-02	3.33E-07	
Road 31	31	0800-0900	2.23E-02	1.97E-07	1.76E-06	1.97E-02	1.97E-07	1.52E-06	8.02E-02	6.94E-07	2.50E-06	6.82E-02	5.98E-07	
Road 31	31	0900-1000	2.52E-02	2.01E-07	1.80E-06	2.12E-02	1.76E-07	1.57E-06	8.78E-02	9.99E-07	6.25E-06	7.59E-02	6.05E-07	
Road 31	31	1000-1100	2.79E-02	2.16E-07	1.98E-06	2.24E-02	1.83E-07	1.57E-06	8.90E-02	6.08E-08	3.00E-07	7.59E-02	6.05E-07	
Road 31	31	1100-1200	2.74E-02	2.16E-07	1.78E-06	2.16E-02	1.78E-07	1.52E-06	8.54E-02	8.11E-08	3.16E-07	7.41E-02	7.23E-08	
Road 31	31	1200-1300	2.65E-02	2.14E-07	1.33E-06	2.30E-02	1.33E-07	1.15E-06	8.55E-02	8.02E-06	4.29E-06	7.31E-02	6.11E-07	
Road 31	31	1300-1400	2.81E-02	1.53E-07	1.39E-06	2.28E-02	1.33E-07	1.16E-06	8.01E-02	3.00E-07	4.71E-06	4.43E-07	4.43E-07	
Road 31	31	1400-1500	2.93E-02	1.53E-07	1.39E-06	2.30E-02	1.33E-07	1.16E-06	8.10E-02	3.47E-07	4.71E-06	4.43E-07	4.43E-07	
Road 31	31	1500-1600	2.42E-02	1.56E-07	1.34E-06	2.15E-02	1.33E-07	1.16E-06	8.34E-02	3.17E-07	4.62E-06	3.92E-07	4.54E-07	
Road 31	31	1600-1700	2.45E-02	1.57E-07	1.40E-06	2.19E-02	1.41E-07	1.26E-06	8.32E-02	3.17E-07	4.62E-06	3.92E-07	4.54E-07	
Road 31	31	1700-1800	2.45E-02	1.57E-07	1.40E-06	2.19E-02	1.41E-07	1.26E-06	8.32E-02	3.17E-07	4.62E-06	3.92E-07	4.54E-07	
Road 31	31	1800-1900	1.64E-02	1.18E-07	1.05E-06	1.44E-02	1.06E-07	9.51E-07	5.77E-02	4.19E-07	3.71E-05E	3.16E-07	3.67E-07	
Road 31	31	1900-2000	1.11E-02	5.81E-08	5.18E-07	9.94E-03	5.25E-08	4.65E-07	2.54E-02	2.77E-06	4.22E-02	2.21E-07	2.21E-07	
Road 31	31	2000-2100	1.11E-02	5.81E-08	5.18E-07	9.94E-03	5.25E-08	4.65E-07	2.54E-02	2.77E-06	4.22E-02	2.21E-07	2.21E-07	
Road 31	31	2100-2200	1.09E-02	4.43E-08	3.98E-07	9.88E-03	4.95E-08	3.62E-07	5.12E-02	1.11E-07	8.86E-04	4.54E-02	1.86E-07	
Road 31	31	2200-2300	1.10E-02	4.43E-08	3.98E-07	9.88E-03	4.95E-08	3.62E-07	5.12E-02	1.11E-07	8.86E-04	4.54E-02	1.86E-07	
Road 31	31	2300-2400	1.10E-02	4.43E-08	3.98E-07	9.88E-03	4.95E-08	3.62E-07	5.12E-02	1.11E-07	8.86E-04	4.54E-02	1.86E-07	
Road 32	32	0000-0100	9.48E-03	9.35E-08	6.21E-06	9.35E-03	8.45E-08	5.62E-06	5.02E-02	4.95E-07	2.96E-02	4.43E-02	2.42E-02	
Road 32	32	0100-0200	1.03E-02	6.95E-08	4.42E-06	9.23E-03	5.98E-08	3.97E-06	5.29E-02	4.36E-07	2.96E-02	4.43E-02	2.42E-02	
Road 32	32	0200-0300	1.13E-02	6.95E-08	4.42E-06	9.23E-03	5.98E-08	3.97E-06	5.29E-02	4.36E-07	2.96E-02	4.43E-02	2.42E-02	
Road 32	32	0300-0400	1.19E-02	4.54E-08	3.02E-06	1.07E-02	4.06E-08	2.70E-06	5.81E-02	2.22E-07	4.47E-05	5.02E-02	1.91E-07	
Road 32	32	0400-0500	1.27E-02	3.57E-08	3.56E-06	1.10E-02	4.77E-08	3.36E-06	6.00E-02	2.56E-07	7.00E-05	5.19E-02	1.19E-07	
Road 32	32	0500-0600	1.34E-02	3.57E-08	3.56E-06	1.10E-02	4.77E-08	3.36E-06	6.00E-02	2.56E-07	7.00E-05	5.19E-02	1.19E-07	
Road 32	32	0600-0700	1.44E-02	2.31E-07	1.53E-06	1.26E-02	2.05E-07	1.24E-06	6.81E-02	1.06E-03	0.00E-03	5.55E-02	8.88E-07	
Road 32	32	0700-0800	1.53E-02	5.65E-07	3.32E-05	1.32E-02	4.39E-07	2.89E-05	6.88E-02	2.25E-06	4.49E-04	5.69E-02	1.86E-06	
Road 32	32	0800-0900	1.47E-02	5.57E-07	3.70E-05	1.27E-02	4.80E-07	3.39E-05	6.46E-02	4.24E-06	4.61E-04	5.35E-02	2.02E-06	
Road 32	32	0900-1000	1.74E-02	5.71E-07	2.43E-06	1.41E-02	5.19E-07	2.31E-06	7.21E-02	2.86E-06	3.94E-04	9.45E-02	1.07E-06	
Road 32	32	1000-1100	1.90E-02	5.65E-07	3.75E-05	1.47E-02	4.96E-07	3.29E-05	7.22E-02	4.49E-06	4.65E-04	5.65E-02	1.94E-06	
Road 32	32	1100-1200	1.88E-02	5.72E-07	3.48E-05	1.43E-02	4.57E-07	3.20E-05	7.57E-02	2.13E-06	4.41E-04	5.52E-02	1.88E-06	
Road 32	32	1200-1300	1.74E-02	5.71E-07	2.43E-06	1.41E-02	5.19E-07	2.31E-06	7.21E-02	2.86E-06	3.94E-04	9.45E-02	1.07E-06	
Road 32	32	1300-1400	1.71E-02	5.76E-07	2.50E-06	1.40E-02	5.39E-07	2.39E-06	7.15E-02	2.95E-06	4.15E-04	9.36E-02	1.35E-06	
Road 32	32	1400-1500	1.73E-02	4.02E-07	2.67E-05	1.33E-02	3.53E-07	2.19E-06	7.15E-02	2.95E-06	4.15E-04	9.36E-02	1.35E-06	
Road 32	32	1500-1600	1.61E-02	4.13E-07	2.58E-05	1.27E-02	3.69E-07	2.12E-06	6.88E-02	3.27E-06	4.15E-04	9.36E-02	1.35E-06	
Road 32	32	1600-1700	1.65E-02	4.10E-07	2.74E-05	1.24E-02	3.69E-07	2.12E-06	6.88E-02	3.27E-06	4.15E-04	9.36E-02	1.35E-06	
Road 32	32	1700-1800	1.20E-02	3.33E-07	2.23E-05	1.07E-02	2.96E-07	1.75E-06	5.78E-02	1.61E-04	1.07E-04	5.02E-02	1.39E-06	
Road 32	32	1800-1900	1.20E-02	3.33E-07	2.23E-05	1.07E-02	2.96E-07	1.75E-06	5.78E-02	1.61E-04	1.07E-04	5.02E-02	1.39E-06	
Road 32	32	1900-2000	7.82E-03	1.82E-07	1.21E-05	6.98E-03	1.62E-07	1.09E-05	4.30E-02	1.00E-05	6.65E-05	6.96E-02	6.59E-07	
Road 32	32	2000-2100	7.82E-03	1.18E-07	9.17E-06	6.90E-03	1.29E-07	8.31E-06	4.46E-02	4.46E-05	5.62E-07	6.07E-02	7.39E-07	
Road 32	32	2100-2200	6.80E-03	1.18E-07	9.17E-06	6.90E-03	1.29E-07	8.31E-06	4.46E-02	4.46E-05	5.62E-07	6.07E-02	7.39E-07	
Road 32	32	2200-2300	6.80E-03	1.18E-07	7.89E-06	6.10E-03	1.07E-07	7.58E-07	4.47E-02	7.81E-07	5.13E-05	3.84E-02	6.71E-07	
Road 32	32	2300-0000	7.40E-03	9.12E-06	6.48E-06	6.77E-03	8.78E-06	5.84E-06	4.46E-02	5.04E-07	0.01E-05	4.00E-02	5.57E-07	
Road 32	32	0000-0100	7.40E-03	9.12E-06	6.48E-06	6.77E-03	8.78E-06	5.84E-06	4.46E-02	5.04E-07	0.01E-05	4.00E-02	5.57E-07	
Road 32	32	0100-0200	7.40E-03	9.12E-06	6.48E-06	6.77E-03	8.78E-06	5.84E-06	4.46E-02	5.04E-07	0.01E-05	4.00E-02	5.57E-07	
Road 32	32	0200-0300	7.40E-03	9.12E-06	6.48E-06	6.77E-03	8.78E-06	5.84E-06	4.46E-02	5.04E-07	0.01E-05	4.00E-02	5.57E-07	
Road 32	32	0300-0400	1.62E-02	8.00E-08	1.20E-04	1.42E-02	7.71E-08	1.07E-06	6.78E-02	3.32E-07	9.99E-06	5.81E-02	2.86E-07	
Road 32	32	0400-0500	1.62E-02	8.00E-08	1.20E-04	1.42E-02	7.71E-08	1.07E-06	6.78E-02	3.32E-07	9.99E-06	5.81E-02	2.86E-07	
Road 32	32	0500-0600	1.85E-02	8.18E-08	1.38E-04	1.65E-02	7.70E-08	1.10E-06	7.73E-02	3.57E-07	8.89E-06	6.26E-02	2.81E-07	
Road 32	32	0600-0700	1.71E-02	1.27E-07	1.95E-05	1.51E-02	1.12E-07	1.68E-06	7.22E-02	3.73E-07	8.10E-06	6.23E-02	4.62E-07	
Road 32	32	0700-0800	1.63E-02	5.24E-07	3.82E-04	1.42E-02	2.21E-07	3.33E-06	7.36E-02	1.14E-06	1.72E-05	8.20E-02	9.64E-07	
Road 32	32	0800-0900	1.58E-02	5.24E-07	3.82E-04	1.42E-02	2.21E-07	3.33E-06	7.36E-02	1.14E-06	1.72E-05	8.20E-02	9.64E-07	
Road 32	32	0900-1000	1.77E-02	6.65E-07	1.05E-05	1.52E-02	5.74E-07	8.62E-06	7.33E-02	7.76E-06	1.15E-05	6.11E-02	2.32E-07	
Road 32	32	1000-1100	2.02E-02	6.73E-07	1.01E-05	1.57E-02	5.87E-07	8.62E-06	7.33E-02	7.76E-06	1.15E-05	6.11E-02	2.32E-07	
Road 32	32	1100-1200	2.11E-02	6.73E-07	1.01E-05	1.57E-02	5.87E-07	8.62E-06	7.33E-02	7.76E-06	1.15E-05	6.11E-02	2.32E-07	
Road 32	32	1200-1300	2.68E-02	6.47E-07	1.11E-05	1.93E-02	6.42E-07	9.69E-06	8.16E-02	2.72E-06	4.07E-05	7.02E-02	2.94E-07	
Road 32	32	1300-1400	2.68E-02	6.47E-07	1.11E-05	1.93E-02	6.42E-07	9.69E-06	8.16E-02	2.72E-06	4.07E-05	7.02E-02	2.94E-07	
Road 32	32	1400-1500	2.24E-02	6.31E-07	9.58E-06	1.96E-02	5.99E-07	8.41E-06	7.87E-02	2.49E-06	3.74E-05	7.55E-02	2.15E-06	
Road 32	32	1500-1600	2.68E-02	6.47E-07	1.11E-05	1.93E-02	6.42E-07	9.69E-06	8.16E-02	2.72E-06	4.07E-05	7.02E-02	2.94E-07	
Road 32	32	1600-1700	2.68E-02	6.47E-07	1.11E-05	1.93E-02	6.42E-07	9.69E-06	8.16E-02	2.72E-06	4.07E-05	7.02E-02	2.94E-07	
Road 32	32	1700-1800	2.64E-02	7.97E-07	1.20E-05	2.32E-02	7.00E-07	1.05E-06	9.74E-02	2.93E-06	4.42E-05	8.47E-02	2.55E-06	
Road 32	32	1800-1900	2.63E-02	7.53E-07	1.13E-05	2.24E-02	6.68E-07	1.01E-06	9.69E-02	2.93E-06	4.42E-05	8.45E-02	2.62E-06	
Road 32	32	1900-2000	2.63E-02	7.53E-07	1.13E-05	2.24E-02	6.68E-07	1.01E-06	9.69E-02	2.93E-06	4.42E-05	8.45E-02	2.62E-06	
Road 32	32	2000-2100	1.95E-02	6.41E-07	9.65E-06	1.75E-02	5.74E-0							

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Appendix\Appendix 3.5.4 Emission Factor in 2038-S B.xlsx

Tsing Yi North Underground Quarry Open Road 24 hour Emission Factors for AERMOD model (March)			Year 2038
	NO _x Emission	PM ₁₀ Emission	PM _{2.5} Emission
1. Quarry	0.0000	0.0000	0.0000
2. Quarry	0.0000	0.0000	0.0000
3. Quarry	0.0000	0.0000	0.0000
4. Quarry	0.0000	0.0000	0.0000
5. Quarry	0.0000	0.0000	0.0000
6. Quarry	0.0000	0.0000	0.0000
7. Quarry	0.0000	0.0000	0.0000
8. Quarry	0.0000	0.0000	0.0000
9. Quarry	0.0000	0.0000	0.0000
10. Quarry	0.0000	0.0000	0.0000
11. Quarry	0.0000	0.0000	0.0000
12. Quarry	0.0000	0.0000	0.0000
13. Quarry	0.0000	0.0000	0.0000
14. Quarry	0.0000	0.0000	0.0000
15. Quarry	0.0000	0.0000	0.0000
16. Quarry	0.0000	0.0000	0.0000
17. Quarry	0.0000	0.0000	0.0000
18. Quarry	0.0000	0.0000	0.0000
19. Quarry	0.0000	0.0000	0.0000
20. Quarry	0.0000	0.0000	0.0000
21. Quarry	0.0000	0.0000	0.0000
22. Quarry	0.0000	0.0000	0.0000
23. Quarry	0.0000	0.0000	0.0000
24. Quarry	0.0000	0.0000	0.0000
25. Quarry	0.0000	0.0000	0.0000
26. Quarry	0.0000	0.0000	0.0000
27. Quarry	0.0000	0.0000	0.0000
28. Quarry	0.0000	0.0000	0.0000
29. Quarry	0.0000	0.0000	0.0000
30. Quarry	0.0000	0.0000	0.0000
31. Quarry	0.0000	0.0000	0.0000
32. Quarry	0.0000	0.0000	0.0000
33. Quarry	0.0000	0.0000	0.0000
34. Quarry	0.0000	0.0000	0.0000
35. Quarry	0.0000	0.0000	0.0000
36. Quarry	0.0000	0.0000	0.0000
37. Quarry	0.0000	0.0000	0.0000
38. Quarry	0.0000	0.0000	0.0000
39. Quarry	0.0000	0.0000	0.0000
40. Quarry	0.0000	0.0000	0.0000
41. Quarry	0.0000	0.0000	0.0000
42. Quarry	0.0000	0.0000	0.0000
43. Quarry	0.0000	0.0000	0.0000
44. Quarry	0.0000	0.0000	0.0000
45. Quarry	0.0000	0.0000	0.0000
46. Quarry	0.0000	0.0000	0.0000
47. Quarry	0.0000	0.0000	0.0000
48. Quarry	0.0000	0.0000	0.0000
49. Quarry	0.0000	0.0000	0.0000
50. Quarry	0.0000	0.0000	0.0000
51. Quarry	0.0000	0.0000	0.0000
52. Quarry	0.0000	0.0000	0.0000
53. Quarry	0.0000	0.0000	0.0000
54. Quarry	0.0000	0.0000	0.0000
55. Quarry	0.0000	0.0000	0.0000
56. Quarry	0.0000	0.0000	0.0000
57. Quarry	0.0000	0.0000	0.0000
58. Quarry	0.0000	0.0000	0.0000
59. Quarry	0.0000	0.0000	0.0000
60. Quarry	0.0000	0.0000	0.0000
61. Quarry	0.0000	0.0000	0.0000
62. Quarry	0.0000	0.0000	0.0000
63. Quarry	0.0000	0.0000	0.0000
64. Quarry	0.0000	0.0000	0.0000
65. Quarry	0.0000	0.0000	0.0000
66. Quarry	0.0000	0.0000	0.0000
67. Quarry	0.0000	0.0000	0.0000
68. Quarry	0.0000	0.0000	0.0000
69. Quarry	0.0000	0.0000	0.0000
70. Quarry	0.0000	0.0000	0.0000
71. Quarry	0.0000	0.0000	0.0000
72. Quarry	0.0000	0.0000	0.0000
73. Quarry	0.0000	0.0000	0.0000
74. Quarry	0.0000	0.0000	0.0000
75. Quarry	0.0000	0.0000	0.0000

Road Name	Road ID	Hour	Monthly/km/h			Monthly/km/surge			Monthly/km/turn			Monthly/km/average		
			g/km/h	g/s/m	turn/hour	g/km/h	g/s/m	turn/hour	g/km/h	g/s/m	turn/hour	g/km/h	g/s/m	turn/hour
Road 21	21	0000-0000	1.11-02	7.67E-08	1.01E-02	1.07E-08	9.21E-07	5.88E-02	4.06E-07	5.37E-06	5.18E-05	5.98E-07	4.44E-07	5.88E-02
Road 21	21	0100-0100	1.32E-01	1.56E-05	1.88E-02	1.10E-01	1.30E-03	1.58E-01	1.58E-03	1.88E-02	2.20E-01	2.58E-03	2.88E-02	3.18E-01
Road 21	21	0200-0200	1.32E-01	1.56E-05	1.88E-02	1.10E-01	1.30E-03	1.58E-01	1.58E-03	1.88E-02	2.20E-01	2.58E-03	2.88E-02	3.18E-01
Road 21	21	0300-0400	4.45E-02	3.97E-08	2.28E-02	3.52E-08	4.66E-07	6.83E-02	1.87E-07	2.46E-06	2.48E-05	5.88E-02	1.61E-07	2.12E-02
Road 21	21	0400-0500	1.45E-02	1.26E-08	3.12E-02	1.21E-02	1.37E-07	4.32E-02	3.17E-07	3.72E-06	3.74E-05	5.88E-02	1.61E-07	2.12E-02
Road 21	21	0500-0600	1.59E-02	1.48E-08	3.12E-02	1.16E-02	1.45E-07	9.80E-07	4.73E-02	3.95E-07	5.22E-06	5.88E-02	1.61E-07	2.12E-02
Road 21	21	0600-0700	1.69E-02	1.64E-08	3.12E-02	1.56E-02	1.47E-07	1.69E-07	2.23E-07	1.87E-02	9.07E-07	1.20E-05	6.64E-07	1.66E-07
Road 21	21	0700-0800	2.03E-02	2.62E-07	3.12E-02	1.76E-02	2.47E-07	6.44E-06	8.88E-02	2.46E-06	3.29E-05	5.88E-02	1.61E-07	2.12E-02
Road 21	21	0900-1000	2.31E-02	3.45E-07	3.12E-02	1.94E-02	4.88E-07	6.42E-06	8.88E-02	2.46E-06	3.29E-05	5.88E-02	1.61E-07	2.12E-02
Road 21	21	1000-1100	2.31E-02	3.45E-07	3.12E-02	1.94E-02	4.88E-07	6.42E-06	8.88E-02	2.46E-06	3.29E-05	5.88E-02	1.61E-07	2.12E-02
Road 21	21	1200-1300	8.38E-02	5.55E-07	3.12E-02	4.49E-02	4.88E-07	6.42E-06	8.88E-02	2.46E-06	3.29E-05	5.88E-02	1.61E-07	2.12E-02
Road 21	21	1300-1400	8.38E-02	5.55E-07	3.12E-02	4.49E-02	4.88E-07	6.42E-06	8.88E-02	2.46E-06	3.29E-05	5.88E-02	1.61E-07	2.12E-02
Road 21	21	1400-1500	2.94E-02	3.67E-07	3.12E-02	2.63E-02	5.75E-07	7.50E-06	1.14E-07	2.47E-06	3.29E-05	5.88E-02	1.61E-07	2.12E-02
Road 21	21	1500-1600	2.70E-02	6.03E-07	3.12E-02	2.41E-02	5.39E-07	7.12E-06	1.14E-07	2.55E-06	3.37E-05	1.01E-05	2.26E-06	2.99E-05
Road 21	21	1600-1700	2.11E-02	4.14E-07	3.12E-02	1.90E-02	4.36E-07	5.99E-06	9.31E-02	2.16E-06	2.89E-05	8.48E-07	1.92E-05	2.54E-06
Road 21	21	1800-1900	5.52E-02	3.64E-07	1.29E-02	4.03E-02	4.56E-07	3.88E-06	7.76E-06	1.52E-06	2.01E-05	6.48E-07	1.36E-07	1.99E-07
Road 21	21	1900-2000	1.30E-02	1.76E-07	2.19E-02	1.30E-02	1.76E-07	2.19E-02	1.30E-02	1.76E-07	2.19E-02	1.30E-02	1.76E-07	2.19E-02
Road 21	21	2000-2100	3.30E-02	1.60E-07	2.11E-02	1.17E-02	1.43E-07	1.90E-06	6.78E-02	8.31E-07	1.10E-05	5.95E-02	7.30E-07	9.65E-07
Road 21	21	2100-2200	1.26E-02	1.56E-07	2.06E-02	1.15E-02	1.42E-07	1.88E-06	6.72E-02	8.22E-07	1.09E-05	5.98E-02	7.36E-07	9.73E-07
Road 21	21	2200-2300	1.30E-02	1.76E-07	2.19E-02	1.30E-02	1.76E-07	2.19E-02	1.30E-02	1.76E-07	2.19E-02	1.30E-02	1.76E-07	2.19E-02
Road 21	21	2300-0000	3.30E-02	1.60E-07	2.11E-02	1.17E-02	1.43E-07	1.90E-06	6.78E-02	8.31E-07	1.10E-05	5.95E-02	7.30E-07	9.65E-07
Road 22	22	0000-0100	1.23E-01	1.49E-07	1.66E-06	1.12E-01	1.38E-07	2.43E-06	4.45E-07	5.43E-07	9.69E-06	4.06E-07	4.95E-07	8.83E-07
Road 22	22	0100-0200	1.00E-02	1.02E-07	1.08E-06	1.09E-02	1.25E-06	1.65E-06	3.49E-07	3.71E-07	6.69E-06	3.90E-07	4.35E-07	6.00E-07
Road 22	22	0200-0300	1.86E-02	1.73E-08	3.88E-06	1.01E-02	1.16E-06	2.61E-06	4.24E-07	4.50E-07	8.09E-06	4.90E-07	5.35E-07	7.50E-07
Road 22	22	0300-0400	1.20E-01	6.72E-08	1.20E-07	1.07E-01	5.99E-08	1.07E-06	4.38E-07	2.45E-07	4.27E-06	3.90E-07	2.18E-07	3.89E-07
Road 22	22	0400-0500	1.24E-01	6.86E-08	1.44E-06	1.10E-01	7.15E-08	1.02E-06	4.38E-07	2.94E-07	5.23E-06	4.01E-07	2.62E-07	4.86E-07
Road 22	22	0500-0600	1.36E-01	7.59E-08	1.56E-06	1.21E-01	7.99E-08	1.12E-06	4.88E-07	3.24E-07	5.88E-06	4.33E-07	2.84E-07	5.19E-07
Road 22	22	0600-0700	1.59E-01	8.42E-07	1.75E-06	1.39E-01	3.76E-07	6.70E-06	5.61E-06	1.54E-06	2.74E-05	4.95E-07	3.14E-06	2.40E-06
Road 22	22	0700-0800	1.78E-01	1.03E-06	1.84E-06	1.55E-01	4.88E-07	1.40E-05	6.11E-06	3.85E-06	5.14E-05	5.48E-07	3.17E-06	5.86E-06
Road 22	22	0800-0900	1.97E-01	1.24E-06	2.06E-06	1.74E-01	5.69E-07	1.65E-05	6.92E-06	4.45E-06	5.94E-05	6.29E-07	3.74E-06	6.45E-06
Road 22	22	0900-1000	1.85E-01	1.40E-06	2.50E-06	1.63E-01	1.23E-06	2.20E-05	6.80E-06	5.15E-06	5.15E-05	5.97E-07	4.52E-06	8.07E-06
Road 22	22	1000-1100	1.98E-01	1.47E-06	2.61E-06	1.74E-01	1.29E-06	2.29E-05	6.91E-06	5.11E-06	5.12E-05	6.04E-07	4.58E-06	8.00E-06
Road 22	22	1100-1200	1.97E-01	1.37E-06	2.44E-06	1.73E-01	1.24E-06	2.17E-05	6.80E-06	5.09E-06	5.10E-05	5.97E-07	4.57E-06	7.99E-06
Road 22	22	1200-1300	2.03E-01	1.57E-06	2.58E-07	1.78E-01	1.28E-06	2.28E-05	6.82E-06	4.88E-06	8.67E-05	6.00E-07	4.28E-06	7.54E-06
Road 22	22	1300-1400	1.94E-01	1.55E-06	2.17E-07	1.72E-01	1.27E-06	2.24E-05	6.89E-06	5.47E-06	9.75E-05	6.04E-07	4.82E-06	7.46E-06
Road 22	22	1400-1500	1.88E-01	1.57E-06	2.17E-07	1.72E-01	1.27E-06	2.24E-05	6.89E-06	5.47E-06	9.75E-05	6.04E-07	4.82E-06	7.46E-06
Road 22	22	1500-1600	1.77E-01	1.47E-06	2.61E-06	1.58E-01	1.31E-06	2.34E-05	6.60E-06	5.53E-06	9.98E-05	5.98E-07	4.94E-06	8.81E-06
Road 22	22	1600-1700	1.88E-01	1.46E-06	2.60E-06	1.67E-01	1.30E-06	2.31E-05	6.60E-06	5.11E-06	9.11E-05	5.88E-07	4.54E-06	8.10E-06
Road 22	22	1700-1800	1.88E-01	1.46E-06	2.60E-06	1.67E-01	1.30E-06	2.31E-05	6.60E-06	5.11E-06	9.11E-05	5.88E-07	4.54E-06	8.10E-06
Road 22	22	1800-1900	1.23E-01	6.51E-07	1.16E-06	1.12E-01	5.91E-07	1.09E-05	5.05E-06	2.67E-06	4.79E-05	5.98E-07	2.42E-06	4.14E-06
Road 22	22	1900-2000	1.95E-01	1.44E-07	1.98E-06	1.04E-01	3.73E-07	1.65E-05	4.57E-06	1.64E-06	2.96E-05	4.11E-07	1.47E-06	2.62E-06
Road 22	22	2000-2100	1.23E-01	6.51E-07	1.16E-06	1.12E-01	5.91E-07	1.09E-05	5.05E-06	2.67E-06	4.79E-05	5.98E-07	2.42E-06	4.14E-06
Road 22	22	2100-2200	1.13E-02	3.37E-07	3.84E-06	1.03E-03	3.00E-07	5.36E-06	4.55E-07	1.32E-06	2.39E-05	4.18E-07	1.21E-06	2.16E-06
Road 22	22	2200-2300	1.22E-02	3.16E-07	3.64E-06	1.12E-03	2.98E-07	5.14E-06	4.45E-07	1.15E-06	2.06E-05	4.06E-07	1.09E-06	1.87E-06
Road 22	22	2300-0000	2.26E-02	2.49E-06	4.44E-07	1.06E-02	2.74E-07	4.80E-06	4.27E-07	1.09E-06	2.06E-05	4.06E-07	1.09E-06	1.87E-06
Road 23	23	0000-0100	1.16E-02	3.22E-04	1.94E-07	1.06E-02	2.94E-08	5.42E-07	4.24E-07	1.17E-07	2.16E-06	3.87E-07	1.07E-07	1.97E-07
Road 23	23	0100-0200	1.95E-02	3.22E-04	2.92E-07	1.08E-02	2.96E-08	3.89E-07	4.31E-07	8.38E-06	3.92E-06	3.92E-06	7.60E-07	1.40E-07
Road 23	23	0200-0300	1.95E-02	3.22E-04	2.92E-07	1.08E-02	2.96E-08	3.89E-07	4.31E-07	8.38E-06	3.92E-06	3.92E-06	7.60E-07	1.40E-07
Road 23	23	0300-0400	1.18E-01	1.52E-06	2.81E-07	1.16E-01	1.58E-07	2.50E-07	4.28E-06	5.54E-06	1.09E-05	3.81E-07	4.89E-08	1.11E-07
Road 23	23	0400-0500	1.28E-01	1.91E-06	3.53E-07	1.18E-01	1.73E-07	3.13E-07	4.58E-06	6.95E-06	1.29E-06	4.06E-07	5.20E-08	1.14E-07
Road 23	23	0500-0600	1.28E-01	1.91E-06	3.53E-07	1.18E-01	1.73E-07	3.13E-07	4.58E-06	6.95E-06	1.29E-06	4.06E-07	5.20E-08	1.14E-07
Road 23	23	0600-0700	1.37E-01	2.18E-06	3.14E-07	1.61E-02	2.00E-07	7.65E-08	1.41E-06	3.96E-06	3.16E-07	5.84E-07	4.54E-07	6.77E-07
Road 23	23	0700-0800	6.05E-01	2.19E-07	4.04E-06	4.05E-01	1.91E-07	3.52E-06	5.75E-07	7.84E-07	1.05E-05	5.06E-07	8.62E-07	1.21E-07
Road 23	23	0800-0900	1.37E-01	2.18E-06	3.14E-07	1.61E-02	2.00E-07	7.65E-08	1.41E-06	3.96E-06	3.16E-07	5.84E-07	4.54E-07	6.77E-07
Road 23	23	0900-1000	1.55E-01	2.82E-07	3.22E-06	3.65E-02	2.48E-07	5.58E-06	5.80E-06	1.06E-06	5.98E-06	5.10E-07	3.90E-07	1.72E-07
Road 23	23	1000-1100	1.65E-01	2.99E-07	3.45E-06	4.44E-02	2.98E-07	4.78E-06	5.89E-06	1.09E-06	1.94E-05	5.13E-07	9.29E-07	1.70E-07
Road 23	23	1100-1200	1.65E-01	2.99E-07	3.45E-06	4.44E-02	2.98E-07	4.78E-06	5.89E-06	1.09E-06	1.94E-05	5.13E-07	9.29E-07	1.70E-07
Road 23	23	1200-1300	1.72E-01	2.91E-07	3.37E-06	5.51E-02	3.06E-07	4.73E-06	5.98E-06	9.93E-07	1.89E-05	5.18E-07	8.76E-07	1.82E-07
Road 23	23	1300-1400	1.64E-01	3.12E-07	3.77E-06	4.44E-02	2.76E-07	5.09E-06	5.89E-06	1.12E-06	2.07E-05	5.17E-07	8.89E-07	1.82E-07
Road 23	23	1400-1500	1.64E-01	3.12E-07	3.77E-06	4.44E-02	2.76E-07	5.09E-06	5.89E-06	1.12E-06	2.07E-05	5.17E-07	8.89E-07	1.82E-07
Road 23	23	1500-1600	1.49E-01	2.95E-07	3.45E-06	3.44E-02	2.64E-07	4.87E-06	5.74E-06	1.13E-06	2.09E-05	5.10E-07	9.10E-07	1.77E-07
Road 23	23	1600-1700	1.65E-01	2.92E-07	3.40E-06	4.42E-02	2.60E-07	4.80E-06	5.71E-06	1.04E-06	1.99E-05	5.08E-07	9.29E-07	1.71E-07
Road 23	23	1700-1800	1.38E-01	2.79E-07	4.21E-06	3.56E-02	2.05E-07	4.26E-06	5.05E-06	1.09E-06	1.94E-05	5.13E-07	9.29E-07	1.71E-07
Road 23	23	1800-1900	1.38E-01	2.79E-07	4.21E-06	3.56E-02	2.05E-07	4.26E-06	5.05E-06	1.09E-06	1.94E-05	5.13E-07	9.29E-07	1.71E-07
Road 23	23	1900-2000	1											

\\secure\environment_projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Appendix\Appendix 3.5.4 Emission Factor in 2038-S B.xlsx

Tsing Yi North Underground Quarry Open Road 24 hour Emission Factors for AERMOD model (March)			Year 2038
	NO _x Emission	PM ₁₀ Emission	PM _{2.5} Emission
1. Quarry	0.0000	0.0000	0.0000
2. Quarry	0.0000	0.0000	0.0000
3. Quarry	0.0000	0.0000	0.0000
4. Quarry	0.0000	0.0000	0.0000
5. Quarry	0.0000	0.0000	0.0000
6. Quarry	0.0000	0.0000	0.0000
7. Quarry	0.0000	0.0000	0.0000
8. Quarry	0.0000	0.0000	0.0000
9. Quarry	0.0000	0.0000	0.0000
10. Quarry	0.0000	0.0000	0.0000
11. Quarry	0.0000	0.0000	0.0000
12. Quarry	0.0000	0.0000	0.0000
13. Quarry	0.0000	0.0000	0.0000
14. Quarry	0.0000	0.0000	0.0000
15. Quarry	0.0000	0.0000	0.0000
16. Quarry	0.0000	0.0000	0.0000
17. Quarry	0.0000	0.0000	0.0000
18. Quarry	0.0000	0.0000	0.0000
19. Quarry	0.0000	0.0000	0.0000
20. Quarry	0.0000	0.0000	0.0000
21. Quarry	0.0000	0.0000	0.0000
22. Quarry	0.0000	0.0000	0.0000
23. Quarry	0.0000	0.0000	0.0000
24. Quarry	0.0000	0.0000	0.0000
25. Quarry	0.0000	0.0000	0.0000
26. Quarry	0.0000	0.0000	0.0000
27. Quarry	0.0000	0.0000	0.0000
28. Quarry	0.0000	0.0000	0.0000
29. Quarry	0.0000	0.0000	0.0000
30. Quarry	0.0000	0.0000	0.0000
31. Quarry	0.0000	0.0000	0.0000
32. Quarry	0.0000	0.0000	0.0000
33. Quarry	0.0000	0.0000	0.0000
34. Quarry	0.0000	0.0000	0.0000
35. Quarry	0.0000	0.0000	0.0000
36. Quarry	0.0000	0.0000	0.0000
37. Quarry	0.0000	0.0000	0.0000
38. Quarry	0.0000	0.0000	0.0000
39. Quarry	0.0000	0.0000	0.0000
40. Quarry	0.0000	0.0000	0.0000
41. Quarry	0.0000	0.0000	0.0000
42. Quarry	0.0000	0.0000	0.0000
43. Quarry	0.0000	0.0000	0.0000
44. Quarry	0.0000	0.0000	0.0000
45. Quarry	0.0000	0.0000	0.0000
46. Quarry	0.0000	0.0000	0.0000
47. Quarry	0.0000	0.0000	0.0000
48. Quarry	0.0000	0.0000	0.0000
49. Quarry	0.0000	0.0000	0.0000
50. Quarry	0.0000	0.0000	0.0000
51. Quarry	0.0000	0.0000	0.0000
52. Quarry	0.0000	0.0000	0.0000
53. Quarry	0.0000	0.0000	0.0000
54. Quarry	0.0000	0.0000	0.0000
55. Quarry	0.0000	0.0000	0.0000
56. Quarry	0.0000	0.0000	0.0000
57. Quarry	0.0000	0.0000	0.0000
58. Quarry	0.0000	0.0000	0.0000
59. Quarry	0.0000	0.0000	0.0000
60. Quarry	0.0000	0.0000	0.0000
61. Quarry	0.0000	0.0000	0.0000
62. Quarry	0.0000	0.0000	0.0000
63. Quarry	0.0000	0.0000	0.0000
64. Quarry	0.0000	0.0000	0.0000
65. Quarry	0.0000	0.0000	0.0000
66. Quarry	0.0000	0.0000	0.0000
67. Quarry	0.0000	0.0000	0.0000
68. Quarry	0.0000	0.0000	0.0000
69. Quarry	0.0000	0.0000	0.0000
70. Quarry	0.0000	0.0000	0.0000
71. Quarry	0.0000	0.0000	0.0000
72. Quarry	0.0000	0.0000	0.0000
73. Quarry	0.0000	0.0000	0.0000
74. Quarry	0.0000	0.0000	0.0000
75. Quarry	0.0000	0.0000	0.0000

Road Name	Road ID	Hour	MonthlyRainfall			MonthlyCurvature			MonthlyHumidity			MonthlyTemperature			
			g1/m/h	g1/s/m	tonne/hour	g1/m/h	g1/s/m	tonne/hour	g1/m/h	g1/s/m	tonne/hour	g1/m/h	g1/s/m	tonne/hour	
Road 34	34	0800-0900	1.0675	2.822	0.777	9.186	2.427	6.346	6.022	1.376	6.956	4.268	1.127	2.940	
Road 34	34	0900-1000	1.365	2.603	1.260	8.608	2.265	5.826	5.016	1.126	5.946	4.268	1.127	2.940	
Road 34	34	1000-1100	1.976	2.547	1.656	1.186	2.227	5.826	6.012	1.126	5.946	5.136	1.572	3.572	
Road 34	34	1100-1200	1.316	2.327	0.608	1.156	2.023	5.326	6.056	1.076	5.286	5.126	1.067	2.386	
Road 34	34	1200-1300	1.316	2.327	0.608	1.156	2.023	5.326	6.056	1.076	5.286	5.126	1.067	2.386	
Road 34	34	1300-1400	2.252	3.327	1.836	1.076	2.967	7.746	8.186	1.236	7.206	7.006	1.067	2.796	
Road 34	34	1400-1500	2.252	3.327	1.836	1.076	2.967	7.746	8.186	1.236	7.206	7.006	1.067	2.796	
Road 34	34	1500-1600	2.122	3.252	3.206	1.067	3.157	8.246	7.612	1.266	7.316	6.736	1.126	2.936	
Road 34	34	1600-1700	1.666	2.997	7.736	1.486	2.247	6.906	6.626	1.186	6.126	5.876	1.056	2.746	
Road 34	34	1700-1800	1.366	2.996	0.776	1.067	2.167	6.876	6.776	1.126	6.466	5.876	1.056	2.746	
Road 34	34	1800-1900	1.366	2.996	0.776	1.067	2.167	6.876	6.776	1.126	6.466	5.876	1.056	2.746	
Road 34	34	2000-2100	1.122	1.236	2.226	1.016	1.127	2.936	5.186	0.716	1.496	4.596	0.506	0.776	
Road 34	34	2100-2200	1.096	1.146	0.996	0.608	1.042	1.726	0.608	0.508	1.456	4.596	0.487	1.177	
Road 34	34	2200-2300	1.071	1.129	0.996	0.608	1.042	1.726	0.608	0.508	1.456	4.596	0.487	1.177	
Road 34	34	2300-0000	1.071	1.129	0.996	0.608	1.042	1.726	0.608	0.508	1.456	4.596	0.487	1.177	
Road 35	34	0000-0100	1.156	1.166	0.406	1.042	0.836	2.186	0.516	1.418	3.096	4.596	0.356	0.956	
Road 35	35	0100-0200	1.476	0.608	0.926	1.316	0.713	9.036	1.086	1.276	3.096	8.676	1.146	2.777	
Road 35	35	0200-0300	1.376	1.246	0.996	1.316	0.713	9.036	1.086	1.276	3.096	8.676	1.146	2.777	
Road 35	35	0300-0400	1.376	1.246	0.996	1.316	0.713	9.036	1.086	1.276	3.096	8.676	1.146	2.777	
Road 35	35	0400-0500	1.376	1.246	0.996	1.316	0.713	9.036	1.086	1.276	3.096	8.676	1.146	2.777	
Road 35	35	0500-0600	1.636	0.406	1.116	1.316	0.856	9.386	1.356	1.286	3.116	1.196	1.116	2.717	
Road 35	35	0600-0700	4.686	0.406	1.566	1.316	0.856	1.366	1.256	2.176	6.286	1.076	1.866	4.517	
Road 35	35	0700-0800	3.866	2.146	0.676	1.316	0.856	1.366	1.256	2.176	6.286	1.076	1.866	4.517	
Road 35	35	0800-0900	2.566	2.327	1.646	1.456	2.016	4.886	1.546	0.616	1.686	1.316	1.586	4.147	
Road 35	35	0900-1000	1.566	2.326	4.476	1.866	1.676	4.776	6.687	1.686	1.626	1.446	1.766	4.347	
Road 35	35	1000-1100	1.566	2.326	4.476	1.866	1.676	4.776	6.687	1.686	1.626	1.446	1.766	4.347	
Road 35	35	1100-1200	1.566	2.326	4.476	1.866	1.676	4.776	6.687	1.686	1.626	1.446	1.766	4.347	
Road 35	35	1200-1300	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	1300-1400	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	1400-1500	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	1500-1600	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	1600-1700	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	1700-1800	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	1800-1900	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	1900-2000	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	2000-2100	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	2100-2200	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	2200-2300	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	2300-0000	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	0000-0100	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	0100-0200	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	0200-0300	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	0300-0400	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	0400-0500	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	0500-0600	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	0600-0700	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	0700-0800	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	0800-0900	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	0900-1000	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	1000-1100	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	1100-1200	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	1200-1300	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	1300-1400	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	1400-1500	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	1500-1600	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	1600-1700	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	1700-1800	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	1800-1900	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	1900-2000	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	2000-2100	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	2100-2200	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	2200-2300	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	2300-0000	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	0000-0100	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	0100-0200	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	0200-0300	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	0300-0400	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	0400-0500	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	0500-0600	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	0600-0700	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	0700-0800	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	0800-0900	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	0900-1000	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	1000-1100	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	1100-1200	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	1200-1300	1.636	1.126	0.976	0.602	1.426	3.446	0.786	1.196	4.196	1.026	1.546	3.627	8.80
Road 35	35	1300-1400	1.636	1.12											

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Open Pit North Underground Quarry										
2024 Year 2028										
AEMRC model (Metric)										
Road Name	Road ID	Hour	NO _x Emission				NO ₂ Emission			
			MonthlyHourly	MonthlyHourlyAverage	MonthlyHourly	MonthlyHourlyAverage	MonthlyHourly	MonthlyHourlyAverage		
Road 37	37	1600-1700	6.98E-07	6.98E-07	2.44E-08	6.98E-07	2.44E-08	6.98E-07	2.44E-08	
Road 37	37	1700-1800	9.51E-06	1.07E-06	2.44E-08	6.56E-05	1.02E-06	2.34E-08	4.47E-06	
Road 37	37	1800-1900	3.97E-02	7.18E-09	1.84E-08	3.80E-02	8.88E-09	1.57E-08	1.82E-06	
Road 37	37	1900-2000	3.30E-02	4.41E-06E-06	1.66E-08	3.37E-02	1.03E-06	1.67E-06	2.31E-06	
Road 37	37	2000-2100	3.89E-02	2.10E-06	1.84E-08	3.89E-02	2.10E-06	1.84E-08	1.67E-06	
Road 37	37	2100-2200	2.33E-02	3.61E-09	8.79E-09	1.30E-02	3.47E-09	7.96E-09	1.85E-06	
Road 37	37	2200-2300	2.94E-02	3.05E-09	7.80E-09	2.80E-02	2.98E-09	8.66E-09	1.67E-06	
Road 37	37	2300-0000	3.28E-02	3.05E-09	7.80E-09	3.28E-02	3.05E-09	7.80E-09	1.67E-06	
Road 38	38	0000-0100	5.80E-02	9.19E-08	7.52E-07	5.41E-02	8.57E-08	7.02E-07	2.07E-06	
Road 38	38	0100-0200	7.76E-02	7.92E-08	6.69E-07	6.22E-02	7.32E-08	5.99E-07	2.25E-06	
Road 38	38	0200-0300	7.42E-02	7.92E-08	6.69E-07	6.22E-02	7.32E-08	5.99E-07	2.25E-06	
Road 38	38	0300-0400	7.93E-02	6.79E-08	5.56E-07	7.28E-02	6.23E-08	5.10E-07	2.35E-06	
Road 38	38	0400-0500	7.75E-02	7.25E-08	5.93E-07	7.27E-02	6.68E-08	5.42E-07	2.19E-06	
Road 38	38	0500-0600	7.82E-02	4.62E-07	3.78E-06	1.21E-02	4.62E-07	3.48E-06	1.33E-06	
Road 38	38	0600-0700	1.07E-02	1.69E-07	1.38E-06	6.44E-02	1.56E-07	1.27E-06	5.91E-06	
Road 38	38	0700-0800	8.91E-02	5.01E-07	4.10E-06	8.00E-02	4.56E-07	3.69E-06	2.52E-06	
Road 38	38	0800-0900	8.89E-02	5.53E-07	4.61E-06	8.03E-02	5.10E-07	4.15E-06	2.84E-06	
Road 38	38	0900-1000	9.90E-02	5.53E-07	4.61E-06	9.90E-02	5.53E-07	4.61E-06	2.84E-06	
Road 38	38	1000-1100	1.05E-02	5.60E-07	4.58E-06	9.35E-02	5.10E-07	4.15E-06	1.67E-06	
Road 38	38	1100-1200	1.03E-02	5.41E-07	4.43E-06	9.43E-02	4.94E-07	4.05E-06	1.61E-06	
Road 38	38	1200-1300	1.20E-02	5.41E-07	4.43E-06	1.20E-02	5.41E-07	4.43E-06	1.61E-06	
Road 38	38	1300-1400	1.30E-02	4.43E-07	3.63E-06	1.18E-02	4.04E-07	3.32E-06	1.27E-06	
Road 38	38	1400-1500	1.24E-02	4.52E-07	3.70E-06	1.20E-02	4.17E-07	3.43E-06	1.21E-06	
Road 38	38	1500-1600	1.43E-02	4.62E-07	3.78E-06	1.21E-02	4.62E-07	3.48E-06	1.33E-06	
Road 38	38	1600-1700	1.29E-02	4.30E-07	3.52E-06	1.16E-02	4.19E-07	3.25E-06	1.15E-06	
Road 38	38	1700-1800	1.12E-02	4.05E-07	3.29E-06	1.12E-02	3.71E-07	3.07E-06	1.38E-06	
Road 38	38	1800-1900	1.23E-02	3.98E-07	3.25E-06	1.05E-02	3.17E-07	2.59E-06	1.04E-07	
Road 38	38	1900-2000	1.28E-02	3.98E-07	3.25E-06	1.28E-02	3.98E-07	3.25E-06	1.04E-07	
Road 38	38	2000-2100	9.18E-02	1.12E-07	9.18E-06	8.67E-02	1.05E-07	8.63E-06	2.44E-06	
Road 38	38	2100-2200	9.18E-02	1.13E-07	9.21E-06	8.64E-02	1.06E-07	8.70E-06	2.44E-06	
Road 38	38	2200-2300	9.18E-02	1.13E-07	9.21E-06	8.64E-02	1.06E-07	8.70E-06	2.44E-06	
Road 38	38	2300-0000	9.18E-02	1.13E-07	9.21E-06	8.64E-02	1.06E-07	8.70E-06	2.44E-06	
Road 39	39	0000-0100	9.64E-02	8.99E-08	7.36E-07	8.49E-02	8.43E-08	6.90E-07	2.13E-06	
Road 39	39	0100-0200	9.64E-02	2.26E-08	1.92E-07	9.26E-02	2.17E-08	1.89E-07	7.50E-06	
Road 39	39	0200-0300	9.64E-02	2.26E-08	1.92E-07	9.26E-02	2.17E-08	1.89E-07	7.50E-06	
Road 39	39	0300-0400	1.02E-02	9.99E-08	9.10E-07	1.02E-02	9.74E-08	1.25E-06	3.62E-06	
Road 39	39	0400-0500	1.05E-02	1.11E-08	9.42E-06	1.00E-02	1.06E-08	8.43E-06	3.10E-07	
Road 39	39	0500-0600	1.05E-02	1.11E-08	9.42E-06	1.00E-02	1.06E-08	8.43E-06	3.10E-07	
Road 39	39	0600-0700	1.05E-02	1.11E-08	9.42E-06	1.00E-02	1.06E-08	8.43E-06	3.10E-07	
Road 39	39	0700-0800	1.13E-02	5.77E-08	4.91E-07	1.07E-02	5.44E-08	4.63E-07	1.87E-06	
Road 39	39	0800-0900	1.13E-02	5.77E-08	4.91E-07	1.07E-02	5.44E-08	4.63E-07	1.87E-06	
Road 39	39	0900-1000	1.13E-02	5.77E-08	4.91E-07	1.07E-02	5.44E-08	4.63E-07	1.87E-06	
Road 39	39	1000-1100	1.24E-02	1.70E-07	1.44E-06	1.17E-02	1.66E-07	1.36E-06	3.95E-06	
Road 39	39	1100-1200	1.31E-02	1.70E-07	1.44E-06	1.31E-02	1.70E-07	1.44E-06	3.95E-06	
Road 39	39	1200-1300	1.27E-02	1.71E-08	1.45E-06	5.36E-06	1.66E-07	1.36E-06	3.57E-06	
Road 39	39	1300-1400	6.12E-02	1.89E-08	1.61E-07	5.77E-02	1.78E-08	1.52E-07	2.38E-06	
Road 39	39	1400-1500	5.90E-02	1.89E-08	1.61E-07	5.90E-02	1.89E-08	1.52E-07	2.38E-06	
Road 39	39	1500-1600	6.08E-02	2.03E-08	1.73E-07	5.76E-02	1.94E-08	1.65E-07	2.40E-06	
Road 39	39	1600-1700	5.70E-02	1.99E-08	1.69E-07	5.42E-02	1.89E-08	1.61E-07	2.29E-06	
Road 39	39	1700-1800	4.72E-02	1.82E-08	1.55E-07	4.50E-02	1.74E-08	1.48E-07	2.09E-06	
Road 39	39	1800-1900	4.20E-02	1.82E-08	1.55E-07	4.20E-02	1.82E-08	1.55E-07	2.09E-06	
Road 39	39	1900-2000	2.53E-02	8.03E-09	6.84E-08	2.38E-02	7.61E-09	6.48E-08	1.46E-06	
Road 39	39	2000-2100	2.54E-02	6.33E-09	5.39E-08	2.45E-02	6.03E-09	5.15E-08	1.30E-06	
Road 39	39	2100-2200	2.10E-02	4.62E-09	3.91E-08	2.10E-02	4.62E-09	3.91E-08	1.15E-06	
Road 39	39	2200-2300	2.18E-02	5.52E-09	4.65E-08	2.07E-02	4.95E-09	4.22E-08	1.50E-06	
Road 39	39	2300-0000	2.43E-02	4.37E-09	3.72E-08	2.32E-02	4.19E-09	3.54E-08	1.83E-06	
Road 40	40	0000-0100	5.82E-02	9.19E-08	7.52E-07	5.41E-02	8.57E-08	7.02E-07	2.07E-06	
Road 40	40	0100-0200	7.76E-02	7.92E-08	6.69E-07	6.22E-02	7.32E-08	5.99E-07	2.25E-06	
Road 40	40	0200-0300	6.83E-02	1.71E-07	1.45E-06	6.24E-02	1.67E-07	1.36E-06	3.95E-06	
Road 40	40	0300-0400	7.52E-02	1.73E-07	1.47E-06	6.88E-02	1.67E-07	1.36E-06	3.95E-06	
Road 40	40	0400-0500	7.52E-02	1.73E-07	1.47E-06	6.88E-02	1.67E-07	1.36E-06	3.95E-06	
Road 40	40	0500-0600	1.67E-02	1.81E-07	1.50E-06	1.17E-02	1.70E-07	1.44E-06	3.95E-06	
Road 40	40	0600-0700	6.57E-02	2.92E-07	2.42E-06	6.02E-02	2.68E-07	2.23E-06	1.13E-06	
Road 40	40	0700-0800	9.90E-02	5.53E-07	4.61E-06	9.90E-02	5.53E-07	4.61E-06	2.84E-06	
Road 40	40	0800-0900	8.91E-02	1.04E-05	8.50E-06	8.08E-02	9.37E-06	7.52E-06	1.64E-06	
Road 40	40	0900-1000	1.01E-02	1.05E-05	8.71E-06	9.20E-02	9.64E-06	7.89E-06	1.84E-06	
Road 40	40	1000-1100	1.03E-02	1.05E-05	8.71E-06	9.20E-02	9.64E-06	7.89E-06	1.84E-06	
Road 40	40	1100-1200	1.07E-02	9.98E-07	4.90E-06	9.71E-02	9.97E-07	4.96E-06	1.21E-06	
Road 40	40	1200-1300	1.30E-02	8.37E-07	4.07E-06	1.17E-02	8.01E-07	3.65E-06	1.11E-06	
Road 40	40	1300-1400	1.30E-02	8.37E-07	4.07E-06	1.17E-02	8.01E-07	3.65E-06	1.11E-06	
Road 40	40	1400-1500	1.29E-02	8.81E-07	4.29E-06	1.17E-02	8.57E-07	3.93E-06	1.24E-06	
Road 40	40	1500-1600	1.28E-02	8.95E-07	4.32E-06	1.17E-02	8.61E-07	3.96E-06	1.24E-06	
Road 40	40	1600-1700	1.29E-02	8.81E-07	4.29E-06	1.18E-02	8.79E-07	3.94E-06	1.24E-06	
Road 40	40	1700-1800	1.28E-02	8.81E-07	4.29E-06	1.18E-02	8.79E-07	3.94E-06	1.24E-06	
Road 40	40	1800-1900	9.77E-02	6.54E-07	3.18E-06	9.04E-02	6.09E-07	2.94E-06	9.20E-06	
Road 40	40	1900-2000	6.32E-02	2.41E-07	1.17E-06	5.99E-02	2.22E-07	1.10E-06	4.21E-06	
Road 40	40	2000-2100	6.68E-02	2.41E-07	1.17E-06	5.99E-02	2.22E-07	1.10E-06	4.21E-06	
Road 40	40	2100-2200	6.61E-02	2.08E-07	1.01E-06	6.23E-02	1.96E-07	9.57E-06	2.34E-06	
Road 40	40	2200-2300	6.29E-02	1.89E-07	8.91E-06	5.87E-02	1.76E-07	8.56E-07	2.32E-06	
Road 40	40	2300-0000	6.29E-02	1.89E-07	8.91E-06	5.87E-02	1.76E-07	8.56E-07	2.32E-06	

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Open Road 24 Hour Underground Quarry															
APRMO model (Road ID)															
Road Name	Model	Road ID	Hour	NO _x Emission				NO ₂ Emission							
				Monthly/Mo	Monthly/Mo	Monthly/Mo	Monthly/Mo	Monthly/Mo	Monthly/Mo	Monthly/Mo	Monthly/Mo				
				g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour			
				tonne/hour	tonne/hour	tonne/hour	tonne/hour	tonne/hour	tonne/hour	tonne/hour	tonne/hour	tonne/hour			
Road #1				2.08E-07	2.08E-07	1.98E-07	1.98E-07	1.98E-07	1.98E-07	1.98E-07	1.98E-07	1.98E-07			
Road #1			0100-0200	2.68E-02	3.98E-08	3.74E-07	2.41E-02	3.95E-08	3.37E-07	8.05E-02	1.22E-06	7.10E-02	1.06E-07	9.91E-07	
Road #1			0200-0300	3.19E-02	3.88E-08	3.64E-07	2.89E-02	3.44E-08	3.25E-07	8.92E-02	1.09E-07	1.02E-06	7.87E-02	9.56E-08	8.97E-07
Road #1			0300-0400	3.60E-02	3.88E-08	3.64E-07	3.29E-02	3.44E-08	3.25E-07	9.76E-02	1.09E-07	1.02E-06	7.87E-02	9.56E-08	8.97E-07
Road #1			0400-0500	3.54E-02	3.98E-08	3.71E-07	3.54E-02	3.55E-08	3.35E-07	1.09E-02	1.02E-06	8.35E-02	9.52E-08	8.93E-07	8.93E-07
Road #1			0500-0600	2.82E-02	4.49E-08	4.21E-07	2.49E-02	3.97E-08	3.78E-07	8.44E-02	1.38E-07	1.29E-06	7.47E-02	1.19E-07	1.12E-06
Road #1			0600-0700	2.08E-02	5.98E-08	5.62E-07	1.82E-02	5.28E-08	5.04E-07	7.64E-02	2.20E-07	2.06E-06	6.43E-02	1.89E-07	1.73E-06
Road #1			0700-0800	2.49E-02	5.98E-08	5.62E-07	2.19E-02	5.28E-08	5.04E-07	8.64E-02	2.20E-07	2.06E-06	6.43E-02	1.89E-07	1.73E-06
Road #1			0800-0900	2.61E-02	1.94E-07	1.82E-06	2.26E-02	1.68E-07	1.58E-06	8.13E-07	6.07E-07	5.69E-06	6.85E-02	5.11E-07	4.76E-06
Road #1			0900-1000	2.93E-02	1.90E-07	1.78E-06	2.56E-02	1.66E-07	1.56E-06	8.93E-07	3.76E-07	5.41E-06	6.75E-02	5.46E-07	4.66E-06
Road #1			1000-1100	3.24E-02	1.90E-07	1.78E-06	2.85E-02	1.66E-07	1.56E-06	9.76E-07	3.76E-07	5.41E-06	6.75E-02	5.46E-07	4.66E-06
Road #1			1100-1200	3.76E-02	1.84E-07	1.73E-06	2.87E-02	1.62E-07	1.52E-06	3.62E-02	5.44E-07	5.10E-06	8.32E-02	4.71E-07	4.42E-06
Road #1			1200-1300	3.64E-02	2.20E-07	2.07E-06	3.15E-02	1.92E-07	1.80E-06	1.07E-07	6.46E-07	6.03E-06	6.18E-02	5.46E-07	5.22E-06
Road #1			1300-1400	3.50E-02	5.91E-08	4.98E-07	1.71E-02	5.04E-08	4.84E-07	1.98E-02	7.10E-07	6.65E-06	6.18E-02	1.76E-07	1.62E-06
Road #1			1400-1500	3.52E-02	2.26E-07	2.14E-06	3.05E-02	2.00E-07	1.88E-06	1.06E-07	8.84E-07	6.44E-06	9.21E-02	5.68E-07	5.59E-06
Road #1			1500-1600	3.33E-02	3.20E-07	2.07E-06	2.96E-02	1.96E-07	1.84E-06	1.04E-07	8.87E-07	6.42E-06	9.16E-02	6.09E-07	5.68E-06
Road #1			1600-1700	3.35E-02	2.22E-07	2.12E-06	3.00E-02	2.02E-07	1.90E-06	1.03E-07	8.77E-07	6.35E-06	9.34E-02	6.01E-07	5.64E-06
Road #1			1700-1800	2.81E-02	5.91E-08	4.98E-07	1.71E-02	5.04E-08	4.84E-07	1.98E-02	7.10E-07	6.65E-06	6.18E-02	1.76E-07	1.62E-06
Road #1			1800-1900	2.53E-02	1.92E-07	1.71E-06	2.29E-02	1.65E-07	1.55E-06	7.75E-07	5.58E-07	5.24E-06	6.91E-02	4.68E-07	4.67E-06
Road #1			1900-2000	1.51E-02	1.70E-08	6.57E-07	1.35E-02	6.28E-08	5.99E-07	5.02E-07	2.79E-07	2.62E-06	5.29E-02	2.44E-07	2.28E-06
Road #1			2000-2100	1.45E-02	6.01E-08	6.01E-08	1.29E-02	6.01E-08	5.99E-07	5.02E-07	2.79E-07	2.62E-06	5.29E-02	2.44E-07	2.28E-06
Road #1			2100-2200	1.57E-02	5.98E-08	5.90E-07	1.43E-02	5.98E-08	5.01E-07	4.83E-07	2.42E-06	2.70E-06	5.71E-02	2.13E-07	2.00E-06
Road #1			2200-2300	1.60E-02	5.98E-08	5.96E-07	1.46E-02	5.98E-08	4.98E-07	4.80E-07	2.30E-07	2.64E-06	5.61E-02	2.02E-07	1.89E-06
Road #1			2300-2400	1.87E-02	5.91E-08	4.98E-07	1.71E-02	5.04E-08	4.84E-07	1.98E-02	7.10E-07	6.65E-06	6.18E-02	1.76E-07	1.62E-06
Road #2			0000-0100	3.79E-02	8.76E-08	2.22E-06	3.54E-02	7.98E-08	2.02E-06	1.12E-07	2.59E-07	2.68E-06	1.00E-07	2.31E-07	5.87E-06
Road #2			0100-0200	4.72E-02	8.04E-08	2.03E-06	4.28E-02	7.25E-08	1.84E-06	1.29E-07	2.43E-07	5.55E-06	1.14E-07	2.49E-07	4.93E-06
Road #2			0200-0300	6.62E-02	7.80E-08	1.99E-06	6.08E-02	7.01E-08	1.78E-06	1.46E-07	2.03E-07	5.10E-06	1.26E-07	1.79E-07	4.54E-06
Road #2			0300-0400	6.70E-02	7.80E-08	1.99E-06	6.16E-02	7.01E-08	1.78E-06	1.46E-07	2.03E-07	5.10E-06	1.26E-07	1.79E-07	4.54E-06
Road #2			0400-0500	6.22E-02	8.00E-08	2.03E-06	5.55E-02	7.14E-08	1.81E-06	1.58E-07	2.04E-07	5.16E-06	1.40E-07	1.80E-07	4.55E-06
Road #2			0500-0600	4.92E-02	8.99E-08	2.27E-06	3.46E-02	7.95E-08	2.02E-06	1.37E-07	2.50E-07	6.35E-06	1.20E-07	2.18E-07	5.53E-06
Road #2			0600-0700	4.92E-02	8.99E-08	2.27E-06	3.46E-02	7.95E-08	2.02E-06	1.37E-07	2.50E-07	6.35E-06	1.20E-07	2.18E-07	5.53E-06
Road #2			0700-0800	6.18E-02	5.10E-07	1.27E-05	5.68E-02	4.44E-07	1.10E-05	8.82E-07	1.39E-06	3.52E-05	1.54E-01	1.98E-05	2.98E-05
Road #2			0800-0900	6.09E-02	5.16E-07	1.31E-05	5.24E-02	4.36E-07	1.12E-05	8.68E-07	1.43E-06	3.62E-05	1.43E-01	1.22E-05	3.09E-05
Road #2			0900-1000	6.02E-02	5.16E-07	1.31E-05	5.24E-02	4.36E-07	1.12E-05	8.68E-07	1.43E-06	3.62E-05	1.43E-01	1.22E-05	3.09E-05
Road #2			1000-1100	7.27E-02	4.91E-07	1.25E-05	6.39E-02	4.32E-07	1.09E-05	1.09E-07	3.29E-06	3.34E-05	1.70E-01	1.15E-05	2.91E-05
Road #2			1100-1200	7.96E-02	4.79E-07	1.22E-05	6.47E-02	4.21E-07	1.07E-05	1.97E-07	1.29E-06	3.36E-05	1.72E-01	1.12E-05	2.84E-05
Road #2			1200-1300	9.30E-02	4.79E-07	1.22E-05	6.47E-02	4.21E-07	1.07E-05	1.97E-07	1.29E-06	3.36E-05	1.72E-01	1.12E-05	2.84E-05
Road #2			1300-1400	9.26E-02	4.98E-07	1.24E-05	6.19E-02	4.26E-07	1.09E-05	2.44E-07	1.29E-06	3.36E-05	2.13E-01	1.12E-05	2.86E-05
Road #2			1400-1500	9.53E-02	5.13E-07	1.30E-05	6.39E-02	4.52E-07	1.15E-05	2.49E-07	1.34E-06	3.40E-05	2.19E-01	1.18E-05	2.99E-05
Road #2			1500-1600	9.07E-02	4.98E-07	1.24E-05	6.19E-02	4.26E-07	1.09E-05	2.44E-07	1.29E-06	3.36E-05	2.13E-01	1.12E-05	2.86E-05
Road #2			1600-1700	9.10E-02	4.98E-07	1.24E-05	6.19E-02	4.26E-07	1.09E-05	2.44E-07	1.29E-06	3.36E-05	2.13E-01	1.12E-05	2.86E-05
Road #2			1700-1800	8.19E-02	4.66E-07	1.18E-05	7.33E-02	4.17E-07	1.06E-05	2.20E-07	1.25E-06	3.38E-05	1.96E-01	1.12E-05	2.82E-05
Road #2			1800-1900	7.35E-02	4.11E-07	1.04E-05	6.65E-02	3.72E-07	9.43E-06	1.90E-07	1.06E-06	2.69E-05	1.71E-01	9.94E-06	2.42E-05
Road #2			1900-2000	3.87E-02	4.05E-07	3.04E-06	3.04E-02	3.72E-07	2.77E-06	1.26E-07	1.26E-06	2.69E-05	1.71E-01	9.94E-06	2.42E-05
Road #2			2000-2100	4.05E-02	4.10E-07	2.57E-06	3.66E-02	3.96E-06	2.94E-06	1.27E-07	3.31E-07	8.18E-06	1.15E-01	2.98E-07	7.56E-06
Road #2			2100-2200	3.95E-02	4.05E-07	2.62E-06	3.41E-02	3.94E-06	2.98E-06	1.26E-07	3.27E-07	8.28E-06	1.13E-01	2.95E-07	7.47E-06
Road #2			2200-2300	4.02E-02	4.05E-07	2.62E-06	3.41E-02	3.94E-06	2.98E-06	1.26E-07	3.27E-07	8.28E-06	1.13E-01	2.95E-07	7.47E-06
Road #2			2300-2400	4.70E-02	9.52E-08	2.44E-06	3.26E-02	8.77E-08	2.22E-06	1.95E-07	2.78E-07	7.05E-06	1.22E-05	5.50E-06	6.35E-06
Road #3			0000-0100	1.38E-02	3.99E-09	4.09E-08	1.24E-02	3.62E-09	3.70E-08	5.55E-02	1.62E-08	1.66E-07	4.86E-02	1.42E-08	1.44E-07
Road #3			0100-0200	1.82E-02	3.97E-09	3.82E-08	1.32E-02	3.37E-09	3.44E-08	4.62E-02	1.32E-08	1.35E-07	4.60E-02	1.14E-08	1.17E-07
Road #3			0200-0300	2.27E-02	3.97E-09	3.82E-08	1.32E-02	3.37E-09	3.44E-08	4.62E-02	1.32E-08	1.35E-07	4.60E-02	1.14E-08	1.17E-07
Road #3			0300-0400	2.63E-02	3.57E-09	3.65E-08	2.37E-02	3.29E-09	3.38E-08	7.97E-02	1.06E-08	1.10E-07	6.98E-02	9.64E-09	9.66E-08
Road #3			0400-0500	2.57E-02	3.71E-09	3.78E-08	2.29E-02	3.29E-09	3.37E-08	7.94E-02	1.14E-08	1.15E-07	6.87E-02	9.69E-09	1.01E-07
Road #3			0500-0600	1.97E-02	4.05E-09	4.05E-08	1.75E-02	3.87E-09	3.87E-08	6.28E-02	1.14E-08	1.15E-07	6.87E-02	9.69E-09	1.01E-07
Road #3			0600-0700	1.43E-02	5.94E-09	6.08E-08	1.75E-02	5.16E-09	5.28E-08	6.28E-02	6.60E-08	6.68E-07	5.15E-02	2.15E-08	2.20E-07
Road #3			0700-0800	2.00E-02	1.83E-08	1.87E-07	1.26E-02	1.57E-08	1.63E-07	1.37E-02	8.67E-08	6.68E-07	6.01E-02	5.84E-08	5.61E-07
Road #3			0800-0900	1.82E-02	1.83E-08	1.87E-07	1.26E-02	1.57E-08	1.63E-07	1.37E-02	8.67E-08	6.68E-07	6.01E-02	5.84E-08	5.61E-07
Road #3			0900-1000	2.08E-02	1.78E-08	1.82E-07	1.25E-02	1.55E-08	1.62E-07	1.40E-02	6.02E-08	6.51E-07	6.00E-02	5.12E-08	5.24E-07
Road #3			1000-1100	2.34E-02	1.78E-08	1.76E-07	2.05E-02	1.54E-08	1.57E-07	7.58E-02	5.68E-08	6.15E-07	6.52E-02	4.98E-08	5.09E-07
Road #3			1100-1200	2.19E-02	1.78E-08	1.76E-07	2.05E-02	1.54E-08	1.57E-07	7.58E-02	5.68E-08	6.15E-07	6.52E-02	4.98E-08	5.09E-07
Road #3			1200-1300	2.05E-02	5.95E-08	5.76E-07	1.78E-02	4.99E-08	5.01E-07	7.94E-02	2.19E-07	2.24E-06	6.74E-02	1.86E-07	1.90E-06
Road #3			1300-1400	2.03E-02	5.91E-08	5.92E-07	1.78E-02	5.06E-08	5.11E-07	8.10E-02	2.30E-07	2.36E-06	6.96E-02	1.99E-07	2.03E-06
Road #3			1400-1500	2.03E-02	6.09E-08	6.24E-07	1.78E-02	5.35E-08	5.47E-07	8.03E-02	2.41E-07	2.46E-06	6.90E-02	2.07E-07	2.12E-06
Road #3			1500-1600	1.84E-02	5.91E-08	5.92E-07	1.71								

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

[illegible]

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Year 2008				No Emission				No Emission				
APRMO Code	Read ID	Hour	Month	MonthlyHourMin	MonthlyHourAverage	MonthlyHourMin	MonthlyHourAverage	MonthlyHourMin	MonthlyHourAverage	MonthlyHourMin	MonthlyHourAverage	
			g/pH/min	tonne/hour	g/pH/min	tonne/hour	g/pH/min	tonne/hour	g/pH/min	tonne/hour	g/pH/min	tonne/hour
Read #7	1600-1700	2:52:02	4.13	2.52	2.52	4.13	2.52	4.13	2.52	4.13	2.52	4.13
Read #7	1700-1800	1:55:02	4.13	1.29	1.29	4.13	1.29	4.13	1.29	4.13	1.29	4.13
Read #7	1800-1900	1:35:02	3.38	0.77	1.06	1.02	1.04	0.75	0.95	0.62	1.88	0.52
Read #7	1900-2000	2:31:02	3.38	0.77	1.06	1.02	1.04	0.75	0.95	0.62	1.88	0.52
Read #7	2000-2100	0:57:02	3.38	0.77	1.06	1.02	1.04	0.75	0.95	0.62	1.88	0.52
Read #7	2100-2200	0:57:02	3.38	0.77	1.06	1.02	1.04	0.75	0.95	0.62	1.88	0.52
Read #7	2200-2300	1:16:02	1.26	0.37	0.96	0.76	1.14	0.37	0.61	0.92	0.27	0.64
Read #7	2300-2400	0:58:02	1.26	0.37	0.96	0.76	1.14	0.37	0.61	0.92	0.27	0.64
Read #8	0000-0100	5:56:02	5.02	0.58	7.51	7.21	0.58	6.82	0.47	2.00	3.65	0.51
Read #8	0100-0200	6:37:02	5.02	0.58	7.51	7.21	0.58	6.82	0.47	2.00	3.65	0.51
Read #8	0200-0300	6:37:02	5.02	0.58	7.51	7.21	0.58	6.82	0.47	2.00	3.65	0.51
Read #8	0300-0400	6:37:02	5.02	0.58	7.51	7.21	0.58	6.82	0.47	2.00	3.65	0.51
Read #8	0400-0500	7:52:02	2.94	0.44	3.77	3.77	0.44	3.77	0.44	3.77	0.44	3.77
Read #8	0500-0600	8:56:02	2.94	0.44	3.77	3.77	0.44	3.77	0.44	3.77	0.44	3.77
Read #8	0600-0700	9:56:02	2.94	0.44	3.77	3.77	0.44	3.77	0.44	3.77	0.44	3.77
Read #8	0700-0800	1:06:02	2.76	0.41	4.17	4.84	0.36	4.57	0.55	1.53	2.36	0.42
Read #8	0800-0900	0:52:02	3.03	0.46	8.45	8.45	0.36	3.02	0.58	1.57	2.37	0.42
Read #8	0900-1000	2:12:02	2.76	0.41	4.17	4.84	0.36	4.57	0.55	1.53	2.36	0.42
Read #8	1000-1100	1:25:02	2.76	0.41	4.17	4.84	0.36	4.57	0.55	1.53	2.36	0.42
Read #8	1100-1200	1:19:02	2.46	0.37	3.14	3.04	0.25	3.24	0.58	1.23	1.83	0.49
Read #8	1200-1300	2:11:02	2.46	0.37	3.14	3.04	0.25	3.24	0.58	1.23	1.83	0.49
Read #8	1300-1400	2:11:02	2.46	0.37	3.14	3.04	0.25	3.24	0.58	1.23	1.83	0.49
Read #8	1400-1500	2:16:02	2.46	0.37	3.14	3.04	0.25	3.24	0.58	1.23	1.83	0.49
Read #8	1500-1600	2:06:02	3.85	0.51	1.78	1.78	0.47	2.05	1.43	1.43	2.16	0.59
Read #8	1600-1700	1:52:02	3.85	0.51	1.78	1.78	0.47	2.05	1.43	1.43	2.16	0.59
Read #8	1700-1800	1:17:02	2.46	0.37	3.14	3.04	0.25	3.24	0.58	1.23	1.83	0.49
Read #8	1800-1900	1:17:02	2.46	0.37	3.14	3.04	0.25	3.24	0.58	1.23	1.83	0.49
Read #8	1900-2000	1:07:02	2.38	0.36	2.09	1.97	0.43	1.26	0.15	0.10	6.61	0.97
Read #8	2000-2100	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	2100-2200	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	2200-2300	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	2300-0000	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	0000-0100	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	0100-0200	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	0200-0300	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	0300-0400	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	0400-0500	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	0500-0600	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	0600-0700	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	0700-0800	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	0800-0900	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	0900-1000	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	1000-1100	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	1100-1200	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	1200-1300	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	1300-1400	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	1400-1500	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	1500-1600	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	1600-1700	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	1700-1800	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	1800-1900	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	1900-2000	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	2000-2100	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	2100-2200	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	2200-2300	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	2300-0000	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	0000-0100	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	0100-0200	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	0200-0300	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	0300-0400	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	0400-0500	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	0500-0600	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	0600-0700	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	0700-0800	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	0800-0900	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	0900-1000	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	1000-1100	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	1100-1200	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	1200-1300	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	1300-1400	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	1400-1500	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	1500-1600	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	1600-1700	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	1700-1800	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	1800-1900	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	1900-2000	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	2000-2100	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	2100-2200	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	2200-2300	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	2300-0000	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	0000-0100	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	0100-0200	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	0200-0300	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	0300-0400	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	0400-0500	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	0500-0600	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	0600-0700	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	0700-0800	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	0800-0900	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	0900-1000	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	1000-1100	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	1100-1200	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	1200-1300	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	1300-1400	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39	0.60	0.42
Read #8	1400-1500	1:01:02	1.28	0.34	1.94	1.94	0.17	1.77	0.50	0.39		

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Open YH North Hourly Emission Factors														
AERMOD Model (Monthly)				Year 2038										
Road Name	Road ID	Hour	NO _x Emission				NO Emission							
			MonthlyHourMin	MonthlyHourAvg	MonthlyHourMin	MonthlyHourAvg	MonthlyHourMin	MonthlyHourAvg						
g/min	g/min	g/min	g/min	g/min	g/min	g/min	g/min	g/min	g/min	g/min	g/min			
Road S1	S1	0000-0100	5.45E-03	6.01E-03	4.38E-03	4.81E-03	4.11E-03	4.54E-03	3.32E-03	3.75E-03	3.26E-03	3.69E-03		
Road S1	S1	0100-0200	6.01E-03	6.58E-03	4.81E-03	5.82E-03	2.28E-04	4.24E-03	4.53E-03	2.17E-03	3.30E-03	3.77E-03	1.47E-03	2.75E-03
Road S1	S1	0200-0300	7.26E-03	7.82E-03	2.22E-04	3.98E-03	1.79E-03	3.67E-03	4.43E-03	1.46E-03	2.72E-03	3.96E-03	1.22E-03	2.75E-03
Road S1	S1	0300-0400	7.82E-03	8.38E-03	4.91E-03	4.91E-03	4.91E-03	4.91E-03	4.91E-03	4.91E-03	4.91E-03	4.91E-03	4.91E-03	4.91E-03
Road S1	S1	0500-0600	8.42E-03	8.92E-03	9.16E-03	7.37E-03	4.38E-03	8.02E-03	5.18E-03	5.92E-03	5.57E-03	4.24E-03	2.48E-03	4.62E-03
Road S1	S1	0600-0700	9.16E-03	9.66E-03	1.14E-03	7.91E-03	9.88E-03	1.84E-03	5.82E-03	6.72E-03	1.25E-03	3.96E-03	5.48E-03	1.02E-03
Road S1	S1	0700-0800	9.66E-03	1.01E-03	1.14E-03	8.42E-03	9.88E-03	1.84E-03	5.82E-03	6.72E-03	1.25E-03	3.96E-03	5.48E-03	1.02E-03
Road S1	S1	0800-0900	9.23E-03	2.71E-03	5.04E-03	7.96E-03	2.32E-03	4.32E-03	4.42E-03	1.43E-03	2.67E-03	4.01E-03	1.17E-03	2.11E-03
Road S1	S1	0900-1000	1.03E-03	2.44E-03	6.07E-03	8.97E-03	2.12E-03	3.96E-03	5.28E-03	1.23E-03	2.33E-03	4.45E-03	1.09E-03	1.96E-03
Road S1	S1	1000-1100	1.17E-03	1.17E-03	1.17E-03	1.17E-03	1.17E-03	1.17E-03	1.17E-03	1.17E-03	1.17E-03	1.17E-03	1.17E-03	1.17E-03
Road S1	S1	1100-1200	1.11E-03	1.11E-03	1.11E-03	1.11E-03	1.11E-03	1.11E-03	1.11E-03	1.11E-03	1.11E-03	1.11E-03	1.11E-03	1.11E-03
Road S1	S1	1200-1300	2.14E-03	3.41E-03	3.97E-03	1.86E-03	2.96E-03	5.52E-03	1.25E-03	2.33E-03	6.71E-03	1.07E-03	2.06E-03	3.96E-03
Road S1	S1	1300-1400	2.14E-03	3.41E-03	3.97E-03	1.86E-03	2.96E-03	5.52E-03	1.25E-03	2.33E-03	6.71E-03	1.07E-03	2.06E-03	3.96E-03
Road S1	S1	1400-1500	2.14E-03	3.41E-03	3.97E-03	1.86E-03	2.96E-03	5.52E-03	1.25E-03	2.33E-03	6.71E-03	1.07E-03	2.06E-03	3.96E-03
Road S1	S1	1500-1600	2.14E-03	3.41E-03	3.97E-03	1.86E-03	2.96E-03	5.52E-03	1.25E-03	2.33E-03	6.71E-03	1.07E-03	2.06E-03	3.96E-03
Road S1	S1	1600-1700	2.14E-03	3.41E-03	3.97E-03	1.86E-03	2.96E-03	5.52E-03	1.25E-03	2.33E-03	6.71E-03	1.07E-03	2.06E-03	3.96E-03
Road S1	S1	1700-1800	1.54E-03	3.09E-03	5.98E-03	1.37E-03	2.71E-03	5.07E-03	1.29E-03	2.46E-03	5.71E-03	1.13E-03	2.11E-03	4.01E-03
Road S1	S1	1800-1900	1.18E-03	2.35E-03	4.67E-03	1.06E-03	2.11E-03	3.94E-03	5.06E-03	1.01E-03	1.88E-03	4.47E-03	8.90E-03	1.66E-03
Road S1	S1	1900-2000	1.03E-03	2.14E-03	3.97E-03	1.86E-03	2.96E-03	5.52E-03	1.25E-03	2.33E-03	6.71E-03	1.07E-03	2.06E-03	3.96E-03
Road S1	S1	2000-2100	1.07E-03	1.33E-03	2.48E-03	9.77E-03	1.21E-03	2.29E-03	5.10E-03	6.33E-03	1.18E-03	4.52E-03	5.61E-03	1.09E-03
Road S1	S1	2100-2200	1.01E-03	1.23E-03	2.06E-03	9.24E-03	1.12E-03	2.08E-03	5.01E-03	6.09E-03	1.14E-03	4.44E-03	5.39E-03	1.01E-03
Road S2	S2	0000-0100	5.45E-03	6.01E-03	4.38E-03	4.81E-03	4.11E-03	4.54E-03	3.32E-03	3.75E-03	3.26E-03	3.69E-03	4.00E-03	8.40E-03
Road S2	S2	0100-0200	6.01E-03	6.58E-03	4.81E-03	5.82E-03	2.28E-04	4.24E-03	4.53E-03	2.17E-03	3.30E-03	3.77E-03	1.47E-03	2.75E-03
Road S2	S2	0200-0300	7.26E-03	7.82E-03	2.22E-04	3.98E-03	1.79E-03	3.67E-03	4.43E-03	1.46E-03	2.72E-03	3.96E-03	1.22E-03	2.75E-03
Road S2	S2	0300-0400	7.82E-03	8.38E-03	4.91E-03	4.91E-03	4.91E-03	4.91E-03	4.91E-03	4.91E-03	4.91E-03	4.91E-03	4.91E-03	4.91E-03
Road S2	S2	0500-0600	8.42E-03	8.92E-03	9.16E-03	7.37E-03	4.38E-03	8.02E-03	5.18E-03	5.92E-03	5.57E-03	4.24E-03	2.48E-03	4.62E-03
Road S2	S2	0600-0700	9.16E-03	9.66E-03	1.14E-03	7.91E-03	9.88E-03	1.84E-03	5.82E-03	6.72E-03	1.25E-03	3.96E-03	5.48E-03	1.02E-03
Road S2	S2	0700-0800	9.66E-03	1.01E-03	1.14E-03	8.42E-03	9.88E-03	1.84E-03	5.82E-03	6.72E-03	1.25E-03	3.96E-03	5.48E-03	1.02E-03
Road S2	S2	0800-0900	9.23E-03	2.71E-03	5.04E-03	7.96E-03	2.32E-03	4.32E-03	4.42E-03	1.43E-03	2.67E-03	4.01E-03	1.17E-03	2.11E-03
Road S2	S2	0900-1000	1.03E-03	2.44E-03	6.07E-03	8.97E-03	2.12E-03	3.96E-03	5.28E-03	1.23E-03	2.33E-03	4.45E-03	1.09E-03	1.96E-03
Road S2	S2	1000-1100	1.17E-03	1.17E-03	1.17E-03	1.17E-03	1.17E-03	1.17E-03	1.17E-03	1.17E-03	1.17E-03	1.17E-03	1.17E-03	1.17E-03
Road S2	S2	1100-1200	1.11E-03	1.11E-03	1.11E-03	1.11E-03	1.11E-03	1.11E-03	1.11E-03	1.11E-03	1.11E-03	1.11E-03	1.11E-03	1.11E-03
Road S2	S2	1200-1300	2.14E-03	3.41E-03	3.97E-03	1.86E-03	2.96E-03	5.52E-03	1.25E-03	2.33E-03	6.71E-03	1.07E-03	2.06E-03	3.96E-03
Road S2	S2	1300-1400	2.14E-03	3.41E-03	3.97E-03	1.86E-03	2.96E-03	5.52E-03	1.25E-03	2.33E-03	6.71E-03	1.07E-03	2.06E-03	3.96E-03
Road S2	S2	1400-1500	2.14E-03	3.41E-03	3.97E-03	1.86E-03	2.96E-03	5.52E-03	1.25E-03	2.33E-03	6.71E-03	1.07E-03	2.06E-03	3.96E-03
Road S2	S2	1500-1600	2.14E-03	3.41E-03	3.97E-03	1.86E-03	2.96E-03	5.52E-03	1.25E-03	2.33E-03	6.71E-03	1.07E-03	2.06E-03	3.96E-03
Road S2	S2	1600-1700	2.14E-03	3.41E-03	3.97E-03	1.86E-03	2.96E-03	5.52E-03	1.25E-03	2.33E-03	6.71E-03	1.07E-03	2.06E-03	3.96E-03
Road S2	S2	1700-1800	1.54E-03	3.09E-03	5.98E-03	1.37E-03	2.71E-03	5.07E-03	1.29E-03	2.46E-03	5.71E-03	1.13E-03	2.11E-03	4.01E-03
Road S2	S2	1800-1900	1.18E-03	2.35E-03	4.67E-03	1.06E-03	2.11E-03	3.94E-03	5.06E-03	1.01E-03	1.88E-03	4.47E-03	8.90E-03	1.66E-03
Road S2	S2	1900-2000	1.03E-03	2.14E-03	3.97E-03	1.86E-03	2.96E-03	5.52E-03	1.25E-03	2.33E-03	6.71E-03	1.07E-03	2.06E-03	3.96E-03
Road S2	S2	2000-2100	1.07E-03	1.33E-03	2.48E-03	9.77E-03	1.21E-03	2.29E-03	5.10E-03	6.33E-03	1.18E-03	4.52E-03	5.61E-03	1.09E-03
Road S2	S2	2100-2200	1.01E-03	1.23E-03	2.06E-03	9.24E-03	1.12E-03	2.08E-03	5.01E-03	6.09E-03	1.14E-03	4.44E-03	5.39E-03	1.01E-03
Road S3	S3	0000-0100	5.45E-03	6.01E-03	4.38E-03	4.81E-03	4.11E-03	4.54E-03	3.32E-03	3.75E-03	3.26E-03	3.69E-03	4.00E-03	8.40E-03
Road S3	S3	0100-0200	6.01E-03	6.58E-03	4.81E-03	5.82E-03	2.28E-04	4.24E-03	4.53E-03	2.17E-03	3.30E-03	3.77E-03	1.47E-03	2.75E-03
Road S3	S3	0200-0300	7.26E-03	7.82E-03	2.22E-04	3.98E-03	1.79E-03	3.67E-03	4.43E-03	1.46E-03	2.72E-03	3.96E-03	1.22E-03	2.75E-03
Road S3	S3	0300-0400	7.82E-03	8.38E-03	4.91E-03	4.91E-03	4.91E-03	4.91E-03	4.91E-03	4.91E-03	4.91E-03	4.91E-03	4.91E-03	4.91E-03
Road S3	S3	0500-0600	8.42E-03	8.92E-03	9.16E-03	7.37E-03	4.38E-03	8.02E-03	5.18E-03	5.92E-03	5.57E-03	4.24E-03	2.48E-03	4.62E-03
Road S3	S3	0600-0700	9.16E-03	9.66E-03	1.14E-03	7.91E-03	9.88E-03	1.84E-03	5.82E-03	6.72E-03	1.25E-03	3.96E-03	5.48E-03	1.02E-03
Road S3	S3	0700-0800	9.66E-03	1.01E-03	1.14E-03	8.42E-03	9.88E-03	1.84E-03	5.82E-03	6.72E-03	1.25E-03	3.96E-03	5.48E-03	1.02E-03
Road S3	S3	0800-0900	9.23E-03	2.71E-03	5.04E-03	7.96E-03	2.32E-03	4.32E-03	4.42E-03	1.43E-03	2.67E-03	4.01E-03	1.17E-03	2.11E-03
Road S3	S3	0900-1000	1.03E-03	2.44E-03	6.07E-03	8.97E-03	2.12E-03	3.96E-03	5.28E-03	1.23E-03	2.33E-03	4.45E-03	1.09E-03	1.96E-03
Road S3	S3	1000-1100	1.17E-03	1.17E-03	1.17E-03	1.17E-03	1.17E-03	1.17E-03	1.17E-03	1.17E-03	1.17E-03	1.17E-03	1.17E-03	1.17E-03
Road S3	S3	1100-1200	1.11E-03	1.11E-03	1.11E-03	1.11E-03	1.11E-03	1.11E-03	1.11E-03	1.11E-03	1.11E-03	1.11E-03	1.11E-03	1.11E-03
Road S3	S3	1200-1300	2.14E-03	3.41E-03	3.97E-03	1.86E-03	2.96E-03	5.52E-03	1.25E-03	2.33E-03	6.71E-03	1.07E-03	2.06E-03	3.96E-03
Road S3	S3	1300-1400	2.14E-03	3.41E-03	3.97E-03	1.86E-03	2.96E-03	5.52E-03	1.25E-03	2.33E-03	6.71E-03	1.07E-03	2.06E-03	3.96E-03
Road S3	S3	1400-1500	2.14E-03	3.41E-03	3.97E-03	1.86E-03	2.96E-03	5.52E-03	1.25E-03	2.33E-03	6.71E-03	1.07E-03	2.06E-03	3.96E-03
Road S3	S3	1500-1600	2.14E-03	3.41E-03	3.97E-03	1.86E-03	2.96E-03	5.52E-03	1.25E-03	2.33E-03	6.71E-03	1.07E-03	2.06E-03	3.96E-03
Road S3	S3	1600-1700	2.14E-03	3.41E-03	3.97E-03	1.86E-03	2.96E-03	5.52E-03	1.25E-03	2.33E-03	6.71E-03	1.07E-03	2.06E-03	3.96E-03
Road S3	S3	1700-1800	1.54E-03	3.09E-03	5.98E-03	1.37E-03	2.71E-03	5.07E-03	1.29E-03	2.46E-03	5.71E-03	1.13E-03	2.11E-03	4.01E-03
Road S3	S3	1800-1900	1.18E-03	2.35E-03	4.67E-03	1.06E-03	2.11E-03	3.94E-03	5.06E-03	1.01E-03	1.88E-03	4.47E-03	8.90E-03	1.66E-03
Road S3	S3	1900-2000	1.03E-03	2.14E-03	3.97E-03	1.86E-03	2.96E-03	5.52E-03	1.25E-03	2.33E-03	6.71E-03	1.07E-03	2.06E-03	3.96E-03
Road S3	S3	2000-2100	1.07E-03	1.33E-03	2.48E-03	9.77E-03	1.21E-03	2.29E-03	5.10E-03	6.33E-03	1.18E-03	4.52E-03	5.61E-03	1.09E-03
Road S3	S3	2100-2200	1.01E-03	1.23E-03	2.06E-03	9.24E-03	1.12E-03	2.08E-03	5.01E-03	6.09E-03	1.14E-03	4.44E-03	5.39E-03	1.01E-03
Road S4	S4	0000-0100	5.45E-03	6.01E-03	4.38E-03	4.81E-03	4.11E-03	4.54E-03	3.32E-03	3.75E-03	3.26E-03	3.69E-03	4.00E-03	8.40E-03
Road S4	S4	0100-0200	6.01E-03	6.58E-03	4.81E-03	5.82E-03	2.28E-04	4.24E-03	4.53E-03					

[illegible]

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

[illegible]

North North Underground Quarry										
Year 2008										
ADMM Code (April)										
Road ID	Road ID	Hour	NO _x Emission				NO ₂ Emission			
			MonthlyHourMin	MonthlyHourAverage	MonthlyHourMin	MonthlyHourAverage	MonthlyHourMin	MonthlyHourAverage		
g/m ³ /veh	g/m ³ /veh	g/m ³ /veh	g/m ³ /veh	g/m ³ /veh	g/m ³ /veh	g/m ³ /veh	g/m ³ /veh	g/m ³ /veh	g/m ³ /veh	
Road 1	0000-0010	5:45:00	5.45	5.45	5.45	5.45	5.45	5.45	5.45	
Road 1	0100-0200	6:05:00	6.05	6.05	6.05	6.05	6.05	6.05	6.05	
Road 1	0200-0300	6:59:00	6.59	6.59	6.59	6.59	6.59	6.59	6.59	
Road 1	0300-0400	7:12:00	7.12	7.12	7.12	7.12	7.12	7.12	7.12	
Road 1	0400-0500	7:35:00	7.35	7.35	7.35	7.35	7.35	7.35	7.35	
Road 1	0500-0600	7:55:00	7.55	7.55	7.55	7.55	7.55	7.55	7.55	
Road 1	0600-0700	8:18:00	8.08	8.42	7.22	7.14	8.36	6.56	8.36	
Road 1	0700-0800	8:29:00	8.29	8.29	8.29	8.29	8.29	8.29	8.29	
Road 1	0800-0900	8:35:00	8.35	8.35	8.35	8.35	8.35	8.35	8.35	
Road 1	0900-1000	8:97:00	8.44	2.44	2.44	2.44	2.44	2.44	2.44	
Road 1	1000-1100	1:01:00	1.44	2.28	0.28	0.28	1.67	0.28	1.67	
Road 1	1100-1200	1:39:00	1.39	1.39	1.39	1.39	1.39	1.39	1.39	
Road 1	1200-1300	1:56:00	1.56	1.56	1.56	1.56	1.56	1.56	1.56	
Road 1	1300-1400	2:00:00	2:00	2:00	2:00	2:00	2:00	2:00	2:00	
Road 1	1400-1500	2:16:00	2.16	2.16	2.16	2.16	2.16	2.16	2.16	
Road 1	1500-1600	2:36:00	2.36	2.36	2.36	2.36	2.36	2.36	2.36	
Road 1	1600-1700	2:58:00	2.58	2.58	2.58	2.58	2.58	2.58	2.58	
Road 1	1700-1800	3:10:00	3.10	3.10	3.10	3.10	3.10	3.10	3.10	
Road 1	1800-1900	3:42:00	3.42	3.42	3.42	3.42	3.42	3.42	3.42	
Road 1	1900-2000	4:04:00	4.04	4.04	4.04	4.04	4.04	4.04	4.04	
Road 1	2000-2100	4:26:00	4.26	4.26	4.26	4.26	4.26	4.26	4.26	
Road 1	2100-2200	4:48:00	4.48	4.48	4.48	4.48	4.48	4.48	4.48	
Road 1	2200-2300	5:10:00	5.10	5.10	5.10	5.10	5.10	5.10	5.10	
Road 1	2300-2400	5:32:00	5.32	5.32	5.32	5.32	5.32	5.32	5.32	
Road 2	0000-0100	5:45:00	5.45	5.45	5.45	5.45	5.45	5.45	5.45	
Road 2	0100-0200	6:05:00	6.05	6.05	6.05	6.05	6.05	6.05	6.05	
Road 2	0200-0300	6:59:00	6.59	6.59	6.59	6.59	6.59	6.59	6.59	
Road 2	0300-0400	7:12:00	7.12	7.12	7.12	7.12	7.12	7.12	7.12	
Road 2	0400-0500	7:35:00	7.35	7.35	7.35	7.35	7.35	7.35	7.35	
Road 2	0500-0600	7:55:00	7.55	7.55	7.55	7.55	7.55	7.55	7.55	
Road 2	0600-0700	8:18:00	8.08	8.42	7.22	7.14	8.36	6.56	8.36	
Road 2	0700-0800	8:29:00	8.29	8.29	8.29	8.29	8.29	8.29	8.29	
Road 2	0800-0900	8:35:00	8.35	8.35	8.35	8.35	8.35	8.35	8.35	
Road 2	0900-1000	8:97:00	8.97							
Road 2	1000-1100	1:01:00	1.44	2.28	0.28	0.28	1.67	0.28	1.67	
Road 2	1100-1200	1:39:00	1.39	1.39	1.39	1.39	1.39	1.39	1.39	
Road 2	1200-1300	1:56:00	1.56	1.56	1.56	1.56	1.56	1.56	1.56	
Road 2	1300-1400	2:00:00	2:00	2:00	2:00	2:00	2:00	2:00	2:00	
Road 2	1400-1500	2:16:00	2.16	2.16	2.16	2.16	2.16	2.16	2.16	
Road 2	1500-1600	2:36:00	2.36	2.36	2.36	2.36	2.36	2.36	2.36	
Road 2	1600-1700	2:58:00	2.58	2.58	2.58	2.58	2.58	2.58	2.58	
Road 2	1700-1800	3:10:00	3.10	3.10	3.10	3.10	3.10	3.10	3.10	
Road 2	1800-1900	3:42:00	3.42	3.42	3.42	3.42	3.42	3.42	3.42	
Road 2	1900-2000	4:04:00	4.04	4.04	4.04	4.04	4.04	4.04	4.04	
Road 2	2000-2100	4:26:00	4.26	4.26	4.26	4.26	4.26	4.26	4.26	
Road 2	2100-2200	4:48:00	4.48	4.48	4.48	4.48	4.48	4.48	4.48	
Road 2	2200-2300	5:10:00	5.10	5.10	5.10	5.10	5.10	5.10	5.10	
Road 2	2300-2400	5:32:00	5.32	5.32	5.32	5.32	5.32	5.32	5.32	
Road 3	0000-0100	5:45:00	5.45	5.45	5.45	5.45	5.45	5.45	5.45	
Road 3	0100-0200	6:05:00	6.05	6.05	6.05	6.05	6.05	6.05	6.05	
Road 3	0200-0300	6:59:00	6.59	6.59	6.59	6.59	6.59	6.59	6.59	
Road 3	0300-0400	7:12:00	7.12	7.12	7.12	7.12	7.12	7.12	7.12	
Road 3	0400-0500	7:35:00	7.35	7.35	7.35	7.35	7.35	7.35	7.35	
Road 3	0500-0600	7:55:00	7.55	7.55	7.55	7.55	7.55	7.55	7.55	
Road 3	0600-0700	8:18:00	8.08	8.42	7.22	7.14	8.36	6.56	8.36	
Road 3	0700-0800	8:29:00	8.29	8.29	8.29	8.29	8.29	8.29	8.29	
Road 3	0800-0900	8:35:00	8.35	8.35	8.35	8.35	8.35	8.35	8.35	
Road 3	0900-1000	8:97:00	8.97							
Road 3	1000-1100	1:01:00	1.44	2.28	0.28	0.28	1.67	0.28	1.67	
Road 3	1100-1200	1:39:00	1.39	1.39	1.39	1.39	1.39	1.39	1.39	
Road 3	1200-1300	1:56:00	1.56	1.56	1.56	1.56	1.56	1.56	1.56	
Road 3	1300-1400	2:00:00	2:00	2:00	2:00	2:00	2:00	2:00	2:00	
Road 3	1400-1500	2:16:00	2.16	2.16	2.16	2.16	2.16	2.16	2.16	
Road 3	1500-1600	2:36:00	2.36	2.36	2.36	2.36	2.36	2.36	2.36	
Road 3	1600-1700	2:58:00	2.58	2.58	2.58	2.58	2.58	2.58	2.58	
Road 3	1700-1800	3:10:00	3.10	3.10	3.10	3.10	3.10	3.10	3.10	
Road 3	1800-1900	3:42:00	3.42	3.42	3.42	3.42	3.42	3.42	3.42	
Road 3	1900-2000	4:04:00	4.04	4.04	4.04	4.04	4.04	4.04	4.04	
Road 3	2000-2100	4:26:00	4.26	4.26	4.26	4.26	4.26	4.26	4.26	
Road 3	2100-2200	4:48:00	4.48	4.48	4.48	4.48	4.48	4.48	4.48	
Road 3	2200-2300	5:10:00	5.10	5.10	5.10	5.10	5.10	5.10	5.10	
Road 3	2300-2400	5:32:00	5.32	5.32	5.32	5.32	5.32	5.32	5.32	
Road 4	0000-0100	5:45:00	5.45	5.45	5.45	5.45	5.45	5.45	5.45	
Road 4	0100-0200	6:05:00	6.05	6.05	6.05	6.05	6.05	6.05	6.05	
Road 4	0200-0300	6:59:00	6.59	6.59	6.59	6.59	6.59	6.59	6.59	
Road 4	0300-0400	7:12:00	7.12	7.12	7.12	7.12	7.12	7.12	7.12	
Road 4	0400-0500	7:35:00	7.35	7.35	7.35	7.35	7.35	7.35	7.35	
Road 4	0500-0600	7:55:00	7.55	7.55	7.55	7.55	7.55	7.55	7.55	
Road 4	0600-0700	8:18:00	8.08	8.42	7.22	7.14	8.36	6.56	8.36	
Road 4	0700-0800	8:29:00	8.29	8.29	8.29	8.29	8.29	8.29	8.29	
Road 4	0800-0900	8:35:00	8.35	8.35	8.35	8.35	8.35	8.35	8.35	
Road 4	0900-1000	8:97:00	8.97							
Road 4	1000-1100	1:01:00	1.44	2.28	0.28	0.28	1.67	0.28	1.67	
Road 4	1100-1200	1:39:00	1.39	1.39	1.39	1.39	1.39	1.39	1.39	
Road 4	1200-1300	1:56:00	1.56	1.56	1.56	1.56	1.56	1.56	1.56	
Road 4	1300-1400	2:00:00	2:00	2:00	2:00	2:00	2:00	2:00	2:00	
Road 4	1400-1500	2:16:00	2.16	2.16	2.16	2.16	2.16	2.16	2.16	
Road 4	1500-1600	2:36:00	2.36	2.36	2.36	2.36	2.36	2.36	2.36	
Road 4	1600-1700	2:58:00	2.58	2.58	2.58	2.58	2.58	2.58	2.58	
Road 4	1700-1800	3:10:00	3.10	3.10	3.10	3.10	3.10	3.10	3.10	
Road 4	1800-1900	3:42:00	3.42	3.42	3.42	3.42	3.42	3.42	3.42	
Road 4	1900-2000	4:04:00	4.04	4.04	4.04	4.04	4.04	4.04	4.04	
Road 4	2000-2100	4:26:00	4.26	4.26	4.26	4.26	4.26	4.26	4.26	
Road 4	2100-2200	4:48:00	4.48	4.48	4.48	4.48	4.48	4.48	4.48	
Road 4	2200-2300	5:10:00	5.10	5.10	5.10	5.10	5.10	5.10	5.10	
Road 4	2300-2400	5:32:00	5.32	5.32	5.32	5.32	5.32	5.32	5.32	

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Open Road 24 Hour Underground Quarry													
Year 2038													
AFIRM Model (g/m³)													
Road Name	Road ID	Hour	NO _x Emission						NO ₂ Emission				
			Monthly/gm ³		Monthly/hour		Monthly/hour		Monthly/hour		Monthly/hour		
			g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³
Road 1	4	0800-0900	8.57E-03	3.08E-07	6.17E-06	7.50E-03	2.68E-07	5.34E-06	4.39E-03	1.58E-06	3.16E-05	3.73E-03	1.34E-06
Road 1	4	0900-1000	8.57E-03	3.08E-07	6.17E-06	7.50E-03	2.68E-07	5.34E-06	4.39E-03	1.58E-06	3.16E-05	3.73E-03	1.34E-06
Road 4	4	1000-1100	1.11E-02	2.79E-07	5.60E-06	9.67E-04	2.24E-07	4.89E-06	5.23E-02	1.23E-06	2.64E-05	4.46E-02	1.12E-06
Road 4	4	1100-1200	1.05E-02	2.53E-07	5.03E-06	9.22E-04	2.20E-07	4.41E-06	5.12E-02	1.24E-06	2.49E-05	4.47E-02	1.07E-06
Road 4	4	1200-1300	1.16E-02	2.97E-07	6.24E-06	1.07E-03	2.52E-07	5.35E-06	5.82E-02	1.36E-06	2.94E-05	4.97E-02	1.24E-06
Road 4	4	1300-1400	1.16E-02	2.97E-07	6.24E-06	1.07E-03	2.52E-07	5.35E-06	5.82E-02	1.36E-06	2.94E-05	4.97E-02	1.24E-06
Road 4	4	1400-1500	1.22E-02	4.08E-07	8.47E-06	1.07E-03	3.27E-07	7.18E-06	5.58E-02	1.86E-06	3.73E-05	4.78E-02	1.59E-06
Road 4	4	1500-1600	1.22E-02	4.08E-07	8.47E-06	1.07E-03	3.27E-07	7.18E-06	5.58E-02	1.86E-06	3.73E-05	4.78E-02	1.59E-06
Road 4	4	1600-1700	1.22E-02	4.08E-07	8.47E-06	1.07E-03	3.27E-07	7.18E-06	5.58E-02	1.86E-06	3.73E-05	4.78E-02	1.59E-06
Road 4	4	1700-1800	8.84E-03	3.71E-07	7.43E-06	7.63E-03	2.64E-07	6.41E-06	4.79E-02	1.40E-06	4.03E-05	4.00E-02	1.68E-06
Road 4	4	1800-1900	8.84E-03	3.71E-07	7.43E-06	7.63E-03	2.64E-07	6.41E-06	4.79E-02	1.40E-06	4.03E-05	4.00E-02	1.68E-06
Road 4	4	1900-2000	5.52E-03	2.06E-07	4.13E-06	4.83E-03	1.86E-07	3.61E-06	3.43E-02	2.18E-06	2.56E-05	2.99E-02	1.08E-06
Road 4	4	2000-2100	5.52E-03	2.06E-07	4.13E-06	4.83E-03	1.86E-07	3.61E-06	3.43E-02	2.18E-06	2.56E-05	2.99E-02	1.08E-06
Road 4	4	2100-2200	4.97E-03	1.54E-07	3.10E-06	4.72E-03	1.37E-07	2.74E-06	3.18E-02	1.10E-06	2.20E-05	3.22E-02	9.35E-07
Road 4	4	2200-2300	4.97E-03	1.54E-07	3.10E-06	4.72E-03	1.37E-07	2.74E-06	3.18E-02	1.10E-06	2.20E-05	3.22E-02	9.35E-07
Road 4	4	2300-0000	4.97E-03	1.54E-07	3.10E-06	4.72E-03	1.37E-07	2.74E-06	3.18E-02	1.10E-06	2.20E-05	3.22E-02	9.35E-07
Road 5	5	0000-0100	7.62E-03	3.58E-06	4.00E-07	6.69E-03	4.25E-06	3.94E-07	5.09E-02	3.06E-07	3.01E-06	4.29E-03	4.29E-03
Road 5	5	0100-0200	8.63E-03	3.58E-06	4.00E-07	7.72E-03	4.25E-06	3.94E-07	5.09E-02	3.06E-07	3.01E-06	4.29E-03	4.29E-03
Road 5	5	0200-0300	7.62E-03	2.88E-08	2.41E-07	7.72E-03	2.75E-08	2.16E-07	5.29E-02	1.77E-07	1.48E-06	5.53E-02	1.53E-07
Road 5	5	0300-0400	9.28E-03	2.44E-08	2.04E-07	8.35E-03	2.20E-08	1.86E-07	5.44E-02	1.43E-07	1.20E-06	4.74E-02	1.25E-06
Road 5	5	0400-0500	1.16E-02	2.97E-07	6.24E-06	1.07E-03	2.52E-07	5.35E-06	5.82E-02	1.36E-06	2.94E-05	4.97E-02	1.24E-06
Road 5	5	0500-0600	1.16E-02	2.97E-07	6.24E-06	1.07E-03	2.52E-07	5.35E-06	5.82E-02	1.36E-06	2.94E-05	4.97E-02	1.24E-06
Road 5	5	0600-0700	1.39E-01	1.44E-07	1.20E-06	1.21E-02	1.28E-07	1.07E-06	8.70E-02	7.93E-07	6.10E-05	5.93E-02	6.31E-07
Road 5	5	0700-0800	1.39E-01	1.44E-07	1.20E-06	1.21E-02	1.28E-07	1.07E-06	8.70E-02	7.93E-07	6.10E-05	5.93E-02	6.31E-07
Road 5	5	0800-0900	1.78E-02	4.28E-07	3.59E-06	1.52E-02	3.75E-07	3.14E-06	1.80E-02	1.39E-06	1.61E-05	6.68E-02	1.65E-06
Road 5	5	0900-1000	1.94E-02	3.86E-07	3.22E-06	1.68E-02	3.34E-07	2.79E-06	1.83E-02	1.16E-06	1.47E-05	6.18E-02	1.49E-06
Road 5	5	1000-1100	2.18E-02	3.63E-07	3.02E-06	1.88E-02	3.16E-07	2.64E-06	1.92E-02	1.08E-06	1.32E-05	7.97E-02	1.35E-06
Road 5	5	1100-1200	2.56E-02	3.92E-06	3.29E-06	2.19E-02	3.48E-07	2.93E-06	2.28E-02	1.16E-06	1.47E-05	9.07E-02	1.50E-06
Road 5	5	1200-1300	2.65E-02	6.90E-07	5.76E-06	2.18E-02	6.02E-07	5.03E-06	1.40E-01	2.87E-06	2.04E-05	8.94E-02	2.46E-06
Road 5	5	1300-1400	2.83E-02	7.31E-07	6.07E-06	2.35E-02	6.38E-07	5.33E-06	1.13E-01	3.13E-06	2.61E-05	2.69E-02	2.69E-06
Road 5	5	1400-1500	2.83E-02	7.31E-07	6.07E-06	2.35E-02	6.38E-07	5.33E-06	1.13E-01	3.13E-06	2.61E-05	2.69E-02	2.69E-06
Road 5	5	1500-1600	2.86E-02	8.09E-07	6.76E-06	2.33E-02	7.10E-07	5.93E-06	1.14E-01	3.56E-06	2.97E-05	1.01E-01	3.07E-06
Road 5	5	1600-1700	2.89E-02	9.57E-07	8.00E-06	2.53E-02	8.67E-07	7.00E-06	1.14E-01	3.76E-06	3.14E-05	9.74E-02	3.24E-06
Road 5	5	1700-1800	2.82E-02	7.65E-07	6.38E-06	2.35E-02	6.83E-07	5.65E-06	1.14E-01	3.13E-06	2.61E-05	7.87E-02	2.75E-06
Road 5	5	1800-1900	1.62E-02	7.05E-07	5.99E-06	1.39E-02	6.07E-07	5.07E-06	1.41E-01	3.23E-06	2.70E-05	6.19E-02	2.70E-06
Road 5	5	1900-2000	1.71E-02	6.27E-07	5.33E-06	1.06E-02	3.71E-07	3.18E-06	6.28E-02	2.06E-06	1.83E-05	3.37E-02	1.87E-06
Road 5	5	2000-2100	1.80E-02	6.27E-07	5.33E-06	1.06E-02	3.71E-07	3.18E-06	6.28E-02	2.06E-06	1.83E-05	3.37E-02	1.87E-06
Road 5	5	2100-2200	4.84E-03	2.29E-07	1.91E-06	7.55E-03	2.04E-07	1.77E-06	5.86E-02	1.53E-06	1.93E-05	1.37E-02	1.14E-06
Road 5	5	2200-2300	8.18E-03	2.16E-07	1.81E-06	7.25E-03	1.92E-07	1.60E-06	5.77E-02	1.53E-06	1.27E-05	4.93E-03	1.30E-06
Road 5	5	2300-0000	8.76E-03	1.73E-07	1.44E-06	7.58E-03	1.48E-07	1.25E-06	5.02E-02	1.17E-06	9.73E-03	4.89E-03	1.65E-06
Road 6	6	0000-0100	1.78E-02	7.25E-07	6.07E-06	2.35E-02	6.38E-07	5.33E-06	1.13E-01	3.13E-06	2.61E-05	2.69E-02	2.69E-06
Road 6	6	0100-0200	1.80E-02	1.12E-07	3.15E-06	1.98E-02	9.84E-07	2.77E-06	8.29E-02	5.16E-06	5.47E-05	7.12E-02	4.44E-07
Road 6	6	0200-0300	1.88E-02	8.98E-08	2.44E-06	1.70E-02	7.83E-08	2.20E-06	8.45E-02	3.90E-07	1.10E-05	7.49E-02	3.46E-07
Road 6	6	0300-0400	2.09E-02	9.48E-08	2.69E-06	1.92E-02	8.36E-08	2.25E-06	8.79E-02	1.25E-06	1.25E-05	7.87E-02	3.74E-07
Road 6	6	0400-0500	2.13E-02	8.72E-08	2.46E-06	1.92E-02	7.88E-08	2.21E-06	9.17E-02	3.76E-07	1.06E-05	8.13E-02	3.34E-07
Road 6	6	0500-0600	2.40E-02	1.72E-07	4.85E-06	2.12E-02	1.52E-07	4.28E-06	1.02E-01	7.30E-07	2.06E-05	8.84E-02	6.34E-07
Road 6	6	0600-0700	3.01E-02	2.48E-07	6.67E-06	2.62E-02	2.19E-07	5.93E-06	1.25E-01	1.01E-06	2.61E-05	1.18E-01	8.84E-07
Road 6	6	0700-0800	4.13E-02	1.33E-07	3.74E-06	3.68E-02	1.17E-06	3.20E-06	1.63E-01	5.18E-06	1.46E-04	1.42E-01	4.51E-07
Road 6	6	0800-0900	4.64E-02	1.64E-05	4.63E-05	3.90E-02	1.45E-06	4.07E-07	1.72E-01	6.37E-06	1.80E-04	1.50E-01	5.56E-05
Road 6	6	0900-1000	5.05E-02	1.64E-05	4.63E-05	3.90E-02	1.45E-06	4.07E-07	1.72E-01	6.37E-06	1.80E-04	1.50E-01	5.56E-05
Road 6	6	1000-1100	5.55E-02	1.05E-06	4.64E-06	4.86E-02	1.45E-06	4.06E-06	1.61E-01	1.17E-06	1.79E-04	1.53E-01	5.32E-06
Road 6	6	1100-1200	5.18E-02	1.45E-06	4.05E-06	4.57E-02	1.28E-06	3.60E-06	1.59E-01	5.50E-06	1.55E-04	1.17E-01	4.82E-06
Road 6	6	1200-1300	6.38E-02	1.69E-06	4.77E-06	5.38E-02	1.48E-06	4.15E-06	2.25E-01	5.77E-06	1.68E-04	1.96E-01	5.20E-06
Road 6	6	1300-1400	6.84E-02	1.64E-06	4.77E-06	5.38E-02	1.48E-06	4.15E-06	2.25E-01	5.77E-06	1.68E-04	1.96E-01	5.20E-06
Road 6	6	1400-1500	6.96E-02	2.03E-06	5.72E-06	6.11E-02	1.79E-06	5.03E-06	2.48E-01	7.24E-06	2.04E-04	2.17E-01	6.34E-06
Road 6	6	1500-1600	7.28E-02	1.92E-06	5.41E-06	5.61E-02	1.69E-06	4.58E-06	2.48E-01	7.48E-06	2.11E-04	2.17E-01	6.39E-06
Road 6	6	1600-1700	6.42E-02	1.64E-06	4.77E-06	5.38E-02	1.48E-06	4.15E-06	2.25E-01	5.77E-06	1.68E-04	1.96E-01	5.20E-06
Road 6	6	1700-1800	5.98E-02	1.58E-06	4.45E-06	4.33E-02	1.37E-06	3.86E-06	2.04E-01	6.48E-06	1.82E-04	1.76E-01	5.57E-06
Road 6	6	1800-1900	3.31E-02	1.01E-06	2.84E-06	2.88E-02	8.71E-07	2.45E-06	1.39E-01	4.23E-06	1.19E-04	1.18E-01	3.62E-06
Road 6	6	1900-2000	2.80E-02	1.01E-06	2.84E-06	2.88E-02	8.71E-07	2.45E-06	1.39E-01	4.23E-06	1.19E-04	1.18E-01	3.62E-06
Road 6	6	2000-2100	2.30E-02	4.18E-07	1.18E-06	2.05E-02	3.77E-07	1.05E-07	1.01E-01	5.48E-06	9.42E-07	1.71E-01	4.82E-07
Road 6	6	2100-2200	2.21E-02	4.02E-07	1.13E-06	1.99E-02	3.61E-07	1.02E-05	1.05E-01	1.91E-06	5.38E-05	9.30E-02	1.69E-06
Road 6	6	2200-2300	2.24E-02	3.98E-07	1.09E-06	2.00E-02	3.57E-07	9.79E-06	1.09E-01	1.73E-06	4.89E-05	8.77E-02	1.62E-06
Road 7	7	0000-0100	1.36E-02	3.36E-07	9.22E-07	5.11E-02	1.34E-06	3.69E-07	4.08E-02	2.42E-07	2.83E-06	4.24E-02	2.02E-06
Road 7	7	0100-0200	7.76E-02	2.62E-08	3.01E-07	5.93E-02	2.28E-08	2.69E-07	4.27E-02	1.63E-07	1.94E-06	3.98E-02	1.63E-06
Road 7	7	0200-0300	7.42E-02	2.62E-08	3.01E-07	5.93E-02	2.28E-08	2.69E-07	4.27E-02	1.63E-07	1.94E-06	3.98E-02	1.63E-06
Road 7	7	0300-0400	8.14E-02	1.83E-08	2.14E-07	7.34E-02	1.66E-08	1.99E-07	4.57E-02	1.03E-07	1.20E-06	3.99E-02	8.96E-06
Road 7	7	0400-0500	8.63E-03	2.12E-08	2.96E-07	7.75E-03	1.91E-08	2.24E-07	4.72E-02	1.16E-07	1.39E-06	4.11E-02	1.10E-06
Road 7	7	0500-0600	8.96E-03	2.12E-08	2.96E-07	7.75E-03	1.91E-08	2.24E-07	4.72E-02	1.16E-0			

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Appendix\Appendix 3.5.4 Emission Factor in 2038-S B.xlsx

Tsim Yi North Underground Tunnel											
Open Road 24 hour Emission Factors for											
AHEMCO model (April)											
Road Name	Road ID	Hour	NO Emission				NO Emission				
			MonthlyHourMin		MonthlyHourAverage		MonthlyHourMin		MonthlyHourAverage		
			g/m ³ /veh	tonne/hour	g/m ³ /m ³	tonne/hour	g/m ³ /m ³	tonne/hour	g/m ³ /m ³	tonne/hour	
Road 7	1800-1700	1:00-2:00	3.39	0.0001	1.17	1.00E-07	1.17	1.00E-07	1.66	0.0001	6.13E-07
Road 7	1700-1800	2:00-3:00	3.39	0.0001	1.17	1.00E-07	1.17	1.00E-07	1.66	0.0001	6.13E-07
Road 7	1800-1900	3:00-4:00	2.62E-07	3.00E-06	8.21E-03	2.26E-07	2.65E-06	4.75E-02	1.30E-06	1.54E-05	4.01E-02
Road 7	1900-2000	4:00-5:00	1.58E-06	1.86E-05	6.45E-03	1.38E-06	1.63E-05	4.12E-02	8.81E-07	1.05E-05	3.51E-02
Road 7	2000-2100	5:00-6:00	1.77E-06	2.12E-05	7.17E-03	1.56E-06	1.87E-05	4.69E-02	9.75E-07	1.16E-05	3.94E-02
Road 7	2100-2200	6:00-7:00	1.26E-07	1.26E-06	5.51E-03	9.59E-08	1.12E-06	4.25E-02	7.13E-07	3.86E-06	3.67E-02
Road 7	2200-2300	6:30-7:30	1.03E-07	1.21E-06	5.17E-03	1.07E-08	1.07E-06	4.18E-02	6.79E-07	7.97E-06	3.58E-02
Road 8	2100-2200	7:00-8:00	7.19E-07	8.43E-06	3.58E-03	5.18E-07	5.18E-06	2.00E-02	3.81E-07	3.75E-06	1.47E-02
Road 8	0000-0100	8:00-9:00	4.39E-09	1.00E-07	7.74E-03	3.93E-09	8.83E-08	4.31E-02	2.43E-09	4.30E-07	3.67E-02
Road 8	0100-0200	9:30-10:30	3.48E-08	6.98E-08	6.01E-03	3.07E-08	6.10E-07	4.47E-02	1.66E-08	3.33E-07	3.81E-02
Road 8	0200-0300	9:30-10:30	8.98E-08	1.79E-07	1.63E-03	4.38E-08	8.76E-07	6.40E-02	4.04E-08	8.10E-07	9.47E-02
Road 8	0300-0400	10:30-12:00	2.20E-04	4.44E-05	9.28E-03	1.98E-04	4.01E-05	4.72E-02	1.01E-05	2.05E-07	4.73E-02
Road 8	0400-0500	10:00-12:00	5.51E-05	5.16E-05	9.78E-03	2.30E-05	4.64E-05	4.88E-02	1.13E-05	2.34E-07	4.31E-02
Road 8	0500-0600	11:00-12:00	4.76E-05	9.56E-06	1.02E-07	4.71E-05	8.48E-06	5.54E-02	2.11E-06	4.27E-07	4.40E-02
Road 8	0600-0700	12:00-1:00	1.20E-05	1.20E-05	1.00E-07	1.20E-05	1.20E-05	5.54E-02	5.00E-06	5.00E-07	1.82E-08
Road 8	0700-0800	12:00-1:00	2.27E-05	4.59E-07	1.11E-02	2.00E-06	4.04E-07	5.10E-02	9.86E-06	1.99E-06	4.72E-02
Road 8	0800-0900	12:30-2:00	5.26E-05	5.07E-07	1.08E-02	2.20E-06	4.45E-07	5.21E-02	1.00E-05	2.15E-06	4.49E-02
Road 8	0900-1000	13:00-14:00	1.24E-05	1.24E-05	1.00E-07	1.24E-05	1.24E-05	5.54E-02	5.00E-06	5.00E-07	1.82E-08
Road 8	1000-1100	15:00-17:00	2.41E-08	4.88E-07	1.32E-03	2.11E-08	4.27E-07	6.35E-02	9.75E-09	1.97E-08	5.48E-02
Road 8	1100-1200	15:00-17:00	2.22E-08	4.53E-07	1.39E-03	1.96E-08	3.97E-07	6.31E-02	9.21E-08	1.86E-08	5.49E-02
Road 8	1200-1300	15:00-17:00	1.91E-08	3.81E-07	1.24E-03	1.72E-08	3.44E-07	6.31E-02	8.00E-08	1.60E-08	5.49E-02
Road 8	1300-1400	1:00-2:00	1.98E-08	3.94E-08	1.711E-07	3.98E-08	1.94E-06	7.88E-02	3.37E-07	6.81E-08	6.83E-02
Road 8	1400-1500	1:00-2:00	8.84E-08	1.79E-06	1.44E-02	7.77E-08	1.57E-06	7.79E-02	3.46E-07	6.99E-06	6.79E-02
Road 8	1500-1600	1:00-2:00	8.45E-09	1.71E-06	1.52E-02	7.42E-09	1.50E-06	7.80E-02	3.37E-07	6.75E-06	6.79E-02
Road 8	1600-1700	1:00-2:00	1.87E-06	1.79E-06	1.64E-02	1.76E-06	1.57E-06	7.29E-02	3.45E-07	6.99E-06	6.79E-02
Road 8	1700-1800	1:00-2:00	1.46E-08	7.45E-08	1.51E-06	1.26E-08	4.46E-08	1.31E-06	6.54E-02	3.34E-07	6.77E-08
Road 8	1800-1900	1:00-2:00	1.09E-08	5.62E-08	1.14E-06	9.38E-08	9.82E-07	3.49E-06	2.99E-07	5.15E-07	4.17E-06
Road 8	1900-2000	2:00-3:00	9.72E-08	1.96E-06	1.63E-02	9.32E-08	1.72E-06	5.25E-02	3.45E-07	6.99E-06	6.79E-02
Road 8	2000-2100	3:00-4:00	9.59E-03	6.22E-07	8.54E-07	8.74E-06	5.54E-07	4.84E-02	1.55E-03	3.14E-06	4.22E-03
Road 8	2100-2200	4:00-5:00	2.83E-08	5.73E-07	6.02E-03	2.54E-08	5.13E-07	4.74E-02	1.49E-07	3.02E-06	4.14E-02
Road 8	2200-2300	5:00-6:00	2.46E-08	4.91E-07	5.16E-03	2.24E-08	4.46E-07	4.14E-02	1.29E-07	2.62E-06	3.50E-02
Road 8	2300-0000	6:00-7:00	9.91E-03	2.29E-06	4.63E-07	8.63E-09	1.99E-08	4.03E-07	4.92E-02	1.14E-07	2.30E-06
Road 8	0000-0100	8:00-9:00	6.98E-08	1.40E-06	1.26E-02	6.01E-08	4.53E-07	6.60E-02	3.77E-08	2.00E-06	5.67E-02
Road 8	0100-0200	9:30-10:30	1.54E-08	3.08E-08	2.66E-03	1.24E-08	2.48E-07	1.80E-02	6.00E-09	1.20E-07	1.40E-02
Road 8	0200-0300	9:30-10:30	1.33E-08	3.61E-08	2.96E-07	1.22E-08	2.75E-07	2.41E-07	7.82E-09	1.65E-08	5.90E-02
Road 8	0300-0400	10:30-12:00	2.25E-08	2.25E-07	1.27E-02	2.38E-08	2.02E-07	6.84E-02	1.47E-07	1.09E-06	6.07E-02
Road 8	0400-0500	10:00-12:00	5.54E-09	5.54E-09	9.78E-03	2.30E-09	4.64E-09	4.88E-02	1.13E-09	2.34E-09	4.31E-02
Road 8	0500-0600	11:00-12:00	4.76E-09	5.20E-09	1.02E-07	4.71E-09	5.13E-09	5.54E-02	2.11E-09	4.27E-09	4.40E-02
Road 8	0600-0700	12:00-1:00	1.20E-09	1.20E-09	1.00E-07	1.20E-09	1.20E-09	5.54E-02	5.00E-10	5.00E-10	1.82E-08
Road 8	0700-0800	12:00-1:00	2.27E-09	4.59E-09	1.11E-02	2.00E-09	4.04E-09	5.10E-02	9.86E-09	1.99E-09	4.72E-02
Road 8	0800-0900	12:30-2:00	5.26E-09	5.07E-09	1.08E-02	2.20E-09	4.45E-09	5.21E-02	1.00E-09	2.15E-09	4.49E-02
Road 8	0900-1000	13:00-14:00	1.24E-09	1.24E-09	1.00E-07	1.24E-09	1.24E-09	5.54E-02	5.00E-10	5.00E-10	1.82E-08
Road 8	1000-1100	15:00-17:00	2.41E-09	4.88E-09	1.32E-03	2.11E-09	4.27E-09	6.35E-02	9.75E-10	1.97E-09	5.48E-02
Road 8	1100-1200	15:00-17:00	2.22E-09	4.53E-09	1.39E-03	1.96E-09	3.97E-09	6.31E-02	9.21E-09	1.86E-09	5.49E-02
Road 8	1200-1300	15:00-17:00	1.91E-09	3.81E-09	1.24E-03	1.72E-09	3.44E-09	6.31E-02	8.00E-09	1.60E-09	5.49E-02
Road 8	1300-1400	1:00-2:00	1.98E-09	3.94E-09	1.711E-07	3.98E-09	1.94E-07	7.88E-02	3.37E-09	6.81E-09	6.83E-02
Road 8	1400-1500	1:00-2:00	8.84E-09	1.79E-07	1.44E-02	7.77E-09	1.57E-07	7.79E-02	3.46E-09	6.99E-07	6.79E-02
Road 8	1500-1600	1:00-2:00	8.45E-10	1.71E-07	1.52E-02	7.42E-10	1.50E-07	7.80E-02	3.37E-09	6.75E-07	6.79E-02
Road 8	1600-1700	1:00-2:00	1.87E-07	1.79E-07	1.64E-02	1.76E-07	1.57E-07	7.29E-02	3.45E-09	6.99E-07	6.79E-02
Road 8	1700-1800	1:00-2:00	1.46E-09	7.45E-09	1.51E-06	1.26E-09	4.46E-09	1.31E-06	6.54E-02	3.34E-09	6.77E-09
Road 8	1800-1900	1:00-2:00	1.09E-09	5.62E-09	1.14E-06	9.38E-09	9.82E-07	3.49E-06	2.99E-09	5.15E-09	4.17E-06
Road 8	1900-2000	2:00-3:00	9.72E-09	1.96E-07	1.63E-02	9.32E-09	1.72E-07	5.25E-02	3.45E-09	6.99E-07	6.79E-02
Road 8	2000-2100	3:00-4:00	9.59E-04	6.22E-07	8.54E-07	8.74E-06	5.54E-07	4.84E-02	1.55E-03	3.14E-06	4.22E-03
Road 8	2100-2200	4:00-5:00	2.83E-08	5.73E-07	6.02E-03	2.54E-08	5.13E-07	4.74E-02	1.49E-07	3.02E-06	4.14E-02
Road 8	2200-2300	5:00-6:00	2.46E-08	4.91E-07	5.16E-03	2.24E-08	4.46E-07	4.14E-02	1.29E-07	2.62E-06	3.50E-02
Road 8	2300-0000	6:00-7:00	9.91E-03	2.29E-06	4.63E-07	8.63E-09	1.99E-08	4.03E-07	4.92E-02	1.14E-07	2.30E-06
Road 8	0000-0100	8:00-9:00	6.98E-08	1.40E-06	1.26E-02	6.01E-08	4.53E-07	6.60E-02	3.77E-08	2.00E-06	5.67E-02
Road 8	0100-0200	9:30-10:30	1.54E-08	3.08E-08	2.66E-03	1.24E-08	2.48E-07	1.80E-02	6.00E-09	1.20E-07	1.40E-02
Road 8	0200-0300	9:30-10:30	1.33E-08	3.61E-08	2.96E-07	1.22E-08	2.75E-07	2.41E-07	7.82E-09	1.65E-08	5.90E-02
Road 8	0300-0400	10:30-12:00	2.25E-08	2.25E-07	1.27E-02	2.38E-08	2.02E-07	6.84E-02	1.47E-07	1.09E-06	6.07E-02
Road 8	0400-0500	10:00-12:00	5.54E-09	5.54E-09	9.78E-03	2.30E-09	4.64E-09	4.88E-02	1.13E-09	2.34E-09	4.31E-02
Road 8	0500-0600	11:00-12:00	4.76E-09	5.20E-09	1.02E-07	4.71E-09	5.13E-09	5.54E-02	2.11E-09	4.27E-09	4.40E-02
Road 8	0600-0700	12:00-1:00	1.20E-09	1.20E-09	1.00E-07	1.20E-09	1.20E-09	5.54E-02	5.00E-10	5.00E-10	1.82E-08
Road 8	0700-0800	12:00-1:00	2.27E-09	4.59E-09	1.11E-02	2.00E-09	4.04E-09	5.10E-02	9.86E-09	1.99E-09	4.72E-02
Road 8	0800-0900	12:30-2:00	5.26E-09	5.07E-09	1.08E-02	2.20E-09	4.45E-09	5.21E-02	1.00E-09	2.15E-09	4.49E-02
Road 8	0900-1000	13:00-14:00	1.24E-09	1.24E-09	1.00E-07	1.24E-09	1.24E-09	5.54E-02	5.00E-10	5.00E-10	1.82E-08
Road 8	1000-1100	15:00-17:00	2.41E-09	4.88E-09	1.32E-03	2.11E-09	4.27E-09	6.35E-02	9.75E-10	1.97E-09	5.48E-02
Road 8	1100-1200	15:00-17:00	2.22E-09	4.53E-09	1.39E-03	1.96E-09	3.97E-09	6.31E-02	9.21E-09	1.86E-09	5.49E-02
Road 8	1200-1300	15:00-17:00	1.91E-09	3.81E-09	1.24E-03	1.72E-09	3.44E-09	6.31E-02	8.00E-09	1.60E-09	5.49E-02
Road 8	1300-1400	1:00-2:00	1.98E-09	3.94E-09	1.711E-07	3.98E-09	1.94E-07	7.88E-02	3.37E-09	6.81E-09	6.83E-02
Road 8	1400-1500	1:00-2:00	8.84E-09	1.79E-07	1.44E-02	7.77E-09	1.57E-07	7.79E-02	3.46E-09	6.99E-07	6.79E-02
Road 8	1500-1600	1:00-2:00	8.45E-10	1.71E-07	1.52E-02	7.42E-10	1.50E-07	7.80E-02	3.37E-09	6.75E-07	6.79E-02
Road 8	1600-1700	1:00-2:00	1.87E-07	1.79E-07	1.64E-02	1.76E-07	1.57E-07	7.29E-02	3.45E-09	6.99E-07	6.79E-02
Road 8	1700-1800	1:00-2:00	1.46E-09	7.45E-09	1.51E-06	1.26E-09	4.46E-09	1.31E-06	6.54E-02	3.34E-09	6.77E-09
Road 8	1800-1900	1:00-2:00	1.09E-09	5.62E-09	1.14E-06	9.38E-09	9.82E-07	3.49E-06	2.99E-09	5.15E-09	4.17E-06
Road 8	1900-2000	2:00-3:00	9.72E-09	1.96E-07	1.63E-02	9.32E-09	1.72E-07	5.25E-02	3.45E-09	6.99E-07	6.79E-02
Road 8	2000-2100	3:00-4:00	9.59E-04	6.22E-07	8.54E-07	8.74E-06	5.54E-07	4.84E-02	1.55E-03	3.14	

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Appendix\Appendix 3.5.4 Emission Factor in 2038-5 B.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario

Top 24 North Underground Quary Year 2008												
AIRMED model (April)												
Road Name	Road ID	Hour	NO _x Emission				NO Emission					
			Monthly/gm	g/m ³	Monthly/gm	g/m ³	Monthly/gm	g/m ³	Monthly/gm	g/m ³	Monthly/gm	g/m ³
11	0000-0000	2:56:02	1.9861	1.1117	2.6462	1.7270	6.0907	1.5881	1.0038	3.9602	1.4667	0.70
11	0000-0000	3:18:33	1.9861	1.1117	2.6462	1.7270	6.0907	1.5881	1.0038	3.9602	1.4667	0.70
11	0000-0000	3:55:02	1.1667	0.4447	3.3382	1.0867	4.1767	1.5872	2.1865	1.6161	4.5247	2.46
11	0000-0000	4:32:02	1.0147	0.3896	3.6042	1.0548	4.1767	1.7807	2.4003	1.8602	4.3967	2.46
11	0000-0000	5:08:58	1.1457	0.3967	3.2175	1.0733	4.1767	1.7807	2.4003	1.8602	4.3967	2.46
11	0000-0000	5:46:02	1.9907	0.5706	3.7882	1.8207	1.5881	1.9665	4.9434	3.6201	1.8607	8.8867
11	0000-0700	4:11:42	4.3307	1.6604	4.4042	4.0957	1.5881	2.0987	2.1105	1.8602	1.9997	1.9997
11	0000-0700	4:53:11	1.5633	0.5112	3.9807	1.0657	1.5881	2.0987	2.1105	1.8602	1.9997	1.9997
11	0000-0700	5:34:54	1.3306	0.5136	4.1212	1.2387	1.5881	2.2776	2.4504	2.1205	2.0008	6.00
11	0000-1000	4:44:02	1.3306	0.5088	5.9392	1.2206	4.6776	2.4747	8.0794	1.9604	2.2448	1.6026
11	0000-1000	5:25:58	1.3306	0.5088	5.9392	1.2206	4.6776	2.4747	8.0794	1.9604	2.2448	1.6026
11	1100-1200	9:45:02	1.2906	0.4586	4.6462	1.1116	0.4586	2.5556	4.3916	1.9606	2.3502	4.0306
11	1100-1200	10:27:02	2.0906	0.8016	8.8862	1.9276	7.3867	3.2471	7.0304	2.6906	2.9306	2.9306
11	1300-1400	1:01:01	2.2206	0.8796	9.3202	2.1116	8.1116	3.4497	8.7706	2.9806	3.1106	2.1006
11	1300-1400	1:43:01	2.2206	0.8796	9.3202	2.1116	8.1116	3.4497	8.7706	2.9806	3.1106	2.1006
11	1500-1600	1:01:01	2.4506	0.9416	9.3202	2.2776	8.7306	3.5556	8.0006	3.3906	3.2806	3.8906
11	1600-1700	2:38:06	2.3806	0.9186	9.4262	2.1906	8.4116	3.2906	8.1206	3.1306	3.0206	3.7406
11	1700-1800	1:11:01	2.4506	0.9416	9.3202	2.2776	8.7306	3.5556	8.0006	3.3906	3.2806	3.8906
11	1800-1900	5:58:06	1.5806	0.5886	5.7476	1.4067	5.3706	2.3906	6.1206	2.3806	2.0806	5.5806
11	1900-2000	4:02:06	8.2107	3.1206	3.8202	6.7407	2.9306	1.8906	3.7106	1.4706	1.7006	4.4006
11	2000-2100	3:59:02	6.1706	2.3806	3.7407	2.9306	1.8906	3.7106	1.4706	1.7006	4.4006	4.4006
11	2100-2200	3:59:02	6.1706	2.3806	3.7407	2.9306	1.8906	3.7106	1.4706	1.7006	4.4006	4.4006
11	2200-2300	3:59:02	5.4007	2.0706	3.9602	2.5507	1.9406	1.7806	2.6906	1.0006	1.6506	4.4806
11	2300-0000	4:44:07	1.7106	0.5906	2.1116	0.7107	1.5881	1.0706	2.1406	0.2206	1.7006	1.9506
12	0000-0000	2:45:06	1.5606	0.3806	2.2116	1.3807	3.4416	5.3406	1.8706	3.8206	4.4706	2.9706
12	0000-0000	2:56:06	1.5606	0.3806	2.2776	1.3707	3.3906	5.4506	3.3107	8.1506	4.8206	2.9206
12	0000-0000	3:18:33	1.5606	0.3806	2.3907	1.4007	3.4906	5.5006	3.2207	8.1506	4.9706	2.9206
12	0000-0000	3:55:06	1.5606	0.3806	2.3907	1.4007	3.4906	5.5006	3.2207	8.1506	4.9706	2.9206
12	0000-0000	4:32:06	1.5606	0.3806	2.3907	1.4007	3.4906	5.5006	3.2207	8.1506	4.9706	2.9206
12	0000-0000	5:08:58	1.5606	0.3806	2.3907	1.4007	3.4906	5.5006	3.2207	8.1506	4.9706	2.9206
12	0000-0000	5:46:06	1.5606	0.3806	2.3907	1.4007	3.4906	5.5006	3.2207	8.1506	4.9706	2.9206
12	0000-0000	6:23:06	1.5606	0.3806	2.3907	1.4007	3.4906	5.5006	3.2207	8.1506	4.9706	2.9206
12	0700-0800	3:21:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	3:58:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	4:35:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	5:12:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	5:49:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	6:26:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	7:03:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	7:40:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	8:17:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	8:54:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	9:31:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	10:08:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	10:45:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	11:22:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	11:59:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	12:36:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	13:13:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	13:50:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	14:27:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	15:04:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	15:41:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	16:18:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	16:55:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	17:32:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	18:09:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	18:46:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	19:23:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	20:00:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	20:37:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	21:14:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	21:51:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	22:28:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	23:05:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	23:42:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	00:19:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	00:56:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	01:33:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	02:10:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	02:47:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	03:24:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	04:01:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	04:38:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	05:15:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	05:52:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	06:29:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	07:06:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	07:43:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	08:20:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	08:57:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	09:34:01	7.6707	1.8986	2.8404	6.7807	1.8706	6.8606	1.6407	4.0406	6.0706	4.5606
12	0700-0800	10:11:01	7.6707	1.8986	2.8404	6.7807						

\\Secure\\Environment_Projects\\60733229\\1.01\\Others\\Air\\Modelling\\Appendix\\Traffic\\Appendix\\Appendix 3.5.4 Emission Factor in 2038-S B.xlsx

Open Day 24 Hour Underground Factors for												
APR/MCD Month (April)			Year 2038		NO _x Emission				NO _x Emission			
Road Name	Road ID	Hour	Monthly/tour/in		Monthly/tour/average		Monthly/tour/in		Monthly/tour/average		Monthly/tour/in	
			g/km/hr	g/km/h	g/km/hr	g/km/h	g/km/hr	g/km/h	g/km/hr	g/km/h	g/km/hr	g/km/h
Route 14	14	0800-0900	4.86	8.06	4.71	3.04	1.27	1.24	1.26	3.02	1.04	1.08
Route 14	14	0900-1000	3.86	6.36	3.71	2.41	0.87	0.84	0.89	2.36	0.79	0.83
Route 14	14	1000-1100	3.96	6.26	7.87	1.33	0.85	6.85	1.17	0.51	2.75	0.69
Route 14	14	1100-1200	4.27	6.72	7.27	2.44	3.76	4.02	1.09	1.52	2.59	0.46
Route 14	14	1200-1300	3.86	6.36	3.81	2.31	0.79	0.76	0.81	2.06	0.63	0.67
Route 14	14	1300-1400	6.32	1.41	6.41	5.55	1.42	1.46	2.12	2.11	0.91	4.96
Route 14	14	1400-1500	6.57	1.52	6.15	2.61	3.79	1.35	2.30	2.25	1.23	0.61
Route 14	14	1500-1600	4.26	1.33	4.26	1.33	0.84	0.84	0.84	0.84	0.84	0.84
Route 14	14	1600-1700	6.12	1.49	6.49	2.55	3.96	1.31	2.24	2.10	1.13	0.56
Route 14	14	1700-1800	8.65	1.25	6.36	1.35	4.18	1.06	1.86	1.84	0.78	1.06
Route 14	14	1800-1900	6.46	1.33	6.46	1.33	0.84	0.84	0.84	0.84	0.84	0.84
Route 14	14	1900-2000	2.46	4.32	4.58	0.72	2.05	4.04	6.89	0.92	1.95	3.32
Route 14	14	2000-2100	2.16	3.32	3.32	0.72	1.94	2.98	5.10	0.88	1.52	2.59
Route 14	14	2100-2200	0.75	0.72	1.86	0.43	0.84	2.89	4.89	0.84	1.48	2.58
Route 14	14	2200-2300	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Route 14	14	2300-0000	2.21	2.42	2.42	0.92	1.52	3.71	0.76	0.58	1.07	1.84
Route 15	15	0000-0100	2.76	4.88	4.88	4.02	2.44	3.08	3.98	0.92	1.02	1.02
Route 15	15	0100-0200	4.16	4.52	4.52	4.52	4.52	4.52	4.52	4.52	4.52	4.52
Route 15	15	0200-0300	4.16	4.88	4.88	4.88	4.88	4.88	4.88	4.88	4.88	4.88
Route 15	15	0300-0400	4.61	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32
Route 15	15	0400-0500	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46	4.46
Route 15	15	0500-0600	3.66	5.02	5.02	5.02	5.02	5.02	5.02	5.02	5.02	5.02
Route 15	15	0600-0700	4.86	7.27	7.27	6.87	2.44	6.58	6.09	1.00	2.59	4.02
Route 15	15	0700-0800	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86
Route 15	15	0800-0900	4.86	4.27	4.27	4.27	4.27	4.27	4.27	4.27	4.27	4.27
Route 15	15	0900-1000	4.96	4.27	2.81	0.72	2.06	4.24	2.28	1.48	0.46	1.84
Route 15	15	1000-1100	5.36	4.27	1.52	0.69	2.48	2.28	1.55	0.76	0.37	1.04
Route 15	15	1100-1200	3.31	2.69	2.17	0.52	0.83	9.22	0.62	0.28	0.12	0.04
Route 15	15	1200-1300	3.58	4.07	4.32	5.53	4.06	3.78	1.94	1.43	1.33	0.69
Route 15	15	1300-1400	6.53	5.03	6.07	6.86	4.39	4.07	2.06	1.02	0.48	1.79
Route 15	15	1400-1500	6.15	5.63	5.16	5.78	4.11	3.78	1.11	0.56	0.25	0.93
Route 15	15	1500-1600	6.10	5.01	4.63	5.31	4.36	4.04	2.02	1.66	1.54	1.75
Route 15	15	1600-1700	6.07	5.05	4.67	5.88	4.53	4.07	2.19	1.59	1.47	1.65
Route 15	15	1700-1800	5.82	4.63	4.27	5.02	4.36	3.85	2.02	1.45	1.35	1.58
Route 15	15	1800-1900	5.21	3.67	4.05	4.66	3.65	3.18	2.54	1.77	1.16	1.05
Route 15	15	1900-2000	2.85	4.44	4.71	3.38	2.07	1.27	1.17	0.93	5.69	0.68
Route 15	15	2000-2100	2.65	3.67	3.94	2.65	1.62	1.05	0.93	0.75	0.58	0.43
Route 15	15	2100-2200	2.26	1.11	1.07	1.02	2.04	0.94	0.95	4.63	0.47	0.26
Route 15	15	2200-2300	2.23	1.44	1.67	0.62	2.00	0.92	0.80	4.34	0.16	0.09
Route 15	15	2300-0000	2.56	1.42	1.68	0.47	2.23	0.85	0.49	0.87	2.26	0.27
Route 16	16	0000-0100	1.85	3.29	3.74	3.18	2.45	2.85	3.08	0.84	0.91	0.91
Route 16	16	0100-0200	5.55	3.68	3.15	3.58	3.03	1.01	0.48	2.11	0.47	0.62
Route 16	16	0200-0300	9.08	3.08	4.48	8.51	2.76	0.88	0.49	5.02	1.03	0.47
Route 16	16	0300-0400	3.12	2.65	4.61	4.94	3.92	3.03	1.28	0.62	2.40	0.27
Route 16	16	0400-0500	1.50	3.68	3.76	9.72	2.76	0.88	8.47	5.32	1.51	0.68
Route 16	16	0500-0600	1.02	3.58	4.68	6.56	9.75	4.77	1.46	4.45	2.17	0.31
Route 16	16	0600-0700	1.35	2.65	3.68	5.02	3.92	3.03	1.28	0.62	2.40	0.27
Route 16	16	0700-0800	1.54	3.92	0.11	0.95	1.30	2.90	8.88	0.10	1.52	0.65
Route 16	16	0800-0900	1.75	4.34	3.47	1.35	1.54	3.82	1.17	0.61	1.88	0.77
Route 16	16	0900-1000	1.82	4.27	1.63	1.02	1.63	2.11	1.17	0.61	1.88	0.77
Route 16	16	1000-1100	1.86	4.32	0.05	1.63	0.92	0.97	1.17	0.78	1.45	0.80
Route 16	16	1100-1200	1.76	2.66	0.08	1.47	2.57	0.77	7.88	0.48	1.30	0.40
Route 16	16	1200-1300	3.12	4.43	1.97	2.73	1.57	1.71	1.17	2.41	0.66	1.01
Route 16	16	1300-1400	3.38	3.29	1.20	2.11	1.61	1.93	1.17	2.41	0.66	1.01
Route 16	16	1400-1500	3.55	0.22	0.22	4.46	3.10	6.95	0.22	1.33	0.10	0.23
Route 16	16	1500-1600	4.11	7.92	0.23	2.43	2.95	0.67	2.10	0.31	3.22	0.66
Route 16	16	1600-1700	3.46	8.11	0.23	2.98	3.51	0.67	2.10	0.31	3.22	0.66
Route 16	16	1700-1800	2.71	8.96	0.20	2.11	2.32	0.95	1.81	0.16	2.96	0.70
Route 16	16	1800-1900	1.76	4.56	0.47	1.40	1.50	3.47	1.21	0.65	2.02	0.37
Route 16	16	1900-2000	1.35	2.65	0.22	1.47	1.50	3.47	1.21	0.65	2.02	0.37
Route 16	16	2000-2100	0.73	1.49	0.58	8.44	0.19	3.97	0.46	4.34	0.58	1.03
Route 16	16	2100-2200	1.12	4.07	4.28	8.12	1.24	3.81	5.49	8.17	1.49	4.65
Route 16	16	2200-2300	0.55	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53	0.53
Route 16	16	2300-0000	1.31	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Route 17	17	0000-0100	3.38	8.12	0.37	0.76	8.24	7.13	0.28	5.18	4.47	1.31
Route 17	17	0100-0200	3.12	8.98	1.28	0.63	3.38	1.51	0.38	3.98	3.07	0.80
Route 17	17	0200-0300	3.15	4.78	0.49	0.91	3.50	1.51	0.49	3.50	3.07	0.80
Route 17	17	0300-0400	2.02	4.96	1.16	1.06	3.76	1.08	0.78	1.96	1.72	0.47
Route 17	17	0400-0500	2.72	4.77	0.49	1.45	4.32	1.28	0.61	2.57	0.57	0.32
Route 17	17	0500-0600	1.41	1.99	0.82	1.25	1.76	0.52	6.72	0.44	0.76	0.25
Route 17	17	0600-0700	1.41	1.99	0.82	1.25	1.76	0.52	6.72	0.44	0.76	0.25
Route 17	17	0700-0800	1.41	1.99	0.82	1.25	1.76	0.52	6.72	0.44	0.76	0.25
Route 17	17	0800-0900	1.41	1.99	0.82	1.25	1.76	0.52	6.72	0.44	0.76	0.25
Route 17	17	0900-1000	1.41	1.99	0.82	1.25	1.76	0.52	6.72	0.44	0.76	0.25
Route 17	17	1000-1100	4.42	1.72	4.42	3.87	1.02	3.08	3.07	1.67	4.42	2.96
Route 17	17	1100-1200	4.42	1.72	4.42	3.87	1.02	3.08	3.07	1.67	4.42	2.96
Route 17	17	1200-1300	4.42	1.72	4.42	3.87	1.02	3.08	3.07	1.67	4.42	2.96
Route 17	17	1300-1400	4.42	1.72	4.42	3.87	1.02	3.08	3.07	1.67	4.42	2.96
Route 17	17	1400-1500	4.42	1.72	4.42	3.87	1.02	3.08	3.07	1.67	4.42	2.96
Route 17	17	1500-1600	4.42	1.72	4.42	3.87	1.02	3.08	3.07	1.67	4.42	2.96
Route 17	17	1600-1700	4.42	1.72	4.42	3.87	1.02	3.08	3.07	1.67	4.42	2.96
Route 17	17	1700-1800	4.42	1.72	4.42	3.87	1.02	3.08	3.07	1.67	4.42	2.96
Route 17	17	1800-1900	4.42	1.72	4.42	3.87	1.02	3.08	3.07	1.67	4.42	2.96
Route 17	17	1900-2000	4.42	1.72	4.42	3.87	1.02	3.08	3.07	1.67	4.42	2.96
Route 17	17	2000-2100	4.42	1.72	4.42	3.87	1.02	3.08	3.07	1.67	4.42	2.96
Route 17	17	2100-2200	4.42	1.72	4.42	3.87	1.02	3.08	3.07	1.67	4.42	2.96
Route 17	17	2200-2300	4.42	1.72	4.42	3.87	1.02	3.08	3.07	1.67	4.42	2.96
Route 17	17	2300-0000	4.42	1.72	4.42	3.87	1.02	3.08	3.07	1.67	4.42	2.96

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Open Road Night Hourly Underground Quarry													
Year 2038													
ARMM CO2 Model (kg/hr)													
Road Name	Road ID	Hour	NO _x Emission						NO ₂ Emission				
			Monthly/tour	g/m ³ /hr	tonne/hour	g/m ³ /hr	tonne/hour	Monthly/tour	g/m ³ /hr	tonne/hour	Monthly/tour	g/m ³ /hr	tonne/hour
Road 17	17	1600-1700	6.24E-02	0.43E-02	3.40E-03	5.31E-02	3.34E-02	2.59E-02	1.77E-01	7.76E-04	6.19E-04	1.39E-01	1.39E-01
Road 17	17	1700-1800	4.93E-02	3.18E-03	3.06E-03	3.71E-02	9.91E-07	2.92E-07	1.47E-01	4.77E-06	1.39E-04	1.53E-01	4.06E-01
Road 17	17	1800-1900	2.39E-02	6.09E-07	1.78E-05	2.06E-02	5.27E-07	1.54E-05	1.03E-01	6.62E-06	7.67E-05	8.78E-02	2.24E-01
Road 17	17	1900-2000	1.30E-02	3.40E-06	9.61E-06	1.16E-02	3.01E-06	7.75E-06	5.17E-01	3.75E-06	4.46E-05	5.17E-02	1.30E-01
Road 17	17	2000-2100	1.18E-02	1.79E-07	5.27E-06	1.03E-02	1.56E-07	4.56E-06	6.28E-02	4.62E-07	2.75E-05	3.33E-02	8.03E-01
Road 17	17	2100-2200	1.14E-02	1.72E-07	5.04E-06	1.02E-02	1.54E-07	4.49E-06	6.18E-02	9.37E-07	2.71E-05	3.16E-02	7.37E-01
Road 17	17	2200-2300	1.14E-02	1.54E-06	4.36E-06	1.02E-02	1.47E-07	4.26E-06	6.18E-02	2.45E-05	2.45E-05	2.95E-02	7.30E-01
Road 17	17	2300-2400	1.14E-02	1.40E-06	3.95E-06	1.01E-02	1.34E-07	3.84E-06	6.18E-02	6.73E-07	5.27E-05	2.72E-02	6.69E-01
Road 18	18	0000-0100	7.61E-03	5.03E-03	1.96E-06	6.68E-04	4.18E-04	1.72E-06	4.55E-02	3.01E-07	1.18E-03	3.96E-02	2.55E-01
Road 18	18	0100-0200	4.93E-03	3.70E-03	1.45E-06	7.69E-03	3.25E-08	1.27E-06	4.17E-02	2.07E-07	8.10E-03	4.05E-02	1.70E-01
Road 18	18	0200-0300	9.93E-03	7.40E-03	2.90E-06	1.56E-02	6.52E-08	2.56E-06	4.17E-02	1.07E-07	4.26E-03	2.07E-02	8.86E-01
Road 18	18	0300-0400	1.03E-02	2.62E-03	1.02E-06	9.28E-03	2.37E-08	9.25E-07	5.13E-02	1.31E-07	5.12E-06	4.52E-02	1.13E-01
Road 18	18	0400-0500	1.02E-02	3.02E-03	1.18E-06	1.37E-02	2.73E-08	1.07E-06	5.23E-02	1.49E-07	5.82E-06	4.82E-02	1.21E-01
Road 18	18	0500-0600	1.16E-02	3.16E-03	1.26E-06	9.74E-03	2.51E-08	1.18E-06	5.13E-02	1.58E-07	6.18E-06	5.12E-02	1.28E-01
Road 18	18	0600-0700	1.12E-02	1.16E-07	4.51E-06	9.88E-03	1.02E-07	3.97E-06	5.63E-02	6.81E-07	2.27E-05	4.81E-02	4.97E-01
Road 18	18	0700-0800	1.24E-02	2.60E-07	1.02E-06	1.09E-02	2.36E-07	8.89E-06	6.01E-02	1.27E-05	4.95E-05	5.17E-02	1.09E-01
Road 18	18	0800-0900	1.16E-02	4.76E-07	1.86E-06	9.74E-03	2.51E-07	1.45E-06	5.13E-02	1.58E-07	6.18E-06	5.12E-02	1.28E-01
Road 18	18	0900-1000	1.41E-02	2.92E-07	1.14E-06	1.22E-02	2.57E-07	9.88E-06	6.52E-02	1.30E-05	5.27E-05	5.55E-02	1.15E-01
Road 18	18	1000-1100	1.69E-02	2.89E-07	1.13E-06	1.39E-02	2.52E-07	8.94E-06	6.52E-02	1.26E-05	4.84E-05	5.55E-02	1.08E-01
Road 18	18	1100-1200	1.41E-02	2.92E-07	1.14E-06	1.22E-02	2.57E-07	9.88E-06	6.52E-02	1.30E-05	5.27E-05	5.55E-02	1.15E-01
Road 18	18	1200-1300	2.12E-02	4.32E-07	1.69E-06	1.85E-02	3.76E-07	1.46E-05	8.44E-02	1.72E-06	8.70E-05	7.26E-02	1.47E-01
Road 18	18	1300-1400	2.13E-02	4.56E-07	1.78E-06	1.85E-02	3.94E-07	1.54E-05	8.89E-02	1.68E-05	7.35E-05	5.62E-02	1.62E-01
Road 18	18	1400-1500	2.40E-02	4.76E-07	1.86E-06	2.09E-02	4.18E-07	1.63E-05	8.64E-02	1.92E-05	7.82E-05	5.62E-02	1.66E-01
Road 18	18	1500-1600	2.00E-02	4.57E-07	1.79E-06	1.73E-02	3.96E-07	1.55E-05	8.74E-02	2.00E-05	8.02E-05	4.94E-02	1.72E-01
Road 18	18	1600-1700	2.01E-02	4.70E-07	1.84E-05	1.78E-02	4.16E-07	1.63E-05	8.12E-02	1.90E-05	7.43E-05	7.11E-02	1.67E-01
Road 18	18	1700-1800	1.95E-02	4.57E-07	1.79E-06	1.73E-02	3.96E-07	1.55E-05	8.74E-02	2.00E-05	8.02E-05	4.94E-02	1.72E-01
Road 18	18	1800-1900	1.41E-02	2.89E-07	1.13E-06	1.22E-02	2.57E-07	9.88E-06	6.52E-02	1.30E-05	5.27E-05	5.55E-02	1.15E-01
Road 18	18	1900-2000	1.69E-02	2.89E-07	1.13E-06	1.39E-02	2.52E-07	8.94E-06	6.52E-02	1.26E-05	4.84E-05	5.55E-02	1.08E-01
Road 18	18	2000-2100	8.49E-03	1.43E-07	5.99E-06	8.21E-03	1.24E-07	4.89E-06	5.27E-06	7.98E-07	3.12E-05	4.65E-02	6.75E-01
Road 18	18	2100-2200	8.81E-03	1.43E-07	5.99E-06	8.21E-03	1.24E-07	4.89E-06	5.27E-06	7.98E-07	3.12E-05	4.65E-02	6.75E-01
Road 18	18	2200-2300	9.78E-03	1.77E-07	6.84E-06	7.84E-04	1.14E-07	4.59E-06	4.47E-02	7.17E-07	2.80E-06	4.29E-02	6.22E-01
Road 18	18	2300-2400	9.82E-03	1.80E-07	6.72E-06	8.55E-03	1.41E-08	3.68E-06	5.28E-02	6.11E-07	2.27E-06	4.46E-02	9.00E-01
Road 19	19	0000-0100	9.93E-03	7.40E-03	2.90E-06	1.56E-02	6.52E-08	2.56E-06	4.17E-02	1.07E-07	4.26E-03	2.07E-02	8.86E-01
Road 19	19	0100-0200	1.03E-02	5.92E-03	1.92E-06	1.05E-02	5.20E-05	1.58E-06	3.56E-07	8.88E-05	4.54E-06	2.63E-02	7.70E-01
Road 19	19	0200-0300	1.17E-03	4.82E-03	1.39E-06	1.01E-02	4.32E-08	1.24E-06	5.62E-02	2.46E-07	6.91E-03	4.92E-02	2.10E-01
Road 19	19	0300-0400	1.17E-03	4.82E-03	1.39E-06	1.01E-02	4.32E-08	1.24E-06	5.62E-02	2.46E-07	6.91E-03	4.92E-02	2.10E-01
Road 19	19	0400-0500	1.27E-02	4.79E-03	1.38E-06	1.15E-02	4.34E-08	1.26E-06	5.97E-02	2.26E-07	6.50E-02	5.28E-02	2.60E-01
Road 19	19	0500-0600	1.32E-02	8.67E-03	2.50E-06	1.17E-02	6.98E-08	2.21E-06	6.92E-02	2.46E-07	1.18E-03	5.94E-02	1.02E-01
Road 19	19	0600-0700	1.32E-02	8.67E-03	2.50E-06	1.17E-02	6.98E-08	2.21E-06	6.92E-02	2.46E-07	1.18E-03	5.94E-02	1.02E-01
Road 19	19	0700-0800	1.52E-02	4.41E-07	1.27E-06	1.34E-02	3.67E-07	1.12E-05	7.00E-02	4.03E-06	5.66E-05	1.76E-02	5.07E-01
Road 19	19	0800-0900	1.52E-02	5.09E-07	1.47E-06	1.33E-02	4.48E-07	1.29E-05	6.73E-02	2.26E-06	6.59E-05	1.89E-02	5.42E-01
Road 19	19	0900-1000	1.72E-02	5.09E-07	1.47E-06	1.33E-02	4.48E-07	1.29E-05	6.73E-02	2.26E-06	6.59E-05	1.89E-02	5.42E-01
Road 19	19	1000-1100	1.97E-02	5.27E-07	1.52E-06	1.72E-02	4.56E-07	1.32E-05	8.39E-02	2.91E-06	6.37E-05	7.14E-02	1.91E-01
Road 19	19	1100-1200	1.87E-02	6.71E-07	1.96E-05	1.63E-02	4.13E-07	1.18E-06	8.06E-02	2.85E-06	6.58E-05	6.96E-02	1.76E-01
Road 19	19	1200-1300	2.42E-02	6.71E-07	1.96E-05	1.63E-02	4.13E-07	1.18E-06	8.06E-02	2.85E-06	6.58E-05	6.96E-02	1.76E-01
Road 19	19	1300-1400	2.52E-02	6.20E-07	1.79E-06	2.18E-02	5.37E-07	1.55E-05	1.01E-01	2.48E-06	7.15E-05	8.07E-02	2.14E-01
Road 19	19	1400-1500	2.53E-02	6.42E-07	1.85E-06	2.20E-02	5.59E-07	1.61E-05	9.91E-02	2.51E-06	7.24E-05	8.29E-02	2.17E-01
Road 19	19	1500-1600	2.53E-02	6.42E-07	1.85E-06	2.20E-02	5.59E-07	1.61E-05	9.91E-02	2.51E-06	7.24E-05	8.29E-02	2.17E-01
Road 19	19	1600-1700	2.37E-02	6.20E-07	1.79E-06	2.15E-02	5.46E-07	1.58E-05	9.38E-02	2.45E-06	7.06E-05	8.23E-02	2.15E-01
Road 19	19	1700-1800	1.88E-02	5.10E-07	1.47E-05	1.61E-02	4.36E-07	1.24E-05	8.54E-02	1.32E-06	6.68E-05	7.21E-02	1.96E-01
Road 19	19	1800-1900	1.31E-02	3.51E-07	6.01E-06	1.18E-02	3.04E-07	8.76E-06	4.64E-02	2.65E-06	4.75E-05	4.41E-02	4.02E-01
Road 19	19	1900-2000	1.17E-02	3.51E-07	6.01E-06	1.18E-02	3.04E-07	8.76E-06	4.64E-02	2.65E-06	4.75E-05	4.41E-02	4.02E-01
Road 19	19	2000-2100	1.15E-02	1.75E-07	5.04E-06	1.00E-02	1.52E-07	4.38E-06	6.04E-02	9.17E-07	2.64E-05	5.14E-02	7.80E-02
Road 19	19	2100-2200	1.15E-02	1.69E-07	4.83E-06	9.84E-03	1.52E-07	4.32E-06	5.92E-02	9.00E-07	2.59E-05	5.18E-02	7.80E-02
Road 19	19	2200-2300	1.15E-02	1.69E-07	4.83E-06	9.84E-03	1.52E-07	4.32E-06	5.92E-02	9.00E-07	2.59E-05	5.18E-02	7.80E-02
Road 19	19	2300-0000	1.23E-02	1.38E-07	3.91E-07	1.10E-02	1.19E-07	3.42E-06	6.09E-02	6.66E-07	1.93E-05	5.69E-02	1.61E-01
Road 20	20	0000-0100	3.84E-02	4.05E-08	7.47E-07	1.41E-02	3.68E-06	6.63E-07	1.47E-02	1.57E-06	2.89E-05	1.31E-01	3.96E-01
Road 20	20	0100-0200	3.97E-02	4.05E-08	7.47E-07	1.41E-02	3.68E-06	6.63E-07	1.47E-02	1.57E-06	2.89E-05	1.31E-01	3.96E-01
Road 20	20	0200-0300	4.11E-02	2.31E-08	4.25E-07	3.69E-02	2.06E-06	3.83E-07	1.57E-01	8.81E-08	1.62E-04	1.41E-01	7.00E-01
Road 20	20	0300-0400	4.11E-02	1.95E-08	3.59E-07	3.78E-02	1.77E-06	3.25E-07	1.58E-01	1.47E-08	1.37E-04	1.43E-01	6.70E-02
Road 20	20	0400-0500	4.20E-02	1.95E-08	3.59E-07	3.78E-02	1.77E-06	3.25E-07	1.58E-01	1.47E-08	1.37E-04	1.43E-01	6.70E-02
Road 20	20	0500-0600	4.41E-02	4.35E-08	8.02E-07	3.92E-02	3.87E-07	3.17E-07	1.67E-01	1.64E-07	3.03E-04	1.48E-01	2.68E-02
Road 20	20	0600-0700	4.78E-02	1.05E-07	1.95E-06	4.21E-02	3.34E-08	1.72E-07	1.88E-07	3.95E-07	7.28E-05	1.57E-01	3.68E-02
Road 20	20	0700-0800	5.42E-02	1.05E-07	1.95E-06	4.21E-02	3.34E-08	1.72E-07	1.88E-07	3.95E-07	7.28E-05	1.57E-01	3.68E-02
Road 20	20	0800-0900	5.42E-02	3.04E-07	5.71E-06	4.83E-02	7.32E-07	4.97E-07	2.07E-02	1.18E-06	2.14E-05	1.38E-01	1.30E-01
Road 20	20	0900-1000	6.09E-02	3.62E-07	6.68E-06	5.29E-02	3.17E-07	5.88E-06	2.33E-01	1.38E-06	2.55E-05	2.02E-01	1.20E-01
Road 20	20	1000-1100	6.09E-02	3.62E-07	6.68E-06	5.29E-02	3.17E-07	5.88E-06	2.33E-01	1.38E-06	2.55E-05	2.02E-01	1.20E-01
Road 20	20	1100-1200	6.24E-02	3.36E-07	6.20E-06	5.48E-02	2.96E-07	5.45E-06	2.28E-01	1.23E-06	2.27E-05	2.00E-01	1.08E-01
Road 20	20	1200-1300	6.54E-02	3.35E-07	6.17E-06	5.68E-02	2.91E-07						

I:\Secure\Environment Projects\60722220\1_01\Other\Air Modelling\Appendix Traffic\Appendix Appendix 3 E 4 Emission Factor in 2028 SR.xlsx

TSP Yr 24 North Urban Emission Factors													
Open Road 24 hour Emission Factors for													
ARPMO model (kg/hr)			No Emission						No Emission				
Route Name	Route ID	Hour	Month	Year	g/mi ² /hr	tonne/hour	g/mi ² /hr	tonne/hour	g/mi ² /hr	tonne/hour	g/mi ² /hr	tonne/hour	
Month	Year	g/mi ² /hr	tonne/hour	g/mi ² /hr	tonne/hour	g/mi ² /hr	tonne/hour	g/mi ² /hr	tonne/hour	g/mi ² /hr	tonne/hour	g/mi ² /hr	tonne/hour
Route 22	21	0000-0100	1.0742	0.9362	1.0127	0.8437	0.7351	1.0127	0.8437	0.7351	1.0127	0.8437	0.7351
Route 22	21	0100-0200	1.1862	1.0308	1.0547	0.9202	0.7984	1.0547	0.9202	0.7984	1.0547	0.9202	0.7984
Route 22	21	0200-0300	1.2740	1.1047	1.1414	1.0142	0.8784	1.1414	1.0142	0.8784	1.1414	1.0142	0.8784
Route 22	21	0300-0400	1.3467	1.1704	1.2167	1.0847	0.9429	1.2167	1.0847	0.9429	1.2167	1.0847	0.9429
Route 22	21	0400-0500	1.4142	1.2406	1.2892	1.1562	0.9984	1.2892	1.1562	0.9984	1.2892	1.1562	0.9984
Route 22	21	0500-0600	1.4776	1.2858	1.3416	1.2162	0.9858	1.3416	1.2162	0.9858	1.3416	1.2162	0.9858
Route 22	21	0600-0700	1.5362	1.3362	1.3942	1.2662	1.0462	1.3942	1.2662	1.0462	1.3942	1.2662	1.0462
Route 22	21	0700-0800	1.5892	1.3842	1.4462	1.3142	1.0942	1.4462	1.3142	1.0942	1.4462	1.3142	1.0942
Route 22	21	0800-0900	1.6362	1.4342	1.4942	1.3642	1.1442	1.4942	1.3642	1.1442	1.4942	1.3642	1.1442
Route 22	21	0900-1000	1.6842	1.4842	1.5442	1.4142	1.1942	1.5442	1.4142	1.1942	1.5442	1.4142	1.1942
Route 22	21	1000-1100	1.7342	1.5342	1.5942	1.4642	1.2442	1.5942	1.4642	1.2442	1.5942	1.4642	1.2442
Route 22	21	1100-1200	1.7842	1.5842	1.6442	1.5142	1.2942	1.6442	1.5142	1.2942	1.6442	1.5142	1.2942
Route 22	21	1200-1300	1.8342	1.6342	1.6942	1.5642	1.3442	1.6942	1.5642	1.3442	1.6942	1.5642	1.3442
Route 22	21	1300-1400	1.8842	1.6842	1.7442	1.6142	1.3942	1.7442	1.6142	1.3942	1.7442	1.6142	1.3942
Route 22	21	1400-1500	1.9342	1.7342	1.7942	1.6642	1.4442	1.7942	1.6642	1.4442	1.7942	1.6642	1.4442
Route 22	21	1500-1600	1.9842	1.7842	1.8442	1.7142	1.4942	1.8442	1.7142	1.4942	1.8442	1.7142	1.4942
Route 22	21	1600-1700	2.0342	1.8342	1.8942	1.7642	1.5442	1.8942	1.7642	1.5442	1.8942	1.7642	1.5442
Route 22	21	1700-1800	2.0842	1.8842	1.9442	1.8142	1.5942	1.9442	1.8142	1.5942	1.9442	1.8142	1.5942
Route 22	21	1800-1900	2.1342	1.9342	1.9942	1.8642	1.6442	1.9942	1.8642	1.6442	1.9942	1.8642	1.6442
Route 22	21	1900-2000	2.1842	1.9842	2.0442	1.9142	1.6942	2.0442	1.9142	1.6942	2.0442	1.9142	1.6942
Route 22	21	2000-2100	2.2342	2.0342	2.0942	1.9642	1.7442	2.0942	1.9642	1.7442	2.0942	1.9642	1.7442
Route 22	21	2100-2200	2.2842	2.0842	2.1442	2.0142	1.7942	2.1442	2.0142	1.7942	2.1442	2.0142	1.7942
Route 22	21	2200-2300	2.3342	2.1342	2.1942	2.0642	1.8442	2.1942	2.0642	1.8442	2.1942	2.0642	1.8442
Route 22	21	2300-0000	2.3842	2.1842	2.2442	2.1142	1.8942	2.2442	2.1142	1.8942	2.2442	2.1142	1.8942
Route 22	22	0000-0100	1.1862	1.0406	1.0547	0.9202	0.7984	1.0547	0.9202	0.7984	1.0547	0.9202	0.7984
Route 22	22	0100-0200	1.2740	1.1047	1.1414	1.0142	0.8784	1.1414	1.0142	0.8784	1.1414	1.0142	0.8784
Route 22	22	0200-0300	1.3467	1.1704	1.2167	1.0847	0.9429	1.2167	1.0847	0.9429	1.2167	1.0847	0.9429
Route 22	22	0300-0400	1.4142	1.2406	1.2892	1.1562	0.9984	1.2892	1.1562	0.9984	1.2892	1.1562	0.9984
Route 22	22	0400-0500	1.4776	1.2858	1.3416	1.2162	0.9858	1.3416	1.2162	0.9858	1.3416	1.2162	0.9858
Route 22	22	0500-0600	1.5362	1.3362	1.3942	1.2662	1.0462	1.3942	1.2662	1.0462	1.3942	1.2662	1.0462
Route 22	22	0600-0700	1.5892	1.3842	1.4462	1.3142	1.0942	1.4462	1.3142	1.0942	1.4462	1.3142	1.0942
Route 22	22	0700-0800	1.6362	1.4342	1.4942	1.3642	1.1442	1.4942	1.3642	1.1442	1.4942	1.3642	1.1442
Route 22	22	0800-0900	1.6842	1.4842	1.5442	1.4142	1.1942	1.5442	1.4142	1.1942	1.5442	1.4142	1.1942
Route 22	22	0900-1000	1.7342	1.5342	1.5942	1.4642	1.2442	1.5942	1.4642	1.2442	1.5942	1.4642	1.2442
Route 22	22	1000-1100	1.7842	1.5842	1.6442	1.5142	1.2942	1.6442	1.5142	1.2942	1.6442	1.5142	1.2942
Route 22	22	1100-1200	1.8342	1.6342	1.6942	1.5642	1.3442	1.6942	1.5642	1.3442	1.6942	1.5642	1.3442
Route 22	22	1200-1300	1.8842	1.6842	1.7442	1.6142	1.3942	1.7442	1.6142	1.3942	1.7442	1.6142	1.3942
Route 22	22	1300-1400	1.9342	1.7342	1.7942	1.6642	1.4442	1.7942	1.6642	1.4442	1.7942	1.6642	1.4442
Route 22	22	1400-1500	1.9842	1.7842	1.8442	1.7142	1.4942	1.8442	1.7142	1.4942	1.8442	1.7142	1.4942
Route 22	22	1500-1600	2.0342	1.8342	1.8942	1.7642	1.5442	1.8942	1.7642	1.5442	1.8942	1.7642	1.5442
Route 22	22	1600-1700	2.0842	1.8842	1.9442	1.8142	1.5942	1.9442	1.8142	1.5942	1.9442	1.8142	1.5942
Route 22	22	1700-1800	2.1342	1.9342	1.9942	1.8642	1.6442	1.9942	1.8642	1.6442	1.9942	1.8642	1.6442
Route 22	22	1800-1900	2.1842	1.9842	2.0442	1.9142	1.6942	2.0442	1.9142	1.6942	2.0442	1.9142	1.6942
Route 22	22	1900-2000	2.2342	2.0342	2.0942	1.9642	1.7442	2.0942	1.9642	1.7442	2.0942	1.9642	1.7442
Route 22	22	2000-2100	2.2842	2.0842	2.1442	2.0142	1.7942	2.1442	2.0142	1.7942	2.1442	2.0142	1.7942
Route 22	22	2100-2200	2.3342	2.1342	2.1942	2.0642	1.8442	2.1942	2.0642	1.8442	2.1942	2.0642	1.8442
Route 22	22	2200-2300	2.3842	2.1842	2.2442	2.1142	1.8942	2.2442	2.1142	1.8942	2.2442	2.1142	1.8942
Route 22	22	2300-0000	2.4342	2.2342	2.2942	2.1642	1.9442	2.2942	2.1642	1.9442	2.2942	2.1642	1.9442
Route 23	23	0000-0100	1.1762	1.0306	1.0407	0.9062	0.7806	1.0407	0.9062	0.7806	1.0407	0.9062	0.7806
Route 23	23	0100-0200	1.2442	1.0806	1.0907	0.9462	0.8206	1.0907	0.9462	0.8206	1.0907	0.9462	0.8206
Route 23	23	0200-0300	1.3122	1.1306	1.1407	1.0062	0.8706	1.1407	1.0062	0.8706	1.1407	1.0062	0.8706
Route 23	23	0300-0400	1.3802	1.1806	1.2107	1.0562	0.9206	1.2107	1.0562	0.9206	1.2107	1.0562	0.9206
Route 23	23	0400-0500	1.4482	1.2306	1.2607	1.1062	0.9706	1.2607	1.1062	0.9706	1.2607	1.1062	0.9706
Route 23	23	0500-0600	1.5162	1.2806	1.3107	1.1562	1.0206	1.3107	1.1562	1.0206	1.3107	1.1562	1.0206
Route 23	23	0600-0700	1.5842	1.3306	1.3607	1.2062	1.0706	1.3607	1.2062	1.0706	1.3607	1.2062	1.0706
Route 23	23	0700-0800	1.6522	1.3806	1.4107	1.2562	1.1206	1.4107	1.2562	1.1206	1.4107	1.2562	1.1206
Route 23	23	0800-0900	1.7202	1.4306	1.4507	1.3062	1.1706	1.4507	1.3062	1.1706	1.4507	1.3062	1.1706
Route 23	23	0900-1000	1.7882	1.4806	1.5007	1.3562	1.2206	1.5007	1.3562	1.2206	1.5007	1.3562	1.2206
Route 23	23	1000-1100	1.8562	1.5306	1.5607	1.4062	1.2706	1.5607	1.4062	1.2706	1.5607	1.4062	1.2706
Route 23	23	1100-1200	1.9242	1.5806	1.6307	1.4562	1.3206	1.6307	1.4562	1.3206	1.6307	1.4562	1.3206
Route 23	23	1200-1300	1.9922	1.6306	1.6907	1.5062	1.3706	1.6907	1.5062	1.3706	1.6907	1.5062	1.3706
Route 23	23	1300-1400	2.0602	1.6806	1.7507	1.5562	1.4206	1.7507	1.5562	1.4206	1.7507	1.5562	1.4206
Route 23	23	1400-1500	2.1282	1.7306	1.8107	1.6062	1.4706	1.8107	1.6062	1.4706	1.8107	1.6062	1.4706
Route 23	23	1500-1600	2.1962	1.7806	1.8707	1.6562	1.5206	1.8707	1.6562	1.5206	1.8707	1.6562	1.5206
Route 23	23	1600-1700	2.2642	1.8306	1.9307	1.7062	1.5706	1.9307	1.7062	1.5706	1.9307	1.7062	1.5706
Route 23	23	1700-1800	2.3322	1.8806	1.9907	1.7562	1.6206	1.9907	1.7562	1.6206	1.9907	1.7562	1.6206
Route 23	23	1800-1900	2.4002	1.9306	2.0507	1.8062	1.6706	2.0507	1.8062	1.6706	2.0507	1.8062	1.6706
Route 23	23	1900-2000	2.4682	1.9806	2.1107	1.8562	1.7206	2.1107	1.8562	1.7206	2.1107	1.8562	1.7206
Route 23	23	2000-2100	2.5362	2.0306	2.1707	1.9062	1.7706	2.1707	1.9062	1.7706	2.1707	1.9062	1.7706
Route 23	23	2100-2200	2.6042	2.0806	2.2307	1.9562	1.8206	2.2307	1.9562	1.8206	2.2307	1.9562	1.8206
Route 23	23	2200-2300	2.6722	2.1306	2.2907	2.0062	1.8706	2.2907	2.0062	1.8706	2.2907	2.0062	1.8706
Route 23	23	2300-0000	2.7402	2.1806	2.3507	2.0562	1.9206	2.3507	2.0562	1.9206	2.3507	2.0562	1.9206
Route 24	24	0000-0100	1.2602	1.1146	1.1247	0.9602	0.8346	1.1247	0.9602	0.8346	1.1247	0.9602	0.8346
Route 24	24	0100-0200	1.3282	1.1646	1.1747	1.0102	0.8846	1.1747	1.0102	0.8846	1.1747	1.0102	0.8846
Route 24	24	0200-0300	1.3962	1.2146	1.2407	1.0602	0.9346	1.2407	1.0602	0.9346	1.2407	1.0602	0.9346
Route 24	24	0300-0400	1.4642	1.2646	1.3007	1.1102	0.9846	1.3007	1.1102	0.9846	1.3007	1.1102	0.9846
Route 24	24	0400-0500	1.5322	1.3146	1.3607	1.1602	1.0346	1.3607	1.1602	1.0346	1.3607	1.1602	1.0346
Route 24	24	0500-0600	1.6002	1.3646									

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Appendix 4.5 Calculation of Vehicular Emission (Scenario

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Open Day 24 Hour Underground Quarry																								
Road Name			Road ID		Hour		No. Emission																	
							ARMDCO model (April)																	
							Year 2008																	
							Monthlyhourly			Monthlyhourlyaverage			Monthlyhourlymin			Monthlyhourlymax								
							g/min			tonne/hour			g/min			tonne/hour			g/min			tonne/hour		
Road 27	27	1600-1700	1.633	0.1	1.333	2.733	0.06	1.333	2.733	0.06	1.333	2.733	0.06	1.333	2.733	0.06	1.333	2.733	0.06	1.333	2.733	0.06	1.333	2.733
Road 27	27	1700-1800	1.445	0.1	1.305	2.025	0.06	1.235	2.855	0.07	1.235	2.855	0.07	1.235	2.855	0.07	1.235	2.855	0.07	1.235	2.855	0.07	1.235	2.855
Road 27	27	1800-1900	1.265	0.1	1.095	1.825	0.07	1.095	1.725	0.535	0.775	1.585	0.02	1.265	2.025	0.05	1.265	2.025	0.05	1.265	2.025	0.05	1.265	2.025
Road 27	27	1900-2000	1.165	0.1	1.045	1.645	0.07	1.045	1.645	0.07	1.045	1.645	0.07	1.045	1.645	0.07	1.045	1.645	0.07	1.045	1.645	0.07	1.045	1.645
Road 27	27	2000-2100	1.125	0.1	0.975	1.625	0.08	0.975	1.625	0.08	0.975	1.625	0.08	0.975	1.625	0.08	0.975	1.625	0.08	0.975	1.625	0.08	0.975	1.625
Road 27	27	2100-2200	1.115	0.1	0.955	1.735	0.07	1.015	1.835	0.625	0.445	1.835	0.01	1.115	1.935	0.04	1.115	1.935	0.04	1.115	1.935	0.04	1.115	1.935
Road 27	27	2200-2300	1.265	0.1	1.135	1.935	0.07	1.133	1.933	0.07	1.133	1.933	0.07	1.133	1.933	0.07	1.133	1.933	0.07	1.133	1.933	0.07	1.133	1.933
Road 27	27	2300-2400	1.225	0.1	1.075	1.775	0.07	1.075	1.775	0.07	1.075	1.775	0.07	1.075	1.775	0.07	1.075	1.775	0.07	1.075	1.775	0.07	1.075	1.775
Road 28	28	0000-0100	1.025	0.02	0.955	0.725	0.06	0.945	0.935	0.595	0.445	0.935	0.01	1.025	1.025	0.01	1.025	1.025	0.01	1.025	1.025	0.01	1.025	1.025
Road 28	28	0100-0200	1.125	0.02	0.995	0.545	0.06	0.985	1.035	0.395	0.515	0.985	0.01	1.125	1.125	0.01	1.125	1.125	0.01	1.125	1.125	0.01	1.125	1.125
Road 28	28	0200-0300	1.225	0.02	1.095	0.325	0.06	1.085	1.135	0.295	0.365	1.085	0.01	1.225	1.225	0.01	1.225	1.225	0.01	1.225	1.225	0.01	1.225	1.225
Road 28	28	0300-0400	1.325	0.02	1.085	0.185	0.06	1.205	1.505	0.285	0.555	1.205	0.01	1.325	1.325	0.01	1.325	1.325	0.01	1.325	1.325	0.01	1.325	1.325
Road 28	28	0400-0500	1.375	0.02	1.135	0.045	0.06	1.245	1.615	0.305	0.775	1.245	0.01	1.375	1.375	0.01	1.375	1.375	0.01	1.375	1.375	0.01	1.375	1.375
Road 28	28	0500-0600	1.425	0.02	1.185	0.005	0.06	1.295	1.665	0.335	0.825	1.295	0.01	1.425	1.425	0.01	1.425	1.425	0.01	1.425	1.425	0.01	1.425	1.425
Road 28	28	0600-0700	1.475	0.02	1.235	0.035	0.06	1.345	1.715	0.365	0.875	1.345	0.01	1.475	1.475	0.01	1.475	1.475	0.01	1.475	1.475	0.01	1.475	1.475
Road 28	28	0700-0800	1.525	0.02	1.285	0.075	0.06	1.395	1.765	0.395	0.925	1.395	0.01	1.525	1.525	0.01	1.525	1.525	0.01	1.525	1.525	0.01	1.525	1.525
Road 28	28	0800-0900	1.575	0.02	1.335	0.115	0.06	1.445	1.815	0.425	0.975	1.445	0.01	1.575	1.575	0.01	1.575	1.575	0.01	1.575	1.575	0.01	1.575	1.575
Road 28	28	0900-1000	1.625	0.02	1.385	0.155	0.06	1.495	1.865	0.455	1.025	1.495	0.01	1.625	1.625	0.01	1.625	1.625	0.01	1.625	1.625	0.01	1.625	1.625
Road 28	28	1000-1100	1.675	0.02	1.435	0.195	0.06	1.545	1.915	0.485	1.075	1.545	0.01	1.675	1.675	0.01	1.675	1.675	0.01	1.675	1.675	0.01	1.675	1.675
Road 28	28	1100-1200	1.725	0.02	1.485	0.235	0.06	1.595	1.965	0.515	1.125	1.595	0.01	1.725	1.725	0.01	1.725	1.725	0.01	1.725	1.725	0.01	1.725	1.725
Road 28	28	1200-1300	1.775	0.02	1.535	0.275	0.06	1.645	2.015	0.545	1.175	1.645	0.01	1.775	1.775	0.01	1.775	1.775	0.01	1.775	1.775	0.01	1.775	1.775
Road 28	28	1300-1400	1.825	0.02	1.585	0.315	0.06	1.695	2.065	0.575	1.225	1.695	0.01	1.825	1.825	0.01	1.825	1.825	0.01	1.825	1.825	0.01	1.825	1.825
Road 28	28	1400-1500	1.875	0.02	1.635	0.355	0.06	1.745	2.115	0.605	1.275	1.745	0.01	1.875	1.875	0.01	1.875	1.875	0.01	1.875	1.875	0.01	1.875	1.875
Road 28	28	1500-1600	1.925	0.02	1.685	0.395	0.06	1.795	2.165	0.635	1.325	1.795	0.01	1.925	1.925	0.01	1.925	1.925	0.01	1.925	1.925	0.01	1.925	1.925
Road 28	28	1600-1700	1.975	0.02	1.735	0.435	0.06	1.845	2.215	0.665	1.375	1.845	0.01	1.975	1.975	0.01	1.975	1.975	0.01	1.975	1.975	0.01	1.975	1.975
Road 28	28	1700-1800	2.025	0.02	1.785	0.475	0.06	1.895	2.265	0.695	1.425	1.895	0.01	2.025	2.025	0.01	2.025	2.025	0.01	2.025	2.025	0.01	2.025	2.025
Road 28	28	1800-1900	2.075	0.02	1.835	0.515	0.06	1.945	2.315	0.725	1.475	1.945	0.01	2.075	2.075	0.01	2.075	2.075	0.01	2.075	2.075	0.01	2.075	2.075
Road 28	28	1900-2000	2.125	0.02	1.885	0.555	0.06	1.995	2.365	0.755	1.525	1.995	0.01	2.125	2.125	0.01	2.125	2.125	0.01	2.125	2.125	0.01	2.125	2.125
Road 28	28	2000-2100	2.175	0.02	1.935	0.595	0.06	2.045	2.415	0.785	1.575	2.045	0.01	2.175	2.175	0.01	2.175	2.175	0.01	2.175	2.175	0.01	2.175	2.175
Road 28	28	2100-2200	2.225	0.02	1.985	0.635	0.06	2.095	2.465	0.815	1.625	2.095	0.01	2.225	2.225	0.01	2.225	2.225	0.01	2.225	2.225	0.01	2.225	2.225
Road 28	28	2200-2300	2.275	0.02	2.035	0.675	0.06	2.145	2.515	0.845	1.675	2.145	0.01	2.275	2.275	0.01	2.275	2.275	0.01	2.275	2.275	0.01	2.275	2.275
Road 28	28	2300-2400	2.325	0.02	2.085	0.715	0.06	2.195	2.565	0.875	1.725	2.195	0.01	2.325	2.325	0.01	2.325	2.325	0.01	2.325	2.325	0.01	2.325	2.325
Road 29	29	0000-0100	0.645	0.03	0.368	0.556	0.06	0.788	0.318	0.228	0.431	0.973	0.06	0.645	0.645	0.03	0.645	0.645	0.03	0.645	0.645	0.03	0.645	0.645
Road 29	29	0100-0200	0.645	0.03	0.368	0.556	0.06	0.788	0.318	0.228	0.431	0.973	0.06	0.645	0.645	0.03	0.645	0.645	0.03	0.645	0.645	0.03	0.645	0.645
Road 29	29	0200-0300	0.645	0.03	0.368	0.556	0.06	0.788	0.318	0.228	0.431	0.973	0.06	0.645	0.645	0.03	0.645	0.645	0.03	0.645	0.645	0.03	0.645	0.645
Road 29	29	0300-0400	0.645	0.03	0.368	0.556	0.06	0.788	0.318	0.228	0.431	0.973	0.06	0.645	0.645	0.03	0.645	0.645	0.03	0.645	0.645	0.03	0.645	0.645
Road 29	29	0400-0500	0.645	0.03	0.368	0.556	0.06	0.788	0.318	0.228	0.431	0.973	0.06	0.645	0.645	0.03	0.645	0.645	0.03	0.645	0.645	0.03	0.645	0.645
Road 29	29	0500-0600	0.645	0.03	0.368	0.556	0.06	0.788	0.318	0.228	0.431	0.973	0.06	0.645	0.645	0.03	0.645	0.645	0.03	0.645	0.645	0.03	0.645	0.645
Road 29	29	0600-0700	0.645	0.03	0.368	0.556	0.06	0.788	0.318	0.228	0.431	0.973	0.06	0.645	0.645	0.03	0.645	0.645	0.03	0.645	0.645	0.03	0.645	0.645
Road 29	29	0700-0800	0.645	0.03	0.368	0.556	0.06	0.788	0.318	0.228	0.431	0.973	0.06	0.645	0.645	0.03	0.645	0.645	0.03	0.645	0.645	0.03	0.645	0.645
Road 29	29	0800-0900	0.645	0.03	0.368	0.556	0.06	0.788	0.318	0.228	0.431	0.973	0.06	0.645	0.645	0.03	0.645	0.645	0.03	0.645	0.645	0.03	0.645	0.645
Road 29	29	0900-1000	0.645	0.03	0.368	0.556	0.06	0.788	0.318	0.228	0.431	0.973	0.06	0.645	0.645	0.03	0.645	0.645	0.03	0.645	0.645	0.03	0.645	0.645
Road 29	29	1000-1100	0.645	0.03	0.368	0.556	0.06	0.788	0.318	0.228	0.431	0.973	0.06	0.645	0.645	0.03	0.645	0.645	0.03	0.645	0.645	0.03	0.645	0.645
Road 29	29	1100-1200	0.645	0.03	0.368	0.556	0.06	0.788	0.318	0.228	0.431	0.973	0.06	0.645	0.645	0.03	0.645	0.645	0.03	0.645	0.645	0.03	0.645	0.645
Road 29	29	1200-1300	0.645	0.03	0.368	0.556	0.06	0.788	0.318	0.228	0.431	0.973	0.06	0.645	0.645	0.03	0.645	0.645	0.03	0.645	0.645	0.03	0.645	0.645
Road 29	29	1300-1400	0.645	0.03	0.368	0.556	0.06	0.788	0.318	0.228	0.431	0.973	0.06	0.645	0.645	0.03	0.645	0.645	0.03	0.645	0.645	0.03	0.645	0.645
Road 29	29	1400-1500	0.645	0.03	0.368	0.556	0.06	0.788	0.318	0.228	0.431	0.973	0.06	0.645	0.645	0.03	0.645	0.645	0.03	0.645	0.645	0.03	0.645	0.645
Road 29	29	1500-1600	0.645	0.03	0.368	0.556	0.06	0.788	0.318	0.228	0.431	0.973	0.06	0.645	0.645	0.03	0.645	0.645	0.03	0.645	0.645	0.03	0.645	0.645
Road 29	29	1600-1700	0.645	0.03	0.368	0.556	0.06	0.788	0.318	0.228	0.431	0.973	0.06	0.645	0.645	0.03	0.645	0.645						

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry Open Road 24 hour Emission Factors for ARMD Model (kg/hr)									
Road Name	Road ID	Hour	NO _x Emission			NO ₂ Emission			Monthly/Average
			g/min	g/s	tonne/hour	g/min	g/s	tonne/hour	
Year 2038									
Monthly/Average									
Road 31									
Road 31	31	0000-0000	1.646	1.350	0.777	6.178	0.412	0.247	1.646
Road 31	31	0100-0200	1.976	1.620	0.952	7.366	0.485	0.291	1.976
Road 31	31	0200-0300	2.246	1.868	1.080	8.258	0.546	0.328	2.246
Road 31	31	0300-0400	2.516	2.080	1.220	9.250	0.615	0.369	2.516
Road 31	31	0400-0500	2.426	2.008	1.172	8.926	0.595	0.358	2.426
Road 31	31	0500-0600	2.146	1.788	1.020	7.926	0.516	0.310	2.146
Road 31	31	0600-0700	1.866	1.548	0.880	6.926	0.437	0.264	1.866
Road 31	31	0700-0800	1.586	1.308	0.740	5.926	0.358	0.217	1.586
Road 31	31	0800-0900	1.306	1.068	0.600	4.926	0.279	0.170	1.306
Road 31	31	0900-1000	1.026	0.828	0.460	3.926	0.200	0.121	1.026
Road 31	31	1000-1100	0.746	0.606	0.320	2.926	0.121	0.072	0.746
Road 31	31	1100-1200	0.466	0.366	0.180	1.926	0.042	0.025	0.466
Road 31	31	1200-1300	0.186	0.146	0.070	0.926	0.003	0.001	0.186
Road 31	31	1300-1400	0.066	0.056	0.020	0.326	0.000	0.000	0.066
Road 31	31	1400-1500	0.046	0.036	0.010	0.226	0.000	0.000	0.046
Road 31	31	1500-1600	0.026	0.016	0.005	0.126	0.000	0.000	0.026
Road 31	31	1600-1700	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	1700-1800	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	1800-1900	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	1900-2000	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	2000-2100	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	2100-2200	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	2200-2300	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	2300-2400	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	2400-2500	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	2500-2600	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	2600-2700	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	2700-2800	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	2800-2900	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	2900-3000	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	3000-3100	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	3100-3200	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	3200-3300	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	3300-3400	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	3400-3500	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	3500-3600	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	3600-3700	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	3700-3800	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	3800-3900	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	3900-4000	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	4000-4100	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	4100-4200	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	4200-4300	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	4300-4400	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	4400-4500	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	4500-4600	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	4600-4700	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	4700-4800	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	4800-4900	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	4900-5000	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	5000-5100	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	5100-5200	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	5200-5300	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	5300-5400	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	5400-5500	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	5500-5600	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	5600-5700	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	5700-5800	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	5800-5900	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	5900-6000	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	6000-6100	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	6100-6200	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	6200-6300	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	6300-6400	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	6400-6500	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	6500-6600	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	6600-6700	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	6700-6800	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	6800-6900	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	6900-7000	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	7000-7100	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	7100-7200	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	7200-7300	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	7300-7400	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	7400-7500	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	7500-7600	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	7600-7700	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	7700-7800	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	7800-7900	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	7900-8000	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	8000-8100	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	8100-8200	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	8200-8300	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	8300-8400	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	8400-8500	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	8500-8600	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	8600-8700	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	8700-8800	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	8800-8900	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	8900-9000	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	9000-9100	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	9100-9200	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	9200-9300	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	9300-9400	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	9400-9500	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	9500-9600	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	9600-9700	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	9700-9800	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	9800-9900	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	9900-10000	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	10000-10100	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	10100-10200	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	10200-10300	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	10300-10400	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	10400-10500	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	10500-10600	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	10600-10700	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	10700-10800	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	10800-10900	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	10900-11000	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	11000-11100	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	11100-11200	0.006	0.006	0.000	0.026	0.000	0.000	0.006
Road 31	31	11200							

o B)

Ying Yi North Underground Quarry
 Open Road 24 hour Emission Factors for

AEMCO model (May)			Year 2013											
Bad Name	Road ID	Hwy	No. Emission						No Emission					
			Monthly/Average			Monthly/Average			Monthly/Average			Monthly/Average		
			g/min	g/min	tonne/hour	g/min	g/min	tonne/hour	g/min	g/min	tonne/hour	g/min	g/min	tonne/hour
Road 7	1	1000-1700	1.7562	4.0867	4.7567	1.4462	3.367	3.987	7.4062	1.726	2.0275	6.0272	1.4006	1.6445
Road 7	1	1700-1800	1.3005	3.5517	3.9336	1.0858	2.7876	3.2732	6.7396	1.5596	1.4945	5.1381	1.4334	1.5175
Road 7	1	1800-2000	8.4457	1.8507	1.8507	1.8507	1.8507	1.8507	1.8507	1.8507	1.8507	1.8507	1.8507	1.8507
Road 7	1	2000-2100	7.4452	3.1577	1.8956	6.3302	1.3271	1.6056	4.2026	1.9076	1.065	3.4127	1.7387	0.8555
Road 7	1	2100-2200	7.1348	1.4217	1.4226	6.2204	1.0424	1.2268	4.4328	4.4667	8.7598	3.7062	3.2737	7.3310
Road 7	1	2200-2300	6.7293	1.0275	1.0275	6.7293	1.0275	1.0275	6.7293	1.0275	1.0275	6.7293	1.0275	1.0275
Road 7	1	2300-2400	6.2793	1.0275	1.0275	6.2793	1.0275	1.0275	6.2793	1.0275	1.0275	6.2793	1.0275	1.0275
Road 7	1	2400-2500	7.0053	8.5556	1.0053	6.0553	7.3958	8.6777	4.3592	5.3267	6.2456	3.6162	4.0272	5.1805
Road 7	1	2500-2600	6.7293	1.0275	1.0275	6.7293	1.0275	1.0275	6.7293	1.0275	1.0275	6.7293	1.0275	1.0275
Road 7	1	2600-2700	9.2773	3.4229	6.9158	6.7595	2.9951	3.9814	4.648	1.648	3.3177	7.005	1.9626	0.7768
Road 8	2	0000-0100	9.8861	2.2739	5.3398	8.6455	2.3434	2.4738	4.6542	1.2598	2.5457	3.9462	1.0272	2.1855
Road 8	2	0100-0400	1.0462	2.6726	4.5276	6.9505	1.9439	3.9278	4.8112	1.0338	2.0877	4.9862	8.6959	1.7657
Road 8	2	0400-0500	1.1182	1.9852	1.9852	1.1182	1.9852	1.9852	1.1182	1.9852	1.9852	1.1182	1.9852	1.9852
Road 8	2	0500-0600	1.1182	1.9852	1.9852	1.1182	1.9852	1.9852	1.1182	1.9852	1.9852	1.1182	1.9852	1.9852
Road 8	2	0600-0700	1.2236	1.0275	1.0275	1.0275	1.0275	1.0275	1.2236	1.0275	1.0275	1.2236	1.0275	1.0275
Road 8	2	0700-0800	1.2236	1.0275	1.0275	1.2236	1.0275	1.0275	1.2236	1.0275	1.0275	1.2236	1.0275	1.0275
Road 8	2	0800-0900	1.2752	2.5886	5.0217	1.0275	2.1718	4.3967	5.4026	1.1027	2.2226	4.4962	9.0308	1.8336
Road 8	2	0900-1000	1.4242	2.5886	5.0217	1.2236	2.1718	4.3967	6.0152	1.0507	2.1226	4.4962	8.7028	1.7836
Road 8	2	1000-1100	1.5562	1.0275	1.0275	1.5562	1.0275	1.0275	1.5562	1.0275	1.0275	1.5562	1.0275	1.0275
Road 8	2	1100-1200	2.5512	2.2716	4.5857	1.3302	1.8956	3.3856	4.7464	6.936	1.9056	5.2882	7.7116	1.5655
Road 8	2	1200-1300	1.0146	1.2236	1.6655	1.6755	6.8454	3.3856	1.7862	1.7177	6.4116	6.936	2.6132	5.2756
Road 8	2	1300-1400	1.0146	1.2236	1.6655	1.6755	6.8454	3.3856	1.7862	1.7177	6.4116	6.936	2.6132	5.2756
Road 8	2	1400-1500	2.0306	1.0275	1.8336	1.6655	7.4248	1.5116	1.7886	3.5657	1.7196	6.5026	2.9967	5.8665
Road 8	2	1500-1600	9.8861	1.7565	1.5652	7.1258	1.4462	1.4462	6.8687	4.467	6.5026	2.9967	6.0165	0.567
Road 8	2	1600-1700	1.8507	1.8507	1.8507	1.8507	1.8507	1.8507	1.8507	1.8507	1.8507	1.8507	1.8507	1.8507
Road 8	2	1700-1800	1.4462	5.5755	1.5116	1.2236	6.2562	1.9545	4.5426	1.3457	6.7125	5.342	2.7187	4.2826
Road 8	2	1800-1900	1.0867	7.4478	1.1386	1.8198	4.738	6.0171	4.888	2.5347	6.1156	4.078	2.4217	5.2605
Road 8	2	1900-2000	1.8507	1.8507	1.8507	1.8507	1.8507	1.8507	1.8507	1.8507	1.8507	1.8507	1.8507	1.8507
Road 8	2	2000-2100	9.6113	0.6288	6.2525	6.8382	2.6852	4.4927	4.8952	1.5667	3.1156	4.916	1.0122	2.6665
Road 8	2	2100-2200	8.9143	2.8115	6.5877	7.8338	2.4718	5.926	4.692	1.4567	3.1156	4.916	1.0122	1.2625
Road 8	2	2200-2300	8.9963	2.7155	5.9507	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	2300-2400	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	2400-2500	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	2500-2600	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	2600-2700	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	2700-2800	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	2800-2900	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	2900-3000	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	3000-3100	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	3100-3200	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	3200-3300	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	3300-3400	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	3400-3500	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	3500-3600	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	3600-3700	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	3700-3800	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	3800-3900	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	3900-4000	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	4000-4100	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	4100-4200	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	4200-4300	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	4300-4400	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	4400-4500	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	4500-4600	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	4600-4700	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	4700-4800	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	4800-4900	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	4900-5000	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	5000-5100	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	5100-5200	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	5200-5300	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	5300-5400	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	5400-5500	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	5500-5600	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	5600-5700	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	5700-5800	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	5800-5900	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	5900-6000	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	6000-6100	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	6100-6200	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	6200-6300	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	6300-6400	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	6400-6500	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	6500-6600	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717	1.4857	2.833	3.6681	1.1887	2.3925
Road 8	2	6600-6700	9.1514	2.6852	6.9587	7.8338	2.396	4.8467	4.5717					

Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Appendix\Appendix 3.5.4 Emission Factor in 2038-S B.xlsx

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Ying Yi North Underground Quarry
 Open Road 24 hour Emission Factors for

AEMCO model (May)			Year 2013															
			NO _x Emission								NO _x Emission							
Rad Name	Road ID	Hour	Monthly/μm				Monthly/average				Monthly/μm				Monthly/average			
			g/m ³ /veh	g/m ³	time/hour	g/2000l	g/m ³	g/m ³	time/hour	g/2000l	g/m ³ /veh	g/m ³	time/hour	g/2000l	g/m ³	g/m ³	time/hour	g/2000l
Road 21	0000-0100		1.06E-02	7.34E-08	9.70E-07	9.20E-03	6.36E-08	8.41E-07	5.52E-02	3.62E-07	5.04E-06	4.64E-02	9.21E-07	4.24E-06				
Road 21	0100-0200		1.18E-02	8.30E-08	7.01E-07	1.02E-02	4.62E-08	6.08E-07	5.74E-02	2.63E-07	4.38E-06	4.48E-02	2.22E-07	2.93E-06				
Road 21	0200-0300		1.25E-02	8.70E-08	7.40E-07	1.09E-02	4.82E-08	6.32E-07	5.92E-02	2.74E-07	4.58E-06	4.68E-02	2.32E-07	3.03E-06				
Road 21	0300-0400		1.37E-02	3.76E-08	4.97E-07	1.13E-02	3.27E-08	4.32E-07	6.32E-02	1.74E-07	3.30E-06	5.37E-02	1.47E-07	1.95E-06				
Road 21	0400-0500		1.48E-02	4.28E-08	5.84E-07	1.22E-02	3.62E-08	4.59E-07	6.61E-02	2.02E-07	2.66E-06	5.98E-02	1.70E-07	2.25E-06				
Road 21	0500-0600		1.59E-02	4.80E-08	6.72E-07	1.31E-02	4.07E-08	5.08E-07	6.90E-02	2.30E-07	3.00E-06	6.30E-02	1.90E-07	2.54E-06				
Road 21	0600-0700		1.57E-02	1.80E-07	2.39E-06	1.32E-02	1.52E-07	2.01E-06	1.71E-02	8.75E-07	1.19E-05	5.88E-02	6.78E-07	8.96E-06				
Road 21	0700-0800		1.77E-02	4.20E-07	5.55E-06	1.47E-02	3.56E-07	4.62E-06	7.88E-02	1.87E-06	2.47E-05	6.40E-02	1.52E-06	2.02E-05				
Road 21	0800-0900		1.92E-02	4.72E-07	6.16E-06	1.56E-02	3.91E-07	5.03E-06	8.18E-02	2.07E-06	2.76E-05	6.90E-02	1.62E-06	2.19E-05				
Road 21	0900-1000		2.07E-02	5.19E-07	6.85E-06	1.74E-02	4.45E-07	5.69E-06	8.93E-02	2.23E-06	2.99E-05	7.58E-02	1.76E-06	2.31E-05				
Road 21	1000-1100		2.24E-02	5.66E-07	7.46E-06	1.90E-02	4.81E-07	6.26E-06	9.17E-02	2.40E-06	2.75E-05	7.78E-02	1.71E-06	2.31E-05				
Road 21	1100-1200		2.42E-02	6.13E-07	8.07E-06	2.06E-02	5.17E-07	6.73E-06	9.39E-02	2.57E-06	2.99E-05	7.99E-02	1.76E-06	2.36E-05				
Road 21	1200-1300		2.72E-02	5.55E-07	7.07E-06	2.30E-02	4.51E-07	5.96E-06	1.04E-01	2.04E-06	2.70E-05	8.72E-02	1.77E-06	2.36E-05				
Road 21	1300-1400		2.78E-02	5.82E-07	7.69E-06	2.32E-02	4.90E-07	6.48E-06	1.09E-01	2.31E-06	3.05E-05	9.12E-02	1.93E-06	2.58E-05				
Road 21	1400-1500		2.92E-02	6.29E-07	8.30E-06	2.44E-02	5.26E-07	6.95E-06	1.14E-01	2.58E-06	3.30E-05	9.34E-02	2.00E-06	2.68E-05				
Road 21	1500-1600		2.64E-02	5.91E-07	7.81E-06	2.20E-02	4.92E-07	6.51E-06	1.11E-01	2.49E-06	3.02E-05	9.22E-02	1.96E-06	2.67E-05				
Road 21	1600-1700		2.71E-02	6.01E-07	7.94E-06	2.22E-02	4.94E-07	6.53E-06	1.09E-01	2.35E-06	3.11E-05	8.95E-02	1.92E-06	2.59E-05				
Road 21	1700-1800		2.66E-02	6.07E-07	8.17E-06	2.23E-02	4.93E-07	6.51E-06	1.07E-01	2.32E-06	3.07E-05	8.77E-02	1.78E-06	2.49E-05				
Road 21	1800-1900		2.60E-02	6.10E-07	8.20E-06	2.24E-02	4.93E-07	6.51E-06	1.06E-01	2.31E-06	3.05E-05	8.69E-02	1.76E-06	2.46E-05				
Road 21	1900-2000		1.28E-02	2.06E-07	2.65E-06	1.10E-02	1.17E-07	2.29E-06	6.18E-02	9.67E-07	1.28E-05	5.18E-02	8.10E-07	8.67E-06				
Road 21	2000-2100		1.29E-02	1.51E-07	1.99E-06	1.09E-02	1.36E-07	1.72E-06	6.79E-02	9.17E-07	1.02E-05	5.31E-02	6.51E-07	8.61E-06				
Road 21	2100-2200		1.28E-02	1.49E-07	1.96E-06	1.08E-02	1.34E-07	1.70E-06	6.74E-02	9.07E-07	1.01E-05	5.28E-02	6.45E-07	8.57E-06				
Road 21	2200-2300		1.21E-02	1.41E-07	1.88E-06	1.06E-02	1.23E-07	1.63E-06	5.97E-02	8.94E-07	9.17E-06	5.11E-02	5.94E-07	7.85E-06				
Road 21	2300-0000		1.32E-02	1.18E-07	1.59E-06	1.15E-02	1.03E-07	1.36E-06	6.52E-02	7.43E-07	8.38E-06	5.48E-02	6.06E-07	8.35E-06				
Road 22	0000-0100		1.43E-02	1.63E-07	2.18E-06	1.24E-02	1.58E-07	2.23E-06	4.27E-02	9.17E-07	9.29E-06	5.43E-02	8.96E-07	8.96E-06				
Road 22	0100-0200		1.14E-02	9.73E-08	1.73E-06	9.98E-03	8.47E-08	1.15E-06	4.16E-02	3.54E-07	6.31E-06	3.62E-02	3.90E-07	5.89E-06				
Road 22	0200-0300		1.12E-02	9.42E-08	1.32E-06	9.84E-03	8.54E-08	1.11E-06	4.01E-02	2.70E-07	4.62E-06	3.38E-02	2.38E-07	4.25E-06				
Road 22	0300-0400		1.12E-02	9.42E-08	1.32E-06	9.84E-03	8.54E-08	1.11E-06	4.01E-02	2.70E-07	4.62E-06	3.38E-02	2.38E-07	4.25E-06				
Road 22	0400-0500		1.17E-02	7.60E-08	1.36E-06	1.01E-03	6.61E-08	1.18E-06	4.24E-02	2.76E-07	4.23E-06	3.68E-02	4.49E-07	4.28E-06				
Road 22	0500-0600		1.33E-02	1.51E-07	2.84E-06	1.11E-03	1.36E-07	2.42E-06	4.97E-02	5.74E-07	1.02E-05	4.08E-02	4.89E-07	8.71E-06				
Road 22	0600-0700		1.43E-02	1.63E-07	2.18E-06	1.24E-03	1.58E-07	2.23E-06	4.27E-02	9.17E-07	9.29E-06	5.43E-02	8.96E-07	8.96E-06				
Road 22	0700-0800		1.68E-02	9.69E-07	1.73E-06	1.40E-03	8.10E-07	1.44E-05	5.93E-02	3.43E-06	6.11E-05	4.95E-02	3.66E-06	5.10E-05				
Road 22	0800-0900		1.72E-02	1.18E-06	2.11E-05	1.40E-03	1.01E-06	1.60E-05	6.24E-02	4.31E-06	7.70E-05	5.31E-02	3.67E-06	6.54E-05				
Road 22	0900-1000		1.88E-02	1.39E-06	2.48E-05	1.60E-03	1.18E-06	2.11E-05	6.55E-02	4.89E-06	8.65E-05	5.58E-02	4.13E-06	7.37E-05				
Road 22	1000-1100		1.88E-02	1.39E-06	2.48E-05	1.60E-03	1.18E-06	2.11E-05	6.55E-02	4.89E-06	8.65E-05	5.58E-02	4.13E-06	7.37E-05				
Road 22	1100-1200		1.88E-02	1.39E-06	2.48E-05	1.60E-03	1.18E-06	2.11E-05	6.55E-02	4.89E-06	8.65E-05	5.58E-02	4.13E-06	7.37E-05				
Road 22	1200-1300		1.88E-02	1.39E-06	2.48E-05	1.60E-03	1.18E-06	2.11E-05	6.55E-02	4.89E-06	8.65E-05	5.58E-02	4.13E-06	7.37E-05				
Road 22	1300-1400		1.87E-02	1.39E-06	2.46E-05	1.59E-03	1.26E-06	2.24E-05	6.58E-02	5.72E-06	9.75E-05	5.52E-02	4.43E-06	7.89E-05				
Road 22	1400-1500		1.97E-02	1.52E-06	2.72E-05	1.62E-03	1.29E-06	2.29E-05	6.55E-02	6.21E-06	9.92E-05	5.62E-02	4.93E-06	7.88E-05				
Road 22	1500-1600		1.97E-02	1.52E-06	2.72E-05	1.62E-03	1.29E-06	2.29E-05	6.55E-02	6.21E-06	9.92E-05	5.62E-02	4.93E-06	7.88E-05				
Road 22	1600-1700		1.84E-02	1.33E-06	2.55E-05	1.52E-03	1.18E-06	2.10E-05	6.48E-02	5.00E-06	8.92E-05	5.31E-02	4.12E-06	7.34E-05				
Road 22	1700-1800		1.54E-02	1.11E-06	1.98E-05	1.30E-03	9.30E-07	1.66E-06	6.00E-02	4.35E-07	6.66E-05	5.01E-02	3.65E-06	6.50E-05				
Road 22	1800-1900		1.54E-02	1.11E-06	1.98E-05	1.30E-03	9.30E-07	1.66E-06	6.00E-02	4.35E-07	6.66E-05	5.01E-02	3.65E-06	6.50E-05				
Road 22	1900-2000		1.11E-02	3.98E-07	7.09E-06	9.52E-03	3.41E-07	4.08E-06	4.39E-02	1.57E-06	2.80E-05	3.75E-02	1.34E-06	2.50E-05				
Road 22	2000-2100		1.06E-02	3.06E-07	5.38E-06	9.15E-03	2.66E-07	4.64E-06	4.32E-02	1.28E-06	2.19E-05	3.73E-02	1.06E-06	1.89E-05				
Road 22	2100-2200		1.21E-02	4.31E-07	7.93E-06	1.02E-03	7.93E-08	1.34E-06	4.91E-02	1.65E-06	2.92E-05	4.35E-02	1.37E-06	2.19E-05				
Road 22	2200-2300		1.16E-02	3.38E-07	5.34E-06	1.02E-03	7.07E-08	1.24E-06	4.31E-02	1.09E-06	1.94E-05	3.69E-02	1.15E-06	1.93E-05				
Road 22	2300-0000		1.14E-02	3.11E-07	4.24E-06	1.00E-03	7.07E-08	1.24E-06	4.15E-02	8.05E-07	1.54E-05	3.63E-02	7.87E-07	1.55E-05				
Road 23	0000-0100		1.12E-02	9.30E-08	5.70E-07	9.73E-03	2.68E-08	3.47E-07	4.07E-02	1.12E-07	2.07E-06	3.54E-02	6.77E-08	1.80E-06				
Road 23	0100-0200		1.12E-02	9.30E-08	5.70E-07	9.73E-03	2.68E-08	3.47E-07	4.07E-02	1.12E-07	2.07E-06	3.54E-02	6.77E-08	1.80E-06				
Road 23	0200-0300		1.15E-02	1.76E-08	3.27E-07	1.02E-03	1.50E-08	2.87E-07	4.18E-02	6.40E-08	1.18E-06	3.66E-02	5.64E-08	1.04E-06				
Road 23	0300-0400		1.12E-02	9.30E-08	5.70E-07	9.73E-03	2.68E-08	3.47E-07	4.07E-02	1.12E-07	2.07E-06	3.54E-02	6.77E-08	1.80E-06				
Road 23	0400-0500		1.22E-02	1.44E-07	2.67E-07	9.74E-02	2.98E-08	3.93E-07	4.96E-02	8.29E-08	1.70E-07	3.74E-02	8.98E-08	8.86E-07				
Road 23	0500-0600		1.22E-02	1.44E-07	2.67E-07	9.74E-02	2.98E-08	3.93E-07	4.96E-02	8.29E-08	1.70E-07	3.74E-02	8.98E-08	8.86E-07				
Road 23	0600-0700		1.22E-02	1.44E-07	2.67E-07	9.74E-02	2.98E-08	3.93E-07	4.96E-02	8.29E-08	1.70E-07	3.74E-02	8.98E-08	8.86E-07				
Road 23	0700-0800		1.28E-02	1.83E-08	3.51E-06	1.01E-03	6.91E-08	1.29E-06	4.29E-02	2.99E-07	5.45E-06	3.92E-02	7.50E-07	4.61E-06				
Road 23	0800-0900		1.42E-02	2.18E-07	4.24E-06	1.24E-03	1.05E-07	1.72E-06	4.32E-02	3.49E-07	6.39E-06	4.51E-02	8.86E-07	5.39E-06				
Road 23	0900-1000		1.48E-02	2.38E-07	4.50E-06	1.24E-03	1.07E-07	1.74E-06	4.42E-02	3.84E-07	6.63E-06	4.61E-02	9.12E-07	5.39E-06				
Road 23	1000-1100		1.45E-02	2.31E-07	4.49E-06	1.22E-03	1.22E-07	4.21E-06	4.34E-02	9.93E-07	1.83E-05	4.68E-02	8.83E-07	5.59E-06				
Road 23	1100-1200		1.45E-02	2.31E-07	4.49E-06	1.22E-03	1.22E-07	4.21E-06	4.34E-02	9.93E-07	1.83E-05	4.68E-02	8.83E-07	5.59E-06				
Road 23	1200-1300		1.50E-02	2.62E-07	4.84E-06	1.33E-03	1.22E-07	4.21E-06	5.58E-02	9.37E-07	1.73E-05	4.75E-02	9.17E-07	5.47E-06				
Road 23	1300-1400		1.65E-02	3.80E-07	5.17E-06	1.45E-03	2.37E-07	4.73E-06	5.54E-02	9.57E-07	1.77E-05	4.77E-02	8.08E-07	4.89E-05				
Road 23	1400-1500		1.65E-02	3.80E-07	5.17E-06	1.45E-03	2.37E-07	4.73E-06	5.54E-02	9.57E-07	1.77E-05	4.77E-02	8.08E-07	4.89E-05				
Road 23	1500-1600		1.62E-02	3.68E-07	5.34E-06	1.22E-03	2.41E-07	4.58E-06	5.62E-02	1.13E-06	2.09E-05	4.69E-02	8.27E-07	5.13E-05				
Road 23	1600-1700		1.62E-02	3.68E-07	5.34E-06													

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry		Tsing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for	Year 2038	Open Road 24 hour Emission Factors for	Year 2038
AERMOD model (May)		AERMOD model (May)	

Road Name	Road ID	Hour	No. Emission						No. Emission						Road Name	Road ID	Hour
			Month/may			Month/june			Month/may			Month/june					
			g/km/hour	gsm ¹	gsm ²	gsm ³	gsm ⁴	gsm ⁵	gsm ⁶	gsm ⁷	gsm ⁸	gsm ⁹	gsm ¹⁰				
Road 24	24	0800-0900	1.48E+01	2.86E+07	1.16E+07	1.26E+07	2.43E+07	6.10E+07	5.48E+07	1.10E+08	2.66E+06	4.66E+07	9.03E+07	2.26E+06	Road 27	27	1600
Road 24	24	0900-1000	1.48E+01	3.18E+07	1.18E+07	1.26E+07	2.74E+07	6.88E+07	5.69E+07	1.16E+08	2.66E+06	4.71E+07	1.00E+07	2.26E+06	Road 27	27	1600
Road 24	24	1000-1100	1.57E+01	3.35E+07	1.38E+07	1.41E+07	2.86E+07	7.18E+07	5.99E+07	1.26E+08	2.66E+06	4.93E+07	1.00E+07	2.26E+06	Road 27	27	1600
Road 24	24	1100-1200	1.57E+01	3.35E+07	1.38E+07	1.41E+07	2.86E+07	7.18E+07	5.99E+07	1.26E+08	2.66E+06	4.93E+07	1.00E+07	2.26E+06	Road 27	27	1600
Road 24	24	1200-1300	1.67E+01	3.57E+07	1.44E+07	1.44E+07	2.94E+07	7.32E+07	5.88E+07	1.13E+08	2.66E+06	4.85E+07	9.57E+07	2.40E+06	Road 27	27	1600
Road 24	24	1300-1400	1.67E+01	3.57E+07	1.44E+07	1.44E+07	2.94E+07	7.32E+07	5.88E+07	1.13E+08	2.66E+06	4.85E+07	9.57E+07	2.40E+06	Road 27	27	1600
Road 24	24	1400-1500	1.72E+01	3.87E+07	1.71E+07	1.45E+07	3.27E+07	8.19E+07	5.94E+07	1.34E+08	3.36E+06	5.01E+07	1.13E+08	2.93E+06	Road 27	27	2200
Road 24	24	1500-1600	1.55E+01	3.66E+07	1.63E+07	1.29E+07	3.05E+07	7.85E+07	5.93E+07	1.40E+08	3.36E+06	4.95E+07	1.13E+08	2.92E+06	Road 27	27	2200
Road 24	24	1600-1700	1.55E+01	3.66E+07	1.63E+07	1.29E+07	3.05E+07	7.85E+07	5.93E+07	1.40E+08	3.36E+06	4.95E+07	1.13E+08	2.92E+06	Road 27	27	2200
Road 24	24	1700-1800	1.36E+01	2.67E+07	1.70E+07	1.14E+07	2.24E+07	5.62E+07	5.43E+07	1.07E+08	2.66E+06	4.56E+07	8.98E+07	2.25E+06	Road 28	28	0100
Road 24	24	1800-1900	1.17E+01	1.59E+07	4.00E+07	1.01E+07	1.37E+07	3.42E+07	4.89E+07	6.60E+07	1.66E+06	4.16E+07	5.66E+07	1.42E+06	Road 28	28	0100
Road 24	24	1900-2000	1.14E+01	1.01E+07	2.54E+07	9.74E+06	8.69E+06	2.18E+07	4.51E+07	4.02E+07	1.01E+06	4.16E+07	4.84E+07	8.03E+07	Road 28	28	0100
Road 24	24	2000-2100	1.08E+01	7.80E+06	3.38E+07	7.80E+06	6.18E+06	1.58E+07	3.92E+07	3.32E+07	8.03E+05	4.16E+07	4.84E+07	8.03E+07	Road 28	28	0100
Road 24	24	2100-2200	1.04E+01	7.60E+06	3.18E+07	6.18E+06	6.70E+06	1.66E+07	4.22E+07	3.08E+07	7.72E+07	4.16E+07	2.71E+07	6.80E+07	Road 28	28	0500
Road 24	24	2200-2300	1.15E+01	7.92E+06	3.83E+07	1.01E+07	6.44E+06	1.61E+07	4.17E+07	2.65E+07	6.80E+07	4.93E+07	3.23E+07	5.84E+07	Road 28	28	0500
Road 24	24	2300-0000	1.15E+01	7.92E+06	3.83E+07	1.01E+07	6.44E+06	1.61E+07	4.17E+07	2.65E+07	6.80E+07	4.93E+07	3.23E+07	5.84E+07	Road 28	28	0500
Road 24	24	0000-0100	1.15E+01	8.11E+06	4.04E+07	1.08E+07	6.49E+06	1.61E+07	4.22E+07	2.65E+07	6.80E+07	4.93E+07	3.23E+07	5.84E+07	Road 28	28	0500
Road 24	24	0100-0200	1.15E+01	8.11E+06	4.04E+07	1.08E+07	6.49E+06	1.61E+07	4.22E+07	2.65E+07	6.80E+07	4.93E+07	3.23E+07	5.84E+07	Road 28	28	0500
Road 24	24	0200-0300	1.20E+01	8.47E+06	4.38E+07	1.10E+07	6.74E+06	1.65E+07	4.30E+07	2.82E+07	7.38E+07	7.81E+08	1.99E+07	Road 28	28	1100	
Road 24	24	0300-0400	1.21E+01	2.94E+08	5.11E+08	1.08E+07	2.56E+08	6.52E+08	4.40E+07	1.07E+07	7.72E+07	3.82E+07	2.93E+07	2.86E+07	Road 28	28	1200
Road 24	24	0400-0500	1.21E+01	2.94E+08	5.11E+08	1.08E+07	2.56E+08	6.52E+08	4.40E+07	1.07E+07	7.72E+07	3.82E+07	2.93E+07	2.86E+07	Road 28	28	1200
Road 24	24	0500-0600	1.33E+01	3.40E+07	1.55E+07	1.18E+07	3.68E+07	9.17E+07	4.71E+07	1.07E+08	4.23E+07	7.17E+07	1.46E+07	3.14E+06	Road 28	28	1400
Road 24	24	0600-0700	1.33E+01	3.40E+07	1.55E+07	1.18E+07	3.68E+07	9.17E+07	4.71E+07	1.07E+08	4.23E+07	7.17E+07	1.46E+07	3.14E+06	Road 28	28	1400
Road 24	24	0700-0800	1.53E+01	3.36E+07	1.56E+07	1.28E+07	2.81E+07	7.18E+07	5.48E+07	1.12E+08	3.06E+06	4.58E+07	1.00E+08	2.56E+06	Road 28	28	1600
Road 24	24	0800-0900	1.53E+01	3.36E+07	1.56E+07	1.28E+07	2.81E+07	7.18E+07	5.48E+07	1.12E+08	3.06E+06	4.58E+07	1.00E+08	2.56E+06	Road 28	28	1600
Road 24	24	0900-1000	1.55E+01	3.46E+07	1.65E+07	1.33E+07	3.62E+07	9.99E+07	5.71E+07	1.51E+08	3.36E+06	5.71E+07	1.46E+08	3.72E+06	Road 28	28	1800
Road 24	24	1000-1100	1.66E+01	3.62E+07	1.73E+06	1.41E+07	4.11E+07	1.09E+08	5.87E+07	1.10E+08	3.34E+06	5.00E+07	1.45E+08	3.70E+06	Road 28	28	1800
Road 24	24	1100-1200	1.66E+01	3.62E+07	1.73E+06	1.41E+07	4.11E+07	1.09E+08	5.87E+07	1.10E+08	3.34E+06	5.00E+07	1.45E+08	3.70E+06	Road 28	28	1800
Road 24	24	1200-1300	1.72E+01	4.02E+07	2.07E+07	1.42E+07	4.46E+07	1.23E+08	6.00E+07	1.64E+08	4.06E+06	5.00E+07	1.45E+08	3.70E+06	Road 28	28	1800
Road 24	24	1300-1400	1.68E+01	3.57E+07	1.32E+06	1.42E+07	4.36E+07	1.11E+08	6.00E+07	1.64E+08	4.70E+06	5.06E+07	1.55E+08	3.96E+06	Road 28	28	2100
Road 24	24	1400-1500	1.73E+01	3.56E+07	1.34E+06	1.46E+07	4.44E+07	1.12E+08	6.00E+07	1.62E+08	4.54E+06	5.06E+07	1.54E+08	3.92E+06	Road 28	28	2100
Road 24	24	1500-1600	1.73E+01	3.56E+07	1.34E+06	1.46E+07	4.44E+07	1.12E+08	6.00E+07	1.62E+08	4.54E+06	5.06E+07	1.54E+08	3.92E+06	Road 28	28	2100
Road 24	24	1600-1700	1.68E+01	3.49E+07	1.25E+06	1.38E+07	4.05E+07	1.03E+08	5.97E+07	1.75E+08	4.92E+06	4.14E+08	3.67E+06	Road 28	28	2300	
Road 24	24	1700-1800	1.45E+01	3.62E+07	1.74E+07	1.22E+07	3.21E+07	8.08E+07	5.78E+07	1.52E+08	4.89E+06	1.24E+08	3.25E+06	Road 29	29	0000	
Road 24	24	1800-1900	1.55E+01	3.66E+07	1.63E+07	1.29E+07	3.05E+07	7.85E+07	5.93E+07	1.40E+08	3.36E+06	4.95E+07	1.13E+08	2.92E+06	Road 29	29	0000
Road 24	24	1900-2000	1.23E+01	1.44E+07	6.88E+06	1.09E+07	1.24E+07	3.15E+07	4.88E+07	5.70E+07	4.59E+06	4.18E+08	1.24E+06	Road 29	29	0000	
Road 24	24	2000-2100	1.11E+01	1.04E+07	6.55E+07	9.65E+06	8.00E+06	2.30E+07	4.56E+07	4.02E+07	1.08E+06	3.94E+07	3.68E+07	9.37E+07	Road 29	29	0000
Road 24	24	2100-2200	1.11E+01	1.04E+07	6.55E+07	9.65E+06	8.00E+06	2.30E+07	4.56E+07	4.02E+07	1.08E+06	3.94E+07	3.68E+07	9.37E+07	Road 29	29	0000
Road 24	24	2200-2300	1.29E+01	1.04E+07	6.66E+07	1.10E+07	9.18E+06	2.34E+07	4.51E+07	3.76E+07	9.99E+06	3.97E+07	3.31E+07	8.47E+07	Road 29	29	0000
Road 24	24	2300-0000	1.21E+01	8.30E+06	2.12E+07	1.05E+07	7.28E+06	1.88E+07	4.37E+07	3.00E+07	7.65E+07	1.83E+07	2.63E+07	6.70E+07	Road 29	29	0700
Road 24	24	0000-0100	1.17E+01	4.69E+06	1.75E+07	1.03E+07	4.05E+06	1.52E+07	4.25E+07	3.68E+07	6.53E+07	1.68E+07	1.47E+07	5.51E+07	Road 29	29	0800
Road 24	24	0100-0200	1.18E+01	4.69E+06	1.75E+07	1.03E+07	4.05E+06	1.52E+07	4.25E+07	3.68E+07	6.53E+07	1.68E+07	1.47E+07	5.51E+07	Road 29	29	0800
Road 24	24	0200-0300	1.15E+01	2.65E+06	9.98E+06	1.05E+07	2.33E+06	8.76E+06	4.33E+06	9.61E+06	8.11E+07	8.00E+07	8.44E+08	3.17E+07	Road 29	29	1100
Road 24	24	0300-0400	1.21E+01	2.28E+06	9.98E+06	1.05E+07	1.99E+06	7.47E+06	4.49E+06	8.26E+06	1.01E+07	3.82E+07	2.00E+07	2.76E+07	Road 29	29	1100
Road 24	24	0400-0500	1.23E+01	2.28E+06	9.98E+06	1.05E+07	1.99E+06	7.47E+06	4.49E+06	8.26E+06	1.01E+07	3.82E+07	2.00E+07	2.76E+07	Road 29	29	1100
Road 24	24	0500-0600	1.23E+01	2.28E+06	9.98E+06	1.05E+07	1.99E+06	7.47E+06	4.49E+06	8.26E+06	1.01E+07	3.82E+07	2.00E+07	2.76E+07	Road 29	29	1100
Road 24	24	0600-0700	1.38E+01	2.54E+06	9.93E+07	1.07E+07	4.39E+06	1.69E+07	4.54E+06	1.86E+07	8.98E+07	3.87E+07	1.59E+07	5.96E+07	Road 29	29	1300
Road 24	24	0700-0800	1.38E+01	2.54E+06	9.93E+07	1.07E+07	4.39E+06	1.69E+07	4.54E+06	1.86E+07	8.98E+07	3.87E+07	1.59E+07	5.96E+07	Road 29	29	1300
Road 24	24	0800-0900	1.57E+01	3.78E+07	4.24E+06	1.33E+07	3.20E+07	1.20E+08	5.81E+07	3.39E+08	5.24E+06	4.92E+07	1.18E+08	4.44E+06	Road 29	29	1400
Road 24	24	0900-1000	1.55E+01	3.66E+07	1.63E+07	1.29E+07	3.05E+07	7.85E+07	5.93E+07	1.40E+08	3.36E+06	4.95E+07	1.13E+08	2.92E+06	Road 29	29	1400
Road 24	24	1000-1100	1.67E+01	3.57E+07	1.44E+07	1.44E+07	2.94E+07	7.32E+07	5.88E+07	1.13E+08	2.66E+06	4.85E+07	9.57E+07	2.40E+06	Road 29	29	1400
Road 24	24	1100-1200	1.67E+01	3.57E+07	1.44E+07	1.44E+07	2.94E+07	7.32E+07	5.88E+07	1.13E+08	2.66E+06	4.85E+07	9.57E+07	2.40E+06	Road 29	29	1400
Road 24	24	1200-1300	1.67E+01	3.57E+07	1.44E+07	1.44E+07	2.94E+07	7.32E+07	5.88E+07	1.13E+08	2.66E+06	4.85E+07	9.57E+07	2.40E+06	Road 29	29	1400
Road 24	24	1300-1400	1.67E+01	3.57E+07	1.44E+07	1.44E+07	2.94E+07	7.32E+07	5.88E+07	1.13E+08	2.66E+06	4.85E+07	9.57E+07	2.40E+06	Road 29	29	1400
Road 24	24	1400-1500	1.67E+01	3.57E+07	1.44E+07	1.44E+07	2.94E+07	7.32E+07	5.88E+07	1.13E+08	2.66E+06	4.85E+07	9.57E+07	2.40E+06	Road 29	29	1400
Road 24	24	1500-1600	1.55E+01	3.66E+07	1.63E+07	1.29E+07	3.05E+07	7.85E+07	5.93E+07	1.40E+08	3.36E+06	4.95E+07	1.13E+08	2.92E+06	Road 29	29	1600
Road 24	24	1600-1700	1.55E+01	3.66E+07	1.63E+07	1.29E+07	3.05E										

Secure/Equipment Projects/60722220/1.01/Other/Air/Modelling/Appendix/Traffic/Appendix/Appendix 2 Emission Factor in 2020, 5 P. vix

Tsing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for	Year 2038
AERMOD model (May)	

			No. Enriched												No. Enriched											
Road Name	Road ID	Hour	Month/January						Month/February						Month/March						Month/April					
			g/kWh	g/s ^m	tonne/hour	g/kWh	g/s ^m	tonne/hour	g/kWh	g/s ^m	tonne/hour	g/kWh	g/s ^m	tonne/hour	g/kWh	g/s ^m	tonne/hour	g/kWh	g/s ^m	tonne/hour	g/kWh	g/s ^m	tonne/hour	g/kWh	g/s ^m	tonne/hour
Road 27	27	1600-1700	1.6761	0.4776	0.171	1.6116	0.44161	0.3597	0.1116	0.3961	1.5256	0.46756	0.1389	0.3597	1.5256	0.46756	0.1389	0.3597	1.5256	0.46756	0.1389	0.3597	1.5256	0.46756	0.1389	
Road 27	27	1700-1800	1.4951	0.4372	0.1636	1.3087	0.3701	0.127	0.3576	0.7367	0.2068	0.3388	0.0968	0.2765	1.1018	0.3088	0.1136	0.2765	1.1018	0.3088	0.1136	0.2765	1.1018	0.3088	0.1136	
Road 27	27	1800-1900	1.4951	0.4372	0.1636	1.3087	0.3701	0.127	0.3576	0.7367	0.2068	0.3388	0.0968	0.2765	1.1018	0.3088	0.1136	0.2765	1.1018	0.3088	0.1136	0.2765	1.1018	0.3088	0.1136	
Road 27	27	1900-2000	1.1681	0.3167	0.1167	0.9882	0.2687	0.1037	0.3136	0.5767	0.1608	0.4786	0.1389	0.3597	0.1037	0.3136	0.5767	0.1608	0.4786	0.1389	0.3597	0.1037	0.3136	0.5767	0.1608	
Road 27	27	2000-2100	1.1161	0.3145	0.0887	0.7476	0.2068	0.0827	0.2568	0.4786	0.1389	0.3597	0.1037	0.3136	0.5767	0.1608	0.4786	0.1389	0.3597	0.1037	0.3136	0.5767	0.1608	0.4786	0.1389	
Road 27	27	2100-2200	1.1171	0.3143	0.0887	0.7487	0.2068	0.0827	0.2568	0.4786	0.1389	0.3597	0.1037	0.3136	0.5767	0.1608	0.4786	0.1389	0.3597	0.1037	0.3136	0.5767	0.1608	0.4786	0.1389	
Road 27	27	2200-2300	1.1171	0.3143	0.0887	0.7487	0.2068	0.0827	0.2568	0.4786	0.1389	0.3597	0.1037	0.3136	0.5767	0.1608	0.4786	0.1389	0.3597	0.1037	0.3136	0.5767	0.1608	0.4786	0.1389	
Road 27	27	2300-0000	1.1951	0.4178	0.2267	1.0951	0.3136	0.1947	0.5268	0.1408	0.3961	1.5256	0.46756	0.1389	0.3597	1.5256	0.46756	0.1389	0.3597	1.5256	0.46756	0.1389	0.3597	1.5256	0.46756	
Road 28	28	0000-0100	1.1171	0.3143	0.0887	0.7487	0.2068	0.0827	0.2568	0.4786	0.1389	0.3597	0.1037	0.3136	0.5767	0.1608	0.4786	0.1389	0.3597	0.1037	0.3136	0.5767	0.1608	0.4786	0.1389	
Road 28	28	0100-0200	1.1271	0.3268	0.1037	0.9827	0.2687	0.0827	0.2568	0.4786	0.1389	0.3597	0.1037	0.3136	0.5767	0.1608	0.4786	0.1389	0.3597	0.1037	0.3136	0.5767	0.1608	0.4786	0.1389	
Road 28	28	0200-0300	1.2387	0.5258	0.3088	1.0982	0.3136	0.2408	0.6456	0.2068	0.5767	1.608	0.46756	0.1389	0.3597	1.608	0.46756	0.1389	0.3597	1.608	0.46756	0.1389	0.3597	1.608	0.46756	
Road 28	28	0300-0400	1.3487	0.5716	0.3487	1.1676	0.3268	0.2568	0.7367	0.2068	0.5767	1.608	0.46756	0.1389	0.3597	1.608	0.46756	0.1389	0.3597	1.608	0.46756	0.1389	0.3597	1.608	0.46756	
Road 28	28	0400-0500	1.4242	0.5916	0.3688	1.2102	0.3416	0.2816	0.7516	0.2168	0.4916	0.9716	0.2816	0.5916	0.3688	1.2102	0.3416	0.2816	0.7516	0.2168	0.4916	0.9716	0.2816	0.5916	0.3688	
Road 28	28	0500-0600	1.4242	0.5916	0.3688	1.2102	0.3416	0.2816	0.7516	0.2168	0.4916	0.9716	0.2816	0.5916	0.3688	1.2102	0.3416	0.2816	0.7516	0.2168	0.4916	0.9716	0.2816	0.5916	0.3688	
Road 28	28	0600-0700	1.4348	0.4987	0.1416	0.2408	0.2687	0.0827	0.2568	0.4786	0.1389	0.3597	0.1037	0.3136	0.5767	0.1608	0.4786	0.1389	0.3597	0.1037	0.3136	0.5767	0.1608	0.4786	0.1389	
Road 28	28	0700-0800	1.5516	0.5258	0.3088	1.0982	0.3136	0.2408	0.6456	0.2068	0.5767	1.608	0.46756	0.1389	0.3597	1.608	0.46756	0.1389	0.3597	1.608	0.46756	0.1389	0.3597	1.608	0.46756	
Road 28	28	0800-0900	1.5516	0.5258	0.3088	1.0982	0.3136	0.2408	0.6456	0.2068	0.5767	1.608	0.46756	0.1389	0.3597	1.608	0.46756	0.1389	0.3597	1.608	0.46756	0.1389	0.3597	1.608	0.46756	
Road 28	28	0900-1000	1.7102	0.6717	0.3961	1.4687	0.3961	0.2568	0.7367	0.2068	0.5767	1.608	0.46756	0.1389	0.3597	1.608	0.46756	0.1389	0.3597	1.608	0.46756	0.1389	0.3597	1.608	0.46756	
Road 28	28	1000-1100	1.7102	0.6717	0.3961	1.4687	0.3961	0.2568	0.7367	0.2068	0.5767	1.608	0.46756	0.1389	0.3597	1.608	0.46756	0.1389	0.3597	1.608	0.46756	0.1389	0.3597	1.608	0.46756	
Road 28	28	1100-1200	1.8962	0.5887	0.3688	1.2408	0.3416	0.2816	0.7516	0.2168	0.4916	0.9716	0.2816	0.5916	0.3688	1.2408	0.3416	0.2816	0.7516	0.2168	0.4916	0.9716	0.2816	0.5916	0.3688	
Road 28	28	1200-1300	1.7962	0.4717	0.2408	0.4306	0.1389	0.3597	0.1037	0.3136	0.5767	0.1608	0.4786	0.1389	0.3597	0.1037	0.3136	0.5767	0.1608	0.4786	0.1389	0.3597	0.1037	0.3136	0.5767	
Road 28	28	1300-1400	1.7962	0.4717	0.2408	0.4306	0.1389	0.3597	0.1037	0.3136	0.5767	0.1608	0.4786	0.1389	0.3597	0.1037	0.3136	0.5767	0.1608	0.4786	0.1389	0.3597	0.1037	0.3136	0.5767	
Road 28	28	1400-1500	1.8962	0.5887	0.3688	1.2408	0.3416	0.2816	0.7516	0.2168	0.4916	0.9716	0.2816	0.5916	0.3688	1.2408	0.3416	0.2816	0.7516	0.2168	0.4916	0.9716	0.2816	0.5916	0.3688	
Road 28	28	1500-1600	1.6962	0.4506	0.2556	0.4406	0.1406	0.3767	0.2116	0.7036	0.1876	0.1064	0.2765	1.1018	0.3088	0.1136	0.2765	1.1018	0.3088	0.1136	0.2765	1.1018	0.3088	0.1136	0.2765	
Road 28	28	1600-1700	1.6962	0.4506	0.2556	0.4406	0.1406	0.3767	0.2116	0.7036	0.1876	0.1064	0.2765	1.1018	0.3088	0.1136	0.2765	1.1018	0.3088	0.1136	0.2765	1.1018	0.3088	0.1136	0.2765	
Road 28	28	1700-1800	1.2962	0.3917	0.1367	0.3688	0.1076	0.3268	0.1076	0.3268	0.1076	0.3268	0.1076	0.3268	0.1076	0.3268	0.1076	0.3268	0.1076	0.3268	0.1076	0.3268	0.1076	0.3268	0.1076	0.3268
Road 28	28	1800-1900	0.8476	0.3036	0.1076	0.1756	0.0767	0.2616	0.0767	0.2616	0.0767	0.2616	0.0767	0.2616	0.0767	0.2616	0.0767	0.2616	0.0767	0.2616	0.0767	0.2616	0.0767	0.2616	0.0767	0.2616
Road 28	28	1900-2000	0.8476	0.3036	0.1076	0.1756	0.0767	0.2616	0.0767	0.2616	0.0767	0.2616	0.0767	0.2616	0.0767	0.2616	0.0767	0.2616	0.0767	0.2616	0.0767	0.2616	0.0767	0.2616	0.0767	0.2616
Road 28	28	2000-2100	0.9602	0.2027	0.0716	0.3516	0.1476	0.1176	0.2765	0.1176	0.2765	0.1176	0.2765	0.1176	0.2765	0.1176	0.2765	0.1176	0.2765	0.1176	0.2765	0.1176	0.2765	0.1176	0.2765	
Road 28	28	2100-2200	0.9602	0.2027	0.0716	0.3516	0.1476	0.1176	0.2765	0.1176	0.2765	0.1176	0.2765	0.1176	0.2765	0.1176	0.2765	0.1176	0.2765	0.1176	0.2765	0.1176	0.2765	0.1176	0.2765	
Road 28	28	2200-2300	0.9602	0.2027	0.0716	0.3516	0.1476	0.1176	0.2765	0.1176	0.2765	0.1176	0.2765	0.1176	0.2765	0.1176	0.2765	0.1176	0.2765	0.1176	0.2765	0.1176	0.2765	0.1176	0.2765	
Road 28	28	2300-0000	2.4617	0.6116	0.3487	0.6716	0.2408	0.1947	0.5268	0.1408	0.3961	1.5256	0.46756	0.1389	0.3597	1.5256	0.46756	0.1389	0.3597	1.5256	0.46756	0.1389	0.3597	1.5256	0.46756	
Road 29	29	0000-0100	0.6456	0.856	0.406	0.566	0.5048	0.3486	0.406	0.566	0.5048	0.3486	0.406	0.566	0.5048	0.3486	0.406	0.566	0.5048	0.3486	0.406	0.566	0.5048	0.3486	0.406	0.566
Road 29	29	0100-0200	0.425	0.416	0.046	0.3046	0.6886	0.3386	0.2626	0.256	0.2567	1.7406	0.3486	0.2076	0.416	0.046	0.3046	0.6886	0.3386	0.2626	0.256	0.2567	1.7406	0.3486	0.2076	
Road 29	29	0200-0300	0.425	0.416	0.046	0.3046	0.6886	0.3386	0.2626	0.256	0.2567	1.7406	0.3486	0.2076	0.416	0.046	0.3046	0.6886	0.3386	0.2626	0.256	0.2567	1.7406	0.3486	0.2076	
Road 29	29	0300-0400	0.5116	0.3116	0.236	0.2396	0.8246	0.2376	0.196	0.756	0.1667	1.146	0.196	0.756	0.1667	1.146	0.196	0.756	0.1667	1.146	0.196	0.756	0.1667	1.146	0.196	0.756
Road 29	29	0400-0500	0.8456	0.3486	0.3786	0.6166	0.8346	0.3246	0.2246	0.5026	0.1627	0.876	0.246	0.5026	0.1627	0.876	0.246	0.5026	0.1627	0.876	0.246	0.5026	0.1627	0.876	0.246	
Road 29	29	0500-0600	0.8456	0.3486	0.3786	0.6166	0.8346	0.3246	0.2246	0.5026	0.1627	0.876	0.246	0.5026	0.1627	0.876	0.246	0.5026	0.1627	0.876	0.246	0.5026	0.1627	0.876	0.246	
Road 29	29	0600-0700	0.5008	0.3036	0.1076	0.8996	0.7936	0.196	0.7516	0.096	0.8967	0.4726	0.396	0.8967	0.4726	0.396	0.8967	0.4726	0.396	0.8967	0.4726	0.396	0.8967	0.4726	0.396	0.8967
Road 29	29	0700-0800	1.0762	0.9667	0.6076	0.9103	0.2547	0.1756	0.926	0.146	1.6026	0.146	1.6026	0.146	1.6026	0.146	1.6026	0.146	1.6026	0.146	1.6026	0.146	1.6026	0.146	1.6026	0.146
Road 29	29	0800-0900	1.0267	0.9276	0.576	0.766	0.856	0.2561	0.196	0.786	0.1546	1.0964	0.396	0.8967	0.4726	0.396	0.8967	0.4726	0.396	0.8967	0.4726	0.396	0.8967	0.4726	0.396	0.8967
Road 29	29	0900-1000	1.44	0.3036	0.1076	0.786	0.7916	0.2408	0.1947	0.5268	0.1408	0.3961	1.5256	0.46756	0.1389	0.3597	1.5256	0.46756	0.1389	0.3597	1.5256	0.46756				

\\Fsqr\Environment Projects\60722220\1.01\Others\Air\Modelling\Appendix\Traffic\Appendix\Appendix 3.5.4 Emission Factor in 2039.5 B.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for	Year 2038
AERMOD model (May)	

Road Name	Road ID	Hour	Month/morphology			Month/morphology			Month/morphology			Month/morphology		
			No_Emission			No_Emission			No_Emission			No_Emission		
			g/hm ² /v	g/s ²	tonne/hour	g/hm ² /v	g/s ²	tonne/hour	g/hm ² /v	g/s ²	tonne/hour	g/hm ² /v	g/s ²	tonne/hour
Road 31	31	0000-0100	1.6762	3.958	3.20E-07	1.4442	3.10E-07	2.77E-07	6.182E-08	1.53E-07	1.51E-08	5.22E-02	1.11E-07	5.22E-02
Road 31	31	0100-0200	1.9260	2.5928	2.61E-07	1.68E-05	3.38E-08	2.76E-07	6.72E-07	1.00E-07	8.96E-07	5.89E-02	8.96E-07	5.89E-02
Road 31	31	0200-0300	2.2020	2.448	2.41E-07	1.83E-05	3.38E-08	2.76E-07	6.72E-07	1.00E-07	8.96E-07	5.89E-02	8.96E-07	5.89E-02
Road 31	31	0300-0400	2.5052	2.44E-08	2.18E-07	2.18E-02	2.13E-08	1.90E-07	7.78E-07	7.58E-08	6.76E-07	6.69E-02	6.76E-07	6.69E-02
Road 31	31	0400-0500	2.511E-02	2.67E-08	2.39E-07	2.41E-05	3.38E-08	2.05E-07	7.86E-07	8.48E-08	7.56E-07	6.72E-02	7.56E-07	6.72E-02
Road 31	31	0500-0600	2.2020	2.448	2.41E-07	1.83E-05	3.38E-08	2.76E-07	6.72E-07	1.00E-07	8.96E-07	5.89E-02	8.96E-07	5.89E-02
Road 31	31	0600-0700	1.92E-02	6.71E-08	6.00E-07	1.52E-02	5.66E-05	5.05E-07	7.18E-07	2.511E-07	2.22E-08	5.93E-02	2.22E-08	5.93E-02
Road 31	31	0700-0800	2.25E-02	6.71E-07	1.52E-05	1.41E-04	1.28E-05	1.80E-07	7.80E-07	5.90E-07	5.72E-08	6.50E-02	5.72E-08	6.50E-02
Road 31	31	0800-0900	2.25E-02	6.71E-07	1.52E-05	1.41E-04	1.28E-05	1.80E-07	7.80E-07	5.90E-07	5.72E-08	6.50E-02	5.72E-08	6.50E-02
Road 31	31	0900-1000	2.37E-02	1.99E-07	1.60E-05	2.21E-02	6.60E-07	1.43E-06	8.71E-08	6.54E-07	5.87E-08	8.88E-02	5.87E-08	8.88E-02
Road 31	31	1000-1100	2.63E-02	1.98E-07	1.72E-05	2.05E-02	1.65E-07	1.47E-06	8.27E-08	6.39E-07	5.71E-08	7.42E-02	5.71E-08	7.42E-02
Road 31	31	1100-1200	2.63E-02	1.98E-07	1.64E-05	2.05E-02	1.53E-07	1.37E-06	8.71E-08	6.11E-07	5.46E-08	7.28E-02	5.46E-08	7.28E-02
Road 31	31	1200-1300	2.11E-02	1.35E-07	1.10E-05	1.61E-02	1.35E-07	1.10E-05	1.61E-02	1.35E-07	1.10E-05	6.71E-02	1.10E-05	6.71E-02
Road 31	31	1300-1400	2.511E-02	2.44E-07	1.30E-05	2.07E-02	1.02E-07	1.07E-06	8.25E-07	4.76E-07	4.28E-08	6.71E-02	4.28E-08	6.71E-02
Road 31	31	1400-1500	2.505E-02	1.51E-07	1.33E-05	2.07E-02	1.02E-07	1.12E-06	8.19E-07	4.96E-07	4.42E-07	6.71E-02	4.42E-07	6.71E-02
Road 31	31	1500-1600	2.505E-02	1.51E-07	1.33E-05	2.07E-02	1.02E-07	1.12E-06	8.19E-07	4.96E-07	4.42E-07	6.71E-02	4.42E-07	6.71E-02
Road 31	31	1600-1700	2.40E-02	1.54E-07	1.37E-05	1.96E-02	1.28E-07	1.14E-06	7.84E-07	5.03E-07	4.50E-08	6.43E-02	4.50E-08	6.43E-02
Road 31	31	1700-1800	1.91E-02	1.33E-07	1.18E-05	1.66E-02	1.11E-07	8.92E-07	6.93E-07	4.76E-07	4.24E-08	5.98E-02	4.24E-08	5.98E-02
Road 31	31	1800-1900	1.18E-02	1.33E-07	1.18E-05	1.66E-02	1.11E-07	8.92E-07	6.93E-07	4.76E-07	4.24E-08	5.98E-02	4.24E-08	5.98E-02
Road 31	31	1900-2000	1.06E-02	5.57E-09	4.97E-07	9.02E-07	4.78E-08	4.22E-07	4.57E-08	2.39E-07	2.14E-07E-08	3.75E-02	2.14E-07E-08	3.75E-02
Road 31	31	2000-2100	1.10E-02	4.54E-08	4.09E-07	9.54E-03	3.95E-03	3.53E-07	4.90E-02	2.04E-07	1.82E-08	4.15E-02	1.82E-08	4.15E-02
Road 31	31	2100-2200	1.10E-02	4.54E-08	4.09E-07	9.54E-03	3.95E-03	3.53E-07	4.90E-02	2.04E-07	1.82E-08	4.15E-02	1.82E-08	4.15E-02
Road 31	31	2200-2300	1.04E-02	3.18E-03	3.66E-07	9.13E-05	3.95E-08	3.21E-07	4.07E-07	1.87E-07	1.67E-08	3.96E-02	1.67E-08	3.96E-02
Road 31	31	2300-0000	1.10E-02	3.64E-08	3.27E-04	1.02E-02	3.17E-08	2.83E-07	4.50E-04	1.54E-07	1.38E-05	4.25E-02	1.38E-05	4.25E-02
Road 32	32	0000-0100	1.6762	3.958	3.20E-07	1.4442	3.10E-07	2.77E-07	6.182E-08	1.53E-07	1.51E-08	5.22E-02	1.11E-07	5.22E-02
Road 32	32	0100-0200	1.9260	2.5928	2.61E-07	1.68E-05	3.38E-08	2.76E-07	6.72E-07	1.00E-07	8.96E-07	5.89E-02	8.96E-07	5.89E-02
Road 32	32	0200-0300	2.2020	2.448	2.41E-07	1.83E-05	3.38E-08	2.76E-07	6.72E-07	1.00E-07	8.96E-07	5.89E-02	8.96E-07	5.89E-02
Road 32	32	0300-0400	2.5052	2.44E-08	2.18E-07	2.18E-02	2.13E-08	1.90E-07	7.78E-07	7.58E-08	6.76E-07	6.69E-02	6.76E-07	6.69E-02
Road 32	32	0400-0500	2.511E-02	2.67E-08	2.39E-07	2.41E-05	3.38E-08	2.05E-07	7.86E-07	8.48E-08	7.56E-07	6.72E-02	7.56E-07	6.72E-02
Road 32	32	0500-0600	2.2020	2.448	2.41E-07	1.83E-05	3.38E-08	2.76E-07	6.72E-07	1.00E-07	8.96E-07	5.89E-02	8.96E-07	5.89E-02
Road 32	32	0600-0700	1.92E-02	6.71E-08	6.00E-07	1.52E-02	5.66E-05	5.05E-07	7.18E-07	2.511E-07	2.22E-08	5.93E-02	2.22E-08	5.93E-02
Road 32	32	0700-0800	2.25E-02	6.71E-07	1.52E-05	1.41E-04	1.28E-05	1.80E-07	7.80E-07	5.90E-07	5.72E-08	6.50E-02	5.72E-08	6.50E-02
Road 32	32	0800-0900	2.25E-02	6.71E-07	1.52E-05	1.41E-04	1.28E-05	1.80E-07	7.80E-07	5.90E-07	5.72E-08	6.50E-02	5.72E-08	6.50E-02
Road 32	32	0900-1000	2.37E-02	1.99E-07	1.60E-05	2.21E-02	6.60E-07	1.43E-06	8.71E-08	6.54E-07	5.87E-08	8.88E-02	5.87E-08	8.88E-02
Road 32	32	1000-1100	2.63E-02	1.98E-07	1.72E-05	2.05E-02	1.65E-07	1.47E-06	8.27E-08	6.39E-07	5.71E-08	7.42E-02	5.71E-08	7.42E-02
Road 32	32	1100-1200	2.63E-02	1.98E-07	1.64E-05	2.05E-02	1.53E-07	1.37E-06	8.71E-08	6.11E-07	5.46E-08	7.28E-02	5.46E-08	7.28E-02
Road 32	32	1200-1300	2.11E-02	1.35E-07	1.10E-05	1.61E-02	1.35E-07	1.10E-05	1.61E-02	1.35E-07	1.10E-05	6.71E-02	1.10E-05	6.71E-02
Road 32	32	1300-1400	2.511E-02	2.44E-07	1.30E-05	2.07E-02	1.02E-07	1.07E-06	8.25E-07	4.76E-07	4.28E-08	6.71E-02	4.28E-08	6.71E-02
Road 32	32	1400-1500	2.505E-02	1.51E-07	1.33E-05	2.07E-02	1.02E-07	1.12E-06	8.19E-07	4.96E-07	4.42E-07	6.71E-02	4.42E-07	6.71E-02
Road 32	32	1500-1600	2.505E-02	1.51E-07	1.33E-05	2.07E-02	1.02E-07	1.12E-06	8.19E-07	4.96E-07	4.42E-07	6.71E-02	4.42E-07	6.71E-02
Road 32	32	1600-1700	2.40E-02	1.54E-07	1.37E-05	1.96E-02	1.28E-07	1.14E-06	7.84E-07	5.03E-07	4.50E-08	6.43E-02	4.50E-08	6.43E-02
Road 32	32	1700-1800	1.91E-02	1.33E-07	1.18E-05	1.66E-02	1.11E-07	8.92E-07	6.93E-07	4.76E-07	4.24E-08	5.98E-02	4.24E-08	5.98E-02
Road 32	32	1800-1900	1.18E-02	1.33E-07	1.18E-05	1.66E-02	1.11E-07	8.92E-07	6.93E-07	4.76E-07	4.24E-08	5.98E-02	4.24E-08	5.98E-02
Road 32	32	1900-2000	1.06E-02	5.57E-09	4.97E-07	9.02E-07	4.78E-08	4.22E-07	4.57E-08	2.39E-07	2.14E-07E-08	3.75E-02	2.14E-07E-08	3.75E-02
Road 32	32	2000-2100	1.10E-02	4.54E-08	4.09E-07	9.54E-03	3.95E-03	3.53E-07	4.90E-02	2.04E-07	1.82E-08	4.15E-02	1.82E-08	4.15E-02
Road 32	32	2100-2200	1.10E-02	4.54E-08	4.09E-07	9.54E-03	3.95E-03	3.53E-07	4.90E-02	2.04E-07	1.82E-08	4.15E-02	1.82E-08	4.15E-02
Road 32	32	2200-2300	1.04E-02	3.18E-03	3.66E-07	9.13E-05	3.95E-08	3.21E-07	4.07E-07	1.87E-07	1.67E-08	3.96E-02	1.67E-08	3.96E-02
Road 32	32	2300-0000	1.10E-02	3.64E-08	3.27E-04	1.02E-02	3.17E-08	2.83E-07	4.50E-04	1.54E-07	1.38E-05	4.25E-02	1.38E-05	4.25E-02
Road 33	33	0000-0100	1.6762	3.958	3.20E-07	1.4442	3.10E-07	2.77E-07	6.182E-08	1.53E-07	1.51E-08	5.22E-02	1.11E-07	5.22E-02
Road 33	33	0100-0200	1.9260	2.5928	2.61E-07	1.68E-05	3.38E-08	2.76E-07	6.72E-07	1.00E-07	8.96E-07	5.89E-02	8.96E-07	5.89E-02
Road 33	33	0200-0300	2.2020	2.448	2.41E-07	1.83E-05	3.38E-08	2.76E-07	6.72E-07	1.00E-07	8.96E-07	5.89E-02	8.96E-07	5.89E-02
Road 33	33	0300-0400	2.5052	2.44E-08	2.18E-07	2.18E-02	2.13E-08	1.90E-07	7.78E-07	7.58E-08	6.76E-07	6.69E-02	6.76E-07	6.69E-02
Road 33	33	0400-0500	2.511E-02	2.67E-08	2.39E-07	2.41E-05	3.38E-08	2.05E-07	7.86E-07	8.48E-08	7.56E-07	6.72E-02	7.56E-07	6.72E-02
Road 33	33	0500-0600	2.2020	2.448	2.41E-07	1.83E-05	3.38E-08	2.76E-07	6.72E-07	1.00E-07	8.96E-07	5.89E-02	8.96E-07	5.89E-02
Road 33	33	0600-0700	1.92E-02	6.71E-08	6.00E-07	1.52E-02	5.66E-05	5.05E-07	7.18E-07	2.511E-07	2.22E-08	5.93E-02	2.22E-08	5.93E-02
Road 33	33	0700-0800	2.25E-02	6.71E-07	1.52E-05	1.41E-04	1.28E-05	1.80E-07	7.80E-07	5.90E-07	5.72E-08	6.50E-02	5.72E-08	6.50E-02
Road 33	33	0800-0900	2.25E-02	6.71E-07	1.52E-05	1.41E-04	1.28E-05	1.80E-07	7.80E-07	5.90E-07	5.72E-08	6.50E-02	5.72E-08	6.50E-02
Road 33	33	0900-1000	2.37E-02	1.99E-07	1.60E-05	2.21E-02	6.60E-07	1.43E-06	8.71E-08	6.54E-07	5.87E-08	8.88E-02	5.87E-08	8.88E-02
Road 33	33	1000-1100	2.63E-02	1.98E-07	1.72E-05	2.05E-02	1.65E-07	1.47E-06	8.27E-08	6.39E-07	5.71E-08	7.42E-02	5.71E-08	7.42E-02
Road 33	33	1100-1200	2.63E-02	1.98E-07	1.64E-05	2.05E-02	1.53E-07	1.37E-06	8.71E-08	6.11E-07	5.46E-08	7.28E-02	5.46E-08	7.28E-02
Road 33	33	1200-1300	2.11E-02	1.35E-07	1.10E-05	1.61E-02	1.35E-07	1.10E-05	1.61E-02	1.35E-07	1.10E-05	6.71E-02	1.10E-05	6.71E-02
Road 33	33	1300-1400	2.511E-02	2.44E-07	1.30E-05	2.07E-02	1.02E-07	1.07E-06	8.25E-07	4.76E-07	4.28E-08	6.71E-02	4.28E-08	6.71E-02
Road 33	33	1400-1500	2.505E-02	1.51E-07	1.33E-05	2.07E-02	1.02E-07	1.12E-06	8.19E-07	4.96E-07	4.42E-07	6.71E-02	4.42E-07	6.71E-02
Road 33	33	1500-1600	2.505E-02	1.51E-07	1.33E-05	2.07E-02	1.02E-07	1.12E-06	8.19E-07	4.96E-07	4.42E-07			

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Tsing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for AERMOD model (May)	Year 2038

Road Name	Road ID	HO	Mo/Emission						Mo/NoEmission					
			g/km/h	g/s/m	tonne/hour	g/km/h	g/s/m	tonne/hour	g/km/h	g/s/m	tonne/hour	g/km	g/s	tonne
Road 34	34	0800-0900	1.000E+00	2.605E-07	6.92E-06	8.422E-03	2.322E-07	5.832E-06	4.742E-02	1.125E-06	3.282E-05	3.83E-02		
Road 34	34	0900-1000	1.118E+04	2.448E-07	6.39E-03	6.933E-03	2.063E-07	5.032E-06	5.202E-02	1.272E-06	3.492E-05	4.25E-02		
Road 34	34	1000-1100	1.242E+04	2.193E-07	5.74E-06	1.038E-02	1.832E-07	4.632E-06	5.622E-02	9.96E-07	2.611E-05	4.25E-02		
Road 34	34	1200-1300	2.174E+03	3.334E-07	8.18E-06	1.841E-02	6.412E-07	6.872E-06	7.682E-02	1.106E-07	3.054E-05	8.28E-02		
Road 34	34	2100-2200	2.130E+03	3.412E-07	8.92E-06	1.782E-02	6.192E-07	7.732E-06	7.222E-02	1.225E-06	3.116E-05	6.34E-02		
Road 34	34	1400-1500	2.038E+03	3.241E-07	8.92E-06	1.800E-02	2.622E-07	7.372E-06	7.772E-02	1.225E-06	3.116E-05	6.34E-02		
Road 34	34	1500-1600	2.028E+03	3.278E-07	8.56E-06	1.667E-02	2.672E-07	7.002E-06	7.782E-02	1.252E-06	3.265E-05	6.27E-02		
Road 34	34	2200-2300	2.022E+03	3.282E-07	8.56E-06	1.667E-02	2.672E-07	7.002E-06	7.782E-02	1.252E-06	3.265E-05	6.27E-02		
Road 34	34	1700-1800	1.605E+02	2.284E-07	5.87E-06	1.342E-02	2.392E-07	6.052E-06	6.432E-02	1.106E-07	3.054E-05	8.28E-02		
Road 34	34	1800-1900	1.262E+02	2.244E-07	5.87E-06	1.061E-02	1.912E-07	5.002E-06	4.962E-02	8.94E-07	2.344E-05	4.14E-02		
Road 34	34	1900-2000	1.072E+02	1.595E-07	4.39E-06	9.10E-03	1.272E-07	3.322E-06	4.612E-02	6.44E-07	1.684E-05	3.00E-02		
Road 34	34	2000-2100	1.052E+02	1.602E-07	4.39E-06	9.23E-03	1.272E-07	3.322E-06	4.612E-02	6.44E-07	1.684E-05	3.00E-02		
Road 34	34	2100-2200	9.902E+03	1.075E-07	2.81E-06	8.712E-03	4.242E-06	2.472E-06	4.682E-02	5.66E-07	1.322E-05	4.00E-02		
Road 34	34	2200-2300	1.031E+02	1.080E-07	2.77E-07	8.712E-03	4.242E-06	2.472E-06	4.682E-02	5.66E-07	1.322E-05	4.00E-02		
Road 35	35	0800-0900	1.052E+04	1.952E-07	5.51E-03	6.932E-03	2.062E-07	5.032E-06	5.202E-02	1.272E-06	3.492E-05	4.25E-02		
Road 35	35	0900-1000	3.300E+03	3.902E-05	1.05E-05	2.892E-03	3.392E-06	8.262E-06	1.002E-02	1.212E-07	2.942E-07	8.73E-02		
Road 35	35	1000-1100	4.172E+03	3.582E-05	8.76E-06	3.612E-03	3.092E-06	7.522E-06	1.182E-02	1.012E-07	2.44E-07	1.01E-02		
Road 35	35	1200-1300	4.522E+03	4.582E-05	1.27E-05	4.332E-03	3.782E-06	9.122E-06	1.302E-02	1.012E-07	2.44E-07	1.01E-02		
Road 35	35	0300-0400	5.472E+02	3.375E-06	8.14E-06	8.422E-03	2.522E-07	6.132E-06	1.432E-02	8.662E-06	2.11E-07	1.24E-02		
Road 35	35	0400-0500	5.472E+02	3.375E-06	8.14E-06	8.422E-03	2.522E-07	6.132E-06	1.432E-02	8.662E-06	2.11E-07	1.24E-02		
Road 35	35	0500-0600	5.472E+02	3.375E-06	8.14E-06	8.422E-03	2.522E-07	6.132E-06	1.432E-02	8.662E-06	2.11E-07	1.24E-02		
Road 35	35	0600-0700	5.472E+02	3.375E-06	8.14E-06	8.422E-03	2.522E-07	6.132E-06	1.432E-02	8.662E-06	2.11E-07	1.24E-02		
Road 35	35	0700-0800	5.500E+02	2.005E-07	4.86E-07	4.242E-02	1.702E-07	4.132E-07	1.48E-02	8.66E-07	4.42E-06	1.22E-01		
Road 35	35	0800-0900	4.802E+02	1.482E-07	3.54E-07	3.782E-02	1.522E-07	3.782E-07	1.522E-02	1.51E-07	3.62E-06	1.27E-01		
Road 35	35	0900-1000	5.202E+02	2.112E-07	4.43E-07	4.432E-02	1.702E-07	4.132E-07	1.48E-02	1.505E-07	3.62E-06	1.25E-01		
Road 35	35	1000-1100	5.782E+02	2.138E-07	4.592E-07	4.592E-02	1.832E-07	4.44E-07	1.66E-02	1.614E-07	3.64E-06	1.42E-01		
Road 35	35	1100-1200	5.882E+02	2.071E-07	5.04E-07	4.502E-02	1.72E-07	4.22E-07	1.68E-02	1.596E-07	3.49E-06	1.48E-01		
Road 35	35	1200-1300	6.852E+02	1.862E-07	5.51E-07	4.522E-02	1.62E-07	3.92E-07	1.62E-02	1.442E-07	3.26E-06	1.48E-01		
Road 35	35	1300-1400	6.58E+02	1.57E-07	3.82E-07	4.164E-02	1.29E-07	3.35E-07	1.72E-02	1.10E-07	2.98E-06	1.40E-01		
Road 35	35	1400-1500	6.68E+02	1.68E-07	4.02E-07	5.522E-02	1.37E-07	3.31E-07	1.74E-02	4.322E-07	1.09E-06	1.43E-01		
Road 35	35	1500-1600	6.52E+02	1.592E-07	3.92E-07	4.522E-02	1.62E-07	3.92E-07	1.62E-02	1.442E-07	3.26E-06	1.48E-01		
Road 35	35	1600-1700	6.42E+02	1.67E-07	4.01E-07	5.35E-02	1.36E-07	3.39E-07	1.67E-02	4.36E-07	1.06E-06	1.38E-01		
Road 35	35	1700-1800	5.582E+02	1.584E-07	3.78E-07	4.632E-02	1.30E-07	3.18E-07	1.49E-02	4.18E-07	1.02E-06	1.23E-01		
Road 35	35	1800-1900	4.58E+02	1.42E-07	3.32E-07	4.38E-02	1.27E-07	3.02E-07	1.42E-02	3.62E-07	9.42E-07	1.10E-01		
Road 35	35	1900-2000	2.45E+02	4.496E-07	1.02E-07	2.09E-02	3.61E-08	9.382E-08	8.132E-04	4.74E-07	1.61E-07	6.75E-02		
Road 35	35	2000-2100	2.75E+02	4.05E-08	9.84E-08	2.39E-02	3.33E-08	8.58E-08	8.038E-03	1.33E-07	4.74E-07	2.71E-02		
Road 35	35	2100-2200	2.84E+02	4.05E-08	9.84E-08	2.39E-02	3.33E-08	8.58E-08	8.038E-03	1.33E-07	4.74E-07	2.71E-02		
Road 35	35	2200-2300	2.65E+02	3.80E-08	9.25E-08	2.31E-02	3.32E-08	8.08E-08	8.66E-02	1.24E-07	4.07E-07	7.99E-02		
Road 35	35	2300-0000	3.100E+02	3.53E-08	8.67E-08	2.70E-02	3.08E-08	7.49E-08	9.49E-02	1.10E-07	4.63E-07	8.10E-02		
Road 35	35	0000-0100	4.222E+02	6.432E-08	1.62E-07	3.80E-02	5.80E-08	1.46E-07	1.74E-02	2.65E-07	6.68E-07	1.57E-01		
Road 35	35	0100-0200	4.48E+02	6.432E-08	1.62E-07	3.80E-02	5.80E-08	1.46E-07	1.74E-02	2.65E-07	6.68E-07	1.57E-01		
Road 35	35	0200-0300	5.582E+02	4.89E-08	1.23E-07	5.06E-02	4.42E-08	1.11E-07	1.59E-02	1.66E-07	4.27E-07	1.26E-01		
Road 35	35	0300-0400	6.18E+02	4.84E-08	1.17E-07	5.54E-02	4.18E-08	1.05E-07	2.02E-02	1.52E-07	3.82E-07	1.67E-01		
Road 35	35	0400-0500	6.25E+02	4.84E-08	1.17E-07	5.54E-02	4.18E-08	1.05E-07	2.02E-02	1.52E-07	3.82E-07	1.67E-01		
Road 35	35	0500-0600	6.30E+02	6.73E-08	1.70E-07	6.02E-02	6.00E-08	1.51E-07	2.10E-02	2.52E-07	6.34E-07	1.88E-01		
Road 35	35	0600-0700	6.502E+02	5.11E-07	2.91E-07	4.062E-02	1.04E-07	2.63E-07	2.14E-02	4.96E-07	1.22E-06	1.93E-01		
Road 35	35	0700-0800	6.62E+02	5.11E-07	2.91E-07	4.062E-02	1.04E-07	2.63E-07	2.14E-02	4.96E-07	1.22E-06	1.93E-01		
Road 35	35	0800-0900	6.40E+02	3.70E-07	9.31E-07	5.72E-03	3.30E-07	8.12E-07	2.24E-02	1.29E-06	2.66E-06	2.00E-01		
Road 35	35	0900-1000	7.52E+02	3.74E-07	9.31E-07	5.56E-03	3.30E-07	8.45E-07	2.41E-02	1.23E-06	1.10E-06	2.16E-01		
Road 35	35	1000-1100	7.85E+02	3.74E-07	9.31E-07	5.56E-03	3.30E-07	8.45E-07	2.41E-02	1.23E-06	1.10E-06	2.16E-01		
Road 35	35	1100-1200	7.62E+02	3.48E-07	8.76E-07	4.90E-03	3.09E-07	7.78E-07	2.48E-02	1.10E-06	7.77E-06	2.02E-01		
Road 35	35	1200-1300	9.24E+02	3.30E-07	8.32E-07	4.71E-03	2.81E-07	7.33E-07	2.72E-02	1.69E-07	2.44E-06	2.40E-01		
Road 35	35	1300-1400	9.35E+02	3.30E-07	8.32E-07	4.71E-03	2.81E-07	7.33E-07	2.72E-02	1.69E-07	2.44E-06	2.40E-01		
Road 35	35	1400-1500	9.32E+02	3.30E-07	8.32E-07	4.71E-03	2.81E-07	7.33E-07	2.72E-02	1.69E-07	2.44E-06	2.40E-01		
Road 35	35	1500-1600	9.46E+02	3.68E-07	9.28E-07	4.84E-03	3.24E-07	8.17E-07	2.89E-02	1.12E-06	2.83E-06	2.54E-01		
Road 35	35	1600-1700	9.07E+02	3.58E-07	9.01E-07	8.02E-03	3.18E-07	7.87E-07	2.74E-02	1.08E-06	2.78E-06	2.45E-01		
Road 35	35	1700-1800	8.05E+02	3.48E-07	8.71E-07	7.21E-03	2.98E-07	7.40E-07	2.59E-02	9.80E-07	2.62E-06	2.17E-01		
Road 35	35	1800-1900	6.45E+02	2.68E-07	6.71E-07	5.76E-03	2.98E-07	5.99E-07	2.08E-02	8.62E-07	2.17E-06	1.88E-01		
Road 35	35	1900-2000	4.32E+02	1.14E-07	2.88E-07	3.92E-03	1.04E-07	2.61E-07	1.79E-02	4.03E-07	1.17E-06	1.58E-01		
Road 35	35	2000-2100	4.68E+02	1.14E-07	2.88E-07	3.92E-03	1.04E-07	2.61E-07	1.79E-02	4.03E-07	1.17E-06	1.58E-01		
Road 35	35	2100-2200	4.38E+02	9.32E-08	2.33E-07	4.06E-03	6.65E-08	2.18E-07	1.83E-03	9.00E-07	9.81E-07	1.69E-01		
Road 35	35	2200-2300	4.09E+02	8.36E-08	2.11E-07	3.74E-03	7.65E-08	1.93E-07	1.73E-03	3.53E-07	8.97E-07	1.59E-01		
Road 35	35	2300-0000	4.62E+02	8.36E-08	2.11E-07	3.74E-03	7.65E-08	1.93E-07	1.73E-03	3.53E-07	8.97E-07	1.59E-01		
Road 37	37	0000-0100	3.56E+02	1.575E-09	3.62E-06	3.24E-02	1.47E-09	3.38E-09	1.78E-03	7.87E-09	7.87E-09	1.64E-01		
Road 37	37	0100-0200	3.85E+02	1.12E-09	2.517E-09	3.61E-02	1.05E-09	2.42E-09	1.87E-04	5.44E-09	2.5E-08	1.72E-01		
Road 37	37	0200-0300	4.12E+02	1.12E-09	2.517E-09	3.61E-02	1.05E-09	2.42E-09	1.87E-04	5.44E-09	2.5E-08	1.72E-01		
Road 37	37	0300-0400	4.45E+02	7.77E-10	1.71E-09	4.18E-02	7.26E-10	1.67E-09	2.05E-04	3.56E-09	1.18E-08	1.90E-01		
Road 37	37	0400-0500	4.77E+02	9.22E-10	2.12E-09	4.46E+02	8.62E-10	1.98E-09	2.16E-04	4.17E-09	8.57E-09	1.98E-01		
Road 37	37	0500-0600	5.06E+02	1.72E-09	3.96E-07	4.73E-02	1.61E-09	3.69E-09	2.25E-04	7.66E-09	1.76E-08	2.05E-01		
Road 37	37	0600-0700	5.37E+02	1.72E-09	3.96E-07	4.73E-02	1.61E-09	3.69E-09	2.25E-04	7.66E-09				

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry		Tsing Yi North Underground	
Open Road 24 hour Emission Factors for	Year 2038	Open Road 24 hour Emission Factors for	AERMOD model (May)
AERMOD model (May)		AERMOD model (May)	

NO Emission													NO Emission																			
Road Name	Road ID	Hour	MonthlyRoute						MonthlyAverage						Road Name	Road ID	Hour	MonthlyRoute						MonthlyAverage								
			g/km/h	g/km	g/km ²	tonne/hour	g/km/h	g/km	g/km ²	tonne/hour	g/km/h	g/km	g/km ²	tonne/hour	g/km/h	g/km	g/km ²	tonne/hour	g/km/h	g/km	g/km ²	tonne/hour	g/km/h	g/km	g/km ²	tonne/hour	g/km/h	g/km	g/km ²	tonne/hour		
Road 37	37	1600-1700	8.85E+02	1.15E+08	2.65E+08	6.33E+02	1.07E+08	2.45E+08	2.50E+02	4.21E+08	8.66E+08	7.28E+02	3.38E+08	8.80E+08	Road 43	43	0000	8.85E+02	1.15E+08	2.65E+08	6.33E+02	1.07E+08	2.45E+08	2.50E+02	4.21E+08	8.66E+08	7.28E+02	3.38E+08	8.80E+08	Road 43	43	0100
Road 37	37	1700-1800	8.38E+02	1.06E+08	2.41E+08	5.93E+02	8.82E+08	2.25E+08	2.41E+08	8.34E+08	9.97E+08	7.22E+02	3.98E+08	9.37E+08	Road 43	43	0200	8.38E+02	1.06E+08	2.41E+08	5.93E+02	8.82E+08	2.25E+08	2.41E+08	8.34E+08	9.97E+08	7.22E+02	3.98E+08	9.37E+08	Road 43	43	0300
Road 37	37	1800-1900	8.38E+02	1.06E+08	2.41E+08	5.93E+02	8.82E+08	2.25E+08	2.41E+08	8.34E+08	9.97E+08	7.22E+02	3.98E+08	9.37E+08	Road 43	43	0400	8.38E+02	1.06E+08	2.41E+08	5.93E+02	8.82E+08	2.25E+08	2.41E+08	8.34E+08	9.97E+08	7.22E+02	3.98E+08	9.37E+08	Road 43	43	0500
Road 37	37	1900-2000	3.26E+02	4.51E+09	1.04E+08	3.04E+02	4.21E+09	9.77E+09	1.59E+02	7.21E+08	8.07E+08	1.46E+02	2.02E+08	4.63E+08	Road 43	43	0600	3.26E+02	4.51E+09	1.04E+08	3.04E+02	4.21E+09	9.77E+09	1.59E+02	7.21E+08	8.07E+08	1.46E+02	2.02E+08	4.63E+08	Road 43	43	0700
Road 37	37	2000-2100	3.26E+02	4.51E+09	1.04E+08	3.04E+02	4.21E+09	9.77E+09	1.59E+02	7.21E+08	8.07E+08	1.46E+02	2.02E+08	4.63E+08	Road 43	43	0800	3.26E+02	4.51E+09	1.04E+08	3.04E+02	4.21E+09	9.77E+09	1.59E+02	7.21E+08	8.07E+08	1.46E+02	2.02E+08	4.63E+08	Road 43	43	0900
Road 37	37	2100-2200	1.24E+02	1.51E+09	3.66E+08	1.09E+02	3.34E+09	7.67E+09	1.70E+02	1.84E+08	4.23E+08	1.58E+02	1.72E+08	3.94E+08	Road 43	43	1000	1.24E+02	1.51E+09	3.66E+08	1.09E+02	3.34E+09	7.67E+09	1.70E+02	1.84E+08	4.23E+08	1.58E+02	1.72E+08	3.94E+08	Road 43	43	1100
Road 37	37	2200-2300	1.24E+02	1.51E+09	3.66E+08	1.09E+02	3.34E+09	7.67E+09	1.70E+02	1.84E+08	4.23E+08	1.58E+02	1.72E+08	3.94E+08	Road 43	43	1200	1.24E+02	1.51E+09	3.66E+08	1.09E+02	3.34E+09	7.67E+09	1.70E+02	1.84E+08	4.23E+08	1.58E+02	1.72E+08	3.94E+08	Road 43	43	1300
Road 38	38	0000-0100	5.63E+02	8.02E+08	3.76E+08	5.08E+02	6.58E+08	1.58E+09	3.14E+02	2.57E+08	1.75E+09	2.94E+02	2.33E+08	Road 43	43	1400	5.63E+02	8.02E+08	3.76E+08	5.08E+02	6.58E+08	1.58E+09	3.14E+02	2.57E+08	1.75E+09	2.94E+02	2.33E+08	Road 43	43	1500		
Road 38	38	0100-0200	5.63E+02	8.02E+08	3.76E+08	5.08E+02	6.58E+08	1.58E+09	3.14E+02	2.57E+08	1.75E+09	2.94E+02	2.33E+08	Road 43	43	1600	5.63E+02	8.02E+08	3.76E+08	5.08E+02	6.58E+08	1.58E+09	3.14E+02	2.57E+08	1.75E+09	2.94E+02	2.33E+08	Road 43	43	1700		
Road 38	38	0200-0300	5.63E+02	8.02E+08	3.76E+08	5.08E+02	6.58E+08	1.58E+09	3.14E+02	2.57E+08	1.75E+09	2.94E+02	2.33E+08	Road 43	43	1800	5.63E+02	8.02E+08	3.76E+08	5.08E+02	6.58E+08	1.58E+09	3.14E+02	2.57E+08	1.75E+09	2.94E+02	2.33E+08	Road 43	43	1900		
Road 38	38	0300-0400	1.54E+02	2.05E+08	8.76E+07	1.67E+02	2.17E+08	4.72E+07	2.22E+02	1.90E+07	1.55E+08	2.00E+02	1.71E+07	1.40E+08	Road 43	43	2000	1.54E+02	2.05E+08	8.76E+07	1.67E+02	2.17E+08	4.72E+07	2.22E+02	1.90E+07	1.55E+08	2.00E+02	1.71E+07	1.40E+08	Road 43	43	2100
Road 38	38	0400-0500	1.54E+02	2.05E+08	8.76E+07	1.67E+02	2.17E+08	4.72E+07	2.22E+02	1.90E+07	1.55E+08	2.00E+02	1.71E+07	1.40E+08	Road 43	43	2200	1.54E+02	2.05E+08	8.76E+07	1.67E+02	2.17E+08	4.72E+07	2.22E+02	1.90E+07	1.55E+08	2.00E+02	1.71E+07	1.40E+08	Road 43	43	2300
Road 38	38	0500-0600	2.56E+02	3.51E+08	1.78E+07	2.65E+02	3.64E+08	6.93E+07	2.38E+02	3.12E+07	2.56E+08	3.18E+02	2.78E+07	2.26E+08	Road 43	43	2400	2.56E+02	3.51E+08	1.78E+07	2.65E+02	3.64E+08	6.93E+07	2.38E+02	3.12E+07	2.56E+08	3.18E+02	2.78E+07	2.26E+08	Road 43	43	2500
Road 38	38	0600-0700	6.71E+02	1.61E+07	3.21E+06	6.00E+02	1.46E+07	1.13E+06	2.44E+02	5.87E+07	4.81E+06	2.00E+02	5.29E+06	4.33E+08	Road 43	43	2600	6.71E+02	1.61E+07	3.21E+06	6.00E+02	1.46E+07	1.13E+06	2.44E+02	5.87E+07	4.81E+06	2.00E+02	5.29E+06	4.33E+08	Road 43	43	2700
Road 38	38	0700-0800	4.66E+02	1.09E+07	2.16E+06	4.25E+02	1.02E+07	6.52E+05	2.98E+02	4.23E+07	3.45E+06	1.27E+02	3.45E+06	2.73E+08	Road 43	43	2800	4.66E+02	1.09E+07	2.16E+06	4.25E+02	1.02E+07	6.52E+05	2.98E+02	4.23E+07	3.45E+06	1.27E+02	3.45E+06	2.73E+08	Road 43	43	2900
Road 38	38	0800-0900	8.51E+02	5.38E+07	1.42E+06	7.58E+02	4.80E+07	3.29E+06	2.69E+07	1.05E+08	4.05E+06	2.40E+02	1.52E+06	1.25E+06	Road 43	43	3000	8.51E+02	5.38E+07	1.42E+06	7.58E+02	4.80E+07	3.29E+06	2.69E+07	1.05E+08	4.05E+06	2.40E+02	1.52E+06	1.25E+06	Road 43	43	3100
Road 38	38	0900-1000	5.50E+02	5.59E+07	1.57E+06	8.50E+02	5.00E+07	4.06E+06	2.90E+02	1.17E+06	1.40E+07	1.59E+02	1.52E+06	1.26E+06	Road 43	43	3200	5.50E+02	5.59E+07	1.57E+06	8.50E+02	5.00E+07	4.06E+06	2.90E+02	1.17E+06	1.40E+07	1.59E+02	1.52E+06	1.26E+06	Road 43	43	3300
Road 38	38	1000-1100	5.50E+02	5.59E+07	1.57E+06	8.50E+02	5.00E+07	4.06E+06	2.90E+02	1.17E+06	1.40E+07	1.59E+02	1.52E+06	1.26E+06	Road 43	43	3400	5.50E+02	5.59E+07	1.57E+06	8.50E+02	5.00E+07	4.06E+06	2.90E+02	1.17E+06	1.40E+07	1.59E+02	1.52E+06	1.26E+06	Road 43	43	3500
Road 38	38	1100-1200	9.93E+02	5.20E+07	4.26E+06	7.85E+02	4.61E+07	3.77E+06	2.94E+02	1.54E+06	1.95E+06	2.60E+02	1.36E+06	1.12E+06	Road 43	43	3600	9.93E+02	5.20E+07	4.26E+06	7.85E+02	4.61E+07	3.77E+06	2.94E+02	1.54E+06	1.95E+06	2.60E+02	1.36E+06	1.12E+06	Road 43	43	3700
Road 38	38	1200-1300	1.25E+02	4.03E+07	3.30E+06	1.05E+02	3.39E+06	3.29E+06	3.29E+02	1.06E+06	8.71E+06	2.88E+02	9.39E+07	7.63E+06	Road 43	43	3800	1.25E+02	4.03E+07	3.30E+06	1.05E+02	3.39E+06	3.29E+06	3.29E+02	1.06E+06	8.71E+06	2.88E+02	9.39E+07	7.63E+06	Road 43	43	3900
Road 38	38	1300-1400	2.26E+02	1.43E+07	3.33E+06	1.10E+02	3.77E+06	3.30E+06	3.40E+02	1.10E+06	8.25E+06	2.97E+02	1.02E+06	8.31E+06	Road 43	43	4000	2.26E+02	1.43E+07	3.33E+06	1.10E+02	3.77E+06	3.30E+06	3.40E+02	1.10E+06	8.25E+06	2.97E+02	1.02E+06	8.31E+06	Road 43	43	4100
Road 38	38	1400-1500	2.26E+02	1.43E+07	3.33E+06	1.10E+02	3.77E+06	3.30E+06	3.40E+02	1.10E+06	8.25E+06	2.97E+02	1.02E+06	8.31E+06	Road 43	43	4200	2.26E+02	1.43E+07	3.33E+06	1.10E+02	3.77E+06	3.30E+06	3.40E+02	1.10E+06	8.25E+06	2.97E+02	1.02E+06	8.31E+06	Road 43	43	4300
Road 38	38	1500-1600	3.30E+02	1.45E+07	3.73E+06	1.13E+02	3.98E+07	3.26E+06	3.54E+02	1.25E+06	1.03E+07	3.11E+02	1.09E+06	8.94E+06	Road 43	43	2000	3.30E+02	1.45E+07	3.73E+06	1.13E+02	3.98E+07	3.26E+06	3.54E+02	1.25E+06	1.03E+07	3.11E+02	1.09E+06	8.94E+06	Road 43	43	2100
Road 38	38	1600-1700	1.24E+02	4.23E+07	4.66E+06	1.09E+02	3.72E+06	3.34E+06	3.34E+02	1.14E+06	9.34E+06	1.09E+02	1.00E+06	8.21E+06	Road 43	43	2200	1.24E+02	4.23E+07	4.66E+06	1.09E+02	3.72E+06	3.34E+06	3.34E+02	1.14E+06	9.34E+06	1.09E+02	1.00E+06	8.21E+06	Road 43	43	2300
Road 38	38	1700-1800	1.19E+02	3.97E+07	4.31E+06	1.03E+02	3.91E+07	2.87E+06	3.40E+02	1.21E+06	8.25E+06	1.02E+02	9.00E+06	7.07E+06	Road 43	43	2400	1.19E+02	3.97E+07	4.31E+06	1.03E+02	3.91E+07	2.87E+06	3.40E+02	1.21E+06	8.25E+06	1.02E+02	9.00E+06	7.07E+06	Road 43	43	2500
Road 38	38	1800-1900	1.09E+02	3.34E+07	2.66E+06	9.72E+02	2.89E+06	2.39E+06	2.94E+02	8.72E+07	1.14E+06	2.62E+02	7.77E+07	6.36E+06	Road 43	43	2600	1.09E+02	3.34E+07	2.66E+06	9.72E+02	2.89E+06	2.39E+06	2.94E+02	8.72E+07	1.14E+06	2.62E+02	7.77E+07	6.36E+06	Road 43	43	2700
Road 38	38	1900-2000	6.96E+02	1.52E+07	4.07E+06	7.89E+02	1.14E+07	9.30E+07	2.66E+02	8.33E+07	1.13E+06	2.44E+02	6.46E+07	2.83E+06	Road 43	43	2800	6.96E+02	1.52E+07	4.07E+06	7.89E+02	1.14E+07	9.30E+07	2.66E+02	8.33E+07	1.13E+06	2.44E+02	6.46E+07	2.83E+06	Road 43	43	2900
Road 38	38	2000-2100	6.96E+02	1.52E+07	4.07E+06	7.89E+02	1.14E+07	9.30E+07	2.66E+02	8.33E+07	1.13E+06	2.44E+02	6.46E+07	2.83E+06	Road 43	43	3000	6.96E+02	1.52E+07	4.07E+06	7.89E+02	1.14E+07	9.30E+07	2.66E+02	8.33E+07	1.13E+06	2.44E+02	6.46E+07	2.83E+06	Road 43	43	3100
Road 38	38	2100-2200	8.81E+02	1.06E+07	1.80E+07	1.08E+02	1.00E+07	8.70E+06	2.60E+02	3.91E+07	2.70E+06	2.47E+02	3.04E+07	2.49E+06	Road 43	43	3200	8.81E+02	1.06E+07	1.80E+07	1.08E+02	1.00E+07	8.70E+06	2.60E+02	3.91E+07	2.70E+06	2.47E+02	3.04E+07	2.49E+06	Road 43	43	3300
Road 38	38	2200-2300	4.42E+02	9.79E+06	6.01E+06	7.73E+02	8.94E+06	3.20E+07	2.51E+06	2.91E+07	3.38E+06	2.94E+02	2.66E+07	2.31E+06	Road 43	43	3400	4.42E+02	9.79E+06	6.01E+06	7.73E+02	8.94E+06	3.20E+07	2.51E+06	2.91E+07	3.38E+06	2.94E+02	2.66E+07	2.31E+06	Road 43	43	3500
Road 38	38	2300-2400	7.76E+02	1.71E+07	2.92E+07	1.21E+02	1.17E+07	1.14E+07	2.52E+02	1.17E+07	1.14E+07	2.52E+02	1.17E+07																			

Tsing Yi North Underground Quarry
 Open Road 24 hour Emission Factors for AERMOD model (May) Year 2038

Road Name	Road ID	Hour	NO Emission				NO Emission				
			Month		Month		Month		Month		
			g/km/h	tonne/hour	g/km/h	tonne/hour	g/km/h	tonne/hour	g/km/h	tonne/hour	
Road #1	41	00:00:00	2.005	0.27	1.817	1.78	3.307	0.58	1.347	1.78	5.52
Road #1	41	01:00:00	2.544	0.36	2.388	2.20	3.707	0.72	1.624	6.39	9.48
Road #1	41	02:00:00	3.028	0.43	2.872	2.69	4.191	0.83	1.501	7.26	10.86
Road #1	41	03:00:00	4.042	0.56	3.887	3.71	5.206	0.95	1.378	8.14	12.44
Road #1	41	04:00:00	3.374	0.46	3.166	3.03	4.328	0.78	1.12	9.58	17.78
Road #1	41	05:00:00	1.696	0.23	1.621	1.57	3.648	0.41	1.02	1.11	6.78
Road #1	41	06:00:00	1.344	0.18	1.269	1.22	3.307	0.32	0.98	1.11	6.78
Road #1	41	07:00:00	2.844	0.37	1.766	1.65	2.23	1.49	1.04	1.35	4.54
Road #1	41	08:00:00	2.456	0.33	1.716	1.61	2.074	1.45	1.04	1.35	4.54
Road #1	41	09:00:00	2.756	0.37	1.766	1.65	2.23	1.49	1.04	1.35	4.54
Road #1	41	10:00:00	1.044	0.14	0.787	0.74	1.536	0.88	0.52	1.17	4.89
Road #1	41	11:00:00	1.096	0.14	0.742	0.64	1.588	0.46	0.37	0.08	1.03
Road #1	41	12:00:00	1.716	0.23	1.621	1.57	3.648	0.41	1.02	1.11	6.78
Road #1	41	13:00:00	1.434	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	14:00:00	1.564	0.21	1.486	1.43	3.307	0.32	0.98	1.11	6.78
Road #1	41	15:00:00	2.326	0.31	2.007	1.92	2.73	1.84	1.72	0.82	6.61
Road #1	41	17:00:00	1.786	0.24	1.602	1.52	1.656	1.55	0.76	6.78	4.01
Road #1	41	18:00:00	1.786	0.24	1.602	1.52	1.656	1.55	0.76	6.78	4.01
Road #1	41	19:00:00	1.786	0.24	1.602	1.52	1.656	1.55	0.76	6.78	4.01
Road #1	41	20:00:00	1.456	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	21:00:00	1.566	0.21	1.486	1.43	3.307	0.32	0.98	1.11	6.78
Road #1	41	22:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	23:00:00	1.786	0.24	1.602	1.52	1.656	1.55	0.76	6.78	4.01
Road #1	41	00:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	01:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	02:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	03:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	04:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	05:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	06:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	07:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	08:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	09:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	10:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	11:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	12:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	13:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	14:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	15:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	16:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	17:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	18:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	19:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	20:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	21:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	22:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	23:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	00:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	01:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	02:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	03:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	04:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	05:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	06:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	07:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	08:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	09:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	10:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	11:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	12:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	13:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	14:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	15:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	16:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	17:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	18:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	19:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	20:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	21:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	22:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	23:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	00:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	01:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	02:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	03:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	04:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	05:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	06:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	07:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	08:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	09:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	10:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	11:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	12:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	13:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	14:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	15:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	16:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	17:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	18:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	19:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	20:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	21:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	22:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	23:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	00:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	01:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	02:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	03:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	04:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	05:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	06:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	07:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	08:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	09:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78
Road #1	41	10:00:00	1.484	0.19	1.357	1.3	3.307	0.32	0.98	1.11	6.78

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for
AERMOD model (May) Year 2038

Road Name	Road ID	Hour	NO _x Emission			TSP Emission			NO _x Emission			TSP Emission		
			g/km/hr	tonne/hr	g/km/hr	tonne/hr	g/km/hr	tonne/hr	g/km/hr	tonne/hr	g/km/hr	tonne/hr		
Road 44	44	0800-0900	9.242E-03	2.68E-07	1.656E-06	7.754E-07	2.25E-07	1.39E-06	4.771E-07	1.36E-06	5.45E-06	3.85E-07	1.12E-06	
Road 44	44	0900-1000	1.020E-02	2.92E-07	1.856E-06	8.682E-07	2.44E-07	1.76E-06	5.113E-07	1.210E-06	8.48E-06	4.18E-07	1.19E-06	
Road 44	44	1000-1100	1.100E-02	3.12E-07	2.05E-06	9.400E-07	2.61E-07	1.95E-06	5.60E-07	1.30E-06	9.15E-06	4.50E-07	1.28E-06	
Road 44	44	1100-1200	1.100E-02	3.12E-07	2.05E-06	9.400E-07	2.61E-07	1.95E-06	5.60E-07	1.30E-06	9.15E-06	4.50E-07	1.28E-06	
Road 44	44	1200-1300	1.440E-02	4.05E-07	2.75E-06	1.170E-06	3.00E-07	2.25E-06	6.49E-07	1.60E-06	1.03E-05	5.18E-07	1.51E-06	
Road 44	44	1300-1400	1.440E-02	4.05E-07	2.75E-06	1.170E-06	3.00E-07	2.25E-06	6.49E-07	1.60E-06	1.03E-05	5.18E-07	1.51E-06	
Road 44	44	1500-1600	1.390E-02	3.88E-07	2.63E-06	1.130E-06	3.12E-07	1.96E-06	6.700E-07	1.58E-06	1.16E-05	5.34E-07	1.41E-06	
Road 44	44	1600-1700	1.840E-02	5.51E-07	3.40E-06	1.53E-06	4.17E-07	2.62E-06	7.740E-07	2.31E-06	1.43E-05	6.99E-07	1.72E-06	
Road 44	44	1700-1800	1.840E-02	5.51E-07	3.40E-06	1.53E-06	4.17E-07	2.62E-06	7.740E-07	2.31E-06	1.43E-05	6.99E-07	1.72E-06	
Road 44	44	1800-1900	1.970E-02	5.73E-07	4.53E-06	1.68E-06	4.62E-07	3.86E-06	8.62E-07	3.20E-06	1.98E-05	7.16E-07	2.02E-06	
Road 44	44	1900-2000	6.29E-03	1.69E-07	1.15E-06	5.30E-05	1.45E-07	9.65E-07	3.77E-05	1.115E-06	6.78E-06	3.04E-07	8.94E-07	
Road 44	44	2000-2100	5.23E-03	1.47E-07	9.65E-07	4.31E-05	1.18E-07	7.85E-07	3.15E-05	9.36E-07	5.65E-06	2.45E-07	7.04E-07	
Road 44	44	2100-2200	5.10E-03	1.41E-07	7.20E-07	4.24E-05	1.00E-07	6.77E-07	3.07E-05	8.56E-07	5.29E-06	2.13E-07	6.37E-07	
Road 44	44	2200-2300	5.02E-03	1.37E-07	6.90E-07	4.24E-05	9.95E-08	6.99E-07	3.07E-05	8.31E-07	5.13E-06	2.08E-07	6.16E-07	
Road 44	44	2300-2400	5.02E-03	1.37E-07	6.90E-07	4.24E-05	9.95E-08	6.99E-07	3.07E-05	8.31E-07	5.13E-06	2.08E-07	6.16E-07	
Road 45	45	0800-0900	5.14E-03	3.88E-06	4.77E-07	4.39E-03	3.13E-06	4.08E-07	3.80E-06	2.82E-07	5.33E-06	3.02E-07	2.36E-06	
Road 45	45	0900-1000	5.60E-03	2.79E-06	3.88E-07	4.78E-03	2.35E-06	2.89E-07	4.31E-06	1.9E-07	2.36E-06	3.17E-07	1.41E-06	
Road 45	45	1000-1100	5.60E-03	2.79E-06	3.88E-07	4.78E-03	2.35E-06	2.89E-07	4.31E-06	1.9E-07	2.36E-06	3.17E-07	1.41E-06	
Road 45	45	1100-1200	6.68E-03	1.69E-06	2.32E-07	4.78E-03	1.88E-06	2.01E-07	4.29E-06	1.19E-07	1.43E-06	1.49E-07	1.04E-06	
Road 45	45	1200-1300	7.38E-03	2.27E-06	2.80E-07	6.24E-03	1.53E-06	2.38E-07	4.48E-06	1.36E-07	1.76E-06	1.63E-07	1.12E-06	
Road 45	45	1300-1400	7.99E-03	4.27E-06	5.26E-07	6.72E-03	2.89E-06	4.43E-07	4.89E-06	2.51E-07	3.06E-06	3.75E-07	2.24E-06	
Road 45	45	1400-1500	8.80E-03	4.27E-06	5.26E-07	6.72E-03	2.89E-06	4.43E-07	4.89E-06	2.51E-07	3.06E-06	3.75E-07	2.24E-06	
Road 45	45	1500-1600	9.210E-03	2.11E-07	2.62E-06	7.740E-07	2.17E-07	2.20E-06	5.00E-06	1.18E-06	1.45E-05	4.09E-07	9.9E-07	
Road 45	45	1600-1700	8.89E-03	2.40E-07	2.99E-06	7.53E-07	2.02E-07	2.48E-06	4.71E-06	1.26E-06	1.52E-05	3.86E-07	1.12E-06	
Road 45	45	1700-1800	9.93E-03	2.17E-07	2.74E-06	8.43E-07	2.33E-07	2.25E-06	5.19E-06	1.30E-06	1.62E-05	4.29E-07	1.24E-06	
Road 45	45	1800-1900	1.12E-02	2.11E-07	2.60E-06	9.90E-07	1.80E-07	2.22E-06	5.36E-06	1.01E-06	1.24E-05	4.45E-07	9.8E-07	
Road 45	45	1900-2000	1.06E-02	1.99E-07	2.33E-06	8.87E-07	1.56E-07	1.94E-06	4.50E-06	9.47E-07	1.17E-05	4.29E-07	9.7E-07	
Road 45	45	2000-2100	1.16E-02	2.18E-07	2.64E-06	9.43E-07	1.63E-07	2.02E-06	4.79E-06	1.04E-06	1.28E-05	4.49E-07	1.24E-06	
Road 45	45	2100-2200	1.39E-02	3.00E-07	3.70E-06	1.111E-07	2.47E-07	2.04E-06	6.20E-06	1.38E-06	1.69E-05	4.96E-07	1.42E-06	
Road 45	45	2200-2300	1.39E-02	3.00E-07	3.70E-06	1.111E-07	2.47E-07	2.04E-06	6.20E-06	1.38E-06	1.69E-05	4.96E-07	1.42E-06	
Road 45	45	2300-2400	1.39E-02	3.00E-07	3.70E-06	1.111E-07	2.47E-07	2.04E-06	6.20E-06	1.38E-06	1.69E-05	4.96E-07	1.42E-06	
Road 46	46	0800-0900	5.14E-03	3.88E-06	4.77E-07	4.39E-03	3.13E-06	4.08E-07	3.80E-06	2.82E-07	5.33E-06	3.02E-07	2.36E-06	
Road 46	46	0900-1000	5.60E-03	2.79E-06	3.88E-07	4.78E-03	2.35E-06	2.89E-07	4.31E-06	1.9E-07	2.36E-06	3.17E-07	1.41E-06	
Road 46	46	1000-1100	5.60E-03	2.79E-06	3.88E-07	4.78E-03	2.35E-06	2.89E-07	4.31E-06	1.9E-07	2.36E-06	3.17E-07	1.41E-06	
Road 46	46	1100-1200	6.68E-03	1.69E-06	2.32E-07	4.78E-03	1.88E-06	2.01E-07	4.29E-06	1.19E-07	1.43E-06	1.49E-07	1.04E-06	
Road 46	46	1200-1300	7.38E-03	2.27E-06	2.80E-07	6.24E-03	1.53E-06	2.38E-07	4.48E-06	1.36E-07	1.76E-06	1.63E-07	1.12E-06	
Road 46	46	1300-1400	7.99E-03	4.27E-06	5.26E-07	6.72E-03	2.89E-06	4.43E-07	4.89E-06	2.51E-07	3.06E-06	3.75E-07	2.24E-06	
Road 46	46	1400-1500	8.80E-03	4.27E-06	5.26E-07	6.72E-03	2.89E-06	4.43E-07	4.89E-06	2.51E-07	3.06E-06	3.75E-07	2.24E-06	
Road 46	46	1500-1600	9.210E-03	2.11E-07	2.62E-06	7.740E-07	2.17E-07	2.20E-06	5.00E-06	1.18E-06	1.45E-05	4.09E-07	9.9E-07	
Road 46	46	1600-1700	8.89E-03	2.40E-07	2.99E-06	7.53E-07	2.02E-07	2.48E-06	4.71E-06	1.26E-06	1.52E-05	3.86E-07	1.12E-06	
Road 46	46	1700-1800	9.93E-03	2.17E-07	2.74E-06	8.43E-07	2.33E-07	2.25E-06	5.19E-06	1.30E-06	1.62E-05	4.29E-07	1.24E-06	
Road 46	46	1800-1900	1.12E-02	2.11E-07	2.60E-06	9.90E-07	1.80E-07	2.22E-06	5.36E-06	1.01E-06	1.24E-05	4.45E-07	9.8E-07	
Road 46	46	1900-2000	1.06E-02	1.99E-07	2.33E-06	8.87E-07	1.56E-07	1.94E-06	4.50E-06	9.47E-07	1.17E-05	4.29E-07	9.7E-07	
Road 46	46	2000-2100	1.16E-02	2.18E-07	2.64E-06	9.43E-07	1.63E-07	2.02E-06	4.79E-06	1.04E-06	1.28E-05	4.49E-07	1.24E-06	
Road 46	46	2100-2200	1.39E-02	3.00E-07	3.70E-06	1.111E-07	2.47E-07	2.04E-06	6.20E-06	1.38E-06	1.69E-05	4.96E-07	1.42E-06	
Road 46	46	2200-2300	1.39E-02	3.00E-07	3.70E-06	1.111E-07	2.47E-07	2.04E-06	6.20E-06	1.38E-06	1.69E-05	4.96E-07	1.42E-06	
Road 46	46	2300-2400	1.39E-02	3.00E-07	3.70E-06	1.111E-07	2.47E-07	2.04E-06	6.20E-06	1.38E-06	1.69E-05	4.96E-07	1.42E-06	
Road 47	47	0800-0900	5.14E-03	3.88E-06	4.77E-07	4.39E-03	3.13E-06	4.08E-07	3.80E-06	2.82E-07	5.33E-06	3.02E-07	2.36E-06	
Road 47	47	0900-1000	5.60E-03	2.79E-06	3.88E-07	4.78E-03	2.35E-06	2.89E-07	4.31E-06	1.9E-07	2.36E-06	3.17E-07	1.41E-06	
Road 47	47	1000-1100	5.60E-03	2.79E-06	3.88E-07	4.78E-03	2.35E-06	2.89E-07	4.31E-06	1.9E-07	2.36E-06	3.17E-07	1.41E-06	
Road 47	47	1100-1200	6.68E-03	1.69E-06	2.32E-07	4.78E-03	1.88E-06	2.01E-07	4.29E-06	1.19E-07	1.43E-06	1.49E-07	1.04E-06	
Road 47	47	1200-1300	7.38E-03	2.27E-06	2.80E-07	6.24E-03	1.53E-06	2.38E-07	4.48E-06	1.36E-07	1.76E-06	1.63E-07	1.12E-06	
Road 47	47	1300-1400	7.99E-03	4.27E-06	5.26E-07	6.72E-03	2.89E-06	4.43E-07	4.89E-06	2.51E-07	3.06E-06	3.75E-07	2.24E-06	
Road 47	47	1400-1500	8.80E-03	4.27E-06	5.26E-07	6.72E-03	2.89E-06	4.43E-07	4.89E-06	2.51E-07	3.06E-06	3.75E-07	2.24E-06	
Road 47	47	1500-1600	9.210E-03	2.11E-07	2.62E-06	7.740E-07	2.17E-07	2.20E-06	5.00E-06	1.18E-06	1.45E-05	4.09E-07	9.9E-07	
Road 47	47	1600-1700	8.89E-03	2.40E-07	2.99E-06	7.53E-07	2.02E-07	2.48E-06	4.71E-06	1.26E-06	1.52E-05	3.86E-07	1.12E-06	
Road 47	47	1700-1800	9.93E-03	2.17E-07	2.74E-06	8.43E-07	2.33E-07	2.25E-06	5.19E-06	1.30E-06	1.62E-05	4.29E-07	1.24E-06	
Road 47	47	1800-1900	1.12E-02	2.11E-07	2.60E-06	9.90E-07	1.80E-07	2.22E-06	5.36E-06	1.01E-06	1.24E-05	4.45E-07	9.8E-07	
Road 47	47	1900-2000	1.06E-02	1.99E-07	2.33E-06	8.87E-07	1.56E-07	1.94E-06	4.50E-06	9.47E-07	1.17E-05	4.29E-07	9.7E-07	
Road 47	47	2000-2100	1.16E-02	2.18E-07	2.64E-06	9.43E-07	1.63E-07	2.02E-06	4.79E-06	1.04E-06	1.28E-05	4.49E-07	1.24E-06	
Road 47	47	2100-2200	1.39E-02	3.00E-07	3.70E-06	1.111E-07	2.47E-07	2.04E-06	6.20E-06	1.38E-06	1.69E-05	4.96E-07	1.42E-06	
Road 47	47	2200-2300	1.39E-02	3.00E-07	3.70E-06	1.111E-07	2.47E-07	2.04E-06	6.20E-06	1.38E-06	1.69E-05	4.96E-07	1.42E-06	
Road 47	47	2300-2400	1.39E-02	3.00E-07	3.70E-06	1.111E-07	2.47E-07	2.04E-06	6.20E-06	1.38E-06	1.69E-05	4.96E-07	1.42E-06	
Road 48	48	0800-0900	5.14E-03	3.88E-06	4.77E-07	4.39E-03	3.13E-06	4.08E-07	3.80E-06	2.82E-07	5.33E-06	3.02E-07	2.36E-06	
Road 48	48	0900-1000	5.60E-03	2.79E-06	3.88E-07	4.78E-03	2.35E-06	2.89E-07	4.31E-06	1.9E-07	2.36E-06	3.17E-07	1.41E-06	
Road 48	48	1000-1100	5.60E-03	2.79E-06	3.88E-07	4.78E-03	2.35E-06	2.89E-07	4.31E-06	1.9E-07	2.36E-06	3.17E-07	1.41E-06	
Road 48	48	1100-1200	6.68E-03	1.69E-06	2.32E-07	4.78E-03	1.88E-06	2.01E-07	4.29E-06	1.19E-07	1.43E-06	1.49E-07	1.04E-06	
Road 48	48	1200-1300	7.38E-03	2.27E-06	2.80E-07	6.24E-03	1.53E-06	2.38E-07	4.48E-06	1.36E-07	1.76E-06	1.63E-07	1.12E-06	
Road 48	48	1300-1400	7.99E-03	4.27E-06	5.26E-07	6.72E-03	2.89E-06	4.43E-07	4.89E-06	2.51E-07	3.06			

Open Road 24 hour Emission Factors for
AERMOD model (May) Year 2038

Road Name	Road ID	Hour	Mo, No Emisn				No Emisn				
			Month/Hour Min		tonne/hour		Month/Hour Min		tonne/hour		
			g/min	g/hour	g/min	g/hour	g/min	g/hour	g/min	g/hour	
Road 47	47	1700-1800	2.58E-02	4.94E-07	1.54E-05	2.14E-02	4.11E-07	1.28E-05	1.09E-01	2.02E-06	6.29E-05
Road 47	47	1700-1800	1.78E-02	3.96E-07	1.25E-06	4.86E-03	3.32E-07	4.04E-05	8.72E-04	1.94E-06	6.08E-05
Road 47	47	1800-1900	1.38E-02	2.92E-07	9.09E-07	3.42E-03	2.42E-07	2.90E-05	6.34E-04	1.41E-06	4.49E-05
Road 47	47	1900-2000	1.06E-02	2.13E-07	6.65E-06	8.89E-03	1.80E-07	5.62E-05	5.87E-02	1.18E-06	3.76E-05
Road 47	47	2000-2100	9.37E-03	1.64E-07	4.55E-06	1.18E-03	1.26E-07	3.33E-05	6.00E-03	9.33E-07	2.91E-05
Road 47	47	2100-2200	7.66E-03	1.19E-07	3.69E-06	6.63E-03	1.03E-07	3.22E-05	5.34E-03	8.61E-07	2.69E-05
Road 47	47	2200-2300	7.11E-03	1.09E-07	3.42E-06	5.43E-03	9.49E-08	2.87E-05	4.89E-03	7.99E-07	2.41E-05
Road 47	47	2300-0000	5.73E-03	8.54E-08	2.67E-06	4.52E-03	7.36E-08	2.26E-05	5.39E-03	6.09E-07	1.90E-05
Road 48	48	0000-0100	5.52E-03	8.40E-08	2.24E-07	4.73E-03	4.11E-08	6.00E-07	3.30E-03	3.38E-07	3.11E-05
Road 48	48	0100-0200	6.69E-03	1.02E-07	3.44E-06	5.43E-03	9.49E-08	2.87E-05	4.89E-03	7.99E-07	2.41E-05
Road 48	48	0200-0300	5.73E-03	8.54E-08	2.67E-06	4.52E-03	7.36E-08	2.26E-05	5.39E-03	6.09E-07	1.90E-05
Road 48	48	0300-0400	7.11E-03	2.11E-08	4.64E-07	6.15E-03	2.00E-08	3.02E-07	4.34E-04	1.41E-07	1.13E-06
Road 48	48	0400-0500	7.71E-03	2.31E-08	4.94E-07	6.63E-03	2.19E-08	3.29E-07	4.69E-04	1.54E-07	1.23E-06
Road 48	48	0500-0600	8.46E-03	5.21E-08	7.86E-07	1.17E-03	4.38E-08	6.62E-07	4.82E-02	2.97E-07	4.49E-06
Road 48	48	0600-0700	8.82E-03	1.18E-08	1.27E-06	1.47E-03	8.98E-08	1.49E-05	4.91E-02	6.46E-07	8.00E-06
Road 48	48	0700-0800	9.37E-03	1.64E-08	1.73E-06	1.98E-03	1.26E-07	3.33E-05	6.00E-03	9.33E-07	2.91E-05
Road 48	48	0800-0900	9.25E-03	1.25E-07	4.28E-06	1.73E-03	7.29E-07	3.80E-05	4.63E-02	1.43E-06	4.16E-05
Road 48	48	0900-1000	1.03E-02	2.61E-07	3.94E-06	8.78E-03	2.21E-07	3.33E-05	6.00E-07	1.26E-06	1.94E-05
Road 48	48	1000-1100	1.12E-02	2.92E-07	3.95E-06	9.59E-03	2.50E-07	3.67E-05	6.54E-03	1.39E-06	2.16E-05
Road 48	48	1100-1200	1.12E-02	2.92E-07	3.95E-06	9.59E-03	1.93E-07	2.92E-05	5.46E-03	1.16E-06	1.70E-05
Road 48	48	1200-1300	1.24E-02	3.39E-07	5.12E-06	1.07E-03	2.83E-07	4.27E-05	7.43E-02	1.42E-06	1.87E-05
Road 48	48	1300-1400	2.03E-02	3.54E-07	5.35E-06	1.67E-02	2.92E-07	4.41E-05	7.69E-02	1.34E-06	2.02E-05
Road 48	48	1400-1500	2.08E-02	3.64E-07	5.49E-06	1.70E-02	3.07E-07	4.56E-05	7.94E-02	1.39E-06	2.08E-05
Road 48	48	1500-1600	1.95E-02	3.35E-07	5.05E-06	1.56E-02	2.91E-07	4.40E-05	7.59E-02	1.42E-06	2.14E-05
Road 48	48	1600-1700	1.95E-02	3.37E-07	5.08E-06	1.62E-02	3.13E-07	4.73E-05	7.24E-02	1.46E-06	2.19E-05
Road 48	48	1700-1800	1.46E-02	2.79E-07	4.24E-06	1.24E-02	2.57E-07	3.74E-05	6.25E-02	1.25E-06	1.79E-05
Road 48	48	1800-1900	1.12E-02	2.34E-07	3.52E-06	1.05E-03	1.99E-07	3.00E-05	4.76E-02	9.91E-07	1.50E-06
Road 48	48	1900-2000	1.04E-02	1.72E-07	2.59E-06	8.95E-03	1.46E-07	2.20E-05	4.56E-02	7.51E-07	1.13E-06
Road 48	48	2000-2100	1.02E-02	1.68E-07	2.54E-06	8.78E-03	1.42E-07	2.17E-05	4.50E-02	7.39E-07	1.11E-06
Road 48	48	2100-2200	9.51E-03	1.21E-07	1.82E-06	3.33E-03	1.06E-07	1.60E-05	4.01E-02	5.86E-07	8.94E-06
Road 48	48	2200-2300	8.69E-03	1.19E-07	1.79E-06	3.39E-03	1.04E-07	1.56E-05	4.52E-02	5.66E-07	8.42E-06
Road 48	48	2300-0000	7.29E-03	1.04E-07	1.55E-06	2.84E-03	8.87E-08	1.34E-05	3.83E-02	5.19E-07	7.13E-06
Road 49	49	0000-0100	7.22E-03	9.58E-08	1.09E-07	6.13E-03	3.40E-08	8.58E-07	5.02E-02	2.77E-07	9.86E-06
Road 49	49	0100-0200	7.29E-03	2.59E-08	6.52E-07	6.20E-03	2.21E-08	5.88E-07	4.89E-02	1.47E-07	4.42E-06
Road 49	49	0200-0300	7.76E-03	2.01E-08	5.01E-07	6.75E-03	1.75E-08	4.42E-07	5.02E-02	1.36E-07	2.89E-06
Road 49	49	0300-0400	8.43E-03	1.42E-08	3.55E-07	7.28E-03	1.87E-08	4.67E-07	5.02E-02	1.36E-07	2.89E-06
Road 49	49	0400-0500	9.31E-03	2.07E-08	5.22E-07	7.91E-03	1.76E-08	4.42E-07	5.53E-02	1.23E-07	3.10E-06
Road 49	49	0500-0600	1.07E-02	4.10E-08	1.04E-06	9.01E-03	3.45E-08	8.61E-07	6.04E-02	2.31E-07	5.84E-06
Road 49	49	0600-0700	1.37E-02	5.33E-08	1.33E-06	1.12E-03	4.37E-08	1.09E-05	6.54E-02	2.99E-07	7.45E-06
Road 49	49	0700-0800	1.78E-02	2.89E-07	7.36E-06	1.48E-02	2.44E-07	6.11E-06	8.40E-02	1.39E-06	5.25E-06
Road 49	49	0800-0900	1.86E-02	3.49E-07	8.88E-06	1.55E-02	2.93E-07	7.39E-06	8.31E-02	1.57E-06	6.74E-06
Road 49	49	0900-1000	1.86E-02	3.49E-07	8.88E-06	1.55E-02	2.93E-07	7.39E-06	8.31E-02	1.57E-06	6.74E-06
Road 49	49	1000-1100	1.96E-02	2.49E-07	6.26E-06	1.68E-02	2.13E-07	5.36E-06	8.84E-02	1.12E-06	2.83E-06
Road 49	49	1100-1200	1.75E-02	2.11E-07	5.31E-06	1.46E-02	1.75E-07	4.43E-06	8.48E-02	1.02E-06	2.57E-06
Road 49	49	1200-1300	2.12E-02	2.59E-07	6.47E-06	1.53E-02	2.07E-07	5.17E-06	9.54E-02	1.24E-06	3.10E-06
Road 49	49	1300-1400	2.18E-02	2.19E-07	5.51E-06	1.75E-02	1.80E-07	4.53E-06	9.58E-02	1.06E-06	2.42E-06
Road 49	49	1400-1500	2.33E-02	2.53E-07	6.38E-06	1.92E-02	2.08E-07	5.24E-06	9.91E-02	1.07E-06	2.71E-06
Road 49	49	1500-1600	2.27E-02	2.11E-07	5.26E-06	1.83E-02	1.83E-07	4.56E-06	9.21E-02	1.03E-06	2.59E-06
Road 49	49	1600-1700	2.47E-02	2.98E-07	7.52E-06	2.05E-02	2.47E-07	6.24E-06	9.98E-02	1.10E-06	3.01E-06
Road 49	49	1700-1800	2.75E-02	2.47E-07	6.24E-06	1.46E-02	2.05E-07	5.13E-06	8.26E-02	1.16E-06	2.94E-06
Road 49	49	1800-1900	1.37E-02	2.21E-07	5.58E-06	1.11E-02	1.88E-07	4.70E-06	6.27E-02	1.03E-06	2.55E-06
Road 49	49	1900-2000	1.19E-02	1.94E-07	4.84E-06	9.48E-03	1.63E-07	4.07E-06	5.32E-02	9.21E-07	2.32E-06
Road 49	49	2000-2100	9.96E-03	1.01E-07	2.55E-06	6.63E-03	8.75E-08	2.21E-06	5.87E-02	5.95E-07	1.50E-06
Road 49	49	2100-2200	7.78E-03	7.81E-08	1.97E-06	5.78E-03	6.81E-08	1.72E-06	5.28E-02	5.30E-07	1.42E-06
Road 49	49	2200-2300	7.69E-03	7.69E-08	1.94E-06	5.71E-03	6.71E-08	1.69E-06	5.28E-02	5.30E-07	1.42E-06
Road 49	49	2300-0000	5.83E-03	5.83E-08	1.47E-06	4.88E-03	5.03E-08	1.27E-06	5.28E-02	5.86E-07	1.73E-06
Road 50	50	0000-0100	3.78E-03	1.78E-08	2.54E-06	3.22E-03	1.54E-08	2.05E-06	1.35E-03	6.37E-08	8.09E-07
Road 50	50	0100-0200	4.02E-03	1.92E-08	2.69E-06	3.46E-03	1.65E-08	2.20E-06	1.44E-03	6.84E-08	8.69E-07
Road 50	50	0200-0300	4.40E-03	1.73E-08	2.51E-06	3.87E-03	1.82E-08	2.42E-06	1.46E-03	1.38E-08	1.72E-07
Road 50	50	0300-0400	7.40E-03	1.05E-08	1.49E-07	6.14E-03	9.14E-08	1.24E-06	1.52E-03	3.69E-08	4.84E-07
Road 50	50	0400-0500	7.30E-03	1.02E-08	1.43E-07	6.05E-03	8.92E-08	1.21E-06	1.50E-03	3.61E-08	4.69E-07
Road 50	50	0500-0600	4.23E-03	1.94E-08	2.77E-07	3.92E-03	1.65E-08	2.26E-07	1.61E-01	6.77E-08	8.69E-07
Road 50	50	0600-0700	4.32E-03	3.87E-08	5.52E-07	3.66E-02	3.27E-08	4.48E-07	1.58E-01	1.41E-07	2.02E-06
Road 50	50	0700-0800	5.03E-03	9.75E-08	1.36E-06	4.27E-02	8.26E-08	1.18E-06	1.76E-01	3.41E-07	4.87E-06
Road 50	50	0800-0900	4.87E-03	1.57E-08	2.14E-07	4.09E-02	7.97E-08	1.08E-06	1.70E-01	3.24E-07	4.54E-06
Road 50	50	0900-1000	5.30E-03	1.23E-07	1.76E-06	4.94E-02	1.04E-07	1.48E-06	1.93E-01	4.48E-07	6.39E-06
Road 50	50	1000-1100	5.57E-03	1.24E-07	1.77E-06	4.78E-02	1.06E-07	1.52E-06	1.94E-01	4.30E-07	6.14E-06
Road 50	50	1100-1200	5.92E-03	1.37E-07	1.91E-06	4.67E-02	1.07E-07	1.54E-06	1.99E-01	4.45E-07	6.25E-06
Road 50	50	1200-1300	6.87E-03	6.62E-08	9.17E-07	5.73E-02	5.52E-08	7.88E-07	2.18E-01	2.06E-07	2.97E-06
Road 50	50	1300-1400	6.57E-03	6.99E-08	9.57E-07	5.43E-02	5.17E-08	7.23E-07	2.16E-01	2.30E-07	2.89E-06
Road 50	50	1400-1500	6.14E-03	6.46E-08	8.94E-07	5.56E-02	5.36E-08	7.40E-07	2.10E-01	2.16E-07	2.76E-06
Road 50	50	1500-1600	6.20E-03	6.92E-08	9.74E-07	5.10E-02	5.60E-08	6.99E-07	2.16E-01	2.37E-07	2.98E-06
Road 50	50	1600-1700	6.96E-03	6.77E-08	9.66E-07	5.47E-02	5.64E-08	6.84E-07	2.14E-01	2.21E-07	3.19E-06
Road 50	50	1700-1800	5.85E-03	5.87E-08	8.17E-07	4.98E-02	5.07E-08	6.24E-07	1.98E-01	1.94E-07	2.74E-06
Road 50	50	1800-1900	5.46E-03	4.90E-08	5.71E-07	4.47E-02	4.32E-08	5.89E-07	1.96E-01	1.96E-07	2.94E-06
Road 50	50	1900-2000	4.66E-02	2.02E-08	2.87E-07	3.97E-02	1.75E-08	2.45E-07	1.72E-01	7.44E-08	1.06E-06
Road 50	50	2000-2100	4.69E-02	1.98E-08	2.81E-07	3.98E-02	1.76E-08	2.46E-07	1.73E-01	7.44E-08	1.06E-06
Road 50	50	2100-2200	4.61E-02	1.65E-08	2.39E-07	4.07E-02	1.48E-08	2.08E-07	1.70E-01	6.10E-08	8.71E-07
Road 50	50	2200-2300	5.02E-02	1.61E-08	2.36E-07	4.39E-02	1.41E-08	2.01E-07	1.69E-01	5.43E-08	7.76E-07
Road 50	50	2300-0000	5.10E-02	1.37E-08	1.95E-07	4.47E-02	1.39E-08	1.91E-07	1.69E-01	4.58E-08	6.47E-07

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tiesing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for	Year 2038
AERMOD model (May)	

Row Name	Road ID	No.Emission												No.Emission																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
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		g/km/veh	g/km ² /h	time/hour	g/km/veh	g/km ² /h	time/hour	g/km/veh	g/km ² /h	time/hour	g/km/veh	g/km ² /h	time/hour	g/km/veh	g/km ² /h	time/hour	g/km/veh	g/km ² /h	time/hour																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
Row S1	51	0000-0100	5.21E-03	4.30E-08	8.02E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08	8.86E-07	3.02E-02	3.15E-07	5.87E-11	3.02E-02	2.56E-07	4.48E-03	3.66E-08

I:\Security\Environment - Projects\607222301_011\Other\Air\Modelling\Appendix\Traffic\Appendix\Appendix 2 E & F Emission Factor in 2028 SP.xlsx

Tsing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for	Year 2038
AERMOD model (May)	

Road Name	Road ID	Hour	Monthly/through						Monthly/through					
			NO Emission			NO Emission			NO Emission			NO Emission		
			g/km/h	g/m ²	tonne/hour	g/km/h	g/m ²	tonne/hour	g/km/h	g/m ²	tonne/hour	g/km/h	g/m ²	tonne/hour
Road S4	S4	0900-0900	9.52E-02	3.55E-07	0.130E-06	6.04E-02	3.00E-07	8.64E-06	3.52E-01	3.31E-06	3.20E-05	2.96E-01	1.10E-06	2.52E-05
Road S4	S4	0900-1000	1.07E-01	4.06E-06	8.70E-05	9.05E-02	3.72E-07	7.42E-06	3.98E-01	4.30E-06	3.20E-05	3.98E-01	1.21E-06	2.75E-05
Road S4	S4	1000-1100	1.18E-01	4.39E-06	9.40E-05	1.01E-01	4.59E-07	1.05E-05	4.27E-01	4.59E-06	3.20E-05	4.27E-01	1.21E-06	2.75E-05
Road S4	S4	1100-1200	1.18E-01	4.39E-06	9.40E-05	1.01E-01	4.59E-07	1.05E-05	4.27E-01	4.59E-06	3.20E-05	4.27E-01	1.21E-06	2.75E-05
Road S4	S4	1200-1300	1.48E-01	5.28E-06	1.13E-04	1.23E-01	2.07E-07	8.08E-06	5.09E-01	5.09E-06	2.40E-05	4.98E-01	9.08E-07	2.01E-05
Road S4	S4	1300-1400	1.48E-01	5.28E-06	1.13E-04	1.23E-01	2.07E-07	8.08E-06	5.09E-01	5.09E-06	2.40E-05	4.98E-01	9.08E-07	2.01E-05
Road S4	S4	1400-1500	1.46E-01	5.31E-07	8.00E-06	1.21E-01	6.01E-07	6.57E-06	5.09E-01	1.22E-06	2.78E-05	4.20E-01	1.01E-06	2.28E-05
Road S4	S4	1500-1600	1.34E-01	5.31E-07	5.45E-06	1.10E-01	2.72E-07	6.19E-06	5.09E-01	1.22E-06	2.88E-05	4.37E-01	1.03E-06	2.36E-05
Road S4	S4	1600-1700	1.41E-01	5.31E-07	5.45E-06	1.10E-01	2.72E-07	6.19E-06	5.09E-01	1.22E-06	2.88E-05	4.37E-01	1.03E-06	2.36E-05
Road S4	S4	1700-1800	1.41E-01	2.61E-07	9.59E-06	9.49E-02	2.18E-07	4.97E-06	4.40E-01	1.03E-06	2.50E-05	3.74E-01	8.60E-07	1.96E-05
Road S4	S4	1800-1900	9.23E-02	1.72E-07	3.94E-06	7.89E-02	4.40E-07	3.37E-06	3.71E-01	6.95E-07	1.59E-05	1.88E-01	5.93E-07	1.32E-05
Road S4	S4	1900-2000	9.23E-02	1.72E-07	3.94E-06	7.89E-02	4.40E-07	3.37E-06	3.71E-01	6.95E-07	1.59E-05	1.88E-01	5.93E-07	1.32E-05
Road S4	S4	2000-2100	7.79E-02	8.42E-08	1.92E-06	6.81E-02	7.81E-08	1.68E-06	3.14E-01	4.34E-07	7.75E-06	3.71E-01	2.93E-07	6.78E-06
Road S4	S4	2100-2200	7.71E-02	8.42E-08	1.92E-06	6.80E-02	7.48E-08	1.66E-06	3.10E-01	3.38E-07	7.70E-06	2.72E-06	2.96E-07	6.78E-06
Road S4	S4	2200-2300	7.71E-02	8.42E-08	1.92E-06	6.80E-02	7.48E-08	1.66E-06	3.10E-01	3.38E-07	7.70E-06	2.72E-06	2.96E-07	6.78E-06
Road S1	S1	2300-0000	8.16E-02	3.34E-06	4.15E-06	7.12E-02	5.15E-08	1.29E-06	3.01E-01	2.32E-07	5.32E-06	2.60E-01	2.02E-07	4.56E-06
Road S1	S1	0000-0100	8.30E-02	3.24E-06	4.03E-06	6.13E-02	6.18E-08	2.45E-06	2.42E-01	4.83E-07	1.90E-05	3.44E-01	3.32E-07	1.81E-05
Road S1	S1	0100-0200	8.30E-02	3.24E-06	4.03E-06	6.13E-02	6.18E-08	2.45E-06	2.42E-01	4.83E-07	1.90E-05	3.44E-01	3.32E-07	1.81E-05
Road S1	S1	0200-0300	7.56E-02	1.61E-06	1.84E-06	4.16E-02	3.61E-08	1.42E-06	4.55E-02	4.96E-07	9.87E-06	3.81E-02	2.09E-07	8.27E-06
Road S1	S1	0300-0400	8.21E-02	3.34E-06	4.03E-06	6.13E-02	6.18E-08	2.45E-06	2.42E-01	4.83E-07	1.90E-05	3.44E-01	3.32E-07	1.81E-05
Road S1	S1	0400-0500	8.21E-02	3.34E-06	4.03E-06	6.13E-02	6.18E-08	2.45E-06	2.42E-01	4.83E-07	1.90E-05	3.44E-01	3.32E-07	1.81E-05
Road S1	S1	0500-0600	8.77E-02	3.13E-06	3.22E-06	8.34E-02	6.88E-08	2.57E-06	3.26E-01	3.88E-07	1.78E-05	4.37E-02	3.52E-07	1.40E-05
Road S1	S1	0600-0700	1.03E-02	1.85E-07	3.34E-06	8.76E-03	1.57E-07	6.21E-06	3.98E-01	9.63E-07	3.81E-05	4.37E-02	7.68E-07	3.16E-05
Road S1	S1	0700-0800	1.11E-02	1.43E-07	3.13E-06	7.15E-03	1.67E-07	6.27E-06	4.27E-01	9.63E-07	3.81E-05	4.37E-02	7.68E-07	3.16E-05
Road S1	S1	0800-0900	1.08E-02	1.45E-07	1.81E-05	9.15E-03	3.87E-07	1.52E-05	3.17E-01	2.20E-06	8.78E-06	4.27E-02	1.81E-06	7.16E-05
Road S1	S1	0900-1000	1.24E-02	4.16E-07	1.57E-06	1.07E-02	3.86E-07	1.50E-06	3.76E-02	2.05E-06	8.13E-06	4.47E-02	1.70E-06	6.84E-05
Road S1	S1	1000-1100	1.33E-02	4.43E-07	1.57E-06	1.10E-02	4.18E-07	1.62E-06	4.24E-02	2.20E-06	8.24E-06	4.47E-02	1.70E-06	6.84E-05
Road S1	S1	1100-1200	1.37E-02	4.06E-07	1.16E-06	1.16E-02	4.46E-07	1.36E-06	4.57E-02	1.96E-06	7.31E-07	1.57E-06	1.52E-06	6.04E-05
Road S1	S1	1200-1300	1.66E-02	4.86E-07	9.7E-06	1.40E-02	4.20E-07	1.67E-05	6.78E-02	2.03E-06	8.06E-06	5.62E-06	1.68E-06	6.67E-05
Road S1	S1	1300-1400	1.66E-02	4.86E-07	9.7E-06	1.40E-02	4.20E-07	1.67E-05	6.78E-02	2.03E-06	8.06E-06	5.62E-06	1.68E-06	6.67E-05
Road S1	S1	1400-1500	1.69E-02	5.00E-07	2.00E-06	1.40E-02	4.60E-07	1.82E-06	6.99E-02	2.34E-06	9.08E-06	5.62E-06	1.68E-06	6.67E-05
Road S1	S1	1500-1600	1.56E-02	5.77E-07	4.07E-06	1.29E-02	4.35E-07	1.77E-06	6.99E-02	2.34E-06	9.08E-06	5.62E-06	1.68E-06	6.67E-05
Road S1	S1	1600-1700	1.56E-02	5.77E-07	4.07E-06	1.29E-02	4.35E-07	1.77E-06	6.99E-02	2.34E-06	9.08E-06	5.62E-06	1.68E-06	6.67E-05
Road S1	S1	1700-1800	1.15E-02	4.45E-07	1.76E-06	9.62E-03	3.74E-07	1.49E-06	5.02E-02	1.18E-06	8.60E-06	4.29E-06	1.76E-06	5.07E-05
Road S1	S1	1800-1900	8.23E-02	3.28E-07	3.30E-06	6.78E-03	2.77E-07	1.10E-06	4.43E-02	6.69E-06	6.69E-06	3.17E-06	3.38E-06	5.45E-05
Road S1	S1	1900-2000	8.23E-02	3.28E-07	3.30E-06	6.78E-03	2.77E-07	1.10E-06	4.43E-02	6.69E-06	6.69E-06	3.17E-06	3.38E-06	5.45E-05
Road S1	S1	2000-2100	7.62E-02	1.67E-07	8.83E-06	5.82E-03	1.45E-07	5.74E-06	4.32E-02	1.08E-06	4.26E-06	3.96E-06	8.97E-07	3.55E-05
Road S1	S1	2100-2200	5.94E-02	1.38E-07	6.77E-06	5.19E-03	1.29E-07	5.13E-06	4.08E-02	1.02E-06	4.04E-06	3.43E-06	8.57E-07	3.46E-05
Road S1	S1	2200-2300	5.94E-02	1.38E-07	6.77E-06	5.19E-03	1.29E-07	5.13E-06	4.08E-02	1.02E-06	4.04E-06	3.43E-06	8.57E-07	3.46E-05
Road S1	S1	2300-0000	5.94E-02	1.38E-07	6.77E-06	5.19E-03	1.29E-07	5.13E-06	4.08E-02	1.02E-06	4.04E-06	3.43E-06	8.57E-07	3.46E-05
Road S1	S1	0000-0100	7.17E-02	1.73E-06	7.71E-03	1.05E-03	1.05E-07	4.09E-06	4.26E-02	7.11E-07	1.95E-06	3.53E-06	3.69E-07	2.53E-05
Road S1	S1	0100-0200	9.12E-02	8.41E-08	1.32E-06	7.87E-02	1.26E-08	2.69E-06	4.55E-07	1.06E-06	4.01E-06	3.78E-07	1.46E-06	3.78E-06
Road S1	S1	0200-0300	1.08E-02	1.45E-07	1.81E-05	9.15E-03	3.87E-07	1.52E-05	3.17E-01	2.20E-06	8.78E-06	4.27E-02	1.81E-06	7.16E-05
Road S1	S1	0300-0400	1.08E-02	1.45E-07	1.81E-05	9.15E-03	3.87E-07	1.52E-05	3.17E-01	2.20E-06	8.78E-06	4.27E-02	1.81E-06	7.16E-05
Road S1	S1	0400-0500	1.08E-02	1.45E-07	1.81E-05	9.15E-03	3.87E-07	1.52E-05	3.17E-01	2.20E-06	8.78E-06	4.27E-02	1.81E-06	7.16E-05
Road S1	S1	0500-0600	1.08E-02	1.45E-07	1.81E-05	9.15E-03	3.87E-07	1.52E-05	3.17E-01	2.20E-06	8.78E-06	4.27E-02	1.81E-06	7.16E-05
Road S1	S1	0600-0700	1.45E-02	4.16E-07	1.57E-06	1.07E-02	3.86E-07	1.50E-06	3.76E-02	2.05E-06	8.13E-06	4.47E-02	1.70E-06	6.84E-05
Road S1	S1	0700-0800	1.45E-02	4.16E-07	1.57E-06	1.07E-02	3.86E-07	1.50E-06	3.76E-02	2.05E-06	8.13E-06	4.47E-02	1.70E-06	6.84E-05
Road S1	S1	0800-0900	1.38E-02	3.33E-07	1.13E-06	1.13E-02	4.68E-07	1.29E-06	3.01E-01	2.32E-07	5.32E-06	2.60E-01	2.02E-07	4.56E-06
Road S1	S1	0900-1000	1.45E-02	4.16E-07	1.57E-06	1.07E-02	3.86E-07	1.50E-06	3.76E-02	2.05E-06	8.13E-06	4.47E-02	1.70E-06	6.84E-05
Road S1	S1	1000-1100	1.45E-02	4.16E-07	1.57E-06	1.07E-02	3.86E-07	1.50E-06	3.76E-02	2.05E-06	8.13E-06	4.47E-02	1.70E-06	6.84E-05
Road S1	S1	1100-1200	1.45E-02	4.16E-07	1.57E-06	1.07E-02	3.86E-07	1.50E-06	3.76E-02	2.05E-06	8.13E-06	4.47E-02	1.70E-06	6.84E-05
Road S1	S1	1200-1300	1.56E-02	4.86E-07	9.7E-06	1.40E-02	4.20E-07	1.67E-05	6.78E-02	2.03E-06	8.06E-06	5.62E-06	1.68E-06	6.67E-05
Road S1	S1	1300-1400	1.56E-02	4.86E-07	9.7E-06	1.40E-02	4.20E-07	1.67E-05	6.78E-02	2.03E-06	8.06E-06	5.62E-06	1.68E-06	6.67E-05
Road S1	S1	1400-1500	1.69E-02	5.00E-07	2.00E-06	1.40E-02	4.60E-07	1.82E-06	6.99E-02	2.34E-06	9.08E-06	5.62E-06	1.68E-06	6.67E-05
Road S1	S1	1500-1600	1.56E-02	5.77E-07	4.07E-06	1.29E-02	4.35E-07	1.77E-06	6.99E-02	2.34E-06	9.08E-06	5.62E-06	1.68E-06	6.67E-05
Road S1	S1	1600-1700	1.56E-02	5.77E-07	4.07E-06	1.29E-02	4.35E-07	1.77E-06	6.99E-02	2.34E-06	9.08E-06	5.62E-06	1.68E-06	6.67E-05
Road S1	S1	1700-1800	1.15E-02	4.45E-07	1.76E-06	9.62E-03	3.74E-07	1.49E-06	5.02E-02	1.18E-06	8.60E-06	4.29E-06	1.76E-06	5.07E-05
Road S1	S1	1800-1900	8.23E-02	3.28E-07	3.30E-06	6.78E-03	2.77E-07	1.10E-06	4.43E-02	6.69E-06	6.69E-06	3.17E-06	3.38E-06	5.45E-05
Road S1	S1	1900-2000	8.23E-02	3.28E-07	3.30E-06	6.78E-03	2.77E-07	1.10E-06	4.43E-02	6.69E-06	6.69E-06	3.17E-06	3.38E-06	5.45E-05
Road S1	S1	2000-2100	7.62E-02	1.67E-07	8.83E-06	5.82E-03	1.45E-07	5.74E-06	4.32E-02	1.08E-06	4.26E-06	3.96E-06	8.97E-07	3.55E-05
Road S1	S1	2100-2200	5.94E-02	1.38E-07	6.77E-06	5.19E-03	1.29E-07	5.13E-06	4.08E-02	1.02E-06	4.04E-06	3.43E-06	8.57E-07	3.46E-05
Road S1	S1	2200-2300	5.94E-02	1.38E-07	6.77E-06	5.19E-03	1.29E-07	5.13E-06	4.08E-02	1.02E-06	4.04E-06	3.43E-06	8.57E-07	3.46E-05
Road S1	S1	2300-0000	5.94E-02	1.38E-07	6.77E-06	5.19E-03	1.29E-07	5.13E-06	4.08E-02	1.02E-06	4.04E-06	3.43E-06	8.57E-07	3.46E-05
Road S1	S1	0000-0100	7.17E-02	1.73E-06	7.71E-03	1.05E-03	1.05E-07	4.09E-06						

1 | Secure Environment Projects | 60722220 | 1.01 | Other | Air Modelling | Appendix | Traffic | Appendix | Appendix 2 E 4 Emission Factor in 2020, E R vlv

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for AERMOD model (May)	Year 2038

Road Name	Road ID	Hour	No.Emission						No.Emission								
			Month/year			Month/year			Month/year			Month/year					
			g/m ³ /veh	gsm ²	tonne/hour	g/m ³ /veh	gsm ²	tonne/hour	g/m ³ /veh	gsm ²	tonne/hour	g/m ³ /veh	gsm ²	tonne/hour	g/m ³ /veh	gsm ²	tonne/hour
Road 103	103	1600-1700	1.4462	0.5317	1.28E-05	1.8082	0.4462	1.05E-05	1.2422	0.2756	5.511E-05	5.0442	1.85E-05	4.46E-05	1.0302	0.4226	1.03E-05
Road 103	103	1700-1800	1.0102	0.4717	1.00E-06	1.3048	0.3667	8.76E-07	9.2942	2.19E-07	5.717E-07	4.2262	1.06E-06	4.22E-07	1.0302	0.4226	1.03E-05
Road 103	103	1800-1900	1.0652	0.5067	5.50E-06	1.0652	0.5067	5.50E-06	1.0652	0.5067	5.50E-06	4.2262	1.06E-06	4.22E-07	1.0302	0.4226	1.03E-05
Road 103	103	1900-2000	6.0862	0.1667	5.20E-06	5.0138	1.83E-07	4.39E-08	4.72E-03	1.03E-06	3.139E-05	3.00E-07	1.07E-07	2.22E-08	1.0302	0.4226	1.03E-05
Road 103	103	2000-2100	5.7962	2.1667	3.89E-06	4.3182	1.36E-07	4.39E-08	4.03E-03	1.12E-06	2.68E-05	3.00E-07	1.07E-07	2.22E-08	1.0302	0.4226	1.03E-05
Road 103	103	2100-2200	1.7462	0.4717	4.31E-07	2.8772	0.2777	7.86E-08	2.8772	0.2777	7.86E-08	1.0302	0.4226	1.03E-05	1.0302	0.4226	1.03E-05
Road 103	103	2200-2300	4.8712	1.3147	3.14E-06	4.2118	1.13E-07	2.77E-07	7.02E-06	1.02E-06	2.44E-05	3.13E-05	3.86E-07	1.01E-07	1.0302	0.4226	1.03E-05
Road 103	103	2300-2400	5.4702	1.1017	2.69E-06	4.7128	9.49E-08	2.98E-07	7.95E-07	1.941E-05	3.22E-06	5.71E-07	3.22E-06	8.46E-07	1.0302	0.4226	1.03E-05
Road 104	104	0000-0100	1.2252	0.6198	1.28E-06	1.8082	0.4462	1.05E-05	1.2422	0.2756	5.511E-05	5.0442	1.85E-05	4.46E-05	1.0302	0.4226	1.03E-05
Road 104	104	0100-0200	1.0502	0.6198	1.28E-06	0.9058	0.536E-09	1.09E-09	3.312E-07	3.142E-07	6.39E-06	4.43E-07	2.61E-07	5.32E-08	1.0302	0.4226	1.03E-05
Road 104	104	0200-0300	1.1442	0.0000	0.00E-06	1.0018	0.0000	0.00E-06	5.58E-04	2.44E-07	4.75E-07	4.43E-07	2.61E-07	5.32E-08	1.0302	0.4226	1.03E-05
Road 104	104	0300-0400	1.4882	0.0000	0.00E-06	1.1018	0.0000	0.00E-06	5.58E-04	2.44E-07	4.75E-07	4.43E-07	2.61E-07	5.32E-08	1.0302	0.4226	1.03E-05
Road 104	104	0400-0500	1.3242	0.6198	1.05E-06	1.1138	0.424E-08	8.00E-07	0.115E-04	2.44E-07	4.75E-07	4.43E-07	2.61E-07	5.32E-08	1.0302	0.4226	1.03E-05
Road 104	104	0500-0600	1.4112	0.7768	1.98E-06	1.2008	0.28E-08	8.88E-07	6.44E-04	4.43E-07	9.02E-06	5.29E	3.64E-07	7.41E-08	1.0302	0.4226	1.03E-05
Road 104	104	0600-0700	1.4882	0.0000	0.00E-06	1.1018	0.0000	0.00E-06	5.58E-04	2.44E-07	4.75E-07	4.43E-07	2.61E-07	5.32E-08	1.0302	0.4226	1.03E-05
Road 104	104	0700-0800	1.5652	0.8187	9.79E-06	1.32E-07	4.07E-07	8.28E-06	6.94E-04	2.10E-06	4.28E-05	5.63E-07	1.78E-05	5.22E-07	1.0302	0.4226	1.03E-05
Road 104	104	0800-0900	1.5352	0.4527	1.12E-06	1.32E-06	4.65E-07	4.67E-06	5.59E-02	2.37E-06	4.83E-05	5.44E-06	1.78E-06	3.99E-07	1.0302	0.4226	1.03E-05
Road 104	104	0900-1000	1.5352	0.4527	1.12E-06	1.32E-06	4.65E-07	4.67E-06	5.59E-02	2.37E-06	4.83E-05	5.44E-06	1.78E-06	3.99E-07	1.0302	0.4226	1.03E-05
Road 104	104	1000-1100	1.9952	0.8307	1.13E-05	1.17E-06	5.01E-07	1.02E-06	8.00E-06	7.29E-06	4.67E-06	6.60E-06	1.94E-05	5.99E-06	1.0302	0.4226	1.03E-05
Road 104	104	1100-1200	1.9552	0.5447	1.10E-05	1.63E-05	4.52E-07	1.00E-06	7.67E-02	2.17E-05	4.61E-05	6.44E-07	1.78E-06	3.64E-07	1.0302	0.4226	1.03E-05
Road 104	104	1200-1300	1.9552	0.5447	1.10E-05	1.63E-05	4.52E-07	1.00E-06	7.67E-02	2.17E-05	4.61E-05	6.44E-07	1.78E-06	3.64E-07	1.0302	0.4226	1.03E-05
Road 104	104	1300-1400	1.2652	0.9237	5.97E-06	1.04E-07	2.41E-07	4.90E-06	3.86E-02	1.76E-06	4.43E-06	2.76E-06	4.43E-06	1.0302	0.4226	1.03E-05	
Road 104	104	1400-1500	1.3052	3.22E-07	6.58E-06	1.67E-06	7.66E-07	5.40E-06	5.91E-04	1.47E-06	2.98E-05	4.72E-07	1.17E-06	3.99E-07	1.0302	0.4226	1.03E-05
Road 104	104	1500-1600	1.3052	3.22E-07	6.58E-06	1.67E-06	7.66E-07	5.40E-06	5.91E-04	1.47E-06	2.98E-05	4.72E-07	1.17E-06	3.99E-07	1.0302	0.4226	1.03E-05
Road 104	104	1600-1700	1.3052	3.22E-07	7.16E-06	1.08E-06	2.92E-07	5.94E-06	7.50E-07	1.55E-06	3.15E-05	4.02E-07	1.34E-05	3.99E-07	1.0302	0.4226	1.03E-05
Road 104	104	1700-1800	8.89E-03	0.75E-07	6.78E-06	1.738E-06	2.29E-07	4.59E-06	4.80E-02	1.49E-06	3.03E-05	3.82E-06	1.18E-06	4.41E-07	1.0302	0.4226	1.03E-05
Road 104	104	1800-1900	1.3052	3.22E-07	7.16E-06	1.08E-06	2.92E-07	5.94E-06	7.50E-07	1.55E-06	3.15E-05	4.02E-07	1.34E-05	3.99E-07	1.0302	0.4226	1.03E-05
Road 104	104	1900-2000	5.515E-03	1.50E-07	3.05E-06	4.64E-06	1.27E-07	2.57E-05	5.35E-06	9.62E-07	1.95E-06	2.83E-07	1.17E-07	5.7E-08	1.0302	0.4226	1.03E-05
Road 104	104	2000-2100	5.245E-03	1.11E-07	2.26E-06	4.53E-06	9.55E-08	8.65E-06	8.16E-07	1.66E-05	3.18E-06	8.74E-07	3.67E-07	1.0302	0.4226	1.03E-05	
Road 104	104	2100-2200	5.245E-03	1.11E-07	2.26E-06	4.53E-06	9.55E-08	8.65E-06	8.16E-07	1.66E-05	3.18E-06	8.74E-07	3.67E-07	1.0302	0.4226	1.03E-05	
Road 104	104	2200-2300	4.277E-03	8.77E-08	1.50E-06	3.38E-06	7.55E-06	1.54E-06	6.32E-02	7.44E-07	1.55E-06	2.97E-07	1.10E-07	2.66E-07	1.0302	0.4226	1.03E-05
Road 104	104	2300-2400	4.81E-03	7.88E-08	1.50E-06	4.14E-06	1.29E-06	7.68E-07	5.80E-07	1.18E-06	3.09E-06	4.78E-07	1.94E-07	1.0302	0.4226	1.03E-05	
Road 105	105	0000-0100	1.4882	0.0000	0.00E-06	1.1018	0.0000	0.00E-06	5.58E-04	2.44E-07	4.75E-07	4.43E-07	2.61E-07	5.32E-08	1.0302	0.4226	1.03E-05
Road 105	105	0100-0200	1.5652	0.13E-07	4.07E-07	1.34E-07	9.07E-07	4.67E-06	6.95E-05	5.53E-06	2.30E-06	6.41E-07	1.63E-06	3.99E-07	1.0302	0.4226	1.03E-05
Road 105	105	0200-0300	1.6952	0.905E-09	3.77E-07	1.48E-06	7.84E-06	3.31E-07	4.08E-02	4.32E-06	1.80E-06	6.91E-07	3.00E-07	1.54E-07	1.0302	0.4226	1.03E-05
Road 105	105	0300-0400	1.6952	0.905E-09	3.77E-07	1.48E-06	7.84E-06	3.31E-07	4.08E-02	4.32E-06	1.80E-06	6.91E-07	3.00E-07	1.54E-07	1.0302	0.4226	1.03E-05
Road 105	105	0400-0500	1.9852	0.450E-06	3.92E-07	1.89E-06	8.06E-06	3.92E-07	4.02E-02	4.29E-06	1.79E-06	7.54E-06	3.59E-06	4.99E-06	1.0302	0.4226	1.03E-05
Road 105	105	0500-0600	2.12E-06	1.77E-08	7.38E-07	1.89E-06	1.89E-06	8.26E-07	5.05E-08	7.93E-08	3.38E-06	7.85E-06	5.86E-06	7.73E-07	1.0302	0.4226	1.03E-05
Road 105	105	0600-0700	2.12E-06	1.77E-08	7.38E-07	1.89E-06	1.89E-06	8.26E-07	5.05E-08	7.93E-08	3.38E-06	7.85E-06	5.86E-06	7.73E-07	1.0302	0.4226	1.03E-05
Road 105	105	0700-0800	2.6952	0.97E-08	4.15E-06	2.27E-06	8.48E-06	1.52E-06	1.44E-02	4.22E-06	7.94E-06	9.43E-06	3.50E-07	4.46E-07	1.0302	0.4226	1.03E-05
Road 105	105	0800-0900	2.6352	0.41E-07	4.76E-06	2.22E-06	9.63E-06	1.41E-06	1.10E-01	4.80E-07	2.00E-05	9.17E-06	3.97E-07	1.66E-07	1.0302	0.4226	1.03E-05
Road 105	105	0900-1000	2.6352	0.41E-07	4.76E-06	2.22E-06	9.63E-06	1.41E-06	1.10E-01	4.80E-07	2.00E-05	9.17E-06	3.97E-07	1.66E-07	1.0302	0.4226	1.03E-05
Road 105	105	1000-1100	3.32E-02	1.22E-07	5.10E-06	3.92E-06	1.05E-07	4.59E-06	3.38E-01	4.81E-07	1.00E-06	2.17E-06	4.09E-07	1.0302	0.4226	1.03E-05	
Road 105	105	1100-1200	3.32E-02	1.22E-07	5.10E-06	3.92E-06	1.05E-07	4.59E-06	3.38E-01	4.81E-07	1.00E-06	2.17E-06	4.09E-07	1.0302	0.4226	1.03E-05	
Road 105	105	1200-1300	7.43E-02	4.09E-07	1.70E-05	6.13E-06	3.31E-06	1.41E-06	8.88E-06	1.48E-06	6.91E-06	2.21E-06	1.22E-06	5.09E-06	1.0302	0.4226	1.03E-05
Road 105	105	1300-1400	7.43E-02	4.09E-07	1.70E-05	6.13E-06	3.31E-06	1.41E-06	8.88E-06	1.48E-06	6.91E-06	2.21E-06	1.22E-06	5.09E-06	1.0302	0.4226	1.03E-05
Road 105	105	1400-1500	7.66E-02	4.18E-07	1.74E-05	6.33E-06	3.46E-06	1.47E-06	8.69E-06	1.47E-06	6.11E-07	2.27E-06	1.21E-06	5.09E-06	1.0302	0.4226	1.03E-05
Road 105	105	1500-1600	6.91E-02	1.84E-06	1.64E-05	5.06E-06	3.27E-06	1.59E-06	1.53E-06	6.69E-06	1.53E-06	6.69E-06	1.53E-06	6.69E-06	1.0302	0.4226	1.03E-05
Road 105	105	1600-1700	6.91E-02	1.84E-06	1.64E-05	5.06E-06	3.27E-06	1.59E-06	1.53E-06	6.69E-06	1.53E-06	6.69E-06	1.53E-06	6.69E-06	1.0302	0.4226	1.03E-05
Road 105	105	1700-1800	6.05E-02	2.91E-07	1.21E-05	5.08E-06	2.24E-07	1.01E-05	4.54E-05	1.18E-06	4.91E-05	2.04E-06	8.84E-07	4.10E-07	1.0302	0.4226	1.03E-05
Road 105	105	1800-1900	4.85E-02	0.69E-07	6.89E-06	4.13E-06	1.41E-07	2.88E-06	1.04E-04	6.92E-07	2.69E-06	1.14E-06	8.91E-07	2.46E-07	1.0302	0.4226	1.03E-05
Road 105	105	1900-2000	4.85E-02	0.69E-07	6.89E-06	4.13E-06	1.41E-07	2.88E-06	1.04E-04	6.92E-07	2.69E-06	1.14E-06	8.91E-07	2.46E-07	1.0302	0.4226	1.03E-05
Road 105	105	2000-2100	4.42E-02	7.90E-06	3.25E-06	3.88E-06	6.90E-08	2.85E-06	1.85E-03	3.11E-07	1.82E-06	1.67E-06	2.91E-07	8.59E-07	1.0302	0.4226	1.03E-05
Road 105	105	2100-2200	4.42E-02	7.90E-06	3.25E-06	3.88E-06	6.90E-08	2.85E-06	1.85E-03	3.11E-07	1.82E-06	1.67E-06	2.91E-07	8.59E-07	1.0302	0.4226	1.03E-05
Road 105	105	2200-2300	4.42E-02	7.90E-06	3.25E-06	3.88E-0											

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Open Road 24 hour Emission Factors for AERMOD model (June)		Year 2038

Row Number	Row ID	No Emulsion										No Emulsion											
		Monthly/Hourly					Monthly/Average					Monthly/Hourly					Monthly/Average						
		g/m ² /v	g/m ² /h	g/m ² /m	g/m ² /v	g/m ² /h	g/m ² /m	g/m ² /v	g/m ² /h	g/m ² /m	g/m ² /v	g/m ² /h	g/m ² /m	g/m ² /v	g/m ² /h	g/m ² /m	g/m ² /v	g/m ² /h	g/m ² /m	g/m ² /v	g/m ² /h	g/m ² /m	
Row 1	1	0.000-0.100	5.072-0.3	6.988-0.8	3.848-0.6	4.622-0.3	8.108-0.38	2.368-0.3	3.452-0.2	4.786-0.7	6.848-0.5	2.888-0.2	4.008-0.7	2.208-0.5									
Row 1	1	0.000-0.100	5.538-0.0	6.988-0.0	2.738-0.4	4.622-0.3	8.108-0.38	2.458-0.36	3.452-0.2	4.786-0.7	6.848-0.5	2.888-0.2	4.008-0.7	2.208-0.5									
Row 1	1	0.000-0.100	6.008-0.0	6.988-0.0	2.738-0.4	4.622-0.3	8.108-0.38	2.458-0.36	3.452-0.2	4.786-0.7	6.848-0.5	2.888-0.2	4.008-0.7	2.208-0.5									
Row 1	1	0.030-0.400	6.548-0.3	3.418-0.8	1.888-0.5	6.738-0.5	2.998-0.18	1.958-0.38	3.082-0.2	1.988-0.7	1.098-0.5	1.158-0.2	1.667-0.7	1.017-0.8									
Row 1	1	0.030-0.400	7.248-0.3	6.988-0.8	2.238-0.6	5.138-0.3	3.512-0.38	1.958-0.38	4.028-0.2	2.308-0.7	2.738-0.3	1.008-0.2	1.667-0.7	1.017-0.8									
Row 1	1	0.030-0.400	7.648-0.3	6.988-0.8	2.238-0.6	5.138-0.3	3.512-0.38	1.958-0.38	4.028-0.2	2.308-0.7	2.738-0.3	1.008-0.2	1.667-0.7	1.017-0.8									
Row 1	1	0.600-0.700	7.938-0.3	1.688-0.7	9.238-0.6	6.878-0.3	1.458-0.7	1.808-0.6	4.238-0.2	1.958-0.7	1.938-0.5	5.528-0.4	7.418-0.5										
Row 1	1	0.700-0.800	8.788-0.3	1.688-0.7	2.008-0.5	6.878-0.3	1.198-0.7	1.768-0.54	4.548-0.2	1.958-0.7	1.078-0.4	5.528-0.4	7.418-0.5										
Row 1	1	0.700-0.800	9.238-0.3	1.688-0.7	2.008-0.5	6.878-0.3	1.198-0.7	1.768-0.54	4.548-0.2	1.958-0.7	1.078-0.4	5.528-0.4	7.418-0.5										
Row 1	1	0.900-1.000	1.118-0.3	3.868-0.7	2.188-0.5	8.208-0.3	3.338-0.7	1.838-0.47	4.718-0.2	1.918-0.05	1.038-0.4	8.828-0.2	1.558-0.8	1.658-0.5									
Row 1	1	1.000-1.100	1.178-0.3	3.868-0.7	2.138-0.5	8.208-0.3	3.278-0.7	1.838-0.5	5.038-0.2	1.768-0.5	1.038-0.4	8.828-0.2	1.558-0.8	1.658-0.5									
Row 1	1	1.000-1.100	1.248-0.3	3.868-0.7	2.138-0.5	8.208-0.3	3.278-0.7	1.838-0.5	5.038-0.2	1.768-0.5	1.038-0.4	8.828-0.2	1.558-0.8	1.658-0.5									
Row 1	1	1.200-1.300	1.288-0.2	6.048-0.7	3.198-0.5	1.112-0.0	5.028-0.7	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	1.300-1.400	1.308-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	1.400-1.500	1.408-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	1.500-1.600	1.508-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	1.600-1.700	1.608-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	1.700-1.800	1.708-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	1.800-1.900	1.808-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	1.900-2.000	1.908-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	2.000-2.100	2.008-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	2.100-2.200	2.108-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	2.200-2.300	2.208-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	2.300-2.400	2.308-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	2.400-2.500	2.408-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	2.500-2.600	2.508-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	2.600-2.700	2.608-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	2.700-2.800	2.708-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	2.800-2.900	2.808-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	2.900-3.000	2.908-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	3.000-3.100	3.008-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	3.100-3.200	3.108-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	3.200-3.300	3.208-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	3.300-3.400	3.308-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	3.400-3.500	3.408-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	3.500-3.600	3.508-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	3.600-3.700	3.608-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	3.700-3.800	3.708-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	3.800-3.900	3.808-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	3.900-4.000	3.908-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	4.000-4.100	4.008-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	4.100-4.200	4.108-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	4.200-4.300	4.208-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	4.300-4.400	4.308-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	4.400-4.500	4.408-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	4.500-4.600	4.508-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	4.600-4.700	4.608-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	4.700-4.800	4.708-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	4.800-4.900	4.808-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	4.900-5.000	4.908-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	5.000-5.100	5.008-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	5.100-5.200	5.108-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-0.2	2.768-0.54	2.458-0.36	4.028-0.2	1.008-0.2	2.088-0.6	1.158-0.4										
Row 1	1	5.200-5.300	5.208-0.2	6.048-0.7	3.338-0.5	1.112-0.0	5.208-																

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Open Road 24 hour Emission Factors for Year 2038
AFIRM model (3 use)

Road Name	Road ID	Hour	NO Emission						NO Emission						
			MonthlyHourMin			MonthlyHourAverage			MonthlyHourMin			MonthlyHourAverage			
			g/min	g/h	g/min	g/min	g/h	g/min	g/min	g/h	g/min	g/h	g/min	g/h	
Road 1	4	0900-0900	1.185	71.1	1.185	71.1	1.185	71.1	1.185	71.1	1.185	71.1	1.185	71.1	
Road 1	4	0900-0900	9.38m	2.75t	5.50t	6.87t	1.36t	4.62t	4.67t	1.37t	2.74t	3.76t	4.11t	2.22t	
Road 1	4	1000-1100	1.07t	2.69t	5.49t	8.88t	2.23t	4.48t	5.01t	1.29t	2.53t	4.03t	4.07t	2.04t	
Road 1	4	1100-1200	1.04t	2.61t	5.40t	8.80t	2.17t	4.39t	4.92t	1.26t	2.49t	3.97t	4.01t	2.04t	
Road 1	4	1200-1300	1.12t	2.81t	6.84t	8.96t	2.50t	5.61t	6.99t	1.53t	3.05t	4.12t	4.26t	2.54t	
Road 1	4	1300-1400	1.13t	2.81t	7.03t	6.95t	2.58t	5.97t	6.21t	1.62t	3.24t	4.31t	4.34t	2.68t	
Road 1	4	1400-1500	1.16t	2.91t	7.03t	6.95t	2.58t	5.97t	6.21t	1.62t	3.24t	4.31t	4.34t	2.68t	
Road 1	4	1500-1600	1.02t	2.71t	7.43t	6.35t	3.18t	3.07t	3.86t	1.78t	3.57t	4.38t	4.49t	2.96t	
Road 1	4	1600-1700	1.16t	2.42t	6.50t	6.93t	3.62t	2.75t	3.09t	1.86t	3.62t	4.24t	4.54t	3.06t	
Road 1	4	1700-1800	1.17t	2.81t	6.50t	6.93t	3.62t	2.75t	3.09t	1.86t	3.62t	4.24t	4.54t	3.06t	
Road 1	4	1800-1900	1.58t	2.95t	7.29t	5.99t	5.17t	2.41t	4.84t	3.26t	1.52t	3.05t	3.77t	2.55t	
Road 1	4	1900-2000	1.18t	3.93t	3.87t	4.86t	1.68t	3.86t	3.17t	1.18t	2.73t	2.65t	2.87t	1.94t	
Road 1	4	2000-2100	1.18t	3.93t	3.87t	4.86t	1.68t	3.86t	3.17t	1.18t	2.73t	2.65t	2.87t	1.94t	
Road 1	4	2100-2200	1.23t	1.22t	2.44t	3.56t	1.03t	2.06t	3.32t	9.58t	1.92t	2.67t	7.71t	1.58t	
Road 1	4	2200-2300	3.99t	1.12t	2.25t	3.46t	8.74t	3.08t	3.17t	1.88t	8.95t	1.76t	2.64t	4.37t	
Road 1	4	2300-2400	3.99t	1.12t	2.25t	3.46t	8.74t	3.08t	3.17t	1.88t	8.95t	1.76t	2.64t	4.37t	
Road 1	5	0000-0100	3.99t	1.12t	2.25t	3.46t	8.74t	3.08t	3.17t	1.88t	8.95t	1.76t	2.64t	4.37t	
Road 1	5	0000-0100	6.96t	4.93t	4.12t	6.11t	4.32t	3.61t	4.57t	3.22t	2.69t	3.82t	2.71t	2.26t	
Road 1	5	0100-0200	7.44t	3.24t	2.85t	6.48t	2.98t	4.46t	4.44t	2.13t	1.78t	3.88t	7.88t	1.48t	
Road 1	5	0200-0300	7.44t	3.24t	2.85t	6.48t	2.98t	4.46t	4.44t	2.13t	1.78t	3.88t	7.88t	1.48t	
Road 1	5	0300-0400	8.51t	2.24t	1.87t	7.48t	1.97t	1.64t	1.68t	1.29t	1.07t	4.12t	1.08t	0.96t	
Road 1	5	0400-0500	9.38t	2.30t	2.26t	8.08t	2.33t	1.94t	1.94t	1.42t	1.29t	4.28t	1.23t	1.03t	
Road 1	5	0500-0600	9.38t	2.30t	2.26t	8.08t	2.33t	1.94t	1.94t	1.42t	1.29t	4.28t	1.23t	1.03t	
Road 1	5	0600-0700	1.22t	1.23t	1.11t	1.06t	1.16t	1.65t	6.24t	6.63t	5.49t	5.25t	5.65t	4.64t	
Road 1	5	0700-0800	1.64t	3.51t	2.83t	1.40t	2.99t	5.50t	6.70t	1.65t	3.38t	6.38t	3.86t	1.38t	
Road 1	5	0800-0900	1.64t	3.51t	2.83t	1.40t	2.99t	5.50t	6.70t	1.65t	3.38t	6.38t	3.86t	1.38t	
Road 1	5	0900-1000	1.66t	3.07t	3.10t	1.57t	3.11t	3.06t	8.44t	1.66t	1.49t	3.91t	1.37t	1.55t	
Road 1	5	1000-1100	2.05t	3.49t	2.92t	2.07t	2.96t	4.42t	4.08t	1.52t	1.72t	7.28t	2.28t	1.03t	
Road 1	5	1100-1200	2.05t	3.49t	2.92t	2.07t	2.96t	4.42t	4.08t	1.52t	1.72t	7.28t	2.28t	1.03t	
Road 1	5	1200-1300	2.36t	6.49t	5.42t	2.10t	5.52t	4.02t	8.74t	2.68t	2.24t	8.12t	2.24t	8.78t	
Road 1	5	1300-1400	2.50t	6.92t	5.78t	2.12t	5.96t	4.92t	1.06t	2.99t	2.47t	8.87t	2.46t	2.06t	
Road 1	5	1400-1500	2.50t	6.92t	5.78t	2.12t	5.96t	4.92t	1.06t	2.99t	2.47t	8.87t	2.46t	2.06t	
Road 1	5	1500-1600	2.50t	7.63t	6.98t	2.15t	6.56t	4.07t	1.09t	3.44t	2.79t	9.23t	2.82t	3.86t	
Road 1	5	1600-1700	2.75t	6.91t	7.61t	2.35t	6.72t	7.76t	4.48t	1.08t	3.58t	2.98t	9.26t	2.88t	4.48t
Road 1	5	1700-1800	1.97t	6.17t	6.31t	2.68t	6.36t	5.37t	3.31t	1.03t	3.50t	2.99t	7.42t	2.83t	
Road 1	5	1800-1900	1.48t	4.98t	3.86t	2.98t	4.56t	3.76t	3.09t	1.36t	2.88t	7.42t	2.65t	2.38t	
Road 1	5	1900-2000	1.14t	3.97t	3.32t	0.88t	3.88t	3.46t	7.89t	0.83t	2.04t	1.70t	4.91t	1.72t	4.38t
Road 1	5	2000-2100	9.63t	2.62t	2.19t	8.28t	2.25t	1.68t	5.76t	1.59t	1.38t	4.75t	2.96t	1.08t	
Road 1	5	2100-2200	7.98t	2.62t	2.19t	8.28t	2.25t	1.68t	5.76t	1.59t	1.38t	4.75t	2.96t	1.08t	
Road 1	5	2200-2300	4.56t	1.97t	1.65t	0.68t	1.68t	1.72t	1.43t	1.04t	1.38t	1.13t	4.26t	1.94t	9.48t
Road 1	5	2300-2400	7.71t	1.83t	1.28t	7.09t	1.86t	1.35t	1.55t	3.07t	9.99t	0.83t	4.48t	8.74t	2.99t
Road 1	5	0000-0100	6.13t	1.97t	1.28t	7.09t	1.86t	1.35t	1.55t	3.07t	9.99t	0.83t	4.48t	8.74t	2.99t
Road 1	6	0100-0200	1.65t	1.02t	0.97t	2.89t	1.42t	0.91t	2.54t	0.94t	4.67t	1.31t	6.42t	4.05t	1.13t
Road 1	6	0200-0300	1.74t	8.05t	2.27t	1.52t	7.01t	9.97t	7.56t	3.59t	1.01t	8.96t	4.04t	8.51t	
Road 1	6	0300-0400	1.74t	8.05t	2.27t	1.52t	7.01t	9.97t	7.56t	3.59t	1.01t	8.96t	4.04t	8.51t	
Road 1	6	0400-0500	1.95t	6.15t	2.30t	1.72t	7.07t	9.98t	8.45t	3.48t	9.90t	7.12t	9.52t	8.32t	
Road 1	6	0500-0600	2.18t	4.92t	4.41t	1.96t	3.37t	8.96t	8.13t	6.59t	1.48t	7.82t	5.61t	5.08t	
Road 1	6	0600-0700	2.18t	4.92t	4.41t	1.96t	3.37t	8.96t	8.13t	6.59t	1.48t	7.82t	5.61t	5.08t	
Road 1	6	0700-0800	1.95t	1.26t	3.55t	3.39t	1.08t	3.04t	5.51t	4.88t	1.38t	1.29t	1.12t	1.15t	
Road 1	6	0800-0900	4.19t	1.56t	4.39t	3.98t	1.33t	3.76t	1.62t	6.01t	1.69t	3.71t	5.09t	1.46t	
Road 1	6	0900-1000	4.19t	1.56t	4.39t	3.98t	1.33t	3.76t	1.62t	6.01t	1.69t	3.71t	5.09t	1.46t	
Road 1	6	1000-1100	3.32t	1.59t	4.48t	4.46t	1.32t	3.75t	1.98t	5.88t	1.47t	1.64t	1.86t	3.71t	
Road 1	6	1100-1200	4.91t	1.98t	3.88t	4.17t	1.17t	2.98t	1.89t	5.21t	1.47t	1.96t	4.39t	1.24t	
Road 1	6	1200-1300	6.02t	2.02t	3.88t	4.17t	1.17t	2.98t	1.89t	5.21t	1.47t	1.96t	4.39t	1.24t	
Road 1	6	1300-1400	6.50t	1.76t	5.01t	5.37t	1.52t	4.27t	2.31t	6.52t	1.40t	1.96t	5.53t	1.56t	
Road 1	6	1400-1500	6.57t	1.92t	5.40t	5.51t	1.61t	4.53t	2.34t	6.63t	1.93t	1.94t	5.70t	1.60t	
Road 1	6	1500-1600	6.57t	1.92t	5.40t	5.51t	1.61t	4.53t	2.34t	6.63t	1.93t	1.94t	5.70t	1.60t	
Road 1	6	1600-1700	6.13t	1.86t	5.23t	5.24t	1.59t	4.47t	2.21t	6.69t	1.78t	1.98t	5.69t	1.60t	
Road 1	6	1700-1800	4.66t	1.46t	4.18t	3.93t	1.25t	3.51t	1.95t	6.03t	1.70t	1.98t	5.56t	1.42t	
Road 1	6	1800-1900	4.66t	1.46t	4.18t	3.93t	1.25t	3.51t	1.95t	6.03t	1.70t	1.98t	5.56t	1.42t	
Road 1	6	1900-2000	2.38t	5.51t	1.55t	0.58t	1.48t	2.45t	1.02t	2.37t	6.68t	8.82t	2.04t	4.57t	
Road 1	6	2000-2100	2.15t	3.93t	1.10t	1.86t	3.38t	3.55t	9.93t	1.80t	5.05t	8.44t	5.33t	3.31t	
Road 1	6	2100-2200	2.15t	3.93t	1.10t	1.86t	3.38t	3.55t	9.93t	1.80t	5.05t	8.44t	5.33t	3.31t	
Road 1	6	2200-2300	2.06t	2.56t	1.00t	1.85t	1.32t	0.79t	0.90t	1.57t	4.42t	7.82t	3.56t	3.81t	
Road 1	6	2300-2400	2.07t	2.73t	7.69t	1.88t	2.48t	7.98t	8.99t	1.19t	3.44t	6.04t	1.06t	2.99t	
Road 1	7	0000-0100	2.07t	2.73t	7.69t	1.88t	2.48t	7.98t	8.99t	1.19t	3.44t	6.04t	1.06t	2.99t	
Road 7	7	0100-0200	6.20t	2.40t	2.81t	6.41t	2.09t	4.56t	0.87t	3.02t	1.47t	1.72t	3.18t	1.23t	1.44t
Road 7	7	0200-0300	6.92t	1.98t	2.30t	6.05t	1.70t	3.99t	4.01t	1.14t	1.37t	3.36t	3.43t	1.11t	
Road 7	7	0300-0400	6.92t	1.98t	2.30t	6.05t	1.70t	3.99t	4.01t	1.14t	1.37t	3.36t	3.43t	1.11t	
Road 7	7	0400-0500	8.05t	1.98t	2.32t	6.95t	1.71t	2.01t	0.37t	3.32t	1.06t	1.72t	3.56t	1.81t	1.08t
Road 7	7	0500-0600	8.14t	3.45t	4.05t	7.05t	3.00t	5.17t	4.34t	1.84t	1.72t	3.69t	5.45t	1.89t	
Road 7	7	0600-0700	8.14t	3.45t	4.05t	7.05t	3.00t	5.17t	4.34t	1.84t	1.72t	3.69t	5.45t	1.89t	
Road 7	7	0700-0800	9.61t	1.76t	2.07t	8.18t	1.95t	1.76t	0.44t	9.07t	1.95t	4.04t	4.42t	7.07t	
Road 7	7	0800-0900	9.24t	1.67t	2.30t	7.88t	1.67t	1.97t	4.55t	9.66t	1.13t	3.79t	3.77t	9.34t	
Road 7	7	0900-1000	9.24t	1.67t	2.30t	7.88t	1.67t	1.97t	4.55t	9.66t	1.13t	3.79t	3.77t	9.34t	
Road 7	7	1000-1100	1.23t	1.66t	2.18t	1.02t	1.54t	1.81t	0.56t	8.49t	1.49t	4.52t	8.86t	0.70t	
Road 7	7	1100-1200	1.16t	1.66t	1.95t	0.89t	1.41t	0.67t	5.47t	7.86t	9.25t	4.52t	6.49t	8.01t	
Road 7	7	1200-1300	1.23t	1.66t	1.95t	0.89t	1.41t	0.67t	5.47t	7.86t	9.25t	4.52t	6.49t	8.01t	
Road 7	7	1300-1400	1.59t	3.27t	3.82t	1.36t	2.96t	1.25t	0.96t	1.43t	1.67t	5.84t	5.20t	2.06t	1.46t
Road 7	7	1400-1500	1.63t	3.32t	4.14t	1.37t	2.97t	1.47t	6.97t						

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for
AERMOD model (t/ton)

		NO _x Emission						NO _x Emission						
Road Name	Road ID	Hour	MonthlyHours		MonthlyHourAverage		MonthlyHours		MonthlyHourAverage		MonthlyHours		MonthlyHourAverage	
			g/km ²	g/m ³	g/km ²	g/m ³	g/km ²	g/m ³	g/km ²	g/m ³	g/km ²	g/m ³	g/km ²	g/m ³
Road 7	7	1600-1700	1.4152	1.626	1.1722	1.4152	1.626	1.1722	1.4152	1.626	1.1722	1.4152	1.626	1.1722
Road 7	7	1700-1800	1.2166	1.3387	1.0264	1.2166	1.3387	1.0264	1.2166	1.3387	1.0264	1.2166	1.3387	1.0264
Road 7	7	1800-1900	0.7878	1.2157	0.8366	0.7878	1.2157	0.8366	0.7878	1.2157	0.8366	0.7878	1.2157	0.8366
Road 7	7	1900-2000	0.8823	1.6691	0.9823	0.8823	1.6691	0.9823	0.8823	1.6691	0.9823	0.8823	1.6691	0.9823
Road 7	7	2000-2100	1.6556	1.4318	1.1306	1.6556	1.4318	1.1306	1.6556	1.4318	1.1306	1.6556	1.4318	1.1306
Road 7	7	2100-2200	0.6328	1.0127	0.9614	0.6328	1.0127	0.9614	0.6328	1.0127	0.9614	0.6328	1.0127	0.9614
Road 7	7	2200-2300	0.7962	1.4318	1.1306	0.7962	1.4318	1.1306	0.7962	1.4318	1.1306	0.7962	1.4318	1.1306
Road 7	7	2300-0000	0.5365	1.7866	1.0152	0.5365	1.7866	1.0152	0.5365	1.7866	1.0152	0.5365	1.7866	1.0152
Road 8	8	0000-0100	0.0602	0.4595	0.3058	0.7115	0.0103	0.8158	0.3862	1.1948	0.3787	1.1948	0.3787	1.1948
Road 8	8	0100-0200	0.0602	0.4595	0.3058	0.7115	0.0103	0.8158	0.3862	1.1948	0.3787	1.1948	0.3787	1.1948
Road 8	8	0200-0300	0.0602	0.4595	0.3058	0.7115	0.0103	0.8158	0.3862	1.1948	0.3787	1.1948	0.3787	1.1948
Road 8	8	0300-0400	0.0602	0.4595	0.3058	0.7115	0.0103	0.8158	0.3862	1.1948	0.3787	1.1948	0.3787	1.1948
Road 8	8	0400-0500	0.0602	0.4595	0.3058	0.7115	0.0103	0.8158	0.3862	1.1948	0.3787	1.1948	0.3787	1.1948
Road 8	8	0500-0600	0.0602	0.4595	0.3058	0.7115	0.0103	0.8158	0.3862	1.1948	0.3787	1.1948	0.3787	1.1948
Road 8	8	0600-0700	1.1142	0.9787	0.9867	0.9452	0.8326	0.9278	1.0727	0.8862	0.9476	0.8862	0.9476	0.8862
Road 8	8	0700-0800	1.1142	0.9787	0.9867	0.9452	0.8326	0.9278	1.0727	0.8862	0.9476	0.8862	0.9476	0.8862
Road 8	8	0800-0900	1.1142	0.9787	0.9867	0.9452	0.8326	0.9278	1.0727	0.8862	0.9476	0.8862	0.9476	0.8862
Road 8	8	0900-1000	1.1142	0.9787	0.9867	0.9452	0.8326	0.9278	1.0727	0.8862	0.9476	0.8862	0.9476	0.8862
Road 8	8	1000-1100	1.1142	0.9787	0.9867	0.9452	0.8326	0.9278	1.0727	0.8862	0.9476	0.8862	0.9476	0.8862
Road 8	8	1100-1200	1.1142	0.9787	0.9867	0.9452	0.8326	0.9278	1.0727	0.8862	0.9476	0.8862	0.9476	0.8862
Road 8	8	1200-1300	1.8552	0.5458	1.5356	1.5852	0.6458	1.3366	1.7114	0.9257	0.8776	0.9257	0.8776	0.9257
Road 8	8	1300-1400	1.8552	0.5458	1.5356	1.5852	0.6458	1.3366	1.7114	0.9257	0.8776	0.9257	0.8776	0.9257
Road 8	8	1400-1500	1.8552	0.5458	1.5356	1.5852	0.6458	1.3366	1.7114	0.9257	0.8776	0.9257	0.8776	0.9257
Road 8	8	1500-1600	1.8552	0.5458	1.5356	1.5852	0.6458	1.3366	1.7114	0.9257	0.8776	0.9257	0.8776	0.9257
Road 8	8	1600-1700	1.8552	0.5458	1.5356	1.5852	0.6458	1.3366	1.7114	0.9257	0.8776	0.9257	0.8776	0.9257
Road 8	8	1700-1800	1.8552	0.5458	1.5356	1.5852	0.6458	1.3366	1.7114	0.9257	0.8776	0.9257	0.8776	0.9257
Road 8	8	1800-1900	1.8552	0.5458	1.5356	1.5852	0.6458	1.3366	1.7114	0.9257	0.8776	0.9257	0.8776	0.9257
Road 8	8	1900-2000	1.8552	0.5458	1.5356	1.5852	0.6458	1.3366	1.7114	0.9257	0.8776	0.9257	0.8776	0.9257
Road 8	8	2000-2100	1.8552	0.5458	1.5356	1.5852	0.6458	1.3366	1.7114	0.9257	0.8776	0.9257	0.8776	0.9257
Road 8	8	2100-2200	1.8552	0.5458	1.5356	1.5852	0.6458	1.3366	1.7114	0.9257	0.8776	0.9257	0.8776	0.9257
Road 8	8	2200-2300	1.8552	0.5458	1.5356	1.5852	0.6458	1.3366	1.7114	0.9257	0.8776	0.9257	0.8776	0.9257
Road 8	8	2300-0000	1.8552	0.5458	1.5356	1.5852	0.6458	1.3366	1.7114	0.9257	0.8776	0.9257	0.8776	0.9257
Road 9	9	0000-0100	1.1262	0.8366	0.7426	0.9325	0.6058	0.4160	0.5996	0.3861	0.2515	0.5112	0.2892	0.2146
Road 9	9	0100-0200	1.1442	0.8225	0.7387	0.9307	0.5698	0.2745	0.5698	0.2745	0.5698	0.2745	0.5698	0.2745
Road 9	9	0200-0300	1.1442	0.8225	0.7387	0.9307	0.5698	0.2745	0.5698	0.2745	0.5698	0.2745	0.5698	0.2745
Road 9	9	0300-0400	1.2962	0.7786	0.2667	1.1442	0.2458	0.1837	0.6172	0.3318	0.9858	0.5782	1.1442	0.8437
Road 9	9	0400-0500	1.4462	0.6436	0.2557	1.2462	0.2458	0.1837	0.6172	0.3318	0.9858	0.5782	1.1442	0.8437
Road 9	9	0500-0600	1.4462	0.6436	0.2557	1.2462	0.2458	0.1837	0.6172	0.3318	0.9858	0.5782	1.1442	0.8437
Road 9	9	0600-0700	2.0112	0.6167	0.3116	1.7538	0.1538	0.1146	0.8812	0.6967	0.9716	0.7472	0.9657	0.8956
Road 9	9	0700-0800	2.2162	0.5765	0.2782	2.7482	0.0477	0.8158	0.3862	1.1948	0.3787	1.1948	0.3787	1.1948
Road 9	9	0800-0900	2.2162	0.5765	0.2782	2.7482	0.0477	0.8158	0.3862	1.1948	0.3787	1.1948	0.3787	1.1948
Road 9	9	0900-1000	3.8252	0.5572	0.3068	3.7252	0.5538	0.4159	1.5612	0.2676	1.9882	0.1259	2.2726	1.6556
Road 9	9	1000-1100	3.9252	0.5817	0.3593	3.2652	0.8807	0.3625	1.5125	0.2665	1.0858	1.2448	1.0858	1.2448
Road 9	9	1100-1200	3.9252	0.5817	0.3593	3.2652	0.8807	0.3625	1.5125	0.2665	1.0858	1.2448	1.0858	1.2448
Road 9	9	1200-1300	8.6002	0.7175	0.2745	7.2452	1.4458	0.0558	3.0257	0.9156	4.4552	0.2552	0.5095	0.3775
Road 9	9	1300-1400	0.9625	1.2726	0.6865	0.2745	1.3326	1.4458	0.3862	0.8158	0.0113	0.3031	0.8862	0.5136
Road 9	9	1400-1500	0.9625	1.2726	0.6865	0.2745	1.3326	1.4458	0.3862	0.8158	0.0113	0.3031	0.8862	0.5136
Road 9	9	1500-1600	1.1962	1.2685	0.9556	1.0351	2.3115	0.7115	0.4621	0.8856	0.7325	0.3785	0.8158	0.6285
Road 9	9	1600-1700	1.9625	1.3665	0.3755	1.2745	2.7258	0.2658	0.4651	0.7115	0.7825	0.9351	0.9716	0.6756
Road 9	9	1700-1800	2.2625	1.3665	0.3755	1.2745	2.7258	0.2658	0.4651	0.7115	0.7825	0.9351	0.9716	0.6756
Road 9	9	1800-1900	2.2625	1.3665	0.3755	1.2745	2.7258	0.2658	0.4651	0.7115	0.7825	0.9351	0.9716	0.6756
Road 9	9	1900-2000	5.8252	1.4525	0.0715	0.5712	1.2865	0.3365	0.2771	0.5445	0.4185	1.9651	0.8776	0.6151
Road 9	9	2000-2100	5.8252	1.4525	0.0715	0.5712	1.2865	0.3365	0.2771	0.5445	0.4185	1.9651	0.8776	0.6151
Road 9	9	2100-2200	2.2125	1.3137	0.3665	0.8252	0.7387	0.2025	0.9321	0.1545	1.1658	0.8358	1.2926	0.5558
Road 9	9	2200-2300	2.2125	1.3137	0.3665	0.8252	0.7387	0.2025	0.9321	0.1545	1.1658	0.8358	1.2926	0.5558
Road 9	9	2300-0000	2.2125	1.3137	0.3665	0.8252	0.7387	0.2025	0.9321	0.1545	1.1658	0.8358	1.2926	0.5558
Road 10	10	0000-0100	0.6002	0.5002	0.4838	0.6552	0.5152	0.7755	0.5207	1.9257	0.8165	1.7472	0.2677	0.3786
Road 10	10	0100-0200	0.2252	0.7015	0.4707	0.5652	0.6388	0.4287	1.9812	0.2235	1.5055	1.8112	0.2647	0.1788
Road 10	10	0200-0300	0.2252	0.7015	0.4707	0.5652	0.6388	0.4287	1.9812	0.2235	1.5055	1.8112	0.2647	0.1788
Road 10	10	0300-0400	0.6002	0.5002	0.4838	0.6552	0.5152	0.7755	0.5207	1.9257	0.8165	1.7472	0.2677	0.3786
Road 10	10	0400-0500	0.7232	0.6008	0.4025	0.6752	0.4565	0.3667	0.2008	1.7447	1.1855	1.9321	1.5927	1.0716
Road 10	10	0500-0600	0.7232	0.6008	0.4025	0.6752	0.4565	0.3667	0.2008	1.7447	1.1855	1.9321	1.5927	1.0716
Road 10	10	0600-0700	0.6332	0.5352	0.0212	0.6332	1.4117	0.8425	0.2712	0.5352	0.4625	0.2175	0.5002	0.3352
Road 10	10	0700-0800	0.3652	0.4547	0.0416	0.7525	0.6827	0.2738	0.6751	0.4545	0.6956	0.4311	1.3115	0.8766
Road 10	10	0800-0900	0.3652	0.4547	0.0416	0.7525	0.6827	0.2738	0.6751	0.4545	0.6956	0.4311	1.3115	0.8766
Road 10	10	0900-1000	0.5652	0.4747	0.0716	0.8552	0.4857	0.3258	0.2882	1.6556	0.1155	0.2585	1.4456	0.9166
Road 10	10	1000-1100	0.8352	0.4627	0.5256	0.8705	0.4653	0.3125	0.8862	1.5445	1.0355	0.5545	1.3756	0.8166
Road 10	10	1100-1200	0.8352	0.4627	0.5256	0.8705	0.4653	0.3125	0.8862	1.5445	1.0355	0.5545	1.3756	0.8166
Road 10	10	1200-1300	0.0762	0.4547	0.3256	0.5052	0.3071	0.2065	0.7841	0.9157	0.6152	0.2535	0.8167	0.5486
Road 10	10	1300-1400	0.0952	0.3657	0.2476	0.9762	0.3757	0.2265	0.9672	0.9375	0.6855	0.2545	0.8167	0.5486
Road 10	10	1400-1500	0.0952	0.3657	0.2476	0.9762	0.3757	0.2265	0.9672	0.9375	0.6855	0.2545	0.8167	0.5486
Road 10	10	1500-1600	0.0952	0.3657	0.2476	0.9762	0.3757	0.2265	0.9672	0.9375	0.6855	0.2545	0.8167	0.5486
Road 10	10	1600-1700	0.0952	0.3657	0.2476	0.9762	0.3757	0.2265	0.9672	0.9375	0.6855	0.2545	0.8167	0.5486
Road 10	10	1700-1800	0.0952	0.3657	0.2476	0.9								

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for
AERMOD model (t/year) Year 2038

Road Name	Road ID	Hour	NO Emission				NO Emission			
			Monthly/km		Monthly/km		Monthly/km		Monthly/km	
			g/km/h	g/km ³	g/km/h	g/km ³	g/km/h	g/km ³	g/km/h	g/km ³
Road 11	11	0000-0100	2.56	1.75	2.32	1.65	2.32	1.65	2.32	1.65
Road 11	11	0100-0200	2.96	2.02	2.68	1.92	2.68	1.92	2.68	1.92
Road 11	11	0200-0300	3.86	2.70	3.58	2.52	3.58	2.52	3.58	2.52
Road 11	11	0300-0400	4.86	3.38	4.58	3.20	4.58	3.20	4.58	3.20
Road 11	11	0400-0500	5.86	4.06	5.58	3.88	5.58	3.88	5.58	3.88
Road 11	11	0500-0600	6.86	4.74	6.58	4.56	6.58	4.56	6.58	4.56
Road 11	11	0600-0700	7.86	5.42	7.58	5.24	7.58	5.24	7.58	5.24
Road 11	11	0700-0800	8.86	6.10	8.58	5.92	8.58	5.92	8.58	5.92
Road 11	11	0800-0900	9.86	6.78	9.58	6.60	9.58	6.60	9.58	6.60
Road 11	11	0900-1000	10.86	7.46	10.58	7.28	10.58	7.28	10.58	7.28
Road 11	11	1000-1100	11.86	8.14	11.58	7.96	11.58	7.96	11.58	7.96
Road 11	11	1100-1200	12.86	8.82	12.58	8.64	12.58	8.64	12.58	8.64
Road 11	11	1200-1300	13.86	9.50	13.58	9.32	13.58	9.32	13.58	9.32
Road 11	11	1300-1400	14.86	10.18	14.58	10.00	14.58	10.00	14.58	10.00
Road 11	11	1400-1500	15.86	10.86	15.58	10.68	15.58	10.68	15.58	10.68
Road 11	11	1500-1600	16.86	11.54	16.58	11.36	16.58	11.36	16.58	11.36
Road 11	11	1600-1700	17.86	12.22	17.58	12.04	17.58	12.04	17.58	12.04
Road 11	11	1700-1800	18.86	12.90	18.58	12.72	18.58	12.72	18.58	12.72
Road 11	11	1800-1900	19.86	13.58	19.58	13.40	19.58	13.40	19.58	13.40
Road 11	11	1900-2000	20.86	14.26	20.58	14.08	20.58	14.08	20.58	14.08
Road 11	11	2000-2100	21.86	14.94	21.58	14.76	21.58	14.76	21.58	14.76
Road 11	11	2100-2200	22.86	15.62	22.58	15.44	22.58	15.44	22.58	15.44
Road 11	11	2200-2300	23.86	16.30	23.58	16.12	23.58	16.12	23.58	16.12
Road 11	11	2300-0000	24.86	16.98	24.58	16.80	24.58	16.80	24.58	16.80
Road 12	12	0000-0100	2.56	1.75	2.32	1.65	2.32	1.65	2.32	1.65
Road 12	12	0100-0200	2.96	2.02	2.68	1.92	2.68	1.92	2.68	1.92
Road 12	12	0200-0300	3.86	2.70	3.58	2.52	3.58	2.52	3.58	2.52
Road 12	12	0300-0400	4.86	3.38	4.58	3.20	4.58	3.20	4.58	3.20
Road 12	12	0400-0500	5.86	4.06	5.58	3.88	5.58	3.88	5.58	3.88
Road 12	12	0500-0600	6.86	4.74	6.58	4.56	6.58	4.56	6.58	4.56
Road 12	12	0600-0700	7.86	5.42	7.58	5.24	7.58	5.24	7.58	5.24
Road 12	12	0700-0800	8.86	6.10	8.58	5.92	8.58	5.92	8.58	5.92
Road 12	12	0800-0900	9.86	6.78	9.58	6.60	9.58	6.60	9.58	6.60
Road 12	12	0900-1000	10.86	7.46	10.58	7.28	10.58	7.28	10.58	7.28
Road 12	12	1000-1100	11.86	8.14	11.58	7.96	11.58	7.96	11.58	7.96
Road 12	12	1100-1200	12.86	8.82	12.58	8.64	12.58	8.64	12.58	8.64
Road 12	12	1200-1300	13.86	9.50	13.58	9.32	13.58	9.32	13.58	9.32
Road 12	12	1300-1400	14.86	10.18	14.58	10.00	14.58	10.00	14.58	10.00
Road 12	12	1400-1500	15.86	10.86	15.58	10.68	15.58	10.68	15.58	10.68
Road 12	12	1500-1600	16.86	11.54	16.58	11.36	16.58	11.36	16.58	11.36
Road 12	12	1600-1700	17.86	12.22	17.58	12.04	17.58	12.04	17.58	12.04
Road 12	12	1700-1800	18.86	12.90	18.58	12.72	18.58	12.72	18.58	12.72
Road 12	12	1800-1900	19.86	13.58	19.58	13.40	19.58	13.40	19.58	13.40
Road 12	12	1900-2000	20.86	14.26	20.58	14.08	20.58	14.08	20.58	14.08
Road 12	12	2000-2100	21.86	14.94	21.58	14.76	21.58	14.76	21.58	14.76
Road 12	12	2100-2200	22.86	15.62	22.58	15.44	22.58	15.44	22.58	15.44
Road 12	12	2200-2300	23.86	16.30	23.58	16.12	23.58	16.12	23.58	16.12
Road 12	12	2300-0000	24.86	16.98	24.58	16.80	24.58	16.80	24.58	16.80
Road 13	13	0000-0100	2.56	1.75	2.32	1.65	2.32	1.65	2.32	1.65
Road 13	13	0100-0200	2.96	2.02	2.68	1.92	2.68	1.92	2.68	1.92
Road 13	13	0200-0300	3.86	2.70	3.58	2.52	3.58	2.52	3.58	2.52
Road 13	13	0300-0400	4.86	3.38	4.58	3.20	4.58	3.20	4.58	3.20
Road 13	13	0400-0500	5.86	4.06	5.58	3.88	5.58	3.88	5.58	3.88
Road 13	13	0500-0600	6.86	4.74	6.58	4.56	6.58	4.56	6.58	4.56
Road 13	13	0600-0700	7.86	5.42	7.58	5.24	7.58	5.24	7.58	5.24
Road 13	13	0700-0800	8.86	6.10	8.58	5.92	8.58	5.92	8.58	5.92
Road 13	13	0800-0900	9.86	6.78	9.58	6.60	9.58	6.60	9.58	6.60
Road 13	13	0900-1000	10.86	7.46	10.58	7.28	10.58	7.28	10.58	7.28
Road 13	13	1000-1100	11.86	8.14	11.58	7.96	11.58	7.96	11.58	7.96
Road 13	13	1100-1200	12.86	8.82	12.58	8.64	12.58	8.64	12.58	8.64
Road 13	13	1200-1300	13.86	9.50	13.58	9.32	13.58	9.32	13.58	9.32
Road 13	13	1300-1400	14.86	10.18	14.58	10.00	14.58	10.00	14.58	10.00
Road 13	13	1400-1500	15.86	10.86	15.58	10.68	15.58	10.68	15.58	10.68
Road 13	13	1500-1600	16.86	11.54	16.58	11.36	16.58	11.36	16.58	11.36
Road 13	13	1600-1700	17.86	12.22	17.58	12.04	17.58	12.04	17.58	12.04
Road 13	13	1700-1800	18.86	12.90	18.58	12.72	18.58	12.72	18.58	12.72
Road 13	13	1800-1900	19.86	13.58	19.58	13.40	19.58	13.40	19.58	13.40
Road 13	13	1900-2000	20.86	14.26	20.58	14.08	20.58	14.08	20.58	14.08
Road 13	13	2000-2100	21.86	14.94	21.58	14.76	21.58	14.76	21.58	14.76
Road 13	13	2100-2200	22.86	15.62	22.58	15.44	22.58	15.44	22.58	15.44
Road 13	13	2200-2300	23.86	16.30	23.58	16.12	23.58	16.12	23.58	16.12
Road 13	13	2300-0000	24.86	16.98	24.58	16.80	24.58	16.80	24.58	16.80
Road 14	14	0000-0100	2.56	1.75	2.32	1.65	2.32	1.65	2.32	1.65
Road 14	14	0100-0200	2.96	2.02	2.68	1.92	2.68	1.92	2.68	1.92
Road 14	14	0200-0300	3.86	2.70	3.58	2.52	3.58	2.52	3.58	2.52
Road 14	14	0300-0400	4.86	3.38	4.58	3.20	4.58	3.20	4.58	3.20
Road 14	14	0400-0500	5.86	4.06	5.58	3.88	5.58	3.88	5.58	3.88
Road 14	14	0500-0600	6.86	4.74	6.58	4.56	6.58	4.56	6.58	4.56
Road 14	14	0600-0700	7.86	5.42	7.58	5.24	7.58	5.24	7.58	5.24
Road 14	14	0700-0800	8.86	6.10	8.58	5.92	8.58	5.92	8.58	5.92
Road 14	14	0800-0900	9.86	6.78	9.58	6.60	9.58	6.60	9.58	6.60
Road 14	14	0900-1000	10.86	7.46	10.58	7.28	10.58	7.28	10.58	7.28
Road 14	14	1000-1100	11.86	8.14	11.58	7.96	11.58	7.96	11.58	7.96
Road 14	14	1100-1200	12.86	8.82	12.58	8.64	12.58	8.64	12.58	8.64
Road 14	14	1200-1300	13.86	9.50	13.58	9.32	13.58	9.32	13.58	9.32
Road 14	14	1300-1400	14.86	10.18	14.58	10.00	14.58	10.00	14.58	10.00
Road 14	14	1400-1500	15.86	10.86	15.58	10.68	15.58	10.68	15.58	10.68
Road 14	14	1500-1600	16.86	11.54	16.58	11.36	16.58	11.36	16.58	11.36
Road 14	14	1600-1700	17.86	12.22	17.58	12.04	17.58	12.04	17.58	12.04
Road 14	14	1700-1800	18.86	12.90	18.58	12.72	18.58	12.72	18.58	12.72
Road 14	14	1800-1900	19.86	13.58	19.58	13.40	19.58	13.40	19.58	13.40
Road 14	14	1900-2000	20.86	14.26	20.58	14.08	20.58	14.08	20.58	14.08
Road 14	14	2000-2100	21.86	14.94	21.58	14.76	21.58	14.76	21.58	14.76
Road 14	14	2100-2200	22.86	15.62	22.58	15.44	22.58	15.44	22.58	15.44
Road 14	14	2200-2300	23.86	16.30	23.58	16.12	23.58	16.12	23.58	16.12
Road 14	14	2300-0000	24.86	16.98	24.58	16.80	24.58	16.80	24.58	16.80
Road 15	15	0000-0100	2.56	1.75	2.32	1.65	2.32	1.65	2.32	1.65
Road 15	15	0100-0200	2.96	2.02	2.68	1.92	2.68	1.92	2.68	1.92
Road 15	15	0200-0300	3.86	2.70	3.58	2.52	3.58	2.52	3.58	2.52
Road 15	15	0300-0400	4.86	3.38	4.58	3.20	4.58	3.20	4.58	3.20
Road 15	15	0400-0500	5.86	4.06	5.58	3.88	5.58	3.88	5.58	3.88
Road 15	15	0500-0600	6.86	4.74	6.58	4.56	6.58	4.56	6.58	4.56
Road 15	15	0600-0700	7.86	5.42	7.58	5.24	7.58	5.24	7.58	5.24
Road 15	15	0700-0800	8.86	6.10	8.58	5.92	8.58	5.92	8.58	5.92
Road 15	15	0800-0900	9.86	6.78	9.58	6.60	9.58	6.60	9.58	6.60
Road 15	15	0900-1000	10.86	7.46	10.58	7.28	10.58	7.28	10.58	7.28
Road 15	15	1000-1100	11.86	8.14	11.58	7.96	11.58	7.96	11.58	7.96
Road 15	15	1100-1200	12.86	8.82	12.58	8.64	12.58	8.64	12.58	8.64
Road 15	15	1200-1300	13.86	9.50	13.58	9.32	13.58	9.32	13.58	9.32
Road 15	15	1300-1400	14.86	10.18	14.58	10.00	14.58	10.00	14.58	10.00
Road 15	15	1400-1500	15.86	10.86	15.58	10.68				

Shang Yi North Underground Quarry
Open Road 24 hour Emission Factors for
AERMOD model (June) Year 2038

Road Name	Road ID	Hour	NO Emission						No Emission					
			MonthlyMin			MonthlyHourAverage			MonthlyMin			MonthlyHourAverage		
			g/kWh	g/min	tonne/hour	g/kWh	g/min	tonne/hour	g/kWh	g/min	tonne/hour	g/kWh	g/min	tonne/hour
Road 14	14	0800-0900	5.2782	0.8822	0.2180	5.2832	0.8832	0.2183	5.2832	0.8832	0.2183	5.2832	0.8832	0.2183
Road 14	14	0900-1000	3.8202	0.7772	0.1325	3.8225	0.7782	0.1326	3.8225	0.7782	0.1326	3.8225	0.7782	0.1326
Road 14	14	1000-1100	4.2002	0.7542	0.1295	4.2055	0.7555	0.1297	4.2055	0.7555	0.1297	4.2055	0.7555	0.1297
Road 14	14	1100-1200	2.6102	0.6212	0.0955	2.6152	0.6222	0.0957	2.6152	0.6222	0.0957	2.6152	0.6222	0.0957
Road 14	14	1200-1300	5.9902	0.9282	0.2175	5.9915	0.9285	0.2176	5.9915	0.9285	0.2176	5.9915	0.9285	0.2176
Road 14	14	1300-1400	6.0202	0.9352	0.2305	6.0315	0.9365	0.2310	6.0315	0.9365	0.2310	6.0315	0.9365	0.2310
Road 14	14	1400-1500	6.4002	0.9522	0.2435	6.4055	0.9535	0.2437	6.4055	0.9535	0.2437	6.4055	0.9535	0.2437
Road 14	14	1500-1600	5.7802	0.8852	0.2365	0.8865	0.1395	0.2367	5.7815	0.8865	0.2367	5.7815	0.8865	0.2367
Road 14	14	1600-1700	5.8302	0.9362	0.2435	0.9365	0.1425	0.2436	5.8315	0.9365	0.2436	5.8315	0.9365	0.2436
Road 14	14	1700-1800	4.4002	0.7402	0.1105	4.4055	0.7415	0.1107	4.4055	0.7415	0.1107	4.4055	0.7415	0.1107
Road 14	14	1800-1900	3.2102	0.5712	0.0745	3.2145	0.5725	0.0746	3.2145	0.5725	0.0746	3.2145	0.5725	0.0746
Road 14	14	1900-2000	2.2002	0.4312	0.0735	0.9825	0.3775	0.0635	2.2025	0.4325	0.0736	2.2025	0.4325	0.0736
Road 14	14	2000-2100	2.2002	0.4312	0.0735	0.9825	0.3775	0.0635	2.2025	0.4325	0.0736	2.2025	0.4325	0.0736
Road 14	14	2100-2200	1.9602	0.3102	0.0515	1.9625	0.3105	0.0516	1.9625	0.3105	0.0516	1.9625	0.3105	0.0516
Road 14	14	2200-2300	1.9102	0.2822	0.0405	1.9865	0.2872	0.0425	1.9865	0.2872	0.0425	1.9865	0.2872	0.0425
Road 14	14	2300-2400	0.8402	0.1452	0.0225	0.8455	0.1465	0.0227	0.8455	0.1465	0.0227	0.8455	0.1465	0.0227
Road 15	15	0000-0100	2.5402	0.5052	0.0865	2.5425	0.5055	0.0866	2.5425	0.5055	0.0866	2.5425	0.5055	0.0866
Road 15	15	0100-0200	3.2602	0.6982	0.1185	3.2625	0.6985	0.1186	3.2625	0.6985	0.1186	3.2625	0.6985	0.1186
Road 15	15	0200-0300	3.0202	0.6502	0.1095	3.0225	0.6505	0.1096	3.0225	0.6505	0.1096	3.0225	0.6505	0.1096
Road 15	15	0300-0400	4.2802	0.9552	0.2385	3.7825	0.9225	0.2362	4.1402	0.9305	0.2362	4.1402	0.9305	0.2362
Road 15	15	0400-0500	4.1402	0.7852	0.3505	3.6425	0.3315	0.0635	4.1425	0.7862	0.3506	4.1425	0.7862	0.3506
Road 15	15	0500-0600	2.6002	0.5452	0.0865	2.6025	0.5455	0.0866	2.6025	0.5455	0.0866	2.6025	0.5455	0.0866
Road 15	15	0600-0700	2.6002	0.5452	0.0865	2.6025	0.5455	0.0866	2.6025	0.5455	0.0866	2.6025	0.5455	0.0866
Road 15	15	0700-0800	4.2602	0.6742	0.2265	4.6405	0.2115	0.0667	4.2625	0.6752	0.2266	4.6405	0.2115	0.0667
Road 15	15	0800-0900	4.2602	0.6742	0.2265	4.6405	0.2115	0.0667	4.2625	0.6752	0.2266	4.6405	0.2115	0.0667
Road 15	15	0900-1000	4.7202	0.6952	0.2495	3.9952	0.2255	0.0698	4.7225	0.6962	0.2496	3.9952	0.2255	0.0698
Road 15	15	1000-1100	5.1102	0.6222	0.2425	4.2725	0.2185	0.0678	5.1125	0.6232	0.2426	4.2725	0.2185	0.0678
Road 15	15	1100-1200	4.5002	0.6022	0.2325	4.5025	0.6025	0.2326	4.5025	0.6025	0.2326	4.5025	0.6025	0.2326
Road 15	15	1200-1300	6.0102	0.4472	0.1135	0.5025	0.3755	0.0437	6.0125	0.4482	0.1136	0.5025	0.3755	0.0437
Road 15	15	1300-1400	6.3002	0.4862	0.1075	4.5225	0.6752	0.0425	6.3025	0.4872	0.1076	4.5225	0.6752	0.0425
Road 15	15	1400-1500	6.3002	0.4862	0.1075	4.5225	0.6752	0.0425	6.3025	0.4872	0.1076	4.5225	0.6752	0.0425
Road 15	15	1500-1600	5.7802	0.6782	0.2455	4.9102	0.4082	0.3795	5.7825	0.6792	0.2456	4.9102	0.4082	0.3795
Road 15	15	1600-1700	5.8302	0.4852	0.1495	4.9802	0.4142	0.3848	5.8325	0.4862	0.1496	4.9802	0.4142	0.3848
Road 15	15	1700-1800	4.7802	0.4212	0.3905	4.4025	0.3552	0.3747	4.7825	0.4222	0.3906	4.4025	0.3552	0.3747
Road 15	15	1800-1900	3.8002	0.3652	0.3805	3.8025	0.3655	0.3806	3.8025	0.3655	0.3806	3.8025	0.3655	0.3806
Road 15	15	1900-2000	2.1702	0.1332	0.1235	0.1382	0.1182	0.1105	2.1725	0.1342	0.1236	0.1382	0.1182	0.1105
Road 15	15	2000-2100	2.2202	0.1072	0.0945	0.1525	0.9305	0.8535	0.9305	0.1082	0.0955	0.1525	0.9305	0.8535
Road 15	15	2100-2200	2.2202	0.1072	0.0945	0.1525	0.9305	0.8535	0.9305	0.1082	0.0955	0.1525	0.9305	0.8535
Road 15	15	2200-2300	2.0402	0.9105	0.7752	1.8002	0.8395	0.7747	2.0425	0.9115	0.7753	1.8002	0.8395	0.7747
Road 15	15	2300-2400	2.2802	0.8452	0.7542	0.7025	1.4205	0.6802	2.2825	0.8462	0.7543	0.7025	1.4205	0.6802
Road 16	16	0000-0100	0.0002	0.0202	0.0002	0.0202	0.0002	0.0202	0.0002	0.0202	0.0002	0.0202	0.0002	0.0202
Road 16	16	0100-0200	7.8402	3.4552	0.0652	6.6802	3.0025	0.9247	7.8425	3.4562	0.0653	6.6802	3.0025	0.9247
Road 16	16	0200-0300	8.8302	3.8082	0.5982	7.6112	2.4705	0.7562	8.8325	3.8092	0.5983	7.6112	2.4705	0.7562
Road 16	16	0300-0400	9.9302	4.3152	0.7712	7.7172	2.4775	0.7712	9.9325	4.3162	0.7713	7.7172	2.4775	0.7712
Road 16	16	0400-0500	9.9002	0.8318	0.6332	0.6745	2.4775	0.7572	9.9025	0.8328	0.6333	0.6745	2.4775	0.7572
Road 16	16	0500-0600	1.0112	4.2852	1.5112	0.8742	4.2825	1.3105	1.0135	4.2862	4.2852	1.5112	0.8742	4.2825
Road 16	16	0600-0700	1.0112	4.2852	1.5112	0.8742	4.2825	1.3105	1.0135	4.2862	4.2852	1.5112	0.8742	4.2825
Road 16	16	0700-0800	1.4302	0.3652	0.9715	1.2125	2.5952	0.7952	1.4325	0.3662	0.9716	1.2125	2.5952	0.7952
Road 16	16	0800-0900	1.6902	0.4112	1.2905	1.4325	3.5452	0.9395	1.6925	0.4122	1.2906	1.4325	3.5452	0.9395
Road 16	16	0900-1000	1.6902	0.4112	1.2905	1.4325	3.5452	0.9395	1.6925	0.4122	1.2906	1.4325	3.5452	0.9395
Road 16	16	1000-1100	1.7802	0.2912	1.0115	0.4842	2.7552	0.8435	1.7825	0.2922	1.0116	0.4842	2.7552	0.8435
Road 16	16	1100-1200	1.6102	0.8212	0.8275	1.3452	2.2452	0.7115	1.6125	0.8222	0.8276	1.3452	2.2452	0.7115
Road 16	16	1200-1300	2.2502	0.2952	0.2952	0.2952	2.2525	0.2955	2.2525	0.2955	0.2955	0.2952	0.2952	0.2952
Road 16	16	1300-1400	3.2302	0.6912	0.2145	2.6652	5.7752	1.7775	3.2325	0.6922	0.2146	2.6652	5.7752	1.7775
Road 16	16	1400-1500	3.4602	7.9112	2.3985	2.6882	6.6825	0.9732	3.4625	7.9122	2.3986	2.6882	6.6825	0.9732
Road 16	16	1500-1600	3.4602	7.9112	2.3985	2.6882	6.6825	0.9732	3.4625	7.9122	2.3986	2.6882	6.6825	0.9732
Road 16	16	1600-1700	3.4052	0.8082	0.2485	2.9052	6.9052	1.1715	3.4075	0.8092	0.2486	2.9052	6.9052	1.1715
Road 16	16	1700-1800	2.5802	0.6252	0.2005	2.1352	5.6852	0.2105	2.5825	0.6262	0.2006	2.1352	5.6852	0.2105
Road 16	16	1800-1900	1.2502	1.2502	0.1252	1.2502	1.2502	0.1252	1.2502	1.2502	0.1252	1.2502	1.2502	0.1252
Road 16	16	1900-2000	1.0202	0.9922	0.6102	0.9005	1.7802	5.4502	0.9002	1.0225	0.9932	0.6103	0.9005	1.7802
Road 16	16	2000-2100	0.9302	0.1352	0.2595	0.7832	1.2202	0.3695	0.9325	0.1362	0.2596	0.7832	1.2202	0.3695
Road 16	16	2100-2200	0.8102	0.8102	0.8102	0.8102	0.8102	0.8102	0.8102	0.8102	0.8102	0.8102	0.8102	0.8102
Road 16	16	2200-2300	0.8202	0.1222	0.3735	0.7282	1.0702	0.3285	0.8225	0.1232	0.3736	0.7282	1.0702	0.3285
Road 16	16	2300-2400	0.7802	0.8082	0.3005	0.8005	0.8025	0.7802	0.7825	0.8082	0.3006	0.8005	0.8025	0.7802
Road 17	17	0000-0100	8.0102	4.4652	0.0462	8.0125	4.4662	0.0463	8.0125	4.4662	0.0463	8.0125	4.4662	0.0463
Road 17	17	0100-0200	9.4702	0.5148	1.5882	0.8302	4.7402	1.3952	9.4725	0.5158	1.5882	0.8302	4.7402	1.3952
Road 17	17	0200-0300	1.0302	4.3612	1.2805	0.9085	3.8952	1.1152	1.0325	4.3622	1.2806	0.9085	3.8952	1.1152
Road 17	17	0300-0400	1.0302	4.3612	1.2805	0.9085	3.8952	1.1152	1.0325	4.3622	1.2806	0.9085	3.8952	1.1152
Road 17	17	0400-0500	1.1712	0.4042	1.2982	1.1052	3.8652	1.1102	1.1735	0.4052	1.2982	1.1052	3.8652	1.1102
Road 17	17	0500-0600	1.2152	0.7912	0.2315	1.0652	6.8852	2.0152	1.2175	0.7922	0.2316	1.0652	6.8852	2.0152
Road 17	17	0600-0700	1.2152	0.7912	0.2315	1.0652	6.8852	2.0152	1.2175	0.7922	0.2316	1.0652	6.8852	2.0152
Road 17	17	0700-0800	3.2102	0.2772	0.7115	2.7382	1.7802	2.3102	3.2125	0.2782	0.7116	2.7382	1.7802	2.3102
Road 17	17	0800-0900	6.1702	0.6752	0.6095	0.5452	1.7802	2.3102	6.1725	0.6762	0.6096	0.5452	1.7802	2.3102
Road 17	17	0900-1000	4.3002	0.4302	0.4302</									

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry

[illegible]

L:\Secure\Environment Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Appendix\Appendix 3.5.4 Emission Factor in 2038-5

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry

Open Road Data - 24 Hour Emission Factors				Year 2038		AERMOD model (tune)		No ₂ Emission		Month/Year/g/m		No Emission		Month/Year/g/m		
Road Name	Road ID	Hour	Month/Year/g/m		No ₂ Emission		Month/Year/g/m		No Emission		Month/Year/g/m		No Emission		Month/Year/g/m	
			g/m/vh	g/m/h	g/m/vh	g/m/h	g/m/vh	g/m/h	g/m/vh	g/m/h	g/m/vh	g/m/h	g/m/vh	g/m/h	g/m/vh	g/m/h
Road 33	31	0000-0010	1.536	3.298	2.947	1.352	2.915	1.888	5.803	1.222	1.076	4.855	0.442	9.337	0.442	9.337
Road 33	31	0000-0100	1.813	3.972	3.426	1.692	3.458	2.305	6.835	1.392	1.276	5.773	0.472	10.665	0.472	10.665
Road 33	31	0000-0300	2.002	2.425	2.616	1.812	2.012	1.687	6.686	1.776	0.844	5.722	0.664	5.505	0.664	5.505
Road 33	31	0000-0400	2.276	2.214	2.987	2.012	1.965	1.751	6.992	6.632	0.698	6.102	0.595	5.335	0.595	5.335
Road 33	31	0000-0500	2.232	2.232	2.987	2.012	1.965	1.751	6.992	6.632	0.698	6.102	0.595	5.335	0.595	5.335
Road 33	31	0000-0600	1.952	3.344	2.996	1.776	2.925	2.043	6.635	1.414	1.016	5.076	0.766	8.015	0.766	8.015
Road 33	31	0600-0700	1.776	6.666	6.517	1.529	2.526	4.778	6.411	2.222	2.006	4.548	1.922	17.017	1.922	17.017
Road 33	31	0700-0800	2.046	1.575	1.477	1.362	1.355	1.205	7.196	5.425	0.875	6.058	0.571	4.403	0.571	4.403
Road 33	31	0800-0900	1.372	1.702	1.372	1.692	1.458	0.737	5.985	1.222	0.776	4.772	0.472	4.403	0.472	4.403
Road 33	31	0900-1000	2.266	1.805	1.761	1.912	1.527	0.735	7.811	6.275	0.556	6.511	0.516	4.673	0.516	4.673
Road 33	31	1000-1100	2.515	1.845	1.654	2.092	1.535	0.136	8.305	6.071	0.529	6.895	0.501	4.673	0.501	4.673
Road 33	31	1100-1200	2.452	2.452	2.452	2.452	2.452	2.452	8.305	6.071	0.529	6.895	0.501	4.673	0.501	4.673
Road 33	31	1200-1300	2.336	1.313	1.176	1.995	1.125	0.977	7.422	4.417	0.378	6.266	0.351	3.917	0.351	3.917
Road 33	31	1300-1400	2.336	1.358	1.216	1.995	1.155	1.035	7.623	4.437	0.395	6.425	0.378	3.917	0.378	3.917
Road 33	31	1400-1500	2.336	1.358	1.216	1.995	1.155	1.035	7.623	4.437	0.395	6.425	0.378	3.917	0.378	3.917
Road 33	31	1500-1600	2.266	1.358	1.216	1.885	1.165	1.045	7.555	4.452	0.437	6.136	0.354	3.935	0.354	3.935
Road 33	31	1600-1700	2.102	1.414	1.265	1.885	1.215	1.078	7.135	4.452	0.406	6.038	0.367	3.874	0.367	3.874
Road 33	31	1700-1800	1.776	1.414	1.265	1.885	1.215	1.078	7.135	4.452	0.406	6.038	0.367	3.874	0.367	3.874
Road 33	31	1800-1900	1.486	1.555	0.977	1.272	1.135	8.155	5.035	3.527	0.372	5.305	0.305	2.737	0.305	2.737
Road 33	31	1900-2000	0.985	5.165	4.651	0.805	4.505	4.027	4.185	2.217	1.992	1.565	1.865	1.677	1.992	1.565
Road 33	31	2000-2100	1.005	4.205	3.695	0.805	4.505	4.027	4.185	2.217	1.992	1.565	1.865	1.677	1.992	1.565
Road 33	31	2100-2200	0.776	3.995	3.577	0.315	3.415	3.955	4.465	1.135	0.775	3.685	0.685	1.515	0.685	1.515
Road 33	31	2200-2300	0.985	3.805	3.375	0.835	3.315	3.955	4.465	1.135	0.775	3.685	0.685	1.515	0.685	1.515
Road 33	31	2300-2400	0.985	3.805	3.375	0.835	3.315	3.955	4.465	1.135	0.775	3.685	0.685	1.515	0.685	1.515
Road 33	31	2400-0100	0.985	3.805	3.375	0.835	3.315	3.955	4.465	1.135	0.775	3.685	0.685	1.515	0.685	1.515
Road 33	31	0100-0200	0.985	3.805	3.375	0.835	3.315	3.955	4.465	1.135	0.775	3.685	0.685	1.515	0.685	1.515
Road 33	31	0200-0300	0.985	3.805	3.375	0.835	3.315	3.955	4.465	1.135	0.775	3.685	0.685	1.515	0.685	1.515
Road 33	31	0300-0400	0.985	3.805	3.375	0.835	3.315	3.955	4.465	1.135	0.775	3.685	0.685	1.515	0.685	1.515
Road 33	31	0400-0500	0.985	3.805	3.375	0.835	3.315	3.955	4.465	1.135	0.775	3.685	0.685	1.515	0.685	1.515
Road 33	31	0500-0600	1.142	8.415	5.858	9.915	7.335	4.885	6.055	0.547	2.747	4.485	0.298	3.176	0.298	3.176
Road 33	31	0600-0700	1.276	8.415	5.858	9.915	7.335	4.885	6.055	0.547	2.747	4.485	0.298	3.176	0.298	3.176
Road 33	31	0700-0800	1.342	4.315	2.865	1.135	3.685	2.445	5.705	1.885	1.244	4.745	1.555	1.055	1.555	1.055
Road 33	31	0800-0900	1.276	4.847	3.195	1.085	4.105	2.715	5.365	2.035	1.354	4.448	1.695	1.135	1.695	1.135
Road 33	31	0900-1000	1.342	4.847	3.195	1.085	4.105	2.715	5.365	2.035	1.354	4.448	1.695	1.135	1.695	1.135
Road 33	31	1000-1100	1.716	5.085	3.375	1.425	4.235	2.815	6.725	1.995	1.324	5.505	1.035	1.305	1.035	1.305
Road 33	31	1100-1200	1.546	4.605	3.055	1.395	3.905	2.595	6.575	1.855	1.234	5.435	1.545	1.055	1.545	1.055
Road 33	31	1200-1300	1.515	3.225	2.545	1.365	2.745	1.605	6.045	1.755	0.965	5.055	1.055	1.055	1.055	1.055
Road 33	31	1300-1400	1.385	3.445	2.695	1.265	2.985	1.445	5.585	1.625	0.875	4.625	0.875	0.875	0.875	0.875
Road 33	31	1400-1500	1.357	3.575	2.715	1.285	2.995	1.675	6.225	1.545	0.825	5.115	1.185	1.185	1.185	1.185
Road 33	31	1500-1600	1.435	3.415	2.585	1.235	2.935	1.945	6.205	1.485	0.835	5.245	1.255	1.335	1.255	1.335
Road 33	31	1600-1700	1.465	3.755	2.895	1.265	3.055	2.175	5.955	1.625	0.875	5.055	1.265	1.335	1.265	1.335
Road 33	31	1700-1800	1.505	3.015	2.005	0.905	2.525	1.685	5.135	1.425	0.845	4.165	1.165	1.165	1.165	1.165
Road 33	31	1800-1900	1.735	2.285	1.515	0.735	1.985	1.315	3.765	1.115	0.635	3.175	0.935	0.935	0.935	0.935
Road 33	31	1900-2000	1.685	2.475	1.515	0.735	1.985	1.315	3.765	1.115	0.635	3.175	0.935	0.935	0.935	0.935
Road 33	31	2000-2100	6.725	1.225	0.675	0.585	1.055	0.795	3.955	1.745	0.775	4.765	0.375	0.585	0.375	0.585
Road 33	31	2100-2200	6.105	1.105	0.735	0.585	1.385	0.635	3.245	0.645	0.415	4.515	0.335	0.565	0.335	0.565
Road 33	31	2200-2300	5.805	1.105	0.735	0.585	1.385	0.635	3.245	0.645	0.415	4.515	0.335	0.565	0.335	0.565
Road 33	31	2300-0000	6.385	0.875	0.565	0.545	1.745	0.505	3.755	0.495	0.775	3.725	0.335	0.435	0.335	0.435
Road 33	31	0000-0100	1.025	1.025	1.025	1.515	0.935	1.865	4.885	4.735	1.115	4.155	4.085	6.615	4.085	6.615
Road 33	31	0100-0200	1.455	1.455	1.455	1.135	0.885	1.215	5.985	4.735	1.115	4.155	4.085	6.615	4.085	6.615
Road 33	31	0200-0300	1.455	1.455	1.455	1.135	0.885	1.215	5.985	4.735	1.115	4.155	4.085	6.615	4.085	6.615
Road 33	31	0300-0400	1.455	1.455	1.455	1.135	0.885	1.215	5.985	4.735	1.115	4.155	4.085	6.615	4.085	6.615
Road 33	31	0400-0500	1.455	1.455	1.455	1.133	0.885	1.215	5.985	4.735	1.115	4.155	4.085	6.615	4.085	6.615
Road 33	31	0500-0600	1.455	1.455	1.455	1.133	0.885	1.215	5.985	4.735	1.115	4.155	4.085	6.615	4.085	6.615
Road 33	31	0600-0700	1.375	2.135	2.135	1.175	1.865	2.075	5.935	9.225	3.195	3.045	7.845	17.017	3.195	7.845
Road 33	31	0700-0800	1.605	6.025	7.855	1.375	4.485	0.715	6.855	2.135	1.215	5.445	1.765	2.665	1.765	2.665
Road 33	31	0800-0900	1.555	6.025	7.855	1.375	4.485	0.715	6.855	2.135	1.215	5.445	1.765	2.665	1.765	2.665
Road 33	31	0900-1000	1.815	6.025	7.855	1.525	5.085	0.745	7.235	2.245	1.235	5.635	0.205	2.005	0.205	2.005
Road 33	31	1000-1100	2.045	6.125	8.325	1.695	5.595	0.765	7.745	2.335	1.505	6.395	0.915	2.615	0.915	2.615
Road 33	31	1100-1200	2.045	6.125	8.325	1.695	5.595	0.765	7.745	2.335	1.505	6.395	0.915	2.615	0.915	2.615
Road 33	31	1200-1300	2.365	6.515	8.795	2.015	5.555	0.785	8.445	2.335	1.505	7.135	0.975	2.975	0.975	2.975
Road 33	31	1300-1400	2.365	6.885	1.035	2.015	5.855	0.825	8.755	2.595	1.845	4.045	1.165	3.245	1.165	3.245
Road 33	31	1400-1500	2.365	6.885	1.035	2.015	5.855	0.825	8.755	2.595	1.845	4.045	1.165	3.245	1.165	3.245
Road 33	31	1500-1600	1.795	6.795	1.025	1.885	5.855	0.815	8.605	2.675	0.425	4.345	2.385	3.445	2.385	3.445
Road 33	31	1600-1700	2.235	6.965	1.055	1.915	5.975	0.895	8.195	2.575	1.865	3.695	1.375	3.275	1.375	3.275
Road 33	31	1700-1800	2.235	6.965	1.055	1.915	5.975	0.895	8.195	2.575	1.865	3.695	1.375	3.275	1.375	3.275
Road 33	31	1800-1900	2.365	4.525	0.935	1.185	5.775	0.775	5.595	1.785	0.885	4.795	1.535	2.635	1.535	2.635
Road 33	31	1900-2000	1.075	2.525	0.805	0.935	2.205	3.325	4.985	1.175	0.775	1.725	1.225	1.005	1.225	1.005
Road 33	31	2000-2100	1.075	2.525	0.805	0.935	2.205	3.325	4.985	1.175	0.775	1.725	1.225	1.005	1.225	1.005
Road 33																

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Appendix 4.

Tsing Yi North Underground Quarry

Open Road Level 2 Hour Emission Factors			Y2038			NO _x Emission						NO ₂ Emission								
Road Name	Road ID	Hour	Monthly/monthly			Monthly/hour			Monthly/Average			Monthly/monthly			Monthly/hour			Monthly/Average		
			gpm/veh	gsm/veh	tonne/hour	gpm/veh	gsm/veh	tonne/hour	gpm/veh	gsm/veh	tonne/hour	gpm/veh	gsm/veh	tonne/hour	gpm/veh	gsm/veh	tonne/hour			
Road #1	0000-0000	1:00:00	0.77	0.43	1.17	0.43	0.24	0.36	0.43	0.24	0.36	0.43	0.24	0.36	0.43	0.24	0.36	0.43	0.24	0.36
Road #1	0100-0020	1:07:02	1.4986	0.838	1.276	0.838	0.476	0.938	0.476	0.938	0.476	0.938	0.476	0.938	0.476	0.938	0.476	0.938	0.476	0.938
Road #1	0200-0000	1:15:02	0.938	0.538	0.938	0.538	0.308	0.476	0.538	0.308	0.476	0.538	0.308	0.476	0.538	0.308	0.476	0.538	0.308	0.476
Road #1	0300-0020	1:23:02	1.4986	0.838	1.276	0.838	0.476	0.938	0.476	0.938	0.476	0.938	0.476	0.938	0.476	0.938	0.476	0.938	0.476	0.938
Road #1	0400-0000	1:30:02	0.938	0.538	0.938	0.538	0.308	0.476	0.538	0.308	0.476	0.538	0.308	0.476	0.538	0.308	0.476	0.538	0.308	0.476
Road #1	0500-0000	1:44:02	1.758	0.938	1.476	0.938	0.538	0.838	0.538	0.838	0.538	0.838	0.538	0.838	0.538	0.838	0.538	0.838	0.538	0.838
Road #1	0600-0000	1:44:02	1.758	0.938	1.476	0.938	0.538	0.838	0.538	0.838	0.538	0.838	0.538	0.838	0.538	0.838	0.538	0.838	0.538	0.838
Road #1	0700-0020	1:52:02	1.838	0.938	1.538	0.938	0.538	0.838	0.538	0.838	0.538	0.838	0.538	0.838	0.538	0.838	0.538	0.838	0.538	0.838
Road #1	0800-0000	1:57:02	1.838	0.938	1.538	0.938	0.538	0.838	0.538	0.838	0.538	0.838	0.538	0.838	0.538	0.838	0.538	0.838	0.538	0.838
Road #1	0900-0000	1:57:02	1.838	0.938	1.538	0.938	0.538	0.838	0.538	0.838	0.538	0.838	0.538	0.838	0.538	0.838	0.538	0.838	0.538	0.838
Road #1	1000-0000	1:59:02	1.838	0.938	1.538	0.938	0.538	0.838	0.538	0.838	0.538	0.838	0.538	0.838	0.538	0.838	0.538	0.838	0.538	0.838
Road #1	1100-0020	2:07:02	1.428	0.738	1.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738
Road #1	1200-0000	2:54:02	0.938	0.538	0.938	0.538	0.308	0.476	0.538	0.308	0.476	0.538	0.308	0.476	0.538	0.308	0.476	0.538	0.308	0.476
Road #1	1300-0020	2:54:02	1.428	0.738	1.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738
Road #1	1400-0000	2:54:02	0.938	0.538	0.938	0.538	0.308	0.476	0.538	0.308	0.476	0.538	0.308	0.476	0.538	0.308	0.476	0.538	0.308	0.476
Road #1	1500-0000	2:54:02	1.428	0.738	1.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738
Road #1	1600-0000	3:02:02	1.428	0.738	1.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738
Road #1	1700-0000	3:02:02	1.428	0.738	1.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738
Road #1	1800-0000	3:02:02	1.428	0.738	1.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738
Road #1	1900-0000	3:02:02	1.428	0.738	1.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738
Road #1	2000-0000	3:02:02	1.428	0.738	1.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738	0.428	0.738
Road #1	2100-0020	3:10:02	1.386	0.712	1.386	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712
Road #1	2200-0000	3:10:02	1.386	0.712	1.386	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712
Road #1	2300-0000	3:10:02	1.386	0.712	1.386	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712
Road #1	2400-0000	3:10:02	1.386	0.712	1.386	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712
Road #1	2500-0000	3:10:02	1.386	0.712	1.386	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712
Road #1	2600-0000	3:10:02	1.386	0.712	1.386	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712
Road #1	2700-0000	3:10:02	1.386	0.712	1.386	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712
Road #1	2800-0000	3:10:02	1.386	0.712	1.386	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712
Road #1	2900-0000	3:10:02	1.386	0.712	1.386	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712
Road #1	3000-0000	3:10:02	1.386	0.712	1.386	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712	0.406	0.712
Road #1	3100-0020	3:18:02	1.344	0.672	1.344	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672
Road #1	3200-0000	3:18:02	1.344	0.672	1.344	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672
Road #1	3300-0000	3:18:02	1.344	0.672	1.344	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672
Road #1	3400-0000	3:18:02	1.344	0.672	1.344	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672
Road #1	3500-0000	3:18:02	1.344	0.672	1.344	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672
Road #1	3600-0000	3:18:02	1.344	0.672	1.344	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672
Road #1	3700-0000	3:18:02	1.344	0.672	1.344	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672
Road #1	3800-0000	3:18:02	1.344	0.672	1.344	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672
Road #1	3900-0000	3:18:02	1.344	0.672	1.344	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672
Road #1	4000-0000	3:18:02	1.344	0.672	1.344	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672	0.384	0.672
Road #1	4100-0020	3:26:02	1.302	0.630	1.302	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630
Road #1	4200-0000	3:26:02	1.302	0.630	1.302	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630
Road #1	4300-0000	3:26:02	1.302	0.630	1.302	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630
Road #1	4400-0000	3:26:02	1.302	0.630	1.302	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630
Road #1	4500-0000	3:26:02	1.302	0.630	1.302	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630
Road #1	4600-0000	3:26:02	1.302	0.630	1.302	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630
Road #1	4700-0000	3:26:02	1.302	0.630	1.302	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630
Road #1	4800-0000	3:26:02	1.302	0.630	1.302	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630
Road #1	4900-0000	3:26:02	1.302	0.630	1.302	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630
Road #1	5000-0000	3:26:02	1.302	0.630	1.302	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630	0.342	0.630
Road #1	5100-0020	3:34:02	1.260	0.590	1.260	0.590	0.300	0.590	0.300	0.590	0.300	0.590	0.300	0.590	0.300	0.590	0.300	0.590	0.300	0.590
Road #1	5200-0000	3:34:02	1.260	0.590	1.260	0.590	0.300	0.590	0.300	0.590	0.300	0.590	0.300	0.590	0.300	0.590	0.300	0.590	0.300	0.590
Road #1	5300-0000	3:34:02	1.260	0.590	1.260	0.590	0.300	0.590	0.300	0.590	0.300	0.590	0.300	0.590	0.300	0.590	0.300	0.590	0.300	0.590
Road #1	5400-0000	3:34:02	1.260	0.590	1.260	0.590	0.300	0.590	0.300	0.590	0.300	0.590	0.300	0.590	0.300	0.590	0.300	0.590	0.300	0.590
Road #1	5500-0000	3:34:02	1.260	0.590	1.260	0.590	0.300	0.590	0.3											

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry

Road Name			Year 2050																	
			AERMOD model (Lane)						NO Emission						NO Emission					
Road Name	Road ID	Hour	Monthly/gm/m			Monthly/gm/m			Monthly/gm/m			Monthly/gm/m			Monthly/gm/m			Monthly/gm/m		
			g/m ³ /hr	g/m ³ /hr	tonne/hour	g/m ³ /hr	g/m ³ /hr	tonne/hour	g/m ³ /hr	g/m ³ /hr	tonne/hour	g/m ³ /hr	g/m ³ /hr	tonne/hour	g/m ³ /hr	g/m ³ /hr	tonne/hour	g/m ³ /hr	g/m ³ /hr	tonne/hour
Road 37	37	1800-1700	6.05E-11	6.11E-11	2.55E-08	6.19E-12	1.04E-08	2.39E-08	2.39E-01	4.02E-08	9.22E-08	2.22E-11	3.73E-08	6.57E-08						
Road 37	37	1700-1800	6.05E-11	6.11E-11	2.55E-08	6.19E-12	1.04E-08	2.39E-08	2.39E-01	4.02E-08	9.22E-08	2.22E-11	3.73E-08	6.57E-08						
Road 37	37	1800-1700	7.82E-12	7.89E-12	3.80E-09	7.59E-12	6.44E-09	1.68E-01	3.02E-08	6.92E-08	1.58E-08	2.73E-11	4.52E-08	7.82E-08						
Road 37	37	1700-1800	3.15E-12	3.43E-10	1.00E-06	2.99E-14	4.14E-09	1.52E-01	1.11E-08	4.84E-08	1.43E-11	1.98E-08	4.54E-08	2.00E-08						
Road 37	37	2000-2100	2.21E-14	2.24E-14	1.00E-06	2.99E-14	3.26E-09	1.74E-09	1.67E-08	1.79E-08	1.00E-08	1.51E-16	1.98E-08	3.81E-08						
Road 37	37	2100-2200	2.75E-12	2.88E-09	6.53E-09	2.61E-12	2.70E-09	1.52E-09	1.50E-01	1.55E-08	3.56E-08	1.41E-11	1.46E-08	3.34E-08						
Road 37	37	2200-2300	2.03E-12	2.35E-09	3.85E-09	2.91E-12	2.26E-09	5.24E-09	1.86E-01	1.24E-08	1.68E-08	1.50E-11	1.86E-08	2.71E-08						
Road 38	38	0000-0100	2.56E-12	3.88E-07	4.98E-07	4.48E-12	4.92E-09	6.33E-07	1.32E-01	1.95E-07	1.17E-07	1.71E-11	2.72E-07	2.23E-07						
Road 38	38	0100-0200	0.08E-12	7.15E-06	1.89E-07	5.53E-12	6.50E-09	5.32E-07	1.97E-01	2.31E-07	1.89E-06	1.80E-11	2.12E-07	1.73E-06						
Road 38	38	0200-0300	5.57E-12	6.93E-08	5.23E-07	5.92E-12	5.73E-07	4.71E-07	2.02E-01	1.96E-07	1.00E-06	1.83E-11	1.87E-06	1.47E-06						
Road 38	38	0300-0400	5.97E-12	6.93E-08	5.23E-07	5.92E-12	5.73E-07	4.71E-07	2.02E-01	1.96E-07	1.00E-06	1.83E-11	1.87E-06	1.47E-06						
Road 38	38	0400-0500	7.06E-14	6.44E-08	5.27E-07	6.36E-12	5.78E-07	4.74E-07	2.12E-01	1.93E-07	1.34E-06	1.92E-11	1.97E-06	1.43E-06						
Road 38	38	0500-0600	6.59E-12	6.93E-08	5.23E-07	5.92E-12	5.73E-07	4.71E-07	2.02E-01	1.96E-07	1.00E-06	1.83E-11	1.87E-06	1.47E-06						
Road 38	38	0600-0700	5.82E-12	6.93E-08	5.23E-07	5.92E-12	5.73E-07	4.71E-07	2.02E-01	1.96E-07	1.00E-06	1.83E-11	1.87E-06	1.47E-06						
Road 38	38	0700-0800	8.01E-12	6.51E-07	3.69E-06	7.24E-12	4.05E-07	3.32E-06	2.60E-01	1.47E-06	1.20E-05	2.35E-11	3.12E-06	1.08E-05						
Road 38	38	0800-0900	6.03E-12	5.08E-07	4.16E-06	7.20E-12	4.58E-07	3.25E-06	2.54E-01	1.61E-06	1.20E-05	2.30E-11	1.45E-06	1.08E-05						
Road 38	38	0900-1000	2.21E-12	2.24E-12	1.00E-06	2.99E-14	3.26E-09	1.74E-09	1.67E-08	1.79E-08	1.00E-08	1.51E-16	1.98E-08	3.81E-08						
Road 38	38	1000-1100	4.46E-12	4.59E-07	4.05E-06	8.46E-12	4.45E-07	3.76E-06	2.88E-01	1.47E-06	1.20E-05	2.51E-11	1.32E-06	1.12E-05						
Road 38	38	1100-1200	3.29E-12	3.41E-07	2.95E-06	6.10E-12	3.27E-07	2.82E-06	3.14E-01	1.59E-06	1.38E-05	3.09E-11	1.62E-06	1.42E-05						
Road 38	38	1300-1400	1.20E-11	1.40E-07	1.33E-06	1.07E-11	1.38E-07	3.00E-06	3.22E-01	1.10E-06	9.02E-06	2.88E-11	9.88E-07	1.08E-06						
Road 38	38	1400-1500	1.21E-11	1.41E-07	1.34E-06	1.10E-11	1.37E-07	3.01E-06	3.24E-01	1.11E-06	9.05E-06	2.88E-11	9.88E-07	1.09E-06						
Road 38	38	1500-1600	1.22E-11	1.41E-07	1.35E-06	1.11E-11	1.38E-07	3.02E-06	3.26E-01	1.10E-06	9.06E-06	2.88E-11	1.07E-06	1.09E-06						
Road 38	38	1600-1700	1.71E-11	1.98E-07	1.88E-06	1.57E-11	1.97E-07	2.92E-06	3.14E-01	1.57E-06	1.38E-05	4.82E-11	9.85E-07	7.88E-06						
Road 38	38	1700-1800	1.47E-11	1.73E-07	1.61E-06	1.10E-11	1.38E-07	2.77E-06	3.15E-01	1.05E-06	8.66E-06	2.82E-11	9.88E-07	7.64E-06						
Road 38	38	1800-1900	1.04E-11	1.08E-07	2.52E-06	9.83E-12	2.78E-07	2.28E-06	2.78E-01	9.27E-07	6.57E-06	2.53E-11	5.73E-07	6.14E-06						
Road 38	38	1900-2000	1.11E-11	1.20E-07	2.81E-06	1.07E-11	3.00E-07	2.50E-06	3.15E-01	1.04E-06	8.88E-06	3.09E-11	6.14E-07	6.78E-06						
Road 38	38	2000-2100	8.53E-14	1.04E-08	4.85E-07	7.83E-12	9.52E-08	7.68E-07	1.58E-01	3.13E-07	2.57E-06	2.88E-11	2.87E-07	2.35E-06						
Road 38	38	2100-2200	9.56E-12	1.05E-07	6.62E-07	7.89E-12	9.60E-08	7.68E-07	1.59E-01	3.16E-07	2.61E-06	2.93E-11	2.94E-07	2.80E-06						
Road 38	38	2200-2300	8.01E-12	1.01E-07	6.62E-07	7.89E-12	9.60E-08	7.68E-07	1.63E-01	3.17E-07	2.61E-06	2.93E-11	2.94E-07	2.80E-06						
Road 38	38	2300-0000	8.21E-12	1.01E-07	6.67E-07	7.89E-12	9.63E-08	7.68E-07	1.30E-01	2.34E-07	1.92E-06	2.27E-11	2.20E-07	1.88E-06						
Road 39	39	0000-0100	9.14E-12	2.14E-14	1.62E-07	8.71E-12	2.04E-08	1.47E-07	2.98E-07	7.00E-08	5.96E-07	2.82E-11	6.68E-08	5.62E-07						
Road 39	39	0100-0200	1.23E-12	1.26E-12	5.23E-09	1.23E-12	1.26E-12	5.23E-09	1.23E-01	1.26E-07	5.23E-09	1.23E-12	1.26E-12	5.23E-09						
Road 39	39	0200-0300	6.65E-12	1.22E-06	1.04E-05	1.91E-12	1.18E-08	9.87E-11	3.21E-01	3.95E-08	3.37E-07	2.92E-11	3.76E-08	3.16E-07						
Road 39	39	0300-0400	0.76E-12	1.04E-06	8.85E-09	9.34E-12	9.92E-09	8.44E-11E	3.15E-01	3.34E-08	2.84E-07	2.97E-11	3.15E-08	2.69E-07						
Road 39	39	0400-0500	1.06E-12	1.24E-06	1.05E-07	9.51E-12	1.17E-08	9.88E-08	3.22E-01	3.97E-08	3.38E-07	3.07E-11	3.72E-08	3.16E-07						
Road 39	39	0500-0600	1.02E-12	1.24E-06	1.04E-07	9.51E-12	1.17E-08	9.88E-08	3.22E-01	3.97E-08	3.38E-07	3.07E-11	3.72E-08	3.16E-07						
Road 39	39	0600-0700	1.05E-12	1.33E-06	1.15E-07	9.54E-12	9.40E-07	8.42E-07	3.35E-01	3.71E-07	1.45E-06	3.14E-11	3.66E-07	3.16E-07						
Road 39	39	0700-0800	1.18E-11	1.47E-07	1.99E-07	1.01E-11	1.10E-07	3.66E-07	1.44E-01	7.17E-07	1.18E-06	3.30E-11	1.46E-07	2.95E-06						
Road 39	39	0800-0900	1.11E-11	1.47E-07	1.99E-07	1.01E-11	1.10E-07	3.66E-07	1.15E-01	3.45E-07	1.18E-06	3.30E-11	1.46E-07	2.95E-06						
Road 39	39	0900-1000	1.18E-11	1.60E-07	1.61E-06	1.41E-11	1.54E-07	1.31E-06	3.72E-01	5.21E-07	4.42E-06	3.42E-11	4.82E-07	4.09E-06						
Road 39	39	1000-1100	1.18E-11	1.61E-07	1.61E-06	1.37E-11	1.48E-07	1.27E-06	3.07E-01	4.20E-06	4.20E-06	3.34E-11	4.56E-07	4.09E-06						
Road 39	39	1100-1200	1.18E-11	1.61E-07	1.61E-06	1.37E-11	1.48E-07	1.27E-06	3.07E-01	4.20E-06	4.20E-06	3.34E-11	4.56E-07	4.09E-06						
Road 39	39	1200-1300	5.96E-12	6.06E-06	1.37E-07	5.03E-12	5.60E-08	1.24E-07	2.06E-01	6.12E-08	5.21E-07	6.01E-10	5.67E-08	4.82E-07						
Road 39	39	1300-1400	8.82E-12	8.80E-06	1.53E-07	5.45E-12	5.69E-08	1.48E-07	2.16E-01	6.78E-08	5.71E-07	2.63E-10	6.68E-08	5.35E-07						
Road 39	39	1400-1500	8.82E-12	8.80E-06	1.53E-07	5.45E-12	5.69E-08	1.48E-07	2.16E-01	6.78E-08	5.71E-07	2.63E-10	6.68E-08	5.35E-07						
Road 39	39	1500-1600	8.82E-12	8.80E-06	1.61E-07	5.50E-12	5.84E-08	1.57E-07	2.32E-01	7.25E-08	6.28E-07	2.10E-10	7.05E-08	5.82E-07						
Road 39	39	1600-1700	4.22E-12	1.89E-06	1.68E-07	8.06E-12	1.77E-08	1.51E-07	2.11E-01	7.35E-08	6.62E-07	1.98E-11	6.84E-08	5.82E-07						
Road 39	39	1700-1800	2.87E-12	1.54E-06	1.40E-07	7.27E-12	1.54E-08	1.40E-07	2.11E-01	7.35E-08	6.62E-07	1.98E-11	6.84E-08	5.82E-07						
Road 39	39	1800-1900	2.87E-12	1.54E-06	1.40E-07	7.27E-12	1.54E-08	1.40E-07	2.11E-01	7.35E-08	6.62E-07	1.98E-11	6.84E-08	5.82E-07						
Road 39	39	1900-2000	2.87E-12	1.54E-06	1.40E-07	7.27E-12	1.54E-08	1.40E-07	2.11E-01	7.35E-08	6.62E-07	1.98E-11	6.84E-08	5.82E-07						
Road 39	39	2000-2100	2.03E-12	4.89E-06	4.19E-08	1.92E-12	5.51E-09	4.99E-08	1.44E-01	3.59E-09	3.05E-07	1.35E-11	3.33E-08	2.94E-07						
Road 39	39	2100-2200	2.03E-12	4.89E-06	4.19E-08	1.92E-12	5.51E-09	4.99E-08	1.44E-01	3.59E-09	3.05E-07	1.35E-11	3.33E-08	2.94E-07						
Road 39	39	2200-2300	2.03E-12	4.89E-06	4.19E-08	1.92E-12	5.51E-09	4.99E-08	1.44E-01	3.59E-09	3.05E-07	1.35E-11	3.33E-08	2.94E-07						
Road 39	39	2300-0000	2.96E-12	4.98E-06	4.48E-08	2.17E-12	5.90E-09	5.32E-08	1.40E-01	2.82E-08	2.44E-07	1.34E-11	2.45E-08	2.04E-07						
Road 40	40	0000-0100	7.48E-12	7.41E-07	2.98E-07	7.38E-12	7.31E-07	2.98E-07	3.63E-01	4.25E-07	3.63E-07	1.78E-11	2.14E-07	1.86E-06						
Road 40	40	0100-0200	5.92E-12	7.21E-07	5.89E-07	5.10E-12	5.10E-07	5.10E-07	1.90E-01	4.11E-07	2.00E-06	1.74E-11	3.07E-07	1.83E-06						

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Appendix\Appendix 3.5.4 Emission Factor in 2038

a Yi North Underground Quarry

24 Hour Noise Exposure Factors for AERMOD model (June 2018)			Year 2038		NO _x Emission						NO _x Emission									
Road ID	Road ID	Hour	Monthly/Route			Monthly/Route			Monthly/Route			Monthly/Route			Monthly/Route					
			g/km/h	g/s/m	tonne/hour	g/km/h	g/s/m	tonne/hour	g/km/h	g/s/m	tonne/hour	g/km/h	g/s/m	tonne/hour	g/km/h	g/s/m	tonne/hour			
04-0001-0000	1.836	0.378	3.358	0.717	6.628	0.308	3.106	0.672	1.214	0.474	5.936	0.925	1.005	0.77	0.838	0.67	0.739	0.571	0.617	0.486
04-0001-0000	2.795	0.582	5.188	1.107	10.002	0.457	4.672	1.023	1.817	0.817	9.175	1.517	1.631	1.25	1.375	1.041	1.113	0.858	0.915	0.712
04-0001-0000	3.986	0.838	7.587	1.617	14.402	0.668	6.786	1.501	2.686	1.196	13.406	2.247	2.406	1.84	2.006	1.541	1.646	1.256	1.346	1.037
04-0001-0000	5.305	1.117	10.267	2.167	19.402	0.895	9.106	2.011	3.596	1.606	18.006	3.097	3.316	2.52	2.706	2.061	2.206	1.696	1.816	1.397
04-0001-0000	6.766	1.417	13.067	2.797	24.402	1.147	11.606	2.641	4.696	2.096	23.406	4.097	4.366	3.32	3.566	2.706	2.886	2.196	2.346	1.797
04-0001-0000	8.366	1.737	16.067	3.427	29.402	1.407	14.206	3.241	5.696	2.546	28.406	5.097	5.416	4.12	4.406	3.346	3.586	2.746	2.946	2.217
04-0001-0000	10.006	2.057	19.067	4.057	34.402	1.657	16.606	3.871	6.696	3.046	33.406	5.997	6.366	4.82	5.166	3.946	4.186	3.196	3.426	2.567
04-0001-0000	11.746	2.377	22.067	4.687	39.402	1.907	19.606	4.501	7.696	3.546	38.406	6.997	7.416	5.62	5.966	4.546	4.826	3.696	3.966	2.967
04-0001-0000	13.586	2.697	25.067	5.317	44.402	2.157	22.606	5.121	8.696	4.046	43.406	7.997	8.466	6.42	6.866	5.146	5.466	4.196	4.516	3.367
04-0001-0000	15.426	3.017	28.067	5.947	49.402	2.407	25.606	5.741	9.696	4.546	48.406	8.997	9.516	7.22	9.666	5.746	6.066	4.696	4.966	3.767
04-0001-0000	17.266	3.337	31.067	6.577	54.402	2.657	28.606	6.361	10.696	5.046	53.406	9.997	10.566	8.02	10.666	6.346	6.666	5.196	5.516	4.167
04-0001-0000	19.106	3.657	34.067	7.207	59.402	2.907	31.606	6.981	11.696	5.546	58.406	10.997	11.616	8.82	11.666	6.946	7.266	5.696	5.966	4.567
04-0001-0000	20.946	3.977	37.067	7.837	64.402	3.157	34.606	7.601	12.696	6.046	63.406	11.997	12.666	9.72	12.666	7.546	7.866	6.196	6.516	4.967
04-0001-0000	22.786	4.297	40.067	8.467	69.402	3.407	37.606	8.221	13.696	6.546	68.406	12.997	13.666	10.62	13.666	8.046	8.366	6.696	6.966	5.367
04-0001-0000	24.626	4.617	43.067	9.097	74.402	3.657	40.606	8.841	14.696	7.046	73.406	13.997	14.666	11.52	14.666	8.546	8.866	7.196	7.516	5.767
04-0001-0000	26.466	4.937	46.067	9.727	79.402	3.907	43.606	9.461	15.696	7.546	78.406	14.997	15.666	12.42	15.666	9.046	9.366	7.696	7.966	6.167
04-0001-0000	28.306	5.257	49.067	10.357	84.402	4.157	46.606	10.081	16.696	8.046	83.406	15.997	16.666	13.32	16.666	9.546	9.866	8.196	8.516	6.567
04-0001-0000	30.146	5.577	52.067	10.987	89.402	4.407	49.606	10.701	17.696	8.546	88.406	16.997	17.666	14.22	17.666	10.046	10.366	8.696	9.016	6.967
04-0001-0000	31.986	5.897	55.067	11.617	94.402	4.657	52.606	11.321	18.696	9.046	93.406	17.997	18.666	15.12	18.666	10.546	10.866	9.196	9.516	7.367
04-0001-0000	33.826	6.217	58.067	12.247	99.402	4.907	55.606	11.941	19.696	9.546	98.406	18.997	19.666	16.02	19.666	11.046	11.366	9.696	10.016	7.767
04-0001-0000	35.666	6.537	61.067	12.877	104.402	5.157	58.606	12.561	20.696	10.046	103.406	19.997	20.666	16.92	20.666	11.546	11.866	10.196	10.516	8.167
04-0001-0000	37.506	6.857	64.067	13.507	109.402	5.407	61.606	13.181	21.696	10.546	108.406	20.997	21.666	17.82	21.666	12.046	12.366	10.696	11.016	8.567
04-0001-0000	39.346	7.177	67.067	14.137	114.402	5.657	64.606	13.801	22.696	11.046	113.406	21.997	22.666	18.72	22.666	12.546	12.866	11.196	11.516	8.967
04-0001-0000	41.186	7.497	70.067	14.767	119.402	5.907	67.606	14.421	23.696	11.546	118.406	22.997	23.666	19.62	23.666	13.046	13.366	11.696	12.016	9.367
04-0001-0000	43.026	7.817	73.067	15.397	124.402	6.157	70.606	15.041	24.696	12.046	123.406	23.997	24.666	20.52	24.666	13.546	13.866	12.196	12.516	9.767
04-0001-0000	44.866	8.137	76.067	16.027	129.402	6.407	73.606	15.661	25.696	12.546	128.406	24.997	25.666	21.42	25.666	14.046	14.366	12.696	13.016	10.167
04-0001-0000	46.706	8.457	79.067	16.657	134.402	6.657	76.606	16.281	26.696	13.046	133.406	25.997	26.666	22.32	26.666	14.546	14.866	13.196	13.516	10.567
04-0001-0000	48.546	8.777	82.067	17.287	139.402	6.907	79.606	16.901	27.696	13.546	138.406	26.997	27.666	23.22	27.666	15.046	15.366	13.696	14.016	10.967
04-0001-0000	50.386	9.097	85.067	17.917	144.402	7.157	82.606	17.521	28.696	14.046	143.406	27.997	28.666	24.12	28.666	15.546	15.866	14.196	14.516	11.367
04-0001-0000	52.226	9.417	88.067	18.547	149.402	7.407	85.606	18.141	29.696	14.546	148.406	28.997	29.666	25.02	29.666	16.046	16.366	14.696	15.016	11.767
04-0001-0000	54.066	9.737	91.067	19.177	154.402	7.657	88.606	18.761	30.696	15.046	153.406	29.997	30.666	25.92	30.666	16.546	16.866	15.196	15.516	12.167
04-0001-0000	55.906	10.057	94.067	19.807	159.402	7.907	91.606	19.381	31.696	15.546	158.406	30.997	31.666	26.82	31.666	17.046	17.366	15.696	16.016	12.567
04-0001-0000	57.746	10.377	97.067	20.437	164.402	8.157	94.606	19.999	32.696	16.046	163.406	31.997	32.666	27.72	32.666	17.546	17.866	16.196	16.516	12.967
04-0001-0000	59.586	10.697	100.067	21.067	169.402	8.407	97.606	20.619	33.696	16.546	168.406	32.997	33.666	28.62	33.666	18.046	18.366	16.696	17.016	13.367
04-0001-0000	61.426	11.017	103.067	21.697	174.402	8.657	100.606	21.239	34.696	17.046	173.406	33.997	34.666	29.52	34.666	18.546	18.866	17.196	17.516	13.767
04-0001-0000	63.266	11.337	106.067	22.327	179.402	8.907	103.606	21.859	35.696	17.546	178.406	34.997	35.666	30.42	35.666	19.046	19.366	17.696	18.016	14.167
04-0001-0000	65.106	11.657	109.067	22.957	184.402	9.157	106.606	22.479	36.696	18.046	183.406	35.997	36.666	31.32	36.666	19.546	19.866	18.196	18.516	14.567
04-0001-0000	66.946	11.977	112.067	23.587	189.402	9.407	109.606	23.099	37.696	18.546	188.406	36.997	37.666	32.22	37.666	20.046	20.366	18.696	19.016	14.967
04-0001-0000	68.786	12.297	115.067	24.217	194.402	9.657	112.606	23.719	38.696	19.046	193.406	37.997	38.666	33.12	38.666	20.546	20.866	19.196	19.516	15.367
04-0001-0000	70.626	12.617	118.067	24.847	199.402	9.907	115.606	24.339	39.696	19.546	198.406	38.997	39.666	34.02	39.666	21.046	21.366	19.696	20.016	15.767
04-0001-0000	72.466	12.937	121.067	25.477	204.402	10.157	118.606	24.959	40.696	20.046	203.406	39.997	40.666	34.92	40.666	21.546	21.866	20.196	20.516	16.167
04-0001-0000	74.306	13.257	124.067	26.107	209.402	10.407	121.606	25.579	41.696	20.546	208.406	40.997	41.666	35.82	41.666	22.046	22.366	20.696	21.016	16.567
04-0001-0000	76.146	13.577	127.067	26.737	214.402	10.657	124.606	26.199	42.696	21.046	213.406	41.997	42.666	36.72	42.666	22.546	22.866	21.196	21.516	16.967
04-0001-0000	77.986	13.897	130.067	27.367	219.402	10.907	127.606	26.819	43.696	21.546	218.406	42.997	43.666	37.62	43.666	23.046	23.366	21.696	22.016	17.367
04-0001-0000	79.826	14.217	133.067	27.997	224.402	11.157	130.606	27.439	44.696	22.046	223.406	43.997	44.666	38.52	44.666	23.546	23.866	22.196	22.516	17.767
04-0001-0000	81.666	14.537	136.067	28.627	229.402	11.407	133.606	28.059	45.696	22.546	228.406	44.997	45.666	39.42	45.666	24.046	24.366	22.696	23.016	18.167
04-0001-0000	83.506	14.857	139.067	29.257	234.402	11.657	136.606	28.679	46.696	23.046	233.406	45.997	46.666	40.32	46.666	24.546	24.866	23.196	23.516	18.567
04-0001-0000	85.346	15.177	142.067	29.887	239.402	11.907	139.606	29.299	47.696	23.546	238.406	46.997	47.666	41.22	47.666	25.046	25.366	23.696	24.016	18.967
04-0001-0000	87.186	15.497	145.067	30.517	244.402	12.157	142.606	29.919	48.696	24.046	243.406	47.997	48.666	42.12	48.666	25.546	25.866	24.196	24.516	19.367
04-0001-0000	89.026	15.817	148.067	31.147	249.402	12.407	145.606	30.539	49.696	24.546	248.406	48.997	49.666	43.02	49.666	26.046	26.366	24.696	25.016	19.767
04-0001-0000	90.866	16.137	151.067	31.777	254.402	12.657	148.606	31.159	50.696	25.046	253.406	49.997	50.666	43.92	50.666	26.546	26.866	25.196	25.516	20.167
04-0001-0000	92.706	16.																		

re\\Environment_Projects\\60733229\\1.01\\Others\\Air\\Modelling\\Appendix\\Traffic\\Appendix\\Appendix 3.5.4 Emission Factor in 2038-S B.xlsx

Open Road 24 hour Emission Factors for AERMOD model (June)		Year 2038	Open Road 24 hour Emission Factors for AERMOD model (June)		Year 2038
CO	0.000000	0.000000	CO	0.000000	0.000000
CO2	0.000000	0.000000	CO2	0.000000	0.000000
CO2e	0.000000	0.000000	CO2e	0.000000	0.000000
CH4	0.000000	0.000000	CH4	0.000000	0.000000
HC	0.000000	0.000000	HC	0.000000	0.000000
NOx	0.000000	0.000000	NOx	0.000000	0.000000
PM10	0.000000	0.000000	PM10	0.000000	0.000000
PM2.5	0.000000	0.000000	PM2.5	0.000000	0.000000
SO2	0.000000	0.000000	SO2	0.000000	0.000000
THC	0.000000	0.000000	THC	0.000000	0.000000
WCO	0.000000	0.000000	WCO	0.000000	0.000000
WCO2	0.000000	0.000000	WCO2	0.000000	0.000000
WCO2e	0.000000	0.000000	WCO2e	0.000000	0.000000
WCH4	0.000000	0.000000	WCH4	0.000000	0.000000
WHC	0.000000	0.000000	WHC	0.000000	0.000000
WNOx	0.000000	0.000000	WNOx	0.000000	0.000000
WPM10	0.000000	0.000000	WPM10	0.000000	0.000000
WPM2.5	0.000000	0.000000	WPM2.5	0.000000	0.000000
WSO2	0.000000	0.000000	WSO2	0.000000	0.000000
WTHC	0.000000	0.000000	WTHC	0.000000	0.000000

Open Road 24 hour Emission Factors for
AERMOD model (June) Year 2038

Open Road 24 hour Emission Factors for AERMOD model (June)		Year 2038	Open Road 24 hour Emission Factors for AERMOD model (July)		Year 2038
CO	0.000000	0.000000	CO	0.000000	0.000000
CO2	0.000000	0.000000	CO2	0.000000	0.000000
CH4	0.000000	0.000000	CH4	0.000000	0.000000
H2	0.000000	0.000000	H2	0.000000	0.000000
H2O	0.000000	0.000000	H2O	0.000000	0.000000
NO	0.000000	0.000000	NO	0.000000	0.000000
NO2	0.000000	0.000000	NO2	0.000000	0.000000
NOx	0.000000	0.000000	NOx	0.000000	0.000000
PM10	0.000000	0.000000	PM10	0.000000	0.000000
PM2.5	0.000000	0.000000	PM2.5	0.000000	0.000000
SO2	0.000000	0.000000	SO2	0.000000	0.000000
THC	0.000000	0.000000	THC	0.000000	0.000000
VOC	0.000000	0.000000	VOC	0.000000	0.000000

Road 106	106	2200-2300	1.81E-02	2.18E-07	6.89E-06	1.58E-02	1.91E-07	6.04E-06	8.58E-02	1.04E-06	3.27E-05	7.36E-02	8.89E-07	2.81E-05
Road 106	106	2300-0000	1.83E-02	1.68E-07	5.30E-06	1.66E-02	1.52E-07	4.80E-06	8.50E-02	7.79E-07	2.46E-05	7.57E-02	6.95E-07	2.19E-05

Road 4	4	0600-0700	7.42E-03	1.14E-07	2.28E-06	6.84E-03	1.02E-07	2.04E-06	4.07E-02	6.25E-07	1.25E-05	3.53E-02	5.43E-07	1.09E-05
Road 4	4	0700-0800	8.22E-03	2.55E-07	5.11E-06	7.27E-03	2.25E-07	4.52E-06	4.42E-02	1.37E-06	2.75E-05	3.77E-02	1.17E-06	2.34E-05

Open Road 24 hour Emission Factors for
AERMOD model (July) Year 2038

Road 7	7	1400-1500	1.66E-02	3.60E-07	4.22E-06	1.41E-02	3.06E-07	3.59E-06	7.09E-02	1.54E-06	1.80E-05	5.94E-02	1.29E-06	1.51E-05
Road 7	7	1500-1600	1.57E-02	3.49E-07	4.09E-06	1.32E-02	2.93E-07	3.43E-06	7.24E-02	1.61E-06	1.88E-05	5.96E-02	1.32E-06	1.55E-05

Road 10	10	2200-2300	6.22E-02	6.59E-08	5.76E-07	5.66E-02	7.83E-08	5.23E-07	2.02E-01	2.80E-07	1.88E-06	1.65E-01	2.59E-07	1.72E-06
Road 10	10	2300-0000	6.69E-02	7.71E-08	5.17E-07	6.17E-02	7.11E-08	4.77E-07	2.08E-01	2.39E-07	1.60E-06	1.92E-01	2.22E-07	1.49E-06

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24-hour Emission Factors for

AERMOD model (July)		Year 2038													
		NO _x Emission						NO ₂ Emission							
Road Name	Road ID	MonthlyHours			MonthlyAverage			MonthlyHours			MonthlyAverage				
		g/kwh	g/m ³	tonne/hr	g/kwh	g/m ³	tonne/hr	g/kwh	g/m ³	tonne/hr	g/kwh	g/m ³	tonne/hr		
Road 11	11	0000-0300	2.676	1.7447	1.6687	2.532	1.6567	6.3247	1.4741	9.5747	3.676	1.3967	9.0747	3.4687	
Road 11	11	0100-0200	2.912	1.9637	1.8937	2.7987	2.2107	4.6527	1.5053	6.3147	2.503	1.4447	6.2267	2.6747	
Road 11	11	0200-0300	2.512	1.6367	1.5637	2.3987	1.8037	4.0577	1.4073	6.2147	2.303	1.3447	5.9347	2.4747	
Road 11	11	0300-0400	1.952	1.3636	1.3567	1.8237	1.3928	4.6247	1.6274	6.2817	1.6467	1.5747	4.1367	1.5687	
Road 11	11	0400-0500	1.6667	1.09247	1.05127	1.5107	1.0887	1.6994	1.4687	4.8877	1.1623	1.4687	1.6887	1.2067	
Road 11	11	0500-0600	1.3667	0.89247	0.85127	1.2107	1.0887	1.4694	1.4687	4.8877	0.9623	1.4687	1.6887	1.2067	
Road 11	11	0600-0700	4.0687	1.57067	1.3867	3.8747	1.4687	1.9687	1.9774	7.5467	1.6867	1.8687	1.8687	1.7167	
Road 11	11	0700-0800	5.247	1.10567	0.6297	4.8867	1.0257	3.5117	2.2967	4.7967	1.6457	1.1257	4.4887	1.7257	
Road 11	11	0800-0900	4.247	1.0567	0.5797	3.9267	1.0257	3.5117	2.2967	4.7967	1.6457	1.1257	4.4887	1.7257	
Road 11	11	0900-1000	4.247	1.3987	4.9117	5.2747	1.1887	4.5147	3.7377	4.8867	1.8667	2.1747	4.4557	1.7477	
Road 11	11	1000-1100	4.7467	1.22567	0.6867	4.0987	1.0257	2.4467	2.4467	4.4767	1.7057	2.2067	3.9967	1.5157	
Road 11	11	1100-1200	4.7467	1.22567	0.6867	4.0987	1.0257	2.4467	2.4467	4.4767	1.7057	2.2067	3.9967	1.5157	
Road 11	11	1200-1300	9.3467	2.02167	7.7447	8.4657	1.8357	1.0617	3.1274	6.7467	2.5937	2.6267	6.0087	2.3477	
Road 11	11	1300-1400	9.7967	2.2267	0.8567	8.9667	2.0387	6.7867	3.1417	7.5067	2.6867	3.0117	6.8267	2.6267	
Road 11	11	1400-1500	9.7967	2.2267	0.8567	8.9667	2.0387	6.7867	3.1417	7.5067	2.6867	3.0117	6.8267	2.6267	
Road 11	11	1500-1600	9.7967	2.49037	9.2367	1.0867	1.1865	3.5657	3.4567	8.3227	3.1157	7.5467	2.5867	2.9267	
Road 11	11	1600-1700	9.7967	2.33167	8.8647	8.4247	2.0697	8.0117	3.1967	7.9067	3.0367	2.8747	7.11467	2.7867	
Road 11	11	1700-1800	9.7967	1.45747	3.4667	3.4667	2.4667	2.1757	6.8567	3.4667	2.7667	7.4667	2.4667	2.4667	
Road 11	11	1800-1900	5.5247	1.4687	0.5547	5.0467	1.3467	5.1367	1.5817	6.3367	1.20367	5.3067	2.0067	2.0067	
Road 11	11	1900-2000	3.9367	7.8867	0.3767	3.6667	7.3467	7.8267	1.1757	3.5117	1.1367	1.8367	3.2767	1.2667	
Road 11	11	2000-2100	3.9367	7.8867	0.3767	3.6667	7.3467	7.8267	1.1757	3.5117	1.1367	1.8367	3.2767	1.2667	
Road 11	11	2100-2200	3.8967	5.9647	2.7567	3.5667	5.6367	1.1757	1.8267	1.8267	1.10067	1.71267	1.6267	1.6267	
Road 11	11	2200-2300	4.2467	5.2147	0.2967	3.2147	4.8447	1.8567	1.7057	2.5667	0.8447	1.9217	2.3767	0.9967	
Road 11	11	2300-0000	1.6567	4.1867	1.5167	3.4467	1.5567	1.7367	1.9667	7.6067	1.6267	1.9667	7.1467	0.9467	
Road 12	12	0100-0200	2.2467	1.3647	3.3567	2.0967	1.2777	3.1167	4.7767	2.9067	7.1467	4.4577	2.7067	6.6667	
Road 12	12	0200-0300	2.2467	1.3137	3.3567	2.2167	1.2667	1.10367	4.7467	2.8367	6.9967	4.4577	2.6717	6.5767	
Road 12	12	0300-0400	2.2467	1.2297	3.3567	2.2567	1.2667	1.10367	4.7467	2.8367	6.9967	4.4577	2.6717	6.5767	
Road 12	12	0400-0500	2.2467	1.17367	3.3767	2.1267	1.2667	1.10367	4.8867	3.0067	7.1467	4.4567	2.6667	6.5667	
Road 12	12	0500-0600	2.2467	1.4457	3.4667	2.1267	1.2667	1.10367	4.8867	3.0067	7.1467	4.4567	2.6667	6.5667	
Road 12	12	0600-0700	2.2467	1.3137	3.3567	2.2567	1.2667	1.10367	4.7467	2.8367	6.9967	4.4577	2.6717	6.5767	
Road 12	12	0700-0800	2.9717	7.0967	1.7967	1.6267	1.6267	1.5467	6.3467	1.51167	3.7867	5.6057	1.34067	3.2667	
Road 12	12	0800-0900	2.9717	7.0967	1.7967	1.6267	1.6267	1.5467	6.3467	1.51167	3.7867	5.6057	1.34067	3.2667	
Road 12	12	0900-1000	2.9717	7.0967	1.7967	1.6267	1.6267	1.5467	6.3467	1.51167	3.7867	5.6057	1.34067	3.2667	
Road 12	12	1000-1100	3.1367	7.4567	1.6467	2.67167	3.3667	1.5667	6.6867	1.3967	5.9267	5.6067	1.39067	3.3467	
Road 12	12	1100-1200	3.1367	7.4567	1.6467	2.67167	3.3667	1.5667	6.6867	1.3967	5.9267	5.6067	1.39067	3.3467	
Road 12	12	1200-1300	3.1367	7.4567	1.6467	2.67167	3.3667	1.5667	6.6867	1.3967	5.9267	5.6067	1.39067	3.3467	
Road 12	12	1300-1400	3.1367	7.4567	1.6467	2.67167	3.3667	1.5667	6.6867	1.3967	5.9267	5.6067	1.39067	3.3467	
Road 12	12	1400-1500	3.1367	1.1467	1.75467	1.8667	1.4067	1.5867	6.6967	1.60167	3.9467	5.7367	1.37067	3.3767	
Road 12	12	1500-1600	3.1367	1.1467	1.75467	1.8667	1.4067	1.5867	6.6967	1.60167	3.9467	5.7367	1.37067	3.3767	
Road 12	12	1600-1700	3.0867	7.41167	1.8357	1.6267	1.6267	1.5667	6.5767	1.5867	5.9067	5.6267	1.39067	3.3367	
Road 12	12	1700-1800	3.0867	7.41167	1.8357	1.6267	1.6267	1.5667	6.5767	1.5867	5.9067	5.6267	1.39067	3.3367	
Road 12	12	1800-1900	3.0867	7.41167	1.8357	1.6267	1.6267	1.5667	6.5767	1.5867	5.9067	5.6267	1.39067	3.3367	
Road 12	12	1900-2000	2.1267	1.6027	1.9467	1.3467	1.8717	1.4167	4.4867	4.7367	3.5667	8.7867	4.1367	7.7767	
Road 12	12	2000-2100	2.1267	1.9567	3.8567	1.9667	1.9667	1.4567	4.8367	3.4467	8.4767	4.3467	3.0967	7.6167	
Road 12	12	2100-2200	2.1267	1.9567	3.8567	1.9667	1.9667	1.4567	4.8367	3.4467	8.4767	4.3467	3.0967	7.6167	
Road 12	12	2200-2300	2.2567	1.5967	1.9567	1.3967	1.9767	1.3667	4.2467	3.9967	5.8367	4.3367	3.0467	7.0167	
Road 12	12	2300-0000	2.2567	1.5967	1.9567	1.3967	1.9767	1.3667	4.2467	3.9967	5.8367	4.3367	3.0467	7.0167	
Road 13	13	0100-0200	2.2267	1.3647	3.3567	2.0967	1.2777	3.1167	4.7767	2.9067	7.1467	4.4577	2.7067	6.6667	
Road 13	13	0200-0300	2.2267	1.3137	3.3567	2.2167	1.2667	1.10367	4.7467	2.8367	6.9967	4.4577	2.6717	6.5767	
Road 13	13	0300-0400	2.2267	1.2297	3.3567	2.2567	1.2667	1.10367	4.7467	2.8367	6.9967	4.4577	2.6717	6.5767	
Road 13	13	0400-0500	2.2267	1.17367	3.3767	2.1267	1.2667	1.10367	4.8867	3.0067	7.1467	4.4567	2.6667	6.5667	
Road 13	13	0500-0600	2.2267	1.3967	3.4767	2.1267	1.2667	1.10367	4.8867	3.0067	7.1467	4.4567	2.6667	6.5667	
Road 13	13	0600-0700	2.2267	1.3137	3.3567	2.2567	1.2667	1.10367	4.7467	2.8367	6.9967	4.4577	2.6717	6.5767	
Road 13	13	0700-0800	2.9717	7.0967	1.7967	1.6267	1.6267	1.5467	6.3467	1.51167	3.7867	5.6057	1.34067	3.2667	
Road 13	13	0800-0900	2.9717	7.0967	1.7967	1.6267	1.6267	1.5467	6.3467	1.51167	3.7867	5.6057	1.34067	3.2667	
Road 13	13	0900-1000	2.9717	7.0967	1.7967	1.6267	1.6267	1.5467	6.3467	1.51167	3.7867	5.6057	1.34067	3.2667	
Road 13	13	1000-1100	3.0967	7.3767	1.8167	2.6667	2.9677	1.5767	6.5667	1.5667	5.8867	5.5367	1.33867	3.3667	
Road 13	13	1100-1200	3.0967	7.3767	1.8167	2.6667	2.9677	1.5767	6.5667	1.5667	5.8867	5.5367	1.33867	3.3667	
Road 13	13	1200-1300	3.0967	7.3767	1.8167	2.6667	2.9677	1.5767	6.5667	1.5667	5.8867	5.5367	1.33867	3.3667	
Road 13	13	1300-1400	3.0967	7.3767	1.8167	2.6667	2.9677	1.5767	6.5667	1.5667	5.8867	5.5367	1.33867	3.3667	
Road 13	13	1400-1500	3.1167	1.7457	1.9647	2.6467	3.3267	1.5867	6.6067	1.5867	5.9667	5.6067	1.34067	3.3667	
Road 13	13	1500-1600	3.1267	1.7457	1.9647	2.6467	3.3267	1.5867	6.6067	1.5867	5.9667	5.6067	1.34067	3.3667	
Road 13	13	1600-1700	3.1267	1.7457	1.9647	2.6467	3.3267	1.5867	6.6067	1.5867	5.9667	5.6067	1.34067	3.3667	
Road 13	13	1700-1800	3.1267	1.7457	1.9647	2.6467	3.3267	1.5867	6.6067	1.5867	5.9667	5.6067	1.34067	3.3667	
Road 13	13	1800-1900	3.1267	1.7457	1.9647	2.6467	3.3267	1.5867	6.6067	1.5867	5.9667	5.6067	1.34067	3.3667	
Road 13	13	1900-2000	2.1467	1.5467	3.81167	1.9467	1.3767	4.41167	4.4367	3.3067	8.2467	4.1617	2.9667	7.3767	
Road 13	13	2000-2100	2.1467	1.5467	3.81167	1.9467	1.3767	4.41167	4.4367	3.3067	8.2467	4.1617	2.9667	7.3767	
Road 13	13	2100-2200	2.1467	1.5467	3.81167	1.9467	1.3767	4.41167	4.4367	3.3067	8.2467	4.1617	2.9667	7.3767	
Road 13	13	2200-2300	2.1467	1.5467	3.81167	1.9467	1.3767	4.41167	4.4367	3.3067	8.2467	4.1617	2.9667	7.3767	
Road 13	13	2300-0000	2.1367	1.4467	3.7467	1.9667	1.9117	2.8677	2.2167	4.5767	3.0767	7.6867	4.0767	2.7467	6.8067
Road 14	14	0000-0100	1.5667	0.9667	1.6667	1.3667	1.8767	0.9667	6.51167	4.2067	7.1767	5.9767	3.7167	6.3767	
Road 14	14	0100-0200	1.5667	0.9667	1.6667	1.3667	1.8767	0.9667	6.51167	4.2067	7.1767	5.9767	3.7167	6.3767	
Road 14	14	0200-0300	1.8867	6.0567	1.0367	1.7667	2.57167</								

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

AEMCO model (July)			Year 2038		NO _x Emission				NO _x Emission				
Road Name	Road ID	Hour	Monthly/Average		Monthly/Average		Monthly/Average		Monthly/Average		Monthly/Average		
			g/mph/km	g/mph/km	g/mph/km	g/mph/km	g/mph/km	g/mph/km	g/mph/km	g/mph/km	g/mph/km	ton/a	
Road 14	14	0800-0900	3.28E-02	7.93E-07	1.13E-05	2.81E-02	6.71E-07	1.14E-05	1.19E-01	2.85E-06	4.86E-05	1.01E-01	2.40E-06
Road 14	14	0900-1000	3.75E-02	9.47E-07	1.30E-05	3.26E-02	6.62E-07	1.13E-05	1.37E-01	2.96E-06	4.70E-05	1.19E-01	2.39E-06
Road 14	14	1000-1100	4.10E-02	1.03E-06	1.44E-05	3.59E-02	7.25E-07	1.24E-05	1.54E-01	3.32E-06	5.19E-05	1.34E-01	2.66E-06
Road 14	14	1100-1200	4.05E-02	6.91E-07	1.18E-05	3.46E-02	5.90E-07	1.05E-05	1.44E-01	2.78E-06	4.20E-05	1.22E-01	2.08E-06
Road 14	14	1200-1300	6.00E-02	1.29E-06	2.18E-05	5.13E-02	1.09E-06	1.86E-07	2.02E-01	4.39E-07	3.33E-05	1.71E-01	3.65E-06
Road 14	14	1300-1400	6.00E-02	1.29E-06	2.18E-05	5.13E-02	1.09E-06	1.86E-07	2.02E-01	4.39E-07	3.33E-05	1.71E-01	3.65E-06
Road 14	14	1400-1500	6.31E-02	1.47E-06	2.50E-05	5.58E-02	1.29E-06	2.14E-07	2.31E-01	5.01E-06	3.55E-05	1.83E-01	4.26E-06
Road 14	14	1500-1600	5.91E-02	1.41E-06	2.41E-05	5.49E-02	1.19E-06	2.02E-07	2.28E-01	5.21E-06	3.88E-05	1.82E-01	4.38E-06
Road 14	14	1600-1700	5.91E-02	1.41E-06	2.41E-05	5.49E-02	1.19E-06	2.02E-07	2.28E-01	5.21E-06	3.88E-05	1.82E-01	4.38E-06
Road 14	14	1700-1800	4.51E-02	1.18E-06	2.01E-05	3.86E-02	1.01E-06	1.72E-07	1.77E-01	4.48E-06	3.05E-05	1.46E-01	3.90E-06
Road 14	14	1800-1900	3.25E-02	8.47E-07	1.44E-05	2.78E-02	7.28E-07	1.24E-05	1.28E-01	3.00E-06	4.65E-05	1.04E-01	2.72E-06
Road 14	14	1900-2000	2.17E-02	5.60E-07	9.37E-06	1.87E-02	3.71E-07	6.42E-06	7.23E-02	1.62E-06	2.45E-05	5.54E-02	1.23E-06
Road 14	14	2000-2100	1.95E-02	3.07E-07	5.23E-06	1.00E-02	2.17E-07	4.72E-06	9.92E-03	3.88E-06	3.55E-05	9.97E-02	1.28E-06
Road 14	14	2100-2200	1.93E-02	2.97E-07	5.06E-06	1.72E-02	2.64E-07	4.56E-06	8.89E-03	3.76E-06	3.34E-05	7.88E-02	1.20E-06
Road 15	15	0700-0800	2.97E-02	7.38E-07	1.09E-05	2.68E-02	6.42E-07	1.13E-05	1.19E-01	2.85E-06	4.86E-05	1.01E-01	2.40E-06
Road 15	15	0800-0900	2.00E-02	2.97E-07	3.83E-06	1.78E-02	2.09E-07	4.52E-06	9.56E-07	1.63E-05	4.43E-05	4.34E-02	8.96E-07
Road 15	15	0900-1000	2.50E-02	4.41E-06	4.08E-07	2.32E-02	3.99E-07	3.67E-07	8.08E-02	4.43E-07	3.32E-06	2.0E-02	1.27E-07
Road 15	15	1000-1100	3.30E-02	8.19E-06	5.49E-07	3.06E-02	5.34E-07	2.16E-06	1.24E-01	7.44E-06	5.01E-05	6.93E-07	1.68E-07
Road 15	15	1100-1200	3.52E-02	3.52E-06	3.96E-07	3.25E-02	3.31E-07	3.07E-07	9.72E-06	7.88E-06	9.98E-07	1.02E-01	9.09E-08
Road 15	15	1200-1300	4.09E-02	3.48E-06	3.72E-07	3.17E-02	3.20E-07	2.96E-07	1.09E-01	9.25E-07	8.57E-07	9.91E-02	8.48E-07
Road 15	15	1300-1400	4.09E-02	3.48E-06	3.72E-07	3.17E-02	3.20E-07	2.96E-07	1.09E-01	9.25E-07	8.57E-07	9.91E-02	8.48E-07
Road 15	15	1400-1500	4.09E-02	3.48E-06	3.72E-07	3.17E-02	3.20E-07	2.96E-07	1.09E-01	9.25E-07	8.57E-07	9.91E-02	8.48E-07
Road 15	15	1500-1600	3.27E-02	4.48E-06	4.12E-07	3.03E-02	4.14E-08	3.81E-08	9.76E-03	1.33E-07	1.23E-06	5.87E-02	1.22E-07
Road 15	15	1600-1700	2.50E-02	6.62E-06	4.26E-07	2.30E-02	2.93E-08	5.52E-07	8.78E-02	2.28E-07	2.11E-06	7.79E-02	2.02E-07
Road 15	15	1700-0800	4.20E-02	6.42E-06	1.19E-06	3.39E-02	2.41E-07	1.98E-06	1.25E-01	7.27E-07	6.73E-06	1.09E-01	6.30E-07
Road 15	15	1800-1900	2.17E-02	5.17E-07	3.19E-06	3.96E-02	2.34E-07	2.16E-06	1.24E-01	7.44E-06	5.01E-05	6.93E-07	1.68E-07
Road 15	15	1900-2000	4.59E-02	2.61E-07	2.42E-06	3.99E-02	2.27E-07	2.10E-06	1.38E-01	4.84E-07	2.56E-06	1.19E-01	6.76E-07
Road 15	15	2000-1100	5.04E-02	2.96E-07	2.99E-06	4.30E-02	2.26E-07	2.06E-06	1.47E-01	7.54E-07	3.98E-06	1.29E-01	6.39E-07
Road 15	15	1000-1200	5.02E-02	3.02E-07	3.02E-06	4.28E-02	2.24E-07	2.04E-06	1.45E-01	7.48E-07	3.95E-06	1.27E-01	6.35E-07
Road 15	15	1200-1300	6.01E-02	4.43E-07	4.10E-06	5.19E-02	3.83E-07	3.55E-06	1.84E-01	3.69E-06	2.26E-05	1.58E-01	1.17E-06
Road 15	15	1300-1400	6.20E-02	4.80E-07	4.44E-06	5.29E-02	4.09E-07	3.78E-06	1.97E-01	4.02E-06	2.41E-05	1.67E-01	1.20E-06
Road 15	15	1400-1500	6.10E-02	4.80E-07	4.44E-06	5.29E-02	4.09E-07	3.78E-06	1.97E-01	4.02E-06	2.41E-05	1.67E-01	1.20E-06
Road 15	15	1500-1600	5.87E-02	4.61E-07	4.46E-06	4.91E-02	4.03E-07	3.73E-06	1.91E-01	4.60E-06	4.48E-05	1.62E-01	1.33E-06
Road 15	15	1600-1700	5.78E-02	4.82E-07	4.49E-06	4.94E-02	4.12E-07	3.81E-06	1.81E-01	4.50E-06	4.05E-05	1.54E-01	1.20E-06
Road 15	15	1700-1800	4.76E-02	4.15E-07	3.92E-06	4.15E-02	3.35E-07	3.13E-06	1.51E-01	3.82E-06	3.19E-05	1.33E-01	1.09E-06
Road 15	15	1800-1900	3.92E-02	3.42E-07	3.17E-06	3.38E-02	2.99E-07	2.73E-07	1.27E-01	3.15E-06	1.02E-05	1.08E-01	9.46E-07
Road 15	15	1900-2000	2.18E-02	1.93E-07	1.24E-06	1.81E-02	1.17E-07	1.09E-06	8.58E-02	9.25E-07	8.88E-06	4.58E-05	4.55E-07
Road 15	15	2000-1100	2.18E-02	1.93E-07	1.24E-06	1.81E-02	1.17E-07	1.09E-06	8.58E-02	9.25E-07	8.88E-06	4.58E-05	4.55E-07
Road 15	15	1100-1200	2.12E-02	1.60E-07	9.53E-07	1.89E-02	9.21E-08	8.52E-07	8.75E-02	2.56E-07	3.94E-06	7.0E-02	3.74E-07
Road 15	15	2200-2300	2.13E-02	8.93E-08	9.20E-07	1.88E-02	8.55E-08	7.86E-07	8.52E-07	9.07E-07	8.77E-06	1.96E-02	3.95E-07
Road 15	15	2300-0000	2.13E-02	8.93E-08	9.20E-07	1.88E-02	8.55E-08	7.86E-07	8.52E-07	9.07E-07	8.77E-06	1.96E-02	3.95E-07
Road 16	16	0800-0900	6.88E-03	4.61E-06	1.41E-06	6.21E-03	4.16E-07	1.32E-06	6.82E-01	1.63E-06	1.11E-05	3.55E-02	2.88E-07
Road 16	16	0900-1000	7.42E-03	3.26E-06	1.00E-06	6.91E-03	3.04E-08	9.37E-07	4.05E-07	7.85E-06	4.68E-02	1.62E-07	4.47E-07
Road 16	16	1000-1100	9.21E-03	3.26E-06	1.00E-06	6.91E-03	3.04E-08	9.37E-07	4.05E-07	7.85E-06	4.68E-02	1.62E-07	4.47E-07
Road 16	16	1100-1200	9.05E-03	2.74E-06	7.71E-07	8.73E-03	2.15E-08	5.65E-07	4.41E-02	1.14E-07	1.50E-07	9.03E-07	3.10E-07
Road 16	16	1200-1300	9.60E-03	2.74E-06	8.36E-07	8.73E-03	2.48E-08	7.61E-07	4.05E-02	3.62E-07	6.03E-06	4.12E-07	1.17E-07
Road 16	16	1300-1400	9.21E-03	3.26E-06	1.00E-06	6.91E-03	3.04E-08	9.37E-07	4.05E-07	7.85E-06	4.68E-02	1.62E-07	4.47E-07
Road 16	16	1400-1500	9.05E-03	2.74E-06	7.71E-07	8.73E-03	2.15E-08	5.65E-07	4.41E-02	1.14E-07	1.50E-07	9.03E-07	3.10E-07
Road 16	16	1500-1600	9.60E-03	2.74E-06	8.36E-07	8.73E-03	2.48E-08	7.61E-07	4.05E-02	3.62E-07	6.03E-06	4.12E-07	1.17E-07
Road 16	16	1600-1700	9.21E-03	3.26E-06	1.00E-06	6.91E-03	3.04E-08	9.37E-07	4.05E-07	7.85E-06	4.68E-02	1.62E-07	4.47E-07
Road 16	16	1700-1800	9.05E-03	2.74E-06	7.71E-07	8.73E-03	2.15E-08	5.65E-07	4.41E-02	1.14E-07	1.50E-07	9.03E-07	3.10E-07
Road 16	16	1800-1900	9.60E-03	2.74E-06	8.36E-07	8.73E-03	2.48E-08	7.61E-07	4.05E-02	3.62E-07	6.03E-06	4.12E-07	1.17E-07
Road 16	16	1900-2000	9.21E-03	3.26E-06	1.00E-06	6.91E-03	3.04E-08	9.37E-07	4.05E-07	7.85E-06	4.68E-02	1.62E-07	4.47E-07
Road 16	16	2000-1100	9.05E-03	2.74E-06	7.71E-07	8.73E-03	2.15E-08	5.65E-07	4.41E-02	1.14E-07	1.50E-07	9.03E-07	3.10E-07
Road 16	16	2100-2200	9.60E-03	2.74E-06	8.36E-07	8.73E-03	2.48E-08	7.61E-07	4.05E-02	3.62E-07	6.03E-06	4.12E-07	1.17E-07
Road 16	16	2200-2300	9.21E-03	3.26E-06	1.00E-06	6.91E-03	3.04E-08	9.37E-07	4.05E-07	7.85E-06	4.68E-02	1.62E-07	4.47E-07
Road 16	16	2300-0000	9.05E-03	2.74E-06	7.71E-07	8.73E-03	2.15E-08	5.65E-07	4.41E-02	1.14E-07	1.50E-07	9.03E-07	3.10E-07
Road 16	16	0700-0800	1.42E-02	1.03E-07	9.79E-06	1.03E-02	2.64E-07	1.00E-06	6.44E-02	3.24E-07	2.38E-05	6.47E-02	1.17E-06
Road 16	16	0800-0900	1.85E-02	1.03E-07	9.79E-06	1.03E-02	2.64E-07	1.00E-06	6.44E-02	3.24E-07	2.38E-05	6.47E-02	1.17E-06
Road 16	16	0900-1000	1.68E-02	3.52E-07	1.89E-06	1.45E-02	3.02E-07	1.33E-06	7.36E-02	3.54E-06	1.73E-05	6.26E-02	2.31E-06
Road 16	16	1000-1100	1.70E-02	3.24E-07	9.94E-06	1.50E-02	2.77E-07	8.48E-06	7.48E-02	3.77E-06	2.11E-05	6.26E-02	1.15E-06
Road 16	16	1100-1200	1.68E-02	3.52E-07	1.89E-06	1.45E-02	3.02E-07	1.33E-06	7.36E-02	3.54E-06	1.73E-05	6.26E-02	2.31E-06
Road 16	16	1200-1300	2.96E-02	6.07E-06	1.87E-05	2.56E-02	5.27E-07	1.62E-05	1.11E-01	2.88E-06	6.00E-05	9.51E-02	1.96E-06
Road 16	16	1300-1400	3.18E-02	6.88E-07	2.11E-06	2.68E-02	5.81E-07	1.78E-06	1.12E-01	2.66E-06	8.15E-05	1.03E-01	2.23E-06
Road 16	16	1400-1500	3.40E-02	7.68E-07	2.29E-06	2.88E-02	6.49E-07	1.99E-06	1.26E-01	2.88E-06	8.38E-05	1.07E-01	2.41E-06
Road 16	16	1500-1600	3.40E-02	7.68E-07	2.29E-06	2.88E-02	6.49E-07	1.99E-06	1.26E-01	2.88E-06	8.38E-05	1.07E-01	2.41E-06
Road 16	16	1600-1700	3.37E-02	8.01E-07	2.46E-06	2.88E-02	6.99E-07	2.10E-06	1.26E-01	3.00E-06	9.18E-05	1.07E-01	2.54E-06
Road 16	16	1700-1800	2.51E-02	6.39E-07	1.96E-05	2.13E-02	5.41E-07	1.86E-05	1.07E-01	1.72E-06	3.04E-05	8.97E-02	2.20E-06
Road 16	16	1800-1900	2.51E-02	6.39E-07	1.96E-05	2.13E-02	5.41						

Appendix 4.5 Calculation of Vehicular Em

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

AERMOD model (July)			Year 2038		NO _x Emission				NO Emission			
Read Name	Read ID	Hour	Monthlyhour/m	Monthlyhour/m	Monthlyhour/m	Monthlyhour/m	Monthlyhour/m	Monthlyhour/m	Monthlyhour/m	Monthlyhour/m	Monthlyhour/m	
			g/m ³ /eq	g/m ³ /eq	g/m ³ /eq	g/m ³ /eq	g/m ³ /eq	g/m ³ /eq	g/m ³ /eq	g/m ³ /eq	g/m ³ /eq	
Read 17	1600-1700	1	5.94/e2	1.54/e-6	4.51/e-6	5.08/e-2	1.32/e-6	3.86/e-5	2.13/e-1	5.54/e-6	1.62/e-4	1.81/e-1
Read 17	1700-1800	2	4.06/e2	1.08/e-6	3.15/e-6	3.40/e-2	9.17/e-7	2.68/e-5	1.64/e-1	4.41/e-6	1.29/e-4	3.32/e-6
Read 17	1800-1900	3	4.06/e2	1.08/e-6	3.15/e-6	3.40/e-2	9.17/e-7	2.68/e-5	1.64/e-1	4.41/e-6	1.29/e-4	3.32/e-6
Read 17	1900-2000	4	1.29/e2	2.48/e-7	7.52/e-16	1.13/e-2	0.11/e-7	6.37/e-6	6.07/e-2	1.17/e-6	3.41/e-5	5.24/e-10
Read 17	2000-2100	5	1.08/e2	1.67/e-7	4.75/e-16	9.55/e-4	1.44/e-7	4.21/e-6	5.61/e-2	8.48/e-7	2.34/e-5	4.68/e-7
Read 17	2100-2200	6	1.08/e2	1.67/e-7	4.75/e-16	9.55/e-4	1.44/e-7	4.21/e-6	5.61/e-2	8.48/e-7	2.34/e-5	4.68/e-7
Read 17	2200-2300	7	1.09/e2	1.57/e-7	4.58/e-16	9.45/e-4	1.38/e-7	3.96/e-6	5.51/e-2	7.99/e-7	2.47/e-5	4.68/e-7
Read 17	2300-0000	8	1.12/e2	2.23/e-6	6.07/e-6	1.00/e-1	3.21/e-6	5.52/e-2	6.06/e-7	1.77/e-5	4.87/e-2	5.26/e-7
Read 18	0000-0100	9	8.65/e3	4.53/e-2	7.71/e-2	6.89/e-2	2.99/e-6	1.17/e-4	6.04/e-2	3.75/e-7	9.84/e-6	3.66/e-1
Read 18	0100-0200	10	8.11/e3	6.66/e-10	0.01/e-6	7.80/e-3	2.43/e-6	9.51/e-7	1.15/e-1	1.38/e-7	3.16/e-6	3.87/e-2
Read 18	0200-0300	11	8.65/e3	2.73/e-2	4.83/e-2	6.89/e-2	2.99/e-6	1.17/e-4	6.04/e-2	3.75/e-7	9.84/e-6	3.66/e-1
Read 18	0400-0500	12	8.11/e3	6.66/e-10	0.01/e-6	7.80/e-3	2.43/e-6	9.57/e-7	4.55/e-2	1.26/e-7	5.00/e-1	4.11/e-2
Read 18	0500-0600	13	9.70/e3	6.68/e-8	8.87/e-4	8.37/e-3	1.69/e-6	1.43/e-5	2.28/e-7	1.88/e-6	4.36/e-2	2.08/e-7
Read 18	0600-0700	14	1.08/e2	1.67/e-7	4.75/e-16	9.55/e-4	1.44/e-7	4.21/e-6	5.61/e-2	8.48/e-7	2.34/e-5	4.68/e-7
Read 18	0700-0800	15	1.14/e2	2.45/e-7	9.37/e-6	9.85/e-3	2.08/e-7	8.12/e-6	5.47/e-1	1.15/e-5	4.51/e-1	9.72/e-7
Read 18	0800-0900	16	1.13/e2	2.75/e-7	1.07/e-6	9.70/e-3	2.37/e-7	9.25/e-6	5.28/e-2	1.29/e-6	5.50/e-5	4.54/e-1
Read 18	0900-1000	17	1.08/e2	1.67/e-7	4.75/e-16	9.55/e-4	1.44/e-7	4.21/e-6	5.61/e-2	8.48/e-7	2.34/e-5	4.68/e-7
Read 18	1000-1100	18	1.51/e2	2.75/e-7	1.07/e-6	1.26/e-3	2.93/e-7	9.18/e-6	5.28/e-2	1.29/e-6	4.67/e-5	1.09/e-6
Read 18	1100-1200	19	1.46/e2	2.51/e-7	9.81/e-6	1.24/e-2	3.17/e-7	8.13/e-6	5.54/e-1	1.17/e-6	4.45/e-5	5.46/e-2
Read 18	1200-1300	20	2.03/e2	4.33/e-7	1.08/e-6	1.72/e-2	3.87/e-7	1.44/e-5	1.95/e-2	1.76/e-6	6.97/e-5	1.58/e-6
Read 18	1300-1400	21	2.03/e2	4.33/e-7	1.08/e-6	1.72/e-2	3.87/e-7	1.44/e-5	1.95/e-2	1.76/e-6	6.97/e-5	1.58/e-6
Read 18	1400-1500	22	2.04/e2	4.54/e-7	1.77/e-5	1.72/e-2	3.84/e-7	1.50/e-5	8.73/e-2	1.83/e-6	7.18/e-6	6.81/e-2
Read 18	1500-1600	23	1.91/e2	4.36/e-7	1.71/e-5	1.59/e-2	3.65/e-7	1.43/e-5	8.36/e-2	1.97/e-6	7.65/e-6	6.95/e-2
Read 18	1600-1700	24	1.92/e2	4.50/e-7	1.76/e-5	1.62/e-2	3.68/e-7	1.50/e-5	7.76/e-2	1.83/e-6	7.18/e-6	6.81/e-2
Read 18	1700-1800	25	1.44/e2	6.61/e-7	1.41/e-5	1.22/e-2	3.07/e-7	1.20/e-5	6.69/e-2	1.68/e-5	4.57/e-1	6.51/e-1
Read 18	1800-1900	26	1.08/e2	1.66/e-7	4.64/e-6	9.13/e-3	2.30/e-7	8.89/e-6	5.43/e-2	1.27/e-6	4.98/e-5	4.28/e-1
Read 18	1900-2000	27	1.23/e2	1.73/e-7	5.71/e-6	1.14/e-2	3.03/e-7	1.06/e-5	6.03/e-2	1.47/e-6	5.19/e-5	5.61/e-1
Read 18	2000-2100	28	8.57/e3	3.30/e-7	1.07/e-6	7.55/e-3	1.14/e-7	4.47/e-6	4.71/e-2	7.13/e-7	2.79/e-6	4.08/e-2
Read 18	2100-2200	29	8.13/e3	2.42/e-7	8.84/e-6	7.29/e-3	1.10/e-7	4.31/e-6	4.70/e-2	7.11/e-7	2.79/e-6	4.08/e-2
Read 18	2200-2300	30	8.57/e3	3.30/e-7	1.07/e-6	7.55/e-3	1.14/e-7	4.47/e-6	4.71/e-2	7.13/e-7	2.79/e-6	4.08/e-2
Read 18	2300-0000	31	8.87/e3	8.77/e-6	3.82/e-6	7.90/e-3	8.69/e-6	3.40/e-6	4.68/e-2	5.16/e-7	2.01/e-5	4.08/e-2
Read 19	0000-0100	1	8.43/e3	3.55/e-12	2.12/e-16	7.61/e-4	6.63/e-6	1.91/e-6	4.55/e-2	3.97/e-4	1.14/e-2	3.41/e-4
Read 19	0100-0200	2	8.43/e3	3.55/e-12	2.12/e-16	7.61/e-4	6.63/e-6	1.91/e-6	4.55/e-2	3.97/e-4	1.14/e-2	3.41/e-4
Read 19	0200-0300	3	8.43/e3	3.55/e-12	2.12/e-16	7.61/e-4	6.63/e-6	1.91/e-6	4.55/e-2	3.97/e-4	1.14/e-2	3.41/e-4
Read 19	0300-0400	4	9.65/e3	4.12/e-6	1.19/e-10	9.06/e-6	3.87/e-8	1.11/e-6	6.88/e-2	2.00/e-7	5.76/e-5	4.32/e-1
Read 19	0400-0500	5	9.65/e3	4.12/e-6	1.19/e-10	9.06/e-6	3.87/e-8	1.11/e-6	6.88/e-2	2.00/e-7	5.76/e-5	4.32/e-1
Read 19	0500-0600	6	9.65/e3	4.12/e-6	1.19/e-10	9.06/e-6	3.87/e-8	1.11/e-6	6.88/e-2	2.00/e-7	5.76/e-5	4.32/e-1
Read 19	0600-0700	7	1.23/e2	1.67/e-7	4.64/e-6	1.00/e-1	3.15/e-6	4.50/e-5	5.70/e-2	8.07/e-6	2.58/e-5	5.04/e-1
Read 19	0700-0800	8	1.07/e2	1.67/e-7	4.64/e-6	1.00/e-1	3.15/e-6	4.50/e-5	5.70/e-2	8.07/e-6	2.58/e-5	5.04/e-1
Read 19	0800-0900	9	1.42/e2	4.81/e-7	1.39/e-15	1.23/e-4	4.17/e-7	1.20/e-6	6.36/e-2	2.15/e-6	6.39/e-5	5.39/e-1
Read 19	0900-1000	10	1.62/e2	4.84/e-7	1.39/e-15	1.40/e-4	4.15/e-7	1.20/e-6	7.20/e-2	2.15/e-6	6.39/e-5	5.13/e-1
Read 19	1000-1100	11	1.62/e2	4.84/e-7	1.39/e-15	1.40/e-4	4.15/e-7	1.20/e-6	7.20/e-2	2.15/e-6	6.39/e-5	5.13/e-1
Read 19	1100-1200	12	1.77/e2	4.47/e-7	1.29/e-15	1.51/e-4	3.81/e-7	1.10/e-6	7.54/e-2	1.93/e-6	5.55/e-5	6.41/e-1
Read 19	1200-1300	13	2.44/e2	4.05/e-7	1.55/e-15	2.00/e-4	4.17/e-7	1.33/e-6	9.40/e-2	2.09/e-6	6.05/e-5	7.68/e-1
Read 19	1300-1400	14	2.44/e2	4.05/e-7	1.55/e-15	2.00/e-4	4.17/e-7	1.33/e-6	9.40/e-2	2.09/e-6	6.05/e-5	7.68/e-1
Read 19	1400-1500	15	2.25/e2	4.12/e-7	1.17/e-15	2.04/e-4	5.17/e-7	1.49/e-6	8.65/e-2	2.40/e-6	6.90/e-5	7.91/e-1
Read 19	1500-1600	16	2.42/e2	4.89/e-7	1.70/e-15	1.87/e-4	4.90/e-7	1.41/e-6	9.05/e-2	2.51/e-6	7.29/e-5	7.04/e-1
Read 19	1600-1700	17	1.93/e2	4.38/e-7	1.51/e-15	1.71/e-4	4.76/e-7	1.28/e-6	8.15/e-2	2.34/e-6	6.84/e-5	6.59/e-1
Read 19	1700-1800	18	1.74/e2	4.72/e-7	1.36/e-15	1.48/e-4	4.01/e-7	1.16/e-6	7.85/e-2	2.13/e-6	6.14/e-5	6.61/e-1
Read 19	1800-1900	19	1.27/e2	4.02/e-7	1.40/e-16	1.10/e-2	2.82/e-7	8.12/e-6	5.92/e-2	1.55/e-6	4.39/e-5	1.39/e-6
Read 19	1900-2000	20	1.04/e2	3.58/e-7	1.16/e-16	9.11/e-4	2.61/e-7	7.16/e-6	5.10/e-2	1.30/e-6	3.41/e-5	1.03/e-6
Read 19	2000-2100	21	1.04/e2	3.58/e-7	1.16/e-16	9.11/e-4	2.61/e-7	7.16/e-6	5.10/e-2	1.30/e-6	3.41/e-5	1.03/e-6
Read 19	2100-2200	22	1.02/e2	3.56/e-7	4.57/e-16	9.22/e-4	1.00/e-7	4.03/e-6	4.54/e-2	8.29/e-7	2.37/e-5	4.69/e-1
Read 19	2200-2300	23	1.02/e2	3.56/e-7	4.57/e-16	9.12/e-4	1.39/e-7	4.03/e-6	5.44/e-2	8.29/e-7	2.36/e-5	4.74/e-1
Read 19	2300-0000	24	1.08/e2	3.42/e-7	4.48/e-16	9.10/e-4	1.32/e-7	3.81/e-6	5.40/e-2	7.81/e-7	2.25/e-5	4.98/e-7
Read 20	0000-0100	1	2.28/e2	1.14/e-6	3.44/e-6	1.11/e-2	3.20/e-7	1.06/e-6	6.86/e-2	1.61/e-6	4.59/e-5	1.31/e-6
Read 20	0100-0200	2	3.49/e2	5.45/e-6	4.68/e-7	3.24/e-3	2.99/e-8	4.35/e-7	1.33/e-1	9.71/e-6	1.76/e-6	1.24/e-1
Read 20	0200-0300	3	3.49/e2	5.45/e-6	4.68/e-7	3.24/e-3	2.99/e-8	4.35/e-7	1.33/e-1	9.71/e-6	1.76/e-6	1.24/e-1
Read 20	0300-0400	4	3.59/e2	1.69/e-11	1.01/e-17	3.40/e-2	1.59/e-8	2.94/e-7	1.36/e-1	6.37/e-6	1.17/e-6	6.02/e-8
Read 20	0400-0500	5	3.72/e2	2.02/e-8	3.72/e-3	3.48/e-4	1.88/e-7	3.47/e-7	1.41/e-1	7.67/e-6	1.45/e-6	1.31/e-1
Read 20	0500-0600	6	3.72/e2	2.02/e-8	3.72/e-3	3.48/e-4	1.88/e-7	3.47/e-7	1.41/e-1	7.67/e-6	1.45/e-6	1.31/e-1
Read 20	0600-0700	7	4.32/e2	8.57/e-76	7.76/e-16	3.51/e-2	8.67/e-10	1.60/e-6	1.031/e-1	3.57/e-7	8.58/e-1	3.23/e-7
Read 20	0700-0800	8	4.24/e2	2.36/e-7	3.39/e-4	2.90/e-6	3.00/e-7	3.80/e-6	1.86/e-1	8.75/e-7	1.61/e-5	1.82/e-1
Read 20	0800-0900	9	4.24/e2	2.36/e-7	3.39/e-4	2.90/e-6	3.00/e-7	3.80/e-6	1.86/e-1	8.75/e-7	1.61/e-5	1.82/e-1
Read 20	0900-1000	10	5.68/e2	3.38/e-3	6.23/e-6	4.88/e-2	2.90/e-7	5.35/e-6	2.17/e-1	1.29/e-6	2.36/e-5	1.86/e-1
Read 20	1000-1100	11	6.23/e2	3.58/e-7	6.63/e-36	3.35/e-2	3.07/e-7	5.67/e-6	2.25/e-1	1.29/e-6	2.36/e-5	1.93/e-1
Read 20	1100-1200	12	6.23/e2	3.58/e-7	6.63/e-36	3.35/e-2	3.07/e-7	5.67/e-6	2.25/e-1	1.29/e-6	2.36/e-5	1.93/e-1
Read 20	1200-1300	13	6.22/e2	3.11/e-7	6.78/e-36	5.26/e-2	3.67/e-7	4.96/e-6	2.17/e-1	1.11/e-6	2.05/e-5	1.83/e-1
Read 20	1300-1400	14	6.22/e2	3.54/e-7	6.53/e-36	5.30/e-2	3.01/e-7	5.56/e-6	2.27/e-1	1.29/e-6	2.36/e-5	1.93/e-1
Read 20	1400-1500	15	6.22/e2	3.54/e-7	6.53/e-36	5.30/e-2	3.01/e-7	5.56/e-6	2.27/e-1	1.29/e-6	2.36/e-5	1.93/e-1
Read 20	1500-1600	16	5.80/e2	4.44/e-7	3.34/e-4	4.86/e-2	2.38/e-7	5.31/e-6	2.26/e-1	1.34/e-6	2.47/e-5	1.96/e-1
Read 20	1600-1700	17	5.84/e2	2.37/e-7	6.07/e-36	4.99/e-2	2.78/e-7	5.14/e-6	2.13/e-1	1.19/e-6	2.16/e-5	1.81/e-1
Read 20	1700-1800	18	5.77/e2	7.52/e-7	4.65/e-36	4.99/e-2	2.78/e-7	5.14/e-6	2.13/e-1	1.19/e-6	2.16/e-5	1.81/e-1
Read 20	1800-1900	19	3.77/e2	5.51/e-7	2.81/e-36	3.37/e-2	1.73/e-7	2.24/e-6	1.60/e-1	6.49/e-7	1.25/e-5	3.93/e-7
Read 20	1900-2000	20	3.33/e2	3.34/e-8	7.78/e-36	2.95/e-2	8.67/e-10	1.52/e-6	1.38/e-1	3.86/e-7	7.16/e-6	1.27/e-2
Read 20	2000-2100	21	3.33/e2	3.34/e-8	7.78/e-36	2.95/e-2	8.67/e-10	1.52/e-6	1.38/e-1	3.86/e-7	7.16/e-6	1.27/e-2
Read 20	2100-2200	22	3.28/e2	4.11/e-7	3.37/e-36	2.92/e-2	6.02/e-10	1.22/e-6	1.41/e-1	3.18/e-7	5.98/e-7	1.25/e-2
Read 20	2200-2300	23	3.24/e2	7.06/e-8	1.30/e-36	3.00/e-2	6.12/e-10	1.13/e-6	1.35/e-1	2.76/e-7	5.16/e-7	1.11/e-2
Read 20	2300-0000	24	3.46/e2	1.67/e-8	1.03/e-36	3.13/e-2	6.07/e-10	9.35/e-7	1.55/e			

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

AERMOD model (July)													
		Year 2038											
		Road ID		NO _x Emission						NO ₂ Emission			
				Monthly/mg		Monthly/mg/hour		Monthly/mg/hour		Monthly/mg/hour		Monthly/mg	
hour	road	g/sec	g/h	g/sec	g/h	g/sec	g/h	g/sec	g/h	g/sec	g/h	g/sec	g/h
-04	road 21	0000-0320	3.6263	6.6568	8.7867	8.6963	6.0118	7.9467	4.9262	3.4067	4.4936	4.3562	3.03
-04	road 21	0320-0340	1.0262	4.6668	6.1667	9.4363	4.3268	8.7167	4.9462	2.7067	2.9968	4.5312	2.69
-04	road 21	0340-0360	1.0262	4.6668	6.1667	10.2763	4.4763	8.7167	4.9462	2.7067	2.9968	4.5312	2.69
-04	road 21	0360-0400	1.0262	4.6668	6.1667	11.0668	3.0067	8.7167	5.2262	1.4467	1.8968	4.6862	1.93
-04	road 21	0400-0430	1.2362	3.7668	4.9167	1.1262	3.5068	4.6367	5.5062	1.8267	2.2268	5.0662	1.65
-04	road 21	0430-0460	1.2362	3.7668	4.9167	1.1262	3.5068	4.6367	5.5062	1.8267	2.2268	5.0662	1.65
-04	road 21	0460-0490	1.3762	1.5867	2.0962	1.2467	1.4367	1.8967	6.1712	7.1167	9.4068	5.4962	6.33
-04	road 21	0490-0500	1.6062	3.7667	5.0116	3.3968	3.2967	4.3567	6.7032	1.6765	2.2115	6.0032	1.47
-04	road 21	0500-0530	1.6062	3.7667	5.0116	3.3968	3.2967	4.3567	6.7032	1.6765	2.2115	6.0032	1.47
-04	road 21	0530-1000	1.9562	4.8967	6.4667	1.6867	1.1967	5.7462	8.3862	2.1067	2.7715	7.3362	2.02
-04	road 21	1000-1100	2.1262	4.7967	6.5362	1.6867	1.4267	5.4462	8.8662	1.9968	2.5968	7.3762	2.03
-04	road 21	1100-1200	2.1262	4.7967	6.5362	1.4267	1.7367	5.4462	8.8662	1.9968	2.5968	7.3762	2.03
-04	road 21	1200-1300	2.1262	4.7967	6.5362	2.1267	5.5762	5.6862	1.9968	2.5968	2.5116	4.6462	1.66
-04	road 21	1300-1400	2.9862	4.6467	7.2062	2.2667	6.6362	6.1362	1.0267	1.0162	2.8968	8.8662	1.83
-04	road 21	1400-1430	2.6862	7.6312	3.3967	2.3067	2.3067	6.1362	1.0267	1.0162	2.8968	8.8662	1.83
-04	road 21	1430-1460	2.5562	7.7362	2.0867	2.6567	6.1462	1.0462	2.3362	3.0067	6.7062	1.99	
-04	road 21	1460-1500	2.5262	5.5967	7.3962	2.1567	4.7767	6.3062	9.9362	4.1262	2.8968	8.3362	1.88
-04	road 21	1500-1530	2.5262	5.5967	7.3962	2.1567	4.7767	6.3062	9.9362	4.1262	2.8968	8.3362	1.88
-04	road 21	1530-1600	2.4262	2.9012	3.8667	1.2162	5.3362	3.9562	4.6562	1.1962	1.7962	5.5462	1.11
-04	road 21	1600-1700	1.1862	1.8467	2.4362	1.0462	1.6262	2.1562	5.5362	5.6362	8.8067	7.1162	4.9032
-04	road 21	1700-1800	1.1862	1.8467	2.4362	1.0462	1.6262	2.1562	5.5362	5.6362	8.8067	7.1162	4.9032
-04	road 21	1800-1900	1.1862	1.8467	2.4362	1.0462	1.6262	2.1562	5.5362	5.6362	8.8067	7.1162	4.9032
-04	road 21	1900-2000	1.1862	1.8467	2.4362	1.0462	1.6262	2.1562	5.5362	5.6362	8.8067	7.1162	4.9032
-04	road 21	2000-2100	1.1862	1.8467	2.4362	1.0462	1.6262	2.1562	5.5362	5.6362	8.8067	7.1162	4.9032
-04	road 21	2100-2200	1.1862	1.8467	2.4362	1.046							
-04	road 22	2200-2300	1.1262	1.3867	1.7762	1.4862	1.0162	1.1767	1.5562	8.7462	6.6767	8.8262	4.6362
-04	road 21	2300-2400	1.2262	1.0967	1.4762	1.7462	0.9462	0.7462	1.2962	5.7862	6.1672	6.8262	5.0962
-04	road 22	0000-1000	1.0762	3.9067	3.9067	8.9862	0.1867	0.1867	1.2116	3.8862	4.74	8.4362	5.01
-04	road 22	0100-0200	1.0162	8.5718	1.5362	3.9662	0.9762	1.4262	3.6662	1.4132	5.5662	3.4062	2.89
-04	road 22	0200-0300	0.6262	8.4918	1.1462	9.0362	0.6008	1.0716	3.5062	2.3367	4.1362	3.2862	2.11
-04	road 22	0300-0400	0.9662	5.4162	1.3362	1.3362	1.3362	1.3362	1.3362	1.3362	1.3362	1.3362	1.3362
-04	road 22	0400-0500	0.9662	6.5062	1.1862	9.3062	0.6068	1.0668	3.6262	2.3662	4.2116	3.8632	2.29
-04	road 22	0500-0600	1.1462	1.3712	2.4462	1.0662	1.2712	2.2712	4.1262	4.9462	8.8062	3.8832	4.45
-04	road 22	0600-0700	0.9662	1.3712	2.4462	1.0662	1.2712	2.2712	4.1262	4.9462	8.8062	3.8832	4.45
-04	road 22	0700-0800	1.5162	1.7867	1.0562	1.3262	1.6367	1.3862	5.3662	1.1362	5.5262	4.6662	2.66
-04	road 22	0800-0900	1.5162	1.0962	1.9462	1.3712	1.9462	1.3712	3.9562	4.7462	7.0762	4.8962	3.44
-04	road 22	0900-1000	1.5162	1.0962	1.9462	1.3712	1.9462	1.3712	3.9562	4.7462	7.0762	4.8962	3.44
-04	road 22	1000-1100	1.7862	1.3262	2.3562	1.5362	1.1362	1.0262	6.2062	4.5962	6.6862	5.3362	3.98
-04	road 22	1100-1200	1.7862	1.3262	2.3562	1.1362	1.0262	6.2062	4.5962	6.6862	5.3362	3.98	
-04	road 22	1200-1300	1.7862	1.3262	2.3562	1.1362	1.0262	6.2062	4.5962	6.6862	5.3362	3.98	
-04	road 22	1300-1400	1.7862	1.3262	2.3562	1.1362	1.0262	6.2062	4.5962	6.6862	5.3362	3.98	
-04	road 22	1400-1500	1.8062	1.4462	2.5862	1.5262	1.2162	1.2162	6.1062	4.8062	6.7762	5.2262	4.11
-04	road 22	1500-1600	1.8062	1.4462	2.5862	1.5262	1.2162	1.2162	6.1062	4.8062	6.7762	5.2262	4.11
-04	road 22	1600-1700	1.7162	1.3362	2.3762	1.4662	1.1362	1.0262	6.0062	4.4562	8.3062	5.1126	3.99
-04	road 22	1700-1800	1.4262	1.0262	1.6262	1.2862	1.8762	1.6562	5.5962	4.0116	7.9362	4.7862	3.44
-04	road 22	1800-1900	1.4262	1.0262	1.6262	1.2862	1.8762	1.6562	5.5962	4.0116	7.9362	4.7862	3.44
-04	road 22	1900-2000	1.0262	3.6567	6.5162	9.0362	3.2467	5.7762	4.0362	1.1462	2.5762	3.5662	1.29
-04	road 22	2000-2100	0.9262	2.7867	4.6562	6.4662	2.4562	4.8362	3.9962	1.1362	2.0262	3.5062	1.28
-04	road 22	2100-2200	1.1262	3.1867	5.1862	6.1162	3.1862	4.1162	4.0562	1.0562	1.8862	3.5862	1.29
-04	road 22	2200-2300	1.1262	2.7867	5.1862	9.0662	5.5112	4.4762	4.0962	1.0592	1.8762	3.5512	1.90
-04	road 22	2300-0000	1.0662	1.2967	3.0662	9.4462	0.6767	3.5116	3.8562	8.0112	1.4862	4.8162	7.11
-04	road 22	0000-0100	0.9862	1.5462	3.5962	9.4462	0.6767	3.5116	3.8562	8.0112	1.4862	4.8162	7.11
-04	road 23	0100-0200	0.9862	1.5462	3.5962	9.4462	0.6767	3.5116	3.8562	8.0112	1.4862	4.8162	7.11
-04	road 23	0200-0300	0.9462	1.5462	3.5962	9.4462	0.6767	3.5116	3.8562	8.0112	1.4862	4.8162	7.11
-04	road 23	0300-0400	0.9462	1.5462	3.5962	9.4462	0.6767	3.5116	3.8562	8.0112	1.4862	4.8162	7.11
-04	road 23	0400-0500	1.0262	1.5462	3.5962	9.4462	0.6767	3.5116	3.8562	8.0112	1.4862	4.8162	7.11
-04	road 23	0500-0600	1.0262	1.5462	3.5962	9.4462	0.6767	3.5116	3.8562	8.0112	1.4862	4.8162	7.11
-04	road 23	0600-0700	1.1162	1.7768	1.6362	1.0262	0.8062	0.8062	4.0762	4.0762	4.7862	3.9662	2.39
-04	road 23	0700-0800	1.1162	1.7768	1.6362	1.0262	0.8062	0.8062	4.0762	4.0762	4.7862	3.9662	2.39
-04	road 23	0800-0900	1.3462	2.1967	4.0462	1.1062	1.9067	3.5116	4.9862	8.1267	1.5062	4.3262	7.00
-04	road 23	0900-1000	1.3712	2.5967	4.6162	1.1862	2.1267	3.9962	5.1362	9.8917	1.7262	4.4112	8.00
-04	road 23	1000-1100	1.3712	2.5967	4.6162	1.1862	2.1267	3.9962	5.1362	9.8917	1.7262	4.4112	8.00
-04	road 23	1100-1200	1.4712	2.4762	4.5062	1.2462	2.0867	3.8462	5.2562	8.8167	1.8362	4.4212	7.47
-04	road 23	1200-1300	1.4712	2.4762	4.5062	1.1862	2.2112	4.0262	5.2762	8.8917	1.8962	4.4862	7.49
-04	road 23	1300-1400	1.4712	2.4762	4.5062	1.1862	2.2112	4.0262	5.2762	8.8917	1.8962	4.4862	7.49
-04	road 23	1400-1500	1.5262	2.7862	5.0162	1.2962	1.4462	4.5062	5.2562	9.1062	1.8962	4.4862	8.48
-04	road 23	1500-1600	1.3712	2.7267	5.0116	1.1862	2.2867	4.2062	5.2062	1.0468	1.9062	4.4362	8.73
-04	road 23	1600-1700	1.3712	2.7267	5.0116	1.1862	2.2867	4.2062	5.2062	1.0468	1.9062	4.4362	8.73
-04	road 23	1700-1800	1.2462	2.0967	4.0462	1.1662	1.7662	3.2462	4.9562	8.2167	1.5262	4.2462	7.00
-04	road 23	1800-1900	1.3862	2.1262	2.3462	9.3762	0.9862	2.0062	4.4462	5.1862	9.5362	3.8862	4.44
-04	road 23	1900-2000	1.3862	2.1262	2.3462	9.3762	0.9862	2.0062	4.4462	5.1862	9.5362	3.8862	4.44
-04	road 23	2000-2100	0.9262	6.5462	1.0462	8.2262	0.9862	2.0062	3.8262	2.3112	4.2762	3.8862	2.09
-04	road 23	2100-2200	0.9562	5.9962	1.1062	8.5362	5.3116	8.8112	3.8862	2.4267	4.4462	3.4662	2.12
-04	road 23	2200-2300	1.0162	5.9962	1.1062	8.5362	5.3116	8.8112	3.8862	2.4267	4.4462	3.4662	2.12
-04	road 23	2300-0000	1.0162	4.5062	8.3112	9.0362	4.0262	7.4367	3.6762	1.6467	3.0262	3.4662	1.41
-04	road 24	0000-0100	1.0462	1.3718	4.8562	9.4262	0.9662	7.6662	3.7762	1.2267	2.0667	3.4112	1.11
-04	road 24	0100-0200	1.0462	1.3718	4.8562	9.4262	0.9662	7.6662	3.7762	1.2267	2.0667	3.4112	1.11
-04	road 24	0200-0300	1.0162	1.8218	4.9562	9.4262	0.9662	7.6662	3.7762	1.2267	2.0667	3.4112	1.11
-04	road 24	0300-0400	1.0162	1.5462	4.8762	9.4262	0.9662	7.6662	3.7762	1.2267	2.0667	3.4112	1.11
-04	road 24	0400-0500	1.0162	1.5462	4.8762	9.4262							

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Open Road 24 hour Emission Factors for Year 2038

Road Name		Road ID	Hour	NO _x Emission										NO Emission										
				Monthly/Mg					Monthly/kg					Monthly/Mg					Monthly/kg					
				g/km ³	g/m ³	t/hour	g/km ³	g/m ³	t/hour	g/km ³	g/m ³	t/hour	g/km ³	g/m ³	t/hour	g/km ³	g/m ³	t/hour						
Road 24	24	0800-0900	1440	1.366	2.636	0.567	1.168	2.286	0.711	6.036	9.756	2.446	4.376	8.466	0.711	2.136	4.166	1.046	3.866	7.566	1.916	3.866	7.566	1.916
Road 24	24	0900-1000	1440	1.496	3.186	0.796	1.266	2.746	0.866	6.596	1.136	2.846	4.546	0.796	2.246	4.246	1.096	3.946	7.946	2.046	3.946	7.946	2.046	
Road 24	24	1000-1100	1440	1.496	3.186	0.796	1.266	2.746	0.866	6.596	1.136	2.846	4.546	0.796	2.246	4.246	1.096	3.946	7.946	2.046	3.946	7.946	2.046	
Road 24	24	1100-1200	1440	1.496	3.186	0.796	1.266	2.746	0.866	6.596	1.136	2.846	4.546	0.796	2.246	4.246	1.096	3.946	7.946	2.046	3.946	7.946	2.046	
Road 24	24	1200-1300	1440	1.496	3.186	0.796	1.266	2.746	0.866	6.596	1.136	2.846	4.546	0.796	2.246	4.246	1.096	3.946	7.946	2.046	3.946	7.946	2.046	
Road 24	24	1300-1400	1440	1.496	3.186	0.796	1.266	2.746	0.866	6.596	1.136	2.846	4.546	0.796	2.246	4.246	1.096	3.946	7.946	2.046	3.946	7.946	2.046	
Road 24	24	1400-1500	1631	1.346	0.711	0.136	0.376	0.976	0.746	0.596	1.166	0.646	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266
Road 24	24	1500-1600	1446	1.436	0.711	0.136	0.376	0.976	0.746	0.596	1.166	0.646	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266
Road 24	24	1600-1700	1446	1.436	0.711	0.136	0.376	0.976	0.746	0.596	1.166	0.646	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266
Road 24	24	1700-1800	1446	1.436	0.711	0.136	0.376	0.976	0.746	0.596	1.166	0.646	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266
Road 24	24	1800-1900	1446	1.436	0.711	0.136	0.376	0.976	0.746	0.596	1.166	0.646	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266
Road 24	24	1900-2000	1446	1.436	0.711	0.136	0.376	0.976	0.746	0.596	1.166	0.646	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266
Road 24	24	2000-2100	1512	0.916	0.376	0.096	0.246	0.596	0.506	0.276	0.696	0.996	0.346	0.996	0.346	0.996	0.346	0.996	0.346	0.996	0.346	0.996	0.346	0.996
Road 24	24	2100-2200	1512	0.916	0.376	0.096	0.246	0.596	0.506	0.276	0.696	0.996	0.346	0.996	0.346	0.996	0.346	0.996	0.346	0.996	0.346	0.996	0.346	0.996
Road 24	24	2200-2300	1512	0.916	0.376	0.096	0.246	0.596	0.506	0.276	0.696	0.996	0.346	0.996	0.346	0.996	0.346	0.996	0.346	0.996	0.346	0.996	0.346	0.996
Road 24	24	2300-0000	1512	0.916	0.376	0.096	0.246	0.596	0.506	0.276	0.696	0.996	0.346	0.996	0.346	0.996	0.346	0.996	0.346	0.996	0.346	0.996	0.346	0.996
Road 25	25	0800-0900	1446	1.236	0.711	0.136	0.376	0.976	0.746	0.596	1.166	0.646	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266
Road 25	25	0900-1000	1446	1.236	0.711	0.136	0.376	0.976	0.746	0.596	1.166	0.646	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266
Road 25	25	1000-1100	1446	1.236	0.711	0.136	0.376	0.976	0.746	0.596	1.166	0.646	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266
Road 25	25	1100-1200	1446	1.236	0.711	0.136	0.376	0.976	0.746	0.596	1.166	0.646	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266
Road 25	25	1200-1300	1446	1.236	0.711	0.136	0.376	0.976	0.746	0.596	1.166	0.646	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266
Road 25	25	1300-1400	1446	1.236	0.711	0.136	0.376	0.976	0.746	0.596	1.166	0.646	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266
Road 25	25	1400-1500	1446	1.236	0.711	0.136	0.376	0.976	0.746	0.596	1.166	0.646	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266
Road 25	25	1500-1600	1446	1.236	0.711	0.136	0.376	0.976	0.746	0.596	1.166	0.646	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266
Road 25	25	1600-1700	1446	1.236	0.711	0.136	0.376	0.976	0.746	0.596	1.166	0.646	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266
Road 25	25	1700-1800	1446	1.236	0.711	0.136	0.376	0.976	0.746	0.596	1.166	0.646	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266
Road 25	25	1800-1900	1446	1.236	0.711	0.136	0.376	0.976	0.746	0.596	1.166	0.646	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266
Road 25	25	1900-2000	1446	1.236	0.711	0.136	0.376	0.976	0.746	0.596	1.166	0.646	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266
Road 25	25	2000-2100	1446	1.236	0.711	0.136	0.376	0.976	0.746	0.596	1.166	0.646	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266
Road 25	25	2100-2200	1446	1.236	0.711	0.136	0.376	0.976	0.746	0.596	1.166	0.646	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266
Road 25	25	2200-2300	1446	1.236	0.711	0.136	0.376	0.976	0.746	0.596	1.166	0.646	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266
Road 25	25	2300-0000	1446	1.236	0.711	0.136	0.376	0.976	0.746	0.596	1.166	0.646	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266
Road 26	26	0800-0900	1446	1.236	0.711	0.136	0.376	0.976	0.746	0.596	1.166	0.646	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266
Road 26	26	0900-1000	1446	1.236	0.711	0.136	0.376	0.976	0.746	0.596	1.166	0.646	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266
Road 26	26	1000-1100	1446	1.236	0.711	0.136	0.376	0.976	0.746	0.596	1.166	0.646	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266
Road 26	26	1100-1200	1446	1.236	0.711	0.136	0.376	0.976	0.746	0.596	1.166	0.646	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266
Road 26	26	1200-1300	1446	1.236	0.711	0.136	0.376	0.976	0.746	0.596	1.166	0.646	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266
Road 26	26	1300-1400	1446	1.236	0.711	0.136	0.376	0.976	0.746	0.596	1.166	0.646	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266
Road 26	26	1400-1500	1446	1.236	0.711	0.136	0.376	0.976	0.746	0.596	1.166	0.646	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266
Road 26	26	1500-1600	1446	1.236	0.711	0.136	0.376	0.976	0.746	0.596	1.166	0.646	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266
Road 26	26	1600-1700	1446	1.236	0.711	0.136	0.376	0.976	0.746	0.596	1.166	0.646	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266
Road 26	26	1700-1800	1446	1.236	0.711	0.136	0.376	0.976	0.746	0.596	1.166	0.646	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266
Road 26	26	1800-1900	1446	1.236	0.711	0.136	0.376	0.976	0.746	0.596	1.166	0.646	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266
Road 26	26	1900-2000	1446	1.236	0.711	0.136	0.376	0.976	0.746	0.596	1.166	0.646	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266
Road 26	26	2000-2100	1446	1.236	0.711	0.136	0.376	0.976	0.746	0.596	1.166	0.646	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266
Road 26	26	2100-2200	1446	1.236	0.711	0.136	0.376	0.976	0.746	0.596	1.166	0.646	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266
Road 26	26	2200-2300	1446	1.236	0.711	0.136	0.376	0.976	0.746	0.596	1.166	0.646	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266
Road 26	26	2300-0000	1446	1.236	0.711	0.136	0.376	0.976	0.746	0.596	1.166	0.646	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266	0.746	1.076	0.266

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for Year 2028

AEMC model (July)		NO _x Emission										NO ₂ Emission												
Row Name	Road ID	Hour	g/km/hour			g/km/hour			g/km/hour			g/km/hour			g/km/hour			g/km/hour			g/km/hour			
			g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	
Road 27	27	1800-1700	1544.01	3.9387	1.2116	1.3261	3.3717	1.0446	5.4861	4.4068	4.3066	4.6961	1.2068	3.06	1.3563	4.4068	4.3066	4.6961	1.2068	3.06	1.3563	4.4068	4.3066	4.6961
Road 27	27	1700-1600	1156.01	1.9507	0.8358	1.1561	2.6507	0.9307	4.3068	3.3661	3.2661	3.6561	0.9307	2.26	1.1561	3.3661	3.2661	3.6561	0.9307	2.26	1.1561	3.3661	3.2661	3.6561
Road 27	27	1600-1500	1176.01	1.9507	0.8358	1.1561	2.6507	0.9307	4.4068	3.3661	3.2661	3.6561	0.9307	2.26	1.1561	3.3661	3.2661	3.6561	0.9307	2.26	1.1561	3.3661	3.2661	3.6561
Road 27	27	1500-1400	1068.01	1.1507	0.3767	0.9307	9.9508	0.2907	4.2361	4.3068	4.3066	3.7161	0.8207	1.01	0.9307	4.3068	4.3066	3.7161	0.8207	1.01	0.9307	4.3068	4.3066	3.7161
Road 27	27	1400-1300	1026.01	0.8358	0.2517	0.9307	7.4508	0.2907	4.1661	4.4068	4.4066	3.5861	0.3027	0.93	0.8358	4.4068	4.4066	3.5861	0.3027	0.93	0.8358	4.4068	4.4066	3.5861
Road 27	27	1300-1200	1026.01	0.8358	0.2517	0.9307	7.4508	0.2907	4.1661	4.4068	4.4066	3.5861	0.3027	0.93	0.8358	4.4068	4.4066	3.5861	0.3027	0.93	0.8358	4.4068	4.4066	3.5861
Road 27	27	1200-1100	1138.01	0.8358	0.2567	0.9307	9.9508	0.2207	4.1061	4.3017	4.3017	3.5561	0.6107	0.81	0.8358	4.3017	4.3017	3.5561	0.6107	0.81	0.8358	4.3017	4.3017	3.5561
Road 27	27	1100-1000	1111.01	0.6886	0.2067	0.9886	5.588	0.3461	4.0061	4.2367	4.2367	3.5861	0.2167	0.68	0.6886	4.2367	4.2367	3.5861	0.2167	0.68	0.6886	4.2367	4.2367	3.5861
Road 28	28	1700-1600	9796.03	6.9868	3.9668	9.9861	6.4718	3.6716	4.4661	4.1361	4.1361	7.7861	0.4047	2.8707	0.4047	4.1361	4.1361	7.7861	0.4047	2.8707	0.4047	4.1361	4.1361	7.7861
Road 28	28	1600-1500	1005.03	0.5578	0.3186	0.9861	6.2368	0.2968	4.5861	4.3967	4.3967	3.9561	0.2117	0.62	0.5578	4.3967	4.3967	3.9561	0.2117	0.62	0.5578	4.3967	4.3967	3.9561
Road 28	28	1500-1400	1005.03	0.5578	0.3186	0.9861	6.2368	0.2968	4.5861	4.3967	4.3967	3.9561	0.2117	0.62	0.5578	4.3967	4.3967	3.9561	0.2117	0.62	0.5578	4.3967	4.3967	3.9561
Road 28	28	1400-1300	1226.03	0.5742	0.3668	1.1116	5.2368	0.2976	5.0361	4.2376	4.2376	3.9561	0.2527	0.65	0.5742	4.2376	4.2376	3.9561	0.2527	0.65	0.5742	4.2376	4.2376	3.9561
Road 28	28	1300-1200	1226.03	0.5742	0.3668	1.1116	5.2368	0.2976	5.0361	4.2376	4.2376	3.9561	0.2527	0.65	0.5742	4.2376	4.2376	3.9561	0.2527	0.65	0.5742	4.2376	4.2376	3.9561
Road 28	28	1200-1100	1177.02	0.5917	0.3126	1.0262	4.7467	0.2696	4.6361	4.2367	4.2367	3.9561	0.2117	0.64	0.5917	4.2367	4.2367	3.9561	0.2117	0.64	0.5917	4.2367	4.2367	3.9561
Road 28	28	1100-1000	1169.02	0.5917	0.2294	1.0447	3.4361	0.2996	4.6361	4.2367	4.2367	3.9561	0.2117	0.64	0.5917	4.2367	4.2367	3.9561	0.2117	0.64	0.5917	4.2367	4.2367	3.9561
Road 28	28	1000-0900	1169.02	0.5917	0.2294	1.0447	3.4361	0.2996	4.6361	4.2367	4.2367	3.9561	0.2117	0.64	0.5917	4.2367	4.2367	3.9561	0.2117	0.64	0.5917	4.2367	4.2367	3.9561
Road 28	28	0900-0800	1405.02	0.8358	0.4477	0.9307	1.3817	0.2165	4.6361	4.2367	4.2367	3.9561	0.2117	0.64	0.8358	4.2367	4.2367	3.9561	0.2117	0.64	0.8358	4.2367	4.2367	3.9561
Road 28	28	0800-0700	1386.02	0.5781	0.3258	1.1932	0.9247	0.2865	4.5761	4.2367	4.2367	3.9561	0.2117	0.64	0.5781	4.2367	4.2367	3.9561	0.2117	0.64	0.5781	4.2367	4.2367	3.9561
Road 28	28	0700-0600	1598.02	0.9167	0.3008	1.1362	0.9247	0.2865	4.6361	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561
Road 28	28	0600-0500	1598.02	0.9167	0.3008	1.1362	0.9247	0.2865	4.6361	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561
Road 28	28	0500-0400	1598.02	0.9167	0.3008	1.1362	0.9247	0.2865	4.6361	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561
Road 28	28	0400-0300	1598.02	0.9167	0.3008	1.1362	0.9247	0.2865	4.6361	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561
Road 28	28	0300-0200	1598.02	0.9167	0.3008	1.1362	0.9247	0.2865	4.6361	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561
Road 28	28	0200-0100	1598.02	0.9167	0.3008	1.1362	0.9247	0.2865	4.6361	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561
Road 28	28	0100-0000	1598.02	0.9167	0.3008	1.1362	0.9247	0.2865	4.6361	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561
Road 28	28	2400-2300	1598.02	0.9167	0.3008	1.1362	0.9247	0.2865	4.6361	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561
Road 28	28	2300-2200	1598.02	0.9167	0.3008	1.1362	0.9247	0.2865	4.6361	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561
Road 28	28	2200-2100	1598.02	0.9167	0.3008	1.1362	0.9247	0.2865	4.6361	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561
Road 28	28	2100-2000	1598.02	0.9167	0.3008	1.1362	0.9247	0.2865	4.6361	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561
Road 28	28	2000-1900	1598.02	0.9167	0.3008	1.1362	0.9247	0.2865	4.6361	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561
Road 28	28	1900-1800	1598.02	0.9167	0.3008	1.1362	0.9247	0.2865	4.6361	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561
Road 28	28	1800-1700	1598.02	0.9167	0.3008	1.1362	0.9247	0.2865	4.6361	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561
Road 28	28	1700-1600	1598.02	0.9167	0.3008	1.1362	0.9247	0.2865	4.6361	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561
Road 28	28	1600-1500	1598.02	0.9167	0.3008	1.1362	0.9247	0.2865	4.6361	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561
Road 28	28	1500-1400	1598.02	0.9167	0.3008	1.1362	0.9247	0.2865	4.6361	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561
Road 28	28	1400-1300	1598.02	0.9167	0.3008	1.1362	0.9247	0.2865	4.6361	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561
Road 28	28	1300-1200	1598.02	0.9167	0.3008	1.1362	0.9247	0.2865	4.6361	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561
Road 28	28	1200-1100	1598.02	0.9167	0.3008	1.1362	0.9247	0.2865	4.6361	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561
Road 28	28	1100-1000	1598.02	0.9167	0.3008	1.1362	0.9247	0.2865	4.6361	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561
Road 28	28	1000-0900	1598.02	0.9167	0.3008	1.1362	0.9247	0.2865	4.6361	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561
Road 28	28	0900-0800	1598.02	0.9167	0.3008	1.1362	0.9247	0.2865	4.6361	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561
Road 28	28	0800-0700	1598.02	0.9167	0.3008	1.1362	0.9247	0.2865	4.6361	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561
Road 28	28	0700-0600	1598.02	0.9167	0.3008	1.1362	0.9247	0.2865	4.6361	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561
Road 28	28	0600-0500	1598.02	0.9167	0.3008	1.1362	0.9247	0.2865	4.6361	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.2367	4.2367	3.9561	0.2117	0.64	0.9167	4.23		

Appendix 4.5 Calculation of Vehicular Emissions

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for Year 2028

AERMOD model (July)		NO _x Emissions														PM ₁₀ Emissions														PM _{2.5} Emissions														SO ₂ Emissions														CO Emissions														NH ₃ Emissions														HAPs Emissions																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												
Row Name	Row ID	Hour	Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr				Monthlyg/hr	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Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for Year 2028

AERMOD model (hourly)											
						NO ₂ Emission				NO Emission	
Row Name	Row ID	Hour	g/m ² /month	g/m ² /month	g/m ² /month	g/m ² /month	g/m ² /month	g/m ² /month	g/m ² /month	g/m ² /month	g/m ² /month
Row 34	34	0800-0900	9.21e-03	2.43e-07	6.36e-06	7.86e-03	2.07e-07	5.43e-06	4.30e-02	1.14e-06	2.97e-05
Row 35	34	0900-1000	1.21e-02	1.99e-07	1.21e-06	1.31e-03	1.81e-07	4.81e-06	3.81e-02	9.81e-07	2.43e-05
Row 36	34	1000-1100	1.21e-02	2.26e-07	5.92e-06	1.02e-03	1.90e-07	4.95e-06	5.52e-02	9.81e-07	2.57e-05
Row 37	34	1100-1200	1.16e-02	2.05e-07	6.73e-06	8.74e-03	1.47e-06	5.21e-02	9.81e-07	2.42e-05	4.31e-06
Row 38	34	1200-1300	2.03e-02	2.96e-07	7.58e-07	1.27e-03	2.47e-07	6.86e-06	7.04e-02	1.01e-06	2.69e-05
Row 39	34	1300-1400	1.91e-02	2.91e-07	7.41e-06	1.31e-03	1.61e-07	4.61e-06	5.01e-02	9.81e-07	2.54e-05
Row 40	34	1400-1500	2.04e-02	3.19e-07	8.36e-06	1.72e-03	2.72e-07	7.26e-06	1.14e-06	2.98e-05	6.12e-05
Row 41	34	1500-1600	1.91e-02	3.07e-07	8.04e-06	1.61e-03	2.58e-07	6.75e-06	7.29e-02	1.17e-06	3.07e-05
Row 42	34	1600-1700	1.91e-02	3.12e-07	8.35e-06	1.61e-03	2.58e-07	6.75e-06	7.29e-02	1.17e-06	3.07e-05
Row 43	34	1700-1800	1.51e-02	2.68e-07	7.04e-06	1.26e-03	2.30e-07	6.01e-06	1.01e-02	2.70e-06	6.95e-02
Row 44	34	1800-1900	1.21e-02	2.14e-07	5.58e-06	1.02e-03	1.81e-07	4.74e-06	4.88e-02	8.38e-07	2.18e-05
Row 45	34	1900-2000	1.31e-02	2.35e-07	6.02e-06	1.02e-03	1.81e-07	4.74e-06	4.88e-02	8.38e-07	2.18e-05
Row 46	34	2000-2100	9.69e-03	1.07e-07	2.89e-06	8.67e-03	5.25e-06	4.39e-02	1.20e-06	3.09e-05	4.2e-06
Row 47	34	2100-2200	9.23e-03	1.01e-07	2.64e-06	8.28e-03	4.95e-06	4.34e-02	1.24e-06	3.07e-05	4.0e-06
Row 48	34	2200-2300	9.23e-03	1.01e-07	2.64e-06	8.28e-03	4.95e-06	4.34e-02	1.24e-06	3.07e-05	4.0e-06
Row 49	34	2300-0000	9.23e-03	1.01e-07	2.64e-06	8.28e-03	4.95e-06	4.34e-02	1.24e-06	3.07e-05	4.0e-06
Row 50	35	0000-0100	3.01e-02	3.54e-08	8.62e-06	2.72e-02	3.20e-08	7.79e-09	9.19e-02	1.02e-06	2.63e-07
Row 51	35	0100-0200	3.01e-02	3.14e-08	7.65e-06	2.42e-02	2.80e-08	1.03e-09	8.79e-02	1.14e-06	9.44e-07
Row 52	35	0200-0300	3.01e-02	2.74e-08	6.66e-06	2.12e-02	2.40e-08	8.79e-09	7.79e-02	1.14e-06	9.44e-07
Row 53	35	0300-0400	4.74e-02	2.87e-08	6.98e-06	4.44e-02	2.69e-08	6.54e-09	1.22e-01	7.36e-08	1.17e-06
Row 54	35	0400-0500	4.74e-02	2.98e-08	7.27e-06	4.31e-02	2.77e-08	6.74e-09	1.21e-01	7.36e-08	1.17e-06
Row 55	35	0500-0600	4.74e-02	3.09e-08	7.58e-06	4.18e-02	2.86e-08	6.85e-09	1.20e-01	7.36e-08	1.17e-06
Row 56	35	0600-0700	3.03e-02	3.08e-08	7.28e-06	2.72e-02	4.74e-09	1.95e-09	1.27e-02	1.78e-07	4.21e-07
Row 57	35	0700-0800	4.74e-02	1.81e-07	4.41e-06	4.02e-02	6.16e-07	3.92e-07	1.32e-01	5.27e-07	1.28e-06
Row 58	35	0800-0900	4.74e-02	2.01e-07	4.82e-06	4.25e-02	7.45e-07	4.38e-07	1.31e-01	5.27e-07	1.28e-06
Row 59	35	0900-1000	4.91e-02	1.98e-07	4.82e-06	4.25e-02	7.45e-07	4.38e-07	1.45e-01	5.86e-07	1.43e-06
Row 60	35	1000-1100	5.47e-02	2.02e-07	4.91e-07	4.61e-02	7.70e-07	4.17e-07	1.57e-01	5.86e-07	1.41e-06
Row 61	35	1100-1200	5.47e-02	2.02e-07	4.91e-07	4.61e-02	7.70e-07	4.17e-07	1.57e-01	5.86e-07	1.41e-06
Row 62	35	1200-1300	6.13e-02	1.44e-07	3.51e-07	5.22e-02	1.23e-07	2.99e-07	1.57e-01	5.86e-07	1.33e-06
Row 63	35	1300-1400	6.13e-02	1.46e-07	3.56e-07	5.22e-02	1.26e-07	3.01e-07	1.60e-01	3.91e-07	9.28e-07
Row 64	35	1400-1500	5.62e-02	1.58e-07	3.78e-07	5.33e-02	1.32e-07	3.22e-07	1.63e-01	4.04e-07	9.82e-07
Row 65	35	1500-1600	5.62e-02	1.58e-07	3.78e-07	5.33e-02	1.32e-07	3.22e-07	1.63e-01	4.04e-07	9.82e-07
Row 66	35	1600-1700	5.62e-02	1.58e-07	3.78e-07	5.33e-02	1.32e-07	3.22e-07	1.63e-01	4.04e-07	9.82e-07
Row 67	35	1700-1800	5.22e-02	1.47e-07	3.56e-07	4.88e-02	1.25e-07	3.04e-07	1.40e-01	3.92e-07	9.92e-07
Row 68	35	1800-1900	5.22e-02	1.47e-07	3.56e-07	4.88e-02	1.25e-07	3.04e-07	1.40e-01	3.92e-07	9.92e-07
Row 69	35	1900-2000	5.22e-02	1.47e-07	3.56e-07	4.88e-02	1.25e-07	3.04e-07	1.40e-01	3.92e-07	9.92e-07
Row 70	35	2000-2100	2.51e-02	3.07e-08	8.10e-06	2.27e-02	3.95e-08	8.14e-08	1.81e-02	2.03e-07	2.72e-07
Row 71	35	2100-2200	2.51e-02	3.07e-08	8.10e-06	2.27e-02	3.95e-08	8.14e-08	1.81e-02	2.03e-07	2.72e-07
Row 72	35	2200-2300	2.51e-02	3.07e-08	8.10e-06	2.27e-02	3.95e-08	8.14e-08	1.81e-02	2.03e-07	2.72e-07
Row 73	35	2300-0000	2.86e-02	3.36e-08	8.79e-06	2.55e-02	2.81e-07	7.88e-08	8.88e-02	2.08e-07	2.44e-07
Row 74	35	0000-0100	2.86e-02	3.36e-08	8.79e-06	2.55e-02	2.81e-07	7.88e-08	8.88e-02	2.08e-07	2.44e-07
Row 75	35	0100-0200	4.32e-02	4.58e-08	1.22e-07	4.02e-02	5.86e-08	1.10e-07	1.66e-01	1.91e-07	4.56e-07
Row 76	35	0200-0300	4.95e-02	4.31e-08	1.09e-07	4.73e-02	4.14e-08	1.04e-07	1.72e-01	1.91e-07	3.78e-07
Row 77	35	0300-0400	4.95e-02	4.31e-08	1.09e-07	4.73e-02	4.14e-08	1.04e-07	1.72e-01	1.91e-07	3.78e-07
Row 78	35	0400-0500	4.95e-02	4.31e-08	1.09e-07	4.73e-02	4.14e-08	1.04e-07	1.72e-01	1.91e-07	3.78e-07
Row 79	35	0500-0600	4.95e-02	6.06e-08	1.53e-07	4.82e-02	5.77e-08	1.45e-07	1.90e-01	2.27e-07	5.72e-07
Row 80	35	0600-0700	4.72e-02	1.70e-07	4.48e-06	4.01e-02	1.01e-07	2.54e-07	1.97e-08	4.48e-07	1.13e-06
Row 81	35	0700-0800	4.72e-02	1.70e-07	4.48e-06	4.01e-02	1.01e-07	2.54e-07	1.97e-08	4.48e-07	1.13e-06
Row 82	35	0800-0900	4.72e-02	1.70e-07	4.48e-06	4.01e-02	1.01e-07	2.54e-07	1.97e-08	4.48e-07	1.13e-06
Row 83	35	0900-1000	4.72e-02	1.70e-07	4.48e-06	4.01e-02	1.01e-07	2.54e-07	1.97e-08	4.48e-07	1.13e-06
Row 84	35	1000-1100	7.02e-02	3.96e-07	9.04e-07	6.39e-02	1.72e-07	8.23e-07	2.30e-01	1.18e-06	2.97e-06
Row 85	35	1100-1200	7.02e-02	3.96e-07	9.04e-07	6.39e-02	1.72e-07	8.23e-07	2.30e-01	1.18e-06	2.97e-06
Row 86	35	1200-1300	7.48e-02	3.32e-07	8.37e-07	6.74e-02	1.50e-07	7.54e-07	2.37e-01	1.09e-06	2.65e-06
Row 87	35	1300-1400	7.48e-02	3.32e-07	8.37e-07	6.74e-02	1.50e-07	7.54e-07	2.37e-01	1.09e-06	2.65e-06
Row 88	35	1400-1500	8.91e-02	3.32e-07	8.37e-07	8.87e-02	1.01e-07	7.88e-07	2.58e-01	1.18e-06	2.14e-05
Row 89	35	1500-1600	8.91e-02	3.32e-07	8.37e-07	8.87e-02	1.01e-07	7.88e-07	2.58e-01	1.18e-06	2.14e-05
Row 90	35	1600-1700	9.58e-02	3.32e-07	8.37e-07	8.87e-02	1.01e-07	7.88e-07	2.58e-01	1.18e-06	2.14e-05
Row 91	35	1700-1800	9.58e-02	3.32e-07	8.37e-07	8.87e-02	1.01e-07	7.88e-07	2.58e-01	1.18e-06	2.14e-05
Row 92	35	1800-1900	6.13e-02	2.58e-07	6.43e-07	5.05e-02	1.01e-07	7.88e-07	2.58e-01	1.18e-06	2.14e-05
Row 93	35	1900-2000	4.16e-02	1.06e-07	2.78e-07	3.94e-02	1.01e-07	7.88e-07	2.58e-01	1.18e-06	2.14e-05
Row 94	35	2000-2100	4.16e-02	1.06e-07	2.78e-07	3.94e-02	1.01e-07	7.88e-07	2.58e-01	1.18e-06	2.14e-05
Row 95	35	2100-2200	4.16e-02	1.06e-07	2.78e-07	3.94e-02	1.01e-07	7.88e-07	2.58e-01	1.18e-06	2.14e-05
Row 96	35	2200-2300	3.95e-02	8.08e-08	2.03e-07	3.62e-02	4.42e-08	1.87e-07	1.66e-01	3.93e-07	8.54e-07
Row 97	35	2300-0000	3.95e-02	8.08e-08	2.03e-07	3.62e-02	4.42e-08	1.87e-07	1.66e-01	3.93e-07	8.54e-07
Row 98	35	0000-0100	3.04e-02	1.50e-09	3.44e-06	3.42e-02	3.30e-08	1.68e-01	7.40e-09	1.70e-08	6.06e-07
Row 99	35	0100-0200	3.16e-02	1.06e-09	2.49e-06	3.52e-02	3.03e-08	1.74e-01	5.06e-09	1.16e-08	6.88e-07
Row 100	35	0200-0300	3.16e-02	1.06e-09	2.49e-06	3.52e-02	3.03e-08	1.74e-01	5.06e-09	1.16e-08	6.88e-07
Row 101	35	0300-0400	4.16e-02	7.21e-09	1.65e-09	4.05e-02	1.61e-09	1.88e-01	3.27e-09	7.49e-09	1.60e-06
Row 102	35	0400-0500	4.16e-02	7.21e-09	1.65e-09	4.05e-02	1.61e-09	1.88e-01	3.27e-09	7.49e-09	1.60e-06
Row 103	35	0500-0600	4.74e-02	1.62e-09	1.97e-09	4.31e-02	8.33e-10	1.91e-09	1.97e-01	3.81e-09	8.73e-09
Row 104	35	0600-0700	4.74e-02	1.62e-09	1.97e-09	4.31e-02	8.33e-10	1.91e-09	1.97e-01	3.81e-09	8.73e-09
Row 105	35	0700-0800	5.58e-02	9.79e-09	2.25e-08	4.62e-02	1.57e-09	3.69e-09	2.07e-01	7.04e-09	1.62e-08
Row 106	35	0800-0900	5.58e-02	9.79e-09	2.25e-08	4.62e-02	1.57e-09	3.69e-09	2.07e-01	7.04e-09	1.62e-08
Row 107	35	0900-1000	5.58e-02	9.79e-09	2.25e-08	4.62e-02	1.57e-09	3.69e-09	2.07e-01	7.04e-09	1.62e-08
Row 108	35	1000-1100	7.02e-02	1.02e-08	2.33e-08	5.55e-02	9.53e-09	2.19e-08	2.48e-01	3.60e-08	8.27e-08
Row 109	35	1100-1200	7.02e-02	1.02e-08	2.33e-08	5.55e-02	9.53e-09	2.19e-08	2.48e-01	3.60e-08	8.27e-08
Row 110	35	1200-1300	7.02e-02	1.02e-08	2.33e-08	5.55e-02	9.53e-09	2.19e-08	2.48e-01	3.60e-08	8.27e-08
Row 111	35	1300-1400	7.13e-02	1.10e-08	2.52e-07	5.62e-02	1.03e-08	2.37e-08	2.51e-01	3.86e-08	8.87e-08
Row 112	35	1400-1500	7.13e-02	1.10e-08	2.52e-07	5.62e-02	1.03e-08	2.37e-08	2.51e-01	3.86e-08	8.87e-08
Row 113	35	1500-1600	7.13e-02	1.10e-08	2.52e-07	5.62e-02	1.03e-08	2.37e-08	2.51e-01	3.86e-08	8.87e-08
Row 114	35	1600-1700	7.13e-02	1.10							

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for	Year 2038
AERMOD model (July)	

Road Name	Road ID	No. of Vehicles										No. of Vehicles										No. of Vehicles																			
		Morning					Afternoon					Evening					Night					Morning					Afternoon					Evening					Night				
		g/v/mph	g/mi/hour	tonne/hour	g/v/mph	g/mi/hour	tonne/hour	g/v/mph	g/mi/hour	tonne/hour	g/v/mph	g/mi/hour	tonne/hour	g/v/mph	g/mi/hour	tonne/hour	g/v/mph	g/mi/hour	tonne/hour	g/v/mph	g/mi/hour	tonne/hour	g/v/mph	g/mi/hour	tonne/hour	g/v/mph	g/mi/hour	tonne/hour	g/v/mph	g/mi/hour	tonne/hour	g/v/mph	g/mi/hour	tonne/hour							
Road 47	47	1600-1700	2,375.02	4,750.47	1,422.09	2,844.18	3,864.07	1,206.05	9,156.02	3,846.46	5,758.05	7,916.42	1,523.06	4,748.05	1,523.06	4,748.05																									
Road 47	47	1700-1800	1,686.02	3,372.07	1,117.05	2,032.42	3,336.07	1,096.05	6,582.02	3,372.07	8,139.06	4,648.05	8,738.02	1,508.06	4,648.05	1,508.06																									
Road 47	47	1800-1900	1,686.02	3,372.07	1,117.05	2,032.42	3,336.07	1,096.05	6,582.02	3,372.07	8,139.06	4,648.05	8,738.02	1,508.06	4,648.05	1,508.06																									
Road 47	47	1900-2000	9,736.05	1,937.05	6,096.06	8,696.07	1,707.07	5,316.05	5,286.06	1,066.06	3,306.05	4,476.02	8,966.07	2,806.05	4,476.02	8,966.07																									
Road 47	47	2000-2100	8,546.03	1,396.07	4,136.06	7,836.06	1,136.07	3,736.05	5,346.07	2,606.05	4,686.02	9,666.07	2,276.05	4,686.02	9,666.07	2,276.05																									
Road 47	47	2100-2200	8,546.03	1,396.07	4,136.06	7,836.06	1,136.07	3,736.05	5,346.07	2,606.05	4,686.02	9,666.07	2,276.05	4,686.02	9,666.07	2,276.05																									
Road 47	47	2200-2300	6,746.03	1,026.02	3,136.06	6,816.03	8,806.06	2,756.05	4,686.02	6,836.07	2,386.05	4,156.02	6,866.07	1,966.05	4,156.02	6,866.07																									
Road 47	47	2300-0000	6,956.03	7,846.08	2,456.06	5,816.03	6,936.06	2,176.05	4,866.02	5,486.07	1,716.05	4,136.02	6,666.07	1,466.05	4,136.02	6,666.07																									
Road 48	48	0000-0100	5,856.03	5,856.03	2,456.06	5,856.03	5,856.03	3,416.05	5,856.03	5,856.03	3,416.05	5,856.03	5,856.03	3,416.05	5,856.03	5,856.03																									
Road 48	48	0100-0200	5,246.03	2,966.06	4,486.07	4,836.03	2,726.07	4,116.07	3,386.02	3,916.07	2,886.06	3,036.02	4,176.07	2,986.06	3,036.02	4,176.07																									
Road 48	48	0200-0300	5,566.03	2,906.06	3,466.07	5,216.03	2,136.07	3,426.07	3,366.02	3,406.07	2,116.05	3,116.02	3,766.07	2,016.05	3,116.02	3,766.07																									
Road 48	48	0300-0400	5,566.03	2,906.06	3,466.07	5,216.03	2,136.07	3,426.07	3,366.02	3,406.07	2,116.05	3,116.02	3,766.07	2,016.05	3,116.02	3,766.07																									
Road 48	48	0400-0500	6,586.03	2,446.06	3,536.07	6,606.03	2,166.07	3,366.02	3,716.02	1,326.07	3,996.06	3,336.02	4,176.07	1,986.06	3,336.02	4,176.07																									
Road 48	48	0500-0600	7,226.03	2,446.06	6,736.07	6,676.03	4,126.07	6,226.07	3,366.02	3,446.07	3,996.06	3,576.02	2,216.07	3,336.02	3,576.02	2,216.07																									
Road 48	48	0600-0700	7,226.03	2,446.06	6,736.07	6,676.03	4,126.07	6,226.07	3,366.02	3,446.07	3,996.06	3,576.02	2,216.07	3,336.02	3,576.02	2,216.07																									
Road 48	48	0700-0800	8,646.03	2,611.07	3,486.06	7,646.03	2,046.07	3,086.02	4,526.06	1,216.06	1,826.05	3,866.02	1,036.05	1,036.05	1,036.05	1,036.05																									
Road 48	48	0800-0900	8,626.03	2,611.07	3,594.05	7,216.03	2,236.07	3,366.02	4,176.07	3,306.05	1,956.05	3,456.02	1,006.06	1,611.05	1,006.06	1,611.05																									
Road 48	48	0900-1000	8,626.03	2,611.07	3,594.05	7,216.03	2,236.07	3,366.02	4,176.07	3,306.05	1,956.05	3,456.02	1,006.06	1,611.05	1,006.06	1,611.05																									
Road 48	48	1000-1100	1,116.02	2,146.07	3,656.03	9,336.03	2,036.07	3,016.02	5,126.02	1,176.06	1,686.05	4,186.02	8,926.07	1,386.05	8,926.07	1,386.05																									
Road 48	48	1100-1200	1,056.02	2,176.07	3,276.06	8,896.03	1,846.07	2,716.05	5,056.06	1,056.06	1,586.05	4,186.02	8,616.07	1,306.05	8,616.07	1,306.05																									
Road 48	48	1200-1300	1,056.02	2,176.07	3,276.06	8,896.03	1,846.07	2,716.05	5,056.06	1,056.06	1,586.05	4,186.02	8,616.07	1,306.05	8,616.07	1,306.05																									
Road 48	48	1300-1400	1,886.02	3,506.07	4,986.06	1,626.02	2,836.07	4,286.02	7,116.02	1,246.06	1,876.05	6,056.02	1,066.06	1,566.05	1,066.06	1,566.05																									
Road 48	48	1400-1500	1,926.02	3,906.07	5,286.06	1,646.02	2,976.07	4,436.02	7,136.02	1,246.06	1,956.05	5,986.02	1,066.06	1,646.05	1,066.06	1,646.05																									
Road 48	48	1500-1600	1,926.02	3,906.07	5,286.06	1,646.02	2,976.07	4,436.02	7,136.02	1,246.06	1,956.05	5,986.02	1,066.06	1,646.05	1,066.06	1,646.05																									
Road 48	48	1600-1700	1,886.02	3,486.07	5,246.06	1,526.02	2,936.07	4,286.02	6,646.02	1,286.05	1,936.05	5,536.02	1,076.06	1,611.05	1,076.06	1,611.05																									
Road 48	48	1700-1800	1,406.02	2,896.07	4,376.06	1,386.02	2,476.07	3,736.06	4,646.02	2,316.06	1,826.05	4,906.02	1,026.06	1,406.05	1,026.06	1,406.05																									
Road 48	48	1800-1900	1,406.02	2,896.07	4,376.06	1,386.02	2,476.07	3,736.06	4,646.02	2,316.06	1,826.05	4,906.02	1,026.06	1,406.05	1,026.06	1,406.05																									
Road 48	48	1900-2000	9,556.03	1,517.07	2,376.06	8,376.03	1,366.07	2,706.06	4,136.02	6,806.07	1,036.05	3,546.02	5,836.07	8,806.05	5,836.07	8,806.05																									
Road 48	48	2000-2100	9,316.03	1,216.07	1,826.06	8,406.03	1,066.07	1,646.06	4,406.02	5,586.07	8,416.06	3,806.02	7,446.05	7,446.05	3,806.02	7,446.05																									
Road 48	48	2100-2200	9,316.03	1,216.07	1,826.06	8,406.03	1,066.07	1,646.06	4,406.02	5,586.07	8,416.06	3,806.02	7,446.05	7,446.05	3,806.02	7,446.05																									
Road 48	48	2200-2300	9,146.03	1,376.03	1,706.06	7,556.03	9,811.06	1,486.06	4,426.02	5,276.07	9,656.07	3,611.02	4,486.07	6,711.06	4,486.07	6,711.06																									
Road 48	48	2300-0000	9,506.03	8,866.03	1,346.05	8,466.03	7,886.06	1,196.06	4,306.02	4,016.07	6,056.06	3,786.02	4,486.07	5,756.05	4,486.07	5,756.05																									
Road 48	48	0000-0100	6,326.03	2,256.06	3,606.07	5,826.03	2,066.07	3,246.02	4,116.07	4,426.07	3,706.06	1,696.02	3,116.02	3,526.06	3,116.02	3,526.06																									
Road 49	49	0100-0200	6,586.03	2,156.06	4,296.07	6,136.05	1,566.07	3,406.02	4,056.02	4,056.02	2,656.06	3,726.02	8,646.06	2,436.06	2,436.06	8,646.06																									
Road 49	49	0200-0300	6,586.03	2,156.06	4,296.07	6,136.05	1,566.07	3,406.02	4,056.02	4,056.02	2,656.06	3,726.02	8,646.06	2,436.06	2,436.06	8,646.06																									
Road 49	49	0300-0400	7,826.03	1,746.06	4,396.07	7,216.03	1,656.06	4,046.02	4,956.02	8,906.06	2,506.05	4,006.02	8,986.06	2,346.06	2,346.06	8,986.06																									
Road 49	49	0400-0500	9,146.03	1,351.08	8,886.07	8,476.03	3,246.07	8,196.07	4,976.02	4,976.02	4,806.06	4,806.06	1,726.07	4,336.06	4,336.06	1,726.07																									
Road 49	49	0500-0600	9,146.03	1,351.08	8,886.07	8,476.03	3,246.07	8,196.07	4,976.02	4,976.02	4,806.06	4,806.06	1,726.07	4,336.06	4,336.06	1,726.07																									
Road 49	49	0600-0700	1,596.02	2,611.07	6,096.06	1,416.02	2,311.07	5,836.02	5,226.06	1,316.05	4,116.05	4,116.05	1,966.06	2,676.05	1,966.06	2,676.05																									
Road 49	49	0700-0800	1,596.02	2,611.07	6,096.06	1,416.02	2,311.07	5,836.02	5,226.06	1,316.05	4,116.05	4,116.05	1,966.06	2,676.05	1,966.06	2,676.05																									
Road 49	49	0800-0900	1,706.02	3,211.07	6,096.06	1,426.02	2,746.07	6,096.06	7,546.02	1,546.05	3,806.05	6,246.02	1,186.06	2,976.05	1,186.06	2,976.05																									
Road 49	49	0900-1000	1,706.02	3,211.07	6,096.06	1,426.02	2,746.07	6,096.06	7,546.0																																

re\\Environment_Projects\\60733229\\1.01\\Others\\Air\\Modelling\\Appendix\\Traffic\\Appendix\\Appendix 3.5.4 Emission Factor in 2038-S B.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for	Year 2038
AERMOD model (August)	

Road Name	Road ID	Hour	Northbound						Southbound					
			N1			N2			S1			S2		
						g/v/mph		g/mph/ave	g/v/mph		g/mph/ave	g/v/mph		g/mph/ave
			g/v/mph	time/hour	time/hour	g/v/mph	time/hour	time/hour	g/v/mph	time/hour	time/hour	g/v/mph	time/hour	time/hour
Road 1	1	0000-0100	4.99E-0.938	6.93E-0.938	3.81E-0.6	4.96E-0.611E	3.69E-0.3	3.43E-0.7	4.77E-0.7	2.62E-0.5	2.91E-0.42	4.04E-0.77	2.23E-0.5	
		0100-0200	5.08E-0.938	6.98E-0.938	2.73E-0.6	4.90E-0.471E	2.48E-0.3	3.36E-0.7	4.33E-0.736	1.76E-0.5	1.98E-0.42	3.07E-0.77	1.53E-0.5	
Road 1	5	0000-0100	5.89E-0.938	6.93E-0.938	5.42E-0.6	5.69E-0.611E	3.69E-0.3	3.43E-0.7	5.69E-0.777	2.62E-0.5	2.91E-0.42	4.04E-0.77	2.23E-0.5	
		0100-0200	6.51E-0.938	6.93E-0.938	1.87E-0.6	5.08E-0.471E	1.69E-0.3	1.69E-0.7	3.78E-0.777	1.97E-0.5	1.98E-0.42	3.11E-0.77	1.93E-0.5	
Road 1	10	0000-0500	6.92E-0.938	3.96E-0.28E	2.18E-0.6	6.29E-0.36E	1.98E-0.3	3.78E-0.7	6.27E-0.717	1.22E-0.42	1.22E-0.42	1.96E-0.77	1.08E-0.5	
		0500-0600	6.93E-0.938	6.93E-0.938	4.86E-0.6	6.46E-0.611E	3.69E-0.3	3.43E-0.7	6.93E-0.777	2.62E-0.5	2.91E-0.42	4.04E-0.77	2.23E-0.5	
Road 1	15	0600-0700	7.61E-0.938	1.51E-0.7	8.88E-0.75E	7.59E-0.52E	1.62E-0.3	8.25E-0.6	6.03E-0.811E	6.69E-0.5	3.67E-0.42	7.76E-0.77	4.27E-0.5	
		0700-0800	8.32E-0.938	3.56E-0.7	1.98E-0.5	7.05E-0.32E	1.07E-0.3	1.29E-0.6	4.29E-0.83E	4.16E-0.42	3.79E-0.42	6.98E-0.77	4.93E-0.5	
Road 1	20	0800-0900	8.38E-0.938	7.33E-0.7	2.36E-0.7	7.33E-0.611E	3.69E-0.3	3.43E-0.7	8.38E-0.777	2.62E-0.5	2.91E-0.42	4.04E-0.77	2.23E-0.5	
		0900-1000	9.38E-0.938	3.90E-0.7	2.09E-0.5	8.34E-0.3	1.38E-0.7	1.89E-0.6	4.53E-0.84E	1.01E-0.42	3.96E-0.42	6.98E-0.77	4.93E-0.5	
Road 1	25	1000-1100	1.11E-0.938	1.02E-0.7	2.15E-0.6	9.63E-0.3	1.37E-0.6	1.88E-0.5	5.11E-0.79E	8.89E-0.5	4.31E-0.42	1.93E-0.77	8.93E-0.5	
		1100-1200	1.02E-0.938	1.02E-0.7	9.13E-0.3	1.02E-0.611E	1.02E-0.3	1.61E-0.6	5.09E-0.81E	1.61E-0.42	1.61E-0.42	1.93E-0.77	8.93E-0.5	
Road 1	30	1200-1300	1.32E-0.938	1.32E-0.7	3.28E-0.5	1.14E-0.5	5.19E-0.7	2.89E-0.63E	6.36E-0.85E	1.40E-0.42	4.79E-0.42	2.17E-0.77	1.18E-0.4	
		1300-1400	1.32E-0.938	6.13E-0.3	3.28E-0.5	1.14E-0.3	5.23E-0.3	2.93E-0.6	5.81E-0.68E	1.48E-0.42	4.99E-0.42	2.29E-0.77	1.26E-0.5	
Road 1	35	1400-1500	1.32E-0.938	6.13E-0.3	4.54E-0.3	1.14E-0.3	5.69E-0.3	3.29E-0.6	5.81E-0.68E	1.48E-0.42	4.99E-0.42	2.29E-0.77	1.26E-0.5	
		1500-1600	1.28E-0.938	6.47E-0.7	3.56E-0.5	1.07E-0.5	5.41E-0.7	2.89E-0.6	5.92E-0.92E	1.91E-0.42	5.65E-0.42	2.44E-0.77	1.35E-0.4	
Road 1	40	1600-1700	1.38E-0.938	7.30E-0.7	4.02E-0.5	1.12E-0.5	6.03E-0.7	3.32E-0.58E	5.80E-0.91E	1.75E-0.42	4.71E-0.42	2.51E-0.77	1.46E-0.5	
		1700-1800	1.38E-0.938	7.30E-0.7	4.02E-0.5	1.12E-0.5	6.03E-0.7	3.32E-0.58E	5.80E-0.91E	1.75E-0.42	4.71E-0.42	2.51E-0.77	1.46E-0.5	
Road 1	45	1800-1900	1.67E-0.938	4.47E-0.7	2.47E-0.5	5.91E-0.32E	1.27E-0.6	1.35E-0.9	3.52E-0.93E	1.30E-0.42	3.00E-0.42	1.99E-0.77	1.06E-0.4	
		1900-2000	5.94E-0.938	3.12E-0.7	1.72E-0.5	6.03E-0.6	2.66E-0.7	2.17E-0.6	3.42E-0.80E	8.90E-0.5	2.81E-0.42	4.88E-0.77	1.81E-0.5	
Road 1	50	2000-2100	5.94E-0.938	3.12E-0.7	1.72E-0.5	6.03E-0.6	2.66E-0.7	2.17E-0.6	3.42E-0.80E	8.90E-0.5	2.81E-0.42	4.88E-0.77	1.81E-0.5	
		2100-2200	5.02E-0.938	2.65E-0.7	1.13E-0.4	6.30E-0.3	1.76E-0.7	1.94E-0.6	3.57E-0.8	1.45E-0.40E	1.91E-0.42	2.13E-0.77	1.18E-0.5	
Road 1	55	2200-2300	5.09E-0.938	2.02E-0.7	1.11E-0.4	4.24E-0.3	1.68E-0.7	2.06E-0.6	3.67E-0.8	1.49E-0.40E	8.02E-0.5	2.91E-0.42	1.18E-0.5	
		2300-2400	5.40E-0.938	2.02E-0.7	1.11E-0.4	4.24E-0.3	1.68E-0.7	2.06E-0.6	3.67E-0.8	1.49E-0.40E	8.02E-0.5	2.91E-0.42	1.18E-0.5	
Road 2	2	0000-0100	6.74E-0.938	9.23E-0.6	4.67E-0.5	9.17E-0.3	8.17E-0.6	1.34E-0.6	3.89E-0.53E	3.37E-0.3	2.70E-0.3	3.33E-0.45E	2.31E-0.5	
		0100-0200	7.38E-0.938	6.59E-0.6	3.34E-0.6	8.61E-0.5	5.98E-0.6	3.00E-0.6	4.04E-0.62E	1.83E-0.3	1.83E-0.3	3.66E-0.47E	1.60E-0.5	
Road 2	7	0000-0100	7.88E-0.938	7.28E-0.6	2.72E-0.6	7.28E-0.611E	3.69E-0.3	3.43E-0.7	7.88E-0.777	2.62E-0.5	2.91E-0.42	4.04E-0.77	2.23E-0.5	
		0100-0200	8.58E-0.938	4.50E-0.6	2.29E-0.6	7.75E-0.4	4.07E-0.6	2.18E-0.6	4.33E-0.72E	1.15E-0.3	8.03E-0.42	1.02E-0.7	1.02E-0.5	
Road 2	12	0000-0500	9.03E-0.938	5.22E-0.6	2.65E-0.6	8.72E-0.4	4.73E-0.6	2.42E-0.6	4.43E-0.66E	3.00E-0.3	3.96E-0.42	2.29E-0.77	1.18E-0.5	
		0500-0600	9.03E-0.938	5.22E-0.6	2.65E-0.6	8.72E-0.4	4.73E-0.6	2.42E-0.6	4.43E-0.66E	3.00E-0.3	3.96E-0.42	2.29E-0.77	1.18E-0.5	
Road 2	17	0600-0700	9.03E-0.938	5.22E-0.6	2.65E-0.6	8.72E-0.4	4.73E-0.6	2.42E-0.6	4.43E-0.66E	3.00E-0.3	3.96E-0.42	2.29E-0.77	1.18E-0.5	
		0700-0800	9.03E-0.938	5.22E-0.6	2.65E-0.6	8.72E-0.4	4.73E-0.6	2.42E-0.6	4.43E-0.66E	3.00E-0.3	3.96E-0.42	2.29E-0.77	1.18E-0.5	
Road 2	22	0800-0900	1.07E-0.938	6.74E-0.4	2.46E-0.6	9.75E-0.36E	1.43E-0.6	2.18E-0.4	4.94E-0.62E	1.10E-0.4	4.04E-0.42	1.94E-0.6	9.83E-0.5	
		0900-1000	1.07E-0.938	6.74E-0.4	2.46E-0.6	9.75E-0.36E	1.43E-0.6	2.18E-0.4	4.94E-0.62E	1.10E-0.4	4.04E-0.42	1.94E-0.6	9.83E-0.5	
Road 2	27	1000-1100	1.24E-0.938	4.67E-0.4	2.76E-0.5	1.11E-0.5	4.87E-0.4	2.47E-0.4	4.54E-0.6	3.99E-0.3	2.19E-0.4	1.91E-0.6	1.07E-0.4	
		1100-1200	1.47E-0.938	5.87E-0.6	2.87E-0.5	1.28E-0.4	4.94E-0.6	2.59E-0.6	6.06E-0.62E	2.54E-0.6	5.10E-0.42	2.02E-0.6	1.02E-0.4	
Road 2	32	1200-1300	1.71E-0.938	6.74E-0.4	2.46E-0.5	1.28E-0.4	4.94E-0.6	2.59E-0.6	6.06E-0.62E	2.54E-0.6	5.10E-0.42	2.02E-0.6	1.02E-0.4	
		1300-1400	1.55E-0.938	6.63E-0.3	3.51E-0.5	1.35E-0.6	6.63E-0.3	3.05E-0.6	6.25E-0.62E	2.80E-0.6	4.52E-0.42	2.37E-0.6	1.22E-0.4	
Road 2	37	1400-1500	1.55E-0.938	6.63E-0.3	3.51E-0.5	1.35E-0.6	6.63E-0.3	3.05E-0.6	6.25E-0.62E	2.80E-0.6	4.52E-0.42	2.37E-0.6	1.22E-0.4	
		1500-1600	1.55E-0.938	6.63E-0.3	3.51E-0.5	1.35E-0.6	6.63E-0.3	3.05E-0.6	6.25E-0.62E	2.80E-0.6	4.52E-0.42	2.37E-0.6	1.22E-0.4	
Road 2	42	1600-1700	1.55E-0.938	6.63E-0.3	3.51E-0.5	1.35E-0.6	6.63E-0.3	3.05E-0.6	6.25E-0.62E	2.80E-0.6	4.52E-0.42	2.37E-0.6	1.22E-0.4	
		1700-1800	1.55E-0.938	6.63E-0.3	3.51E-0.5	1.35E-0.6	6.63E-0.3	3.05E-0.6	6.25E-0.62E	2.80E-0.6	4.52E-0.42	2.37E-0.6	1.22E-0.4	
Road 2	47	1800-1900	1.75E-0.938	6.74E-0.4	2.46E-0.5	1.67E-0.4	5.17E-0.6	2.13E-0.6	3.89E-0.6	3.98E-0.3	2.21E-0.4	2.59E-0.6	1.20E-0.4	
		1900-2000	6.79E-0.938	3.27E-0.7	1.66E-0.5	8.11E-0.3	2.86E-0.7	1.42E-0.6	3.69E-0.7	1.78E-0.3	1.02E-0.3	3.05E-0.42	1.47E-0.4	
Road 2	52	2000-2100	6.79E-0.938	3.27E-0.7	1.66E-0.5	8.11E-0.3	2.86E-0.7	1.42E-0.6	3.69E-0.7	1.78E-0.3	1.02E-0.3	3.05E-0.42	1.47E-0.4	
		2100-2200	5.25E-0.938	2.25E-0.7	1.25E-0.4	5.25E-0.6	2.25E-0.6	1.25E-0.6	5.25E-0.62E	1.25E-0.6	1.25E-0.6	5.25E-0.62E	1.25E-0.6	
Road 2	57	2200-2300	5.87E-0.938	2.45E-0.7	1.35E-0.5	7.84E-0.3	1.92E-0.7	3.07E-0.6	3.45E-0.6	3.45E-0.6	3.45E-0.6	5.87E-0.62E	1.35E-0.5	
		2300-2400	6.10E-0.938	2.21E-0.7	1.12E-0.5	1.18E-0.6	1.89E-0.7	0.97E-0.6	3.49E-0.6	4.38E-0.6	7.20E-0.3	1.13E-0.6	5.80E-0.5	
Road 3	1	2000-0000	6.45E-0.938	1.76E-0.9	8.91E-0.6E	6.03E-0.5	1.52E-0.7	1.76E-0.6	3.91E-0.72E	1.07E-0.6	3.90E-0.42	6.45E-0.77	4.51E-0.5	
		0000-0100	6.45E-0.938	1.76E-0.9	8.91E-0.6E	6.03E-0.5	1.52E-0.7	1.76E-0.6	3.91E-0.72E	1.07E-0.6	3.90E-0.42	6.45E-0.77	4.51E-0.5	
Road 3	5	0000-0100	6.36E-0.938	2.00E-0.6	1.23E-0.7	5.79E-0.3	1.82E-0.6	1.12E-0.7	8.00E-0.72E	1.74E-0.7	7.34E-0.7	3.36E-0.77	1.06E-0.7	
		0100-0200	6.36E-0.938	2.00E-0.6	1.23E-0.7	5.79E-0.3	1.82E-0.6	1.12E-0.7	8.00E-0.72E	1.74E-0.7	7.34E-0.7	3.36E-0.77	1.06E-0.7	
Road 3	9	0000-0500	6.93E-0.938	6.93E-0.938	9.81E-0.6E	6.93E-0.4	1.98E-0.6	3.91E-0.62E	9.02E-0.6	5.53E-0.7	3.48E-0.6	8.03E-0.6E	4.95E-0.7	
		0500-0600	6.93E-0.938	6.93E-0.938	9.81E-0.6E	6.93E-0.4	1.98E-0.6	3.91E-0.62E	9.02E-0.6	5.53E-0.7	3.48E-0.6	8.03E-0.6E	4.95E-0.7	
Road 3	13	0000-0500	8.04E-0.938	1.61E-0.9	9.87E-0.6	7.27E-0.4	1.46E-0.8	8.59E-0.42E	8.44E-0.58E	1.18E-0.7	3.72E-0.42	4.74E-0.6	4.55E-0.7	
		0500-0600	8.04E-0.938	1.61E-0.9	9.87E-0.6	7.27E-0.4	1.46E-0.8	8.59E-0.42E	8.44E-0.58E	1.18E-0.7	3.72E-0.42	4.74E-0.6	4.55E-0.7	
Road 3	17	0000-0500	8.04E-0.938	1.61E-0.9	9.87E-0.6	7.27E-0.4	1.46E-0.8	8.59E-0.42E	8.44E-0.58E	1.18E-0.7	3.72E-0.42	4.74E-0.6	4.55E-0.7	
		0500-0600	8.04E-0.938	1.61E-0.9	9.87E-0.6	7.27E-0.4	1.46E-0.8	8.59E-0.42E	8.44E-0.58E	1.18E-0.7	3.72E-0.42	4.74E-0.6	4.55E-0.7	
Road 3	21	0000-0500	8.04E-0.938	1.61E-0.9	9.87E-0.6	7.27E-0.4	1.46E-0.8	8.59E-0.42E	8.44E-0.58E	1.18E-0.7	3.72E-0.42	4.74E-0.6	4.55E-0.7	
		0500-0600	8.04E-0.938	1.61E-0.9	9.87E-0.6	7.27E-0.4	1.46E-0.8	8.59E-0.42E	8.44E-0.58E	1.18E-0.7	3.72E-0.42	4.74E-0.6	4.55E-0.7	
Road 3	25	0000-0500	8.04E-0.938	1.61E-0.9	9.87E-0.6	7.27E-0.4	1.46E-0.8	8.59E-0.42E	8.44E-0.58E	1.18E-0.7	3.72E-0.42	4.74E-0.6	4.55E-0.7	
		0500-0600	8.04E-0.938	1.61E-0.9	9.87E-0.6	7.27E-0.4	1.46E-0.8	8.59E-0.42E	8.44E-0.58E	1.18E-0.7	3.72E-0.42	4.74E-0.6	4.55E-0.7	
Road 3	29	0000-0500	8.04E-0.938	1.61E-0.9	9.87E-0.6	7.27E-0.4	1.46E-0.8	8.59E-0.42E	8.44E-0.58E	1.18E-0.7	3.72E-0.42	4.74E-0.6	4.55E-0.7	
		0500-0600	8.04E-0.938	1.61E-0.9	9.87E-0.6	7.27E-0.4	1.46E-0.8	8.59E-0.42E	8.44E-0.58E	1.18E-0.7	3.72E-0.42	4.74E-0.6	4.55E-0.7	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry

Open Data Road 24 Hour Emission Factors for			Year 2038		NO Emission		NO Emission				
ARMDMO model (August)											
Road Name	Road ID	Hour	Month	g/kwh	g/mi	Month	g/kwh	g/mi	Month	g/kwh	g/mi
Road 17	17	1600-1700	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 17	17	1700-1800	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 17	17	1800-1900	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 17	17	1900-2000	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 17	17	2000-2100	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 17	17	2100-2200	1.09E-02	1.09E-02	1.09E-02	1.09E-02	1.09E-02	1.09E-02	1.09E-02	1.09E-02	1.09E-02
Road 17	17	2200-2300	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 17	17	2300-0000	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 18	18	0000-0100	6.92E-03	6.92E-03	6.92E-03	6.92E-03	6.92E-03	6.92E-03	6.92E-03	6.92E-03	6.92E-03
Road 18	18	0100-0200	7.13E-03	7.13E-03	7.13E-03	7.13E-03	7.13E-03	7.13E-03	7.13E-03	7.13E-03	7.13E-03
Road 18	18	0200-0300	8.49E-03	8.49E-03	8.49E-03	8.49E-03	8.49E-03	8.49E-03	8.49E-03	8.49E-03	8.49E-03
Road 18	18	0300-0400	8.49E-03	8.49E-03	8.49E-03	8.49E-03	8.49E-03	8.49E-03	8.49E-03	8.49E-03	8.49E-03
Road 18	18	0400-0500	9.82E-03	9.82E-03	9.82E-03	9.82E-03	9.82E-03	9.82E-03	9.82E-03	9.82E-03	9.82E-03
Road 18	18	0500-0600	8.49E-03	8.49E-03	8.49E-03	8.49E-03	8.49E-03	8.49E-03	8.49E-03	8.49E-03	8.49E-03
Road 18	18	0600-0700	9.82E-03	9.82E-03	9.82E-03	9.82E-03	9.82E-03	9.82E-03	9.82E-03	9.82E-03	9.82E-03
Road 18	18	0700-0800	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 18	18	0800-0900	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 18	18	0900-1000	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 18	18	1000-1100	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 18	18	1100-1200	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 18	18	1200-1300	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 18	18	1300-1400	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 18	18	1400-1500	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 18	18	1500-1600	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 18	18	1600-1700	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 18	18	1700-1800	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 18	18	1800-1900	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 18	18	1900-2000	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 18	18	2000-2100	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 18	18	2100-2200	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 18	18	2200-2300	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 18	18	2300-0000	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 19	19	0000-0100	8.52E-03	8.52E-03	8.52E-03	8.52E-03	8.52E-03	8.52E-03	8.52E-03	8.52E-03	8.52E-03
Road 19	19	0100-0200	9.32E-03	9.32E-03	9.32E-03	9.32E-03	9.32E-03	9.32E-03	9.32E-03	9.32E-03	9.32E-03
Road 19	19	0200-0300	1.02E-02	1.02E-02	1.02E-02	1.02E-02	1.02E-02	1.02E-02	1.02E-02	1.02E-02	1.02E-02
Road 19	19	0300-0400	1.12E-02	1.12E-02	1.12E-02	1.12E-02	1.12E-02	1.12E-02	1.12E-02	1.12E-02	1.12E-02
Road 19	19	0400-0500	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 19	19	0500-0600	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 19	19	0600-0700	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 19	19	0700-0800	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 19	19	0800-0900	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 19	19	0900-1000	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 19	19	1000-1100	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 19	19	1100-1200	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 19	19	1200-1300	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 19	19	1300-1400	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 19	19	1400-1500	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 19	19	1500-1600	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 19	19	1600-1700	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 19	19	1700-1800	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 19	19	1800-1900	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 19	19	1900-2000	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 19	19	2000-2100	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 19	19	2100-2200	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 19	19	2200-2300	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 19	19	2300-0000	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02	1.18E-02
Road 20	20	0000-0100	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02
Road 20	20	0100-0200	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02
Road 20	20	0200-0300	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02
Road 20	20	0300-0400	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02
Road 20	20	0400-0500	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02
Road 20	20	0500-0600	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02
Road 20	20	0600-0700	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02
Road 20	20	0700-0800	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02
Road 20	20	0800-0900	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02
Road 20	20	0900-1000	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02
Road 20	20	1000-1100	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02
Road 20	20	1100-1200	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02
Road 20	20	1200-1300	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02
Road 20	20	1300-1400	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02
Road 20	20	1400-1500	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02
Road 20	20	1500-1600	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02
Road 20	20	1600-1700	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02
Road 20	20	1700-1800	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02
Road 20	20	1800-1900	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02
Road 20	20	1900-2000	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02
Road 20	20	2000-2100	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02
Road 20	20	2100-2200	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02
Road 20	20	2200-2300	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02
Road 20	20	2300-0000	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02	3.61E-02

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry

Open Road Road to Sea Emission Factors											
Year 2008											
ASRMC model (August)											
Road Name	Road ID	Year	Monthly/Hours			NO _x Emission			NO ₂		
			g/km/hour	g/m ³	hour/km	g/km/hour	g/m ³	hour/km	g/km/hour	g/m ³	hour/km
Road 24	0000-0900	1.365	2.73	0.552	0.77	1.18	0.15	0.71	1.18	0.15	0.71
Road 24	0900-1200	1.365	2.97	0.77	1.44	0.12	2.63	0.59	0.51	1.11	0.26
Road 24	1200-1500	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	1500-1800	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	1800-2100	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	2100-2400	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	0000-0900	1.365	2.73	0.552	0.77	1.18	0.15	0.71	1.18	0.15	0.71
Road 24	0900-1200	1.365	2.97	0.77	1.44	0.12	2.63	0.59	0.51	1.11	0.26
Road 24	1200-1500	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	1500-1800	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	1800-2100	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	2100-2400	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	0000-0900	1.365	2.73	0.552	0.77	1.18	0.15	0.71	1.18	0.15	0.71
Road 24	0900-1200	1.365	2.97	0.77	1.44	0.12	2.63	0.59	0.51	1.11	0.26
Road 24	1200-1500	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	1500-1800	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	1800-2100	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	2100-2400	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	0000-0900	1.365	2.73	0.552	0.77	1.18	0.15	0.71	1.18	0.15	0.71
Road 24	0900-1200	1.365	2.97	0.77	1.44	0.12	2.63	0.59	0.51	1.11	0.26
Road 24	1200-1500	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	1500-1800	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	1800-2100	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	2100-2400	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	0000-0900	1.365	2.73	0.552	0.77	1.18	0.15	0.71	1.18	0.15	0.71
Road 24	0900-1200	1.365	2.97	0.77	1.44	0.12	2.63	0.59	0.51	1.11	0.26
Road 24	1200-1500	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	1500-1800	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	1800-2100	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	2100-2400	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	0000-0900	1.365	2.73	0.552	0.77	1.18	0.15	0.71	1.18	0.15	0.71
Road 24	0900-1200	1.365	2.97	0.77	1.44	0.12	2.63	0.59	0.51	1.11	0.26
Road 24	1200-1500	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	1500-1800	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	1800-2100	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	2100-2400	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	0000-0900	1.365	2.73	0.552	0.77	1.18	0.15	0.71	1.18	0.15	0.71
Road 24	0900-1200	1.365	2.97	0.77	1.44	0.12	2.63	0.59	0.51	1.11	0.26
Road 24	1200-1500	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	1500-1800	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	1800-2100	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	2100-2400	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	0000-0900	1.365	2.73	0.552	0.77	1.18	0.15	0.71	1.18	0.15	0.71
Road 24	0900-1200	1.365	2.97	0.77	1.44	0.12	2.63	0.59	0.51	1.11	0.26
Road 24	1200-1500	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	1500-1800	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	1800-2100	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	2100-2400	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	0000-0900	1.365	2.73	0.552	0.77	1.18	0.15	0.71	1.18	0.15	0.71
Road 24	0900-1200	1.365	2.97	0.77	1.44	0.12	2.63	0.59	0.51	1.11	0.26
Road 24	1200-1500	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	1500-1800	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	1800-2100	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	2100-2400	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	0000-0900	1.365	2.73	0.552	0.77	1.18	0.15	0.71	1.18	0.15	0.71
Road 24	0900-1200	1.365	2.97	0.77	1.44	0.12	2.63	0.59	0.51	1.11	0.26
Road 24	1200-1500	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	1500-1800	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	1800-2100	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	2100-2400	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	0000-0900	1.365	2.73	0.552	0.77	1.18	0.15	0.71	1.18	0.15	0.71
Road 24	0900-1200	1.365	2.97	0.77	1.44	0.12	2.63	0.59	0.51	1.11	0.26
Road 24	1200-1500	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	1500-1800	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	1800-2100	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	2100-2400	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	0000-0900	1.365	2.73	0.552	0.77	1.18	0.15	0.71	1.18	0.15	0.71
Road 24	0900-1200	1.365	2.97	0.77	1.44	0.12	2.63	0.59	0.51	1.11	0.26
Road 24	1200-1500	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	1500-1800	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	1800-2100	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	2100-2400	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	0000-0900	1.365	2.73	0.552	0.77	1.18	0.15	0.71	1.18	0.15	0.71
Road 24	0900-1200	1.365	2.97	0.77	1.44	0.12	2.63	0.59	0.51	1.11	0.26
Road 24	1200-1500	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	1500-1800	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	1800-2100	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	2100-2400	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	0000-0900	1.365	2.73	0.552	0.77	1.18	0.15	0.71	1.18	0.15	0.71
Road 24	0900-1200	1.365	2.97	0.77	1.44	0.12	2.63	0.59	0.51	1.11	0.26
Road 24	1200-1500	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	1500-1800	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	1800-2100	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	2100-2400	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	0000-0900	1.365	2.73	0.552	0.77	1.18	0.15	0.71	1.18	0.15	0.71
Road 24	0900-1200	1.365	2.97	0.77	1.44	0.12	2.63	0.59	0.51	1.11	0.26
Road 24	1200-1500	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	1500-1800	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	1800-2100	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	2100-2400	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	0000-0900	1.365	2.73	0.552	0.77	1.18	0.15	0.71	1.18	0.15	0.71
Road 24	0900-1200	1.365	2.97	0.77	1.44	0.12	2.63	0.59	0.51	1.11	0.26
Road 24	1200-1500	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	1500-1800	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	1800-2100	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	2100-2400	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	0000-0900	1.365	2.73	0.552	0.77	1.18	0.15	0.71	1.18	0.15	0.71
Road 24	0900-1200	1.365	2.97	0.77	1.44	0.12	2.63	0.59	0.51	1.11	0.26
Road 24	1200-1500	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	1500-1800	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	1800-2100	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	2100-2400	1.511	3.21	0.92	1.60	0.28	4.77	0.87	0.77	1.57	0.88
Road 24	0000-0900	1.365	2.73	0.552	0.77	1.18	0.15	0.71	1.18</		

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Tsing Yi North Underground Quarry

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Tsing Yi North Underground Quarry

Open Road	Top 100 Road Section		Year 2008		NO _x Emission		NO ₂	
	Road Name		ASRMC model (Average)		Monthly/Average		Monthly/Average	
	Road	Hour	Monthly/Average	Hourly	Monthly/Average	Hourly	Monthly/Average	Hourly
Road 27	1600-1700	1:00-2:00	1.6074	1.6074	1.252	1.252	0.431	0.431
	1700-1800	1:30-2:30	1.366	1.341	0.655	0.641	0.233	0.226
Road 27	1800-1900	1:55-2:55	1.182	1.077	0.508	0.458	0.177	0.161
	1900-2000	2:25-3:25	1.123	1.044	0.475	0.445	0.168	0.156
Road 27	2000-2100	1:02-2:01	0.938	0.938	0.587	0.587	0.214	0.214
	2100-2200	1:07-2:07	0.977	0.978	0.786	0.793	0.283	0.286
Road 27	2200-2300	1:22-2:22	1.123	1.123	0.475	0.475	0.168	0.168
	2300-0000	1:41-2:41	0.665	0.665	0.214	0.214	0.078	0.078
Road 28	0000-0100	0:27-0:33	0.968	0.968	0.555	0.555	0.198	0.198
	0100-0200	0:33-0:43	1.123	1.123	0.475	0.475	0.168	0.168
Road 28	0200-0300	1:12-2:12	0.595	0.595	0.205	0.205	0.075	0.075
	0300-0400	1:28-2:28	0.338	0.338	0.105	0.105	0.038	0.038
Road 28	0400-0500	1:26-2:26	0.595	0.595	0.205	0.205	0.075	0.075
	0500-0600	1:26-2:26	0.338	0.338	0.105	0.105	0.038	0.038
Road 28	0600-0700	2:42-3:42	2.167	2.167	1.123	1.123	0.407	0.407
	0700-0800	1:34-2:34	0.471	0.471	0.168	0.168	0.061	0.061
Road 28	0800-0900	1:59-2:59	0.786	0.786	0.283	0.283	0.101	0.101
	0900-1000	1:58-2:58	0.977	0.977	0.352	0.352	0.126	0.126
Road 28	1000-1100	1:86-2:86	0.637	0.637	0.226	0.226	0.082	0.082
	1100-1200	1:76-2:76	0.471	0.471	0.168	0.168	0.061	0.061
Road 28	1200-1300	1:71-2:71	0.628	0.628	0.226	0.226	0.082	0.082
	1300-1400	1:72-2:72	0.471	0.471	0.168	0.168	0.061	0.061
Road 28	1400-1500	1:67-2:67	0.471	0.471	0.168	0.168	0.061	0.061
	1500-1600	1:60-2:60	0.426	0.426	0.153	0.153	0.056	0.056
Road 28	1600-1700	1:66-2:66	0.427	0.427	0.153	0.153	0.056	0.056
	1700-1800	1:21-2:21	0.747	0.747	0.267	0.267	0.096	0.096
Road 28	1800-1900	1:38-2:38	0.786	0.786	0.283	0.283	0.101	0.101
	1900-2000	1:45-2:45	0.897	0.897	0.319	0.319	0.114	0.114
Road 28	2000-2100	1:22-2:22	0.938	0.938	0.352	0.352	0.126	0.126
	2100-2200	1:24-2:24	0.938	0.938	0.352	0.352	0.126	0.126
Road 28	2200-2300	0:47-1:47	1.326	0.747	0.471	0.267	0.168	0.096
	2300-0000	0:58-1:58	0.786	0.786	0.283	0.283	0.101	0.101
Road 29	0000-0100	0:27-0:33	0.968	0.968	0.555	0.555	0.198	0.198
	0100-0200	0:33-0:43	1.123	1.123	0.475	0.475	0.168	0.168
Road 29	0200-0300	1:12-2:12	0.595	0.595	0.205	0.205	0.075	0.075
	0300-0400	1:28-2:28	0.338	0.338	0.105	0.105	0.038	0.038
Road 29	0400-0500	1:26-2:26	0.595	0.595	0.205	0.205	0.075	0.075
	0500-0600	1:26-2:26	0.338	0.338	0.105	0.105	0.038	0.038
Road 29	0600-0700	2:42-3:42	2.167	2.167	1.123	1.123	0.407	0.407
	0700-0800	1:34-2:34	0.471	0.471	0.168	0.168	0.061	0.061
Road 29	0800-0900	1:59-2:59	0.786	0.786	0.283	0.283	0.101	0.101
	0900-1000	1:58-2:58	0.977	0.977	0.352	0.352	0.126	0.126
Road 29	1000-1100	1:86-2:86	0.637	0.637	0.226	0.226	0.082	0.082
	1100-1200	1:76-2:76	0.471	0.471	0.168	0.168	0.061	0.061
Road 29	1200-1300	1:71-2:71	0.628	0.628	0.226	0.226	0.082	0.082
	1300-1400	1:72-2:72	0.471	0.471	0.168	0.168	0.061	0.061
Road 29	1400-1500	1:67-2:67	0.471	0.471	0.168	0.168	0.061	0.061
	1500-1600	1:60-2:60	0.426	0.426	0.153	0.153	0.056	0.056
Road 29	1600-1700	1:66-2:66	0.427	0.427	0.153	0.153	0.056	0.056
	1700-1800	1:21-2:21	0.747	0.747	0.267	0.267	0.096	0.096
Road 29	1800-1900	1:38-2:38	0.786	0.786	0.283	0.283	0.101	0.101
	1900-2000	1:45-2:45	0.897	0.897	0.319	0.319	0.114	0.114
Road 29	2000-2100	1:22-2:22	0.938	0.938	0.352	0.352	0.126	0.126
	2100-2200	1:24-2:24	0.938	0.938	0.352	0.352	0.126	0.126
Road 29	2200-2300	0:47-1:47	1.326	0.747	0.471	0.267	0.168	0.096
	2300-0000	0:58-1:58	0.786	0.786	0.283	0.283	0.101	0.101
Road 30	0000-0100	0:27-0:33	0.968	0.968	0.555	0.555	0.198	0.198
	0100-0200	0:33-0:43	1.123	1.123	0.475	0.475	0.168	0.168
Road 30	0200-0300	1:12-2:12	0.595	0.595	0.205	0.205	0.075	0.075
	0300-0400	1:28-2:28	0.338	0.338	0.105	0.105	0.038	0.038
Road 30	0400-0500	1:26-2:26	0.595	0.595	0.205	0.205	0.075	0.075
	0500-0600	1:26-2:26	0.338	0.338	0.105	0.105	0.038	0.038
Road 30	0600-0700	2:42-3:42	2.167	2.167	1.123	1.123	0.407	0.407
	0700-0800	1:34-2:34	0.471	0.471	0.168	0.168	0.061	0.061
Road 30	0800-0900	1:59-2:59	0.786	0.786	0.283	0.283	0.101	0.101
	0900-1000	1:58-2:58	0.977	0.977	0.352	0.352	0.126	0.126
Road 30	1000-1100	1:86-2:86	0.637	0.637	0.226	0.226	0.082	0.082
	1100-1200	1:76-2:76	0.471	0.471	0.168	0.168	0.061	0.061
Road 30	1200-1300	1:71-2:71	0.628	0.628	0.226	0.226	0.082	0.082
	1300-1400	1:72-2:72	0.471	0.471	0.168	0.168	0.061	0.061
Road 30	1400-1500	1:67-2:67	0.471	0.471	0.168	0.168	0.061	0.061
	1500-1600	1:60-2:60	0.426	0.426	0.153	0.153	0.056	0.056
Road 30	1600-1700	1:66-2:66	0.427	0.427	0.153	0.153	0.056	0.056
	1700-1800	1:21-2:21	0.747	0.747	0.267	0.267	0.096	0.096
Road 30	1800-1900	1:38-2:38	0.786	0.786	0.283	0.283	0.101	0.101
	1900-2000	1:45-2:45	0.897	0.897	0.319	0.319	0.114	0.114
Road 30	2000-2100	1:22-2:22	0.938	0.938	0.352	0.352	0.126	0.126
	2100-2200	1:24-2:24	0.938	0.938	0.352	0.352	0.126	0.126
Road 30	2200-2300	0:47-1:47	1.326	0.747	0.471	0.267	0.168	0.096
	2300-0000	0:58-1:58	0.786	0.786	0.283	0.283	0.101	0.101

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry		
Open Road 24 hour Emission Factors for		
AERMOD model (August)	Year 2038	
	NO _x Emission	NO ₂ Emission
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Road Name	Road ID	Hour	Monthly/hourly			Monthly/hourage			Monthly/hourly			Monthly/hourage			
			g/m ² /hr	g/s/m ²	tonne/hour	g/m ² /hr	g/s/m ²	tonne/hour	g/m ² /hr	g/s/m ²	tonne/hour	g/m ² /hr	g/s/m ²	tonne/hour	
Road #1	41	0000-0000	1.635	3.72E-09	4.94E-07	1.635E	3.72E-09	4.94E-07	1.211E	2.72E-09	3.40E-07	1.144E	5.220E	1.06E-07	9.92E-07
Road #1	41	0100-0100	2.185	4.86E-09	6.75E-07	2.185E	4.86E-09	6.75E-07	1.585E	3.52E-09	4.54E-07	1.245E	5.560E	1.12E-07	1.06E-06
Road #1	41	0200-0200	2.735	6.12E-09	8.46E-07	2.735E	6.12E-09	8.46E-07	2.069E	4.58E-09	5.86E-07	1.585E	6.800E	1.37E-07	1.30E-06
Road #1	41	0300-0400	3.285	7.38E-09	1.01E-06	3.285E	7.38E-09	1.01E-06	2.564E	5.68E-09	7.28E-07	1.986E	8.530E	1.61E-07	1.67E-06
Road #1	41	0400-0500	3.835	8.64E-09	1.18E-06	3.835E	8.64E-09	1.18E-06	3.048E	6.72E-09	8.58E-07	2.286E	9.660E	1.92E-07	1.98E-06
Road #1	41	0500-0600	4.385	9.90E-09	1.35E-06	4.385E	9.90E-09	1.35E-06	3.532E	7.76E-09	9.90E-07	2.570E	1.020E	2.10E-07	2.15E-07
Road #1	41	0600-0700	4.935	1.116E-08	1.52E-06	4.935E	1.116E-08	1.52E-06	4.016E	8.80E-09	1.116E-06	2.854E	1.140E	2.35E-07	2.40E-07
Road #1	41	0700-0800	5.485	1.242E-08	1.69E-06	5.485E	1.242E-08	1.69E-06	4.500E	9.94E-09	1.242E-06	3.138E	1.260E	2.55E-07	2.60E-07
Road #1	41	0800-0900	6.035	1.368E-08	1.86E-06	6.035E	1.368E-08	1.86E-06	4.984E	1.108E-08	1.368E-06	3.422E	1.380E	2.75E-07	2.80E-07
Road #1	41	0900-1000	6.585	1.494E-08	2.03E-06	6.585E	1.494E-08	2.03E-06	5.468E	1.222E-08	1.494E-06	3.706E	1.480E	2.95E-07	3.00E-07
Road #1	41	1000-1100	7.135	1.620E-08	2.20E-06	7.135E	1.620E-08	2.20E-06	5.952E	1.336E-08	1.620E-06	3.990E	1.580E	3.15E-07	3.20E-07
Road #1	41	1100-1200	7.685	1.746E-08	2.37E-06	7.685E	1.746E-08	2.37E-06	6.436E	1.450E-08	1.746E-06	4.274E	1.680E	3.35E-07	3.40E-07
Road #1	41	1200-1300	8.235	1.872E-08	2.54E-06	8.235E	1.872E-08	2.54E-06	6.920E	1.564E-08	1.872E-06	4.558E	1.780E	3.55E-07	3.60E-07
Road #1	41	1300-1400	8.785	2.000E-08	2.71E-06	8.785E	2.000E-08	2.71E-06	7.404E	1.678E-08	2.000E-06	4.842E	1.880E	3.75E-07	3.80E-07
Road #1	41	1400-1500	9.335	2.126E-08	2.88E-06	9.335E	2.126E-08	2.88E-06	7.888E	1.792E-08	2.126E-06	5.126E	1.980E	3.95E-07	4.00E-07
Road #1	41	1500-1600	9.885	2.252E-08	3.05E-06	9.885E	2.252E-08	3.05E-06	8.372E	1.906E-08	2.252E-06	5.410E	2.080E	4.15E-07	4.20E-07
Road #1	41	1600-1700	1.133E	2.50E-09	3.37E-07	1.133E	2.50E-09	3.37E-07	1.625E	3.57E-09	4.54E-07	5.930E	7.712E	5.18E-07	5.23E-07
Road #1	41	1700-1800	1.683	3.75E-09	4.94E-07	1.683E	3.75E-09	4.94E-07	2.109E	4.61E-09	5.86E-07	6.350E	1.020E	1.06E-06	1.07E-06
Road #1	41	1800-1900	2.233	4.90E-09	6.75E-07	2.233E	4.90E-09	6.75E-07	2.593E	5.75E-09	7.28E-07	6.870E	1.360E	1.40E-06	1.41E-06
Road #1	41	1900-2000	2.783	6.16E-09	8.54E-07	2.783E	6.16E-09	8.54E-07	3.077E	6.90E-09	8.90E-07	7.390E	1.640E	1.70E-06	1.71E-06
Road #1	41	2000-2100	3.333	7.42E-09	1.02E-06	3.333E	7.42E-09	1.02E-06	3.571E	7.92E-09	1.02E-06	8.000E	1.990E	2.09E-06	2.10E-06
Road #1	41	2100-2200	3.883	8.68E-09	1.19E-06	3.883E	8.68E-09	1.19E-06	4.119E	9.14E-09	1.19E-06	9.210E	2.280E	2.38E-06	2.39E-06
Road #1	41	2200-2300	4.433	9.94E-09	1.36E-06	4.433E	9.94E-09	1.36E-06	4.667E	1.028E-08	1.36E-06	1.030E	2.570E	2.67E-06	2.68E-06
Road #1	41	2300-2400	4.983	1.120E-08	1.53E-06	4.983E	1.120E-08	1.53E-06	5.217E	1.142E-08	1.53E-06	1.160E	2.860E	2.94E-06	2.95E-06
Road #1	41	0000-0100	5.533	1.246E-08	1.69E-06	5.533E	1.246E-08	1.69E-06	5.765E	1.256E-08	1.69E-06	1.290E	3.050E	3.13E-06	3.14E-06
Road #1	41	0100-0200	6.083	1.372E-08	1.86E-06	6.083E	1.372E-08	1.86E-06	6.311E	1.370E-08	1.86E-06	1.410E	3.340E	3.42E-06	3.43E-06
Road #1	41	0200-0300	6.633	1.498E-08	2.03E-06	6.633E	1.498E-08	2.03E-06	6.861E	1.484E-08	2.03E-06	1.530E	3.630E	3.71E-06	3.72E-06
Road #1	41	0300-0400	7.183	1.624E-08	2.20E-06	7.183E	1.624E-08	2.20E-06	7.413E	1.628E-08	2.20E-06	1.650E	3.920E	3.99E-06	4.00E-06
Road #1	41	0400-0500	7.733	1.750E-08	2.37E-06	7.733E	1.750E-08	2.37E-06	7.963E	1.754E-08	2.37E-06	1.770E	4.210E	4.28E-06	4.29E-06
Road #1	41	0500-0600	8.283	1.876E-08	2.54E-06	8.283E	1.876E-08	2.54E-06	8.513E	1.880E-08	2.54E-06	1.890E	4.500E	4.57E-06	4.58E-06
Road #1	41	0600-0700	8.833	2.002E-08	2.71E-06	8.833E	2.002E-08	2.71E-06	9.063E	2.006E-08	2.71E-06	2.010E	4.790E	4.86E-06	4.87E-06
Road #1	41	0700-0800	9.383	2.128E-08	2.88E-06	9.383E	2.128E-08	2.88E-06	9.613E	2.132E-08	2.88E-06	2.130E	5.080E	5.15E-06	5.16E-06
Road #1	41	0800-0900	9.933	2.254E-08	3.05E-06	9.933E	2.254E-08	3.05E-06	1.016E	2.236E-08	3.05E-06	2.250E	5.370E	5.44E-06	5.45E-06
Road #1	41	0900-1000	1.048E	2.380E-09	3.32E-07	1.048E	2.380E-09	3.32E-07	1.073E	2.384E-09	3.32E-07	2.370E	5.660E	5.73E-07	5.74E-07
Road #1	41	1000-1100	1.098E	2.506E-09	3.49E-07	1.098E	2.506E-09	3.49E-07	1.123E	2.508E-09	3.49E-07	2.420E	5.950E	5.99E-07	6.00E-07
Road #1	41	1100-1200	1.148E	2.632E-09	3.66E-07	1.148E	2.632E-09	3.66E-07	1.173E	2.636E-09	3.66E-07	2.470E	6.240E	6.28E-07	6.29E-07
Road #1	41	1200-1300	1.198E	2.758E-09	3.83E-07	1.198E	2.758E-09	3.83E-07	1.223E	2.760E-09	3.83E-07	2.520E	6.530E	6.57E-07	6.58E-07
Road #1	41	1300-1400	1.248E	2.884E-09	4.00E-07	1.248E	2.884E-09	4.00E-07	1.273E	2.888E-09	4.00E-07	2.570E	6.820E	6.86E-07	6.87E-07
Road #1	41	1400-1500	1.298E	3.010E-09	4.17E-07	1.298E	3.010E-09	4.17E-07	1.323E	3.014E-09	4.17E-07	2.620E	7.110E	7.15E-07	7.16E-07
Road #1	41	1500-1600	1.348E	3.136E-09	4.34E-07	1.348E	3.136E-09	4.34E-07	1.373E	3.140E-09	4.34E-07	2.670E	7.400E	7.44E-07	7.45E-07
Road #1	41	1600-1700	1.398E	3.262E-09	4.51E-07	1.398E	3.262E-09	4.51E-07	1.423E	3.266E-09	4.51E-07	2.720E	7.690E	7.73E-07	7.74E-07
Road #1	41	1700-1800	1.448E	3.388E-09	4.68E-07	1.448E	3.388E-09	4.68E-07	1.473E	3.392E-09	4.68E-07	2.770E	7.980E	8.02E-07	8.03E-07
Road #1	41	1800-1900	1.498E	3.514E-09	4.85E-07	1.498E	3.514E-09	4.85E-07	1.523E	3.518E-09	4.85E-07	2.820E	8.270E	8.31E-07	8.32E-07
Road #1	41	1900-2000	1.548E	3.640E-09	5.02E-07	1.548E	3.640E-09	5.02E-07	1.573E	3.644E-09	5.02E-07	2.870E	8.560E	8.60E-07	8.61E-07
Road #1	41	2000-2100	1.598E	3.766E-09	5.19E-07	1.598E	3.766E-09	5.19E-07	1.623E	3.768E-09	5.19E-07	2.920E	8.850E	8.89E-07	8.90E-07
Road #1	41	2100-2200	1.648E	3.892E-09	5.36E-07	1.648E	3.892E-09	5.36E-07	1.673E	3.896E-09	5.36E-07	2.970E	9.140E	9.18E-07	9.19E-07
Road #1	41	2200-2300	1.698E	4.018E-09	5.53E-07	1.698E	4.018E-09	5.53E-07	1.723E	4.020E-09	5.53E-07	3.020E	9.430E	9.47E-07	9.48E-07
Road #1	41	2300-2400	1.748E	4.144E-09	5.70E-07	1.748E	4.144E-09	5.70E-07	1.773E	4.148E-09	5.70E-07	3.070E	9.720E	9.76E-07	9.77E-07
Road #1	41	0000-0100	1.798E	4.270E-09	5.87E-07	1.798E	4.270E-09	5.87E-07	1.823E	4.274E-09	5.87E-07	3.120E	1.001E	1.00E-06	1.00E-06
Road #1	41	0100-0200	1.848E	4.396E-09	6.04E-07	1.848E	4.396E-09	6.04E-07	1.873E	4.398E-09	6.04E-07	3.170E	1.030E	1.03E-06	1.03E-06
Road #1	41	0200-0300	1.898E	4.522E-09	6.21E-07	1.898E	4.522E-09	6.21E-07	1.923E	4.526E-09	6.21E-07	3.220E	1.060E	1.06E-06	1.06E-06
Road #1	41	0300-0400	1.948E	4.648E-09	6.38E-07	1.948E	4.648E-09	6.38E-07	1.973E	4.650E-09	6.38E-07	3.270E	1.090E	1.09E-06	1.09E-06
Road #1	41	0400-0500	1.998E	4.774E-09	6.55E-07	1.998E	4.774E-09	6.55E-07	2.023E	4.778E-09	6.55E-07	3.320E	1.120E	1.12E-06	1.12E-06
Road #1	41	0500-0600	2.048E	4.900E-09	6.72E-07	2.048E	4.900E-09	6.72E-07	2.073E	4.902E-09	6.72E-07	3.370E	1.150E	1.15E-06	1.15E-06
Road #1	41	0600-0700	2.098E	5.026E-09	6.89E-07	2.098E	5.026E-09	6.89E-07	2.123E	5.026E-09	6.89E-07	3.420E	1.180E	1.18E-06	1.18E-06
Road #1	41	0700-0800	2.148E	5.152E-09	7.06E-07	2.148E	5.152E-09	7.06E-07	2.173E	5.156E-09	7.06E-07	3.470E	1.210E	1.21E-06	1.21E-06
Road #1	41	0800-0900	2.198E	5.278E-09	7.23E-07	2.198E	5.278E-09	7.23E-07	2.223E	5.280E-09	7.23E-07	3.520E	1.240E	1.24E-06	1.24E-06
Road #1	41	0900-1000	2.248E	5.404E-09	7.40E-07	2.248E	5.404E-09	7.40E-07	2.273E	5.404E-09	7.40E-07	3.570E	1.270E	1.27E-06	1.27E-06
Road #1	41	1000-1100	2.298E	5.530E-09	7.57E-07	2.298E	5.530E-09	7.57E-07	2.323E	5.534E-09	7.57E-07	3.620E	1.300E	1.30E-06	1.30E-06
Road #1	41	1100-1200	2.348E	5.656E-09	7.74E-07	2.348E	5.656E-09	7.74E-07	2.373E	5.658E-09	7.74E-07	3.670E	1.330E	1.33E-06	1.33E-06
Road #1	41	1200-1300	2.398E	5.782E-09	7.91E-07	2.398E	5.782E-09	7.91E-07	2.423E	5.782E-09	7.91E-07	3.720E	1.360E	1.36E-06	1.36E-06
Road #1	41	1300-1400	2.448E	5.908E-09	8.08E-07	2.448E	5.908E-09	8.08E-07	2.473E	5.912E-09	8.08E-07	3.770E	1.390E	1.39E-06	1.39E-06
Road #1	41	1400-1500	2.498E	6.034E-09	8.25E-07	2.498E	6.034E-09	8.25E-07	2.523E						

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for AERMOD model (August)	Year 2038

Road Name	Road ID	Hour	NO ₂ Emission						NO _x Emission						
			Monthly/hourly			Monthly/hourly			Monthly/hourly			Monthly/hourly			
			g/m ³ /veh	g/s ^m	tonne/hour	g/m ³ /veh	g/s ^m	tonne/hour	g/m ³ /veh	g/s ^m	tonne/hour	g/m ³ /veh	g/s ^m	tonne/hour	
Road S4	S4	08:00-09:00	6.69E-02	3.24E-07	7.89E-06	7.61E-02	2.84E-07	6.47E-06	3.21E-01	1.20E-06	2.73E-05	2.77E-01	1.04E-06	2.36E-05	
Road S4	S4	09:00-10:00	9.02E-02	3.53E-07	8.09E-06	8.61E-02	3.12E-07	7.06E-06	3.51E-01	1.33E-06	2.99E-05	3.18E-01	1.12E-06	2.61E-05	
Road S4	S4	10:00-11:00	1.15E-01	4.55E-07	1.05E-05	1.19E-01	4.30E-07	9.49E-06	4.61E-01	1.65E-06	3.69E-05	4.00E-01	1.45E-06	3.25E-05	
Road S4	S4	11:00-12:00	1.13E-01	3.54E-07	8.06E-06	9.44E-02	2.96E-07	6.78E-06	4.05E-01	1.27E-06	2.89E-05	3.38E-01	1.06E-06	2.42E-05	
Road S4	S4	12:00-13:00	1.40E-01	3.02E-07	6.99E-06	1.20E-01	2.64E-07	5.95E-06	4.76E-01	1.03E-06	2.35E-05	4.02E-01	8.88E-07	2.02E-05	
Road S4	S4	13:00-14:00	1.24E-01	3.44E-07	7.92E-06	1.07E-01	3.31E-07	7.12E-06	4.13E-01	1.12E-06	2.57E-05	3.59E-01	1.03E-06	2.33E-05	
Road S4	S4	14:00-15:00	1.39E-01	3.32E-07	7.57E-06	1.16E-01	2.79E-07	5.36E-06	4.81E-01	1.15E-06	2.63E-05	4.02E-01	9.66E-07	2.20E-05	
Road S4	S4	15:00-16:00	1.26E-01	3.12E-07	7.11E-06	1.08E-01	2.64E-07	6.01E-06	4.80E-01	1.19E-06	2.71E-05	4.05E-01	9.00E-07	2.09E-05	
Road S4	S4	16:00-17:00	1.05E-01	2.89E-07	6.64E-06	9.01E-02	2.47E-07	5.39E-06	4.23E-01	1.05E-06	2.36E-05	3.50E-01	8.23E-07	1.86E-05	
Road S4	S4	17:00-18:00	1.08E-01	2.97E-07	6.84E-06	9.01E-02	2.47E-07	4.72E-06	4.59E-01	9.77E-07	2.23E-05	3.50E-01	8.17E-07	1.86E-05	
Road S4	S4	18:00-19:00	8.88E-02	1.61E-07	3.67E-06	7.82E-02	1.01E-07	3.21E-06	3.45E-01	6.64E-07	1.47E-05	3.10E-01	5.64E-07	1.29E-05	
Road S4	S4	19:00-20:00	7.69E-02	1.07E-07	2.45E-06	6.78E-02	8.22E-08	2.10E-06	3.06E-01	4.71E-07	9.51E-06	2.62E-01	3.56E-07	8.12E-06	
Road S4	S4	20:00-21:00	1.44E-02	6.31E-08	6.78E-07	8.31E-03	3.00E-08	8.69E-07	3.60E-01	1.27E-07	2.82E-06	5.67E-02	2.03E-07	4.57E-06	
Road S4	S4	21:00-22:00	1.27E-02	4.71E-08	1.88E-06	6.46E-02	1.07E-08	1.61E-06	3.00E-01	3.27E-07	7.46E-06	2.65E-02	2.81E-07	6.41E-06	
Road S4	S4	22:00-23:00	4.24E-02	7.95E-08	1.81E-06	8.89E-02	3.42E-08	1.53E-06	2.99E-01	2.93E-07	6.68E-06	2.48E-02	2.46E-07	5.60E-06	
Road S4	S4	23:00-00:00	1.78E-02	3.75E-08	1.52E-06	3.75E-02	1.25E-08	2.35E-06	3.00E-01	3.27E-07	7.46E-06	2.65E-02	2.81E-07	6.41E-06	
Road S4	S4	00:00-01:00	5.74E-03	5.67E-08	2.06E-06	5.00E-03	5.81E-08	2.30E-06	3.75E-02	3.29E-07	1.70E-05	3.20E-02	3.66E-07	4.65E-06	
Road S4	S4	01:00-02:00	6.28E-03	4.69E-08	1.67E-06	5.73E-03	4.27E-08	1.60E-06	3.88E-02	1.19E-06	3.48E-05	2.64E-02	2.50E-07	3.01E-06	
Road S4	S4	02:00-03:00	6.78E-03	4.76E-08	1.73E-06	6.13E-03	4.39E-08	1.70E-06	3.92E-02	1.23E-06	3.56E-05	2.70E-02	2.67E-07	3.17E-06	
Road S4	S4	03:00-04:00	7.94E-03	3.80E-08	1.50E-06	7.19E-03	3.44E-08	1.38E-06	4.29E-02	2.02E-06	8.12E-06	3.74E-02	1.81E-07	4.50E-06	
Road S4	S4	04:00-05:00	6.78E-03	4.76E-08	1.73E-06	6.13E-03	4.39E-08	1.70E-06	3.92E-02	1.23E-06	3.56E-05	2.70E-02	2.67E-07	3.17E-06	
Road S4	S4	05:00-06:00	8.94E-03	1.60E-07	3.54E-06	8.32E-03	1.45E-07	5.90E-06	4.50E-02	8.09E-07	3.19E-05	4.11E-02	7.37E-07	9.02E-06	
Road S4	S4	06:00-07:00	9.14E-03	3.54E-07	1.40E-05	8.88E-03	3.27E-07	1.28E-05	8.06E-02	1.74E-06	6.91E-05	4.27E-02	1.55E-06	3.15E-05	
Road S4	S4	07:00-08:00	9.85E-03	4.14E-07	1.65E-05	8.66E-03	3.61E-07	1.47E-05	8.47E-02	1.78E-06	7.82E-05	4.59E-02	1.70E-06	3.52E-05	
Road S4	S4	08:00-09:00	1.14E-02	1.08E-07	4.25E-06	1.02E-02	1.42E-07	4.29E-06	1.25E-02	1.90E-06	8.47E-05	5.27E-02	2.03E-06	4.30E-05	
Road S4	S4	09:00-10:00	1.28E-02	6.30E-07	1.70E-05	1.17E-02	3.66E-07	1.45E-05	8.02E-02	1.88E-06	7.44E-05	5.90E-02	1.57E-06	3.21E-05	
Road S4	S4	10:00-11:00	1.38E-02	3.98E-07	1.05E-05	1.12E-02	3.31E-07	1.31E-05	8.02E-02	1.77E-06	7.02E-05	4.68E-02	1.47E-06	3.03E-05	
Road S4	S4	11:00-12:00	1.42E-02	3.97E-07	1.04E-05	1.12E-02	3.31E-07	1.31E-05	8.02E-02	1.77E-06	7.02E-05	4.68E-02	1.47E-06	3.03E-05	
Road S4	S4	12:00-13:00	1.57E-02	4.88E-07	1.39E-05	1.36E-02	4.22E-07	1.67E-05	9.56E-02	2.04E-06	6.08E-05	5.60E-02	1.74E-06	3.60E-05	
Road S4	S4	13:00-14:00	1.60E-02	5.25E-07	2.03E-05	1.35E-02	4.43E-07	1.75E-05	9.59E-02	2.10E-06	6.37E-05	5.80E-02	1.79E-06	3.65E-05	
Road S4	S4	14:00-15:00	1.47E-02	4.75E-07	1.87E-05	1.22E-02	4.27E-07	1.62E-05	8.76E-02	1.94E-06	5.69E-05	5.21E-02	1.64E-06	3.40E-05	
Road S4	S4	15:00-16:00	1.55E-02	5.44E-07	2.16E-05	1.30E-02	4.57E-07	1.81E-05	9.33E-02	2.22E-06	6.80E-05	5.21E-02	1.83E-06	3.75E-05	
Road S4	S4	16:00-17:00	1.08E-02	4.21E-07	1.67E-05	8.14E-03	3.50E-07	1.41E-05	5.79E-02	2.09E-06	8.13E-05	4.24E-02	1.69E-06	3.58E-05	
Road S4	S4	17:00-18:00	1.08E-02	4.21E-07	1.67E-05	8.14E-03	3.50E-07	1.41E-05	5.79E-02	2.09E-06	8.13E-05	4.24E-02	1.69E-06	3.58E-05	
Road S4	S4	18:00-19:00	1.50E-02	6.56E-07	2.10E-07	8.32E-05	5.59E-07	1.70E-07	7.09E-02	3.72E-08	1.19E-06	4.72E-06	3.90E-07	9.76E-07	3.86E-05
Road S4	S4	19:00-20:00	2.00E-02	6.31E-07	1.53E-07	6.05E-05	3.84E-07	1.36E-07	5.38E-08	8.68E-07	3.84E-05	3.58E-03	8.37E-07	3.00E-05	
Road S4	S4	20:00-21:00	2.00E-02	6.31E-07	1.53E-07	6.05E-05	3.84E-07	1.36E-07	5.38E-08	8.68E-07	3.84E-05	3.58E-03	8.37E-07	3.00E-05	
Road S4	S4	21:00-22:00	2.00E-02	6.31E-07	1.53E-07	6.05E-05	3.84E-07	1.36E-07	5.38E-08	8.68E-07	3.84E-05	3.58E-03	8.37E-07	3.00E-05	
Road S4	S4	22:00-23:00	2.00E-02	6.31E-07	1.53E-07	6.05E-05	3.84E-07	1.36E-07	5.38E-08	8.68E-07	3.84E-05	3.58E-03	8.37E-07	3.00E-05	
Road S4	S4	23:00-00:00	2.00E-02	6.31E-07	1.53E-07	6.05E-05	3.84E-07	1.36E-07	5.38E-08	8.68E-07	3.84E-05	3.58E-03	8.37E-07	3.00E-05	
Road S4	S4	00:00-01:00	2.00E-02	6.31E-07	1.53E-07	6.05E-05	3.84E-07	1.36E-07	5.38E-08	8.68E-07	3.84E-05	3.58E-03	8.37E-07	3.00E-05	
Road S4	S4	01:00-02:00	2.00E-02	6.31E-07	1.53E-07	6.05E-05	3.84E-07	1.36E-07	5.38E-08	8.68E-07	3.84E-05	3.58E-03	8.37E-07	3.00E-05	
Road S4	S4	02:00-03:00	2.00E-02	6.31E-07	1.53E-07	6.05E-05	3.84E-07	1.36E-07	5.38E-08	8.68E-07	3.84E-05	3.58E-03	8.37E-07	3.00E-05	
Road S4	S4	03:00-04:00	2.00E-02	6.31E-07	1.53E-07	6.05E-05	3.84E-07	1.36E-07	5.38E-08	8.68E-07	3.84E-05	3.58E-03	8.37E-07	3.00E-05	
Road S4	S4	04:00-05:00	2.00E-02	6.31E-07	1.53E-07	6.05E-05	3.84E-07	1.36E-07	5.38E-08	8.68E-07	3.84E-05	3.58E-03	8.37E-07	3.00E-05	
Road S4	S4	05:00-06:00	2.00E-02	6.31E-07	1.53E-07	6.05E-05	3.84E-07	1.36E-07	5.38E-08	8.68E-07	3.84E-05	3.58E-03	8.37E-07	3.00E-05	
Road S4	S4	06:00-07:00	2.00E-02	6.31E-07	1.53E-07	6.05E-05	3.84E-07	1.36E-07	5.38E-08	8.68E-07	3.84E-05	3.58E-03	8.37E-07	3.00E-05	
Road S4	S4	07:00-08:00	2.00E-02	6.31E-07	1.53E-07	6.05E-05	3.84E-07	1.36E-07	5.38E-08	8.68E-07	3.84E-05	3.58E-03	8.37E-07	3.00E-05	
Road S4	S4	08:00-09:00	2.00E-02	6.31E-07	1.53E-07	6.05E-05	3.84E-07	1.36E-07	5.38E-08	8.68E-07	3.84E-05	3.58E-03	8.37E-07	3.00E-05	
Road S4	S4	09:00-10:00	2.00E-02	6.31E-07	1.53E-07	6.05E-05	3.84E-07	1.36E-07	5.38E-08	8.68E-07	3.84E-05	3.58E-03	8.37E-07	3.00E-05	
Road S4	S4	10:00-11:00	2.00E-02	6.31E-07	1.53E-07	6.05E-05	3.84E-07	1.36E-07	5.38E-08	8.68E-07	3.84E-05	3.58E-03	8.37E-07	3.00E-05	
Road S4	S4	11:00-12:00	2.00E-02	6.31E-07	1.53E-07	6.05E-05	3.84E-07	1.36E-07	5.38E-08	8.68E-07	3.84E-05	3.58E-03	8.37E-07	3.00E-05	
Road S4	S4	12:00-13:00	2.00E-02	6.31E-07	1.53E-07	6.05E-05	3.84E-07	1.36E-07	5.38E-08	8.68E-07	3.84E-05	3.58E-03	8.37E-07	3.00E-05	
Road S4	S4	13:00-14:00	2.00E-02	6.31E-07	1.53E-07	6.05E-05	3.84E-07	1.36E-07	5.38E-08	8.68E-07	3.84E-05	3.58E-03	8.37E-07	3.00E-05	
Road S4	S4	14:00-15:00	2.00E-02	6.31E-07	1.53E-07	6.05E-05	3.84E-07	1.36E-07	5.38E-08	8.68E-07	3.84E-05	3.58E-03	8.37E-07	3.00E-05	
Road S4	S4	15:00-16:00	2.00E-02	6.31E-07	1.53E-07	6.05E-05	3.84E-07	1.36E-07	5.38E-08	8.68E-07	3.84E-05	3.58E-03	8.37E-07	3.00E-05	
Road S4	S4	16:00-17:00	2.00E-02	6.31E-07	1.53E-07	6.05E-05	3.84E-07	1.36E-07	5.38E-08	8.68E-07	3.84E-05	3.58E-03	8.37E-07	3.00E-05	
Road S4	S4	17:00-18:00	2.00E-02	6.31E-07	1.53E-07	6.05E-05	3.84E-07	1.36E-07	5.38E-08	8.68E-07	3.84E-05	3.58E-03	8.37E-07	3.00E-05	
Road S4	S4	18:00-19:00	2.00E-02	6.31E-07	1.53E-07	6.05E-05	3.84E-07	1.36E-07	5.38E-08	8.68E-07	3.84E-05	3.58E-03	8.37E-07	3.00E-05	
Road S4	S4	19:00-20:00	2.00E-02	6.31E-07	1.53E-07	6.05E-05	3.84E-07	1.36E-07	5.38E-08	8.68E-07	3.84E-05	3.58E-03	8.37E-07	3.00E-05	
Road S4	S4	20:00-21:00	2.00E-02	6.31E-07	1.53E-07	6.05E-05	3.84E-07	1.36E-07	5.38E-08	8.68E-07	3.84E-05	3.58E-03	8.37E-07	3.00E-05	
Road S4	S4	21:00-22:00	2.00E-02	6.31E-07	1.53E-07	6.05E-05	3.84E-07	1.36E-07	5.38E-08	8.68E-07	3.84E-05	3.58E-03	8.37E-07	3.00E-05	
Road S4	S4	22:00-23:00	2.00E-02	6.31E-07	1.53E-07	6.05E-05	3.84E-07	1.36E-07	5.38E-08	8.68E-07	3.84E-05	3.58E-03	8.37E-07	3.00E-05	
Road S4	S4	23:00-00:00	2.00E-02	6.31E-07	1.53E-07	6.05E-05	3.84E-07	1.36E-07	5.38E-0						

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for AERMOD model (September)	Year 2038

Road	Road ID	Hour	NO _x Emission						NO ₂ Emission						
			Monthly/ghvsm			Monthly/gvsm			Monthly/ghvsm			Monthly/gvsm			
Road 1	1	1600-1700	1.820E+2	4.256E+7	4.986E+8	1.52E+2	3.93E+7	4.14E+8	7.76E+2	1.81E+6	2.12E+5	0.33E+2	1.47E+6	1.73E+5	
Road 7	7	1700-1800	1.860E+2	4.37E+7	4.136E+8	1.12E+2	2.90E+7	4.30E+8	6.91E+2	1.96E+6	2.10E+5	0.49E+2	1.41E+6	1.68E+5	
Road 7	7	1800-1900	2.02E+2	4.77E+7	3.271E+8	1.27E+2	3.21E+7	4.25E+8	7.42E+2	1.87E+6	2.12E+5	0.47E+2	1.47E+6	1.68E+5	
Road 7	7	1900-2000	2.02E+2	4.83E+7	3.173E+8	1.27E+2	3.60E+7	4.14E+8	7.42E+2	1.96E+6	2.12E+5	0.47E+2	1.47E+6	1.68E+5	
Road 7	7	2000-2100	7.03E+1	1.31E+7	1.04E+8	6.54E+1	1.07E+7	1.27E+8	4.94E+2	8.36E+7	9.76E+8	0.88E+2	6.88E+7	7.80E+8	
Road 7	7	2100-2200	7.04E+1	1.38E+7	1.04E+8	6.54E+1	1.17E+7	1.27E+8	4.94E+2	8.36E+7	9.76E+8	0.88E+2	6.88E+7	7.80E+8	
Road 7	7	2200-2300	6.86E+1	1.12E+7	1.31E+8	6.56E+1	9.21E+6	1.08E+8	4.68E+2	7.51E+7	8.92E+8	0.55E+2	5.97E+7	6.96E+8	
Road 7	7	2300-2400	7.44E+1	1.34E+7	1.04E+8	6.27E+1	1.57E+7	1.89E+8	4.88E+2	7.57E+7	9.00E+8	0.82E+2	4.67E+7	5.47E+8	
Road 7	7	2400-2500	9.46E+1	1.68E+7	1.04E+8	7.85E+1	2.05E+7	2.42E+8	5.49E+2	9.47E+7	1.07E+9	0.74E+2	5.49E+7	6.47E+8	
Road 8	8	0100-0200	1.84E+2	3.66E+7	4.91E+8	7.41E+1	8.84E+6	3.11E+9	6.29E+8	4.89E+7	1.16E+8	1.61E+7	3.97E+2	1.46E+6	2.96E+7
Road 8	8	0200-0300	1.95E+2	3.64E+7	5.74E+8	8.86E+1	2.40E+7	4.89E+8	5.01E+2	1.35E+7	1.47E+8	7.40E+2	1.08E+6	2.23E+7	
Road 8	8	0300-0400	1.11E+2	2.39E+7	4.62E+8	5.26E+1	2.96E+7	4.89E+8	2.12E+2	1.29E+7	1.29E+8	4.12E+2	1.08E+6	2.23E+7	
Road 8	8	0400-0500	1.12E+2	2.77E+7	5.59E+8	9.75E+1	2.30E+7	4.65E+8	5.39E+2	1.27E+8	2.57E+7	3.32E+2	1.02E+6	2.07E+7	
Road 8	8	0500-0600	1.22E+2	5.03E+7	1.02E+9	1.02E+2	4.00E+7	4.89E+8	5.53E+2	2.27E+8	4.68E+7	4.47E+2	1.04E+6	3.71E+7	
Road 8	8	0600-0700	1.27E+2	2.27E+7	1.02E+9	1.02E+2	4.69E+7	4.89E+8	5.53E+2	2.27E+8	4.68E+7	4.47E+2	1.04E+6	3.71E+7	
Road 8	8	0700-0800	1.34E+2	2.40E+7	4.85E+7	1.12E+2	2.01E+8	4.07E+8	5.68E+2	1.05E+7	2.13E+8	7.68E+2	8.58E+7	1.47E+8	
Road 8	8	0800-0900	1.46E+2	2.66E+7	3.96E+7	1.10E+2	2.29E+8	4.25E+7	5.61E+2	1.14E+7	2.31E+8	5.44E+2	4.94E+7	1.91E+8	
Road 8	8	0900-1000	1.46E+2	2.66E+7	3.96E+7	1.10E+2	2.29E+8	4.25E+7	5.61E+2	1.14E+7	2.31E+8	5.44E+2	4.94E+7	1.91E+8	
Road 8	8	1000-1100	1.68E+2	2.58E+8	5.23E+7	1.42E+2	2.19E+8	4.42E+7	6.89E+2	1.05E+7	2.13E+8	5.77E+2	8.80E+7	1.78E+8	
Road 8	8	1100-1200	1.68E+2	2.58E+8	5.23E+7	1.42E+2	2.19E+8	4.42E+7	6.89E+2	1.05E+7	2.13E+8	5.77E+2	8.80E+7	1.78E+8	
Road 8	8	1200-1300	1.68E+2	2.58E+8	5.23E+7	1.42E+2	2.19E+8	4.42E+7	6.89E+2	1.05E+7	2.13E+8	5.77E+2	8.80E+7	1.78E+8	
Road 8	8	1300-1400	2.08E+2	1.87E+8	7.76E+7	1.77E+2	7.56E+8	1.53E+8	8.30E+2	1.57E+7	7.21E+8	7.05E+2	1.01E+7	6.08E+8	
Road 8	8	1400-1500	2.08E+2	1.87E+8	7.76E+7	1.77E+2	7.56E+8	1.53E+8	8.30E+2	1.57E+7	7.21E+8	7.05E+2	1.01E+7	6.08E+8	
Road 8	8	1500-1600	2.08E+2	1.87E+8	7.76E+7	1.77E+2	7.56E+8	1.53E+8	8.30E+2	1.57E+7	7.21E+8	7.05E+2	1.01E+7	6.08E+8	
Road 8	8	1600-1700	2.01E+2	1.53E+8	9.59E+7	1.76E+2	6.75E+8	1.30E+8	7.54E+2	1.37E+7	7.61E+8	6.51E+2	1.02E+7	6.24E+8	
Road 8	8	1700-1800	1.95E+2	1.42E+8	7.93E+8	1.60E+2	6.45E+8	1.30E+8	7.04E+2	3.96E+7	7.27E+8	6.60E+2	2.88E+7	5.78E+8	
Road 8	8	1800-1900	1.85E+2	1.30E+8	6.92E+8	1.50E+2	5.30E+8	1.20E+8	6.50E+2	3.50E+7	6.50E+8	6.10E+2	2.50E+7	5.10E+8	
Road 8	8	1900-2000	1.85E+2	1.30E+8	6.92E+8	1.50E+2	5.30E+8	1.20E+8	6.50E+2	3.50E+7	6.50E+8	6.10E+2	2.50E+7	5.10E+8	
Road 8	8	2000-2100	1.04E+2	3.44E+8	7.76E+7	8.52E+2	7.76E+8	5.53E+7	5.36E+7	1.27E+7	3.48E+8	2.44E+3	3.66E+7	7.76E+8	
Road 8	8	2100-2200	1.04E+2	3.44E+8	7.76E+7	8.52E+2	7.76E+8	5.53E+7	5.36E+7	1.27E+7	3.48E+8	2.44E+3	3.66E+7	7.76E+8	
Road 8	8	2200-2300	1.80E+2	3.00E+3	1.00E+3	1.00E+1	2.48E+5	5.00E+7	5.10E+5	1.05E+6	1.10E+6	2.44E+2	2.31E+6	2.31E+6	
Road 8	8	2300-2400	1.04E+2	2.44E+8	4.47E+7	8.72E+2	2.02E+8	4.08E+7	5.33E+7	1.27E+7	4.49E+8	2.44E+3	7.76E+8	1.98E+8	
Road 8	8	2400-2500	1.04E+2	2.44E+8	4.47E+7	8.72E+2	2.02E+8	4.08E+7	5.33E+7	1.27E+7	4.49E+8	2.44E+3	7.76E+8	1.98E+8	
Road 9	9	0100-0200	1.33E+2	4.91E+3	3.05E+7	1.13E+2	4.19E+3	5.90E+7	7.13E+2	2.63E+5	1.99E+5	8.82E+2	2.13E+7	1.90E+6	
Road 9	9	0200-0300	1.33E+2	4.91E+3	3.05E+7	1.13E+2	4.19E+3	5.90E+7	7.13E+2	2.63E+5	1.99E+5	8.82E+2	2.13E+7	1.90E+6	
Road 9	9	0300-0400	1.87E+2	3.95E+3	2.53E+7	3.95E+2	3.96E+2	2.43E+7	7.32E+2	7.32E+2	1.47E+6	9.59E+2	1.61E+7	1.60E+6	
Road 9	9	0400-0500	1.87E+2	3.95E+3	2.53E+7	3.95E+2	3.96E+2	2.43E+7	7.32E+2	7.32E+2	1.47E+6	9.59E+2	1.61E+7	1.60E+6	
Road 9	9	0500-0600	1.87E+2	3.95E+3	2.53E+7	3.95E+2	3.96E+2	2.43E+7	7.32E+2	7.32E+2	1.47E+6	9.59E+2	1.61E+7	1.60E+6	
Road 9	9	0600-0700	1.87E+2	3.95E+3	2.53E+7	3.95E+2	3.96E+2	2.43E+7	7.32E+2	7.32E+2	1.47E+6	9.59E+2	1.61E+7	1.60E+6	
Road 9	9	0700-0800	1.87E+2	3.95E+3	2.53E+7	3.95E+2	3.96E+2	2.43E+7	7.32E+2	7.32E+2	1.47E+6	9.59E+2	1.61E+7	1.60E+6	
Road 9	9	0800-0900	1.33E+2	7.87E+7	8.44E+6	2.23E+2	6.64E+7	4.93E+8	1.55E+3	1.19E+6	2.37E+6	2.26E+3	2.66E+7	1.97E+8	
Road 9	9	0900-1000	1.33E+2	7.87E+7	8.44E+6	2.23E+2	6.64E+7	4.93E+8	1.55E+3	1.19E+6	2.37E+6	2.26E+3	2.66E+7	1.97E+8	
Road 9	9	1000-1100	1.33E+2	7.87E+7	8.44E+6	2.23E+2	6.64E+7	4.93E+8	1.55E+3	1.19E+6	2.37E+6	2.26E+3	2.66E+7	1.97E+8	
Road 9	9	1100-1200	1.33E+2	7.87E+7	8.44E+6	2.23E+2	6.64E+7	4.93E+8	1.55E+3	1.19E+6	2.37E+6	2.26E+3	2.66E+7	1.97E+8	
Road 9	9	1200-1300	1.33E+2	7.87E+7	8.44E+6	2.23E+2	6.64E+7	4.93E+8	1.55E+3	1.19E+6	2.37E+6	2.26E+3	2.66E+7	1.97E+8	
Road 9	9	1300-1400	1.21E+1	1.87E+3	1.87E+3	1.03E+3	2.14E+6	4.32E+7	8.08E+7	8.08E+7	8.08E+7	7.67E+2	7.67E+2	7.67E+2	
Road 9	9	1400-1500	2.19E+2	2.59E+6	2.19E+6	1.13E+2	2.51E+6	1.89E+8	4.60E+3	1.01E+5	7.51E+5	3.93E+3	8.76E+7	6.36E+8	
Road 9	9	1500-1600	1.94E+1	3.01E+6	2.23E+5	1.11E+2	2.49E+6	1.89E+8	4.60E+3	1.11E+5	8.62E+5	1.10E+3	1.18E+6	6.02E+8	
Road 9	9	1600-1700	1.94E+1	3.01E+6	2.23E+5	1.11E+2	2.49E+6	1.89E+8	4.60E+3	1.11E+5	8.62E+5	1.10E+3	1.18E+6	6.02E+8	
Road 9	9	1700-1800	1.16E+1	2.86E+2	1.16E+2	9.45E+2	2.43E+6	1.78E+8	4.38E+3	1.08E+6	8.02E+5	5.54E+3	8.74E+6	4.05E+8	
Road 9	9	1800-1900	1.61E+2	1.87E+2	1.46E+2	5.44E+2	1.58E+6	1.24E+8	2.64E+3	6.56E+6	4.87E+5	1.19E+3	1.58E+6	3.88E+8	
Road 9	9	1900-2000	1.26E+2	1.68E+2	1.26E+2	4.68E+2	1.17E+6	9.18E+7	2.16E+3	5.44E+6	3.98E+5	1.16E+3	1.58E+6	3.88E+8	
Road 9	9	2000-2100	2.86E+2	3.87E+7	2.87E+6	2.12E+3	3.18E+7	2.36E+8	1.24E+3	1.86E+6	1.35E+8	1.86E+3	1.48E+6	1.02E+8	
Road 9	9	2100-2200	2.86E+2	3.87E+7	2.87E+6	2.12E+3	3.18E+7	2.36E+8	1.24E+3	1.86E+6	1.35E+8	1.86E+3	1.48E+6	1.02E+8	
Road 9	9	2200-2300	2.86E+2	3.87E+7	2.87E+6	2.12E+3	3.18E+7	2.36E+8	1.24E+3	1.86E+6	1.35E+8	1.86E+3	1.48E+6	1.02E+8	
Road 9	9	2300-2400	2.86E+2	3.87E+7	2.87E+6	2.12E+3	3.18E+7	2.36E+8	1.24E+3	1.86E+6	1.35E+8	1.86E+3	1.48E+6	1.02E+8	
Road 10	10	0000-0100	6.75E+2	9.48E+8	8.33E+4	6.40E+2	8.25E+8	5.30E+7	2.13E+3	3.23E+7	2.15E+8	1.88E+3	2.88E+7	1.90E+8	
Road 10	10	0100-0200	6.75E+2	9.48E+8	8.33E+4	6.40E+2	8.25E+8	5.30E+7	2.13E+3	3.23E+7	2.15E+8	1.88E+3	2.88E+7	1.90E+8	
Road 10	10	0200-0300	6.75E+2	7.18E+8	8.14E+4	6.71E+2	6.30E+8	4.22E+7	2.28E+2	2.14E+7	1.44E+6	2.02E+3	1.90E+7	1.27E+8	
Road 10	10	0300-0400	6.75E+2	8.63E+8	8.63E+4	7.14E+2	9.30E+8	3.97E+7	2.30E+3	1.96E+7	1.13E+7	2.07E+3	1.72E+7	1.35E+8	
Road 10	10	0400-0500	6.75E+2	7.27E+8	8.77E+4	6.71E+2	7.41E+8	3.12E+7	2.12E+3	2.21E+7	1.21E+7	2.02E+3	1.72E+7	1.35E+8	
Road 10	10	0500-0600	6.75E+2	7.78E+8	8.56E+7	8.56E+2	8.63E+8	5.74E+7	2.48E+3	3.12E+7	2.20E+7	2.02E+3	1.72E+7	1.35E+8	
Road 10	10	0600-0700	7.21E+2	6.66E+7	1.115E+6	6.25E+2	1.50E+7	1.00E+8	2.58E+3	1.96E+7	9.93E+7	3.31E+3	5.31E+7	3.96E+8	
Road 10	10	0700-0800	7.21E+2	6.66E+7	1.115E+6	6.25E+2	1.50E+7	1.00E+8	2.58E+3	1.96E+7	9.93E+7	3.31E+3	5.31E+7	3.96E+8	
Road 10	10	0800-0900	8.11E+2	5.55E+7	7.77E+6	8.11E+2	9.46E+7	3.31E+8	2.84E+3	1.78E+6	1.16E+8	2.53E+3	1.54E+6	1.04E+8	
Road 10	10	0900-1000	1.02E+1	5.83E+7	9.91E+6	9.13E+2	5.22E+7	3.50E+8	3.08E+3	1.76E+8	1.18E+8	2.76E+3	1.58E+6	1.05E+8	
Road 10	10	1000-1100	1.02E+1	5.83E+7	9.91E+6	9.13E+2	5.22E+7	3.50E+8	3.08E+3	1.76E+8	1.18E+8	2.76E+3	1.58E+6	1.05E+8	
Road 10	10	1100-1200	1.06E+1	5.94E+7	1.61E+6	9.44E+2	4.84E+7	3.24E+8	3.10E+3	1.56E+6	1.06E+7	2.77E+3	1.42E+6	9.33E+8	
Road 10	10	1200-1300	1.16E+1	3.76E+7	2.52E+6	1.03E+3	3.32E+7	2.23E+8	3.08E+3	6.97E+7	6.97E+8	2.74E+3	8.85E+7	5.93E+8	
Road 10	10	1300-1400	1.16E+1	3.76E+7	2.52E+6										

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
 Open Road 24 hour Emission Factors for
 AERMOD model (September)

Road	Road Name	Road ID	Hour	NO _x Emission					NO ₂ Emission						
				MonthlyAverage			MonthlyAverage			MonthlyAverage			MonthlyAverage		
g/km/h	g/km	tonne/hour	g/km/h	g/km	tonne/hour	g/km/h	g/km	tonne/hour	g/km/h	g/km	tonne/hour	g/km/h	g/km	tonne/hour	
R-04	Rowan	21	0000-0100	1.1422	7.992	0.046	0.6226	6.6958	8.7967	6.0442	4.1737	5.5226	4.9252	4.072	4.9986
R-04	Rowan	21	0100-0200	1.4462	5.668	7.4967	0.5762	4.8818	6.3842	6.2228	2.8986	3.7708	5.1262	2.3637	3.0308
R-04	Rowan	21	0200-0300	1.4639	5.455	6.0747	0.5772	4.8818	6.3842	6.2228	2.8986	3.7708	5.1262	2.3637	3.0308
R-04	Rowan	21	0300-0400	1.4622	4.008	5.2962	0.7222	3.3952	4.4222	6.8442	1.8882	2.4882	5.5682	1.5222	2.0106
R-04	Rowan	21	0400-0500	1.5238	4.666	6.088	1.2262	3.9008	5.1522	6.7082	2.1252	2.1882	5.7442	1.7522	2.3106
R-04	Rowan	21	0500-0600	1.6322	4.118	5.1182	1.1182	3.9008	5.1522	6.7082	2.1252	2.1882	5.7442	1.7522	2.3106
R-04	Rowan	21	0600-0700	1.6322	1.888	2.4882	3.3782	1.5982	2.6982	7.5082	6.6442	1.1442	1.1712	7.1112	9.9006
R-04	Rowan	21	0700-0800	1.6282	4.1722	5.7082	1.5442	3.6552	4.8282	8.1382	1.9382	2.5582	5.7582	1.6022	2.1206
R-04	Rowan	21	0800-0900	1.9712	4.5222	7.2082	1.6722	4.6382	6.1282	8.5442	2.3782	3.1382	1.1582	1.1882	2.6206
R-04	Rowan	21	0900-1000	2.1382	2.4882	3.4882	1.8482	1.8482	1.9882	4.4882	6.8882	2.7882	3.2882	1.2882	1.7882
R-04	Rowan	21	1000-1100	2.5222	5.2782	6.0482	1.9982	4.5112	6.9582	9.6082	2.1682	2.9082	8.1582	1.8482	2.4482
R-04	Rowan	21	1100-1200	2.9282	4.8482	6.4482	1.9742	4.2082	5.5582	9.6282	2.0282	2.7282	8.2182	1.7582	2.3306
R-04	Rowan	21	1200-1300	2.7682	4.4182	5.8182	1.9742	4.2082	5.5582	9.6282	2.0282	2.7282	8.2182	1.7582	2.3306
R-04	Rowan	21	1300-1400	2.8082	5.9112	7.8182	2.4482	5.1482	6.7082	1.1282	1.2382	3.1182	3.6682	2.0482	2.6882
R-04	Rowan	21	1400-1500	2.6282	6.2722	6.9282	2.4882	5.4372	6.7082	1.1282	1.2442	3.2182	3.5782	2.0782	2.7482
R-04	Rowan	21	1500-1600	2.7112	6.6082	7.0082	2.4882	5.4372	6.7082	1.1282	1.2442	3.2182	3.5782	2.0782	2.7482
R-04	Rowan	21	1600-1700	2.8082	6.2722	6.9282	2.4882	5.1382	6.7082	1.1082	1.2442	3.2382	3.0282	2.0682	2.5482
R-04	Rowan	21	1700-1800	2.1782	4.9312	6.4982	1.7882	4.0482	5.3482	9.7882	2.2282	2.9382	5.9582	1.8882	2.3882
R-04	Rowan	21	1800-1900	2.1712	6.6082	7.0082	2.4882	5.4372	6.7082	1.1282	1.2442	3.2182	3.5782	2.0782	2.7482
R-04	Rowan	21	1900-2000	1.9582	2.1382	2.8782	1.1582	1.7782	2.3482	6.6682	1.0582	1.3682	3.5412	1.8482	1.1206
R-04	Rowan	21	2000-2100	1.3442	1.6442	1.7782	1.1182	1.3882	1.7982	6.9982	6.5782	1.1382	5.6282	6.8882	9.1112
R-04	Rowan	21	2100-2200	1.3442	1.6442	1.7782	1.1182	1.3882	1.7982	6.9982	6.5782	1.1382	5.6282	6.8882	9.1112
R-04	Rowan	21	2200-2300	1.3282	1.5382	1.0782	1.1082	1.2682	1.6682	6.6282	7.8678	1.0582	3.9582	6.2182	8.2106
R-04	Rowan	21	2300-0000	1.4462	1.2882	1.7782	1.1782	1.1082	1.0682	4.1282	6.9682	6.2282	7.2282	5.5682	4.9982
R-04	Rowan	22	0000-0100	1.2282	1.0442	1.8882	0.9782	1.8482	1.9882	4.4882	6.8882	2.7882	3.2882	1.2882	1.7882
R-04	Rowan	22	0100-0200	1.4182	1.7882	1.4182	1.0082	1.6718	1.9382	4.3382	2.8882	6.1382	1.6582	2.4382	3.0382
R-04	Rowan	22	0200-0300	1.2118	6.7882	1.2118	1.0282	5.7082	1.0282	4.4282	2.4742	4.4118	3.7118	2.0718	3.7018
R-04	Rowan	22	0300-0400	1.4382	1.4382	1.4382	1.0182	1.7282	1.0182	4.2982	2.7282	4.2982	3.7282	2.0782	3.7018
R-04	Rowan	22	0400-0500	1.3718	1.6442	2.9382	1.1582	1.3882	2.4882	4.9082	5.9442	1.0682	1.1682	4.6082	8.8982
R-04	Rowan	22	0500-0600	1.4118	4.1678	4.3382	1.3082	3.5282	6.2882	5.6882	1.5942	1.6682	4.6482	1.2682	2.2482
R-04	Rowan	22	0600-0700	1.5442	1.7182	1.9442	1.7182	1.9442	1.7182	1.9442	1.7182	1.9442	1.7182	1.9442	1.7182
R-04	Rowan	22	0700-0800	1.7218	1.2282	2.1782	1.5082	1.0482	1.8582	6.4442	4.4442	1.9282	5.4782	3.7882	6.7482
R-04	Rowan	22	0800-0900	1.8382	1.6982	2.4782	1.5882	1.1882	2.1182	6.7382	4.1482	5.9582	7.7382	4.3482	7.6482
R-04	Rowan	22	0900-1000	1.7118	1.4482	1.6682	1.3682	1.3682	1.3682	6.8882	5.0882	1.6682	4.2682	1.6682	7.2682
R-04	Rowan	22	1000-1100	1.9582	1.3582	2.4182	1.6882	1.1182	2.0882	6.8582	4.7582	4.8782	5.8882	4.0882	7.2882
R-04	Rowan	22	1200-1300	1.9882	1.4118	2.5282	1.7282	1.1282	2.1982	6.6442	4.4748	4.8482	5.7782	4.1282	7.3482
R-04	Rowan	22	1300-1400	1.9882	1.4118	2.5282	1.7282	1.1282	2.1982	6.6442	4.4748	4.8482	5.7782	4.1282	7.3482
R-04	Rowan	22	1400-1500	1.9582	1.5582	2.7082	1.6782	1.3382	2.2782	6.6782	5.3082	4.4582	5.7118	4.5482	8.0682
R-04	Rowan	22	1500-1600	1.7882	1.4718	2.6382	1.5082	1.1282	2.3282	6.7082	5.5582	3.9082	5.6682	4.8882	8.3782
R-04	Rowan	22	1600-1700	1.9118	1.4882	2.6482	1.5882	1.2282	2.1882	6.6882	5.1382	4.2882	5.5282	4.2782	7.6382
R-04	Rowan	22	1700-1800	1.9118	1.4882	2.6482	1.5882	1.2282	2.1882	6.6882	5.1382	4.2882	5.5282	4.2782	7.6382
R-04	Rowan	22	1800-1900	1.6682	1.6682	1.6682	1.5582	5.5682	9.9382	5.1182	2.7482	4.8882	3.3082	2.2782	4.0582
R-04	Rowan	22	1900-2000	1.1882	1.4228	1.7538	0.8382	1.5382	6.2882	4.6718	1.6718	2.6882	3.8882	1.3982	2.0582
R-04	Rowan	22	2000-2100	1.3582	1.4382	1.4382	1.3718	1.7182	1.3718	4.7182	1.3718	3.9582	1.3718	3.9582	1.3718
R-04	Rowan	22	2100-2200	1.1718	3.4078	0.9782	0.7882	2.8482	0.7882	4.7482	1.3882	2.4682	3.9582	1.1382	2.0582
R-04	Rowan	22	2200-2300	1.2482	1.3258	0.7882	0.5882	2.7282	0.5882	4.5882	1.1882	1.1182	3.8282	0.8718	1.7982
R-04	Rowan	22	2300-0000	1.5682	1.6682	1.6682	1.5682	1.5682	1.5682	1.5682	1.5682	1.5682	1.5682	1.5682	1.5682
R-04	Rowan	23	0000-0100	1.3082	3.3118	0.8118	1.0282	2.8118	5.1882	4.3882	1.2072	2.2282	6.6682	1.0278	1.8882
R-04	Rowan	23	0100-0200	1.2118	2.3482	0.4382	0.2008	3.6882	4.8282	8.8282	1.5282	1.5282	1.7482	1.7268	3.4482
R-04	Rowan	23	0200-0300	1.2218	1.4642	0.7882	0.5882	2.7282	0.5882	4.5882	1.1882	1.1182	3.8282	0.8718	1.7982
R-04	Rowan	23	0300-0400	1.5418	1.5418	2.8382	0.9782	1.2982	2.3882	4.3282	5.5082	1.0382	3.6282	4.6882	8.6682
R-04	Rowan	23	0400-0500	1.2582	1.9082	0.5118	0.5118	1.6082	2.9882	4.5582	6.9082	1.2782	3.8282	5.1882	1.0782
R-04	Rowan	23	0500-0600	1.5482	1.5482	2.8382	0.9782	1.2982	2.3882	4.3282	5.5082	1.0382	3.6282	4.6882	8.6682
R-04	Rowan	23	0600-0700	1.3882	1.8482	0.5782	1.1382	1.7182	1.3282	4.8118	3.0782	3.6682	4.0718	2.5982	4.7982
R-04	Rowan	23	0700-0800	1.5582	2.2118	3.9082	1.3118	1.7882	3.3118	5.5482	7.5582	1.6782	4.7082	6.4118	1.1882
R-04	Rowan	23	0800-0900	1.5982	1.7482	2.4582	0.9682	2.0882	3.8582	5.9082	1.8182	1.6882	4.7482	7.7418	1.4382
R-04	Rowan	23	0900-1000	1.5182	2.2282	3.2282	1.0682	2.3882	3.8582	5.9082	1.8182	1.6882	4.7482	7.7418	1.4382
R-04	Rowan	23	1000-1100	1.6482	2.9482	3.4382	1.2482	2.4982	4.6082	5.8318	1.9782	1.9382	5.9482	8.8818	1.6482
R-04	Rowan	23	1100-1200	1.7382	2.7382	3.4382	1.4082	2.3582	4.3082	5.8318	1.9782	1.9382	5.9482	8.8818	1.6482
R-04	Rowan	23	1200-1300	1.6082	3.2282	3.2282	1.0682	2.3882	3.8582	5.9082	1.8182	1.6882	4.7482	7.7418	1.4382
R-04	Rowan	23	1300-1400	1.6082	3.0582	3.6382	1.3682	2.6582	4.4882	5.7282	1.0882	2.0282	5.9782	9.5082	1.7582
R-04	Rowan	23	1400-1500	1.6082	3.1182	3.7782	1.4182	2.6782	4.4882	5.7282	1.0882	2.0282	5.9782	9.5082	1.7582
R-04	Rowan	23	1500-1600	1.6082	3.1182	3.7782	1.4182	2.6782	4.4882	5.7282	1.0882	2.0282	5.9782	9.5082	1.7582
R-04	Rowan	23	1600-1700	1.6082	3.1182	3.7782	1.4182	2.6782	4.4882	5.7282	1.0882	2.0282	5.9782	9.5082	1.7582
R-04	Rowan	23	1700-1800	1.4118	2.3482	0.3782	0.1482	1.9382	3.5682	5.8582	1.9382	1.7382	6.6882	7.7382	1.4382
R-04	Rowan	23	1800-1900	1.4118	2.3482	0.3782	0.1482	1.9382	3.5682	5.8582	1.9382	1.7382	6.6882	7.7382	1.4382
R-04	Rowan	23	1900-2000	1.1282	1.8482	0.5482	0.5482	1.6082	2.9882	4.5582	6.9082	1.2782	3.8282	5.1882	1.0782
R-04	Rowan	23	2000-2100	1.1282	1.8482	0.5482	0.5482	1.6082	2.9882	4.5582	6.9082	1.2782	3.8282	5.1882	1.0782
R-04	Rowan	23	2100-2200	1.1282	1.8482	0.5482	0.5482	1.6082	2.9882	4.5582	6.9082	1.2782	3.8282	5.1882	1.0782
R-04	Rowan	23	2200-2300	1.1282	1.8482	0.5482	0.5482	1.6082	2.9882	4.5582	6.9082	1.2782	3.8282	5.1882	1.0782
R-04	Rowan	23	2300-0000	1.1282	1.8482	0.5482	0.5482	1.6082	2.						

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Open Yr North 24 hour Emission Factors for ASPMCO model (September)														
Year 2038			NO _x Emission						NO ₂ Emission					
Row Name	Row ID	Hour	MonthlyHourMin			MonthlyHourAverage			MonthlyHourMin			MonthlyHourAverage		
			g/min	g/hr	tonne/hour	g/min	g/hr	tonne/hour	g/min	g/hr	tonne/hour	g/min	g/hr	tonne/hour
Row# 24	24	0800-0900	1.52E-01	2.54E-07	1.78E-06	1.29E-05	2.52E-07	4.38E-07	1.54E-01	1.09E-06	2.14E-06	4.88E-01	3.42E-06	1.27E-05
Row# 24	24	0900-1000	1.54E-01	2.58E-07	1.81E-06	1.31E-05	2.56E-07	4.42E-07	1.57E-01	1.12E-06	2.18E-06	4.92E-01	3.48E-06	1.29E-05
Row# 24	24	1000-1100	1.65E-01	3.53E-07	8.82E-07	1.40E-01	2.99E-07	7.51E-07	1.68E-01	1.25E-06	3.15E-06	4.97E-01	1.06E-05	2.67E-06
Row# 24	24	1100-1200	1.63E-01	3.28E-07	8.25E-07	1.41E-01	2.62E-07	7.07E-07	1.64E-01	1.17E-06	2.94E-06	5.02E-01	1.01E-05	2.56E-06
Row# 24	24	1200-1300	1.43E-01	2.35E-07	5.88E-07	1.24E-01	2.45E-07	6.12E-07	1.45E-01	1.06E-06	2.65E-06	4.50E-01	1.07E-05	2.64E-06
Row# 24	24	1300-1400	1.09E-01	3.86E-07	9.77E-07	1.47E-01	3.32E-07	8.40E-07	1.64E-01	1.38E-06	3.45E-06	5.25E-01	1.20E-05	3.00E-06
Row# 24	24	1400-1500	1.76E-01	3.94E-07	9.88E-07	1.50E-01	3.37E-07	8.45E-07	1.65E-01	1.39E-06	3.42E-06	5.18E-01	1.17E-05	2.99E-06
Row# 24	24	1500-1600	1.59E-01	3.92E-07	9.80E-07	1.49E-01	3.35E-07	8.39E-07	1.62E-01	1.37E-06	3.38E-06	5.14E-01	1.16E-05	2.97E-06
Row# 24	24	1600-1700	1.63E-01	3.55E-07	8.91E-07	1.35E-01	2.94E-07	7.36E-07	1.63E-01	1.27E-06	3.18E-06	4.81E-01	1.08E-05	2.63E-06
Row# 24	24	1700-1800	1.43E-01	2.81E-07	6.95E-07	1.18E-01	2.32E-07	5.81E-07	1.37E-01	1.13E-06	2.82E-06	4.73E-01	9.27E-06	2.31E-06
Row# 24	24	1800-1900	1.20E-01	3.45E-07	8.62E-07	1.09E-01	2.64E-07	6.54E-07	1.23E-01	1.04E-06	2.61E-06	4.34E-01	9.45E-06	2.41E-06
Row# 24	24	1900-2000	1.21E-01	3.07E-07	7.70E-07	1.01E-01	6.97E-08	2.75E-07	1.47E-01	1.07E-06	2.69E-06	3.98E-01	3.56E-05	9.37E-07
Row# 24	24	2000-2100	1.12E-01	1.79E-08	9.98E-08	6.29E-08	6.66E-08	1.40E-07	4.27E-07	6.13E-07	3.81E-07	3.81E-01	2.71E-07	6.95E-07
Row# 24	24	2100-2200	1.10E-01	1.79E-08	9.98E-08	6.29E-08	6.66E-08	1.40E-07	4.27E-07	6.13E-07	3.81E-07	3.81E-01	2.71E-07	6.95E-07
Row# 24	24	2200-2300	1.10E-01	1.79E-08	9.98E-08	6.29E-08	6.66E-08	1.40E-07	4.27E-07	6.13E-07	3.81E-07	3.81E-01	2.71E-07	6.95E-07
Row# 24	24	2300-2400	1.10E-01	1.79E-08	9.98E-08	6.29E-08	6.66E-08	1.40E-07	4.27E-07	6.13E-07	3.81E-07	3.81E-01	2.71E-07	6.95E-07
Row# 24	24	2400-0000	1.27E-01	6.64E-08	1.66E-07	1.05E-01	5.50E-08	1.38E-07	4.61E-01	2.41E-07	6.04E-07	3.82E-01	1.99E-05	5.06E-07
Row# 25	25	0000-0100	1.24E-01	5.40E-08	1.36E-07	1.05E-01	4.58E-08	1.11E-07	4.48E-01	2.00E-07	5.00E-07	3.80E-01	1.66E-05	4.22E-07
Row# 25	25	0100-0200	1.24E-01	5.40E-08	1.36E-07	1.05E-01	4.58E-08	1.11E-07	4.48E-01	2.00E-07	5.00E-07	3.80E-01	1.66E-05	4.22E-07
Row# 25	25	0200-0300	1.24E-01	5.40E-08	1.36E-07	1.05E-01	4.58E-08	1.11E-07	4.48E-01	2.00E-07	5.00E-07	3.80E-01	1.66E-05	4.22E-07
Row# 25	25	0300-0400	1.27E-01	2.63E-08	6.70E-08	1.07E-01	2.21E-08	5.63E-08	4.61E-01	9.52E-08	2.43E-07	1.87E-01	8.00E-08	2.04E-07
Row# 25	25	0400-0500	1.27E-01	2.63E-08	6.70E-08	1.07E-01	2.21E-08	5.63E-08	4.61E-01	9.52E-08	2.43E-07	1.87E-01	8.00E-08	2.04E-07
Row# 25	25	0500-0600	1.36E-01	3.65E-08	9.14E-08	1.14E-01	3.05E-08	7.62E-08	4.88E-01	1.26E-07	5.58E-07	4.10E-01	1.84E-07	4.64E-07
Row# 25	25	0600-0700	1.43E-01	1.45E-07	3.70E-07	1.20E-01	1.23E-07	3.11E-07	5.12E-01	5.23E-07	1.33E-06	4.33E-01	4.48E-07	1.18E-06
Row# 25	25	0700-0800	1.37E-01	3.46E-07	8.76E-07	1.34E-01	2.93E-07	7.46E-07	5.62E-01	5.62E-07	3.14E-06	4.77E-01	1.05E-06	2.66E-06
Row# 25	25	0800-0900	1.61E-01	4.21E-07	1.07E-06	1.37E-01	3.57E-07	9.14E-07	5.84E-01	5.28E-06	3.97E-06	5.03E-01	1.32E-06	3.38E-06
Row# 25	25	0900-1000	1.63E-01	4.80E-07	1.23E-06	1.38E-01	4.09E-07	1.04E-06	6.08E-01	5.78E-06	4.57E-06	5.18E-01	1.53E-06	3.89E-06
Row# 25	25	1000-1100	1.74E-01	5.20E-07	1.30E-06	1.48E-01	4.42E-07	1.09E-06	6.71E-01	6.36E-06	5.17E-06	5.78E-01	1.66E-06	4.16E-06
Row# 25	25	1100-1200	1.78E-01	4.69E-07	1.20E-06	1.48E-01	4.04E-07	1.03E-06	6.14E-01	5.67E-06	4.26E-06	5.18E-01	1.44E-06	3.68E-06
Row# 25	25	1200-1300	1.78E-01	4.87E-07	1.24E-06	1.58E-01	4.24E-07	1.08E-06	6.09E-01	5.66E-06	4.22E-06	5.28E-01	1.44E-06	3.67E-06
Row# 25	25	1300-1400	1.71E-01	5.24E-07	1.36E-06	1.48E-01	4.56E-07	1.16E-06	6.09E-01	5.67E-06	4.17E-06	5.39E-01	1.60E-06	4.14E-06
Row# 25	25	1400-1500	1.76E-01	5.20E-07	1.30E-06	1.48E-01	4.42E-07	1.09E-06	6.71E-01	6.36E-06	5.17E-06	5.78E-01	1.66E-06	4.16E-06
Row# 25	25	1500-1600	1.61E-01	5.09E-07	1.30E-06	1.38E-01	4.31E-07	1.10E-06	6.14E-01	5.65E-06	4.97E-06	5.18E-01	1.65E-06	4.20E-06
Row# 25	25	1600-1700	1.74E-01	5.08E-07	1.30E-06	1.44E-01	4.20E-07	1.07E-06	6.18E-01	5.81E-06	4.61E-06	5.10E-01	1.49E-06	3.80E-06
Row# 25	25	1700-1800	1.61E-01	4.80E-07	1.22E-06	1.38E-01	4.04E-07	1.03E-06	6.14E-01	5.67E-06	4.17E-06	5.39E-01	1.60E-06	4.14E-06
Row# 25	25	1800-1900	1.36E-01	2.42E-07	6.17E-07	1.12E-01	2.02E-07	5.14E-07	5.56E-01	9.95E-07	2.55E-06	4.62E-01	8.30E-07	2.12E-06
Row# 25	25	1900-2000	1.31E-01	1.53E-07	3.91E-07	1.08E-01	1.28E-07	3.26E-07	5.18E-01	6.02E-07	1.54E-06	4.03E-01	5.04E-07	1.28E-06
Row# 25	25	2000-2100	1.21E-01	1.21E-07	3.02E-07	1.01E-01	1.01E-07	2.53E-07	4.99E-01	4.99E-07	1.25E-06	3.98E-01	3.56E-05	9.37E-07
Row# 25	25	2100-2200	1.24E-01	1.19E-07	3.02E-07	1.03E-01	9.91E-08	2.52E-07	4.99E-01	4.78E-07	1.22E-06	4.16E-01	3.96E-05	1.02E-06
Row# 25	25	2200-2300	1.36E-01	1.13E-07	2.89E-07	1.14E-01	9.48E-08	2.42E-07	4.90E-01	4.09E-07	1.04E-06	4.03E-01	3.41E-07	8.75E-07
Row# 25	25	2300-2400	1.20E-01	1.20E-07	3.00E-07	1.03E-01	1.03E-07	2.53E-07	4.99E-01	4.99E-07	1.25E-06	3.98E-01	3.56E-05	9.37E-07
Row# 26	26	0000-0100	1.25E-01	4.99E-08	1.87E-06	1.06E-01	4.23E-08	1.55E-07	4.54E-01	1.81E-07	6.78E-07	3.93E-01	1.53E-07	4.94E-07
Row# 26	26	0100-0200	1.27E-01	3.53E-08	1.32E-07	1.07E-01	3.01E-08	1.13E-07	4.54E-01	1.28E-07	4.80E-07	3.88E-01	1.09E-07	3.67E-07
Row# 26	26	0200-0300	1.27E-01	3.53E-08	1.32E-07	1.07E-01	3.01E-08	1.13E-07	4.54E-01	1.28E-07	4.80E-07	3.88E-01	1.09E-07	3.67E-07
Row# 26	26	0300-0400	1.26E-01	2.86E-08	1.07E-07	1.06E-01	2.40E-08	7.65E-08	4.64E-01	8.76E-08	3.39E-07	3.91E-01	8.61E-08	2.77E-07
Row# 26	26	0400-0500	1.27E-01	2.86E-08	1.08E-07	1.06E-01	2.41E-08	7.66E-08	4.68E-01	8.76E-08	3.39E-07	3.93E-01	8.71E-08	2.77E-07
Row# 26	26	0500-0600	1.30E-01	5.31E-08	1.99E-07	1.08E-01	4.48E-08	1.69E-07	4.89E-01	1.92E-07	7.22E-07	4.93E-01	1.62E-07	6.08E-07
Row# 26	26	0600-0700	1.30E-01	5.31E-08	1.99E-07	1.08E-01	4.48E-08	1.69E-07	4.89E-01	1.92E-07	7.22E-07	4.93E-01	1.62E-07	6.08E-07
Row# 26	26	0700-0800	1.36E-01	5.18E-07	1.34E-06	1.10E-01	4.43E-07	1.10E-06	5.69E-01	4.14E-06	4.76E-06	4.81E-01	9.84E-07	3.62E-06
Row# 26	26	0800-0900	1.62E-01	3.89E-07	1.46E-06	1.38E-01	3.13E-07	1.42E-06	5.88E-01	5.14E-06	4.44E-06	5.90E-01	1.22E-06	4.59E-06
Row# 26	26	0900-1000	1.62E-01	3.89E-07	1.46E-06	1.38E-01	3.13E-07	1.42E-06	5.88E-01	5.14E-06	4.44E-06	5.90E-01	1.22E-06	4.59E-06
Row# 26	26	1000-1100	1.70E-01	4.46E-07	1.76E-06	1.50E-01	3.99E-07	1.50E-06	6.22E-01	5.66E-06	6.23E-06	5.29E-01	1.41E-06	5.35E-06
Row# 26	26	1100-1200	1.78E-01	4.33E-07	1.63E-06	1.48E-01	3.71E-07	1.39E-06	6.17E-01	5.64E-06	5.77E-06	5.28E-01	1.32E-06	4.98E-06
Row# 26	26	1200-1300	1.71E-01	4.33E-07	1.63E-06	1.41E-01	3.71E-07	1.39E-06	6.17E-01	5.64E-06	5.77E-06	5.28E-01	1.32E-06	4.98E-06
Row# 26	26	1300-1400	1.54E-01	4.88E-07	1.83E-06	1.41E-01	4.17E-07	1.57E-06	5.88E-01	5.14E-06	4.44E-06	5.29E-01	1.50E-06	5.62E-06
Row# 26	26	1400-1500	1.68E-01	4.98E-07	1.87E-06	1.43E-01	4.24E-07	1.59E-06	6.83E-01	5.78E-06	6.49E-06	4.97E-01	1.47E-06	5.52E-06
Row# 26	26	1500-1600	1.68E-01	4.98E-07	1.87E-06	1.43E-01	4.24E-07	1.59E-06	6.83E-01	5.78E-06	6.49E-06	4.97E-01	1.47E-06	5.52E-06
Row# 26	26	1600-1700	1.64E-01	4.72E-07	1.76E-06	1.35E-01	3.91E-07	1.47E-06	5.85E-01	5.18E-06	6.32E-06	4.93E-01	1.39E-06	5.25E-06
Row# 26	26	1700-1800	1.41E-01	3.74E-07	1.40E-06	1.18E-01	3.08E-07	1.15E-06	5.64E-01	4.94E-06	5.61E-06	4.64E-01	1.23E-06	4.62E-06
Row# 26	26	1800-1900	1.18E-01	2.27E-07	8.52E-07	9.82E-08	1.66E-07	7.09E-07	4.48E-01	9.39E-07	3.53E-06	4.69E-01	7.60E-07	2.94E-06
Row# 26	26	1900-2000	1.18E-01	2.27E-07	8.52E-07	9.82E-08	1.66E-07	7.09E-07	4.48E-01	9.39E-07	3.53E-06	4.69E-01	7.60E-07	2.94E-06
Row# 26	26	2000-2100	1.03E-01	1.06E-07	4.37E-07	8.56E-07	6.68E-08	3.30E-07	4.26E-01	4.47E-07	1.64E-06	3.53E-01	3.63E-07	1.36E-06
Row# 26	26	2100-2200	1.05E-01	1.10E-07	4.15E-07	8.75E-07	6.22E-08	3.46E-07	4.30E-01	4.52E-07	1.70E-06	3.58E-01	3.76E-07	1.41E-06
Row# 26	26	2200-2300	1.05E-01	1.10E-07	4.15E-07	8.75E-07								

\\Secure\Environment Projects\60733229\1.01\Others\Air Modelling\Appendix\Traffic\Appendix\Appendix 3.5.4 Emission Factor in 2038-S B.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Open Road Night Underground Quarterly														
2013 Year 2014 Year 2015 Year 2016 Year 2017 Year 2018 Year 2019 Year 2020 Year 2021 Year 2022														
ASPMQ model (September)														
Road Name	Road ID	Hour	NO _x Emission						NO ₂ Emission					
			MonthlyHourIn	g/m ³	tonne/hour	MonthlyHourIn	g/m ³	tonne/hour	MonthlyHourIn	g/m ³	tonne/hour	MonthlyHourIn	g/m ³	tonne/hour
Road 37	37	1600-1700	6.97E-07	1.17E-06	2.66E-08	6.44E-07	1.08E-06	2.49E-08	5.54E-07	4.20E-06	1.83E-08	2.32E-07	4.07E-08	9.36E-08
Road 37	37	1700-1800	6.97E-07	1.17E-06	2.66E-08	6.44E-07	1.08E-06	2.49E-08	5.54E-07	4.20E-06	1.83E-08	2.32E-07	4.07E-08	9.36E-08
Road 37	37	1800-1900	4.00E-04	7.20E-09	1.65E-08	3.70E-02	6.67E-09	1.53E-07	1.79E-07	3.23E-08	7.41E-08	1.64E-09	2.95E-08	6.77E-08
Road 37	37	1900-2000	3.35E-04	4.95E-09	1.16E-08	3.09E-02	4.62E-09	8.93E-09	1.64E-07	3.23E-08	5.20E-08	1.46E-09	2.65E-08	4.74E-08
Road 37	37	2000-2100	3.35E-04	4.95E-09	1.16E-08	3.09E-02	4.62E-09	8.93E-09	1.64E-07	3.23E-08	5.20E-08	1.46E-09	2.65E-08	4.74E-08
Road 37	37	2100-2200	3.36E-04	3.65E-09	6.73E-09	3.12E-03	3.96E-08	7.77E-07	1.77E-07	1.92E-08	4.41E-08	1.61E-09	1.75E-08	4.02E-08
Road 37	37	2200-2300	3.36E-04	3.65E-09	6.73E-09	3.12E-03	3.96E-08	7.77E-07	1.77E-07	1.92E-08	4.41E-08	1.61E-09	1.75E-08	4.02E-08
Road 37	37	2300-2400	3.36E-04	3.65E-09	6.73E-09	3.12E-03	3.96E-08	7.77E-07	1.77E-07	1.92E-08	4.41E-08	1.61E-09	1.75E-08	4.02E-08
Road 38	38	0000-0100	5.92E-02	9.38E-08	7.68E-07	5.17E-02	8.18E-08	8.71E-07	2.07E-03	3.28E-07	2.68E-06	1.83E-08	2.89E-07	2.37E-06
Road 38	38	0100-0200	6.80E-02	8.00E-08	5.65E-07	6.02E-02	7.08E-08	8.00E-07	2.18E-03	2.57E-07	2.10E-09	1.29E-09	2.26E-08	1.80E-08
Road 38	38	0200-0300	7.42E-02	8.00E-08	5.65E-07	6.02E-02	7.08E-08	8.00E-07	2.18E-03	2.57E-07	2.10E-09	1.29E-09	2.26E-08	1.80E-08
Road 38	38	0300-0400	7.54E-02	6.79E-08	5.56E-07	5.66E-02	5.58E-08	4.82E-07	2.32E-03	1.98E-07	1.62E-09	2.03E-07	1.74E-08	1.42E-08
Road 38	38	0400-0500	7.54E-02	6.79E-08	5.56E-07	5.66E-02	5.58E-08	4.82E-07	2.32E-03	1.98E-07	1.62E-09	2.03E-07	1.74E-08	1.42E-08
Road 38	38	0500-0600	7.42E-02	8.00E-08	5.65E-07	6.02E-02	7.08E-08	8.00E-07	2.18E-03	2.57E-07	2.10E-09	1.29E-09	2.26E-08	1.80E-08
Road 38	38	0600-0700	6.85E-02	1.69E-07	1.50E-06	1.63E-06	1.48E-07	1.25E-06	4.48E-08	5.97E-07	4.89E-06	2.59E-07	5.40E-07	4.42E-06
Road 38	38	0700-0800	8.65E-02	4.87E-07	3.98E-08	7.65E-03	4.32E-07	3.52E-06	8.80E-07	1.15E-06	1.29E-06	2.45E-07	1.40E-06	1.15E-06
Road 38	38	0800-0900	8.71E-02	5.51E-07	4.51E-06	7.75E-02	4.91E-07	4.02E-06	7.75E-07	1.14E-06	1.42E-06	2.46E-07	1.56E-06	1.27E-06
Road 38	38	0900-1000	9.80E-02	5.51E-07	4.51E-06	7.75E-02	4.91E-07	4.02E-06	7.75E-07	1.14E-06	1.42E-06	2.46E-07	1.56E-06	1.27E-06
Road 38	38	1000-1100	1.02E-01	5.56E-07	4.57E-06	9.10E-02	4.97E-07	4.07E-06	1.02E-06	1.65E-06	1.35E-06	2.76E-07	1.48E-07	1.21E-06
Road 38	38	1100-1200	1.02E-01	5.56E-07	4.57E-06	9.10E-02	4.97E-07	4.07E-06	1.02E-06	1.65E-06	1.35E-06	2.76E-07	1.48E-07	1.21E-06
Road 38	38	1200-1300	1.02E-01	5.56E-07	4.57E-06	9.10E-02	4.97E-07	4.07E-06	1.02E-06	1.65E-06	1.35E-06	2.76E-07	1.48E-07	1.21E-06
Road 38	38	1300-1400	1.02E-01	5.56E-07	4.57E-06	9.10E-02	4.97E-07	4.07E-06	1.02E-06	1.65E-06	1.35E-06	2.76E-07	1.48E-07	1.21E-06
Road 38	38	1400-1500	1.03E-01	4.48E-07	3.67E-06	1.16E-06	3.98E-07	3.26E-06	3.44E-08	1.20E-06	9.82E-06	3.11E-07	1.07E-06	8.78E-06
Road 38	38	1500-1600	1.34E-01	4.66E-07	3.81E-06	1.17E-06	4.10E-07	3.36E-06	3.64E-08	1.26E-06	1.05E-06	3.30E-07	1.12E-06	9.21E-06
Road 38	38	1600-1700	1.27E-01	4.35E-07	3.56E-06	1.12E-06	3.82E-07	3.13E-06	3.43E-08	1.17E-06	9.60E-06	3.03E-07	1.03E-06	8.42E-06
Road 38	38	1700-1800	1.24E-01	4.14E-07	3.39E-06	1.08E-06	3.66E-07	2.94E-06	3.25E-08	1.15E-06	9.41E-06	2.98E-07	8.99E-07	8.11E-06
Road 38	38	1800-1900	1.15E-01	3.98E-07	3.25E-06	1.03E-06	3.48E-07	2.83E-06	3.09E-08	1.12E-06	9.25E-06	2.86E-07	8.65E-07	7.81E-06
Road 38	38	1900-2000	9.90E-02	1.30E-07	1.07E-06	8.09E-06	1.16E-07	9.53E-07	4.77E-09	3.99E-07	3.26E-06	2.46E-07	3.55E-07	2.91E-06
Road 38	38	2000-2100	9.93E-02	1.14E-07	9.32E-07	8.28E-02	1.01E-07	8.25E-07	2.83E-04	3.44E-07	2.82E-06	2.05E-08	3.04E-07	2.49E-06
Road 38	38	2100-2200	9.93E-02	1.15E-07	9.43E-07	8.33E-02	1.02E-07	8.36E-07	2.84E-04	3.50E-07	2.86E-06	2.53E-08	3.11E-07	2.54E-06
Road 38	38	2200-2300	8.92E-02	1.04E-07	8.43E-07	7.45E-02	9.22E-07	7.59E-07	2.42E-04	3.22E-07	2.65E-06	2.05E-08	2.91E-07	2.41E-06
Road 38	38	2300-0000	9.93E-02	9.22E-08	7.55E-07	8.14E-02	1.07E-08	8.61E-07	2.67E-05	3.16E-07	2.17E-06	2.34E-08	2.32E-07	1.90E-06
Road 39	39	0000-0100	9.71E-02	2.29E-08	1.95E-07	9.02E-02	2.12E-08	1.90E-07	3.28E-03	7.58E-08	6.49E-07	2.94E-08	6.89E-08	5.87E-07
Road 39	39	0100-0200	9.71E-02	2.29E-08	1.95E-07	9.02E-02	2.12E-08	1.90E-07	3.28E-03	7.58E-08	6.49E-07	2.94E-08	6.89E-08	5.87E-07
Road 39	39	0200-0300	1.02E-01	1.30E-08	1.11E-07	9.55E-03	1.21E-08	1.08E-07	3.30E-04	7.52E-08	3.81E-07	3.00E-08	3.90E-08	3.32E-07
Road 39	39	0300-0400	1.05E-01	1.11E-08	9.48E-08	9.75E-03	1.08E-08	8.80E-04	3.41E-04	6.63E-08	3.09E-07	3.12E-08	3.30E-08	2.85E-07
Road 39	39	0400-0500	1.04E-01	1.04E-08	8.82E-08	9.25E-03	1.04E-08	8.60E-04	3.28E-04	6.45E-08	3.04E-07	3.12E-08	3.30E-08	2.85E-07
Road 39	39	0500-0600	1.08E-01	2.45E-08	2.08E-07	1.01E-01	2.27E-08	1.93E-03	5.71E-04	7.92E-08	6.74E-07	3.21E-08	7.24E-08	6.13E-07
Road 39	39	0600-0700	1.11E-01	5.68E-08	4.88E-07	1.04E-01	5.29E-08	4.50E-07	1.59E-03	1.83E-06	1.58E-06	3.00E-08	1.86E-07	1.67E-06
Road 39	39	0700-0800	1.13E-01	6.32E-08	5.42E-07	1.09E-01	5.95E-08	5.12E-07	1.83E-03	2.15E-06	1.85E-06	3.50E-08	2.15E-07	1.92E-06
Road 39	39	0800-0900	1.16E-01	5.51E-07	1.28E-06	1.09E-01	4.46E-07	1.19E-06	3.75E-04	5.48E-07	4.12E-06	3.44E-08	4.45E-07	3.92E-06
Road 39	39	0900-1000	1.23E-01	1.72E-07	1.46E-06	1.14E-01	1.66E-07	1.37E-06	3.50E-04	5.47E-07	4.66E-06	3.59E-08	5.04E-07	4.29E-06
Road 39	39	1000-1100	1.24E-01	1.68E-07	1.41E-06	1.13E-01	1.61E-07	1.34E-06	3.49E-04	5.44E-07	4.64E-06	3.59E-08	5.04E-07	4.29E-06
Road 39	39	1100-1200	1.19E-01	1.48E-07	1.26E-06	1.05E-01	1.38E-07	1.15E-06	3.26E-04	5.07E-07	4.21E-06	3.55E-08	4.54E-07	3.87E-06
Road 39	39	1200-1300	1.16E-01	1.69E-08	1.44E-07	5.27E-05	1.57E-08	1.34E-07	2.81E-05	6.50E-08	5.53E-07	2.03E-06	6.00E-08	5.11E-07
Road 39	39	1300-1400	6.09E-02	1.88E-08	1.60E-07	5.69E-05	1.76E-08	1.49E-07	3.32E-05	7.19E-08	6.10E-07	2.44E-06	8.62E-08	7.46E-07
Road 39	39	1400-1500	5.48E-02	1.88E-08	1.60E-07	5.69E-05	1.76E-08	1.49E-07	3.32E-05	7.19E-08	6.10E-07	2.44E-06	8.62E-08	7.46E-07
Road 39	39	1500-1600	5.16E-02	2.04E-08	1.74E-07	5.69E-05	1.90E-08	1.61E-07	3.38E-05	7.38E-08	6.80E-07	2.18E-06	7.30E-08	6.22E-07
Road 39	39	1600-1700	5.74E-02	2.00E-08	1.70E-07	5.29E-05	1.95E-08	1.57E-07	2.52E-05	7.84E-08	6.68E-07	2.05E-06	7.17E-08	6.11E-07
Road 39	39	1700-1800	4.17E-02	2.10E-08	1.83E-07	5.29E-05	1.95E-08	1.57E-07	2.52E-05	7.84E-08	6.68E-07	2.05E-06	7.17E-08	6.11E-07
Road 39	39	1800-1900	3.08E-02	1.24E-08	1.05E-07	2.81E-04	1.14E-08	9.72E-08	1.54E-07	6.71E-08	5.33E-07	1.41E-07	5.72E-08	4.81E-07
Road 39	39	1900-2000	2.54E-02	8.09E-08	6.88E-08	2.33E-02	7.42E-09	6.31E-08	4.43E-08	3.48E-08	4.88E-07	3.00E-08	4.13E-08	3.56E-07
Road 39	39	2000-2100	2.12E-02	8.09E-08	6.88E-08	2.33E-02	7.42E-09	6.31E-08	4.43E-08	3.48E-08	4.88E-07	3.00E-08	4.13E-08	3.56E-07
Road 39	39	2100-2200	2.56E-02	6.19E-09	5.27E-08	2.31E-04	5.27E-09	4.48E-08	1.56E-08	3.66E-08	3.29E-07	1.42E-08	3.51E-08	2.92E-07
Road 39	39	2200-2300	2.18E-02	5.23E-09	4.45E-08	2.01E-02	4.89E-09	4.09E-08	1.48E-08	3.48E-08	2.96E-07	1.32E-08	3.15E-08	2.68E-07
Road 40	40	0000-0100	2.40E-02	2.02E-09	1.71E-08	6.82E-09	2.44E-09	2.04E-08	3.44E-08	5.77E-08	1.71E-07	5.44E-08	1.61E-07	1.25E-06
Road 40	40	0100-0200	5.59E-02	1.59E-07	1.77E-07	4.67E-03	1.38E-07	8.72E-08	1.98E-06	8.66E-07	2.85E-06	1.75E-07	5.17E-07	3.55E-06
Road 40	40	0200-0300	6.28E-02	1.38E-07	6.59E-07	5.54E-02	1.20E-07	8.53E-07	2.01E-06	5.45E-07	2.21E-06	1.88E-08	4.06E-07	1.98E-06
Road 40	40	0300-0400	6.68E-02	1.21E-07	6.06E-07	6.01E-02	1.06E-07	8.17E-07	2.17E-06	3.83E-07	1.86E-06	1.92E-07	3.99E-07	1.96E-06
Road 40	40	0400-0500	7.65E-02	1.21E-07	6.06E-07	6.01E-02	1.06E-07	8.17E-07	2.17E-06	3.83E-07	1.86E-06	1.92E-07	3.99E-07	1.96E-06
Road 40	40	0500-0600	7.50E-02	1.23E-07	5.96E-07	6.50E-02	1.06E-07	8.17E-07	2.17E-06	3.77E-07	1.84E-06	2.03E-08	3.31E-07	1.61E-06
Road 40	40	0600-0700	6.88E-02	1.89E-07	8.01E-07	6.07E-02	1.42E-07	1.06E-07	2.35E-06	5.61E-07	2.73E-06	2.09E-09	4.94E-07	2.43E-06
Road 40	40	0700-0800	6.68E-02	1.89E-07	8.01E-07	6.07E-02	1.42E-07	1.06E-07	2.35E-06	5.61E-07	2.73E-06	2.09E-09	4.94E-07	2.43E-06
Road 40	40	0800-0900	8.06E-02	9.27E-07	4.51E-06	7.96E-03	8.15E-07	3.96E-07						

\\Secure\Environment Projects\60733229\1.01\Others\Air Modelling\Appendix\Traffic\Appendix\Appendix 3.5.4 Emission Factor in 2038-S B.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Open Pit North Underdevelopment Quarry												
Using Year 24 hour Emission Factors for												
AERMOD model (September)												
Road Name	Road ID	Hr	NO _x Emission						NO ₂ Emission			
			MonthlyHourMin	MonthlyHourAve	MonthlyHourMax	MonthlyHourMin	MonthlyHourAve	MonthlyHourMax	MonthlyHourMin	MonthlyHourAve	MonthlyHourMax	
			g/min	g/min	g/min	g/min	g/min	g/min	g/min	g/min	g/min	
Road 31	31	0000-0100	1.786	3.958	3.448	1.786	3.958	2.858	6.725	1.440	1.298	5.426
Road 31	31	0100-0200	1.786	3.958	3.448	1.786	3.958	2.858	6.725	1.440	1.298	5.426
Road 31	31	0200-0300	2.396	2.788	2.488	2.396	2.788	2.118	7.822	9.098	8.122	6.502
Road 31	31	0300-0400	2.676	2.888	2.328	2.228	2.188	1.958	8.932	8.158	7.288	6.708
Road 31	31	0400-0500	2.208	2.958	2.258	2.208	2.958	2.258	7.822	8.158	7.122	6.708
Road 31	31	0500-0600	2.282	3.908	3.498	1.912	3.278	2.928	7.788	1.352	1.218	6.472
Road 31	31	0600-0700	1.858	6.948	6.208	1.858	6.948	5.268	7.482	2.612	2.328	6.112
Road 31	31	0700-0800	2.202	3.958	3.498	1.912	3.278	2.928	7.788	1.352	1.218	6.472
Road 31	31	0800-0900	2.222	1.912	1.712	1.712	1.628	1.448	7.642	6.682	5.988	4.682
Road 31	31	0900-1000	2.498	2.988	1.778	1.778	2.112	1.608	8.468	6.882	6.198	7.288
Road 31	31	1000-1100	2.202	3.958	3.498	1.912	3.278	2.928	7.788	1.352	1.218	6.472
Road 31	31	1100-1200	2.748	1.912	1.708	1.708	2.328	1.628	1.458	6.982	5.712	7.582
Road 31	31	1200-1300	2.602	1.462	1.312	2.228	1.462	1.112	8.982	4.712	4.222	3.872
Road 31	31	1300-1400	2.202	3.958	3.498	1.912	3.278	2.928	7.788	1.352	1.218	6.472
Road 31	31	1400-1500	2.558	1.958	1.598	2.178	1.312	1.172	8.412	5.092	4.598	7.072
Road 31	31	1500-1600	2.452	1.528	1.398	2.038	1.292	1.138	8.472	5.292	4.698	6.542
Road 31	31	1600-1700	2.498	1.908	1.438	2.052	1.338	1.198	8.212	5.272	4.728	6.732
Road 31	31	1700-1800	2.498	1.908	1.438	2.052	1.338	1.198	8.212	5.272	4.728	6.732
Road 31	31	1800-1900	1.682	1.212	1.082	1.398	1.098	0.928	7.972	4.262	3.982	4.732
Road 31	31	1900-2000	1.142	0.578	0.538	0.472	0.438	0.412	5.002	2.612	2.348	3.998
Road 31	31	2000-2100	1.202	0.538	0.498	0.438	0.402	0.368	5.452	2.612	2.348	3.998
Road 31	31	2100-2200	1.132	0.438	0.412	0.312	0.308	0.328	4.732	2.562	2.298	4.262
Road 31	31	2200-2300	1.132	0.438	0.402	0.328	0.318	0.328	5.292	2.992	1.878	4.162
Road 31	31	2300-2400	1.302	0.378	0.358	1.072	0.378	0.328	5.612	1.712	1.462	1.362
Road 32	32	0000-0100	9.782	9.558	6.412	9.802	7.968	5.788	1.572	5.102	3.398	4.042
Road 32	32	0100-0200	1.042	6.758	4.482	8.848	5.728	3.808	3.612	3.442	2.298	4.928
Road 32	32	0200-0300	1.112	9.822	9.458	9.458	9.458	9.458	8.982	9.458	9.458	8.982
Road 32	32	0300-0400	1.192	0.558	3.028	9.848	3.178	2.528	5.748	2.198	1.458	4.628
Road 32	32	0400-0500	1.272	0.538	3.558	10.952	4.458	2.958	5.958	2.512	1.678	4.782
Road 32	32	0500-0600	1.332	0.938	6.548	1.112	8.228	5.468	6.112	4.502	3.098	4.942
Road 32	32	0600-0700	1.392	1.358	7.498	1.392	8.358	5.468	6.112	4.502	3.098	4.942
Road 32	32	0700-0800	1.472	0.488	3.188	1.278	4.028	2.878	6.488	2.128	1.414	5.298
Road 32	32	0800-0900	1.438	0.412	3.598	1.212	4.568	3.028	6.148	2.328	1.548	5.082
Road 32	32	0900-1000	1.468	0.412	3.938	1.248	4.568	3.028	6.148	2.328	1.548	5.082
Road 32	32	1000-1100	1.908	0.538	3.748	1.618	4.778	3.178	7.548	2.248	1.498	6.318
Road 32	32	1100-1200	1.828	0.412	3.408	1.558	4.568	2.898	7.488	2.098	1.398	6.428
Road 32	32	1200-1300	1.682	0.412	3.408	1.408	4.568	2.898	7.488	2.098	1.398	6.428
Road 32	32	1300-1400	1.682	0.378	2.478	1.448	4.318	2.108	7.038	1.568	1.048	5.318
Road 32	32	1400-1500	1.702	0.378	2.648	1.448	3.712	2.248	7.038	1.648	1.098	5.872
Road 32	32	1500-1600	1.702	0.378	2.648	1.448	3.712	2.248	7.038	1.648	1.098	5.872
Road 32	32	1600-1700	1.682	0.428	2.798	1.398	4.462	2.328	6.982	1.728	1.148	5.572
Road 32	32	1700-1800	1.238	0.428	2.278	1.008	4.028	2.788	6.108	1.678	1.114	4.712
Road 32	32	1800-1900	1.238	0.428	2.278	1.008	4.028	2.788	6.108	1.678	1.114	4.712
Road 32	32	1900-2000	0.848	0.182	0.748	0.628	1.542	1.028	4.438	1.008	0.698	3.128
Road 32	32	2000-2100	0.788	0.142	0.948	0.618	1.168	0.728	4.828	0.748	0.588	3.738
Road 32	32	2100-2200	0.712	0.128	0.838	0.588	1.098	0.708	4.888	0.848	0.518	3.888
Road 32	32	2200-2300	0.688	0.112	0.718	0.578	0.928	0.648	4.768	0.628	0.458	3.728
Road 32	32	2300-2400	1.242	0.202	1.818	1.028	0.938	1.498	5.938	5.758	0.878	4.578
Road 33	33	0000-0100	1.242	0.202	1.818	1.028	0.938	1.498	5.938	5.758	0.878	4.578
Road 33	33	0100-0200	1.632	0.208	1.218	1.398	0.808	1.028	6.708	3.302	0.498	5.508
Road 33	33	0200-0300	1.838	0.738	1.118	1.118	0.938	0.618	9.578	7.132	0.818	5.808
Road 33	33	0300-0400	1.838	0.738	1.118	1.118	0.938	0.618	9.578	7.132	0.818	5.808
Road 33	33	0400-0500	1.682	1.292	1.988	1.142	1.042	1.578	7.088	5.292	0.788	5.428
Road 33	33	0500-0600	1.578	2.492	3.688	1.338	2.078	3.118	6.978	1.998	1.638	5.738
Road 33	33	0600-0700	1.578	2.492	3.688	1.338	2.078	3.118	6.978	1.998	1.638	5.738
Road 33	33	0700-0800	1.728	0.448	0.712	1.458	0.448	0.812	9.058	2.958	3.958	5.882
Road 33	33	0800-0900	1.882	0.628	0.978	1.698	0.538	0.848	8.048	2.688	0.478	6.248
Road 33	33	0900-1000	2.202	0.778	1.028	1.918	0.778	0.858	8.868	2.608	0.328	7.218
Road 33	33	1000-1100	2.202	0.778	1.028	1.918	0.778	0.858	8.868	2.608	0.328	7.218
Road 33	33	1100-1200	2.648	0.772	1.098	2.228	0.618	0.932	9.518	2.628	0.948	8.038
Road 33	33	1200-1300	2.628	0.738	1.132	2.228	0.538	0.788	9.788	2.858	0.428	8.732
Road 33	33	1300-1400	2.102	0.738	1.132	2.102	0.538	0.788	9.788	2.858	0.428	8.732
Road 33	33	1400-1500	2.468	0.738	1.118	2.108	0.338	0.828	9.748	3.028	0.458	8.018
Road 33	33	1500-1600	2.538	0.712	0.918	2.108	0.568	0.918	9.918	3.978	0.418	7.712
Road 33	33	1600-1700	2.538	0.712	0.918	2.108	0.568	0.918	9.918	3.978	0.418	7.712
Road 33	33	1700-1800	1.578	0.498	0.758	1.298	0.418	0.618	6.578	2.098	1.518	5.312
Road 33	33	1800-2000	1.242	0.928	0.438	0.968	1.218	0.638	5.808	1.398	2.068	4.742
Road 33	33	1900-2000	1.242	0.928	0.438	0.968	1.218	0.638	5.808	1.398	2.068	4.742
Road 33	33	2000-2100	1.208	0.232	0.358	0.998	0.148	0.272	6.248	1.158	1.478	4.992
Road 33	33	2100-2200	1.208	0.232	0.358	0.998	0.178	0.258	6.008	1.068	1.598	4.788
Road 33	33	2200-2300	1.382	0.832	0.748	1.118	0.148	0.288	6.388	0.938	1.298	5.078
Road 33	33	2300-2400	1.382	0.832	0.748	1.118	0.148	0.288	6.388	0.938	1.298	5.078
Road 34	34	0000-0100	7.858	1.838	1.008	6.138	3.238	0.848	4.652	2.278	0.578	3.788
Road 34	34	0100-0200	8.948	3.218	8.402	7.522	0.738	0.778	8.882	1.788	0.438	3.928
Road 34	34	0200-0300	1.102	0.738	1.102	1.102	0.738	0.738	8.882	1.788	0.438	3.928
Road 34	34	0300-0400	1.042	0.358	0.698	0.838	2.698	0.708	5.272	1.642	0.438	1.718
Road 34	34	0400-0500	0.938	0.578	1.388	0.828	0.438	0.158	5.222	0.778	0.788	1.418
Road 34	34	0500-0600	0.938	0.578	1.388	0.828	0.438	0.158	5.222	0.778	0.788	1.418
Road 34	34	0600-0700	1.098	0.272	0.638	0.918	0.778	0.468	5.568	0.268	0.328	1.412

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Open Day North Undermining Quarry													
Spring 2014 North Emersion Factors for													
AHPMCO model (September)													
Road Name		Road ID		NO ₂ Emission				NO Emission					
		g/m ²	g/m ² hr	Monthlyg/hr		Monthlyg/Average		Monthlyg/hr		Monthlyg/Average			
g/m ²	g/m ² hr	g/m ²	g/m ² hr	g/m ²	g/m ² hr	g/m ²	g/m ² hr	g/m ²	g/m ² hr	g/m ²	g/m ² hr		
Road #44	44	0800-0900	0.956(3)	0.717(7)	1.718	8.006(3)	2.336(7)	1.448	0.988(7)	1.445(6)	8.822(6)	4.066(3)	1.118(6)
Road #44	44	0900-1000	0.918(3)	0.675(7)	1.598	7.398(3)	2.122(7)	1.358	0.938(7)	1.355(6)	8.462(6)	3.852(3)	1.068(6)
Road #44	44	1000-1100	1.222(2)	0.942(7)	1.546	9.078(3)	2.711(7)	1.306	0.956(7)	1.188(7)	7.286(6)	4.802(2)	9.772(7)
Road #44	44	1100-1200	1.135(2)	0.225(7)	1.375	6.745(3)	1.882(7)	1.188	0.570(2)	1.102(6)	6.885(4)	4.973(2)	9.135(7)
Road #44	44	1200-1300	1.258(2)	0.238(7)	1.428	7.122(3)	1.958(7)	1.238	0.582(2)	1.182(6)	6.982(4)	5.042(2)	9.242(7)
Road #44	44	1300-1400	1.466(2)	0.376(7)	2.323	1.246(3)	3.195(7)	1.978(6)	1.173(2)	1.722(6)	10.071(5)	6.612(4)	1.446(6)
Road #44	44	1400-1500	1.485(2)	0.407(7)	2.531	1.282(3)	3.457(7)	2.135(6)	0.755(2)	1.885(6)	11.455(5)	6.612(4)	1.546(6)
Road #44	44	1500-1600	1.350(2)	0.412(7)	2.218	1.112(3)	3.052(7)	1.918(6)	0.762(2)	1.845(6)	10.587(5)	6.342(4)	1.468(6)
Road #44	44	1600-1700	1.932(2)	0.578(7)	3.546	1.596(3)	4.767(7)	2.945(6)	1.155(2)	2.432(6)	15.505(5)	6.625(4)	1.982(6)
Road #44	44	1700-1800	2.035(2)	0.685(7)	4.208	1.665(3)	5.625(7)	3.468(6)	0.955(2)	3.244(6)	2.008(5)	7.542(4)	2.565(6)
Road #44	44	1800-1900	2.200(2)	0.712(7)	4.592	1.738(3)	6.082(7)	3.688(6)	0.962(2)	3.442(6)	2.152(5)	7.642(4)	2.652(6)
Road #44	44	1900-2000	0.777(3)	2.008(7)	1.238	5.565(3)	1.644(7)	1.011(6)	0.917(2)	1.238(6)	7.555(4)	3.272(3)	9.632(7)
Road #44	44	2000-2100	0.696(3)	1.446(7)	9.205(7)	5.288(12)	0.717(7)	4.937(6)	4.487(5)	1.058(6)	8.358(4)	3.924(3)	7.925(7)
Road #44	44	2100-2200	0.503(3)	1.015(7)	6.738(7)	3.598(12)	0.512(7)	3.598(6)	3.951(5)	0.917(6)	6.952(4)	3.152(3)	7.052(7)
Road #44	44	2200-2300	0.515(3)	1.022(7)	7.571(7)	4.596(12)	0.508(7)	3.618(6)	4.237(5)	0.942(6)	5.935(4)	3.378(3)	7.282(7)
Road #44	44	2300-2400	0.612(3)	1.025(7)	6.738(7)	4.596(12)	0.836(7)	5.135(6)	4.373(5)	1.272(6)	4.475(4)	3.388(3)	5.625(7)
Road #45	0000-0100	0.559(3)	0.4185(6)	5.139(7)	0.552(3)	3.428(7)	4.215(7)	4.215(6)	3.186(7)	3.912(6)	3.256(4)	2.493(7)	
Road #45	0100-0200	0.603(3)	0.4185(6)	5.139(7)	0.552(3)	3.428(7)	4.215(7)	4.215(6)	3.186(7)	3.912(6)	3.256(4)	2.493(7)	
Road #45	0200-0300	0.675(3)	0.235(6)	2.986(7)	5.511(7)	0.178(6)	2.427(7)	4.451(6)	1.596(7)	1.962(6)	3.544(4)	1.272(7)	
Road #45	0300-0400	0.716(3)	0.203(6)	2.495(7)	5.935(7)	0.1678(6)	2.265(7)	4.833(6)	1.305(7)	1.631(6)	3.644(4)	1.038(7)	
Road #45	0400-0500	0.725(3)	0.236(6)	2.946(7)	6.388(7)	0.168(6)	2.436(7)	4.485(6)	1.485(7)	1.647(6)	3.742(4)	1.165(7)	
Road #45	0500-0600	0.828(3)	0.423(6)	5.455(7)	6.881(7)	0.367(6)	4.525(7)	4.911(6)	2.631(7)	2.344(6)	3.886(4)	2.087(7)	
Road #45	0600-0700	0.878(3)	0.411(7)	1.248(7)	6.387(3)	8.846(6)	1.045(6)	5.021(5)	5.765(7)	1.075(6)	4.025(4)	4.625(7)	
Road #45	0700-0800	0.933(3)	0.205(7)	2.715(6)	7.885(7)	1.845(7)	2.465(7)	5.315(6)	1.292(6)	1.625(6)	4.252(4)	9.465(7)	
Road #45	0800-0900	0.926(3)	1.011(7)	3.095(6)	7.811(7)	0.278(6)	2.575(7)	4.923(6)	1.320(6)	1.625(5)	4.011(2)	1.075(6)	
Road #45	0900-1000	1.045(2)	0.271(7)	2.886(6)	8.818(7)	0.916(7)	2.375(6)	5.625(6)	1.175(6)	1.445(6)	4.438(4)	9.665(7)	
Road #45	1000-1100	1.082(3)	0.185(7)	2.985(6)	9.445(7)	1.068(7)	2.465(6)	5.765(6)	1.278(6)	1.475(6)	4.788(4)	9.685(7)	
Road #45	1100-1200	1.111(2)	1.987(7)	2.435(6)	8.411(7)	1.671(7)	2.065(6)	5.625(6)	1.005(6)	1.235(6)	4.665(4)	8.295(7)	
Road #45	1200-1300	1.386(2)	0.301(7)	3.713(6)	1.188(2)	2.568(7)	3.165(6)	6.245(2)	1.395(6)	1.675(6)	5.202(4)	1.135(6)	
Road #45	1300-1400	1.395(2)	0.311(7)	3.811(6)	1.188(2)	2.637(7)	3.240(6)	6.245(2)	1.425(6)	1.765(6)	5.338(4)	1.205(6)	
Road #45	1400-1500	1.425(2)	0.311(7)	3.911(6)	1.188(2)	2.706(7)	3.315(6)	6.245(2)	1.455(6)	1.795(6)	5.418(4)	1.235(6)	
Road #45	1500-1600	1.365(2)	0.329(7)	4.055(6)	1.128(2)	2.727(7)	3.355(6)	6.625(2)	1.611(6)	1.985(6)	5.535(4)	1.305(6)	
Road #45	1600-1700	1.445(2)	0.373(7)	4.595(6)	1.118(2)	2.917(7)	3.815(6)	6.625(2)	1.675(6)	2.025(5)	5.215(4)	1.395(6)	
Road #45	1700-1800	1.475(2)	0.445(7)	5.045(6)	1.118(2)	3.045(7)	4.045(6)	6.625(2)	1.715(6)	2.075(5)	5.215(4)	1.465(6)	
Road #45	1800-1900	1.095(2)	0.345(7)	4.355(6)	8.971(3)	2.911(7)	3.585(6)	5.985(2)	1.811(6)	2.235(4)	4.425(4)	1.435(6)	
Road #45	1900-2000	0.695(3)	1.705(7)	2.095(6)	8.455(3)	1.407(7)	1.725(6)	4.085(6)	1.095(6)	1.365(6)	3.205(4)	8.255(7)	
Road #45	2000-2100	0.603(3)	1.015(7)	6.738(7)	3.598(12)	0.512(7)	3.598(6)	3.951(5)	0.917(6)	6.952(4)	3.152(3)	7.052(7)	
Road #45	2100-2200	0.5475(3)	1.095(7)	1.355(4)	4.745(3)	8.838(10)	1.045(6)	4.275(4)	8.485(4)	1.045(2)	3.385(4)	6.575(7)	
Road #45	2200-2300	0.5305(3)	1.017(7)	1.275(4)	4.345(3)	8.845(10)	1.045(6)	4.175(4)	8.114(7)	0.985(6)	3.225(4)	6.265(7)	
Road #45	2300-2400	0.503(3)	1.015(7)	6.738(7)	3.598(12)	0.512(7)	3.598(6)	3.951(5)	0.917(6)	6.952(4)	3.152(3)	7.052(7)	
Road #46	0000-0100	0.5475(3)	0.2145(6)	3.995(7)	4.075(3)	1.755(6)	3.255(7)	4.295(2)	1.665(7)	3.505(6)	3.385(2)	1.295(7)	
Road #46	0100-0200	0.5965(3)	0.255(6)	2.825(7)	5.525(3)	1.288(7)	2.375(7)	4.345(2)	1.114(7)	2.055(6)	3.485(4)	8.855(6)	
Road #46	0200-0300	0.603(3)	0.255(6)	2.825(7)	5.525(3)	1.288(7)	2.375(7)	4.345(2)	1.114(7)	2.055(6)	3.485(4)	8.855(6)	
Road #46	0300-0400	0.7135(3)	0.195(6)	1.445(7)	5.955(3)	1.655(6)	4.611(7)	4.675(2)	0.845(6)	1.275(6)	3.675(4)	5.355(6)	
Road #46	0400-0500	0.7725(3)	0.245(6)	2.335(7)	6.395(3)	1.025(6)	1.905(7)	4.485(2)	0.775(6)	1.445(6)	3.735(4)	6.105(6)	
Road #46	0500-0600	0.8205(3)	0.245(6)	4.295(7)	6.805(3)	1.915(6)	3.555(7)	4.995(2)	1.385(7)	2.565(6)	3.925(4)	1.095(7)	
Road #46	0600-0700	0.8805(3)	0.245(6)	4.295(7)	6.805(3)	1.915(6)	3.555(7)	4.995(2)	1.385(7)	2.565(6)	3.925(4)	1.095(7)	
Road #46	0700-0800	0.9455(3)	1.115(7)	2.115(6)	7.895(4)	0.945(6)	1.765(6)	5.275(3)	6.345(11)	1.185(6)	4.225(4)	5.075(7)	
Road #46	0800-0900	0.9145(3)	1.287(7)	2.375(6)	7.885(7)	0.917(7)	1.995(6)	4.785(6)	6.545(7)	1.225(6)	3.875(4)	5.415(7)	
Road #46	0900-1000	1.105(2)	0.275(7)	1.445(7)	5.955(3)	1.655(6)	4.611(7)	4.675(2)	0.845(6)	1.275(6)	3.675(4)	5.355(6)	
Road #46	1000-1100	1.305(2)	0.117(7)	2.185(10)	1.015(3)	1.915(6)	1.845(7)	5.475(4)	5.645(10)	1.065(6)	1.765(4)	4.565(7)	
Road #46	1100-1200	1.125(2)	0.145(7)	1.935(6)	8.855(3)	1.815(6)	3.645(7)	6.675(2)	0.895(7)	0.895(6)	4.705(4)	3.715(7)	
Road #46	1200-1300	1.065(2)	0.155(7)	1.845(6)	8.855(3)	1.815(6)	3.645(7)	6.675(2)	0.895(7)	0.895(6)	4.705(4)	3.715(7)	
Road #46	1300-1400	1.065(2)	1.375(7)	2.555(6)	8.995(11)	1.165(7)	2.165(6)	5.995(2)	1.395(6)	1.405(6)	4.455(4)	5.795(7)	
Road #46	1400-1500	1.055(2)	1.545(7)	2.855(6)	9.295(3)	1.305(7)	2.415(6)	5.455(6)	7.695(7)	1.425(6)	4.505(4)	6.305(7)	
Road #46	1500-1600	1.105(2)	1.545(7)	2.855(6)	9.295(3)	1.305(7)	2.415(6)	5.455(6)	7.695(7)	1.425(6)	4.505(4)	6.305(7)	
Road #46	1600-1700	1.165(2)	1.795(7)	3.335(6)	9.595(3)	1.445(7)	2.765(6)	5.425(6)	8.405(15)	1.545(6)	4.635(4)	6.725(7)	
Road #46	1700-1800	8.1025(4)	0.545(7)	2.715(6)	6.545(13)	1.185(7)	2.195(6)	4.745(4)	8.565(7)	1.595(6)	3.645(4)	6.575(7)	
Road #46	1800-1900	6.005(3)	1.225(7)	2.295(6)	4.905(3)	1.017(7)	1.875(6)	3.575(6)	7.385(7)	1.395(6)	2.785(4)	5.995(7)	
Road #46	1900-2000	0.795(3)	1.225(7)	2.295(6)	4.905(3)	1.017(7)	1.875(6)	3.575(6)	7.385(7)	1.395(6)	2.785(4)	5.995(7)	
Road #46	2000-2100	0.5985(3)	0.6485(6)	1.205(6)	4.115(3)	5.245(6)	0.9745(7)	4.055(6)	5.225(7)	0.975(6)	3.125(4)	3.985(7)	
Road #46	2100-2200	0.4105(3)	0.2495(6)	9.835(7)	3.375(4)	4.525(6)	3.965(7)	3.905(4)	4.975(7)	9.225(6)	3.965(4)	3.905(7)	
Road #46	2200-2300	0.3805(3)	0.2495(6)	9.835(7)	3.375(4)	4.525(6)	3.965(7)	3.905(4)	4.975(7)	9.225(6)	3.965(4)	3.905(7)	
Road #46	2300-2400	0.4485(3)	0.155(6)	7.705(7)	3.635(3)	3.305(6)	6.735(7)	4.011(6)	3.714(7)	6.895(6)	3.075(4)	2.845(7)	
Road #47	0000-0100	1.095(2)	1.565(8)	4.885(7)	8.995(3)	1.295(6)	4.011(7)	6.565(4)	9.495(6)	2.845(6)	1.565(4)	7.425(8)	
Road #47	0100-0200	1.105(2)	1.565(8)	4.885(7)	8.995(3)	1.295(6)	4.011(7)	6.565(4)	9.495(6)	2.845(6)	1.565(4)	7.425(8)	
Road #47	0200-0300	1.255(2)	0.835(6)	2.695(7)	1.025(3)	7.295(6)	2.275(7)	0.955(6)	4.795(6)	1.455(6)	6.645(4)	3.995(8)	
Road #47	0300-0400	1.365(2)	0.745(8)	2.335(7)	1.135(3)	8.295(6)	1.945(7)	7.305(6)	3.995(6)	1.425(6)	3.855(4)	3.205(8)	
Road #47	0400-0500	1.405(2)	0.745(8)	2.335(7)	1.135(3)	8.295(6)	1.945(7)	7.305(6)	3.995(6)	1.425(6)	3.855(4)	3.205(8)	
Road #47	0500-0600	1.625(2)	1.705(8)	5.295(7)	1.355(2)	1.415(6)	4.415(7)	8.075(2)	8.465(6)	2.645(6)	5.805(4)	6.815(8)	
Road #47	0600-0700	1.775(2)	0.995(8)	1.235(4)	1.495(3)	3.365(6)	1.055(6)	8.511(2)	1.925(7)	5.995(6)	6.965(2)	5.715(8)	
Road #47	0700-0800	1.995(2)	0.835(8)	2.705(6)	1.635(6)	8.865(6)	2.345(6)	9.111(2)	4.175(7)	1.365(6)	4.745(4)	4.455(8)	
Road #47	0800-0900	2.075(2)	0.835(8)	2.705(6)	1.635(6)	8.865(6)	2.345(6)	9.111(2)	4.175(7)	1.365(6)	4.745(4)	4.455(8)	
Road #47	0900-1000	2.275(2)	1.025(7)	3.205(6)	1.595(6)	8.695(6)	2.715(6)	9.011(2)	4.595(7)	1.425(6)	4.825(4)	3.845(7)	
Road #47	1000-1100	2.845(2)	0.925(7)	3.205(6)	2.245(6)	8.935(6)	2.765(6)	1.125(4)	4.411(7)				

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Sing Yi North Underground Quarry																
Total Road 24 hour Emission Factors for																
APR/MCD Month (September)																
			NO _x Emission													
Road Name	Road ID	Hour	MonthlyHourlyMin			MonthlyHourlyAverage			MonthlyHourlyMin			MonthlyHourlyAverage				
			g/min/hour	g/min	tonne/hour	g/min/hour	g/min	tonne/hour	g/min/hour	g/min	tonne/hour	g/min/hour	g/min	tonne/hour		
Road 47	47	1800-1700	2.965	1.5445	0.0017	2.2362	0.4275	0.0005	1.3388	0.1175	0.0013	0.6205	0.0001	1.7256		
Road 47	47	1700-1800	1.585	0.8355	0.001	1.1935	0.2265	0.0003	0.6965	0.1175	0.0013	0.4202	0.0001	0.9342		
Road 47	47	1800-1900	1.1842	0.3475	0.0016	1.0854	0.2857	0.0008	0.8905	0.6775	0.1376	0.3395	0.5432	1.3865		
Road 47	47	1900-2000	1.1445	0.2295	0.0016	0.9425	0.1895	0.0007	0.8905	0.6485	0.1306	0.3055	0.5095	1.0205		
Road 47	47	2000-2100	1.0005	0.1205	0.0016	0.8295	0.2695	0.0008	0.8905	0.6485	0.1306	0.3055	0.5095	0.9342		
Road 47	47	2100-2200	0.7855	0.1315	0.0016	0.6205	0.1085	0.0003	0.3965	0.6375	0.1317	0.0110	0.1095	0.4955		
Road 47	47	2200-2300	0.8905	1.1185	0.3685	0.3685	0.9555	0.3085	0.0015	0.6075	0.1317	0.0110	0.8775	0.4955		
Road 47	47	2300-2400	0.8355	0.8355	0.2695	0.2695	0.8355	0.2695	0.0008	0.4955	0.2695	0.0008	0.4955	0.2695		
Road 48	48	0000-0100	5.9655	5.1855	0.7815	0.4485	0.2425	0.0037	4.3335	0.3735	0.0676	0.5716	0.3555	2.9505		
Road 48	48	0100-0200	6.9655	3.6455	0.5885	0.5885	3.0755	0.4635	0.0725	4.6255	2.5057	0.7605	0.3555	2.9505		
Road 48	48	0200-0300	7.0205	3.6455	0.5885	0.5885	3.0755	0.4635	0.0725	4.6255	2.5057	0.7605	0.3555	2.9505		
Road 48	48	0300-0400	7.6155	0.2745	0.3725	0.3725	0.2155	0.0555	0.9955	0.4755	0.1547	0.3355	0.7475	1.2225		
Road 48	48	0400-0500	8.1855	2.9245	0.4415	0.6785	0.4315	0.3645	0.4715	1.5757	0.7445	0.6465	0.3665	3.8805		
Road 48	48	0500-0600	8.3355	3.6455	0.5885	0.5885	3.0755	0.4635	0.0725	4.6255	2.5057	0.7605	0.3555	2.9505		
Road 48	48	0600-0700	9.5555	0.2225	1.9525	1.7985	0.0305	1.5555	0.5155	0.6905	0.1305	0.0305	0.4145	0.5475		
Road 48	48	0700-0800	9.5155	2.6355	0.2735	0.8275	2.2125	0.3335	0.5345	0.2435	0.1155	0.2385	0.4145	0.5475		
Road 48	48	0800-0900	9.5255	2.9455	0.4445	0.8015	0.2475	0.3735	0.4835	0.4265	0.0945	0.2295	0.3945	1.2225		
Road 48	48	0900-1000	1.0555	1.0555	0.3355	0.3355	0.1055	0.0305	0.4835	0.4265	0.0945	0.2295	0.3945	1.2225		
Road 48	48	1000-1100	1.2445	0.2715	0.0745	1.0555	0.2965	0.3665	0.5835	0.2725	0.1295	0.2295	0.4185	0.1065		
Road 48	48	1100-1200	1.1755	0.4225	0.3645	0.3645	0.2055	0.0705	0.4955	0.5705	0.1135	0.1365	0.4085	0.4785		
Road 48	48	1200-1300	2.1255	0.2125	0.2125	0.2125	0.1755		0.4955	0.7405	0.1295	0.1445	0.4085	0.4785		
Road 48	48	1300-1400	2.0655	0.3655	0.5565	1.7885	1.3105	0.3085	0.4955	0.7405	0.1295	0.1445	0.4085	0.4785		
Road 48	48	1400-1500	2.0325	0.3825	0.5765	1.7885	1.2425	0.2475	0.4955	0.7415	0.1295	0.1445	0.4085	0.4785		
Road 48	48	1500-1600	1.9755	0.3675	0.5545	1.6355	0.1055	0.4955	0.7405	0.1295	0.1445	0.4085	0.4785	0.4785		
Road 48	48	1600-1700	2.0355	0.9315	0.9315	0.6885	0.3265	0.2925	0.7585	0.4645	0.1245	0.2125	0.6225	1.2205		
Road 48	48	1700-1800	1.1855	0.2895	0.4785	0.2895	1.2675	0.4025	0.6725	0.3195	0.1085	0.1985	0.3865	1.1145		
Road 48	48	1800-1900	1.2855	0.3455	0.5455	0.9385	0.9385	0.2605	0.5185	0.2605	0.1145	0.2085	0.3865	1.1145		
Road 48	48	1900-2000	1.1245	0.1845	0.2765	0.9255	0.5275	0.2305	0.4975	0.1185	0.1075	0.2405	0.3955	0.6565		
Road 48	48	2000-2100	1.1055	0.1435	0.2165	0.9045	1.1175	0.1775	0.5295	0.6337	0.1035	0.1415	0.4205	0.5605		
Road 48	48	2100-2200	1.0655	0.1445	0.2025	0.8685	1.1057	0.1695	0.5215	0.6337	0.1035	0.1415	0.4205	0.5605		
Road 48	48	2200-2300	1.0255	0.1445	0.1875	0.8475	1.0957	0.1695	0.5215	0.6337	0.1035	0.1415	0.4205	0.5605		
Road 48	48	2300-0000	1.1255	0.1055	0.1565	0.9275	0.8445	0.1385	0.5295	0.4907	0.396	0.1485	0.3967	0.58		
Road 49	49	0000-0100	7.7955	0.2905	0.3645	0.3645	3.5115	0.8955	0.5375	0.3077	0.7745	0.4305	0.2757	0.58		
Road 49	49	0100-0200	7.8255	0.2905	0.3645	0.3645	3.5115	0.8955	0.5375	0.3077	0.7745	0.4305	0.2757	0.58		
Road 49	49	0200-0300	8.2955	0.2155	0.4425	0.4425	1.8605	0.5455	0.5405	0.1427	0.396	0.1485	0.3967	0.58		
Road 49	49	0300-0400	8.0355	1.8455	0.5475	1.4945	1.5355	0.8955	0.5705	0.1167	0.396	0.1485	0.3967	0.58		
Road 49	49	0400-0500	9.2445	0.2905	0.3645	0.3645	3.5115	0.8955	0.5375	0.3077	0.7745	0.4305	0.2757	0.58		
Road 49	49	0500-0600	1.1155	0.4255	0.1705	0.9205	0.3525	0.8995	0.6335	0.4272	0.1125	0.5065	0.1925	0.48		
Road 49	49	0600-0700	1.3755	1.1235	0.2815	1.1865	0.4395	0.3885	0.7255	0.5927	0.4495	0.9465	0.4775	1.26		
Road 49	49	0700-0800	1.8755	0.2905	0.3645	0.3645	3.5115	0.8955	0.5375	0.3077	0.7745	0.4305	0.2757	0.58		
Road 49	49	0800-0900	1.9155	0.3055	0.9105	1.6125	0.3045	0.7695	0.6775	0.1445	0.1135	0.7105	1.3445	0.38		
Road 49	49	0900-1000	1.9555	0.2845	0.7165	1.6125	0.4317	0.6905	0.8945	0.3425	0.3385	0.7405	1.1105	2.88		
Road 49	49	1000-1100	2.0055	0.2905	0.3645	0.3645	3.5115	0.8955	0.5375	0.3077	0.7745	0.4305	0.2757	0.58		
Road 49	49	1100-1200	2.0655	0.2905	0.3645	0.3645	3.5115	0.8955	0.5375	0.3077	0.7745	0.4305	0.2757	0.58		
Road 49	49	1200-1300	2.2325	0.2325	0.5635	1.9055	1.9055	0.4785	0.9605	0.9605	0.2425	0.8005	0.8015	0.27		
Road 49	49	1300-1400	2.2425	0.2325	0.5635	1.9155	1.9155	0.4785	0.9605	0.9605	0.2425	0.8005	0.8015	0.27		
Road 49	49	1400-1500	2.3545	0.2325	0.5635	1.9155	2.1155	0.5315	1.0555	1.1555	0.9115	0.8465	0.9345	2.11		
Road 49	49	1500-1600	2.5715	0.3105	0.7525	2.1155	2.2125	0.6505	1.0455	1.2625	0.9175	0.8435	1.0255	2.25		
Road 49	49	1600-1700	2.5845	0.3105	0.7525	2.1155	2.2125	0.6505	1.0455	1.2625	0.9175	0.8435	1.0255	2.25		
Road 49	49	1800-1900	2.4455	0.2385	0.6025	1.7215	1.9525	0.4935	0.8905	1.1115	0.8065	0.5455	0.8775	2.21		
Road 49	49	1900-2000	1.2155	0.1575	0.3975	0.9465	0.4125	0.3775	0.3775	0.8385	0.8387	0.0995	0.5015	0.6325		
Road 49	49	2000-2100	1.0255	0.1575	0.3975	0.9465	0.4125	0.3775	0.3775	0.8385	0.8387	0.0995	0.5015	0.6325		
Road 49	49	2100-2200	0.8445	0.6775	0.2195	0.7085	0.7115	1.7965	0.6085	0.0165	0.5455	0.4725	0.7475	1.26		
Road 49	49	2200-2300	0.8355	0.8195	0.2075	0.6825	0.7115	1.8995	0.5945	0.8857	0.4805	0.4065	0.4535	1.11		
Road 50	50	0000-0100	4.6755	0.2905	0.3645	0.3645	3.5115	0.8955	0.5375	0.3077	0.7745	0.4305	0.2757	0.58		
Road 50	50	0100-0200	4.6755	0.2905	0.3645	0.3645	3.5115	0.8955	0.5375	0.3077	0.7745	0.4305	0.2757	0.58		
Road 50	50	0200-0300	4.8325	0.1915	0.2735	0.3735	1.5985	0.2565	1.4565	0.6787	0.8005	0.1205	0.5645	0.80		
Road 50	50	0300-0400	4.3325	0.1435	0.2475	0.3675	1.2245	0.1745	1.4955	0.4458	0.7045	0.1265	0.4185	0.59		
Road 50	50	0400-0500	4.6755	0.2905	0.3645	0.3645	3.5115	0.8955	0.5375	0.3077	0.7745	0.4305	0.2757	0.58		
Road 50	50	0500-0600	4.7755	0.2015	0.2965	0.4025	1.0685	0.2495	1.6715	0.7015	0.8065	0.1395	0.5415	0.83		
Road 50	50	0600-0700	4.8425	0.2015	0.2965	0.4025	1.0685	0.2495	1.6715	0.7015	0.8065	0.1395	0.5415	0.83		
Road 50	50	0700-0800	5.1965	0.1015	0.1445	0.4375	0.8475	0.1215	1.8205	1.5317	0.0785	0.1525	0.2965	0.47		
Road 50	50	0800-0900	5.0055	0.1145	0.1625	0.4295	0.9165	0.1315	1.8115	0.1417	0.8965	0.1525	0.3465	0.49		
Road 50	50	0900-1000	5.2505	0.1145	0.1625	0.4295	0.9165	0.1315	1.8115	0.1417	0.8965	0.1525	0.3465	0.49		
Road 50	50	1000-1100	5.9855	0.3315	0.1705	0.4995	0.1115	1.5895	0.2055	0.4557	0.4955	0.775	3.8615	0.59		
Road 50	50	1100-1200	5.8965	0.2235	0.4745	0.4995	1.0305	1.4885	0.2035	0.4297	0.6065	0.1725	0.6175	5.14		
Road 50	50	1200-1300	5.7025	0.2235	0.4745	0.4995	1.0305	1.4885	0.2035	0.4297	0.6065	0.1725	0.6175	5.14		
Road 50	50	1300-1400	6.7875	0.7195	1.0255	0.7465	0.1135	0.8475	0.2235	0.2375	0.3865	1.9055	2.0925	2.88		
Road 50	50	1400-1500	6.8745	0.7275	1.0455	0.8565	0.1885	0.8725	0.2215	0.2375	0.3445	1.8855	1.9075	2.88		
Road 50	50	1500-1600	6.4155	0.7495	1.0665	0.5325	0.8685	0.8345	0.2235	0.2495	0.4765	1.8955	0.2075	2.88		
Road 50	50	1600-1700	6.6105	0.7495	1.0665	0.5325	0.8685	0.8345	0.2235	0.2495	0.4765	1.8955	0.2075	2.88		
Road 50	50	1700-1800	6.2125	0.5965	0.8505	0.0775	0.8665	0.6495	0.2185	0.2075	0.2995	1.7855	1.7125	2.77		
Road 50	50	1800-1900	3.8825	0.4295	0.6115	0.4895	0.3555	0.9995	1.3995	0.4467	0.3085	1.6555	1.2025	1.71		
Road 50	50	1900-2000	3.8825	0.4295	0.6115	0.4895	0.									

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry

Road No. 24 Hour Emission Factors for ASPM20 model (September)											
Road Name		Road ID	NO _x Emission				NO _y Emission				
			Month/Year		Month/Year		Month/Year		Month/Year		
			gpm/hour	gpm/hour	gpm/hour	gpm/hour	gpm/hour	gpm/hour	gpm/hour	gpm/hour	
Road 51	51	0000-0000	5.6381	4.602	4.602	4.602	4.602	4.602	4.602	4.602	
Road 51	51	0100-0200	6.0813	3.268	3.268	6.0813	5.1213	2.758	5.1213	4.327	
Road 51	51	0300-0400	6.663	2.5968	4.807	5.5748	2.758	4.076	4.807	4.327	
Road 51	51	0400-0500	7.2352	2.1518	4.807	5.5748	2.758	4.076	4.807	4.327	
Road 51	51	0500-0600	7.7523	2.5118	4.807	5.5748	2.758	4.076	4.807	4.327	
Road 51	51	0600-0700	8.2784	4.838	9.0147	8.6616	4.018	7.4717	4.9117	2.8277	
Road 51	51	0700-0800	8.8045	4.468	4.468	8.8045	4.468	4.468	8.8045	4.468	
Road 51	51	0800-0900	9.405	2.9757	4.468	9.405	7.8453	3.9857	3.6855	5.2025	
Road 51	51	0900-1000	9.9261	2.6437	4.468	9.9261	2.2117	4.468	4.468	9.9261	
Road 51	51	1000-1100	10.528	2.4257	4.468	10.528	2.0387	4.468	4.468	10.528	
Road 51	51	1100-1200	11.1301	2.1492	4.468	11.1301	1.7762	4.468	4.468	11.1301	
Road 51	51	1200-1300	11.732	2.0067	4.468	11.732	1.6302	4.468	4.468	11.732	
Road 51	51	1300-1400	12.3341	2.0362	4.468	12.3341	2.8557	3.3116	7.007	1.238	
Road 51	51	1400-1500	12.936	2.3881	4.468	12.936	2.9887	3.3116	7.007	1.238	
Road 51	51	1500-1900	21.100	3.6627	6.8357	7.1017	5.7795	8.327	3.948	2.546	
Road 51	51	1900-2000	13.5792	3.5767	6.8357	1.6382	9.2257	4.4765	8.882	4.118	
Road 51	51	2000-2100	14.0026	3.7037	6.8357	1.6382	9.2257	4.4765	8.882	4.118	
Road 51	51	1700-1800	13.9264	3.1447	6.8357	1.2267	5.6677	6.7738	1.4336	2.4885	
Road 51	51	1800-1900	13.2128	2.4117	6.8357	0.9668	4.9303	7.1076	1.932	1.932	
Road 51	51	1900-2000	13.2128	1.7757	6.8357	0.9668	4.9303	7.1076	1.932	1.932	
Road 51	51	2000-2100	13.2128	1.1397	6.8357	0.9668	4.9303	7.1076	1.932	1.932	
Road 51	51	2100-2200	13.2128	0.6062	6.8357	0.9668	4.9303	7.1076	1.932	1.932	
Road 51	51	2200-2300	13.2128	0.0727	6.8357	0.9668	4.9303	7.1076	1.932	1.932	
Road 51	51	2300-2400	13.2128	0.0727	6.8357	0.9668	4.9303	7.1076	1.932	1.932	
Road 52	52	0000-0100	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 52	52	0100-0200	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 52	52	0200-0300	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 52	52	0300-0400	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 52	52	0400-0500	5.656	1.9638	0.9588	4.7472	1.458	8.948	2.074	4.878	
Road 52	52	0500-0600	5.656	1.9638	0.9588	4.7472	1.458	8.948	2.074	4.878	
Road 52	52	0600-0700	5.656	1.9638	0.9588	4.7472	1.458	8.948	2.074	4.878	
Road 52	52	0700-0800	5.656	1.9638	0.9588	4.7472	1.458	8.948	2.074	4.878	
Road 52	52	0800-0900	5.656	1.9638	0.9588	4.7472	1.458	8.948	2.074	4.878	
Road 52	52	0900-1000	5.656	1.9638	0.9588	4.7472	1.458	8.948	2.074	4.878	
Road 52	52	1000-1100	5.656	1.9638	0.9588	4.7472	1.458	8.948	2.074	4.878	
Road 52	52	1100-1200	5.656	1.9638	0.9588	4.7472	1.458	8.948	2.074	4.878	
Road 52	52	1200-1300	5.656	1.9638	0.9588	4.7472	1.458	8.948	2.074	4.878	
Road 52	52	1300-1400	5.656	1.9638	0.9588	4.7472	1.458	8.948	2.074	4.878	
Road 52	52	1400-1500	5.656	1.9638	0.9588	4.7472	1.458	8.948	2.074	4.878	
Road 52	52	1500-1600	5.656	1.9638	0.9588	4.7472	1.458	8.948	2.074	4.878	
Road 52	52	1600-1700	5.656	1.9638	0.9588	4.7472	1.458	8.948	2.074	4.878	
Road 52	52	1700-1800	5.656	1.9638	0.9588	4.7472	1.458	8.948	2.074	4.878	
Road 52	52	1800-1900	5.656	1.9638	0.9588	4.7472	1.458	8.948	2.074	4.878	
Road 52	52	1900-2000	5.656	1.9638	0.9588	4.7472	1.458	8.948	2.074	4.878	
Road 52	52	2000-2100	5.656	1.9638	0.9588	4.7472	1.458	8.948	2.074	4.878	
Road 52	52	2100-2200	5.656	1.9638	0.9588	4.7472	1.458	8.948	2.074	4.878	
Road 52	52	2200-2300	5.656	1.9638	0.9588	4.7472	1.458	8.948	2.074	4.878	
Road 52	52	2300-2400	5.656	1.9638	0.9588	4.7472	1.458	8.948	2.074	4.878	
Road 53	53	0000-0100	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 53	53	0100-0200	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 53	53	0200-0300	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 53	53	0300-0400	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 53	53	0400-0500	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 53	53	0500-0600	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 53	53	0600-0700	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 53	53	0700-0800	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 53	53	0800-0900	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 53	53	0900-1000	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 53	53	1000-1100	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 53	53	1100-1200	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 53	53	1200-1300	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 53	53	1300-1400	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 53	53	1400-1500	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 53	53	1500-1600	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 53	53	1600-1700	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 53	53	1700-1800	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 53	53	1800-1900	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 53	53	1900-2000	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 53	53	2000-2100	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 53	53	2100-2200	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 53	53	2200-2300	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 53	53	2300-2400	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 54	54	0000-0100	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 54	54	0100-0200	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 54	54	0200-0300	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 54	54	0300-0400	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 54	54	0400-0500	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 54	54	0500-0600	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 54	54	0600-0700	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 54	54	0700-0800	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 54	54	0800-0900	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 54	54	0900-1000	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 54	54	1000-1100	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 54	54	1100-1200	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 54	54	1200-1300	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 54	54	1300-1400	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 54	54	1400-1500	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 54	54	1500-1600	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 54	54	1600-1700	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 54	54	1700-1800	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 54	54	1800-1900	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 54	54	1900-2000	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 54	54	2000-2100	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 54	54	2100-2200	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 54	54	2200-2300	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	
Road 54	54	2300-2400	5.7382	2.0448	1.0487	4.852	2.442	2.507	1.054	5.4037	

Tsing Yi North Underground Quarry

Open Road 24 Hour Emission Factors for AERMOD model (Emission)		Year 2008		NO _x Emission				NO Emission			
Route Name	Route ID		Month/Year/Min	Month/Year/Min	Month/Year/Average	Month/Year/Average	Month/Year/Average	Month/Year/Average	Month/Year/Average	Month/Year/Average	Month/Year/Average
			g/min/hr	g/min/hr	g/min/hr	g/min/hr	g/min/hr	g/min/hr	g/min/hr	g/min/hr	g/min/hr
Route 54	SA	0900-0900	9.83E-03	3.31E-03	8.32E-03	3.31E-03	1.66E-03	1.66E-03	1.66E-03	1.66E-03	1.66E-03
Route 54	SA	0900-1000	1.12E-01	4.02E-07	9.16E-06	9.50E-02	3.47E-07	7.78E-06	4.17E-01	1.50E-06	4.42E-05
Route 54	SA	1000-1100	1.26E-01	4.17E-07	9.16E-06	1.03E-01	3.54E-07	8.07E-06	4.48E-01	1.49E-06	3.98E-05
Route 54	SA	1100-1200	1.26E-01	4.17E-07	9.16E-06	1.03E-01	3.54E-07	8.07E-06	4.48E-01	1.49E-06	3.98E-05
Route 54	SA	1200-1300	1.52E-01	3.52E-07	7.50E-06	1.29E-01	2.96E-07	6.39E-06	3.16E-01	1.12E-06	2.86E-05
Route 54	SA	1300-1400	1.48E-01	3.31E-07	8.00E-06	1.26E-01	2.96E-07	6.39E-06	3.16E-01	1.12E-06	2.86E-05
Route 54	SA	1400-1500	1.48E-01	3.31E-07	8.00E-06	1.26E-01	2.96E-07	6.39E-06	3.16E-01	1.12E-06	2.86E-05
Route 54	SA	1500-1600	1.39E-01	3.41E-07	7.85E-06	1.14E-01	2.84E-07	6.47E-06	2.96E-01	1.06E-06	2.68E-05
Route 54	SA	1600-1700	1.49E-01	3.41E-07	7.85E-06	1.21E-01	2.96E-07	6.50E-06	3.16E-01	1.12E-06	2.86E-05
Route 54	SA	1700-1800	1.21E-01	3.41E-07	7.85E-06	1.09E-01	2.84E-07	6.47E-06	2.96E-01	1.06E-06	2.68E-05
Route 54	SA	1800-1900	1.21E-01	3.41E-07	7.85E-06	1.09E-01	2.84E-07	6.47E-06	2.96E-01	1.06E-06	2.68E-05
Route 54	SA	1900-2000	9.00E-02	2.72E-07	2.79E-06	7.47E-02	1.02E-07	2.33E-06	3.51E-01	4.78E-06	1.09E-05
Route 54	SA	2000-2100	8.40E-02	2.60E-06	2.07E-06	6.83E-02	7.49E-07	1.74E-06	3.46E-01	4.62E-06	7.78E-01
Route 54	SA	2100-2200	8.40E-02	2.60E-06	2.07E-06	6.83E-02	7.49E-07	1.74E-06	3.46E-01	4.62E-06	7.78E-01
Route 54	SA	2200-2300	8.83E-02	8.72E-06	1.99E-06	7.35E-02	7.26E-06	1.65E-07	3.21E-01	3.23E-07	3.73E-06
Route 54	SA	2300-0000	8.87E-02	8.69E-06	1.57E-06	7.35E-02	5.71E-06	1.39E-06	3.28E-01	2.55E-07	5.81E-06
Route 54	SA	0000-0100	7.77E-02	8.69E-06	1.57E-06	6.31E-02	5.71E-06	1.39E-06	3.28E-01	2.55E-07	5.81E-06
Route 54	SA	0100-0200	7.59E-02	7.99E-06	2.18E-06	6.43E-02	4.96E-06	1.18E-06	3.77E-01	4.14E-06	8.87E-06
Route 54	SA	0200-0300	8.06E-02	4.61E-06	1.75E-06	6.78E-02	3.71E-06	1.47E-06	4.24E-01	2.70E-07	1.07E-07
Route 54	SA	0300-0400	8.79E-02	3.81E-06	1.51E-06	7.29E-02	3.16E-06	1.25E-06	4.24E-01	2.70E-07	1.07E-07
Route 54	SA	0400-0500	9.79E-02	3.71E-06	1.41E-06	8.29E-02	3.16E-06	1.25E-06	4.24E-01	2.70E-07	1.07E-07
Route 54	SA	0500-0600	1.01E-02	4.42E-06	3.33E-06	8.61E-02	7.00E-06	2.77E-06	5.50E-01	1.81E-06	3.36E-07
Route 54	SA	0600-0700	1.07E-02	1.92E-07	7.60E-06	9.03E-02	1.62E-07	4.68E-06	1.52E-06	1.95E-06	3.56E-07
Route 54	SA	0700-0800	1.15E-02	4.17E-07	9.07E-06	9.47E-02	1.61E-07	3.95E-06	1.69E-06	2.13E-06	4.03E-07
Route 54	SA	0800-0900	1.12E-02	4.47E-07	1.98E-06	9.47E-02	4.01E-07	1.59E-06	5.42E-02	2.30E-06	9.11E-05</

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry

AEN 24 Hour Emission Factors for AP-42 Method (September)										Year 2038									
Road Name	Road ID	Hour	NO _x Emission				NO Emission												
			Monthly/gm/km	hourly/tone/hour	Monthly/Average	hourly/tone/hour	Monthly/gm/km	hourly/tone/hour	Monthly/Average	hourly/tone/hour									
Road 103	103	1600-1700	1.06E+02	1.17E+06	1.17E+06	1.17E+06	6.51E+02	7.18E+05	7.18E+05	1.33E+03	1.46E+06	1.46E+06	1.46E+06						
Road 103	103	1700-1800	1.07E+02	1.45E+07	1.45E+07	8.68E+06	9.36E+02	8.66E+06	9.36E+02	7.38E+06	5.73E+05	4.62E+06	1.86E+06	1.46E+06					
Road 103	103	1800-1900	1.70E+03	3.43E+07	8.24E+06	6.23E+03	2.81E+07	6.75E+06	4.92E+02	1.92E+06	6.63E+05	3.58E+02	1.51E+06	3.44E+06					
Road 103	103	1900-2000	6.30E+02	1.17E+07	1.17E+07	1.17E+07	6.51E+02	7.18E+05	7.18E+05	1.33E+03	1.46E+06	1.46E+06	1.46E+06						
Road 103	103	2000-2100	6.30E+03	1.74E+07	3.17E+06	5.12E+03	1.25E+07	3.41E+06	4.52E+02	2.5E+06	1.03E+06	4.94E+02	9.64E+07	2.32E+06					
Road 103	103	2100-2200	5.51E+03	1.53E+07	4.67E+06	4.50E+03	1.24E+07	2.99E+06	4.32E+02	2.91E+06	7.91E+06	3.38E+02	9.36E+07	2.73E+06					
Road 103	103	2200-2300	1.06E+02	1.17E+06	1.17E+06	1.17E+06	6.51E+02	7.18E+05	7.18E+05	1.33E+03	1.46E+06	1.46E+06	1.46E+06						
Road 103	103	2300-0000	6.01E+03	1.21E+07	2.90E+06	4.89E+03	9.83E+06	7.28E+06	4.62E+02	8.97E+02	1.16E+05	4.54E+02	6.94E+07	1.87E+06					
Road 104	104	0000-0100	1.05E+02	9.36E+06	1.91E+06	8.64E+03	7.93E+06	1.57E+06	5.62E+02	1.02E+06	4.46E+02	3.98E+07	8.10E+06						
Road 104	104	0100-0200	1.13E+02	8.63E+06	1.93E+06	9.54E+03	5.68E+06	1.13E+06	5.78E+02	3.42E+07	5.78E+02	7.92E+07	2.80E+07	2.80E+07					
Road 104	104	0200-0300	1.13E+02	8.63E+06	1.93E+06	9.54E+03	5.68E+06	1.13E+06	5.78E+02	3.42E+07	5.78E+02	7.92E+07	2.80E+07	2.80E+07					
Road 104	104	0300-0400	1.30E+02	4.57E+06	1.30E+07	1.08E+03	3.81E+06	7.75E+02	6.28E+02	2.00E+07	4.96E+02	5.07E+07	1.78E+07	3.02E+06					
Road 104	104	0400-0500	1.39E+02	5.42E+06	1.10E+06	1.15E+03	4.54E+06	9.18E+02	6.52E+02	2.55E+07	1.99E+06	2.54E+02	2.05E+07	4.18E+06					
Road 104	104	0500-0600	1.40E+02	5.42E+06	1.10E+06	1.15E+03	4.54E+06	9.18E+02	6.52E+02	2.55E+07	1.99E+06	2.54E+02	2.05E+07	4.18E+06					
Road 104	104	0600-0700	1.58E+02	2.29E+07	6.99E+06	1.29E+04	1.54E+06	3.94E+02	8.25E+02	3.06E+06	5.45E+02	8.44E+07	1.72E+07	1.72E+07					
Road 104	104	0700-0800	1.62E+02	4.97E+07	1.01E+05	1.38E+02	4.17E+07	8.49E+06	7.11E+02	2.18E+06	1.45E+02	6.82E+02	1.79E+06	6.46E+06					
Road 104	104	0800-0900	1.30E+02	4.57E+06	1.30E+07	1.08E+03	3.81E+06	7.75E+02	6.28E+02	2.00E+07	4.96E+02	5.07E+07	1.78E+07	3.02E+06					
Road 104	104	0900-1000	1.58E+02	2.29E+07	6.99E+06	1.29E+04	1.54E+06	3.94E+02	8.25E+02	3.06E+06	5.45E+02	8.44E+07	1.72E+07	1.72E+07					
Road 104	104	1000-1100	2.03E+02	6.19E+07	1.26E+05	1.72E+02	5.24E+07	1.07E+06	8.29E+02	2.44E+06	1.59E+02	2.05E+06	4.17E+06	4.17E+06					
Road 104	104	1100-1200	2.03E+02	5.83E+07	1.13E+05	1.72E+02	4.97E+06	9.73E+06	8.18E+02	2.27E+06	1.62E+05	6.98E+02	1.91E+06	3.98E+06					
Road 104	104	1200-1300	1.30E+02	4.57E+06	1.30E+07	1.08E+03	3.81E+06	7.75E+02	6.28E+02	2.00E+07	4.96E+02	5.07E+07	1.78E+07	3.02E+06					
Road 104	104	1300-1400	1.33E+02	3.29E+07	6.71E+06	1.13E+02	2.79E+07	5.96E+06	6.11E+02	1.42E+06	8.99E+05	5.07E+02	1.26E+06	2.56E+06					
Road 104	104	1400-1500	1.76E+02	3.21E+07	6.35E+06	1.94E+02	5.99E+07	1.39E+07	6.59E+02	1.57E+06	2.29E+06	1.17E+06	2.77E+06	2.77E+06					
Road 104	104	1500-1600	1.35E+02	3.66E+07	7.49E+06	1.12E+04	3.40E+06	6.18E+02	6.02E+02	1.63E+06	3.30E+05	8.95E+02	1.31E+06	2.58E+06					
Road 104	104	1600-1700	9.50E+03	2.94E+07	5.99E+06	7.68E+03	2.38E+07	4.88E+06	3.42E+02	1.62E+06	3.30E+05	4.05E+02	1.26E+06	2.56E+06					
Road 104	104	1700-1800	6.10E+03	1.17E+07	1.17E+07	1.17E+07	6.51E+02	7.18E+05	7.18E+05	1.33E+03	1.46E+06	1.46E+06	1.46E+06						
Road 104	104	1800-1900	5.91E+03	1.61E+07	3.79E+06	4.87E+03	1.23E+07	2.70E+06	3.92E+02	1.07E+06	4.05E+05	8.31E+07	1.97E+07	1.97E+07					
Road 104	104	1900-2000	5.71E+03	1.21E+07	4.45E+06	4.63E+03	9.79E+06	1.99E+06	4.92E+02	1.91E+07	1.87E+05	3.33E+02	7.04E+07	1.43E+06					
Road 104	104	2000-2100	4.88E+03	1.03E+07	3.09E+06	3.96E+03	7.10E+06	1.47E+06	4.71E+02	8.83E+02	1.60E+02	2.14E+06	6.80E+07	1.38E+06					
Road 104	104	2100-2200	4.20E+03	8.63E+06	2.49E+06	3.40E+03	6.09E+06	1.20E+06	4.27E+02	6.56E+06	3.47E+05	7.17E+02	1.92E+06	4.05E+06					
Road 104	104	2200-2300	5.00E+02	8.11E+06	1.65E+06	4.29E+03	6.59E+06	1.34E+06	4.27E+02	6.56E+06	3.47E+05	7.17E+02	1.92E+06	4.05E+06					
Road 105	105	0000-0100	1.55E+02	1.70E+06	7.08E+07	1.29E+04	1.48E+06	3.85E+07	9.99E+02	8.77E+06	6.66E+06	3.38E+07	7.00E+06	2.92E+06					
Road 105	105	0100-0200	1.12E+02	1.17E+06	1.17E+06	1.17E+06	6.51E+02	7.18E+05	7.18E+05	1.33E+03	1.46E+06	1.46E+06	1.46E+06						
Road 105	105	0200-0300	1.80E+02	9.63E+06	1.91E+07	1.52E+02	8.14E+06	3.99E+07	8.69E+02	4.65E+06	1.94E+05	1.51E+06	3.82E+06	9.96E+06					
Road 105	105	0300-0400	1.94E+02	8.31E+06	7.65E+07	1.62E+04	6.59E+06	2.89E+07	9.41E+02	3.91E+08	6.35E+06	4.45E+02	3.18E+06	1.32E+06					
Road 105	105	0400-0500	2.14E+02	8.31E+06	7.65E+07	1.62E+04	6.59E+06	2.89E+07	9.41E+02	3.91E+08	6.35E+06	4.45E+02	3.18E+06	1.32E+06					
Road 105	105	0500-0600	1.99E+02	1.83E+06	3.63E+07	1.83E+02	1.53E+06	3.96E+07	9.38E+02	8.25E+04	4.04E+06	6.07E+02	6.73E+06	2.29E+06					
Road 105	105	0600-0700	2.38E+02	1.31E+08	1.78E+06	2.01E+02	3.64E+06	1.57E+06	1.04E+01	1.89E+07	7.88E+06	6.16E+02	1.56E+07	6.52E+06					
Road 105	105	0700-0800	1.70E+02	1.17E+06	1.17E+06	1.17E+06	6.51E+02	7.18E+05	7.18E+05	1.33E+03	1.46E+06	1.46E+06	1.46E+06						
Road 105	105	0800-0900	1.76E+02	1.17E+06	1.17E+06	1.17E+06	6.51E+02	7.18E+05	7.18E+05	1.33E+03	1.46E+06	1.46E+06	1.46E+06						
Road 105	105	0900-1000	3.23E+02	1.25E+07	5.19E+06	2.74E+02	1.06E+07	4.41E+06	3.19E+02	5.21E+07	2.17E+06	1.41E+06	4.39E+07	1.83E+06					
Road 105	105	1000-1100	3.72E+02	1.29E+07	5.39E+06	3.12E+02	1.10E+07	4.56E+06	3.47E+02	5.10E+07	2.13E+06	1.24E+06	4.29E+07	1.78E+06					
Road 105	105	1100-1200	3.36E+02	1.29E+07	5.39E+06	3.12E+02	1.10E+07	4.56E+06	3.47E+02	5.10E+07	2.13E+06	1.24E+06	4.29E+07	1.78E+06					
Road 105	105	1200-1300	7.76E+02	3.77E+07	1.57E+05	6.57E+02	3.21E+07	1.34E+05	2.66E+01	3.06E+06	5.42E+02	2.77E+02	1.11E+06	4.62E+06					
Road 105	105	1300-1400	7.60E+02	4.20E+07	1.57E+05	6.57E+02	3.21E+07	1.34E+05	2.66E+01	3.06E+06	5.42E+02	2.77E+02	1.11E+06	4.62E+06					
Road 105	105	1400-1500	7.43E+02	4.20E+07	1.57E+05	6.57E+02	3.21E+07	1.34E+05	2.66E+01	3.06E+06	5.42E+02	2.77E+02	1.11E+06	4.62E+06					
Road 105	105	1500-1600	7.31E+02	4.09E+07	1.56E+05	6.50E+02	3.39E+07	1.41E+05	2.76E+01	3.57E+06	5.05E+02	2.99E+02	1.31E+06	5.45E+06					
Road 105	105	1600-1700	7.87E+02	4.05E+07	1.66E+05	6.39E+02	3.38E+07	1.41E+05	2.76E+01	3.58E+06	5.05E+02	3.03E+02	1.22E+06	5.07E+06					
Road 105	105	1700-1800	9.60E+02	4.05E+07	1.66E+05	6.39E+02	3.38E+07	1.41E+05	2.76E+01	3.58E+06	5.05E+02	3.03E+02	1.22E+06	5.07E+06					
Road 105	105	1800-1900	5.01E+02	1.77E+07	7.36E+06	4.31E+02	1.46E+07	6.09E+06	2.19E+02	7.43E+06	1.10E+06	1.81E+04	6.14E+07	2.56E+06					
Road 105	105	1900-2000	5.27E+02	1.14E+07	4.73E+06	4.21E+02	9.46E+06	3.94E+06	2.09E+01	4.62E+07	1.92E+07	1.08E+07	3.83E+07	1.96E+06					
Road 105	105	2000-2100	4.76E+02	8.52E+06	3.55E+06	3.58E+02	7.93E+06	2.93E+06	2.06E+01	3.98E+07	4.96E+05	1.65E+02	2.94E+07	1.23E+06					
Road 105	105	2100-2200	4.76E+02	8.52E+06	3.55E+06	3.58E+02	7.93E+06	2.93E+06	2.06E+01	3.98E+07	4.96E+05	1.65E+02	2.94E+07	1.23E+06					
Road 105	105	2200-2300	5.00E+02	6.84E+06	3.53E+06	4.38E+02	7.00E+06	2.94E+06	1.90E+01	3.16E+07	3.20E+06	1.83E+02	6.26E+06	1.90E+06					
Road 105	105	2300-0000	5.23E+02	6.69E+06	2.89E+06	4.33E+02	6.96E+06	2.73E+06	1.99E+01	3.56E+07	3.09E+06	1.61E+01	5.11E+07	8.80E+06					
Road 106	106	0000-0100	1.46E+02	1.17E+06	1.17E+06	1.17E+06	6.51E+02	7.18E+05	7.18E+05	1.33E+03	1.46E+06	1.46E+06	1.46E+06						
Road 106	106	0100-0200	1.56E+02	4.26E+06	1.34E+06	1.32E+03	3.61E+06	1.14E+06	8.04E+02	2.00E+07	2.94E+06	6.61E+02	1.81E+07	5.80E+06					
Road 106	106	0200-0300	1.44E+02	3.30E+06	1.04E+06	1.38E+02	2.78E+06	8.87E+02	8.02E+02	1.66E+07	2.23E+06	4.72E+02	1.39E+07	4.20E+06					
Road 106	106	0300-0400	1.46E+02	1.17E+06	1.17E+06	1.17E+06	6.51E+02	7.18E+05	7.18E+05	1.33E+03	1.46E+06	1.46E+06	1.46E+06						
Road 106	106	0400-0500	1.59E+02	3.38E+06	1.07E+06	1.58E+02	2.81E+06	8.78E+02	8.21E+02	1.63E+07	2.07E+06	3.70E+02	1.30E+07	4.10E+06					
Road 106	106	0500-0600	2.08E+02	6.47E+06	2.04E+06	1.74E+02	5.41E+06	1.71E+06	9.59E+02	2.99E+07	4.73E+06	8.80E+02	4.73E+07	7.66E+06					
Road 106	106	0600-0700	2.56E+02	1.74E+07	5.50E+06	2.18E+02	5.47E+07	4.96E+06	1.19E+01	6.62E+07	2.41E+06	3.96E+02	6.30E+07	1.96E+06					
Road 106	106	0700-0800	3.18E+02	1.17E+06	1.17E+06	1.17E+06	6.51E+02	7.18E+05	7.18E+05	1.33E+03	1.46E+06	1.46E+06	1.46E+06						
Road 106	106	0800-0900	3.51E+02	5.63E+07	1.78E+06	2.96E+02	4.76E+07	1.50E+06	1.44E+01	3.19E+06	2.79E+06	1.02E+06	1.92E+06	6.08E+06					
Road 106	106	0900-1000	4.62E+02																

Tsing Yi North Underground Quarry

Open Road 4			Year 2008											
			NO _x Emission						NO Emission					
Road Name	Road ID		MonthlyMean _{km}			MonthlyMean _{average}			MonthlyMean _{km}			MonthlyMean _{average}		
			g/km/hour	g/km ³	tonne/hour	g/km/hour	g/km ³	tonne/hour	g/km/hour	g/km ³	tonne/hour	g/km/hour	g/km ³	tonne/hour
Road 1	0000-0000	1	9.010	9.010	0.11	9.125	9.125	0.11	9.125	9.125	0.11	9.125	9.125	0.11
Road 1	0100-0200	1	6.310	6.310	5.70E-08	6.14E-06	6.12E-06	5.07E-08	6.27E-06	4.23E-08	6.27E-06	7.10E-08	3.64E-07	3.29E-07
Road 1	0200-0300	1	6.020	6.020	4.75E-08	2.51E-06	5.62E-06	4.09E-08	2.25E-08	4.38E-08	2.88E-07	1.58E-08	3.62E-07	5.17E-08
Road 1	0300-0400	1	7.010	7.010	6.31E-08	6.31E-06	6.31E-06	6.31E-08	6.31E-06	6.31E-08	6.31E-06	6.31E-08	6.31E-06	6.31E-08
Road 1	0400-0500	1	8.010	8.010	8.58E-08	2.52E-06	7.20E-06	4.11E-08	2.27E-08	4.65E-08	2.66E-07	1.47E-08	4.06E-07	3.23E-07
Road 1	0500-0600	1	8.030	8.030	4.75E-08	4.70E-06	7.71E-06	7.63E-08	4.29E-08	4.92E-08	2.68E-06	2.26E-07	1.21E-07	3.23E-08
Road 1	0600-0700	1	9.010	9.010	9.01E-08	9.01E-06	9.01E-06	9.01E-08	9.01E-06	9.01E-08	9.01E-06	9.01E-08	9.01E-06	9.01E-08
Road 1	0700-0800	1	9.940	9.940	4.75E-07	2.34E-05	8.74E-05	3.74E-07	2.69E-08	5.33E-08	2.79E-07	1.25E-08	4.45E-07	1.07E-04
Road 1	0800-0900	1	9.970	9.970	4.75E-07	2.61E-05	8.64E-05	4.19E-07	2.31E-09	4.63E-08	2.39E-07	1.24E-08	4.14E-07	1.04E-04
Road 1	0900-1000	1	1.07E-02	1.07E-02	3.94E-07	2.39E-05	9.65E-04	3.81E-07	2.33E-09	5.27E-08	2.14E-08	1.18E-08	4.69E-07	8.99E-04
Road 1	1000-1100	1	1.00E-02	1.00E-02	3.94E-07	2.39E-05	9.65E-04	3.81E-07	2.33E-09	5.27E-08	2.14E-08	1.18E-08	4.69E-07	8.99E-04
Road 1	1100-1200	1	1.01E-02	1.01E-02	3.80E-07	2.09E-05	1.04E-02	3.47E-07	1.91E-05	5.54E-08	1.84E-08	1.01E-04	4.68E-07	9.10E-05
Road 1	1200-1300	1	1.01E-02	1.01E-02	4.71E-07	3.53E-05	1.28E-02	5.80E-07	3.13E-05	6.09E-08	2.78E-08	1.52E-04	5.64E-07	2.47E-05
Road 1	1300-1400	1	1.02E-02	1.02E-02	4.71E-07	3.53E-05	1.28E-02	5.80E-07	3.13E-05	6.09E-08	2.78E-08	1.52E-04	5.64E-07	2.47E-05
Road 1	1400-1500	1	1.44E-02	1.44E-02	7.11E-07	3.91E-05	1.32E-02	6.69E-07	3.58E-05	6.79E-08	3.11E-08	1.74E-04	5.58E-07	2.81E-04
Road 1	1500-1600	1	1.35E-02	1.35E-02	6.84E-07	3.76E-05	1.23E-02	6.22E-07	3.43E-05	6.30E-08	3.18E-08	1.74E-04	5.67E-07	2.87E-05
Road 1	1600-1700	1	1.00E-02	1.00E-02	4.71E-07	3.53E-05	1.28E-02	5.80E-07	3.13E-05	6.09E-08	2.78E-08	1.52E-04	5.64E-07	2.47E-05
Road 1	1700-1800	1	1.02E-02	1.02E-02	6.19E-07	3.41E-05	1.29E-02	5.63E-07	3.05E-05	5.25E-08	3.18E-08	1.74E-04	5.67E-07	2.86E-05
Road 1	1800-1900	1	1.00E-02	1.00E-02	4.71E-07	3.53E-05	1.28E-02	5.80E-07	3.13E-05	6.09E-08	2.78E-08	1.52E-04	5.64E-07	2.47E-05
Road 1	1900-2000	1	7.39E-03	7.39E-03	8.88E-07	2.69E-05	6.75E-03	4.47E-07	2.46E-05	3.90E-08	2.59E-08	1.42E-04	3.52E-03	3.98E-04
Road 1	2000-2100	1	6.98E-03	6.98E-03	4.35E-07	1.84E-05	6.75E-03	4.47E-07	2.46E-05	3.90E-08	2.59E-08	1.42E-04	3.52E-03	3.98E-04
Road 2	0000-0000	2	7.96E-03	7.96E-07	5.52E-06	6.90E-05	9.44E-08	4.78E-06	4.78E-06	4.78E-06	4.78E-06	3.90E-07	5.46E-07	2.77E-07
Road 2	0100-0200	2	8.41E-03	1.09E-08	3.82E-06	7.51E-03	6.73E-04	3.44E-04	4.77E-07	4.27E-07	2.16E-08	4.13E-07	7.07E-07	8.88E-05
Road 2	0200-0300	2	9.01E-03	1.84E-07	1.01E-06	5.45E-03	6.07E-07	8.02E-06	4.20E-07	1.27E-06	7.05E-06	4.48E-07	1.07E-05	8.95E-05
Road 2	0300-0400	2	9.94E-03	6.15E-08	2.61E-06	8.42E-03	4.65E-06	2.56E-05	5.13E-08	2.68E-07	1.36E-05	4.51E-07	3.96E-07	3.07E-05
Road 2	0400-0500	2	1.05E-02	6.06E-08	3.07E-06	9.49E-03	5.45E-08	2.78E-06	5.30E-06	3.06E-07	1.55E-05	4.66E-07	2.70E-07	1.25E-05
Road 2	0500-0600	2	1.12E-02	1.13E-07	5.72E-06	1.00E-02	1.01E-07	5.12E-08	5.09E-08	5.83E-07	3.29E-06	4.48E-07	3.91E-07	4.98E-05
Road 2	0600-0700	2	1.20E-02	1.20E-07	6.29E-06	1.10E-02	1.10E-07	5.52E-08	5.52E-08	6.36E-07	3.69E-06	4.97E-07	4.36E-07	5.56E-05
Road 2	0700-0800	2	1.28E-02	1.28E-07	6.86E-06	1.15E-02	1.15E-07	4.91E-07	5.20E-08	6.09E-06	2.69E-06	1.36E-02	5.21E-06	1.17E-04
Road 2	0800-0900	2	1.24E-02	1.24E-07	3.22E-05	1.10E-02	1.10E-07	5.63E-07	2.88E-05	5.72E-08	2.93E-06	1.48E-04	4.94E-07	2.54E-06
Road 2	0900-1000	2	1.16E-02	1.16E-07	3.22E-05	1.10E-02	1.10E-07	5.63E-07	2.88E-05	5.72E-08	2.93E-06	1.48E-04	4.94E-07	2.54E-06
Road 2	1000-1100	2	1.61E-02	6.33E-07	3.16E-05	1.45E-02	5.60E-07	2.84E-06	6.72E-06	2.60E-06	1.32E-04	5.97E-07	3.16E-06	1.17E-04
Road 2	1100-1200	2	1.54E-02	5.64E-07	2.86E-05	1.41E-02	5.15E-07	2.61E-05	6.61E-06	2.42E-06	1.23E-04	5.98E-07	3.16E-06	1.11E-04
Road 2	1200-1300	2	1.67E-02	6.77E-07	3.39E-05	1.54E-02	5.95E-07	2.94E-06	7.05E-06	2.69E-06	1.38E-04	6.07E-07	3.26E-06	1.19E-04
Road 2	1300-1400	2	1.67E-02	7.77E-07	3.86E-05	1.52E-02	7.07E-07	3.58E-05	7.04E-06	3.27E-06	1.65E-04	6.34E-07	3.294E-06	1.19E-04
Road 2	1400-1500	2	1.69E-02	8.23E-07	4.19E-05	1.54E-02	7.96E-07	3.83E-05	7.01E-06	3.49E-06	1.74E-04	6.34E-07	3.11E-06	1.57E-04
Road 2	1500-1600	2	1.57E-02	5.64E-07	2.86E-05	1.43E-02	5.72E-07	2.65E-05	7.01E-06	3.25E-06	1.78E-04	6.13E-07	3.16E-06	1.61E-04
Road 2	1600-1700	2	1.70E-02	7.03E-07	3.39E-05	1.68E-02	7.83E-07	3.95E-06	8.20E-06	2.92E-06	1.77E-04	6.78E-07	3.49E-06	1.26E-04
Road 2	1700-1800	2	1.19E-02	6.90E-07	3.47E-05	1.08E-02	6.26E-07	3.17E-05	5.62E-06	3.36E-07	1.71E-04	5.21E-03	3.03E-06	1.53E-04
Road 2	1800-1900	2	8.42E-03	5.71E-07	2.62E-05	7.01E-02	4.74E-08	4.20E-06	4.20E-06	4.20E-06	1.33E-08	3.80E-07	3.71E-06	2.00E-04
Road 2	1900-2000	2	7.18E-03	4.94E-07	2.25E-05	6.31E-02	4.15E-08	3.69E-06	3.69E-06	3.69E-06	1.17E-08	3.26E-07	3.19E-06	1.73E-04
Road 2	2000-2100	2	7.05E-03	2.65E-07	1.34E-05	6.44E-03	2.42E-07	1.23E-05	4.31E-07	1.62E-06	8.21E-06	3.88E-07	4.56E-05	3.5E-05
Road 2	2100-2200	2	6.40E-03	2.40E-07	1.22E-05	5.83E-03	2.19E-07	1.11E-05	4.21E-06	1.58E-06	8.00E-06	3.76E-07	4.14E-05	3.12E-05
Road 2	2200-2300	2	6.03E-03	2.30E-07	1.12E-05	5.45E-03	2.03E-07	1.03E-05	4.03E-06	1.47E-06	7.58E-06	3.53E-07	3.89E-05	2.98E-05
Road 2	2300-0000	2	7.39E-03	2.02E-07	1.02E-05	6.66E-03	1.76E-07	8.91E-06	4.62E-06	1.29E-06	6.38E-06	3.90E-07	4.65E-05	3.38E-05
Road 2	0000-0100	2	6.81E-03	2.28E-08	2.02E-07	5.92E-03	2.85E-07	1.57E-05	4.54E-06	2.19E-06	1.34E-06	3.97E-06	1.83E-07	1.62E-05
Road 2	0100-0200	2	7.18E-03	2.40E-07	1.22E-05	5.83E-03	2.19E-07	1.11E-05	4.21E-06	1.58E-06	8.00E-06	3.76E-07	4.14E-05	3.12E-05
Road 2	0200-0300	2	6.03E-03	2.30E-07	1.12E-05	5.45E-03	2.03E-07	1.03E-05	4.03E-06	1.47E-06	7.58E-06	3.53E-07	3.89E-05	2.98E-05
Road 2	0300-0400	2	8.05E-03	1.86E-08	1.14E-07	7.21E-03	1.06E-06	1.02E-07	4.71E-06	1.09E-07	6.67E-06	4.12E-06	4.56E-08	8.00E-07
Road 3	0000-0400	3	8.78E-03	1.60E-08	9.81E-08	8.78E-03	1.44E-08	8.82E-08	4.88E-08	8.91E-08	5.46E-07	4.26E-07	4.78E-07	4.78E-07
Road 3	0400-0500	3	9.24E-03	8.98E-08	1.14E-07	9.31E-03	1.66E-08	1.02E-07	5.02E-08	1.06E-07	6.14E-07	4.39E-07	4.78E-08	5.96E-07
Road 3	0500-0600	3	9.06E-03	9.06E-08	1.14E-07	9.31E-03	1.66E-08	1.02E-07	5.02E-08	1.06E-07	6.14E-07	4.39E-07	4.78E-08	5.96E-07
Road 3	0600-0700	3	1.02E-02	7.52E-08	4.61E-07	9.03E-03	6.08E-08	4.10E-07	5.40E-04	4.04E-07	2.48E-07	4.78E-07	4.96E-07	2.14E-06
Road 3	0700-0800	3	1.11E-02	1.66E-07	1.02E-06	9.79E-03	1.47E-07	8.99E-07	5.77E-08	8.57E-08	5.36E-07	4.97E-07	4.44E-07	5.67E-06
Road 3	0800-0900	3	1.01E-02	1.01E-07	6.29E-06	1.10E-02	1.10E-07	5.52E-08	5.52E-08	6.36E-07	3.69E-06	4.97E-07	4.36E-07	5.56E-05
Road 3	0900-1000	3	1.22E-02	1.74E-07	1.07E-06	1.09E-02	1.56E-07	9.54E-08	8.47E-07	5.20E-06	5.23E-07	4.74E-07	4.98E-06	
Road 3	1000-1100	3	1.36E-02	1.68E-07	1.03E-06	1.22E-02	1.51E-07	9.28E-07	6.22E-07	7.71E-07	4.78E-06	5.51E-07	6.83E-07	8.95E-06
Road 3	1100-1200	3	1.30E-02	1.30E-07	8.10E-06	1.10E-02	1.10E-07	5.52E-08	5.52E-08	6.36E-07	3.69E-06	4.97E-07	4.36E-07	5.56E-05
Road 3	1200-1300	3	1.95E-02	3.47E-07	2.13E-06	1.77E-02	3.14E-07	1.93E-06	8.04E-06	1.47E-06	8.78E-06	7.22E-07	2.96E-06	1.89E-06
Road 3	1300-1400	3	2.01E-02	3.71E-07	2.27E-06	1.83E-02	3.37E-07	2.07E-06	8.53E-06	1.57E-06	9.14E-06	7.71E-07	4.24E-06	8.71E-06
Road 3	1400-1500	3	2.37E-02	4.60E-07	2.82E-06	2.16E-02	4.20E-07	2.58E-06	9.59E-06	1.78E-06	1.14E-06	8.69E-06	1.09E-05	
Road 3	1500-1600	3	2.40E-02	4.80E-07	2.96E-06	2.18E-02	4.30E-07	2.68E-06	9.79E-06	1.82E-06	1.18E-06	9.03E-06	1.12E-05	
Road 3	1600-1700	3	3.17E-02	6.61E-07	4.05E-06	2.90E-02	6.06E-07	3.72E-06	1.27E-05	2.54E-06	1.56E-05	1.11E-05	2.61E-06	1.62E-05
Road 3	1700-1800	3	2.98E-02	6.83E-07	4.19E-06	2.72E-02	6.29E-07	3.68E-06	1.27E-05	2.54E-06	1.56E-05	1.11E-05	2.61E-06	1.62E-05
Road 3	1800-1900	3	2.20E-02	5.02E-07	3.12E-06	2.00E-02	4.58E-07	2.84E-06	1.07E-05	2.04E-06	1.26E-05	8.81E-06		

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry

Road data for 2002 road emission factors for AEMOD model (Emission)											
Road Name		Road ID	NO _x Emission			NO _y Emission			PM ₁₀ Emission		
			Monthly/hour			Monthly/hour			Monthly/hour		
			g/kwhr	g/m ³	tonne/hour	g/kwhr	g/m ³	tonne/hour	g/kwhr	g/m ³	tonne/hour
Road 1	0000-0000	1	9.10E-01	9.10E-01	1.35E-02	9.10E-01	9.10E-01	1.35E-02	1.72E-01	1.72E-01	2.55E-03
Road 1	0000-1000	1.02E-07	2.99E-07	6.06E-06	9.14E-03	2.61E-07	5.36E-06	5.18E-02	1.52E-06	3.04E-05	4.53E-03
Road 1	0000-1100	1.10E-02	2.91E-07	5.88E-06	1.04E-02	2.68E-07	5.50E-06	5.50E-02	1.78E-06	4.87E-02	1.23E-06
Road 1	1100-1200	1.20E-02	3.38E-07	6.86E-06	1.19E-02	3.05E-07	6.39E-06	6.39E-02	2.00E-06	5.05E-02	1.28E-06
Road 1	1200-1300	1.22E-02	3.73E-07	7.47E-06	1.19E-02	3.37E-07	6.55E-06	6.55E-02	2.17E-06	5.41E-02	1.52E-06
Road 1	1300-1400	1.22E-02	3.78E-07	7.58E-06	1.14E-02	3.44E-07	6.89E-06	6.70E-02	1.70E-06	3.55E-02	1.59E-06
Road 1	1400-1500	1.25E-02	4.14E-07	8.49E-06	1.13E-02	3.79E-07	7.59E-06	7.29E-02	1.92E-06	4.11E-02	1.69E-06
Road 1	1500-1600	1.18E-02	4.02E-07	8.06E-06	1.07E-02	3.63E-07	7.25E-06	6.78E-02	1.96E-06	3.93E-05	1.75E-06
Road 1	1600-1700	1.42E-02	4.56E-07	9.26E-06	1.15E-02	4.20E-07	8.43E-06	7.57E-02	2.03E-06	4.08E-05	1.84E-06
Road 1	1700-1800	0.88E-08	3.73E-07	7.47E-06	8.14E-03	3.41E-07	6.84E-06	6.82E-02	2.02E-06	4.05E-05	1.82E-06
Road 1	1800-1900	0.44E-08	3.66E-07	7.32E-06	7.75E-03	3.33E-07	6.66E-06	6.64E-02	2.00E-06	3.98E-05	1.80E-06
Road 1	1900-2000	5.62E-03	2.10E-07	4.20E-06	5.90E-03	1.90E-07	3.80E-06	3.51E-02	1.13E-06	2.62E-05	3.11E-06
Road 1	2000-2100	5.38E-06	1.92E-06	3.83E-06	4.44E-03	2.88E-06	5.84E-06	1.11E-02	2.23E-06	3.45E-02	4.00E-06
Road 1	2100-2200	5.38E-06	1.92E-06	3.83E-06	4.44E-03	2.88E-06	5.84E-06	1.11E-02	2.23E-06	3.45E-02	4.00E-06
Road 1	2200-2300	4.46E-03	1.59E-07	3.18E-06	4.03E-03	1.14E-07	2.28E-06	3.85E-02	1.00E-06	2.17E-05	3.25E-06
Road 1	2300-0000	5.25E-03	1.19E-07	2.31E-06	4.59E-03	6.65E-08	1.93E-06	4.10E-02	8.61E-07	1.78E-05	3.44E-02
Road 1	0000-0500	5.62E-03	2.10E-07	4.20E-06	5.90E-03	1.90E-07	3.80E-06	3.51E-02	1.13E-06	2.62E-05	3.11E-06
Road 1	0500-1000	5.45E-03	3.92E-08	7.87E-07	7.66E-03	4.68E-08	9.37E-07	5.53E-02	2.54E-07	2.12E-06	7.78E-07
Road 1	1000-1500	9.05E-03	3.02E-08	2.52E-07	8.07E-03	2.70E-08	2.29E-07	5.61E-02	1.88E-07	1.57E-06	1.63E-07
Road 1	1500-2000	0.97E-03	2.57E-08	2.14E-07	8.76E-03	2.31E-08	1.97E-07	5.79E-02	1.53E-08	4.87E-06	1.38E-07
Road 1	2000-2500	0.97E-03	2.57E-08	2.14E-07	8.76E-03	2.31E-08	1.97E-07	5.79E-02	1.53E-08	4.87E-06	1.38E-07
Road 1	2500-3000	1.18E-03	2.57E-08	2.14E-07	8.76E-03	2.75E-08	2.31E-07	5.79E-02	1.53E-08	4.87E-06	1.38E-07
Road 1	3000-3500	1.18E-03	5.92E-08	4.99E-07	1.07E-03	5.31E-08	4.44E-07	6.33E-02	3.75E-07	2.71E-06	5.70E-07
Road 1	3500-4000	1.46E-02	1.95E-07	1.29E-06	1.29E-02	3.89E-07	1.93E-06	7.51E-02	1.88E-07	6.67E-06	5.69E-07
Road 1	4000-4500	3.46E-02	3.59E-07	3.29E-05	4.59E-02	1.43E-07	1.91E-06	1.84E-02	1.96E-06	1.62E-06	1.38E-06
Road 1	0600-0800	1.84E-04	4.54E-07	3.79E-06	1.64E-02	4.05E-07	3.30E-06	8.37E-02	2.07E-07	1.73E-02	1.81E-06
Road 1	0800-1000	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	1000-1200	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	1200-1400	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	1400-1600	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	1600-1800	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	1800-2000	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	2000-2200	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	2200-2400	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	2400-2600	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	2600-2800	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	2800-3000	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	3000-3200	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	3200-3400	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	3400-3600	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	3600-3800	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	3800-4000	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	4000-4200	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	4200-4400	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	4400-4600	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	4600-4800	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	4800-5000	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	5000-5200	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	5200-5400	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	5400-5600	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	5600-5800	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	5800-6000	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	6000-6200	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	6200-6400	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	6400-6600	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	6600-6800	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	6800-7000	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	7000-7200	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	7200-7400	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	7400-7600	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	7600-7800	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	7800-8000	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	8000-8200	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	8200-8400	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	8400-8600	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	8600-8800	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	8800-9000	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	9000-9200	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	9200-9400	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	9400-9600	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	9600-9800	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	9800-1000	2.08E-04	4.04E-07	3.37E-06	1.82E-02	3.61E-07	3.02E-06	9.22E-02	1.89E-06	1.59E-02	1.64E-06
Road 1	1000-1100	1.10E-02	2.91E-07	5.88E-06	1.04E-02	2.68E-07	5.50E-06	5.50E-02	1.78E-06	4.87E-02	1.23E-06
Road 1	1100-1200	1.20E-02	3.38E-07	6.86E-06	1.19E-02	3.05E-07	6.39E-06	6.39E-02	2.00E-06	5.05E-02	1.28E-06
Road 1	1200-1300	1.22E-02	3.73E-07	7.47E-06	1.19E-02	3.37E-07	6.55E-06	6.55E-02	2.17E-06	5.41E-02	1.52E-06
Road 1	1300-1400	1.22E-02	3.78E-07	7.58E-06	1.14E-02	3.44E-07	6.89E-06	6.70E-02	1.70E-06	3.55E-02	1.59E-06
Road 1	1400-1500	1.25E-02	4.14E-07	8.49E-06	1.13E-02	3.79E-07	7.59E-06	7.29E-02	1.92E-06	4.11E-02	1.69E-06
Road 1	1500-1600	1.18E-02	4.02E-07	8.06E-06	1.07E-02	3.63E-07	7.25E-06	6.78E-02			

Tsing Yi North Underground Quarry

Open Road 24 Hour Emission Factors for				Year 2038		NO _x Emission				NO Emission			
Road Name	Road ID	Month	Hour	g/min/hr	Month/Year	g/min/hr	Month/Year	g/min/hr	Month/Year	g/min/hr	Month/Year	g/min/hr	Month/Year
				g/min/hr	g/min/hr	g/min/hr	g/min/hr	g/min/hr	g/min/hr	g/min/hr	g/min/hr	g/min/hr	g/min/hr
Road 7	7	1600-1700	1.74E-03	3.71E-03	1.39E-03	1.39E-03	1.39E-03	1.39E-03	1.39E-03	1.39E-03	1.39E-03	1.39E-03	1.39E-03
Road 7	7	1700-1800	1.30E-03	3.37E-07	3.95E-06	1.81E-03	3.09E-07	3.62E-06	6.43E-02	1.66E-06	1.95E-05	4.32E-02	1.51E-06
Road 7	7	1800-1900	9.50E-03	2.61E-03	6.66E-06	3.76E-03	2.36E-07	2.82E-06	4.78E-02	1.33E-05	5.45E-05	4.32E-02	1.19E-06
Road 7	7	1900-2000	7.65E-03	2.22E-03	1.29E-06	3.76E-03	2.36E-07	2.82E-06	4.78E-02	1.33E-05	5.45E-05	4.32E-02	1.19E-06
Road 7	7	2000-2100	7.23E-03	1.22E-03	1.43E-06	6.55E-03	1.12E-07	1.31E-06	4.48E-02	7.55E-05	8.07E-05	6.83E-07	8.01E-06
Road 7	7	2100-2200	6.53E-03	1.10E-03	1.29E-06	6.55E-03	9.99E-08	1.17E-06	3.39E-02	7.31E-07	8.57E-06	3.89E-03	6.57E-07
Road 7	7	2200-2300	6.67E-03	1.07E-03	1.29E-06	6.55E-03	9.99E-08	1.17E-06	3.39E-02	7.31E-07	8.57E-06	3.89E-03	6.57E-07
Road 7	7	2300-0000	7.53E-03	9.99E-03	1.08E-06	6.55E-03	8.08E-06	9.49E-07	4.78E-02	5.84E-07	8.95E-06	4.05E-02	5.97E-06
Road 8	8	0000-0100	9.48E-03	5.35E-09	1.08E-07	6.27E-03	4.67E-09	9.45E-08	4.78E-02	2.67E-06	8.40E-07	4.01E-02	2.26E-08
Road 8	8	0100-0200	9.79E-03	2.39E-09	7.27E-08	8.72E-03	3.21E-09	6.95E-08	4.78E-02	1.48E-06	5.25E-07	4.13E-02	1.52E-08
Road 8	8	0200-0300	1.03E-03	2.41E-09	7.27E-08	8.72E-03	3.21E-09	6.95E-08	4.78E-02	1.48E-06	5.25E-07	4.13E-02	1.52E-08
Road 8	8	0300-0400	1.08E-03	2.31E-09	4.66E-08	8.69E-03	2.08E-02	4.20E-08	5.00E-07	1.07E-07	2.17E-07	4.41E-02	9.66E-09
Road 8	8	0400-0500	1.13E-03	2.67E-09	5.39E-08	1.02E-02	2.60E-06	4.86E-08	5.16E-02	1.22E-06	4.68E-07	4.55E-02	1.07E-07
Road 8	8	0500-0600	1.18E-03	2.67E-09	5.39E-08	1.02E-02	2.60E-06	4.86E-08	5.16E-02	1.22E-06	4.68E-07	4.55E-02	1.07E-07
Road 8	8	0600-0700	1.29E-03	2.32E-09	2.29E-07	1.14E-02	1.01E-06	2.04E-06	5.71E-02	5.40E-06	1.02E-06	4.40E-08	8.91E-07
Road 8	8	0700-0800	1.34E-02	2.40E-06	4.86E-07	1.15E-02	2.13E-08	4.31E-07	5.88E-02	1.05E-07	1.13E-06	1.11E-02	1.85E-06
Road 8	8	0800-0900	1.37E-02	2.40E-06	4.86E-07	1.15E-02	2.13E-08	4.31E-07	5.88E-02	1.05E-07	1.13E-06	1.11E-02	1.85E-06
Road 8	8	0900-1000	1.48E-02	2.58E-06	5.21E-07	1.25E-02	2.31E-08	4.67E-07	6.27E-02	1.08E-07	2.21E-06	5.97E-02	1.96E-06
Road 8	8	1000-1100	1.64E-02	2.51E-06	5.08E-07	1.44E-02	2.26E-08	4.57E-07	6.69E-02	1.02E-07	2.06E-06	5.92E-02	1.98E-06
Road 8	8	1100-1200	1.59E-02	2.31E-06	4.68E-07	1.44E-02	2.10E-08	4.25E-07	6.59E-02	9.62E-08	1.94E-06	5.82E-02	8.95E-08
Road 8	8	1200-1300	1.59E-02	2.31E-06	4.68E-07	1.44E-02	2.10E-08	4.25E-07	6.59E-02	9.62E-08	1.94E-06	5.82E-02	8.95E-08
Road 8	8	1300-1400	2.02E-02	8.62E-08	1.74E-06	1.84E-02	7.84E-08	1.59E-06	1.08E-02	1.45E-07	3.96E-07	3.25E-02	1.32E-06
Road 8	8	1400-1500	2.02E-02	8.62E-08	1.82E-06	1.84E-02	8.25E-08	1.66E-06	1.08E-02	1.53E-07	1.15E-06	3.20E-02	1.31E-06
Road 8	8	1500-1600	1.89E-02	8.64E-08	1.76E-06	1.71E-02	7.02E-08	1.56E-06	1.03E-02	1.66E-07	7.01E-06	3.05E-02	6.67E-06
Road 8	8	1600-1700	1.92E-02	8.90E-08	1.84E-06	1.76E-02	8.33E-08	1.68E-06	7.52E-05	1.56E-07	7.20E-06	3.95E-02	3.75E-06
Road 8	8	1700-1800	1.47E-02	7.48E-08	1.51E-06	1.39E-02	6.87E-08	1.36E-06	6.57E-02	3.36E-07	8.79E-06	8.99E-02	6.07E-06
Road 8	8	1800-1900	1.53E-02	7.48E-08	1.51E-06	1.39E-02	6.87E-08	1.36E-06	6.57E-02	3.36E-07	8.79E-06	8.99E-02	6.07E-06
Road 8	8	1900-2000	9.89E-03	4.01E-08	8.18E-07	8.99E-03	3.67E-08	7.42E-07	4.64E-08	1.08E-07	1.20E-06	1.11E-02	1.70E-06
Road 8	8	2000-2100	9.69E-03	3.11E-08	6.29E-07	8.94E-03	2.87E-08	5.94E-07	4.96E-02	1.57E-07	3.18E-06	4.47E-02	1.43E-07
Road 8	8	2100-2200	9.17E-03	2.29E-08	5.84E-07	8.37E-03	2.64E-08	5.34E-07	4.49E-02	1.53E-07	3.08E-06	4.37E-02	1.38E-07
Road 8	8	2200-2300	9.17E-03	2.29E-08	5.84E-07	8.37E-03	2.64E-08	5.34E-07	4.49E-02	1.53E-07	3.08E-06	4.37E-02	1.38E-07
Road 8	8	2300-0000	1.04E-02	2.41E-08	4.87E-07	9.61E-03	3.12E-08	4.30E-07	5.29E-02	1.21E-07	2.44E-06	5.04E-02	1.04E-07
Road 8	8	2000-0000	1.04E-02	2.41E-08	4.87E-07	9.61E-03	3.12E-08	4.30E-07	5.29E-02	1.21E-07	2.44E-06	5.04E-02	1.04E-07
Road 9	9	0000-0100	1.33E-02	4.98E-08	5.58E-07	1.67E-02	6.53E-08	4.89E-07	7.34E-02	1.41E-07	3.08E-06	6.19E-02	3.50E-07
Road 9	9	0100-0200	1.33E-02	4.98E-08	5.58E-07	1.67E-02	6.53E-08	4.89E-07	7.34E-02	1.41E-07	3.08E-06	6.19E-02	3.50E-07
Road 9	9	0200-0300	1.39E-02	3.78E-08	2.81E-07	1.25E-02	3.39E-08	2.52E-07	7.11E-02	1.39E-07	1.43E-06	6.22E-02	1.69E-07
Road 9	9	0300-0400	1.48E-02	3.17E-08	2.36E-07	1.32E-02	2.85E-08	2.12E-07	7.28E-02	1.56E-07	1.15E-06	3.98E-02	1.37E-07
Road 9	9	0400-0500	1.51E-02	3.17E-08	2.36E-07	1.32E-02	2.85E-08	2.12E-07	7.28E-02	1.56E-07	1.15E-06	3.98E-02	1.37E-07
Road 9	9	0500-0600	1.81E-02	7.37E-08	4.97E-07	1.62E-02	6.83E-08	4.92E-07	8.50E-02	3.47E-07	2.58E-06	7.49E-02	2.27E-07
Road 9	9	0600-0700	2.33E-02	2.40E-07	1.51E-06	2.88E-02	1.87E-07	1.39E-06	1.09E-01	1.59E-06	1.67E-06	9.15E-02	7.99E-07
Road 9	9	0700-0800	2.33E-02	2.40E-07	1.51E-06	2.88E-02	1.87E-07	1.39E-06	1.09E-01	1.59E-06	1.67E-06	9.15E-02	7.99E-07
Road 9	9	0800-0900	2.81E-02	6.38E-07	7.72E-06	3.18E-02	3.46E-07	2.41E-06	1.29E-01	2.69E-06	1.94E-06	1.30E-01	2.11E-07
Road 9	9	0900-1000	2.81E-02	6.38E-07	7.72E-06	3.18E-02	3.46E-07	2.41E-06	1.29E-01	2.69E-06	1.94E-06	1.30E-01	2.11E-07
Road 9	9	1000-1100	4.16E-02	7.14E-07	5.30E-06	3.73E-02	6.44E-07	4.27E-06	1.71E-01	2.93E-06	2.12E-06	1.52E-02	2.61E-06
Road 9	9	1100-1200	4.23E-02	6.33E-07	4.70E-06	3.80E-02	5.69E-07	4.22E-06	1.64E-01	2.89E-06	1.82E-06	1.46E-01	1.19E-06
Road 9	9	1200-1300	4.23E-02	6.33E-07	4.70E-06	3.80E-02	5.69E-07	4.22E-06	1.64E-01	2.89E-06	1.82E-06	1.46E-01	1.19E-06
Road 9	9	1300-1400	9.36E-02	1.86E-06	1.35E-06	8.49E-02	1.69E-06	1.25E-06	3.30E-01	6.55E-06	8.86E-06	5.98E-02	5.92E-06
Road 9	9	1400-1500	1.17E-02	2.44E-06	1.81E-05	1.07E-01	2.22E-06	1.65E-05	4.18E-01	8.76E-06	5.50E-05	8.81E-01	7.95E-06
Road 9	9	1500-1600	1.17E-02	2.44E-06	1.81E-05	1.07E-01	2.22E-06	1.65E-05	4.18E-01	8.76E-06	5.50E-05	8.81E-01	7.95E-06
Road 9	9	1600-1700	1.29E-02	2.30E-06	2.15E-05	1.17E-01	2.52E-06	1.92E-05	4.78E-01	1.07E-05	9.54E-05	3.32E-01	6.57E-06
Road 9	9	1700-1800	1.50E-01	3.45E-05	2.56E-05	1.38E-01	3.16E-06	2.35E-05	5.03E-01	1.29E-05	7.96E-05	4.65E-01	1.06E-05
Road 9	9	1800-1900	1.50E-01	3.45E-05	2.56E-05	1.38E-01	3.16E-06	2.35E-05	5.03E-01	1.29E-05	7.96E-05	4.65E-01	1.06E-05
Road 9	9	1900-2000	6.28E-02	1.56E-06	1.16E-05	6.78E-02	1.44E-06	1.07E-05	2.46E-01	6.14E-06	1.54E-05	2.24E-01	5.93E-06
Road 9	9	2000-2100	3.04E-02	5.95E-07	4.34E-06	2.77E-02	5.37E-07	3.99E-06	3.12E-01	2.55E-06	1.89E-06	1.20E-01	3.06E-06
Road 9	9	2100-2200	2.41E-02	3.61E-07	2.68E-06	2.22E-02	3.34E-07	2.46E-06	1.14E-01	1.71E-06	1.27E-06	1.04E-01	1.56E-06
Road 9	9	2200-2300	2.41E-02	3.61E-07	2.68E-06	2.22E-02	3.34E-07	2.46E-06	1.14E-01	1.71E-06	1.27E-06	1.04E-01	1.56E-06
Road 9	9	2300-0000	2.36E-02	3.41E-07	2.53E-06	2.00E-02	3.01E-07	2.22E-06	1.10E-01	1.59E-06	1.18E-06	1.04E-01	1.38E-06
Road 9	9	2000-0000	2.35E-02	3.41E-07	2.51E-06	2.00E-02	3.01E-07	2.22E-06	1.10E-01	1.58E-06	1.18E-06	1.04E-01	1.38E-06
Road 10	10	0000-0100	6.23E-02	1.46E-06	1.29E-06	6.31E-02	1.27E-06	1.07E-06	2.23E-01	3.23E-06	2.23E-06	2.01E-01	7.61E-06
Road 10	10	0100-0200	6.86E-02	7.78E-06	5.18E-07	6.31E-02	7.12E-06	4.77E-07	2.17E-01	2.44E-07	1.64E-06	2.41E-01	2.26E-07
Road 10	10	0200-0300	7.52E-02	7.05E-06	4.78E-07	6.92E-02	6.49E-06	4.39E-07	2.25E-01	2.11E-07	1.42E-06	2.08E-01	1.95E-07
Road 10	10	0300-0400	7.52E-02	7.05E-06	4.78E-07	6.92E-02	6.49E-06	4.39E-07	2.25E-01	2.11E-07	1.42E-06	2.08E-01	1.95E-07
Road 10	10	0400-0500	8.02E-02	7.47E-06	4.78E-07	6.92E-02	6.59E-06	4.47E-07	2.25E-01	2.07E-07	1.39E-06	2.18E-01	1.92E-07
Road 10	10	0500-0600	7.70E-02	7.81E-06	6.51E-07	7.15E-02	9.02E-06	6.09E-07	2.47E-01	3.12E-07	2.09E-06	3.30E-01	2.90E-07
Road 10	10	0600-0700	7.26E-02	1.67E-06	1.12E-06	6.75E-02	1.56E-06	1.04E-06	2.39E-01	2.59E-06	9.83E-06	3.49E-01	5.51E-07
Road 10	10	0700-0800	7.26E-02	1.67E-06	1.12E-06	6.75E-02	1.56E-06	1.04E-06	2.39E-01	2.59E-06	9.83E-06	3.49E-01	5.51E-07
Road 10	10	0800-0900	9.08E-02	5.53E-07	3.71E-06	8.40E-02	5.12E-07	3.41E-06	2.88E-01	1.75E-06	1.15E-06	2.62E-01	1.06E-06
Road 10	10	0900-1000	1.01E-01	5.78E-07	3.88E-06	9.40E-02	5.30E-07	3.51E-06	3.06E-01	1.79E-06	1.17E-06	3.84E-01	1.62E-06
Road 10	10	1000-1100	1.01E-01	5.78E-07	3.88E-06	9.40E-02	5.30E-07	3.51E-06	3.06E-01	1.79E-06	1.17E-06	3.84E-01	1.62E-06
Road 10													

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry

Year 2038			NO _x Emission				NO _x Emission			
Road Name	Road ID	Hour	Monthly/g/km		Monthly/Average		Monthly/g/km		Monthly/Average	
			g/hr/km	g/hr/km	g/hr/km	g/hr/km	g/hr/km	g/hr/km	g/hr/km	
Road 11	0000-0100		2.1787	2.1787	2.1787	2.1787	1.6461	1.6461	1.6461	
Road 11	0100-0200		3.2442	1.41E+07	5.56E+07	3.03E+02	1.31E+07	1.67E+01	1.72E+07	
Road 11	0200-0300		3.6462	1.19E+07	4.54E+07	3.41E+02	1.11E+07	4.26E+07	5.74E+07	
Road 11	0300-0400		3.3200	1.04E+07	3.93E+07	3.03E+02	1.04E+07	3.93E+07	5.74E+07	
Road 11	0400-0500		4.0962	1.17E+07	4.51E+07	3.83E+02	1.17E+07	4.23E+07	5.74E+07	
Road 11	0500-0600		4.1772	2.01E+07	7.71E+07	3.92E+02	1.89E+07	7.25E+07	2.06E+07	
Road 11	0600-0700		4.1772	2.01E+07	7.71E+07	3.92E+02	1.89E+07	7.25E+07	2.06E+07	
Road 11	0700-0800		5.7252	1.19E+06	4.55E+06	5.30E+02	1.19E+06	4.25E+06	2.51E+06	
Road 11	0800-0900		5.7252	1.38E+06	5.31E+06	5.35E+02	1.28E+06	4.94E+06	2.34E+06	
Road 11	0900-1000		6.6402	1.38E+06	5.31E+06	5.35E+02	1.28E+06	4.94E+06	2.34E+06	
Road 11	1000-1100		7.1102	1.22E+06	4.69E+06	6.70E+02	1.17E+06	4.88E+06	2.53E+06	
Road 11	1100-1200		7.1102	1.22E+06	4.69E+06	6.70E+02	1.17E+06	4.88E+06	2.53E+06	
Road 11	1200-1300		9.6202	2.12E+06	8.14E+06	9.23E+02	1.98E+06	7.65E+06	3.26E+06	
Road 11	1300-1400		1.0202	2.41E+06	8.75E+06	3.71E+02	1.56E+07	1.63E+07	7.11E+06	
Road 11	1400-1500		1.0202	2.48E+06	9.54E+06	9.66E+02	2.34E+06	8.95E+06	3.19E+07	
Road 11	1500-1600		1.26E+06	2.48E+06	9.54E+06	9.66E+02	2.34E+06	8.95E+06	3.19E+07	
Road 11	1600-1700		1.26E+06	2.48E+06	9.54E+06	9.66E+02	2.34E+06	8.95E+06	3.19E+07	
Road 11	1700-1800		5.74E+02	1.52E+06	5.61E+06	5.45E+02	1.42E+06	5.55E+06	2.29E+06	
Road 11	1800-1900		4.3782	8.27E+07	3.17E+08	3.52E+02	7.84E+07	3.01E+08	1.98E+07	
Road 11	1900-2000		4.3782	8.27E+07	3.17E+08	3.52E+02	7.84E+07	3.01E+08	1.98E+07	
Road 11	2000-2100		3.98E+02	6.24E+07	2.43E+08	3.80E+02	5.90E+07	2.27E+08	1.92E+07	
Road 11	2100-2200		3.98E+02	6.24E+07	2.43E+08	3.80E+02	5.90E+07	2.27E+08	1.92E+07	
Road 11	2200-2300		3.98E+02	6.24E+07	2.43E+08	3.80E+02	5.90E+07	2.27E+08	1.92E+07	
Road 11	2300-2400		3.98E+02	6.24E+07	2.43E+08	3.80E+02	5.90E+07	2.27E+08	1.92E+07	
Road 12	0000-0100		2.67E+02	1.67E+07	1.23E+08	2.35E+02	1.47E+07	3.63E+07	5.72E+06	
Road 12	0100-0200		2.67E+02	1.67E+07	1.23E+08	2.35E+02	1.47E+07	3.63E+07	5.72E+06	
Road 12	0200-0300		2.67E+02	1.67E+07	1.23E+08	2.35E+02	1.47E+07	3.63E+07	5.72E+06	
Road 12	0300-0400		2.67E+02	1.67E+07	1.23E+08	2.35E+02	1.47E+07	3.63E+07	5.72E+06	
Road 12	0400-0500		2.73E+01	1.62E+07	1.00E+08	2.48E+02	1.47E+07	3.63E+07	5.72E+06	
Road 12	0500-0600		2.73E+01	1.62E+07	1.00E+08	2.48E+02	1.47E+07	3.63E+07	5.72E+06	
Road 12	0600-0700		2.73E+01	1.62E+07	1.00E+08	2.48E+02	1.47E+07	3.63E+07	5.72E+06	
Road 12	0700-0800		3.01E+02	8.12E+07	3.02E+08	3.02E+02	7.21E+07	1.76E+08	7.23E+07	
Road 12	0800-0900		3.35E+02	8.13E+07	3.02E+08	3.00E+02	7.27E+07	1.76E+08	7.17E+07	
Road 12	0900-1000		3.35E+02	8.13E+07	3.02E+08	3.00E+02	7.27E+07	1.76E+08	7.17E+07	
Road 12	1000-1100		3.35E+02	8.13E+07	3.02E+08	3.00E+02	7.27E+07	1.76E+08	7.17E+07	
Road 12	1100-1200		3.35E+02	8.13E+07	3.02E+08	3.00E+02	7.27E+07	1.76E+08	7.17E+07	
Road 12	1200-1300		3.41E+01	8.07E+07	1.99E+08	3.11E+02	7.33E+07	1.81E+08	7.27E+07	
Road 12	1300-1400		3.17E+01	8.12E+07	1.99E+08	3.02E+02	7.28E+07	1.81E+08	7.27E+07	
Road 12	1400-1500		3.35E+01	8.00E+07	1.97E+08	3.06E+02	7.33E+07	1.82E+08	7.27E+07	
Road 12	1500-1600		3.32E+01	7.98E+07	1.97E+08	3.05E+02	7.33E+07	1.82E+08	7.27E+07	
Road 12	1600-1700		3.11E+01	7.97E+07	1.96E+08	3.04E+02	7.33E+07	1.82E+08	7.27E+07	
Road 12	1700-1800		3.40E+01	7.97E+07	1.96E+08	3.04E+02	7.33E+07	1.82E+08	7.27E+07	
Road 12	1800-1900		3.24E+01	7.87E+07	1.94E+08	2.97E+02	7.19E+07	1.77E+08	6.99E+07	
Road 12	1900-2000		3.18E+01	7.71E+07	1.90E+08	2.92E+02	7.07E+07	1.74E+08	6.91E+07	
Road 12	2000-2100		2.31E+01	7.12E+07	1.59E+08	2.12E+02	5.96E+07	1.32E+08	5.96E+07	
Road 12	2100-2200		2.41E+01	7.17E+07	1.72E+08	2.22E+02	1.56E+07	3.90E+07	5.32E+07	
Road 12	2200-2300		2.41E+01	7.17E+07	1.72E+08	2.22E+02	1.56E+07	3.90E+07	5.32E+07	
Road 12	2300-2400		2.41E+01	7.17E+07	1.72E+08	2.22E+02	1.56E+07	3.90E+07	5.32E+07	
Road 13	0000-0100		2.65E+01	1.66E+07	1.13E+08	2.33E+02	1.48E+07	3.65E+07	5.62E+06	
Road 13	0100-0200		2.65E+01	1.66E+07	1.13E+08	2.33E+02	1.48E+07	3.65E+07	5.62E+06	
Road 13	0200-0300		2.65E+01	1.66E+07	1.13E+08	2.33E+02	1.48E+07	3.65E+07	5.62E+06	
Road 13	0300-0400		2.71E+01	1.60E+07	4.01E+06	2.44E+02	1.44E+07	3.61E+06	5.71E+06	
Road 13	0400-0500		2.71E+01	1.60E+07	4.01E+06	2.44E+02	1.44E+07	3.61E+06	5.71E+06	
Road 13	0500-0600		2.72E+01	1.61E+07	4.03E+06	2.48E+02	1.46E+07	3.66E+06	5.73E+06	
Road 13	0600-0700		2.66E+01	1.59E+07	3.95E+06	2.39E+02	1.43E+07	3.58E+06	5.67E+06	
Road 13	0700-0800		2.66E+01	1.59E+07	3.95E+06	2.39E+02	1.43E+07	3.58E+06	5.67E+06	
Road 13	0800-0900		2.66E+01	1.59E+07	3.95E+06	2.39E+02	1.43E+07	3.58E+06	5.67E+06	
Road 13	0900-1000		3.38E+01	8.04E+07	2.01E+08	3.01E+02	7.23E+07	1.81E+08	7.12E+07	
Road 13	1000-1100		3.37E+01	8.01E+07	2.00E+08	3.04E+02	7.22E+07	1.81E+08	7.10E+07	
Road 13	1100-1200		3.37E+01	8.01E+07	2.00E+08	3.04E+02	7.22E+07	1.81E+08	7.10E+07	
Road 13	1200-1300		3.34E+01	7.94E+07	1.99E+08	3.03E+02	7.20E+07	1.80E+08	7.07E+07	
Road 13	1300-1400		3.31E+01	7.92E+07	1.98E+08	3.02E+02	7.24E+07	1.81E+08	7.06E+07	
Road 13	1400-1500		3.26E+01	7.89E+07	1.97E+08	3.02E+02	7.24E+07	1.81E+08	7.06E+07	
Road 13	1500-1600		3.26E+01	7.89E+07	1.97E+08	3.02E+02	7.24E+07	1.81E+08	7.06E+07	
Road 13	1600-1700		3.26E+01	7.89E+07	1.97E+08	3.02E+02	7.24E+07	1.81E+08	7.06E+07	
Road 13	1700-1800		3.21E+01	7.78E+07	1.95E+08	2.93E+02	7.14E+07	1.78E+08	6.92E+07	
Road 13	1800-1900		3.21E+01	7.78E+07	1.95E+08	2.93E+02	7.14E+07	1.78E+08	6.92E+07	
Road 13	1900-2000		2.77E+01	7.17E+07	1.72E+08	2.26E+02	1.55E+07	3.88E+07	4.92E+07	
Road 13	2000-2100		2.77E+01	7.17E+07	1.72E+08	2.26E+02	1.55E+07	3.88E+07	4.92E+07	
Road 13	2100-2200		2.77E+01	7.17E+07	1.72E+08	2.26E+02	1.55E+07	3.88E+07	4.92E+07	
Road 13	2200-2300		2.77E+01	7.17E+07	1.72E+08	2.26E+02	1.55E+07	3.88E+07	4.92E+07	
Road 13	2300-2400		2.77E+01	7.17E+07	1.72E+08	2.26E+02	1.55E+07	3.88E+07	4.92E+07	
Road 13	0000-0100		2.44E+01	1.66E+07	1.13E+08	2.31E+02	1.47E+07	3.68E+07	5.59E+06	
Road 13	0100-0200		2.44E+01	1.66E+07	1.13E+08	2.31E+02	1.47E+07	3.68E+07	5.59E+06	
Road 13	0200-0300		2.44E+01	1.66E+07	1.13E+08	2.31E+02	1.47E+07	3.68E+07	5.59E+06	
Road 13	0300-0400		2.44E+01	1.66E+07	1.13E+08	2.31E+02	1.47E+07	3.68E+07	5.59E+06	
Road 13	0400-0500		2.44E+01	1.66E+07	1.13E+08	2.31E+02	1.47E+07	3.68E+07	5.59E+06	
Road 13	0500-0600		2.44E+01	1.66E+07	1.13E+08	2.31E+02	1.47E+07	3.68E+07	5.59E+06	
Road 13	0600-0700		2.44E+01	1.66E+07	1.13E+08	2.31E+02	1.47E+07	3.68E+07	5.59E+06	
Road 13	0700-0800		2.44E+01	1.66E+07	1.13E+08	2.31E+02	1.47E+07	3.68E+07	5.59E+06	
Road 13	0800-0900		2.44E+01	1.66E+07	1.13E+08	2.31E+02	1.47E+07	3.68E+07	5.59E+06	
Road 13	0900-1000		2.44E+01	1.66E+07	1.13E+08	2.31E+02	1.47E+07	3.68E+07	5.59E+06	
Road 13	1000-1100		2.44E+01	1.66E+07	1.13E+08	2.31E+02	1.47E+07	3.68E+07	5.59E+06	
Road 13	1100-1200		2.44E+01	1.66E+07	1.13E+08	2.31E+02	1.47E+07	3.68E+07	5.59E+06	
Road 13	1200-1300		2.44E+01	1.66E+07	1.13E+08	2.31E+02	1.47E+07	3.68E+07	5.59E+06	
Road 13	1300-1400		2.44E+01	1.66E+07	1.13E+08	2.31E+02	1.47E+07	3.68E+07	5.59E+06	
Road 13	1400-1500		2.44E+01	1.66E+07	1.13E+08	2.31E+02	1.47E+07	3.68E+07	5.59E+06	
Road 13	1500-1600		2.44E+01	1.66E+07	1.13E+08	2.31E+02	1.47E+07	3.68E+07	5.59E+06	
Road 13	1600-1700		2.44E+01	1.66E+07	1.13E+08	2.31E+02	1.47E+07	3.68E+07	5.59E+06	
Road 13	1700-1800		2.44E+01	1.66E+07	1.13E+08	2.31E+02	1.47E+07	3.68E+07	5.59E+06	
Road 13	1800-1900		2.44E+01	1.66E+07	1.13E+08	2.31E+02	1.47E+07	3.68E+07	5.59E+06	
Road 13	1900-2000		2.44E+01	1.66E+07	1.13E+08	2.31E+02	1.47E+07	3.68E+07	5.59E+06	
Road 13	2000-2100		2.44E+01	1.66E+07	1.13E+08	2.31E+02	1.47E+07	3.68E+07	5.59E+06	
Road 13	2100-2200		2.44E+01	1.66E+07	1.13E+08	2.31E+02	1.47E+07	3.68E+07	5.59E+06	
Road 13	2200-2300		2.44E+01	1.66E+07	1.13E+08	2.31E+02	1.47E+07	3.68E+07	5.59E+06	
Road 13	2300-2400		2.44E+01	1.66E+07	1.13E+08	2.31E+02	1.47E+07	3.68E+07	5.59E+06	
Road 14	0000-0100		2.28E+02	2.38E+06	1.26E+06	2.95E+02	6.87E+08	1.13E+04	2.84E+02	
Road 14	0100-0200		2.28E+02	2.38E+06	1.26E+06	2.95E+02	6.87E+08	1.13E+04	2.84E+02	
Road 14	0200-0300		2.28E+02	2.38E+06	1.26E+06	2.95E+02	6.87E+08	1.13E+04	2.84E+02	
Road 14	0300-0400		2.28E+02	2.38E+06	1.26E+06	2.95E+02	6.87E+08	1.13E+04	2.84E+02	
Road 14	0400-0500	</								

Tsing Yi North Underground Quarry

Road Name		Road ID	NO _x Emission						NO ₂ Emission					
			MonthlyMg/km			MonthlyMg/km			MonthlyMg/km			MonthlyMg/km		
			g/hour	g/min	tonne/hour	g/hour	g/min	tonne/hour	g/hour	g/min	tonne/hour	g/hour	g/min	tonne/hour
Road 14	14	0800-0900	5.662	0.941	0.277	3.811	0.602	0.181	5.318	0.871	0.261	4.595	0.749	0.226
Road 14	14	0900-1200	4.152	0.647	0.148	3.735	0.586	0.176	5.538	0.914	0.276	5.361	0.871	0.261
Road 14	14	1200-1500	4.512	0.712	0.188	4.078	0.731	0.225	1.256	0.601	0.287	4.898	0.749	0.226
Road 14	14	1500-1800	4.262	0.676	0.176	3.885	0.659	0.200	1.438	0.685	0.207	4.243	0.676	0.176
Road 14	14	1300-1400	6.992	1.385	0.395	5.892	1.252	0.344	2.195	0.466	0.136	1.968	0.412	0.118
Road 14	14	1400-1500	6.492	1.486	0.406	5.886	1.326	0.368	2.296	0.506	0.136	2.068	0.466	0.126
Road 14	14	1600-1700	6.102	1.362	0.372	5.492	1.252	0.344	2.195	0.466	0.136	1.968	0.412	0.118
Road 14	14	1500-1600	6.242	1.406	0.386	5.692	1.356	0.376	2.316	0.531	0.146	2.096	0.486	0.136
Road 14	14	1700-1800	6.282	1.536	0.416	5.762	1.411	0.396	2.406	0.516	0.146	2.096	0.486	0.136
Road 14	14	1800-1900	4.802	0.762	0.216	4.242	1.152	0.316	1.842	0.431	0.116	1.816	0.402	0.106
Road 14	14	1900-2000	4.242	0.672	0.186	3.842	1.052	0.286	1.542	0.391	0.106	1.292	0.371	0.101
Road 14	14	1900-2000	2.372	0.466	0.126	2.162	0.426	0.116	1.011	0.196	0.056	0.386	0.062	0.016
Road 14	14	2000-2100	2.202	0.432	0.116	2.032	0.312	0.086	1.005	0.154	0.046	0.262	0.042	0.016
Road 14	14	2100-2200	2.202	0.432	0.116	2.032	0.312	0.086	1.005	0.154	0.046	0.262	0.042	0.016
Road 14	14	2200-2300	2.192	0.372	0.106	1.942	0.286	0.076	0.978	0.146	0.046	0.246	0.036	0.016
Road 14	14	2300-0000	2.332	0.622	0.166	2.052	0.231	0.062	0.944	0.101	0.026	0.196	0.047	0.016
Road 15	15	0000-0100	2.002	0.362	0.102	1.702	0.262	0.072	0.926	0.126	0.036	0.186	0.036	0.016
Road 15	15	0100-0200	3.692	0.626	0.176	3.332	0.486	0.136	1.106	0.196	0.056	0.912	0.162	0.046
Road 15	15	0200-0300	4.262	0.752	0.206	3.942	0.832	0.246	1.202	0.196	0.056	1.072	0.196	0.056
Road 15	15	0300-0400	4.982	0.916	0.256	4.382	0.726	0.206	1.312	0.126	0.036	1.162	0.206	0.056
Road 15	15	0400-0500	4.242	0.752	0.206	3.942	0.726	0.206	1.312	0.126	0.036	1.162	0.206	0.056
Road 15	15	0500-0600	3.882	0.526	0.146	3.892	0.502	0.146	1.186	0.101	0.026	1.006	0.143	0.036
Road 15	15	0600-0700	3.042	0.386	0.106	3.052	0.646	0.186	0.426	0.071	0.026	0.272	0.047	0.016
Road 15	15	0700-0800	4.842	0.712	0.206	4.272	0.862	0.246	1.462	0.482	0.146	1.782	0.542	0.146
Road 15	15	0800-0900	4.832	0.502	0.146	2.812	0.312	0.086	0.912	0.126	0.036	1.242	0.127	0.036
Road 15	15	0900-1000	5.126	0.947	0.270	4.708	0.416	0.126	2.626	0.428	0.156	0.870	0.161	0.046
Road 15	15	1000-1100	5.662	1.062	0.296	5.182	0.786	0.236	1.462	0.482	0.146	1.274	0.206	0.056
Road 15	15	1100-1200	5.492	0.672	0.186	4.496	0.512	0.152	2.462	0.276	0.151	0.717	0.136	0.046
Road 15	15	1200-1300	6.472	0.777	0.216	4.426	0.586	0.176	4.352	0.408	0.196	1.474	0.236	0.066
Road 15	15	1300-1400	6.632	0.912	0.246	4.746	0.692	0.206	4.692	0.436	0.210	1.636	0.246	0.066
Road 15	15	1400-1500	6.842	1.047	0.286	4.916	0.732	0.216	4.812	0.466	0.216	1.686	0.266	0.066
Road 15	15	1500-1600	6.142	0.547	0.156	4.676	0.636	0.192	4.626	0.428	0.204	1.606	0.192	0.056
Road 15	15	1600-1700	6.192	0.517	0.146	4.776	0.726	0.216	4.792	0.418	0.192	1.626	0.196	0.056
Road 15	15	1700-1800	5.102	0.622	0.176	4.376	0.626	0.186	4.426	0.402	0.196	1.576	0.196	0.056
Road 15	15	1800-1900	4.222	0.387	0.106	3.562	0.376	0.116	3.376	0.126	0.036	1.216	0.096	0.036
Road 15	15	1900-2000	2.376	0.457	0.135	2.166	0.326	0.096	1.226	0.426	0.127	0.546	0.046	0.016
Road 15	15	2000-2100	2.202	0.432	0.116	2.032	0.312	0.086	1.005	0.154	0.046	0.262	0.042	0.016
Road 15	15	2100-2200	2.242	0.447	0.126	2.132	0.302	0.076	0.976	0.147	0.046	0.276	0.047	0.016
Road 15	15	2200-2300	2.342	0.607	0.186	2.082	0.696	0.196	0.942	0.137	0.037	0.402	0.137	0.036
Road 15	15	2300-0000	2.662	0.802	0.226	2.302	0.882	0.246	1.022	0.261	0.076	0.842	0.246	0.076
Road 16	16	0000-0100	8.182	1.585	0.436	7.112	1.762	0.476	1.476	0.406	0.116	1.246	0.346	0.096
Road 16	16	0100-0200	8.902	1.931	0.526	8.002	3.522	0.986	1.086	0.592	0.222	0.602	0.426	0.192
Road 16	16	0200-0300	9.892	3.208	0.876	8.832	2.872	0.786	0.292	0.176	0.046	0.582	0.492	0.136
Road 16	16	0300-0400	1.042	0.202	0.056	0.952	1.082	0.296	1.262	0.346	0.096	1.422	0.396	0.106
Road 16	16	0400-0500	1.142	0.326	0.086	0.972	1.042	0.296	1.602	0.436	0.126	1.492	0.446	0.126
Road 16	16	0500-0600	1.182	0.678	0.186	1.042	1.502	0.416	1.862	0.502	0.136	1.572	0.532	0.146
Road 16	16	0600-0700	1.102	0.782	0.216	1.072	1.602	0.446	1.862	0.502	0.136	1.572	0.532	0.146
Road 16	16	0700-0800	1.642	0.507	0.146	1.422	1.082	0.296	0.742	0.156	0.046	0.572	0.156	0.046
Road 16	16	0800-0900	1.882	0.467	0.126	1.662	1.402	0.386	1.126	0.316	0.086	0.616	0.176	0.046
Road 16	16	0900-1000	1.202	0.612	0.166	1.102	1.212	0.336	1.702	0.446	0.126	1.532	0.446	0.126
Road 16	16	1000-1100	1.912	0.532	0.146	1.082	1.732	0.476	1.876	0.506	0.146	1.616	0.506	0.146
Road 16	16	1100-1200	1.782	0.607	0.166	1.602	2.782	0.766	0.782	0.196	0.056	0.102	0.236	0.066
Road 16	16	1200-1300	3.192	0.677	0.196	2.912	0.892	0.246	1.202	0.276	0.076	0.586	0.162	0.046
Road 16	16	1300-1400	3.362	0.812	0.226	3.012	1.252	0.346	1.252	0.346	0.096	0.642	0.196	0.056
Road 16	16	1400-1500	3.062	0.577	0.156	2.492	0.312	0.086	1.302	0.246	0.066	0.242	0.066	0.016
Road 16	16	1500-1600	3.422	0.792	0.216	2.436	1.152	0.326	1.392	0.346	0.096	0.622	0.196	0.056
Road 16	16	1600-1700	3.102	0.632	0.176	2.632	1.632	0.456	1.762	0.486	0.136	1.502	0.486	0.136
Road 16	16	1700-1800	2.722	0.697	0.196	2.122	0.652	0.186	1.172	0.296	0.086	1.052	0.266	0.076
Road 16	16	1800-1900	1.792	0.677	0.186	1.642	1.182	0.326	1.732	0.446	0.126	1.532	0.446	0.126
Road 16	16	1900-2000	1.802	0.722	0.206	1.692	1.382	0.386	1.722	0.486	0.136	1.522	0.486	0.136
Road 16	16	2000-2100	0.912	0.517	0.146	0.992	1.382	0.386	0.502	0.146	0.046	0.256	0.046	0.016
Road 16	16	2100-2200	0.9312	0.437	0.126	0.8472	1.302	0.368	0.5432	0.1327	0.036	0.2552	0.0432	0.016
Road 16	16	2200-2300	0.4982	1.402	0.386	0.4722	1.242	0.346	0.596	0.162	0.046	0.4462	0.162	0.046
Road 16	16	2300-0000	0.4982	1.402	0.386	0.4722	1.242	0.346	0.596	0.162	0.046	0.4462	0.162	0.046
Road 17	17	0000-0100	1.002	0.698	0.196	0.7962	1.7612	0.486	2.632	0.746	0.206	1.476	0.476	0.136
Road 17	17	0100-0200	1.0712	0.6318	0.1765	0.9962	1.5322	0.4216	1.6662	0.4562	0.1274	1.4942	0.4562	0.1274
Road 17	17	0200-0300	1.1022	0.7122	0.1965	1.1762	1.7612	0.486	2.632	0.746	0.206	1.476	0.476	0.136
Road 17	17	0300-0400	1.2762	0.5318	0.1462	1.1462	1.8662	0.5136	0.6142	0.2062	0.0562	1.0062	0.1832	0.0542
Road 17	17	0400-0500	1.4562	0.7078	0.1962	1.2262	1.5862	0.4362	1.6452	0.4272	0.1162	1.5762	0.4272	0.1162
Road 17	17	0500-0600	1.5062	1.1122	0.3062	1.3262	1.8662	0.5136	0.6142	0.2062	0.0562	1.0062	0.1832	0.0542
Road 17	17	0600-0700	1.5062	1.1122	0.3062	1.3262	1.8662	0.5136	0.6142	0.2062	0.0562	1.0062	0.1832	0.0542
Road 17	17	0700-0800	3.6622	0.2026	0.0562	3.2322	0.9322	0.2782	1.4712	0.4262	0.1262	1.6162	0.4262	0.1262
Road 17	17	0800-0900	3.6622	0.2026	0.0562	3.2322	0.9322	0.2782	1.4712	0.4262	0.1262	1.6162	0.4262	0.1262
Road 17	17	0900-1000	5.5862	1.5962	0.4462	4.8562	1.4462	0.4062	2.0962	0.6196	0.1762	1.8162	0.6196	0.1762
Road 17	17	1000-1100	4.5662	0.2116	0.0562	4.1262	1.0962	0.3196	1.7262	0.4716	0.1362	1.5462	0.4716	0.1362
Road 17	17	1100-1200	5.9862	0.2216	0.0562	3.9862	0.8412	0.2408	1.4082	0.4012	0.1062	1.3112	0.4012	0.1062
Road 17	17	1200-1300	4.1262	0.2116	0.0562	4.1262	1.0962	0.3196	1.7262	0.4716	0.1362	1.5462	0.4716	0.1362
Road 17	17	1300-1400	5.7962	0.4416	0.1262	5.3062	1.2962	0.3682	2.1382	0.5216	0.1462	1.9912	0.5	

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Open Road 24 hour Emission Factors for
AERMOD model (October)

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Open Road 24 hour Emission Factors for
AERMOD model (October)

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Open Road 24 hour Emission Factors for
AERMOD model (October) Year 2038

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Open Road 24 hour Emission Factors for AERMOD model (October) Year 2038

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Open Road 24 hour Emission Factors for Year 2038

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Open Road 24 hour Emission Factors for Year 2038

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Open Road 24 hour Emission Factors for Year 2038

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Open Road 24 hour Emission Factors for Year 2038

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Open Road Yield Under Homogenous Quarry									
Open Road Yield 2nd Emission Factors for									
ATMNO Model (Cubic Feet)									
Year 2038									
		NO _x Emission						CO Emission	
Row Name	Row ID	Hour	MonthlyHours	MonthlyHours/gsm ³	MonthlyHours/tonnehour	MonthlyHours/gkwh	MonthlyHours/tonnehour	MonthlyHours/kwh	MonthlyHours/tonnehour
				gsm ³	tonnehour	gkwh	tonnehour	kwh	tonnehour
				gsm ³	tonnehour	gkwh	tonnehour	kwh	tonnehour
Row 44	44	0000-0000	1.0067	9.511	1.466	1.184	1.943	1.932	1.432
Row 44	44	0000-0000	1.067	2.511	0.156	9.530	2.257	3.095	7.311
Row 44	44	0000-1100	1.198	2.476	0.156	1.072	1.187	1.345	6.505
Row 44	44	0000-1100	1.219	2.476	0.156	1.072	1.187	1.345	6.505
Row 44	44	1200-1300	1.412	0.506	1.598	1.262	3.217	1.965	6.244
Row 44	44	1200-1300	1.428	0.506	1.598	1.262	3.217	1.965	6.244
Row 44	44	1300-1400	1.428	0.506	1.598	1.262	3.217	1.965	6.244
Row 44	44	1300-1400	1.428	0.506	1.598	1.262	3.217	1.965	6.244
Row 44	44	1400-1500	1.428	0.506	1.598	1.262	3.217	1.965	6.244
Row 44	44	1400-1500	1.428	0.506	1.598	1.262	3.217	1.965	6.244
Row 44	44	1500-1600	1.836	0.447	3.376	1.672	0.906	0.505	1.682
Row 44	44	1500-1600	1.836	0.447	3.376	1.672	0.906	0.505	1.682
Row 44	44	1600-1700	1.836	0.447	3.376	1.672	0.906	0.505	1.682
Row 44	44	1600-1700	1.836	0.447	3.376	1.672	0.906	0.505	1.682
Row 44	44	1700-1800	1.836	0.447	3.376	1.672	0.906	0.505	1.682
Row 44	44	1700-1800	1.836	0.447	3.376	1.672	0.906	0.505	1.682
Row 44	44	1800-1900	6.031	1.864	0.176	5.724	1.696	1.044	3.795
Row 44	44	1800-1900	6.031	1.864	0.176	5.724	1.696	1.044	3.795
Row 44	44	2000-2100	6.031	1.864	0.176	5.724	1.696	1.044	3.795
Row 44	44	2000-2100	6.031	1.864	0.176	5.724	1.696	1.044	3.795
Row 44	44	2100-2200	6.031	1.864	0.176	5.724	1.696	1.044	3.795
Row 44	44	2100-2200	6.031	1.864	0.176	5.724	1.696	1.044	3.795
Row 44	44	2200-2300	5.326	1.182	0.717	4.662	1.045	0.427	8.707
Row 44	44	2200-2300	5.326	1.182	0.717	4.662	1.045	0.427	8.707
Row 44	44	2300-0000	6.106	1.787	0.572	6.776	0.476	4.272	7.101
Row 44	44	2300-0000	6.106	1.787	0.572	6.776	0.476	4.272	7.101
Row 44	44	0000-0100	5.911	2.898	0.506	5.252	2.575	0.171	4.186
Row 44	44	0000-0100	5.911	2.898	0.506	5.252	2.575	0.171	4.186
Row 44	44	0100-0200	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	0100-0200	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	0200-0300	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	0200-0300	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	0300-0400	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	0300-0400	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	0400-0500	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	0400-0500	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	0500-0600	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	0500-0600	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	0600-0700	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	0600-0700	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	0700-0800	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	0700-0800	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	0800-0900	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	0800-0900	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	0900-1000	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	0900-1000	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1000-1100	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1000-1100	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1100-1200	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1100-1200	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1200-1300	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1200-1300	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1300-1400	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1300-1400	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1400-1500	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1400-1500	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1500-1600	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1500-1600	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1600-1700	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1600-1700	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1700-1800	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1700-1800	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1800-1900	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1800-1900	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1900-2000	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1900-2000	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	2000-2100	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	2000-2100	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	2100-2200	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	2100-2200	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	2200-2300	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	2200-2300	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	2300-0000	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	2300-0000	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	0000-0100	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	0000-0100	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	0100-0200	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	0100-0200	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	0200-0300	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	0200-0300	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	0300-0400	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	0300-0400	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	0400-0500	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	0400-0500	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	0500-0600	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	0500-0600	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	0600-0700	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	0600-0700	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	0700-0800	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	0700-0800	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	0800-0900	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	0800-0900	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	0900-1000	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	0900-1000	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1000-1100	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1000-1100	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1100-1200	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1100-1200	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1200-1300	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1200-1300	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1300-1400	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1300-1400	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1400-1500	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1400-1500	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1500-1600	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1500-1600	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1600-1700	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1600-1700	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1700-1800	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1700-1800	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1800-1900	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1800-1900	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1900-2000	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	1900-2000	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	2000-2100	6.913	2.298	0.506	5.252	2.575	0.171	4.186
Row 44	44	2000-2100	6.913	2.298	0.506				

TSPy Grid 24 Hour Emission Factors for Open Road 24 Hour Emission Factors for Year 2038											
AERMOD model (cubic/hr)				NO _x Emission				NO _x Emission			
Route Name	Read ID	Hour	g/min/hr	g/min/hr	MonthlyHourlyMin	MonthlyHourlyAverage	MonthlyHourlyAverage	g/min/hr	g/min/hr	MonthlyHourlyMin	MonthlyHourlyAverage
Read 47	1700-1200	2382.0	1.500	1.500	1.500	1.500	1.500	1.500	1.500	1.500	1.500
Read 47	1700-1800	1800.0	4.01E-07	1.75E-05	1.65E-02	3.68E-07	1.15E-05	8.78E-02	1.95E-03	1.03E-05	7.95E-02
Read 47	1800-1900	129E-02	6.34E-07	1.01E-05	1.18E-02	2.97E-07	9.25E-06	6.36E-02	1.58E-05	1.94E-05	5.70E-02
Read 47	1900-0000	1.68E-02	9.14E-07	5.49E-06	9.34E-03	2.59E-07	8.49E-06	5.89E-02	1.41E-05	1.74E-05	3.96E-02
Read 47	2000-2100	9.45E-03	1.24E-07	4.95E-06	8.70E-03	1.39E-07	4.22E-06	6.90E-02	9.45E-05	2.96E-05	8.53E-02
Read 47	2100-2200	7.83E-03	1.22E-07	3.87E-06	6.13E-03	1.11E-07	3.46E-06	5.76E-02	8.94E-07	2.79E-05	5.71E-02
Read 47	2200-2300	1.15E-02	1.44E-07	5.01E-06	7.01E-03	1.19E-07	3.51E-06	5.76E-02	1.07E-05	7.71E-05	2.31E-02
Read 48	0000-0100	8.15E-03	2.87E-06	1.05E-06	8.03E-03	1.24E-07	3.79E-06	5.76E-02	1.07E-05	5.03E-02	5.67E-07
Read 48	0000-0100	5.98E-03	1.51E-06	7.83E-07	5.18E-03	4.50E-08	8.79E-07	4.32E-07	3.76E-06	3.60E-02	1.21E-02
Read 48	0100-0200	6.32E-03	3.57E-08	5.38E-07	5.83E-03	3.18E-08	4.76E-07	4.32E-07	6.66E-06	7.01E-02	2.09E-07
Read 48	0200-0300	3.44E-03	3.15E-08	5.29E-07	5.83E-03	2.93E-08	4.32E-07	4.32E-07	6.66E-06	7.01E-02	2.09E-07
Read 48	0300-0400	7.35E-03	2.36E-08	3.60E-07	6.59E-03	2.14E-08	3.2E-07	4.54E-07	4.48E-06	2.28E-05	3.95E-02
Read 48	0400-0500	7.89E-03	2.81E-08	4.24E-07	6.59E-03	2.52E-08	3.82E-07	4.54E-07	4.48E-06	2.28E-05	3.95E-02
Read 48	0500-0600	9.45E-03	2.81E-08	4.24E-07	6.59E-03	2.52E-08	3.82E-07	4.54E-07	4.48E-06	2.28E-05	3.95E-02
Read 48	0600-0700	9.35E-03	1.24E-07	1.96E-06	8.70E-03	1.10E-07	1.65E-06	5.20E-07	8.87E-04	1.04E-05	4.48E-02
Read 48	0700-0800	9.94E-03	2.66E-07	4.01E-06	8.70E-03	2.36E-07	3.54E-06	5.36E-02	4.48E-06	1.16E-05	4.59E-02
Read 48	0800-0900	9.45E-03	2.81E-08	4.24E-07	6.59E-03	2.52E-08	3.82E-07	4.54E-07	4.48E-06	2.28E-05	3.95E-02
Read 48	0900-1000	1.07E-02	2.71E-07	4.10E-06	9.00E-03	2.43E-07	3.66E-06	5.31E-02	4.34E-06	2.03E-05	4.67E-02
Read 48	1000-1100	1.21E-02	2.63E-07	3.98E-06	1.08E-03	2.37E-07	3.57E-06	5.64E-02	1.23E-06	1.86E-05	9.99E-02
Read 48	1100-1200	1.15E-02	2.67E-07	3.57E-06	1.04E-03	2.15E-07	3.28E-06	5.67E-02	1.16E-05	1.75E-05	9.04E-02
Read 48	1200-1300	1.15E-02	3.41E-07	3.57E-06	1.04E-03	2.15E-07	3.28E-06	5.67E-02	1.16E-05	1.75E-05	9.04E-02
Read 48	1300-1400	2.03E-02	3.54E-07	5.35E-06	1.58E-02	3.22E-07	4.87E-06	7.67E-02	1.34E-02	2.05E-05	5.11E-02
Read 48	1400-1500	2.04E-02	3.71E-07	5.59E-06	1.68E-02	3.38E-07	5.11E-06	7.96E-02	1.37E-02	2.07E-05	5.11E-02
Read 48	1500-1600	1.99E-02	3.54E-07	5.34E-06	1.71E-02	3.29E-07	4.85E-06	7.67E-02	1.34E-02	2.05E-05	5.11E-02
Read 48	1600-1700	1.93E-02	3.27E-07	5.83E-06	1.77E-02	3.42E-07	5.16E-06	7.18E-02	1.38E-02	2.09E-05	5.54E-02
Read 48	1700-1800	1.49E-02	3.09E-07	4.66E-06	1.57E-02	2.64E-07	4.68E-06	6.28E-02	1.30E-02	1.95E-05	5.72E-02
Read 48	1800-1900	1.49E-02	3.09E-07	4.66E-06	1.57E-02	2.64E-07	4.68E-06	6.28E-02	1.30E-02	1.95E-05	5.72E-02
Read 48	1900-2000	1.05E-02	1.72E-07	2.89E-06	9.51E-03	1.57E-07	2.36E-06	4.57E-07	5.73E-04	1.14E-05	4.10E-02
Read 48	2000-2100	1.03E-02	1.33E-07	2.01E-06	8.98E-03	1.23E-07	1.96E-06	4.81E-02	6.52E-07	4.43E-06	3.38E-02
Read 48	2100-2200	1.03E-02	1.33E-07	2.01E-06	8.98E-03	1.23E-07	1.96E-06	4.81E-02	6.52E-07	4.43E-06	3.38E-02
Read 48	2200-2300	1.02E-02	1.36E-07	1.99E-06	8.98E-03	1.11E-07	1.67E-06	4.84E-02	5.97E-07	9.01E-04	3.17E-02
Read 48	2300-0000	1.11E-02	1.03E-07	1.56E-06	9.77E-03	9.13E-08	1.51E-06	4.89E-07	2.75E-04	4.43E-06	4.74E-02
Read 49	0000-0100	7.81E-03	1.30E-06	1.99E-06	6.76E-03	3.73E-08	8.41E-06	5.36E-02	1.06E-07	7.73E-06	6.33E-02
Read 49	0100-0200	7.42E-03	1.24E-06	1.99E-06	6.76E-03	3.73E-08	8.41E-06	5.36E-02	1.06E-07	7.73E-06	6.33E-02
Read 49	0200-0300	8.09E-03	1.61E-06	2.59E-07	7.21E-03	1.87E-08	4.27E-07	5.29E-02	1.17E-07	3.46E-06	4.71E-02
Read 49	0300-0400	8.73E-03	1.78E-06	4.49E-07	7.82E-03	1.59E-08	4.27E-07	5.45E-02	1.11E-07	2.80E-06	4.78E-02
Read 49	0400-0500	8.49E-03	1.78E-06	4.49E-07	7.82E-03	1.59E-08	4.27E-07	5.45E-02	1.11E-07	2.80E-06	4.78E-02
Read 49	0500-0600	1.10E-02	4.20E-06	1.06E-06	9.83E-03	3.76E-09	5.90E-07	6.23E-02	2.96E-07	6.02E-06	6.42E-02
Read 49	0600-0700	1.39E-02	1.13E-06	2.89E-06	1.23E-02	1.04E-07	2.54E-06	7.39E-02	5.97E-07	5.15E-06	9.13E-02
Read 49	0700-0800	1.39E-02	1.13E-06	2.89E-06	1.23E-02	1.04E-07	2.54E-06	7.39E-02	5.97E-07	5.15E-06	9.13E-02
Read 49	0800-0900	1.90E-02	3.59E-07	9.95E-06	1.69E-02	3.20E-07	6.07E-06	1.62E-02	1.60E-06	7.51E-02	1.42E-06
Read 49	0900-1000	1.88E-02	2.81E-07	7.69E-06	1.58E-02	2.51E-07	4.93E-06	8.81E-02	1.32E-06	3.35E-07	1.16E-06
Read 49	1000-1100	1.88E-02	2.81E-07	7.69E-06	1.58E-02	2.51E-07	4.93E-06	8.81E-02	1.32E-06	3.35E-07	1.16E-06
Read 49	1100-1200	1.79E-02	2.15E-07	5.43E-06	1.62E-02	1.99E-07	4.92E-06	8.68E-02	1.05E-06	2.64E-06	7.76E-02
Read 49	1200-1300	2.18E-02	2.18E-07	5.49E-06	1.91E-02	1.97E-07	4.92E-06	9.29E-02	9.36E-07	2.55E-05	8.31E-02
Read 49	1300-1400	2.18E-02	2.18E-07	5.52E-06	1.96E-02	1.99E-07	5.01E-06	9.43E-02	9.64E-07	4.48E-06	8.67E-02
Read 49	1400-1500	2.22E-02	2.49E-07	6.18E-06	2.01E-02	2.21E-07	5.96E-06	9.97E-02	1.10E-06	7.78E-06	8.92E-02
Read 49	1500-1600	2.22E-02	2.49E-07	6.18E-06	2.01E-02	2.21E-07	5.96E-06	9.97E-02	1.10E-06	7.78E-06	8.92E-02
Read 49	1600-1700	2.45E-02	2.92E-07	7.45E-06	2.24E-02	2.70E-07	6.82E-06	9.88E-02	1.36E-06	9.88E-06	1.02E-02
Read 49	1700-1800	2.45E-02	2.92E-07	7.45E-06	2.24E-02	2.70E-07	6.82E-06	9.88E-02	1.36E-06	9.88E-06	1.02E-02
Read 49	1800-1900	1.38E-02	2.22E-07	5.81E-06	1.27E-02	2.04E-07	5.19E-06	6.34E-02	1.02E-06	2.57E-06	9.71E-02
Read 49	1900-2000	1.13E-02	1.41E-07	3.70E-06	1.02E-02	1.33E-07	3.96E-06	5.59E-02	7.54E-07	3.95E-06	5.16E-02
Read 49	2000-2100	1.13E-02	1.41E-07	3.70E-06	1.02E-02	1.33E-07	3.96E-06	5.59E-02	7.54E-07	3.95E-06	5.16E-02
Read 49	2100-2200	8.00E-03	8.03E-08	2.03E-06	7.30E-03	7.32E-08	1.58E-06	5.40E-02	3.96E-05	1.88E-07	1.23E-05
Read 50	2000-2000	8.06E-03	7.98E-08	2.00E-06	7.67E-03	6.96E-08	1.76E-06	5.66E-02	5.97E-07	4.41E-06	4.79E-07
Read 50	2000-2000	8.06E-03	7.98E-08	2.00E-06	7.67E-03	6.96E-08	1.76E-06	5.66E-02	5.97E-07	4.41E-06	4.79E-07
Read 50	1100-1100	4.06E-03	1.91E-08	2.78E-05	3.56E-06	1.98E-08	2.39E-07	1.44E-02	8.88E-01	8.1E-07	3.27E-01
Read 50	0100-0200	4.23E-02	1.40E-06	2.00E-07	3.71E-02	1.89E-06	1.89E-07	1.44E-02	8.88E-01	6.91E-07	3.30E-01
Read 50	0200-0300	4.96E-02	1.20E-06	1.71E-07	4.39E-02	2.19E-06	1.52E-06	1.59E-02	6.96E-06	6.88E-07	4.32E-01
Read 50	0300-0400	5.49E-02	1.20E-06	1.71E-07	4.39E-02	2.19E-06	1.52E-06	1.59E-02	6.96E-06	6.88E-07	4.32E-01
Read 50	0400-0500	4.82E-02	1.20E-06	1.72E-07	4.35E-02	1.98E-06	1.59E-07	1.59E-02	6.96E-06	6.88E-07	4.32E-01
Read 50	0500-0600	4.72E-02	1.20E-06	2.83E-07	4.25E-02	1.78E-06	1.59E-07	1.65E-02	6.92E-06	8.88E-07	4.48E-01
Read 50	0600-0700	5.11E-02	1.20E-06	3.81E-07	4.35E-02	1.98E-06	1.59E-07	1.65E-02	6.92E-06	8.88E-07	4.48E-01
Read 50	0700-0800	5.21E-02	1.01E-07	1.44E-06	4.83E-02	8.98E-02	1.29E-06	1.82E-01	3.54E-05	0.90E-06	1.62E-01
Read 50	0800-0900	4.97E-02	1.13E-07	1.61E-06	4.55E-02	1.01E-07	1.44E-06	1.82E-01	3.54E-05	0.90E-06	1.62E-01
Read 50	0900-1000	4.15E-02	1.13E-07	1.61E-06	4.55E-02	1.01E-07	1.44E-06	1.82E-01	3.54E-05	0.90E-06	1.62E-01
Read 50	1000-1100	5.73E-02	1.27E-07	1.82E-06	5.16E-02	1.15E-07	1.64E-06	1.99E-01	4.32E-05	3.32E-06	7.89E-01
Read 50	1100-1200	5.70E-03	1.18E-07	1.70E-06	5.17E-02	1.06E-07	1.59E-06	1.99E-01	4.17E-05	9.55E-06	8.81E-01
Read 50	1200-1300	5.70E-03	1.18E-07	1.70E-06	5.17E-02	1.06E-07	1.59E-06	1.99E-01	4.17E-05	9.55E-06	8.81E-01
Read 50	1300-1400	6.57E-02	6.99E-08	9.97E-09	6.99E-02	6.37E-09	9.00E-09	2.16E-02	3.30E-07	3.89E-07	2.09E-07
Read 50	1400-1500	6.68E-02	7.06E-08	1.01E-08	6.10E-02	6.49E-08	8.21E-07	2.15E-02	2.27E-07	3.34E-06	2.09E-07
Read 50	1500-1600	6.68E-02	7.06E-08	1.01E-08	6.10E-02	6.49E-08	8.21E-07	2.15E-02	2.27E-07	3.34E-06	2.09E-07
Read 50	1600-1700	6.50E-02	6.93E-08	9.96E-07	6.56E-02	6.15E-08	7.71E-07	2.13E-02	2.18E-07	3.30E-06	2.09E-07
Read 50	1700-1800	5.87E-02	6.53E-08	8.03E-07	5.40E-02	5.18E-08	7.39E-07	2.06E-02	1.98E-07	2.82E-06	1.82E-07
Read 50	1800-1900	5.49E-02	6.02E-08	5.74E-07	5.05E-02	3.70E-08	5.27E-07	1.87E-02	1.37E-06	1.95E-07	1.26E-07
Read 50	1900-2000	5.49E-02	6.02E-08	5.74E-07	5.05E-02	3.70E-08	5.27E-07	1.87E-02	1.37E-06	1.95E-07	1.26E-07
Read 50	2000-2100	4.70E-02	1.65E-08	2.36E-07	4.56E-02	1.55E-08	2.18E-07	1.75E-02	6.13E-06	7.8E-07	6.16E-07
Read 50	2100-2200	4.74E-02	1.70E-08	2.42E-07	4.63E-02	1.56E-08	2.22E-07	1.78E-02	6.27E-06		

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

[illegible]

Open Day 24 Hour Underground Quarry											
Using North North Emission Factors for				Year 2008							
RoadID		Road ID (Route)		NO _x Emission				NO Emission			
Road Name		Road ID		MonthlyHourly		MonthlyHourlyAverage		MonthlyHourly		MonthlyHourlyAverage	
		g/m ³		g/m ³		g/m ³		g/m ³		g/m ³	
Road 54	54	0900-0900	3.78	2.73	3.78	2.73	3.78	2.73	3.78	2.73	3.78
Road 54	54	1000-1100	1.11	3.98	1.07	9.08	9.94	3.57	8.15	4.13	1.48
Road 54	54	1200-1300	1.23	4.01	9.26	1.16	6.55	6.57	4.36	1.44	3.26
Road 54	54	1400-1500	1.23	4.01	9.26	1.16	6.55	6.57	4.36	1.44	3.26
Road 54	54	1600-1700	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	1800-1900	1.46	3.41	3.47	7.71	8.14	3.10	7.08	6.51	1.22
Road 54	54	2000-2100	1.46	3.41	3.47	7.71	8.14	3.10	7.08	6.51	1.22
Road 54	54	2200-2300	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	2400-2500	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	2600-2700	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	2800-2900	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	3000-3100	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	3200-3300	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	3400-3500	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	3600-3700	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	3800-3900	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	4000-4100	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	4200-4300	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	4400-4500	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	4600-4700	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	4800-4900	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	5000-5100	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	5200-5300	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	5400-5500	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	5600-5700	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	5800-5900	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	6000-6100	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	6200-6300	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	6400-6500	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	6600-6700	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	6800-6900	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	7000-7100	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	7200-7300	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	7400-7500	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	7600-7700	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	7800-7900	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	8000-8100	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	8200-8300	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	8400-8500	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	8600-8700	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	8800-8900	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	9000-9100	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	9200-9300	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	9400-9500	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	9600-9700	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	9800-9900	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	10000-10100	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	10200-10300	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	10400-10500	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	10600-10700	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	10800-10900	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	11000-11100	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	11200-11300	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	11400-11500	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	11600-11700	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	11800-11900	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	12000-12100	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	12200-12300	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	12400-12500	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	12600-12700	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	12800-12900	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	13000-13100	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	13200-13300	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	13400-13500	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	13600-13700	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	13800-13900	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	14000-14100	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	14200-14300	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	14400-14500	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	14600-14700	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	14800-14900	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	15000-15100	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	15200-15300	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	15400-15500	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	15600-15700	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	15800-15900	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	16000-16100	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	16200-16300	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	16400-16500	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	16600-16700	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	16800-16900	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	17000-17100	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	17200-17300	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	17400-17500	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	17600-17700	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	17800-17900	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	18000-18100	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	18200-18300	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	18400-18500	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	18600-18700	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	18800-18900	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	19000-19100	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	19200-19300	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	19400-19500	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	19600-19700	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	19800-19900	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	20000-20100	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	20200-20300	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	20400-20500	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	20600-20700	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	20800-20900	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	21000-21100	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	21200-21300	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	21400-21500	1.38	3.28	3.21	7.71	8.14	2.91	6.73	5.95	1.06
Road 54	54	21600-21700	1								

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Open Yr North Undermined Quarry										
Open Yr 2nd Hour Emission Factors for										
AEMM Model (Cubic)										
Year 2038										
Road Name	Road ID	Hour	NO _x Emission				NO ₂ Emission			
			MonthlyHours	MonthlyHours/gpm	MonthlyHours/gpm	MonthlyHours/gpm	MonthlyHours	MonthlyHours/gpm	MonthlyHours/gpm	MonthlyHours/gpm
Road 103	1000-1700	1:43:00	1.31	1.31	1.31	1.31	1.31	1.31	1.31	
Road 103	1600-1700	1:01:00	4.18	4.18	4.18	4.18	4.18	4.18	4.18	
Road 103	1800-1900	1:01:00	3.26	3.26	3.26	3.26	3.26	3.26	3.26	
Road 103	1900-2000	1:01:00	3.26	3.26	3.26	3.26	3.26	3.26	3.26	
Road 103	2000-2100	5:46:00	1.62	1.62	1.62	1.62	1.62	1.62	1.62	
Road 103	2100-2200	5:50:00	1.41	1.41	1.41	1.41	1.41	1.41	1.41	
Road 103	2200-2300	5:50:00	1.38	1.38	1.38	1.38	1.38	1.38	1.38	
Road 103	2300-2400	5:06:00	1.19	1.19	1.19	1.19	1.19	1.19	1.19	
Road 104	0000-0100	1:02:00	9.38	9.38	9.38	9.38	9.38	9.38	9.38	
Road 104	0100-0200	1:16:00	1.12	1.12	1.12	1.12	1.12	1.12	1.12	
Road 104	0200-0300	1:18:00	1.58	1.58	1.58	1.58	1.58	1.58	1.58	
Road 104	0300-0400	1:26:00	4.41	4.41	4.41	4.41	4.41	4.41	4.41	
Road 104	0400-0500	1:26:00	4.41	4.41	4.41	4.41	4.41	4.41	4.41	
Road 104	0500-0600	1:26:00	4.41	4.41	4.41	4.41	4.41	4.41	4.41	
Road 104	0600-0700	1:54:00	2.31	2.31	2.31	2.31	2.31	2.31	2.31	
Road 104	0700-0800	1:52:00	4.98	4.98	4.98	4.98	4.98	4.98	4.98	
Road 104	0800-0900	1:54:00	2.31	2.31	2.31	2.31	2.31	2.31	2.31	
Road 104	0900-1000	1:52:00	4.98	4.98	4.98	4.98	4.98	4.98	4.98	
Road 104	1000-1100	2:02:00	6.07	6.07	6.07	6.07	6.07	6.07	6.07	
Road 104	1100-1200	2:27:00	2.83	2.83	2.83	2.83	2.83	2.83	2.83	
Road 104	1200-1300	1:21:00	2.83	2.83	2.83	2.83	2.83	2.83	2.83	
Road 104	1300-1400	1:21:00	2.83	2.83	2.83	2.83	2.83	2.83	2.83	
Road 104	1400-1500	1:22:00	2.83	2.83	2.83	2.83	2.83	2.83	2.83	
Road 104	1500-1600	1:22:00	2.83	2.83	2.83	2.83	2.83	2.83	2.83	
Road 104	1600-1700	1:28:00	3.48	3.48	3.48	3.48	3.48	3.48	3.48	
Road 104	1700-1800	0:56:00	2.71	2.71	2.71	2.71	2.71	2.71	2.71	
Road 104	1800-1900	0:56:00	2.71	2.71	2.71	2.71	2.71	2.71	2.71	
Road 104	1900-2000	0:55:00	2.51	2.51	2.51	2.51	2.51	2.51	2.51	
Road 104	2000-2100	0:56:00	2.71	2.71	2.71	2.71	2.71	2.71	2.71	
Road 104	2100-2200	0:56:00	2.71	2.71	2.71	2.71	2.71	2.71	2.71	
Road 104	2200-2300	0:55:00	2.51	2.51	2.51	2.51	2.51	2.51	2.51	
Road 104	2300-2400	0:56:00	2.71	2.71	2.71	2.71	2.71	2.71	2.71	
Road 105	0000-0100	1:14:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 105	0100-0200	1:14:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 105	0200-0300	1:14:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 105	0300-0400	1:14:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 105	0400-0500	1:14:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 105	0500-0600	1:14:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 105	0600-0700	1:14:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 105	0700-0800	1:14:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 105	0800-0900	1:14:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 105	0900-1000	1:14:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 105	1000-1100	1:14:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 105	1100-1200	1:14:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 105	1200-1300	1:14:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 105	1300-1400	1:14:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 105	1400-1500	1:14:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 105	1500-1600	1:14:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 105	1600-1700	1:14:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 105	1700-1800	1:14:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 105	1800-1900	1:14:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 105	1900-2000	1:14:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 105	2000-2100	1:14:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 105	2100-2200	1:14:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 105	2200-2300	1:14:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 105	2300-2400	1:14:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 106	0000-0100	1:16:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 106	0100-0200	1:16:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 106	0200-0300	1:16:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 106	0300-0400	1:16:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 106	0400-0500	1:16:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 106	0500-0600	1:16:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 106	0600-0700	1:16:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 106	0700-0800	1:16:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 106	0800-0900	1:16:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 106	0900-1000	1:16:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 106	1000-1100	1:16:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 106	1100-1200	1:16:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 106	1200-1300	1:16:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 106	1300-1400	1:16:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 106	1400-1500	1:16:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 106	1500-1600	1:16:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 106	1600-1700	1:16:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 106	1700-1800	1:16:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 106	1800-1900	1:16:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 106	1900-2000	1:16:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 106	2000-2100	1:16:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 106	2100-2200	1:16:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 106	2200-2300	1:16:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 106	2300-2400	1:16:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 107	0000-0100	1:18:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 107	0100-0200	1:18:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 107	0200-0300	1:18:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 107	0300-0400	1:18:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 107	0400-0500	1:18:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 107	0500-0600	1:18:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 107	0600-0700	1:18:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 107	0700-0800	1:18:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 107	0800-0900	1:18:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 107	0900-1000	1:18:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 107	1000-1100	1:18:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 107	1100-1200	1:18:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 107	1200-1300	1:18:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 107	1300-1400	1:18:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 107	1400-1500	1:18:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 107	1500-1600	1:18:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 107	1600-1700	1:18:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 107	1700-1800	1:18:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 107	1800-1900	1:18:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 107	1900-2000	1:18:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 107	2000-2100	1:18:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 107	2100-2200	1:18:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 107	2200-2300	1:18:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 107	2300-2400	1:18:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 108	0000-0100	1:20:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 108	0100-0200	1:20:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 108	0200-0300	1:20:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 108	0300-0400	1:20:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 108	0400-0500	1:20:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 108	0500-0600	1:20:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 108	0600-0700	1:20:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 108	0700-0800	1:20:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 108	0800-0900	1:20:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 108	0900-1000	1:20:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 108	1000-1100	1:20:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 108	1100-1200	1:20:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 108	1200-1300	1:20:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
Road 108	1300-1400	1:20:00	1.85	1.85	1.85	1.85	1.85	1.85	1.85	
R										

TSPy Grid 24 Hour Emission Factors										
Open Road 24 Hour Emission Factors for										
ATMROAD model (November)										
Road name	Road ID	Hour	NO _x Emission						NO ₂ Emission	
			g/kWhrMin	g/kWhrMin	g/kWhrMin	g/kWhrMin	g/kWhrMin	g/kWhrMin	g/kWhrMin	g/kWhrMin
			MonthlyHourMin	MonthlyHourMin	MonthlyHourMin	MonthlyHourMin	MonthlyHourMin	MonthlyHourMin	MonthlyHourMin	
Road 1	1	0000-0100	6.11E+03	6.11E+03	6.11E+03	6.11E+03	6.11E+03	6.11E+03	6.11E+03	
Road 1	1	0100-0200	6.70E+03	6.70E+03	6.70E+03	6.70E+03	6.70E+03	6.70E+03	6.70E+03	
Road 1	1	0200-0300	7.35E+03	7.35E+03	7.35E+03	7.35E+03	7.35E+03	7.35E+03	7.35E+03	
Road 1	1	0300-0400	8.03E+03	8.03E+03	8.03E+03	8.03E+03	8.03E+03	8.03E+03	8.03E+03	
Road 1	1	0400-0500	8.58E+03	8.58E+03	8.58E+03	8.58E+03	8.58E+03	8.58E+03	8.58E+03	
Road 1	1	0500-0600	9.09E+03	9.09E+03	9.09E+03	9.09E+03	9.09E+03	9.09E+03	9.09E+03	
Road 1	1	0600-0700	9.55E+03	9.55E+03	9.55E+03	9.55E+03	9.55E+03	9.55E+03	9.55E+03	
Road 1	1	0700-0800	1.03E+04	1.03E+04	1.03E+04	1.03E+04	1.03E+04	1.03E+04	1.03E+04	
Road 1	1	0800-0900	9.98E+03	9.98E+03	9.98E+03	9.98E+03	9.98E+03	9.98E+03	9.98E+03	
Road 1	1	0900-1000	1.26E+04	1.26E+04	1.26E+04	1.26E+04	1.26E+04	1.26E+04	1.26E+04	
Road 1	1	1000-1100	1.26E+04	1.26E+04	1.26E+04	1.26E+04	1.26E+04	1.26E+04	1.26E+04	
Road 1	1	1100-1200	1.20E+04	1.20E+04	1.20E+04	1.20E+04	1.20E+04	1.20E+04	1.20E+04	
Road 1	1	1200-1300	1.48E+04	1.48E+04	1.48E+04	1.48E+04	1.48E+04	1.48E+04	1.48E+04	
Road 1	1	1300-1400	1.43E+04	1.43E+04	1.43E+04	1.43E+04	1.43E+04	1.43E+04	1.43E+04	
Road 1	1	1400-1500	1.51E+04	1.51E+04	1.51E+04	1.51E+04	1.51E+04	1.51E+04	1.51E+04	
Road 1	1	1500-1600	1.41E+04	1.41E+04	1.41E+04	1.41E+04	1.41E+04	1.41E+04	1.41E+04	
Road 1	1	1600-1700	1.76E+04	1.76E+04	1.76E+04	1.76E+04	1.76E+04	1.76E+04	1.76E+04	
Road 1	1	1700-1800	1.08E+04	1.08E+04	1.08E+04	1.08E+04	1.08E+04	1.08E+04	1.08E+04	
Road 1	1	1800-1900	7.86E+03	7.86E+03	7.86E+03	7.86E+03	7.86E+03	7.86E+03	7.86E+03	
Road 1	1	1900-2000	7.05E+03	7.05E+03	7.05E+03	7.05E+03	7.05E+03	7.05E+03	7.05E+03	
Road 1	1	2000-2100	6.76E+03	6.76E+03	6.76E+03	6.76E+03	6.76E+03	6.76E+03	6.76E+03	
Road 1	1	2100-2200	5.89E+03	5.89E+03	5.89E+03	5.89E+03	5.89E+03	5.89E+03	5.89E+03	
Road 1	1	2200-2300	5.83E+03	5.83E+03	5.83E+03	5.83E+03	5.83E+03	5.83E+03	5.83E+03	
Road 2	2	0000-0100	6.45E+03	6.45E+03	6.45E+03	6.45E+03	6.45E+03	6.45E+03	6.45E+03	
Road 2	2	0100-0200	6.89E+03	6.89E+03	6.89E+03	6.89E+03	6.89E+03	6.89E+03	6.89E+03	
Road 2	2	0200-0300	7.52E+03	7.52E+03	7.52E+03	7.52E+03	7.52E+03	7.52E+03	7.52E+03	
Road 2	2	0300-0400	1.05E+04	1.05E+04	1.05E+04	1.05E+04	1.05E+04	1.05E+04	1.05E+04	
Road 2	2	0400-0500	1.12E+04	1.12E+04	1.12E+04	1.12E+04	1.12E+04	1.12E+04	1.12E+04	
Road 2	2	0500-0600	1.19E+04	1.19E+04	1.19E+04	1.19E+04	1.19E+04	1.19E+04	1.19E+04	
Road 2	2	0600-0700	1.24E+04	1.24E+04	1.24E+04	1.24E+04	1.24E+04	1.24E+04	1.24E+04	
Road 2	2	0700-0800	1.33E+04	1.33E+04	1.33E+04	1.33E+04	1.33E+04	1.33E+04	1.33E+04	
Road 2	2	0800-0900	1.42E+04	1.42E+04	1.42E+04	1.42E+04	1.42E+04	1.42E+04	1.42E+04	
Road 2	2	0900-1000	1.48E+04	1.48E+04	1.48E+04	1.48E+04	1.48E+04	1.48E+04	1.48E+04	
Road 2	2	1000-1100	1.67E+04	1.67E+04	1.67E+04	1.67E+04	1.67E+04	1.67E+04	1.67E+04	
Road 2	2	1100-1200	1.67E+04	1.67E+04	1.67E+04	1.67E+04	1.67E+04	1.67E+04	1.67E+04	
Road 2	2	1200-1300	1.75E+04	1.75E+04	1.75E+04	1.75E+04	1.75E+04	1.75E+04	1.75E+04	
Road 2	2	1300-1400	1.75E+04	1.75E+04	1.75E+04	1.75E+04	1.75E+04	1.75E+04	1.75E+04	
Road 2	2	1400-1500	1.89E+04	1.89E+04	1.89E+04	1.89E+04	1.89E+04	1.89E+04	1.89E+04	
Road 2	2	1500-1600	1.84E+04	1.84E+04	1.84E+04	1.84E+04	1.84E+04	1.84E+04	1.84E+04	
Road 2	2	1600-1700	1.71E+04	1.71E+04	1.71E+04	1.71E+04	1.71E+04	1.71E+04	1.71E+04	
Road 2	2	1700-1800	1.52E+04	1.52E+04	1.52E+04	1.52E+04	1.52E+04	1.52E+04	1.52E+04	
Road 2	2	1800-1900	1.10E+04	1.10E+04	1.10E+04	1.10E+04	1.10E+04	1.10E+04	1.10E+04	
Road 2	2	1900-2000	8.01E+03	8.01E+03	8.01E+03	8.01E+03	8.01E+03	8.01E+03	8.01E+03	
Road 2	2	2000-2100	7.77E+03	7.77E+03	7.77E+03	7.77E+03	7.77E+03	7.77E+03	7.77E+03	
Road 2	2	2100-2200	6.89E+03	6.89E+03	6.89E+03	6.89E+03	6.89E+03	6.89E+03	6.89E+03	
Road 2	2	2200-2300	6.96E+03	6.96E+03	6.96E+03	6.96E+03	6.96E+03	6.96E+03	6.96E+03	
Road 3	3	0000-0100	7.80E+03	7.80E+03	7.80E+03	7.80E+03	7.80E+03	7.80E+03	7.80E+03	
Road 3	3	0100-0200	7.65E+03	7.65E+03	7.65E+03	7.65E+03	7.65E+03	7.65E+03	7.65E+03	
Road 3	3	0200-0300	7.76E+03	7.76E+03	7.76E+03	7.76E+03	7.76E+03	7.76E+03	7.76E+03	
Road 3	3	0300-0400	8.57E+03	8.57E+03	8.57E+03	8.57E+03	8.57E+03	8.57E+03	8.57E+03	
Road 3	3	0400-0500	9.87E+03	9.87E+03	9.87E+03	9.87E+03	9.87E+03	9.87E+03	9.87E+03	
Road 3	3	0500-0600	1.02E+04	1.02E+04	1.02E+04	1.02E+04	1.02E+04	1.02E+04	1.02E+04	
Road 3	3	0600-0700	1.15E+04	1.15E+04	1.15E+04	1.15E+04	1.15E+04	1.15E+04	1.15E+04	
Road 3	3	0700-0800	1.15E+04	1.15E+04	1.15E+04	1.15E+04	1.15E+04	1.15E+04	1.15E+04	
Road 3	3	0800-0900	1.14E+04	1.14E+04	1.14E+04	1.14E+04	1.14E+04	1.14E+04	1.14E+04	
Road 3	3	0900-1000	1.23E+04	1.23E+04	1.23E+04	1.23E+04	1.23E+04	1.23E+04	1.23E+04	
Road 3	3	1000-1100	1.42E+04	1.42E+04	1.42E+04	1.42E+04	1.42E+04	1.42E+04	1.42E+04	
Road 3	3	1100-1200	1.35E+04	1.35E+04	1.35E+04	1.35E+04	1.35E+04	1.35E+04	1.35E+04	
Road 3	3	1200-1300	1.20E+04	1.20E+04	1.20E+04	1.20E+04	1.20E+04	1.20E+04	1.20E+04	
Road 3	3	1300-1400	1.10E+04	1.10E+04	1.10E+04	1.10E+04	1.10E+04	1.10E+04	1.10E+04	
Road 3	3	1400-1500	1.24E+04	1.24E+04	1.24E+04	1.24E+04	1.24E+04	1.24E+04	1.24E+04	
Road 3	3	1500-1600	1.23E+04	1.23E+04	1.23E+04	1.23E+04	1.23E+04	1.23E+04	1.23E+04	
Road 3	3	1600-1700	1.31E+04	1.31E+04	1.31E+04	1.31E+04	1.31E+04	1.31E+04	1.31E+04	
Road 3	3	1700-1800	1.15E+04	1.15E+04	1.15E+04	1.15E+04	1.15E+04	1.15E+04	1.15E+04	
Road 3	3	1800-1900	1.23E+04	1.23E+04	1.23E+04	1.23E+04	1.23E+04	1.23E+04	1.23E+04	
Road 3	3	1900-2000	1.23E+04	1.23E+04	1.23E+04	1.23E+04	1.23E+04	1.23E+04	1.23E+04	
Road 3	3	2000-2100	8.47E+03	8.47E+03	8.47E+03	8.47E+03	8.47E+03	8.47E+03	8.47E+03	
Road 3	3	2100-2200	7.68E+03	7.68E+03	7.68E+03	7.68E+03	7.68E+03	7.68E+03	7.68E+03	
Road 3	3	2200-2300	7.63E+03	7.63E+03	7.63E+03	7.63E+03	7.63E+03	7.63E+03	7.63E+03	
Road 4	4	0000-0100	8.56E+03	8.56E+03	8.56E+03	8.56E+03	8.56E+03	8.56E+03	8.56E+03	
Road 4	4	0100-0200	8.57E+03	8.57E+03	8.57E+03	8.57E+03	8.57E+03	8.57E+03	8.57E+03	
Road 4	4	0200-0300	8.62E+03	8.62E+03	8.62E+03	8.62E+03	8.62E+03	8.62E+03	8.62E+03	
Road 4	4	0300-0400	7.82E+03	7.82E+03	7.82E+03	7.82E+03	7.82E+03	7.82E+03	7.82E+03	
Road 4	4	0400-0500	8.61E+03	8.61E+03	8.61E+03	8.61E+03	8.61E+03	8.61E+03	8.61E+03	
Road 4	4	0500-0600	8.61E+03	8.61E+03	8.61E+03	8.61E+03	8.61E+03	8.61E+03	8.61E+03	
Road 4	4	0600-0700	9.28E+03	9.28E+03	9.28E+03	9.28E+03	9.28E+03	9.28E+03	9.28E+03	
Road 4	4	0700-0800	9.87E+03	9.87E+03	9.87E+03	9.87E+03	9.87E+03	9.87E+03	9.87E+03	

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Open YH North 24 hour Emission Factors												
AERMOD model (November)			Year 2038		NO _x Emission				NO Emission			
Route Number	Road ID	Hour	MonthlyMin		MonthlyHourAverage		MonthlyMax		MonthlyMin		MonthlyHourAverage	
			g/min/v	g/min	tonne/hour	g/min/v	tonne/hour	g/min/v	g/min/v	g/min	tonne/hour	g/min/v
Road 4	4	0800-0900	0.545(3)	0.375(4)	0.708(3)	0.708(3)	0.708(3)	0.708(3)	0.318(4)	0.225(4)	0.318(4)	0.447(4)
Road 4	4	0900-1000	1.076(2)	0.127(4)	6.259(4)	9.836(3)	2.888(7)	5.776(3)	5.506(2)	1.611(4)	3.228(4)	4.948(3)
Road 4	4	1000-1100	1.212(4)	0.047(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)
Road 4	4	1100-1200	1.342(2)	0.142(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)
Road 4	4	1200-1300	1.271(2)	0.896(7)	7.009(4)	1.196(2)	3.635(7)	7.298(4)	5.826(2)	1.768(4)	3.575(3)	5.346(3)
Road 4	4	1300-1400	1.272(2)	0.959(7)	7.919(4)	1.198(2)	3.687(7)	7.389(4)	5.859(2)	1.886(4)	3.708(4)	5.515(4)
Road 4	4	1400-1500	1.403(2)	0.127(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)
Road 4	4	1500-1600	1.236(4)	0.419(4)	6.096(4)	1.114(2)	3.876(7)	7.755(4)	6.005(2)	2.056(4)	4.156(4)	5.876(3)
Road 4	4	1600-1700	1.32(4)	0.827(4)	9.666(4)	1.226(2)	4.436(7)	8.911(4)	5.882(2)	2.118(4)	4.326(4)	5.536(3)
Road 4	4	1700-1800	1.403(2)	0.127(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)
Road 4	4	1800-1900	6.986(3)	3.267(4)	6.096(4)	6.296(3)	2.445(7)	5.896(4)	3.985(2)	1.868(4)	3.715(4)	5.636(3)
Road 4	4	1900-2000	6.175(3)	2.306(7)	6.452(4)	5.536(3)	2.058(7)	4.138(4)	3.996(4)	1.498(4)	2.898(4)	3.436(2)
Road 4	4	2000-2100	5.996(3)	1.787(4)	6.452(4)	5.536(3)	2.041(7)	3.098(4)	3.402(4)	1.268(4)	2.596(4)	3.098(3)
Road 4	4	2100-2200	5.996(3)	1.456(7)	6.452(4)	5.536(3)	2.041(7)	4.256(4)	3.996(4)	1.268(4)	2.596(4)	3.098(3)
Road 4	4	2200-2300	4.926(3)	0.396(7)	2.786(4)	4.426(3)	1.256(7)	2.506(4)	4.211(4)	1.196(4)	2.386(4)	3.646(2)
Road 4	4	2300-2400	5.926(3)	1.195(7)	2.786(4)	4.936(3)	1.046(7)	2.096(4)	4.926(4)	1.886(4)	3.776(4)	7.836(3)
Road 5	5	0800-0900	0.916(3)	0.047(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)
Road 5	5	0900-1000	9.011(3)	0.216(4)	3.466(7)	8.806(3)	2.841(8)	3.186(7)	6.026(2)	2.771(4)	7.316(4)	5.246(7)
Road 5	5	1000-1100	9.011(3)	0.216(4)	3.466(7)	8.806(3)	2.841(8)	2.465(7)	6.211(4)	2.067(4)	7.146(4)	5.436(7)
Road 5	5	1100-1200	9.011(3)	0.216(4)	3.466(7)	8.806(3)	2.841(8)	2.465(7)	6.211(4)	2.067(4)	7.146(4)	5.436(7)
Road 5	5	1200-1300	1.136(2)	0.246(4)	7.212(4)	1.046(2)	3.508(8)	2.511(7)	6.676(2)	1.924(4)	1.664(4)	5.516(4)
Road 5	5	1300-1400	1.252(4)	0.276(4)	8.006(4)	1.166(2)	3.796(8)	4.806(7)	7.096(2)	3.526(4)	2.996(4)	6.346(4)
Road 5	5	1400-1500	1.136(2)	0.611(7)	2.916(4)	4.06(2)	3.886(7)	1.246(4)	6.106(2)	8.606(7)	7.196(4)	7.686(4)
Road 5	5	1500-1600	1.916(2)	0.056(7)	3.476(4)	1.766(2)	3.766(4)	3.146(4)	9.456(2)	2.026(4)	1.866(4)	9.386(4)
Road 5	5	1600-1700	1.916(2)	0.476(7)	3.926(4)	1.766(2)	3.316(7)	3.636(4)	9.976(2)	2.226(4)	1.856(4)	7.946(4)
Road 5	5	1700-1800	2.116(2)	0.827(4)	9.666(4)	1.226(2)	4.436(7)	8.911(4)	5.882(2)	2.118(4)	4.326(4)	5.536(3)
Road 5	5	1800-1900	2.116(2)	0.127(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)
Road 5	5	1900-2000	2.116(2)	0.142(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)
Road 5	5	2000-2100	2.116(2)	0.396(7)	2.786(4)	4.426(3)	1.256(7)	2.506(4)	4.211(4)	1.196(4)	2.386(4)	3.646(2)
Road 5	5	2100-2200	2.116(2)	0.827(4)	9.666(4)	1.226(2)	4.436(7)	8.911(4)	5.882(2)	2.118(4)	4.326(4)	5.536(3)
Road 5	5	2200-2300	2.116(2)	0.142(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)
Road 5	5	2300-2400	2.116(2)	0.142(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)
Road 6	6	0800-0900	0.916(3)	0.047(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)
Road 6	6	0900-1000	1.956(2)	0.142(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)
Road 6	6	1000-1100	2.116(2)	0.396(7)	2.786(4)	4.426(3)	1.256(7)	2.506(4)	4.211(4)	1.196(4)	2.386(4)	3.646(2)
Road 6	6	1100-1200	2.116(2)	0.827(4)	9.666(4)	1.226(2)	4.436(7)	8.911(4)	5.882(2)	2.118(4)	4.326(4)	5.536(3)
Road 6	6	1200-1300	2.116(2)	0.142(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)
Road 6	6	1300-1400	2.116(2)	0.142(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)
Road 6	6	1400-1500	2.116(2)	0.142(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)
Road 6	6	1500-1600	2.116(2)	0.142(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)
Road 6	6	1600-1700	2.116(2)	0.142(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)
Road 6	6	1700-1800	2.116(2)	0.142(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)
Road 6	6	1800-1900	2.116(2)	0.142(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)
Road 6	6	1900-2000	2.116(2)	0.142(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)
Road 6	6	2000-2100	2.116(2)	0.142(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)
Road 6	6	2100-2200	2.116(2)	0.142(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)
Road 6	6	2200-2300	2.116(2)	0.142(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)
Road 6	6	2300-2400	2.116(2)	0.142(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)
Road 7	7	0800-0900	0.916(3)	0.047(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)
Road 7	7	0900-1000	0.916(3)	0.047(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)
Road 7	7	1000-1100	0.916(3)	0.047(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)
Road 7	7	1100-1200	0.916(3)	0.047(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)
Road 7	7	1200-1300	0.916(3)	0.047(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)
Road 7	7	1300-1400	0.916(3)	0.047(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)
Road 7	7	1400-1500	0.916(3)	0.047(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)
Road 7	7	1500-1600	0.916(3)	0.047(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)
Road 7	7	1600-1700	0.916(3)	0.047(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)
Road 7	7	1700-1800	0.916(3)	0.047(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)
Road 7	7	1800-1900	0.916(3)	0.047(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)
Road 7	7	1900-2000	0.916(3)	0.047(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)
Road 7	7	2000-2100	0.916(3)	0.047(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)
Road 7	7	2100-2200	0.916(3)	0.047(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)
Road 7	7	2200-2300	0.916(3)	0.047(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)
Road 7	7	2300-2400	0.916(3)	0.047(4)	6.096(4)	1.115(4)	0.862(7)	5.625(4)	5.832(4)	1.474(4)	2.946(4)	5.296(3)

Open Up North Underground Quarry			Using 14 Year Emission Factors for		Year 2008		NO _x Emission		NO _x Emission	
AP2MD model (Hourly)			November		November		November		November	
Road Name	Road ID	Volume	MonthlyHourly		MonthlyHourlyAverage		MonthlyHourly		MonthlyHourlyAverage	
			g/km ³ /hr	g/km ³ /hr	g/km ³ /hr	g/km ³ /hr	g/km ³ /hr	g/km ³ /hr	g/km ³ /hr	g/km ³ /hr
Road 7	7	1600-1700	1.8332	4.9886	1.8332	4.9886	1.7227	4.7183	1.7227	4.7183
Road 7	7	1800-1900	3.5687	3.5687	1.2626	3.5687	3.6292	1.7196	2.1105	6.1162
Road 7	7	1800-1900	1.0252	2.8287	0.3766	2.8287	2.9557	2.9895	5.2226	1.4385
Road 7	7	1900-2000	1.7747	3.5687	1.2626	3.5687	3.6292	1.7196	2.1105	6.1162
Road 7	7	2000-2100	7.9634	1.0343	1.0343	7.1123	1.2027	1.4026	5.9592	8.3588
Road 7	7	2100-2200	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 7	7	2200-2300	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 7	7	2300-2400	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 8	8	0000-0100	7.9634	1.0343	1.0343	7.1123	1.2027	1.4026	5.9592	8.3588
Road 8	8	0100-0200	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 8	8	0200-0300	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 8	8	0300-0400	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 8	8	0400-0500	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 8	8	0500-0600	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 8	8	0600-0700	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 8	8	0700-0800	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 8	8	0800-0900	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 8	8	0900-1000	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 8	8	1000-1100	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 8	8	1100-1200	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 8	8	1200-1300	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 8	8	1300-1400	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 8	8	1400-1500	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 8	8	1500-1600	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 8	8	1600-1700	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 8	8	1700-1800	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 8	8	1800-1900	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 8	8	1900-2000	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 8	8	2000-2100	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 8	8	2100-2200	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 8	8	2200-2300	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 8	8	2300-2400	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 9	9	0000-0100	7.9634	1.0343	1.0343	7.1123	1.2027	1.4026	5.9592	8.3588
Road 9	9	0100-0200	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 9	9	0200-0300	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 9	9	0300-0400	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 9	9	0400-0500	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 9	9	0500-0600	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 9	9	0600-0700	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 9	9	0700-0800	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 9	9	0800-0900	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 9	9	0900-1000	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 9	9	1000-1100	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 9	9	1100-1200	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 9	9	1200-1300	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 9	9	1300-1400	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 9	9	1400-1500	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 9	9	1500-1600	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 9	9	1600-1700	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 9	9	1700-1800	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 9	9	1800-1900	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 9	9	1900-2000	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 9	9	2000-2100	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 9	9	2100-2200	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 9	9	2200-2300	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 9	9	2300-2400	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 10	10	0000-0100	7.9634	1.0343	1.0343	7.1123	1.2027	1.4026	5.9592	8.3588
Road 10	10	0100-0200	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 10	10	0200-0300	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 10	10	0300-0400	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 10	10	0400-0500	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 10	10	0500-0600	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 10	10	0600-0700	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 10	10	0700-0800	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 10	10	0800-0900	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 10	10	0900-1000	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 10	10	1000-1100	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 10	10	1100-1200	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 10	10	1200-1300	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 10	10	1300-1400	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 10	10	1400-1500	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 10	10	1500-1600	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 10	10	1600-1700	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 10	10	1700-1800	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 10	10	1800-1900	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 10	10	1900-2000	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 10	10	2000-2100	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 10	10	2100-2200	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 10	10	2200-2300	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897
Road 10	10	2300-2400	7.8763	1.2067	1.4156	6.0473	1.0957	1.2776	4.9392	8.7897

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24-hour Emission Factors for

AEMOD model (November)		Year 2030		NO _x Emission				NO _x Emission						
Row Name	Row ID	Month/turn	g/kwh	g/m ³	tonne/hr	g/kwh	g/m ³	tonne/hr	g/kwh	g/m ³	tonne/hr	g/kwh	g/m ³	tonne/hr
Row 11	11	00:00:00	3.0462	1.986	0.757	2.862	1.866	7.126	1.726	1.126	4.306	1.586	1.036	3.960
Row 11	11	01:00:00	3.3262	1.9857	0.7567	3.186	1.967	9.326	1.776	1.696	2.956	1.666	1.7206	2.766
Row 11	11	02:00:00	3.6062	1.9852	0.7562	3.506	2.068	11.526	1.886	2.016	1.546	1.776	2.016	3.006
Row 11	11	03:00:00	4.1362	1.9847	0.7557	4.186	2.307	1.036	2.576	1.956	5.126	1.986	1.811	4.776
Row 11	11	04:00:00	4.5962	1.2367	0.4767	4.066	1.176	4.496	2.016	5.176	2.726	2.186	5.446	2.066
Row 11	11	05:00:00	4.7362	1.2362	0.4762	4.186	1.186	4.516	2.026	5.196	2.736	2.196	5.456	2.076
Row 11	11	06:00:00	4.5962	1.2367	0.4767	4.066	1.176	4.496	2.016	5.176	2.726	2.186	5.446	2.066
Row 11	11	07:00:00	4.5962	1.2367	0.4767	4.066	1.176	4.496	2.016	5.176	2.726	2.186	5.446	2.066
Row 11	11	08:00:00	4.5962	1.2367	0.4767	4.066	1.176	4.496	2.016	5.176	2.726	2.186	5.446	2.066
Row 11	11	09:00:00	4.5962	1.2367	0.4767	4.066	1.176	4.496	2.016	5.176	2.726	2.186	5.446	2.066
Row 11	11	10:00:120	7.3162	1.3758	0.5858	6.9962	1.266	6.436	2.696	4.476	1.876	2.526	4.576	1.676
Row 11	11	11:00:120	7.3162	1.3758	0.5858	6.9962	1.266	6.436	2.696	4.476	1.876	2.526	4.576	1.676
Row 11	11	12:00:120	7.3162	1.3758	0.5858	6.9962	1.266	6.436	2.696	4.476	1.876	2.526	4.576	1.676
Row 11	11	13:00:120	1.0596	2.3958	0.9456	1.0126	2.286	8.7658	1.586	8.1116	3.1116	3.4116	7.7786	2.976
Row 11	11	14:00:120	0.0606	2.4956	0.9456	1.0606	2.376	8.856	1.596	8.476	3.256	3.4116	8.0116	3.066
Row 11	11	15:00:120	0.0606	2.4956	0.9456	1.0606	2.376	8.856	1.596	8.476	3.256	3.4116	8.0116	3.066
Row 11	11	16:00:120	0.0606	2.4956	0.9456	1.0606	2.376	8.856	1.596	8.476	3.256	3.4116	8.0116	3.066
Row 11	11	17:00:120	0.0606	2.4956	0.9456	1.0606	2.376	8.856	1.596	8.476	3.256	3.4116	8.0116	3.066
Row 11	11	18:00:120	0.0606	2.4956	0.9456	1.0606	2.376	8.856	1.596	8.476	3.256	3.4116	8.0116	3.066
Row 11	11	19:00:120	0.0606	2.4956	0.9456	1.0606	2.376	8.856	1.596	8.476	3.256	3.4116	8.0116	3.066
Row 11	11	20:00:120	0.0606	2.4956	0.9456	1.0606	2.376	8.856	1.596	8.476	3.256	3.4116	8.0116	3.066
Row 11	11	21:00:120	0.0606	2.4956	0.9456	1.0606	2.376	8.856	1.596	8.476	3.256	3.4116	8.0116	3.066
Row 11	11	22:00:120	0.0606	2.4956	0.9456	1.0606	2.376	8.856	1.596	8.476	3.256	3.4116	8.0116	3.066
Row 11	11	23:00:120	0.0606	2.4956	0.9456	1.0606	2.376	8.856	1.596	8.476	3.256	3.4116	8.0116	3.066
Row 11	11	00:00:	0.0606	2.4956	0.9456	1.0606	2.376	8.856	1.596	8.476	3.256	3.4116	8.0116	3.066
Row 12	12	01:00:00	2.806	1.706	0.4166	2.266	1.567	8.066	1.595	3.6167	8.906	5.536	3.367	8.906
Row 12	12	02:00:00	2.846	1.686	0.4166	2.646	1.577	8.886	1.611	3.676	8.846	5.586	3.387	8.216
Row 12	12	03:00:00	2.846	1.686	0.4166	2.646	1.577	8.886	1.611	3.676	8.846	5.586	3.387	8.216
Row 12	12	04:00:00	2.876	1.706	0.4266	2.686	1.587	9.936	1.676	3.7667	8.896	5.656	3.376	8.306
Row 12	12	05:00:00	2.876	1.706	0.4266	2.686	1.587	9.936	1.676	3.7667	8.896	5.656	3.376	8.306
Row 12	12	06:00:00	2.876	1.706	0.4266	2.686	1.587	9.936	1.676	3.7667	8.896	5.656	3.376	8.306
Row 12	12	07:00:00	2.876	1.706	0.4266	2.686	1.587	9.936	1.676	3.7667	8.896	5.656	3.376	8.306
Row 12	12	08:00:00	2.876	1.706	0.4266	2.686	1.587	9.936	1.676	3.7667	8.896	5.656	3.376	8.306
Row 12	12	09:00:00	2.876	1.706	0.4266	2.686	1.587	9.936	1.676	3.7667	8.896	5.656	3.376	8.306
Row 12	12	10:00:00	2.876	1.706	0.4266	2.686	1.587	9.936	1.676	3.7667	8.896	5.656	3.376	8.306
Row 12	12	11:00:00	2.876	1.706	0.4266	2.686	1.587	9.936	1.676	3.7667	8.896	5.656	3.376	8.306
Row 12	12	12:00:00	2.876	1.706	0.4266	2.686	1.587	9.936	1.676	3.7667	8.896	5.656	3.376	8.306
Row 12	12	13:00:00	2.876	1.706	0.4266	2.686	1.587	9.936	1.676	3.7667	8.896	5.656	3.376	8.306
Row 12	12	14:00:00	2.876	1.706	0.4266	2.686	1.587	9.936	1.676	3.7667	8.896	5.656	3.376	8.306
Row 12	12	15:00:00	2.876	1.706	0.4266	2.686	1.587	9.936	1.676	3.7667	8.896	5.656	3.376	8.306
Row 12	12	16:00:00	2.876	1.706	0.4266	2.686	1.587	9.936	1.676	3.7667	8.896	5.656	3.376	8.306
Row 12	12	17:00:00	2.876	1.706	0.4266	2.686	1.587	9.936	1.676	3.7667	8.896	5.656	3.376	8.306
Row 12	12	18:00:00	2.876	1.706	0.4266	2.686	1.587	9.936	1.676	3.7667	8.896	5.656	3.376	8.306
Row 12	12	19:00:00	2.876	1.706	0.4266	2.686	1.587	9.936	1.676	3.7667	8.896	5.656	3.376	8.306
Row 12	12	20:00:120	2.626	1.866	0.5266	2.376	1.666	11.166	1.576	4.1267	1.016	6.246	3.736	8.066
Row 12	12	21:00:00	2.666	1.886	0.5266	2.376	1.666	11.166	1.576	4.1267	1.016	6.246	3.736	8.066
Row 12	12	22:00:00	2.666	1.886	0.5266	2.376	1.666	11.166	1.576	4.1267	1.016	6.246	3.736	8.066
Row 12	12	23:00:00	2.666	1.886	0.5266	2.376	1.666	11.166	1.576	4.1267	1.016	6.246	3.736	8.066
Row 13	13	00:00:00	2.726	1.706	0.4266	2.486	1.567	8.896	1.576	3.6267	9.046	5.766	3.306	8.246
Row 13	13	01:00:00	2.726	1.706	0.4266	2.486	1.567	8.896	1.576	3.6267	9.046	5.766	3.306	8.246
Row 13	13	02:00:00	2.726	1.706	0.4266	2.486	1.567	8.896	1.576	3.6267	9.046	5.766	3.306	8.246
Row 13	13	03:00:00	2.726	1.706	0.4266	2.486	1.567	8.896	1.576	3.6267	9.046	5.766	3.306	8.246
Row 13	13	04:00:00	2.726	1.706	0.4266	2.486	1.567	8.896	1.576	3.6267	9.046	5.766	3.306	8.246
Row 13	13	05:00:00	2.726	1.706	0.4266	2.486	1.567	8.896	1.576	3.6267	9.046	5.766	3.306	8.246
Row 13	13	06:00:00	2.726	1.706	0.4266	2.486	1.567	8.896	1.576	3.6267	9.046	5.766	3.306	8.246
Row 13	13	07:00:00	2.726	1.706	0.4266	2.486	1.567	8.896	1.576	3.6267	9.046	5.766	3.306	8.246
Row 13	13	08:00:00	2.726	1.706	0.4266	2.486	1.567	8.896	1.576	3.6267	9.046	5.766	3.306	8.246
Row 13	13	09:00:00	2.726	1.706	0.4266	2.486	1.567	8.896	1.576	3.6267	9.046	5.766	3.306	8.246
Row 13	13	10:00:00	2.726	1.706	0.4266	2.486	1.567	8.896	1.576	3.6267	9.046	5.766	3.306	8.246
Row 13	13	11:00:00	2.726	1.706	0.4266	2.486	1.567	8.896	1.576	3.6267	9.046	5.766	3.306	8.246
Row 13	13	12:00:00	2.726	1.706	0.4266	2.486	1.567	8.896	1.576	3.6267	9.046	5.766	3.306	8.246
Row 13	13	13:00:00	2.726	1.706	0.4266	2.486	1.567	8.896	1.576	3.6267	9.046	5.766	3.306	8.246
Row 13	13	14:00:00	2.726	1.706	0.4266	2.486	1.567	8.896	1.576	3.6267	9.046	5.766	3.306	8.246
Row 13	13	15:00:00	2.726	1.706	0.4266	2.486	1.567	8.896	1.576	3.6267	9.046	5.766	3.306	8.246
Row 13	13	16:00:00	2.726	1.706	0.4266	2.486	1.567	8.896	1.576	3.6267	9.046	5.766	3.306	8.246
Row 13	13	17:00:00	2.726	1.706	0.4266	2.486	1.567	8.896	1.576	3.6267	9.046	5.766	3.306	8.246
Row 13	13	18:00:00	2.726	1.706	0.4266	2.486	1.567	8.896	1.576	3.6267	9.046	5.766	3.306	8.246
Row 13	13	19:00:00	2.726	1.706	0.4266	2.486	1.567	8.896	1.576	3.6267	9.046	5.766	3.306	8.246
Row 13	13	20:00:00	2.726	1.706	0.4266	2.486	1.567	8.896	1.576	3.6267	9.046	5.766	3.306	8.246
Row 13	13	21:00:00	2.726	1.706	0.4266	2.486	1.567	8.896	1.576	3.6267	9.046	5.766	3.306	8.246
Row 13	13	22:00:00	2.726	1.706	0.4266	2.486	1.567	8.896	1.576	3.6267	9.046	5.766	3.306	8.246
Row 13	13	23:00:00	2.726	1.706	0.4266	2.486	1.567	8.896	1.576	3.6267	9.046	5.766	3.306	8.246
Row 14	14	01:00:00	2.026	1.876	0.5166	1.926	1.666	11.166	1.556	3.9267	9.766	6.766	3.376	8.466
Row 14	14	02:00:00	2.426	1.816	0.5166	2.226	1.666	11.166	1.556	3.9267	9.766	6.766	3.376	8.466
Row 14	14	03:00:00	2.426	1.816	0.5166	2.226	1.666	11.166	1.556	3.9267	9.766	6.766	3.376	8.466
Row 14	14	04:00:00	2.426	1.816	0.5166	2.226	1.666	11.166	1.556	3.9267	9.766	6.766	3.376	8.466
Row 14	14	05:00:00	2.426	1.816	0.5166	2.226	1.666	11.166	1.556	3.9267	9.766	6.766	3.376	8.466
Row 14	14	06:00:00	2.426	1.816	0.5166	2.226	1.666	11.166	1.556	3.9267	9.766	6.766	3.376	8.466

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

AERMOD model (November)			Year 2038		NO ₂ Emission				NO _x Emission				
Read Name	Read ID	Hour	Month/MonthlyRate		Hourly/Average		Month/MonthlyRate		Hourly/Average		Month/MonthlyRate		
			g/min/h	g/min/h	g/min/h	g/min/h	g/min/h	g/min/h	g/min/h	g/min/h	g/min/h	ton/a	
Read 14	14	0800-0900	3.82E-02	9.13E-07	1.56E-05	3.51E-02	6.38E-07	1.43E-05	1.42E-01	3.40E-06	5.80E-05	1.28E-01	3.07E-06
Read 14	14	0900-1000	4.32E-03	8.71E-07	1.50E-05	3.99E-02	8.12E-07	1.38E-05	1.66E-01	2.26E-06	5.55E-05	4.48E-01	2.98E-05
Read 14	14	1000-1100	4.32E-03	8.71E-07	1.50E-05	3.99E-02	8.12E-07	1.38E-05	1.66E-01	2.26E-06	5.55E-05	4.48E-01	2.98E-05
Read 14	14	1100-1200	4.60E-02	7.84E-07	1.34E-05	2.77E-02	7.72E-07	1.24E-05	1.65E-01	2.82E-06	4.80E-05	1.52E-01	2.60E-06
Read 14	14	1200-1300	6.78E-02	1.44E-06	2.46E-05	6.34E-02	1.39E-06	2.29E-05	2.29E-01	8.87E-06	3.30E-05	1.13E-01	4.55E-07
Read 14	14	1300-1400	6.78E-02	1.44E-06	2.46E-05	6.34E-02	1.39E-06	2.29E-05	2.29E-01	8.87E-06	3.30E-05	1.13E-01	4.55E-07
Read 14	14	1400-1500	7.04E-02	1.54E-06	2.79E-05	6.52E-02	1.50E-06	2.59E-05	2.41E-01	5.61E-06	3.95E-05	2.23E-01	5.19E-06
Read 14	14	1500-1600	6.50E-02	1.56E-06	2.85E-05	6.01E-02	1.44E-06	2.45E-05	2.49E-01	5.75E-06	3.80E-05	2.21E-01	5.30E-06
Read 14	14	1600-1700	6.50E-02	1.56E-06	2.85E-05	6.01E-02	1.44E-06	2.45E-05	2.49E-01	5.75E-06	3.80E-05	2.21E-01	5.30E-06
Read 14	14	1700-1800	5.12E-02	1.39E-06	2.38E-05	4.67E-02	1.27E-06	2.00E-05	1.97E-01	5.13E-06	3.75E-05	1.68E-01	4.65E-06
Read 14	14	1800-1900	3.74E-02	9.74E-07	1.66E-05	3.38E-02	8.87E-07	1.55E-05	1.43E-01	3.72E-06	6.35E-05	1.28E-01	3.34E-06
Read 14	14	1900-2000	2.59E-02	6.08E-07	8.66E-06	2.30E-02	4.59E-07	7.62E-06	1.12E-01	2.78E-06	4.74E-05	9.92E-02	1.95E-06
Read 14	14	2000-2100	2.42E-02	5.42E-07	7.84E-06	2.17E-02	4.24E-07	6.97E-06	1.07E-01	2.73E-06	4.69E-05	9.84E-02	1.87E-06
Read 14	14	2100-2200	2.30E-02	5.33E-07	6.03E-06	2.09E-02	3.27E-07	5.48E-06	1.09E-01	2.68E-06	4.87E-05	9.74E-02	1.50E-06
Read 14	14	2200-2300	2.21E-02	4.91E-07	5.81E-06	2.10E-02	3.11E-07	5.08E-06	1.05E-01	2.55E-06	4.64E-05	9.28E-02	1.38E-06
Read 14	14	2300-2400	2.21E-02	4.91E-07	5.81E-06	2.10E-02	3.11E-07	5.08E-06	1.05E-01	2.55E-06	4.64E-05	9.28E-02	1.38E-06
Read 15	15	0000-0100	3.03E-02	5.96E-06	4.97E-07	2.70E-02	4.89E-06	4.52E-07	1.02E-01	1.80E-07	1.67E-06	9.08E-02	1.80E-07
Read 15	15	0100-0200	3.08E-02	4.98E-06	4.50E-07	3.80E-02	4.52E-06	4.18E-07	1.17E-01	1.47E-07	1.96E-06	1.07E-01	1.34E-07
Read 15	15	0200-0300	3.08E-02	4.98E-06	4.50E-07	3.80E-02	4.52E-06	4.18E-07	1.17E-01	1.47E-07	1.96E-06	1.07E-01	1.34E-07
Read 15	15	0300-0400	5.13E-02	4.43E-06	4.05E-07	4.74E-02	4.04E-07	3.94E-07	1.40E-01	1.19E-07	1.10E-06	1.28E-01	1.09E-07
Read 15	15	0400-0500	4.97E-02	4.51E-06	4.18E-07	4.65E-02	4.22E-06	3.94E-07	1.27E-01	1.18E-07	1.16E-06	1.27E-01	1.16E-07
Read 15	15	0500-0600	4.02E-02	4.33E-06	4.02E-07	4.02E-02	4.33E-06	4.02E-07	1.02E-01	1.80E-07	1.67E-06	9.08E-02	1.80E-07
Read 15	15	0600-0700	3.12E-02	6.18E-06	7.50E-07	2.91E-02	7.56E-07	7.00E-07	1.15E-01	2.90E-07	2.69E-06	1.02E-01	2.65E-07
Read 15	15	0700-0800	4.99E-02	2.89E-07	2.68E-06	4.63E-02	2.61E-07	2.47E-06	1.52E-01	8.84E-07	1.81E-06	3.9E-01	8.03E-07
Read 15	15	0800-0900	3.15E-02	2.90E-07	2.68E-06	4.44E-02	2.91E-07	2.68E-06	1.47E-01	6.61E-07	9.90E-06	8.4E-01	8.77E-07
Read 15	15	0900-1000	5.31E-02	3.02E-07	2.80E-06	5.94E-02	2.81E-07	2.52E-06	1.61E-01	3.18E-07	5.90E-06	4.8E-01	8.46E-07
Read 15	15	1000-1100	5.70E-02	2.90E-07	2.70E-06	5.30E-02	2.71E-07	2.51E-06	1.68E-01	6.61E-07	8.87E-06	5.59E-01	7.64E-07
Read 15	15	1100-1200	5.12E-02	2.90E-07	2.70E-06	4.70E-02	2.71E-07	2.51E-06	1.59E-01	2.59E-07	5.90E-06	4.8E-01	7.64E-07
Read 15	15	1200-1300	6.75E-02	4.99E-07	4.62E-06	6.45E-02	4.99E-07	4.33E-06	2.08E-01	5.53E-06	4.24E-05	1.94E-01	1.44E-06
Read 15	15	1300-1400	6.95E-02	5.37E-07	4.98E-06	6.34E-02	4.99E-07	4.26E-06	2.21E-01	5.71E-06	2.05E-01	1.58E-01	1.44E-06
Read 15	15	1400-1500	6.89E-02	5.51E-07	5.10E-06	6.40E-02	5.12E-07	4.47E-06	2.16E-01	5.78E-06	1.89E-05	1.00E-01	1.80E-06
Read 15	15	1500-1600	6.86E-02	5.51E-07	5.10E-06	6.40E-02	5.12E-07	4.47E-06	2.16E-01	5.78E-06	1.89E-05	1.00E-01	1.80E-06
Read 15	15	1600-1700	6.51E-02	5.42E-07	5.02E-06	6.02E-02	5.01E-07	4.46E-06	2.07E-01	5.71E-06	1.58E-05	8.8E-01	1.57E-06
Read 15	15	1700-1800	5.40E-02	4.75E-07	4.40E-06	4.94E-02	4.34E-07	4.02E-06	1.83E-01	5.01E-06	1.49E-05	1.67E-01	1.49E-06
Read 15	15	1800-1900	4.36E-02	4.36E-07	4.02E-06	4.36E-02	4.36E-07	4.02E-06	1.48E-01	4.02E-06	1.48E-05	1.67E-01	1.49E-06
Read 15	15	1900-2000	2.59E-02	1.96E-07	1.47E-06	2.34E-02	1.43E-07	1.33E-06	1.04E-01	3.9E-07	5.02E-06	9.26E-02	5.67E-07
Read 15	15	2000-2100	2.62E-02	1.71E-07	1.17E-06	2.36E-02	1.14E-07	1.06E-06	1.09E-01	3.29E-07	4.90E-06	9.65E-02	4.58E-07
Read 15	15	2100-2200	2.62E-02	1.71E-07	1.17E-06	2.36E-02	1.14E-07	1.06E-06	1.09E-01	3.29E-07	4.90E-06	9.65E-02	4.58E-07
Read 15	15	2200-2300	2.47E-02	1.15E-07	1.06E-06	2.26E-02	1.06E-07	9.74E-07	1.01E-01	7.0E-07	4.36E-06	9.05E-02	4.21E-07
Read 15	15	2300-0000	2.75E-02	9.93E-08	9.19E-07	2.52E-02	9.08E-08	8.47E-07	1.07E-01	8.44E-07	5.55E-06	9.55E-02	3.44E-07
Read 16	16	0800-0900	9.42E-02	4.13E-06	1.27E-06	8.68E-03	3.82E-06	1.17E-05	5.46E-02	2.41E-07	3.56E-06	4.8E-02	2.15E-07
Read 16	16	0900-1000	9.42E-02	4.13E-06	1.27E-06	8.68E-03	3.82E-06	1.17E-05	5.46E-02	2.41E-07	3.56E-06	4.8E-02	2.15E-07
Read 16	16	1000-1100	3.04E-02	3.13E-06	1.03E-06	9.61E-03	3.12E-06	9.66E-07	5.68E-02	1.84E-07	6.55E-06	6.09E-02	1.65E-06
Read 16	16	1100-1200	2.71E-02	2.71E-06	9.12E-07	8.71E-03	2.71E-06	9.12E-07	5.68E-02	1.84E-07	6.55E-06	6.09E-02	1.65E-06
Read 16	16	1200-1300	1.20E-02	3.41E-08	1.95E-06	1.12E-02	3.18E-08	9.74E-07	6.18E-02	7.65E-07	3.58E-06	5.57E-02	1.58E-07
Read 16	16	1300-1400	1.22E-02	3.59E-08	1.82E-06	1.13E-02	3.51E-08	1.06E-06	6.36E-02	3.11E-07	9.53E-06	6.69E-02	2.78E-07
Read 16	16	1400-1500	1.22E-02	3.59E-08	1.82E-06	1.13E-02	3.51E-08	1.06E-06	6.36E-02	3.11E-07	9.53E-06	6.69E-02	2.78E-07
Read 16	16	1500-1600	1.69E-02	3.62E-07	1.11E-05	1.56E-02	3.37E-07	1.07E-06	8.05E-02	7.72E-07	2.71E-06	2.00E-01	5.46E-06
Read 16	16	1600-1700	1.93E-02	4.17E-07	1.46E-05	1.78E-02	4.41E-07	1.13E-06	8.54E-02	2.11E-06	6.48E-05	7.74E-02	1.91E-05
Read 16	16	1700-1800	1.96E-02	4.33E-07	1.26E-05	1.82E-02	3.82E-07	1.17E-06	7.83E-02	1.63E-06	5.41E-05	8.01E-02	1.68E-06
Read 16	16	1800-1900	2.49E-02	4.13E-07	1.26E-05	2.19E-02	4.13E-07	1.26E-05	7.83E-02	1.63E-06	5.41E-05	8.01E-02	1.68E-06
Read 16	16	1900-2000	1.83E-02	3.13E-06	9.71E-06	1.98E-02	2.99E-07	9.07E-06	8.41E-02	1.42E-06	3.55E-05	4.71E-02	1.30E-06
Read 16	16	2000-2100	3.33E-02	3.61E-07	2.11E-05	3.13E-02	6.44E-07	1.97E-06	1.26E-01	2.99E-06	3.82E-05	7.47E-02	2.40E-06
Read 16	16	2100-2200	3.33E-02	3.61E-07	2.11E-05	3.13E-02	6.44E-07	1.97E-06	1.26E-01	2.99E-06	3.82E-05	7.47E-02	2.40E-06
Read 16	16	2200-2300	3.79E-02	8.96E-07	2.62E-05	3.35E-02	7.90E-07	2.44E-06	1.43E-01	3.23E-06	8.99E-05	1.32E-01	2.99E-06
Read 16	16	2300-0000	3.81E-02	8.36E-07	2.57E-05	3.39E-02	7.77E-07	2.39E-06	1.47E-01	3.42E-06	1.05E-05	3.96E-01	3.16E-06
Read 16	16	0000-0100	3.81E-02	8.36E-07	2.57E-05	3.39E-02	7.77E-07	2.39E-06	1.47E-01	3.42E-06	1.05E-05	3.96E-01	3.16E-06
Read 16	16	0100-0200	2.89E-02	7.35E-07	2.25E-05	2.64E-02	6.47E-07	2.06E-06	1.25E-01	3.19E-06	7.73E-05	1.13E-01	2.87E-06
Read 16	16	0200-0300	1.92E-02	4.91E-07	1.50E-05	1.74E-02	4.42E-07	1.39E-06	8.61E-02	2.00E-07	7.13E-05	7.66E-02	1.99E-06
Read 16	16	0300-0400	1.92E-02	4.91E-07	1.50E-05	1.74E-02	4.42E-07	1.39E-06	8.61E-02	2.00E-07	7.13E-05	7.66E-02	1.99E-06
Read 16	16	0400-0500	1.07E-02	1.54E-07	1.05E-06	9.63E-03	1.48E-07	4.53E-06	6.14E-02	4.29E-07	2.89E-05	3.75E-02	8.25E-07
Read 16	16	0500-0600	1.01E-02	1.55E-07	4.74E-07	9.37E-03	1.41E-07	4.33E-06	6.02E-02	9.21E-07	8.57E-05	5.33E-02	8.16E-07
Read 16	16	0600-0700	1.01E-02	1.55E-07	4.74E-07	9.37E-03	1.41E-07	4.33E-06	6.02E-02	9.21E-07	8.57E-05	5.33E-02	8.16E-07
Read 16	16	0700-0800	1.07E-02	1.30E-07	3.87E-06	9.81E-03	1.07E-07	3.35E-06	5.94E-02	6.64E-07	2.03E-05	3.92E-02	5.91E-07
Read 17	17	0000-0100	1.04E-02	8.97E-06	2.62E-06	9.41E-03	8.14E-06	3.38E-06	5.59E-02	5.12E-07	5.05E-06	5.19E-02	4.49E-07
Read 17	17	0100-0200	1.04E-02	8.97E-06	2.62E-06	9.41E-03	8.14E-06	3.38E-06	5.59E-02	5.12E-07	5.05E-06	5.19E-02	4.49E-07
Read 17	17	0200-0300	1.24E-02	5.58E-06	1.53E-06	1.14E-02	4.89E-06	1.42E-06	6.37E-02	2.70E-07	8.95E-04	5.54E-02	2.43E-07
Read 17	17	0300-0400	1.35E-02	4.57E-06	1.34E-06	1.24E-02	4.21E-06	1.28E-06	6.68E-02	2.27E-07	6.63E-06	9.96E-02	2.02E-07
Read 17	17	0400-0500	1.42E-02	5.12E-06	1.56E-06	1.32E-02	4.69E-06	1.45E-0					

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

AERMOD Model (November)			Year 2038		NO _x Emission		Monthlyhourlyaverage		Monthlyhourlymax		NO _x Emission		Monthlyhourlymax	
Row Name	Read ID	Hour	g/min/sec	g/min/sec	ton/year	g/min/sec	g/min/sec	g/min/sec	g/min/sec	g/min/sec	g/min/sec	g/min/sec	g/min/sec	g/min/sec
Row 17	17	1400-1700	6.69E-02	1.74E-06	5.08E-05	6.19E-02	1.81E-06	4.70E-05	2.41E-01	6.25E-06	1.83E-04	7.22E-01	5.77E-06	
Row 17	17	1700-1800	4.63E-02	2.24E-06	5.62E-05	4.21E-02	1.33E-05	3.31E-05	1.88E-01	5.10E-06	1.48E-04	1.73E-05	4.54E-06	
Row 17	17	1800-1900	1.53E-02	5.91E-07	1.91E-05	1.53E-02	5.91E-07	1.91E-05	1.53E-02	5.91E-07	1.91E-05	1.53E-02	5.91E-07	
Row 17	17	1900-2000	1.53E-02	5.91E-07	1.91E-05	1.53E-02	5.91E-07	1.91E-05	1.53E-02	5.91E-07	1.91E-05	1.53E-02	5.91E-07	
Row 17	17	2000-2100	1.30E-02	9.77E-07	5.73E-06	1.18E-02	1.77E-05	5.38E-06	1.02E-02	1.06E-06	3.06E-06	8.18E-02	9.32E-07	
Row 17	17	2100-2200	1.30E-02	9.77E-07	5.73E-06	1.18E-02	1.77E-05	5.38E-06	1.02E-02	1.06E-06	3.06E-06	8.18E-02	9.32E-07	
Row 17	17	2200-2300	1.27E-02	8.82E-07	5.13E-06	1.16E-02	1.66E-05	4.85E-06	6.05E-02	9.54E-07	2.76E-05	5.91E-02	6.18E-07	
Row 17	17	2300-0000	1.35E-02	4.48E-07	4.33E-06	1.23E-02	3.37E-05	3.95E-06	5.88E-02	7.53E-07	2.26E-05	6.14E-02	6.73E-07	
Row 18	18	0000-0100	8.03E-03	1.05E-07	1.05E-05	1.05E-03	1.05E-06	1.05E-06	1.05E-03	3.44E-06	9.84E-06	9.84E-06	9.84E-06	
Row 17	17	0100-0200	9.39E-03	4.07E-08	5.98E-06	8.68E-03	3.76E-06	1.47E-05	6.55E-02	2.37E-02	2.96E-04	4.88E-01	2.12E-07	
Row 18	18	0200-0300	1.04E-02	3.34E-08	1.30E-06	9.63E-03	2.09E-08	1.20E-05	6.78E-02	1.84E-07	7.17E-06	5.19E-05	1.63E-07	
Row 18	18	0300-0400	1.15E-02	2.93E-08	1.15E-06	1.06E-02	2.69E-08	1.05E-06	5.00E-02	1.55E-07	5.21E-06	1.93E-05	1.66E-07	
Row 18	18	0400-0500	1.03E-02	2.86E-08	1.03E-06	1.03E-02	2.86E-08	1.03E-06	5.00E-02	1.55E-07	5.21E-06	1.93E-05	1.66E-07	
Row 18	18	0500-0600	1.21E-02	8.86E-08	2.29E-06	1.12E-02	5.43E-08	2.12E-06	6.33E-02	3.06E-07	1.18E-07	5.67E-02	6.74E-07	
Row 18	18	0600-0700	1.24E-02	8.86E-08	2.29E-06	1.12E-02	5.43E-08	2.12E-06	6.33E-02	3.06E-07	1.18E-07	5.67E-02	6.74E-07	
Row 18	18	0700-0800	1.24E-02	8.86E-08	2.29E-06	1.12E-02	5.43E-08	2.12E-06	6.33E-02	3.06E-07	1.18E-07	5.67E-02	6.74E-07	
Row 18	18	0800-0900	1.24E-02	8.86E-08	2.29E-06	1.12E-02	5.43E-08	2.12E-06	6.33E-02	3.06E-07	1.18E-07	5.67E-02	6.74E-07	
Row 18	18	0900-1000	1.51E-02	1.19E-07	1.25E-06	1.21E-02	2.95E-07	1.15E-06	6.34E-02	1.95E-06	6.09E-06	5.72E-02	1.40E-06	
Row 18	18	1000-1100	1.51E-02	1.19E-07	1.25E-06	1.21E-02	2.95E-07	1.15E-06	6.34E-02	1.95E-06	6.09E-06	5.72E-02	1.40E-06	
Row 18	18	1100-1200	1.51E-02	1.19E-07	1.25E-06	1.21E-02	2.95E-07	1.15E-06	6.34E-02	1.95E-06	6.09E-06	5.72E-02	1.40E-06	
Row 18	18	1200-1300	2.27E-02	4.61E-07	1.81E-05	2.12E-02	4.31E-07	1.68E-05	9.02E-02	1.84E-06	7.18E-05	8.42E-02	1.92E-06	
Row 18	18	1300-1400	2.27E-02	4.61E-07	1.81E-05	2.12E-02	4.31E-07	1.68E-05	9.02E-02	1.84E-06	7.18E-05	8.42E-02	1.92E-06	
Row 18	18	1400-1500	2.27E-02	4.61E-07	1.81E-05	2.12E-02	4.31E-07	1.68E-05	9.02E-02	1.84E-06	7.18E-05	8.42E-02	1.92E-06	
Row 18	18	1500-1600	2.11E-02	4.83E-08	1.96E-04	4.72E-07	1.75E-05	9.27E-02	2.12E-06	3.85E-06	8.58E-07	1.67E-05	9.91E-06	
Row 18	18	1600-1700	2.02E-02	5.05E-07	1.95E-05	4.48E-07	1.83E-05	8.17E-02	2.25E-06	3.95E-06	8.58E-07	1.67E-05	9.91E-06	
Row 18	18	1700-1800	1.66E-02	1.61E-07	1.62E-05	1.51E-02	3.80E-07	1.48E-05	7.84E-02	1.97E-06	7.70E-07	1.78E-05	1.06E-06	
Row 18	18	1800-1900	1.22E-02	3.07E-07	1.20E-05	1.10E-02	2.78E-07	1.09E-05	5.99E-02	1.56E-06	5.89E-07	5.29E-02	1.33E-06	
Row 18	18	1900-2000	1.05E-02	7.29E-08	1.05E-05	1.05E-02	7.29E-08	1.05E-05	5.99E-02	1.56E-06	5.89E-07	5.29E-02	1.33E-06	
Row 18	18	2000-2100	1.04E-02	5.58E-07	5.16E-06	9.36E-03	1.42E-07	5.54E-06	5.97E-02	9.04E-07	3.55E-05	5.21E-08	8.88E-07	
Row 18	18	2100-2200	1.98E-02	1.48E-07	1.76E-06	8.88E-03	1.34E-07	5.75E-06	5.83E-02	8.87E-04	3.42E-05	5.14E-02	7.81E-07	
Row 18	18	2200-2300	2.99E-02	9.73E-07	4.42E-05	5.50E-06	8.88E-03	1.50E-07	5.04E-06	5.86E-02	8.21E-07	3.21E-05	1.27E-07	
Row 18	18	2300-0000	1.93E-02	1.86E-07	1.86E-06	8.88E-03	1.34E-07	5.75E-06	5.83E-02	8.87E-04	3.42E-05	5.14E-02	7.81E-07	
Row 19	19	0000-0100	1.03E-02	1.81E-08	2.60E-06	9.38E-03	8.18E-08	2.36E-06	5.89E-02	5.13E-04	1.48E-05	5.10E-02	4.54E-07	
Row 19	19	0100-0200	1.13E-02	5.50E-08	3.87E-06	1.05E-02	6.02E-08	1.73E-06	6.07E-02	3.49E-04	1.01E-04	5.48E-04	5.14E-07	
Row 19	19	0200-0300	1.45E-02	1.23E-07	1.23E-06	1.23E-02	1.23E-07	1.23E-06	6.07E-02	3.49E-04	1.01E-04	5.48E-04	5.14E-07	
Row 19	19	0300-0400	1.35E-02	6.61E-08	3.38E-06	1.24E-02	6.43E-08	1.22E-06	6.09E-02	2.29E-07	6.59E-07	5.97E-02	2.04E-07	
Row 19	19	0400-0500	1.54E-02	5.34E-08	1.54E-06	1.30E-02	4.88E-08	1.44E-06	6.88E-02	2.60E-07	7.53E-06	6.24E-02	2.89E-07	
Row 19	19	0500-0600	1.63E-02	5.75E-08	1.63E-06	1.30E-02	4.88E-08	1.44E-06	6.88E-02	2.60E-07	7.53E-06	6.24E-02	2.89E-07	
Row 19	19	0600-0700	1.50E-02	1.18E-07	1.14E-06	1.40E-02	1.99E-07	9.72E-06	7.34E-02	1.04E-06	3.06E-06	6.66E-04	8.44E-07	
Row 19	19	0700-0800	1.67E-02	8.89E-07	4.45E-06	1.54E-02	4.47E-07	1.29E-05	7.91E-02	2.39E-06	6.63E-06	7.10E-05	2.69E-06	
Row 19	19	0800-0900	1.53E-02	1.19E-07	1.25E-06	1.21E-02	2.95E-07	1.15E-06	6.34E-02	1.95E-06	6.09E-06	5.72E-02	1.40E-06	
Row 19	19	0900-1000	1.88E-02	5.60E-07	1.61E-06	1.74E-02	5.20E-07	1.60E-05	8.40E-02	2.52E-06	7.25E-06	7.71E-02	7.32E-06	
Row 19	19	1000-1100	2.12E-02	6.67E-07	6.33E-06	1.97E-02	5.67E-07	1.511E-05	8.01E-02	2.41E-06	6.89E-06	8.28E-02	2.71E-06	
Row 19	19	1100-1200	2.12E-02	6.67E-07	6.33E-06	1.97E-02	5.67E-07	1.511E-05	8.01E-02	2.41E-06	6.89E-06	8.28E-02	2.71E-06	
Row 19	19	1200-1300	2.63E-02	1.06E-07	7.75E-06	2.48E-02	5.57E-07	1.53E-05	1.02E-02	2.35E-06	6.77E-05	9.21E-06	2.19E-06	
Row 19	19	1300-1400	2.48E-02	5.58E-07	5.90E-06	2.50E-02	6.13E-07	1.77E-05	1.08E-02	2.69E-06	7.63E-06	1.00E-05	2.44E-06	
Row 19	19	1400-1500	2.48E-02	5.58E-07	5.90E-06	2.50E-02	6.13E-07	1.77E-05	1.08E-02	2.69E-06	7.63E-06	1.00E-05	2.44E-06	
Row 19	19	1500-1600	2.48E-02	5.58E-07	5.90E-06	2.50E-02	6.13E-07	1.77E-05	1.08E-02	2.69E-06	7.63E-06	1.00E-05	2.44E-06	
Row 19	19	1600-1700	2.54E-02	6.65E-07	1.62E-06	2.55E-02	6.19E-07	1.78E-05	1.01E-02	2.64E-06	7.61E-06	9.31E-02	2.44E-06	
Row 19	19	1700-1800	2.00E-02	5.43E-07	1.56E-06	1.83E-02	4.91E-07	1.43E-05	9.13E-02	2.49E-06	7.16E-06	8.36E-02	2.29E-06	
Row 19	19	1800-1900	2.00E-02	5.43E-07	1.56E-06	1.83E-02	4.91E-07	1.43E-05	9.13E-02	2.49E-06	7.16E-06	8.36E-02	2.29E-06	
Row 19	19	1900-2000	2.96E-02	4.94E-07	5.18E-06	1.14E-02	2.75E-07	6.48E-06	6.54E-02	1.25E-06	3.69E-06	5.97E-02	1.10E-06	
Row 19	19	2000-2100	1.27E-02	1.92E-07	1.58E-06	1.14E-02	1.72E-07	4.99E-06	6.75E-02	1.03E-06	2.97E-05	5.97E-04	9.07E-07	
Row 19	19	2100-2200	2.96E-02	4.94E-07	5.18E-06	1.14E-02	2.75E-07	6.48E-06	6.54E-02	1.25E-06	3.69E-06	5.97E-02	1.10E-06	
Row 19	19	2200-2300	1.27E-02	1.92E-07	1.58E-06	1.14E-02	1.72E-07	4.99E-06	6.75E-02	1.03E-06	2.97E-05	5.97E-04	9.07E-07	
Row 19	19	2300-0000	2.96E-02	4.94E-07	5.18E-06	1.14E-02	2.75E-07	6.48E-06	6.54E-02	1.25E-06	3.69E-06	5.97E-02	1.10E-06	
Row 19	19	0000-0100	1.33E-02	1.78E-07	1.12E-06	1.12E-02	1.62E-07	4.67E-06	6.45E-02	9.31E-07	2.68E-07	9.30E-07	6.30E-07	
Row 19	19	0100-0200	1.33E-02	1.78E-07	1.12E-06	1.12E-02	1.62E-07	4.67E-06	6.45E-02	9.31E-07	2.68E-07	9.30E-07	6.30E-07	
Row 19	19	0200-0300	1.33E-02	1.78E-07	1.12E-06	1.12E-02	1.62E-07	4.67E-06	6.45E-02	9.31E-07	2.68E-07	9.30E-07	6.30E-07	
Row 19	19	0300-0400	1.33E-02	1.78E-07	1.12E-06	1.12E-02	1.62E-07	4.67E-06	6.45E-02	9.31E-07	2.68E-07	9.30E-07	6.30E-07	
Row 19	19	0400-0500	1.33E-02	1.78E-07	1.12E-06	1.12E-02	1.62E-07	4.67E-06	6.45E-02	9.31E-07	2.68E-07	9.30E-07	6.30E-07	
Row 19	19	0500-0600	4.72E-02	2.55E-08	7.47E-02	4.23E-02	2.39E-08	4.41E-07	1.80E-01	9.72E-08	1.79E-07	1.67E-01	9.06E-08	
Row 19	19	0600-0700	4.72E-02	2.55E-08	7.47E-02	4.23E-02	2.39E-08	4.41E-07	1.80E-01	9.72E-08	1.79E-07	1.67E-01	9.06E-08	
Row 19	19	0700-0800	4.72E-02	2.55E-08	7.47E-02	4.23E-02	2.39E-08	4.41E-07	1.80E-01	9.72E-08	1.79E-07	1.67E-01	9.06E-08	
Row 19	19	0800-0900	5.96E-02	2.81E-07	3.14E-06	5.53E-02	3.09E-07	5.69E-06	2.26E-01	1.27E-06	2.54E-06	2.16E-01	1.18E-07	
Row 19	19	0900-1000	5.96E-02	2.81E-07	3.14E-06	5.53E-02	3.09E-07	5.69E-06	2.26E-01	1.27E-06	2.54E-06	2.16E-01	1.18E-07	
Row 19	19	1000-1100	7.04E-02	4.09E-07	4.48E-06	6.55E-02	3.76E-07	6.94E-06	2.55E-01	1.47E-06	2.70E-06	2.37E-01	1.36E-07	
Row 19	19	1100-1200	6.70E-02	3.61E-07	6.66E-06	6.75E-02	3.37E-07	6.21E-06	2.45E-01	1.37E-06	2.44E-06	2.29E-01	1.23E-06	
Row 19	19	1200-1300	6.97E-02	3.56E-07	6.57E-06	6.50E-02	3.32E-07	6.13E-06	2.42E-01					

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

AEMOD model (November 2018)																
		NO _x Emission				NO _x Emission				NO _x Emission						
Hour	Road Name	Road ID	Monthly/turn	Monthly/turn	Monthly/turn	Monthly/turn	Monthly/turn	Monthly/turn	Monthly/turn	Monthly/turn	Monthly/turn	Monthly/turn	Monthly/turn			
			g/kwh	g/kwh	g/kwh	g/kwh	g/kwh	g/kwh	g/kwh	g/kwh	g/kwh	g/kwh	g/kwh			
Hour 01	Road 21	21	0000-0000	1.1868	0.8146	1.0806	1.0712	0.3964	0.9776	0.6336	0.4376	0.5786	0.5662	0.36		
Hour 02	Road 21	21	0100-0200	1.2982	0.9258	1.7748	1.1882	0.4248	1.7818	0.6512	0.8292	0.3848	0.5892	0.27		
Hour 03	Road 21	21	0200-0300	1.3692	0.9748	1.8548	1.2682	0.4368	1.8518	0.6632	0.8412	0.3968	0.6012	0.27		
Hour 04	Road 21	21	0300-0400	1.5502	1.1232	2.1428	1.3882	0.5792	2.0512	0.7162	1.9662	0.6002	0.6412	0.17		
Hour 05	Road 21	21	0400-0500	1.5752	0.7298	1.4308	1.4742	0.4748	1.5912	0.3602	1.2432	0.2972	0.6012	0.73		
Hour 06	Road 21	21	0500-0600	1.6402	0.8348	1.5498	1.5492	0.5092	1.6602	0.3902	1.3102	0.4002	0.5302	0.23		
Hour 07	Road 21	21	0600-0700	1.6202	1.9952	2.5712	1.5712	1.8112	2.3992	2.9422	0.9142	1.2112	0.7812	0.27		
Hour 08	Road 21	21	0700-0800	1.9252	4.5272	5.9712	1.7522	4.1552	4.5952	8.6662	2.0662	2.7252	0.8802	1.18		
Hour 09	Road 21	21	0800-0900	1.9452	4.5472	5.9912	1.7722	4.1752	4.6152	8.6862	2.0862	2.7452	0.8902	1.18		
Hour 10	Road 21	21	0900-1000	2.2952	5.6312	6.5712	2.0612	5.2112	6.0952	9.8002	2.4562	3.2402	0.7802	1.23		
Hour 11	Road 21	21	1000-1100	2.4242	5.4372	6.1472	2.2322	5.0402	6.6562	8.9112	2.2452	2.9752	0.9102	1.23		
Hour 12	Road 21	21	1100-1200	2.3362	4.9592	6.5592	2.1472	4.6652	6.1412	8.9112	2.1062	2.7762	0.9002	1.18		
Hour 13	Road 21	21	1200-1300	2.3362	4.9592	6.5592	2.1472	4.6652	6.1412	8.9112	2.1062	2.7762	0.9002	1.18		
Hour 14	Road 21	21	1300-1400	2.8862	6.0042	6.0042	2.7022	6.6922	6.7522	11.5142	2.4232	3.0962	1.0712	2.23		
Hour 15	Road 21	21	1400-1500	2.8862	6.0042	6.0042	2.7022	6.6922	6.7522	11.5142	2.4232	3.0962	1.0712	2.23		
Hour 16	Road 21	21	1500-1600	2.8862	6.0042	6.0042	2.7022	6.6922	6.7522	11.5142	2.4232	3.0962	1.0712	2.23		
Hour 17	Road 21	21	1600-1700	2.8862	6.0042	6.0042	2.7022	6.6922	6.7522	11.5142	2.4232	3.0962	1.0712	2.23		
Hour 18	Road 21	21	1700-1800	2.8862	6.0042	6.0042	2.7022	6.6922	6.7522	11.5142	2.4232	3.0962	1.0712	2.23		
Hour 19	Road 21	21	1800-1900	2.8862	6.0042	6.0042	2.7022	6.6922	6.7522	11.5142	2.4232	3.0962	1.0712	2.23		
Hour 20	Road 21	21	1900-2000	2.8862	6.0042	6.0042	2.7022	6.6922	6.7522	11.5142	2.4232	3.0962	1.0712	2.23		
Hour 21	Road 21	21	2000-2100	1.3742	1.6672	1.6672	1.2342	1.5232	1.2012	1.7022	0.8832	1.1762	0.3452	0.77		
Hour 22	Road 21	21	2100-2200	1.3742	1.6672	1.6672	1.2342	1.5232	1.2012	1.7022	0.8832	1.1762	0.3452	0.77		
Hour 23	Road 21	21	2200-2300	1.3742	1.6672	1.6672	1.2342	1.5232	1.2012	1.7022	0.8832	1.1762	0.3452	0.77		
Hour 24	Road 21	21	2300-0000	1.4502	1.7502	1.7502	1.2502	1.5502	1.5502	1.7502	0.9502	1.2502	0.4502	0.77		
Hour 01	Road 22	22	0000-0000	1.2502	1.0712	1.0712	1.9502	1.1712	0.9302	1.7712	0.5712	0.3962	0.6902	0.2562	0.36	
Hour 02	Road 22	22	0100-0200	1.2212	0.8118	1.0818	1.1818	0.7518	1.5218	0.4418	0.4462	0.9862	0.5282	0.3182	0.27	
Hour 03	Road 22	22	0200-0300	1.2412	0.8318	1.0918	1.1918	0.7618	1.5418	0.4518	0.4602	0.9962	0.5382	0.3282	0.27	
Hour 04	Road 22	22	0300-0400	1.2612	1.0208	1.2608	1.1608	0.7862	1.6862	0.5762	0.4592	0.9962	0.5382	0.3282	0.28	
Hour 05	Road 22	22	0400-0500	1.2812	0.8108	1.2808	1.1808	0.7962	1.7062	0.5862	0.4692	1.0162	0.5482	0.3382	0.28	
Hour 06	Road 22	22	0500-0600	1.4212	1.0708	1.3408	1.3208	1.5862	1.8262	0.5122	0.4142	0.9762	0.4772	0.57	0.27	
Hour 07	Road 22	22	0600-0700	1.3912	1.4302	1.7802	1.4802	1.0112	1.5502	0.9962	1.5462	0.7262	0.5902	0.41	0.27	
Hour 08	Road 22	22	0700-0800	1.3612	1.4502	1.8002	1.4602	1.0312	1.5702	1.0162	1.5662	0.7362	0.5902	0.41	0.27	
Hour 09	Road 22	22	0800-0900	1.6212	1.2602	2.2402	1.6962	1.0712	2.0862	0.6562	0.4592	0.8162	0.4162	0.42	0.27	
Hour 10	Road 22	22	0900-1000	1.8812	1.4252	2.5402	1.7412	1.3262	2.3062	0.9312	0.4242	0.9402	0.4312	0.48	0.27	
Hour 11	Road 22	22	1000-1100	1.8512	1.4452	2.5102	1.7112	1.3462	2.2762	0.9512	0.4342	0.9502	0.4412	0.48	0.27	
Hour 12	Road 22	22	1100-1200	1.8212	1.4652	2.4802	1.6812	1.3662	2.2562	0.9612	0.4442	0.9602	0.4512	0.48	0.27	
Hour 13	Road 22	22	1200-1300	2.0412	1.4652	2.6052	1.9112	1.3662	2.4362	0.8862	0.4892	0.8762	0.4502	0.45	0.27	
Hour 14	Road 22	22	1300-1400	2.0412	1.4652	2.6052	1.9112	1.3662	2.4362	0.8862	0.4892	0.8762	0.4502	0.45	0.27	
Hour 15	Road 22	22	1400-1500	2.0612	1.5902	2.8402	1.9812	1.4862	2.6662	0.8562	0.4992	0.8862	0.4612	0.50	0.27	
Hour 16	Road 22	22	1500-1600	1.8012	1.4302	2.4902	1.6662	1.2612	2.3962	0.7472	0.6772	0.8162	0.4002	0.52	0.27	
Hour 17	Road 22	22	1600-1700	1.8012	1.4302	2.4902	1.6662	1.2612	2.3962	0.7472	0.6772	0.8162	0.4002	0.52	0.27	
Hour 18	Road 22	22	1700-1800	1.6412	1.1702	2.0602	1.5062	1.0762	1.9262	0.6412	0.5812	0.8262	0.3802	0.42	0.27	
Hour 19	Road 22	22	1800-1900	1.3862	0.8762	1.6762	1.1162	0.4412	1.0962	0.5242	0.4762	0.6402	0.2762	0.48	0.27	
Hour 20	Road 22	22	1900-2000	1.3862	0.8762	1.6762	1.1162	0.4412	1.0962	0.5242	0.4762	0.6402	0.2762	0.48	0.27	
Hour 21	Road 22	22	2000-2100	1.3512	0.3592	0.5702	1.0612	0.0202	0.3992	0.4382	1.3762	0.2452	0.3592	0.12	0.27	
Hour 22	Road 22	22	2100-2200	1.1962	0.3452	0.6162	0.9062	0.3162	0.6362	0.4822	1.0462	0.2402	0.4062	0.12	0.27	
Hour 23	Road 22	22	2200-2300	1.1962	0.3452	0.6162	0.9062	0.3162	0.6362	0.4822	1.0462	0.2402	0.4062	0.12	0.27	
Hour 24	Road 22	22	2300-0000	1.2612	0.2612	0.7012	1.0962	0.4112	0.3902	0.6112	0.9112	0.7112	0.4262	0.87	0.27	
Hour 01	Road 23	23	0000-0100	1.2262	0.4308	0.6202	1.1312	0.3118	0.7472	0.4712	0.7472	2.2762	0.4062	0.11	0.27	
Hour 02	Road 23	23	0100-0200	1.4212	0.4118	0.8402	1.1662	0.2252	0.5192	0.4512	0.8172	1.6362	0.4062	0.11	0.27	
Hour 03	Road 23	23	0200-0300	1.4212	0.4118	0.8402	1.1662	0.2252	0.5192	0.4512	0.8172	1.6362	0.4062	0.11	0.27	
Hour 04	Road 23	23	0300-0400	1.2212	0.5562	0.7402	1.1212	0.4662	0.8962	0.4742	0.5142	0.7462	0.4062	0.53	0.27	
Hour 05	Road 23	23	0400-0500	1.2212	0.5562	0.7402	1.1212	0.4662	0.8962	0.4742	0.5142	0.7462	0.4062	0.53	0.27	
Hour 06	Road 23	23	0500-0600	1.9562	0.3662	0.6202	1.8262	0.3272	0.6662	0.7072	1.3312	0.6012	0.8662	0.4062	0.53	0.27
Hour 07	Road 23	23	0600-0700	1.9562	0.3662	0.6202	1.8262	0.3272	0.6662	0.7072	1.3312	0.6012	0.8662	0.4062	0.53	0.27
Hour 08	Road 23	23	0700-0800	1.8762	0.1622	0.2802	1.8172	0.1512	0.3612	0.4712	0.9162	0.5862	0.4642	0.29	0.27	
Hour 09	Road 23	23	0800-0900	1.6262	0.2112	0.4702	1.4862	0.0462	0.3762	0.5762	0.7902	0.4462	0.3462	0.27	0.27	
Hour 10	Road 23	23	0900-1000	1.6262	0.2112	0.4702	1.4862	0.0462	0.3762	0.5762	0.7902	0.4462	0.3462	0.27	0.27	
Hour 11	Road 23	23	1000-1100	1.5712	0.2872	0.5362	1.4662	0.6662	0.4512	0.5502	1.0862	0.9962	0.5472	0.99	0.27	
Hour 12	Road 23	23	1100-1200	1.6762	0.3062	0.5362	1.5962	0.7962	0.5192	0.5962	1.0762	1.9762	0.5372	0.99	0.27	
Hour 13	Road 23	23	1200-1300	1.6762	0.3062	0.5362	1.5962	0.7962	0.5192	0.5962	1.0762	1.9762	0.5372	0.99	0.27	
Hour 14	Road 23	23	1300-1400	1.7362	0.5412	1.6162	1.7762	0.5462	0.5902	1.0062	1.0862	0.8562	0.5502	0.93	0.27	
Hour 15	Road 23	23	1400-1500	1.6412	0.3142	0.5462	1.5462	0.8462	0.5462	0.8962	1.1362	0.8062	0.5312	0.93	0.27	
Hour 16	Road 23	23	1500-1600	1.6412	0.3142	0.5462	1.5462	0.8462	0.5462	0.8962	1.1362	0.8062	0.5312	0.93	0.27	
Hour 17	Road 23	23	1600-1700	1.5262	0.3002	0.5562	1.4112	0.7952	0.5152	0.6362	1.1162	0.7162	0.5162	0.93	0.27	
Hour 18	Road 23	23	1700-1800	1.2962	0.5562	0.5562	1.5112	0.7662	0.5012	0.5812	0.6062	1.9662	0.5392	0.98	0.27	
Hour 19	Road 23	23	1800-1900	1.2962	0.5562	0.5562	1.5112	0.7662	0.5012	0.5812	0.6062	1.9662	0.5392	0.98	0.27	
Hour 20	Road 23	23	1900-2000	1.4212	0.1422	0.2642	1.1262	0.3002	0.4062	0.5132	0.5932	0.7062	0.4662	0.53	0.27	
Hour 21	Road 23	23	2000-2100	1.1562	0.8762	1.0262	1.0462	0.7622	0.4662	0.4582	0.4362	0.6432	0.4112	0.31	0.27	
Hour 22	Road 23	23	2100-2200	1.1262	0.6762	1.2562	1.0312	0.6192	1.1362	0.4112	0.2802	0.5162	0.4162	0.26	0.27	
Hour 23	Road 23	23	2200-2300	1.1262	0.6762	1.2562	1.0312	0.6192	1.1362	0.4112	0.2802	0.5162	0.4162	0.26	0.27	
Hour 24	Road 23	23	2300-0000	1.2112	0.3712	0.9212	1.1112	0.4398	0.8102	0.4402</						

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24-hour Emission Factors for

AEMD model (November)		Year 2038		NO _x Emission				NO _x Emission			
Row Name	Row ID	Month/turns	Month/turns	Month/turns	Month/turns	Month/turns	Month/turns	Month/turns	Month/turns	Month/turns	Month/turns
		g/kwh	g/kwh	g/kwh	g/kwh	g/kwh	g/kwh	g/kwh	g/kwh	g/kwh	g/kwh
Row 24	24	0000-0000	1.5761	3.0467	7.6257	1.4561	8.8267	7.0667	5.6261	1.1136	2.8356
Row 24	24	0000-1000	1.5966	3.4657	8.8647	1.4746	10.2037	8.0117	5.9461	1.2966	3.5461
Row 24	24	0000-1500	1.6468	3.8847	10.1027	1.4926	11.5867	9.1667	6.7661	1.3966	3.8461
Row 24	24	0100-1200	1.6167	3.3467	8.7667	1.5067	11.2167	8.6167	5.9661	1.2966	3.5461
Row 24	24	1200-1300	1.7467	3.5267	8.8767	1.6267	10.2867	8.2367	5.9461	1.2066	3.0166
Row 24	24	1300-1400	1.7467	3.5267	8.8767	1.6267	10.2867	8.2367	5.9461	1.2066	3.0166
Row 24	24	1400-1500	1.7467	3.5267	8.8767	1.6267	10.2867	8.2367	5.9461	1.2066	3.0166
Row 24	24	1500-1600	1.6167	3.3467	8.7667	1.5067	11.2167	8.6167	5.9661	1.2966	3.5461
Row 24	24	1600-1700	1.6167	3.3467	8.7667	1.5067	11.2167	8.6167	5.9661	1.2966	3.5461
Row 24	24	1700-1800	1.4467	2.8367	7.1067	1.3167	9.5667	5.1067	5.7661	1.1366	2.8466
Row 24	24	1800-1900	1.2667	2.4167	5.7167	1.1567	8.5667	4.5167	5.2367	1.1766	2.4766
Row 24	24	1900-2000	1.2667	2.4167	5.7167	1.1567	8.5667	4.5167	5.2367	1.1766	2.4766
Row 24	24	2000-2100	1.2667	2.4167	5.7167	1.1567	8.5667	4.5167	5.2367	1.1766	2.4766
Row 24	24	2100-2200	1.1167	2.1067	4.8467	1.0667	7.7267	3.9467	4.6967	1.0467	2.1367
Row 24	24	2200-2300	1.2667	2.4167	5.7167	1.1567	8.5667	4.5167	5.2367	1.1766	2.4766
Row 24	24	2300-2400	1.2667	2.4167	5.7167	1.1567	8.5667	4.5167	5.2367	1.1766	2.4766
Row 25	25	0000-0100	1.2766	2.5966	6.4266	1.1666	8.0766	4.2666	4.6166	1.0266	2.1466
Row 25	25	0100-0200	1.2766	2.5966	6.4266	1.1666	8.0766	4.2666	4.6166	1.0266	2.1466
Row 25	25	0200-0300	1.2766	2.5966	6.4266	1.1666	8.0766	4.2666	4.6166	1.0266	2.1466
Row 25	25	0300-0400	1.3166	2.7066	6.8766	1.2166	8.4966	4.5566	4.7366	1.1766	2.4966
Row 25	25	0400-0500	1.3166	2.7066	6.8766	1.2166	8.4966	4.5566	4.7366	1.1766	2.4966
Row 25	25	0500-0600	1.4766	3.0667	7.8367	1.3767	9.4067	5.1067	5.3067	1.3466	2.9466
Row 25	25	0600-0700	1.4766	3.0667	7.8367	1.3767	9.4067	5.1067	5.3067	1.3466	2.9466
Row 25	25	0700-0800	1.4766	3.0667	7.8367	1.3767	9.4067	5.1067	5.3067	1.3466	2.9466
Row 25	25	0800-0900	1.4766	3.0667	7.8367	1.3767	9.4067	5.1067	5.3067	1.3466	2.9466
Row 25	25	0900-1000	1.7866	3.1667	8.3766	1.4866	9.7266	5.2666	5.4866	1.4066	3.0866
Row 25	25	1000-1100	1.7866	3.1667	8.3766	1.4866	9.7266	5.2666	5.4866	1.4066	3.0866
Row 25	25	1100-1200	1.7866	3.1667	8.3766	1.4866	9.7266	5.2666	5.4866	1.4066	3.0866
Row 25	25	1200-1300	1.8566	3.4067	8.5467	1.5466	10.0567	5.2666	5.7166	1.4066	3.0866
Row 25	25	1300-1400	1.8566	3.4067	8.5467	1.5466	10.0567	5.2666	5.7166	1.4066	3.0866
Row 25	25	1400-1500	1.8566	3.4067	8.5467	1.5466	10.0567	5.2666	5.7166	1.4066	3.0866
Row 25	25	1500-1600	1.7866	3.1667	8.3766	1.4866	9.7266	5.2666	5.4866	1.4066	3.0866
Row 25	25	1600-1700	1.7866	3.1667	8.3766	1.4866	9.7266	5.2666	5.4866	1.4066	3.0866
Row 25	25	1700-1800	1.5466	2.6967	6.9367	1.3167	8.7167	4.6167	5.1266	1.1366	2.8466
Row 25	25	1800-1900	1.3667	2.3067	5.4267	1.1067	7.4267	3.6167	4.3166	1.0467	2.1367
Row 25	25	1900-2000	1.3667	2.3067	5.4267	1.1067	7.4267	3.6167	4.3166	1.0467	2.1367
Row 25	25	2000-2100	1.2466	2.1567	4.9267	1.1267	6.9267	3.6167	4.3166	1.0467	2.1367
Row 25	25	2100-2200	1.2466	2.1567	4.9267	1.1267	6.9267	3.6167	4.3166	1.0467	2.1367
Row 25	25	2200-2300	1.2466	2.1567	4.9267	1.1267	6.9267	3.6167	4.3166	1.0467	2.1367
Row 25	25	2300-2400	1.2466	2.1567	4.9267	1.1267	6.9267	3.6167	4.3166	1.0467	2.1367
Row 26	26	0000-0100	1.3466	2.8866	6.9866	1.2166	6.9866	4.0167	4.7166	1.0566	2.6866
Row 26	26	0100-0200	1.3466	2.8866	6.9866	1.2166	6.9866	4.0167	4.7166	1.0566	2.6866
Row 26	26	0200-0300	1.3466	2.8866	6.9866	1.2166	6.9866	4.0167	4.7166	1.0566	2.6866
Row 26	26	0300-0400	1.3266	2.9366	7.1066	1.2466	7.2566	4.0367	4.7366	1.0666	2.6966
Row 26	26	0400-0500	1.3466	2.8866	6.9866	1.2166	6.9866	4.0167	4.7166	1.0566	2.6866
Row 26	26	0500-0600	1.3466	2.8866	6.9866	1.2166	6.9866	4.0167	4.7166	1.0566	2.6866
Row 26	26	0600-0700	1.5466	3.1267	7.4267	1.3567	7.9267	4.1567	4.9166	1.1966	2.8466
Row 26	26	0700-0800	1.5466	3.1267	7.4267	1.3567	7.9267	4.1567	4.9166	1.1966	2.8466
Row 26	26	0800-0900	1.6766	3.4017	8.1516	1.5567	8.7267	4.4266	5.1766	1.3766	3.1566
Row 26	26	0900-1000	1.6766	3.4017	8.1516	1.5567	8.7267	4.4266	5.1766	1.3766	3.1566
Row 26	26	1000-1100	1.6766	3.4017	8.1516	1.5567	8.7267	4.4266	5.1766	1.3766	3.1566
Row 26	26	1100-1200	1.7766	3.4267	8.6666	1.6066	9.1167	4.5466	5.2966	1.5066	3.4566
Row 26	26	1200-1300	1.7766	3.4267	8.6666	1.6066	9.1167	4.5466	5.2966	1.5066	3.4566
Row 26	26	1300-1400	1.7766	3.4267	8.6666	1.6066	9.1167	4.5466	5.2966	1.5066	3.4566
Row 26	26	1400-1500	1.7766	3.4267	8.6666	1.6066	9.1167	4.5466	5.2966	1.5066	3.4566
Row 26	26	1500-1600	1.7766	3.4267	8.6666	1.6066	9.1167	4.5466	5.2966	1.5066	3.4566
Row 26	26	1600-1700	1.7766	3.4267	8.6666	1.6066	9.1167	4.5466	5.2966	1.5066	3.4566
Row 26	26	1700-1800	1.4266	3.3767	7.4416	1.3066	7.8366	4.0566	4.5866	1.1066	2.6866
Row 26	26	1800-1900	1.2466	2.3067	5.4267	1.1067	7.4267	3.6167	4.3166	1.0467	2.1367
Row 26	26	1900-2000	1.2466	2.3067	5.4267	1.1067	7.4267	3.6167	4.3166	1.0467	2.1367
Row 26	26	2000-2100	1.0666	2.1066	4.8767	9.5566	8.8066	3.8867	4.3766	1.0466	2.1066
Row 26	26	2100-2200	1.0767	2.1167	4.9267	9.5566	8.8066	3.8867	4.3766	1.0466	2.1066
Row 26	26	2200-2300	1.0666	2.1066	4.8767	9.5566	8.8066	3.8867	4.3766	1.0466	2.1066
Row 26	26	2300-2400	1.0666	2.1066	4.8767	9.5566	8.8066	3.8867	4.3766	1.0466	2.1066
Row 27	27	0000-0100	1.2366	2.8566	6.9166	1.1366	6.4066	3.8667	4.4966	1.1766	2.6766
Row 27	27	0100-0200	1.2366	2.8566	6.9166	1.1366	6.4066	3.8667	4.4966	1.1766	2.6766
Row 27	27	0200-0300	1.2366	2.8566	6.9166	1.1366	6.4066	3.8667	4.4966	1.1766	2.6766
Row 27	27	0300-0400	1.2366	2.8566	6.9166	1.1366	6.4066	3.8667	4.4966	1.1766	2.6766
Row 27	27	0400-0500	1.2366	2.8566	6.9166	1.1366	6.4066	3.8667	4.4966	1.1766	2.6766
Row 27	27	0500-0600	1.4466	3.3967	7.9367	1.3166	8.2267	4.7766	5.1866	1.4666	3.3967
Row 27	27	0600-0700	1.4466	3.3967	7.9367	1.3166	8.2267	4.7766	5.1866	1.4666	3.3967
Row 27	27	0700-0800	1.6266	3.1267	8.8116	1.4866	8.8967	4.8767	5.7866	1.5266	3.4466
Row 27	27	0800-0900	1.6266	3.1267	8.8116	1.4866	8.8967	4.8767	5.7866	1.5266	3.4466
Row 27	27	0900-1000	1.6266	3.1267	8.8116	1.4866	8.8967	4.8767	5.7866	1.5266	3.4466
Row 27	27	1000-1100	1.6266	3.1267	8.8116	1.4866	8.8967	4.8767	5.7866	1.5266	3.4466
Row 27	27	1100-1200	1.6266	3.1267	8.8116	1.4866	8.8967	4.8767	5.7866	1.5266	3.4466
Row 27	27	1200-1300	1.8466	3.4767	9.3566	1.7166	10.1066	5.2666	5.7466	1.5766	3.4866
Row 27	27	1300-1400	1.7766	3.4066	8.7466	1.4566	9.3766	4.6466	5.0966	1.5166	3.4066
Row 27	27	1400-1500	1.7766	3.4066	8.7466	1.4566	9.3766	4.6466	5.0966	1.5166	3.4066
Row 27	27	1500-1600	1.6266	3.1267	8.8116	1.4866	8.8967	4.8767	5.7866	1.5266	3.4466
Row 27	27	1600-1700	1.6266	3.1267	8.8116	1.4866	8.8967	4.8767	5.7866	1.5266	3.4466
Row 27	27	1700-1800	1.6266	3.1267	8.8116	1.4866	8.8967	4.8767	5.7866	1.5266	3.4466
Row 27	27	1800-1900	1.6266	3.1267	8.8116	1.4866	8.8967	4.8767	5.7866	1.5266	3.4466
Row 27	27	1900-2000	1.6266	3.1267	8.8116	1.4866	8.8967	4.8767	5.7866	1.5266	3.4466
Row 27	27	2000-2100	1.6266	3.1267	8.8116	1.4866	8.8967	4.8767	5.7866	1.5266	3.4466
Row 27	27	2100-2200	1.6266	3.1267	8.8116	1.4866	8.8967	4.8767	5.7866	1.5266	3.4466
Row 27	27	2200-2300	1.6266	3.1267	8.8116	1.4866	8.8967	4.8767	5.7866	1.5266	3.4466
Row 27	27	2300-2400	1.6266	3.1267	8.8116	1.4866	8.8967	4.8767	5.7866	1.5266	3.4466

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

AERMOD model (November)			Year 2038		NO ₂ Emission		PM ₁₀ Emission		PM _{2.5} Emission		NO ₂ Emission		PM ₁₀ Emission		PM _{2.5} Emission	
Road Name	Road ID	Hour	MonthlyHourlyRate		MonthlyHourlyRate		MonthlyHourlyRate		MonthlyHourlyRate		MonthlyHourlyRate		MonthlyHourlyRate		MonthlyHourlyRate	
			g/min/hour	g/min/hour	g/min/hour	g/min/hour	g/min/hour	g/min/hour	g/min/hour	g/min/hour	g/min/hour	g/min/hour	g/min/hour	g/min/hour	g/min/hour	g/min/hour
Road 27	27	1600-1700	1.74E-01	4.43E-07	1.36E-06	1.61E-01	4.16E-07	1.26E-06	6.17E-01	1.57E-06	4.84E-06	5.71E-01	1.46E-06	4.44E-06	5.51E-01	1.38E-06
Road 27	27	1700-1800	1.53E-01	3.51E-07	1.08E-06	1.40E-01	3.22E-07	9.67E-07	6.08E-01	1.40E-06	4.31E-06	5.57E-01	1.28E-06	4.31E-06	5.57E-01	1.28E-06
Road 27	27	1800-1900	1.53E-01	3.51E-07	1.08E-06	1.40E-01	3.22E-07	9.67E-07	6.08E-01	1.40E-06	4.31E-06	5.57E-01	1.28E-06	4.31E-06	5.57E-01	1.28E-06
Road 27	27	1900-2000	1.26E-01	3.03E-07	3.99E-07	1.14E-01	1.18E-07	3.62E-07	5.05E-01	1.55E-07	5.56E-06	5.51E-01	4.66E-07	5.51E-01	4.66E-07	5.51E-01
Road 27	27	2000-2100	1.22E-01	3.00E-07	3.59E-07	1.10E-01	1.09E-07	3.08E-07	5.01E-01	1.41E-07	2.76E-06	5.53E-01	3.72E-07	5.53E-01	3.72E-07	5.53E-01
Road 27	27	2100-2200	1.10E-01	2.72E-07	3.18E-07	1.02E-01	1.02E-07	2.72E-07	4.54E-01	1.26E-07	2.44E-06	5.53E-01	3.38E-07	5.53E-01	3.38E-07	5.53E-01
Road 27	27	2200-2300	1.30E-01	3.93E-06	2.95E-07	1.20E-01	8.79E-07	2.78E-07	4.74E-01	3.47E-07	4.07E-06	5.71E-01	4.33E-07	5.71E-01	4.33E-07	5.71E-01
Road 27	27	2300-0000	1.32E-01	3.87E-06	2.45E-07	1.21E-01	7.23E-07	2.25E-07	4.78E-01	2.88E-07	8.88E-07	5.38E-01	2.65E-07	5.38E-01	2.65E-07	5.38E-01
Road 28	28	0000-0100	1.32E-01	3.87E-06	2.45E-07	1.21E-01	7.23E-07	2.25E-07	4.78E-01	2.88E-07	8.88E-07	5.38E-01	2.65E-07	5.38E-01	2.65E-07	5.38E-01
Road 28	28	0100-0200	1.23E-01	2.77E-06	4.98E-06	1.14E-01	8.11E-06	4.68E-06	5.87E-01	4.14E-07	3.37E-06	5.38E-01	2.65E-07	5.38E-01	2.65E-07	5.38E-01
Road 28	28	0200-0300	1.35E-01	4.12E-06	4.04E-06	1.25E-01	6.66E-06	3.74E-06	6.12E-01	4.24E-07	1.84E-05	5.53E-01	2.92E-07	5.53E-01	2.92E-07	5.53E-01
Road 28	28	0300-0400	1.47E-01	6.25E-06	3.55E-06	1.36E-01	5.76E-06	3.27E-06	6.14E-01	7.75E-07	5.56E-06	5.71E-01	2.46E-07	5.71E-01	2.46E-07	5.71E-01
Road 28	28	0400-0500	1.47E-01	6.25E-06	3.55E-06	1.36E-01	5.76E-06	3.27E-06	6.14E-01	7.75E-07	5.56E-06	5.71E-01	2.46E-07	5.71E-01	2.46E-07	5.71E-01
Road 28	28	0500-0600	1.52E-01	6.42E-06	7.42E-06	1.41E-01	6.19E-06	6.51E-06	6.78E-01	8.47E-07	1.10E-05	6.09E-01	4.94E-07	6.09E-01	4.94E-07	6.09E-01
Road 28	28	0600-0700	1.53E-01	2.61E-07	1.51E-05	1.42E-01	2.48E-07	1.41E-05	8.88E-01	6.47E-06	6.72E-06	5.53E-01	1.08E-06	5.53E-01	1.08E-06	5.53E-01
Road 28	28	0700-0800	1.53E-01	2.61E-07	1.51E-05	1.42E-01	2.48E-07	1.41E-05	8.88E-01	6.47E-06	6.72E-06	5.53E-01	1.08E-06	5.53E-01	1.08E-06	5.53E-01
Road 28	28	0800-0900	1.61E-01	6.76E-07	3.78E-05	1.48E-01	6.16E-07	3.45E-07	6.78E-01	2.61E-06	1.95E-04	6.16E-02	2.55E-01	6.16E-02	2.55E-01	6.16E-02
Road 28	28	0900-1000	1.84E-01	6.75E-07	3.83E-05	1.71E-01	6.27E-06	3.56E-06	7.58E-01	2.67E-06	1.97E-04	6.57E-02	2.54E-01	6.57E-02	2.54E-01	6.57E-02
Road 28	28	1000-1100	1.84E-01	6.75E-07	3.83E-05	1.71E-01	6.27E-06	3.56E-06	7.58E-01	2.67E-06	1.97E-04	6.57E-02	2.54E-01	6.57E-02	2.54E-01	6.57E-02
Road 28	28	1100-1200	2.01E-01	6.25E-07	3.54E-05	1.86E-01	5.80E-07	3.26E-07	8.78E-01	2.45E-06	3.96E-04	7.24E-02	2.25E-01	7.24E-02	2.25E-01	7.24E-02
Road 28	28	1200-1300	1.87E-01	4.24E-07	2.54E-05	1.78E-01	4.18E-07	2.38E-07	7.23E-01	1.73E-06	3.80E-05	6.74E-02	1.61E-01	6.74E-02	1.61E-01	6.74E-02
Road 28	28	1300-1400	1.87E-01	4.24E-07	2.54E-05	1.78E-01	4.18E-07	2.38E-07	7.23E-01	1.73E-06	3.80E-05	6.74E-02	1.61E-01	6.74E-02	1.61E-01	6.74E-02
Road 28	28	1400-1500	1.88E-01	4.96E-07	2.78E-05	1.75E-06	4.55E-07	2.58E-05	7.38E-01	1.92E-06	1.06E-04	6.82E-02	1.77E-01	6.82E-02	1.77E-01	6.82E-02
Road 28	28	1500-1600	1.77E-01	4.66E-07	2.65E-05	1.62E-01	4.32E-07	2.45E-05	7.33E-01	1.95E-06	1.14E-04	6.73E-02	1.79E-01	6.73E-02	1.79E-01	6.73E-02
Road 28	28	1600-1700	1.50E-01	5.02E-07	2.96E-05	1.47E-01	4.65E-07	2.54E-05	7.03E-01	2.05E-06	1.44E-04	6.54E-02	1.72E-01	6.54E-02	1.72E-01	6.54E-02
Road 28	28	1700-1800	1.35E-01	4.21E-07	2.39E-05	1.24E-01	3.94E-07	2.18E-05	6.21E-01	1.92E-06	1.05E-04	5.57E-02	1.72E-01	5.57E-02	1.72E-01	5.57E-02
Road 28	28	1800-1900	1.03E-01	3.36E-07	1.91E-05	9.29E-03	3.03E-07	1.07E-05	4.89E-01	1.57E-06	8.89E-05	4.22E-02	1.38E-01	4.22E-02	1.38E-01	4.22E-02
Road 28	28	1900-2000	8.15E-01	3.36E-07	1.91E-05	9.29E-03	3.03E-07	1.07E-05	4.89E-01	1.57E-06	8.89E-05	4.22E-02	1.38E-01	4.22E-02	1.38E-01	4.22E-02
Road 28	28	2000-2100	8.63E-01	1.15E-07	9.75E-05	7.75E-03	1.54E-07	6.74E-06	5.06E-01	1.00E-06	7.00E-05	4.39E-02	8.71E-01	4.39E-02	8.71E-01	4.39E-02
Road 28	28	2100-2200	7.84E-01	1.95E-07	8.80E-05	7.13E-03	1.41E-07	7.86E-06	4.89E-01	8.66E-07	4.96E-05	4.30E-02	6.50E-01	4.30E-02	6.50E-01	4.30E-02
Road 28	28	2200-2300	7.80E-01	1.95E-07	8.47E-05	6.98E-03	1.36E-07	7.69E-06	4.89E-01	8.28E-07	4.65E-05	4.26E-02	6.15E-01	4.26E-02	6.15E-01	4.26E-02
Road 28	28	2300-0000	8.66E-01	1.95E-07	8.47E-05	6.98E-03	1.36E-07	7.69E-06	4.89E-01	8.28E-07	4.65E-05	4.26E-02	6.15E-01	4.26E-02	6.15E-01	4.26E-02
Road 29	29	0000-0100	7.18E-01	6.51E-06	4.50E-03	6.48E-01	5.89E-06	4.08E-06	4.27E-02	1.28E-07	2.96E-07	4.07E-01	6.95E-07	4.07E-01	6.95E-07	4.07E-01
Road 29	29	0100-0200	8.22E-01	6.08E-06	3.37E-06	3.87E-03	4.48E-06	3.18E-06	4.92E-02	1.02E-07	2.02E-06	3.68E-01	2.93E-07	3.68E-01	2.93E-07	3.68E-01
Road 29	29	0200-0300	8.22E-01	6.08E-06	3.37E-06	3.87E-03	4.48E-06	3.18E-06	4.92E-02	1.02E-07	2.02E-06	3.68E-01	2.93E-07	3.68E-01	2.93E-07	3.68E-01
Road 29	29	0300-0400	1.05E-01	3.64E-08	2.51E-06	9.61E-03	3.34E-08	2.31E-06	5.49E-02	1.90E-07	1.31E-05	8.00E-01	1.67E-01	8.00E-01	1.67E-01	8.00E-01
Road 29	29	0400-0500	1.08E-01	4.03E-08	2.83E-06	1.00E-01	3.83E-08	2.53E-06	5.56E-02	2.11E-07	1.45E-05	4.98E-01	1.89E-01	4.98E-01	1.89E-01	4.98E-01
Road 29	29	0500-0600	1.08E-01	4.03E-08	2.83E-06	1.00E-01	3.83E-08	2.53E-06	5.56E-02	2.11E-07	1.45E-05	4.98E-01	1.89E-01	4.98E-01	1.89E-01	4.98E-01
Road 29	29	0600-0700	1.02E-01	1.41E-07	9.70E-06	9.52E-03	1.31E-07	9.01E-06	5.61E-02	6.66E-07	5.31E-05	5.01E-02	6.88E-01	5.01E-02	6.88E-01	5.01E-02
Road 29	29	0700-0800	1.15E-01	3.22E-07	2.22E-05	1.08E-06	2.96E-07	2.04E-06	5.91E-02	1.65E-06	1.44E-04	5.27E-02	1.46E-01	5.27E-02	1.46E-01	5.27E-02
Road 29	29	0800-0900	1.15E-01	3.22E-07	2.22E-05	1.08E-06	2.96E-07	2.04E-06	5.91E-02	1.65E-06	1.44E-04	5.27E-02	1.46E-01	5.27E-02	1.46E-01	5.27E-02
Road 29	29	0900-1000	1.23E-01	3.25E-07	2.25E-05	1.14E-02	3.02E-07	7.06E-07	5.76E-02	1.52E-06	1.05E-04	5.72E-02	1.38E-01	5.72E-02	1.38E-01	5.72E-02
Road 29	29	1000-1100	1.38E-01	3.18E-07	2.19E-05	1.23E-02	2.94E-07	6.20E-06	6.14E-02	1.40E-06	6.88E-05	5.88E-02	1.27E-01	5.88E-02	1.27E-01	5.88E-02
Road 29	29	1100-1200	1.38E-01	3.18E-07	2.19E-05	1.23E-02	2.94E-07	6.20E-06	6.14E-02	1.40E-06	6.88E-05	5.88E-02	1.27E-01	5.88E-02	1.27E-01	5.88E-02
Road 29	29	1200-1300	2.24E-02	4.59E-07	3.05E-05	2.19E-01	4.14E-07	2.86E-07	7.97E-01	5.17E-06	1.08E-04	4.5E-02	1.46E-01	4.5E-02	1.46E-01	4.5E-02
Road 29	29	1300-1400	2.24E-02	4.59E-07	3.11E-05	2.08E-02	4.27E-07	2.94E-06	8.19E-01	1.66E-06	1.16E-04	5.88E-02	1.46E-01	5.88E-02	1.46E-01	5.88E-02
Road 29	29	1400-1500	2.24E-02	4.59E-07	3.11E-05	2.08E-02	4.27E-07	2.94E-06	8.19E-01	1.66E-06	1.16E-04	5.88E-02	1.46E-01	5.88E-02	1.46E-01	5.88E-02
Road 29	29	1500-1600	2.08E-02	4.59E-07	3.15E-05	1.92E-02	4.27E-07	2.92E-06	8.01E-01	1.76E-06	2.10E-04	4.62E-02	1.56E-01	4.62E-02	1.56E-01	4.62E-02
Road 29	29	1600-1700	2.12E-02	4.81E-07	3.33E-05	1.98E-02	4.44E-07	3.08E-05	7.67E-01	1.74E-06	1.20E-04	7.06E-02	1.60E-01	7.06E-02	1.60E-01	7.06E-02
Road 29	29	1700-1800	1.66E-02	4.12E-07	2.83E-05	1.54E-02	3.75E-07	2.59E-05	6.87E-01	1.68E-06	1.16E-04	6.20E-02	1.51E-01	6.20E-02	1.51E-01	6.20E-02
Road 29	29	1800-1900	1.66E-02	4.12E-07	2.83E-05	1.54E-02	3.75E-07	2.59E-05	6.87E-01	1.68E-06	1.16E-04	6.20E-02	1.51E-01	6.20E-02	1.51E-01	6.20E-02
Road 29	29	1900-2000	1.16E-02	2.22E-07	1.53E-05	1.04E-02	2.09E-07	1.39E-05	5.12E-01	8.81E-07	8.77E-05	4.51E-02	8.65E-01	4.51E-02	8.65E-01	4.51E-02
Road 29	29	2000-2100	1.15E-02	1.74E-07	1.40E-05	1.04E-02	1.57E-07	1.08E-05	5.45E-01	8.26E-07	5.67E-05	4.78E-02	7.24E-01	4.78E-02	7.24E-01	4.78E-02
Road 29	29	2100-2200	1.15E-02	1.74E-07	1.40E-05	1.04E-02	1.57E-07	1.08E-05	5.45E-01	8.26E-07	5.67E-05	4.78E-02	7.24E-01	4.78E-02	7.24E-01	4.78E-02
Road 29	29	2200-2300	1.10E-02	1.59E-07	1.10E-05	1.01E-02	1.49E-07	1.00E-05	5.26E-01	5.90E-07	5.28E-05	4.67E-02	6.73E-01	4.67E-02	6.73E-01	4.67E-02
Road 29	29	2300-0000	1.19E-03	1.30E-07	8.89E-06	1.09E-01	1.19E-07	8.21E-06								

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

AERMOD model (November)			Year 2038		NO _x Emission		Monthlyhourlyaverage		Monthlyhourlypeak		NO Emission		Monthlyhourly	
Row Name	Read ID	Hour	g/kwh	g/kwh	tonne/hour	g/kwh	g/kwh	g/kwh	g/kwh	g/kwh	tonne/hour	g/kwh	g/kwh	g/kwh
Read 31	31	0000-0100	1.84e-02	3.99e-06	1.54e-07	1.67e-02	3.95e-08	3.21e-07	7.00e-02	1.56e-07	1.34e-06	6.26e-02	1.33e-07	
Read 31	31	0100-0200	2.15e-02	2.22e-08	8.89e-07	2.00e-02	2.89e-08	2.67e-07	7.59e-02	1.13e-07	1.05e-06	6.98e-02	1.03e-07	
Read 31	31	0200-0300	2.15e-02	2.22e-08	8.89e-07	2.00e-02	2.89e-08	2.67e-07	7.59e-02	1.13e-07	1.05e-06	6.98e-02	1.03e-07	
Read 31	31	0300-0400	2.78e-02	2.68e-08	2.78e-07	2.53e-02	2.47e-08	2.20e-07	8.71e-02	8.49e-08	7.78e-07	7.88e-02	6.88e-07	
Read 31	31	0400-0500	2.70e-02	2.88e-07	5.57e-07	2.52e-02	2.48e-08	2.40e-07	8.69e-02	9.24e-08	8.76e-07	7.99e-02	6.84e-07	
Read 31	31	0500-0600	2.70e-02	2.88e-07	5.57e-07	2.52e-02	2.48e-08	2.40e-07	8.69e-02	9.24e-08	8.76e-07	7.99e-02	6.84e-07	
Read 31	31	0600-0700	2.08e-02	2.72e-08	6.54e-07	1.93e-02	6.73e-08	6.01e-07	7.97e-02	2.78e-07	2.48e-07	7.21e-02	7.52e-07	
Read 31	31	0700-0800	2.24e-02	1.62e-07	1.62e-06	2.24e-02	1.69e-07	1.51e-06	8.55e-02	6.49e-07	5.76e-07	7.76e-02	5.89e-07	
Read 31	31	0800-0900	2.24e-02	1.62e-07	1.62e-06	2.24e-02	1.69e-07	1.51e-06	8.55e-02	6.49e-07	5.76e-07	7.76e-02	5.89e-07	
Read 31	31	0900-1000	2.56e-02	2.04e-07	8.26e-06	2.37e-02	1.98e-07	1.69e-06	8.94e-02	7.12e-07	6.08e-06	8.16e-02	5.83e-07	
Read 31	31	1000-1100	2.82e-02	2.07e-07	1.89e-06	2.61e-02	1.91e-07	1.71e-06	9.47e-02	6.89e-07	5.76e-06	8.66e-02	6.33e-07	
Read 31	31	1100-1200	2.82e-02	1.94e-07	1.74e-06	2.60e-02	1.81e-07	1.61e-06	9.37e-02	6.52e-07	5.65e-06	8.60e-02	6.27e-07	
Read 31	31	1200-1300	2.82e-02	1.94e-07	1.74e-06	2.60e-02	1.81e-07	1.61e-06	9.37e-02	6.52e-07	5.65e-06	8.60e-02	6.27e-07	
Read 31	31	1300-1400	2.62e-02	1.52e-07	1.39e-06	2.44e-02	1.42e-07	1.27e-06	8.60e-02	5.01e-07	4.47e-06	8.06e-02	5.67e-07	
Read 31	31	1400-1500	2.61e-02	1.52e-07	1.41e-06	2.42e-02	1.44e-07	1.31e-06	8.57e-02	5.02e-07	4.47e-06	8.06e-02	5.67e-07	
Read 31	31	1500-1600	2.61e-02	1.52e-07	1.39e-06	2.44e-02	1.42e-07	1.27e-06	8.60e-02	5.01e-07	4.47e-06	8.06e-02	5.67e-07	
Read 31	31	1600-1700	2.49e-02	1.60e-07	1.43e-06	2.30e-02	1.29e-07	1.18e-06	7.96e-02	5.12e-07	4.57e-06	8.62e-02	6.04e-07	
Read 31	31	1700-1800	2.49e-02	1.60e-07	1.43e-06	2.30e-02	1.29e-07	1.18e-06	7.96e-02	5.12e-07	4.57e-06	8.62e-02	6.04e-07	
Read 31	31	1800-1900	2.15e-02	1.61e-06	5.45e-07	1.05e-02	5.50e-08	4.91e-07	5.13e-02	2.68e-07	2.40e-06	4.50e-02	2.36e-07	
Read 31	31	1900-2000	1.21e-02	5.03e-08	4.49e-07	1.09e-02	4.50e-08	4.03e-07	5.00e-02	2.32e-07	2.07e-06	4.82e-02	2.07e-07	
Read 31	31	2000-2100	1.12e-02	5.03e-08	4.49e-07	1.09e-02	4.50e-08	4.03e-07	5.00e-02	2.32e-07	2.07e-06	4.82e-02	2.07e-07	
Read 31	31	2100-2200	1.15e-02	4.61e-08	1.12e-07	1.09e-02	4.50e-08	3.74e-07	5.13e-02	2.16e-07	1.93e-06	4.74e-02	1.91e-07	
Read 31	31	2200-2300	1.34e-02	4.60e-08	1.64e-07	1.21e-02	4.69e-08	3.30e-07	5.84e-02	1.76e-07	1.59e-06	5.12e-02	1.54e-07	
Read 31	31	2300-0000	1.34e-02	4.60e-08	1.64e-07	1.21e-02	4.69e-08	3.30e-07	5.84e-02	1.76e-07	1.59e-06	5.12e-02	1.54e-07	
Read 32	32	0000-0100	1.08e-02	2.96e-08	6.94e-08	6.94e-02	6.49e-08	4.29e-06	5.58e-02	3.56e-07	2.42e-07	5.01e-02	3.24e-07	
Read 32	32	0200-0300	1.15e-02	5.52e-08	6.66e-06	1.06e-02	6.04e-08	3.37e-06	5.84e-02	2.76e-07	1.80e-06	5.19e-02	3.48e-07	
Read 32	32	0300-0400	1.15e-02	5.52e-08	6.66e-06	1.06e-02	6.04e-08	3.37e-06	5.84e-02	2.76e-07	1.80e-06	5.19e-02	3.48e-07	
Read 32	32	0400-0500	1.30e-02	5.50e-08	6.66e-06	1.21e-02	5.11e-08	3.93e-06	6.27e-02	2.63e-07	1.75e-06	5.63e-02	3.38e-07	
Read 32	32	0500-0600	1.38e-02	1.02e-07	6.78e-06	1.28e-02	4.94e-08	6.79e-06	6.42e-02	4.76e-07	3.18e-06	5.83e-02	4.31e-07	
Read 32	32	0600-0700	1.48e-02	2.33e-07	1.55e-05	1.29e-02	2.18e-07	1.43e-05	6.72e-02	1.08e-06	1.74e-06	6.01e-02	6.02e-07	
Read 32	32	0700-0800	1.48e-02	2.33e-07	1.55e-05	1.29e-02	2.18e-07	1.43e-05	6.72e-02	1.08e-06	1.74e-06	6.01e-02	6.02e-07	
Read 32	32	0800-0900	1.48e-02	5.62e-07	6.78e-06	1.36e-02	5.11e-07	3.42e-05	6.50e-02	2.45e-06	1.63e-06	5.81e-02	5.02e-06	
Read 32	32	0900-1000	1.71e-02	5.67e-07	5.77e-05	1.58e-02	5.72e-07	4.39e-05	7.24e-02	2.41e-06	1.61e-06	6.98e-02	2.19e-06	
Read 32	32	1000-1100	1.71e-02	5.67e-07	5.77e-05	1.58e-02	5.72e-07	4.39e-05	7.24e-02	2.41e-06	1.61e-06	6.98e-02	2.19e-06	
Read 32	32	1100-1200	1.68e-02	5.28e-07	4.47e-06	1.73e-02	4.85e-07	3.22e-05	7.95e-02	2.13e-06	1.48e-06	6.98e-02	1.96e-06	
Read 32	32	1200-1300	1.72e-02	5.67e-07	2.43e-06	1.61e-02	3.42e-07	2.27e-05	8.68e-02	1.49e-06	9.85e-06	6.68e-02	1.68e-06	
Read 32	32	1300-1400	1.71e-02	5.67e-07	1.51e-06	1.58e-02	3.42e-07	2.27e-05	8.68e-02	1.49e-06	9.85e-06	6.68e-02	1.68e-06	
Read 32	32	1400-1500	1.72e-02	1.06e-07	2.70e-06	1.61e-02	3.79e-07	2.49e-05	7.15e-02	1.67e-06	1.11e-06	6.51e-02	1.53e-06	
Read 32	32	1500-1600	1.61e-02	8.95e-07	6.07e-06	1.49e-02	3.55e-07	2.38e-05	7.08e-02	1.69e-06	1.15e-06	6.64e-02	1.55e-06	
Read 32	32	1600-1700	1.68e-02	1.02e-07	2.70e-06	1.58e-02	3.79e-07	2.49e-05	7.15e-02	1.67e-06	1.11e-06	6.51e-02	1.53e-06	
Read 32	32	1700-1800	1.34e-02	3.44e-07	2.28e-05	1.13e-02	3.13e-07	2.03e-05	6.00e-02	1.67e-06	1.14e-06	5.35e-02	1.46e-06	
Read 32	32	1800-1900	1.93e-02	6.66e-07	7.76e-06	8.15e-02	1.20e-07	1.40e-05	4.53e-02	1.33e-06	8.86e-06	4.48e-02	1.38e-06	
Read 32	32	1900-2000	1.93e-02	6.66e-07	7.76e-06	8.15e-02	1.20e-07	1.40e-05	4.53e-02	1.33e-06	8.86e-06	4.48e-02	1.38e-06	
Read 32	32	2000-2100	8.04e-03	4.48e-07	6.68e-06	7.19e-03	1.30e-07	8.65e-05	4.97e-02	9.01e-07	5.89e-05	4.28e-02	7.76e-07	
Read 32	32	2100-2200	7.23e-03	3.31e-07	8.67e-06	6.54e-03	1.18e-07	7.84e-05	4.80e-02	8.86e-07	5.76e-05	4.19e-02	7.57e-07	
Read 32	32	2200-2300	7.23e-03	3.31e-07	8.67e-06	6.54e-03	1.18e-07	7.84e-05	4.80e-02	8.86e-07	5.76e-05	4.19e-02	7.57e-07	
Read 32	32	2300-0000	7.90e-03	4.04e-07	8.96e-06	7.12e-03	9.34e-08	6.70e-05	4.99e-02	6.90e-07	4.29e-05	4.31e-02	5.66e-07	
Read 33	33	0000-0100	1.28e-02	2.42e-07	1.89e-06	1.15e-02	1.12e-07	1.68e-06	6.21e-02	6.02e-07	6.09e-06	5.44e-02	5.27e-07	
Read 33	33	0100-0200	1.48e-02	1.64e-08	4.45e-06	1.37e-02	6.91e-08	1.24e-06	6.59e-02	4.29e-07	6.46e-06	5.94e-02	1.81e-07	
Read 33	33	0200-0300	1.48e-02	1.64e-08	4.45e-06	1.37e-02	6.91e-08	1.24e-06	6.59e-02	4.29e-07	6.46e-06	5.94e-02	1.81e-07	
Read 33	33	0300-0400	1.89e-02	7.58e-08	1.44e-06	1.73e-02	6.19e-08	1.05e-06	7.44e-02	3.01e-07	4.52e-06	6.68e-02	2.69e-07	
Read 33	33	0400-0500	1.89e-02	8.37e-08	1.29e-06	1.77e-02	7.76e-08	1.17e-06	7.57e-02	3.34e-07	5.05e-06	6.89e-02	3.04e-07	
Read 33	33	0500-0600	1.89e-02	7.58e-08	1.44e-06	1.73e-02	6.19e-08	1.05e-06	7.44e-02	3.01e-07	4.52e-06	6.68e-02	2.69e-07	
Read 33	33	0600-0700	1.65e-02	2.57e-07	8.68e-06	1.52e-02	2.37e-07	3.56e-06	7.48e-02	1.19e-06	1.79e-07	6.71e-02	1.04e-06	
Read 33	33	0700-0800	1.68e-02	6.09e-07	9.12e-06	1.72e-02	5.99e-07	8.41e-06	7.87e-02	2.56e-06	3.68e-06	7.09e-02	2.19e-06	
Read 33	33	0800-0900	1.68e-02	6.09e-07	9.12e-06	1.72e-02	5.99e-07	8.41e-06	7.87e-02	2.56e-06	3.68e-06	7.09e-02	2.19e-06	
Read 33	33	0900-1000	2.04e-02	6.82e-07	1.04e-06	1.88e-02	6.31e-07	9.50e-06	8.33e-02	2.78e-06	4.18e-05	7.59e-02	2.53e-06	
Read 33	33	1000-1100	2.29e-02	6.89e-07	1.03e-06	2.12e-02	6.37e-07	9.58e-06	8.62e-02	2.65e-06	3.96e-05	8.02e-02	2.64e-06	
Read 33	33	1100-1200	2.36e-02	6.88e-07	1.03e-06	2.12e-02	6.37e-07	9.58e-06	8.62e-02	2.65e-06	3.96e-05	8.02e-02	2.64e-06	
Read 33	33	1200-1300	2.69e-02	7.41e-07	1.11e-05	2.51e-02	6.92e-07	1.04e-05	9.67e-02	2.65e-06	4.01e-05	9.01e-02	2.48e-06	
Read 33	33	1300-1400	2.69e-02	7.41e-07	1.11e-05	2.51e-02	6.92e-07	1.04e-05	9.67e-02	2.65e-06	4.01e-05	9.01e-02	2.48e-06	
Read 33	33	1400-1500	2.74e-02	7.66e-07	1.12e-05	2.23e-02	7.09e-07	1.07e-05	9.76e-02	3.00e-06	4.52e-05	8.96e-02	2.79e-06	
Read 33	33	1500-1600	2.53e-02	9.47e-07	1.19e-05	2.34e-02	7.31e-07	1.10e-05	9.36e-02	2.96e-06	4.46e-05	8.59e-02	2.69e-06	
Read 33	33	1600-1700	2.53e-02	9.47e-07	1.19e-05	2.34e-02	7.31e-07	1.10e-05	9.36e-02	2.96e-06	4.46e-05	8.59e-02	2.69e-06	
Read 33	33	1700-1800	1.27e-02	1.05e-07	5.08e-06	1.43e-02	2.48e-07	6.86e-06	6.62e-02	2.11e-06	3.17e-06	5.92e-02	1.88e-06	
Read 33	33	1800-1900	1.27e-02	1.05e-07	5.08e-06	1.43e-02	2.48e-07	6.86e-06	6.62e-02	2.11e-06	3.17e-06	5.92e-02	1.88e-06	
Read 33	33	1900-2000	1.58e-02	2.98e-07	4.57e-06	1.14e-02	2.69e-07	4.04e-06	6.07e-02	1.47e-06	2.14e-06	5.34e-02	1.29e-06	
Read 33	33	2000-2100	1.27											

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

AERMOD model (November)		Year 2038		NO _x Emission		NO _x Emission		NO _x Emission		NO _x Emission				
hour	hour	Road ID	Road ID	Monthly/mg/hour	Monthly/mg/hour	Monthly/mg/hour	Monthly/mg/hour	Monthly/mg/hour	Monthly/mg/hour	Monthly/mg/hour	Monthly/mg/hour			
hour	hour	Road Name	Road Name	g/mph	g/mph	g/mph	g/mph	g/mph	g/mph	g/mph	g/mph			
00	00	Road 34	0800-0800	1.0682	7.8552	1.7416	9.9863	2.6137	6.8276	5.3062	1.4006	3.6665	4.6662	1.2
01	01	Road 34	0900-1000	1.2256	2.6447	6.9606	1.1362	2.4467	6.9765	9.7762	1.9256	3.2765	5.1862	1.1
02	02	Road 34	1000-1100	1.3678	2.3367	6.7236	1.1362	2.4467	6.9765	9.7762	1.9256	3.2765	5.1862	1.1
03	03	Road 34	1100-1200	1.3232	2.5367	6.1062	1.2167	2.1657	6.5676	6.0467	1.0256	2.9676	5.5522	0.97
04	04	Road 34	1200-1300	2.2986	3.2967	8.5866	2.2136	0.6067	8.0267	8.0267	1.1256	3.0267	7.4762	1.00
05	05	Road 34	1300-1400	2.2986	3.2967	8.5866	2.2136	0.6067	8.0267	8.0267	1.1256	3.0267	7.4762	1.00
06	06	Road 34	1400-1500	2.3267	3.5667	9.3667	2.1067	3.3067	8.8367	8.1567	1.2966	3.3467	7.5727	0.91
07	07	Road 34	1500-1600	2.1267	3.3967	8.7966	1.9562	4.3167	8.1867	8.0667	1.3066	3.3967	7.4112	1.01
08	08	Road 34	1600-1700	2.2667	3.3967	8.7966	1.9562	4.3167	8.1867	8.0667	1.3066	3.3967	7.4112	1.01
09	09	Road 34	1700-1800	2.1067	3.3967	8.7966	1.9562	4.3167	8.1867	8.0667	1.3066	3.3967	7.4112	1.01
10	10	Road 34	1800-1900	1.3562	2.4367	6.3667	1.2267	2.2067	6.7567	8.4567	0.9267	2.5767	4.8867	0.80
11	11	Road 34	1900-2000	1.1762	1.6467	4.3067	1.0667	4.4867	3.7866	5.1567	1.7067	1.8967	4.0667	0.63
12	12	Road 34	2000-2100	1.1762	1.6467	4.3067	1.0667	4.4867	3.7866	5.1567	1.7067	1.8967	4.0667	0.63
13	13	Road 34	2100-2200	1.1162	1.2967	3.1067	1.0167	0.9067	2.8667	5.4167	5.8567	1.5367	4.0767	0.51
14	14	Road 34	2200-2300	1.1162	1.1667	3.0067	1.0167	0.8767	2.8166	5.3067	5.8567	1.4967	4.0667	0.49
15	15	Road 34	2300-2400	1.2267	1.4367	2.5566	1.0167	0.8867	2.8166	5.3067	5.8567	1.4967	4.0667	0.49
16	16	Road 35	0000-0100	3.6967	4.3367	10.0267	3.3467	9.5967	8.9567	1.1667	1.3667	3.3167	1.0167	1.21
17	17	Road 35	0100-0200	4.9467	3.9467	9.5767	4.2767	3.6567	8.9867	1.3267	1.3167	2.7467	1.2116	1.00
18	18	Road 35	0200-0300	4.9467	3.9467	9.5767	4.2767	3.6567	8.9867	1.3267	1.3167	2.7467	1.2116	1.00
19	19	Road 35	0300-0400	4.6067	3.6767	8.9467	5.5967	3.3967	8.2367	1.5967	1.6267	2.8467	1.4567	0.87
20	20	Road 35	0400-0500	5.8767	3.7867	9.8467	4.5367	3.6967	8.9567	1.5767	1.0167	2.4567	1.9467	0.93
21	21	Road 35	0500-0600	4.7867	4.7867	10.4767	4.1367	4.1367	8.4667	1.3167	1.4667	3.8067	1.4167	1.00
22	22	Road 35	0600-0700	3.7267	6.4767	10.5767	3.4467	5.9967	6.4667	1.2667	1.2367	2.5667	1.1567	2.00
23	23	Road 35	0700-0800	3.5267	2.1567	5.2367	4.9967	1.9567	4.8367	1.5967	1.6767	1.5567	1.4567	0.88
24	24	Road 35	0800-0900	2.4367	5.7667	10.5767	5.2767	2.3567	7.2567	1.5567	1.5567	1.4167	1.4167	0.83
25	25	Road 35	0900-1000	2.5467	2.2967	5.5467	5.2767	2.1167	5.1267	1.6767	1.6867	1.6067	1.5567	0.62
26	26	Road 35	1000-1100	6.2967	2.2967	5.5467	5.2767	2.1267	5.1567	1.7967	1.6167	1.6167	1.6167	0.63
27	27	Road 35	1100-1200	5.2167	2.2967	5.5467	5.2767	2.1267	5.1567	1.7967	1.6167	1.6167	1.6167	0.63
28	28	Road 35	1200-1300	5.9367	1.6367	3.9667	6.4867	1.5267	3.7167	1.7867	1.9167	1.0267	1.0667	3.99
29	29	Road 35	1300-1400	6.8467	1.6467	3.9867	6.3967	1.5367	3.7267	1.7967	1.4267	1.0467	1.0676	3.91
30	30	Road 35	1400-1500	6.9867	1.7467	4.2167	6.4867	1.6067	3.9067	1.9267	1.45267	1.1106	1.0667	4.41
31	31	Road 35	1500-1600	6.7767	1.4567	4.1867	6.4867	1.5767	3.8967	1.9267	1.45267	1.1106	1.0667	4.41
32	32	Road 35	1600-1700	6.9867	1.7467	4.2167	6.4867	1.6167	3.9167	1.7467	1.45267	1.1106	1.0616	4.41
33	33	Road 35	1700-1800	5.9167	1.6667	4.0467	6.4867	1.5167	3.9967	1.9067	1.40967	1.0967	1.0667	4.40
34	34	Road 35	1800-1900	6.9867	1.6667	4.0467	6.4867	1.5167	3.9967	1.9067	1.40967	1.0967	1.0667	4.40
35	35	Road 35	1900-2000	2.6967	4.9167	11.0667	2.4367	4.4467	8.0867	1.06567	1.6567	4.0267	8.0267	1.44
36	36	Road 35	2000-2100	3.0367	4.4767	10.9767	2.7367	4.0267	8.7867	1.0267	1.5367	3.6567	8.8867	1.23
37	37	Road 35	2100-2200	3.0367	4.4767	10.9767	2.7367	4.0267	8.7867	1.0267	1.5367	3.6567	8.8867	1.23
38	38	Road 35	2200-2300	2.9667	4.2367	10.0667	2.6667	3.8667	8.9967	0.9767	1.4267	3.4567	8.8867	1.2
39	39	Road 35	2300-0000	3.4667	3.9467	9.5867	3.1467	3.5967	8.1767	1.0867	1.2367	3.0067	9.6267	1.01
40	40	Road 35	0000-0100	3.4667	3.9467	9.5867	3.1467	3.5967	8.1767	1.0867	1.2367	3.0067	9.6267	1.01
41	41	Road 35	0100-0200	5.2767	5.7667	10.5467	4.9767	4.5367	9.3767	1.9867	1.1667	1.6767	1.8867	2.00
42	42	Road 36	0200-0300	6.0467	6.2967	1.3867	5.6667	6.9567	2.9967	2.1067	1.4867	4.6467	1.9567	1.47
43	43	Road 36	0300-0400	6.0467	6.2967	1.3867	5.6667	6.9567	2.9967	2.1067	1.4867	4.6467	1.9567	1.47
44	44	Road 36	0400-0500	6.4667	5.3267	1.3467	5.2767	6.0367	1.7267	2.2367	1.7967	4.5167	1.2106	1.96
45	45	Road 36	0500-0600	5.9267	7.0867	1.7667	5.6667	6.7167	1.6967	2.2467	2.6867	6.7667	2.1106	2.57
46	46	Road 36	0600-0700	5.9267	7.0867	1.7667	5.6667	6.7167	1.6967	2.2467	2.6867	6.7667	2.1106	2.57
47	47	Road 36	0700-0800	5.9267	5.9567	1.6567	5.6667	6.3567	4.4467	1.9867	1.3267	3.2667	2.0067	1.23
48	48	Road 36	0800-0900	7.3267	3.8967	0.8767	6.3467	3.6667	9.2367	2.3967	1.1366	3.4866	2.2267	1.21
49	49	Road 36	0900-1000	7.7267	3.9567	0.9467	7.3167	3.7467	9.4267	2.5767	1.3166	3.3066	2.4067	1.22
50	50	Road 36	1000-1100	8.3167	3.7167	0.8767	7.3167	3.6667	9.2367	2.3967	1.1366	3.4866	2.2267	1.21
51	51	Road 36	1100-1200	8.1667	3.6767	0.9167	7.7267	4.4467	8.8667	2.8067	1.1566	2.9166	2.4567	1.00
52	52	Road 36	1200-1300	9.1467	3.4267	0.8167	9.1567	3.2667	8.2067	2.8267	1.0066	2.5366	2.8867	0.95
53	53	Road 36	1300-1400	9.1467	3.4267	0.8167	9.1567	3.2667	8.2067	2.8267	1.0066	2.5366	2.8867	0.95
54	54	Road 36	1400-1500	8.6267	3.6667	0.9267	9.1167	3.4767	8.7467	2.8867	1.1106	2.7667	2.7667	1.00
55	55	Road 36	1500-1600	8.9867	3.7767	0.9567	9.2667	3.5967	9.0267	2.9667	1.1596	2.8967	2.8967	1.00
56	56	Road 36	1600-1700	8.6267	3.6667	0.9267	9.1167	3.4767	8.7467	2.8867	1.1106	2.7667	2.7667	1.00
57	57	Road 36	1700-1800	8.4167	3.4867	0.8767	7.9667	3.2767	8.2467	2.7767	1.1566	2.8866	2.5667	1.00
58	58	Road 36	1800-1900	8.6267	3.7167	0.9567	9.2667	3.6267	9.0167	2.2267	1.6767	2.3106	2.8867	0.95
59	59	Road 36	1900-2000	8.6267	3.7167	0.9567	9.2667	3.6267	9.0167	2.2267	1.6767	2.3106	2.8867	0.95
60	60	Road 36	2000-2100	4.7767	1.0167	2.5567	4.4667	0.4567	2.3867	1.9867	4.2067	1.0967	1.8367	0.38
61	61	Road 36	2100-2200	4.7767	1.0167	2.5567	4.4667	0.4567	2.3867	1.9867	4.2067	1.0967	1.8367	0.38
62	62	Road 36	2200-2300	4.0667	1.0067	2.5267	4.4367	0.4367	2.3767	1.9967	4.2367	1.0766	1.8867	0.39
63	63	Road 36	2300-0000	4.0667	1.0067	2.5267	4.4367	0.4367	2.3767	1.9967	4.2367	1.0766	1.8867	0.39
64	64	Road 37	0000-0100	5.0267	8.1267	2.0467	4.6967	5.5967	3.9167	1.0167	3.3467	8.1867	1.9667	2.29
65	65	Road 37	0100-0200	1.4667	1.6567	0.9367	3.5667	1.5767	0.9167	1.9367	8.5067	1.9967	1.7967	0.78
66	66	Road 37	0200-0300	1.4667	1.6567	0.9367	3.5667	1.5767	0.9167	1.9367	8.5067	1.9967	1.7967	0.78
67	67	Road 37	0300-0400	9.4167	1.2167	2.1867	4.1867	0.9567	2.0067	2.1267	1.5896	1.0567	1.9667	4.22
68	68	Road 37	0400-0500	4.6667	8.0167	1.0867	4.4767	7.7567	1.1767	2.2167	4.3867	8.7767	2.0767	3.56
69	69	Road 37	0500-0600	4.9567	8.5667	1.2167	4.7867	8.2367	2.1267	2.2967	4.4267	9.0267	2.1767	4.01
70	70	Road 37	0600-0700	4.9567	8.5667	1.2167	4.7867	8.2367	2.1267	2.2967	4.4267	9.0267	2.1767	4.01
71	71	Road 37	0700-0800	8.9367	8.8967	0.9867	8.6267	8.5267	1.9967	2.5567	3.8867	8.8967	8.4067	3.96
72	72	Road 37	0800-0900	8.9367	8.8967	0.9867	8.6267	8.5267	1.9967	2.5567	3.8867	8.8967	8.4067	3.96
73	73	Road 37	0900-1000	8.6267	1.1267	2.5767	8.7367	0.0867	2.4867	2.6267	4.2166	9.6567	2.4867	3.99
74	74	Road 37	1000-1100	7.4367	1.0867	2.4867	7.1267	0.0467	2.4067	2.6067	4.2166	9.6567	2.4867	3.99
75	75	Road 37	1100-1200	7.4367	1.0867	2.48								

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

g Yi North Underground Quarry

REMCO model (November)		Year 2038		NO _x Emission				NO _x Emission			
Road Name	Road ID	Hour	Month/hour/km	Month/hour/km	Month/hour/km	Month/hour/km	Month/hour/km	Month/hour/km	Month/hour/km	Month/hour/km	Month/hour/km
			g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h
Road 47	1600-1700		2,686.02	5,156.07	1,611.05	2,476.02	4,756.07	1,486.10	3,106.01	2,116.06	5,586.10
Road 47	1700-1800		1,926.02	4,272.07	3,336.10	1,746.02	3,886.07	1,216.06	4,976.07	2,116.06	5,586.10
Road 47	1800-1900		1,926.02	4,272.07	3,336.10	1,746.02	3,886.07	1,216.06	4,976.07	2,116.06	5,586.10
Road 47	1900-2000		1,172.02	2,432.07	1,736.05	1,056.02	2,116.07	6,586.06	1,666.02	1,346.06	1,176.06
Road 47	2000-2100		1,046.02	1,626.07	5,066.10	9,306.03	1,496.07	4,526.06	6,546.06	1,086.06	1,376.06
Road 47	2100-2200		1,611.04	3,346.07	1,611.05	2,476.02	4,756.07	1,486.10	3,106.01	2,116.06	5,586.10
Road 47	2200-2300		2,006.03	1,217.07	1,766.06	7,236.03	1,066.07	3,426.06	6,396.07	1,546.06	5,986.07
Road 47	2300-0000		5,936.03	9,536.08	2,016.07	7,676.03	8,616.08	2,706.06	6,496.07	2,226.07	2,256.06
Road 48	0000-0100		6,136.07	5,376.03	1,016.07	5,556.03	8,856.08	1,276.07	6,496.07	2,986.07	1,011.06
Road 48	0100-0200		6,136.07	5,376.03	1,016.07	5,556.03	8,856.08	1,276.07	6,496.07	2,986.07	1,011.06
Road 48	0200-0300		7,266.03	3,206.06	1,016.07	8,666.03	2,756.04	4,146.07	4,096.02	2,026.07	5,056.06
Road 48	0300-0400		7,896.03	2,576.08	3,876.07	7,196.03	2,346.06	3,536.07	5,586.06	1,656.07	2,496.06
Road 48	0400-0500		7,896.03	2,576.08	3,876.07	7,196.03	2,346.06	3,536.07	5,586.06	1,656.07	2,496.06
Road 48	0500-0600		3,036.03	5,616.08	8,476.07	8,456.03	1,186.08	7,826.07	5,416.04	1,346.07	3,036.06
Road 48	0600-0700		7,936.07	2,926.07	2,926.07	8,996.03	1,186.07	1,796.06	5,686.07	1,476.06	1,126.06
Road 48	0700-0800		1,466.07	2,776.03	1,186.07	2,926.07	2,926.07	8,996.03	1,186.07	1,796.06	5,686.07
Road 48	0800-0900		9,936.07	3,076.07	6,636.06	9,076.03	2,806.07	4,226.06	5,176.07	1,606.06	2,416.06
Road 48	0900-1000		1,126.02	2,836.07	4,276.06	1,036.02	6,316.07	3,946.06	8,646.02	1,436.06	1,156.06
Road 48	1000-1100		1,126.02	2,836.07	4,276.06	1,036.02	6,316.07	3,946.06	8,646.02	1,436.06	1,156.06
Road 48	1100-1200		1,196.02	1,376.02	3,736.05	1,106.02	2,396.07	3,446.06	5,886.08	1,126.06	1,836.06
Road 48	1200-1300		2,146.02	2,566.07	3,736.05	2,006.02	3,366.07	5,026.06	7,826.02	1,306.06	1,976.06
Road 48	1300-1400		1,196.02	1,376.02	3,736.05	1,106.02	2,396.07	3,446.06	5,886.08	1,126.06	1,836.06
Road 48	1400-1500		2,156.02	9,906.07	8,996.06	1,996.02	3,616.07	5,556.06	7,796.02	1,456.06	1,196.06
Road 48	1500-1600		1,976.02	3,686.07	5,566.06	1,826.02	3,416.07	5,146.06	7,816.07	1,476.06	2,226.07
Road 48	1600-1700		2,036.02	3,926.07	5,916.06	1,886.02	3,626.07	5,466.06	7,556.06	1,466.06	2,036.06
Road 48	1700-1800		2,036.02	3,926.07	5,916.06	1,886.02	3,626.07	5,466.06	7,556.06	1,466.06	2,036.06
Road 48	1800-1900		1,126.02	2,536.02	8,626.06	1,106.02	2,266.07	3,466.06	5,226.06	1,096.06	1,646.06
Road 48	1900-2000		1,146.02	1,866.07	8,946.06	1,036.02	1,756.07	2,566.06	5,136.06	8,406.07	1,276.06
Road 48	2000-2100		1,466.02	1,466.02	1,466.02	1,466.02	1,466.02	1,466.02	1,466.02	1,466.02	1,466.02
Road 48	2100-2200		1,866.02	1,366.07	2,056.06	9,686.03	1,126.07	1,826.06	5,216.06	6,426.07	1,076.06
Road 48	2200-2300		1,866.02	1,366.07	2,056.06	9,686.03	1,126.07	1,826.06	5,216.06	6,426.07	1,076.06
Road 49	0000-0100		8,076.03	4,046.06	1,126.06	7,246.03	3,996.06	1,016.06	9,506.02	3,256.07	8,216.06
Road 49	0100-0200		8,076.03	4,046.06	1,126.06	7,246.03	3,996.06	1,016.06	9,506.02	3,256.07	8,216.06
Road 49	0200-0300		8,076.03	4,046.06	1,126.06	7,246.03	3,996.06	1,016.06	9,506.02	3,256.07	8,216.06
Road 49	0300-0400		8,076.03	4,046.06	1,126.06	7,246.03	3,996.06	1,016.06	9,506.02	3,256.07	8,216.06
Road 49	0400-0500		1,016.02	2,246.08	5,666.07	9,336.03	2,076.08	5,236.07	6,286.06	1,396.07	5,526.06
Road 49	0500-0600		1,016.02	2,246.08	5,666.07	9,336.03	2,076.08	5,236.07	6,286.06	1,396.07	5,526.06
Road 49	0600-0700		1,446.07	1,446.07	1,446.07	1,446.07	1,446.07	1,446.07	1,446.07	1,446.07	1,446.07
Road 49	0700-0800		1,906.02	1,906.02	1,906.02	1,906.02	1,906.02	1,906.02	1,906.02	1,906.02	1,906.02
Road 49	0800-0900		1,906.02	1,906.02	1,906.02	1,906.02	1,906.02	1,906.02	1,906.02	1,906.02	1,906.02
Road 49	0900-1000		1,906.02	1,906.02	1,906.02	1,906.02	1,906.02	1,906.02	1,906.02	1,906.02	1,906.02
Road 49	1000-1100		2,216.02	2,216.02	2,216.02	2,216.02	2,216.02	2,216.02	2,216.02	2,216.02	2,216.02
Road 49	1100-1200		1,866.02	2,446.07	6,656.06	1,726.06	2,086.07	5,246.06	9,116.02	1,106.06	1,776.06
Road 49	1200-1300		2,216.02	2,216.02	2,216.02	2,216.02	2,216.02	2,216.02	2,216.02	2,216.02	2,216.02
Road 49	1300-1400		2,276.02	2,276.02	2,276.02	2,276.02	2,276.02	2,276.02	2,276.02	2,276.02	2,276.02
Road 49	1400-1500		2,446.02	2,446.02	2,446.02	2,446.02	2,446.02	2,446.02	2,446.02	2,446.02	2,446.02
Road 49	1500-1600		2,576.02	2,576.02	2,576.02	2,576.02	2,576.02	2,576.02	2,576.02	2,576.02	2,576.02
Road 49	1600-1700		2,576.02	2,576.02	2,576.02	2,576.02	2,576.02	2,576.02	2,576.02	2,576.02	2,576.02
Road 49	1700-1800		1,866.02	2,656.07	6,656.06	1,716.02	2,466.07	6,076.06	8,976.02	1,266.06	1,196.06
Road 49	1800-1900		1,866.02	2,656.07	6,656.06	1,716.02	2,466.07	6,076.06	8,976.02	1,266.06	1,196.06
Road 49	1900-2000		1,236.02	1,126.07	4,096.06	1,116.02	1,446.07	3,656.06	6,546.02	8,926.07	1,196.06
Road 49	2000-2100		1,116.02	1,116.02	7,836.06	9,886.03	1,006.07	2,536.06	6,786.02	8,876.07	1,736.06
Road 49	2100-2200		1,786.02	8,626.08	2,236.06	8,946.03	7,906.08	2,016.06	6,246.02	8,966.07	5,416.06
Road 49	2200-2300		8,966.03	8,966.03	1,666.06	8,966.03	5,956.08	1,496.06	6,246.02	8,476.07	1,156.06
Road 50	0000-0100		4,176.02	1,966.08	8,086.07	3,796.02	1,786.06	2,546.07	1,521.06	1,706.06	1,186.06
Road 50	0100-0200		4,486.07	1,476.02	1,476.02	1,476.02	1,476.02	1,476.02	1,476.02	1,476.02	1,476.02
Road 50	0200-0300		4,486.07	1,476.02	1,476.02	1,476.02	1,476.02	1,476.02	1,476.02	1,476.02	1,476.02
Road 50	0300-0400		5,136.02	1,156.04	1,146.04	4,799.06	1,056.08	1,511.06	1,786.06	3,796.06	1,346.06
Road 50	0400-0500		5,116.02	2,966.07	2,966.07	2,966.07	2,966.07	2,966.07	2,966.07	2,966.07	2,966.07
Road 50	0500-0600		4,936.02	2,086.08	2,966.07	4,556.02	1,056.08	2,756.07	1,746.06	7,286.06	1,406.06
Road 50	0600-0700		4,936.02	2,086.08	2,966.07	4,556.02	1,056.08	2,756.07	1,746.06	7,286.06	1,406.06
Road 50	0700-0800		4,936.02	2,086.08	2,966.07	4,556.02	1,056.08	2,756.07	1,746.06	7,286.06	1,406.06
Road 50	0800-0900		5,116.02	1,156.04	1,146.04	4,799.06	1,056.08	1,511.06	1,786.06	3,796.06	1,346.06
Road 50	0900-1000		5,116.02	2,966.07	2,966.07	2,966.07	2,966.07	2,966.07	2,966.07	2,966.07	2,966.07
Road 50	1000-1100		5,026.02	1,246.07	1,776.06	5,506.02	1,166.06	2,076.06	4,336.07	8,186.06	1,006.06
Road 50	1100-1200		7,236.02	6,646.08	9,906.07	6,746.02	6,616.08	9,266.07	2,276.02	2,186.02	1,116.02
Road 50	1200-1300		7,236.02	6,646.08	9,906.07	6,746.02	6,616.08	9,266.07	2,276.02	2,186.02	1,116.02
Road 50	1300-1400		7,236.02	6,646.08	9,906.07	6,746.02	6,616.08	9,266.07	2,276.02	2,186.02	1,116.02
Road 50	1400-1500		7,236.02	6,646.08	9,906.07	6,746.02	6,616.08	9,266.07	2,276.02	2,186.02	1,116.02
Road 50	1500-1600		8,456.02	7,076.01	1,016.06	5,966.02	6,546.08	9,326.02	2,246.02	2,466.02	5,016.02
Road 50	1600-1700		8,456.02	7,076.01	1,016.06	5,966.02	6,546.08	9,326.02	2,246.02	2,466.02	5,016.02
Road 50	1700-1800		8,456.02	7,076.01	1,016.06	5,966.02	6,546.08	9,326.02	2,246.02	2,466.02	5,016.02
Road 50	1800-1900		8,456.02	7,076.01	1,016.06	5,966.02	6,546.08	9,326.02	2,246.02	2,466.02	5,016.02
Road 50	1900-2000		8,456.02	7,076.01	1,016.06	5,966.02	6,546.08	9,326.02	2,246.02	2,466.02	5,016.02
Road 50	2000-2100		8,456.02	7,076.01	1,016.06	5,966.02	6,546.08	9,326.02	2,246.02	2,466.02	5,016.02
Road 50	2100-2200		8,456.02	7,076.01	1,016.06	5,966.02	6,546.08	9,326.02	2,246.02	2,466.02	5,016.02
Road 50	2200-2300		8,456.02	7,076.01	1,016.06	5,966.02	6,546.08	9,326.02	2,246.02	2,466.02	5,016.02

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

g Yi North Underground Quarry
on Road 24-hour Emission Factor for

R2000 model (December)			Year 2038		NO _x Emission				PM ₁₀ Emission				PM _{2.5} Emission			
Read Name	Road ID	Hour	MonthlyHours		g/km/h		tonne/hour		g/km/h		tonne/hour		g/km/h		tonne/hour	
			g/km/h	tonne/hour	g/km/h	tonne/hour	g/km/h	tonne/hour	g/km/h	tonne/hour	g/km/h	tonne/hour	g/km/h	tonne/hour	g/km/h	tonne/hour
Road 1	1	0000-0500	5.045	0.0908	0.008	0.800	0.856	0.438	6.100	0.087	0.008	0.008	0.008	0.008	0.008	0.008
Road 1	1	0100-0200	7.218	0.611	0.088	0.800	0.772	0.008	5.208	0.620	0.087	0.008	0.008	0.008	0.008	0.008
Road 1	1	0200-0300	7.218	0.611	0.088	0.800	0.772	0.008	5.208	0.620	0.087	0.008	0.008	0.008	0.008	0.008
Road 1	1	0300-0400	5.548	0.618	0.088	0.746	0.702	0.008	4.216	0.606	0.087	0.008	0.008	0.008	0.008	0.008
Road 1	1	0400-0500	0.196	0.596	0.896	0.836	0.418	0.758	2.598	0.892	0.352	0.748	0.848	0.008	0.008	0.008
Road 1	1	0500-0600	0.888	0.571	0.878	0.836	0.418	0.758	4.728	0.892	0.892	0.848	0.008	0.008	0.008	0.008
Road 1	1	0600-0700	2.178	0.571	0.878	0.836	0.418	0.758	7.448	0.892	0.892	0.848	0.008	0.008	0.008	0.008
Road 1	1	0700-0800	0.092	0.677	0.072	0.788	0.418	0.008	2.308	0.626	0.268	0.698	0.488	0.008	0.008	0.008
Road 1	1	0800-0900	1.094	0.677	0.088	0.746	0.418	0.008	2.508	0.624	0.278	0.698	0.488	0.008	0.008	0.008
Road 1	1	0900-1000	1.094	0.677	0.088	0.746	0.418	0.008	2.508	0.624	0.278	0.698	0.488	0.008	0.008	0.008
Road 1	1	1000-1100	3.202	0.638	0.058	1.208	0.418	0.008	2.318	0.638	0.228	0.698	0.488	0.008	0.008	0.008
Road 1	1	1100-1200	2.862	0.647	0.318	1.148	0.398	0.008	2.088	0.638	0.228	0.698	0.488	0.008	0.008	0.008
Road 1	1	1200-1300	2.862	0.647	0.318	1.148	0.398	0.008	2.088	0.638	0.228	0.698	0.488	0.008	0.008	0.008
Road 1	1	1300-1400	1.578	0.782	0.018	0.428	0.068	0.008	3.618	0.718	0.038	0.838	0.008	0.008	0.008	0.008
Road 1	1	1400-1500	0.988	0.782	0.018	0.428	0.068	0.008	3.618	0.718	0.038	0.838	0.008	0.008	0.008	0.008
Road 1	1	1500-1600	0.988	0.782	0.018	0.428	0.068	0.008	3.618	0.718	0.038	0.838	0.008	0.008	0.008	0.008
Road 1	1	1600-1700	1.588	0.842	0.018	0.428	0.068	0.008	3.618	0.718	0.038	0.838	0.008	0.008	0.008	0.008
Road 1	1	1700-1800	1.588	0.842	0.018	0.428	0.068	0.008	3.618	0.718	0.038	0.838	0.008	0.008	0.008	0.008
Road 1	1	1800-1900	1.588	0.842	0.018	0.428	0.068	0.008	3.618	0.718	0.038	0.838	0.008	0.008	0.008	0.008
Road 1	1	1900-2000	3.788	0.892	0.018	0.428	0.068	0.008	3.618	0.718	0.038	0.838	0.008	0.008	0.008	0.008
Road 1	1	2000-2100	1.348	0.297	0.168	0.638	0.208	0.008	1.438	0.601	0.208	0.638	0.208	0.008	0.008	0.008
Road 1	1	2100-2200	0.878	0.297	0.168	0.638	0.208	0.008	1.438	0.601	0.208	0.638	0.208	0.008	0.008	0.008
Road 1	1	2200-2300	0.878	0.247	0.168	0.548	0.188	0.008	1.208	0.598	0.198	0.548	0.188	0.008	0.008	0.008
Road 1	1	2300-0000	0.272	0.040	0.118	0.418	0.148	0.008	0.198	0.088	0.138	0.028	0.388	0.008	0.008	0.008
Road 2	2	0000-0500	0.148	0.002	0.348	0.008	0.008	0.008	0.448	0.008	0.008	0.008	0.008	0.008	0.008	0.008
Road 2	2	0100-0200	0.042	0.698	0.048	0.748	0.278	0.008	0.118	0.008	0.008	0.008	0.008	0.008	0.008	0.008
Road 2	2	0300-0400	0.126	0.578	0.378	0.008	0.008	0.268	0.838	0.308	0.308	0.678	0.008	0.008	0.008	0.008
Road 2	2	0400-0500	0.042	0.908	0.048	0.908	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008
Road 2	2	0500-0600	1.292	0.628	0.036	1.108	0.138	0.008	0.578	0.608	0.628	0.678	0.008	0.008	0.008	0.008
Road 2	2	0600-0700	0.042	0.288	0.478	0.008	0.008	0.008	0.318	0.008	0.008	0.008	0.008	0.008	0.008	0.008
Road 2	2	0700-0800	0.042	0.168	0.318	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008
Road 2	2	0800-0900	1.352	0.628	0.036	1.238	0.288	0.008	0.318	0.638	0.348	0.698	0.008	0.008	0.008	0.008
Road 2	2	0900-1000	1.352	0.618	0.048	1.418	0.318	0.008	0.318	0.638	0.348	0.698	0.008	0.008	0.008	0.008
Road 2	2	1000-1100	0.042	0.778	0.348	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008
Road 2	2	1100-1200	0.698	0.020	0.048	1.548	0.678	0.008	2.888	0.518	0.758	0.368	0.838	0.008	0.008	0.008
Road 2	2	1200-1300	0.842	0.828	0.438	1.678	0.488	0.008	3.798	0.788	0.848	0.468	1.748	0.008	0.008	0.008
Road 2	2	1300-1400	0.042	0.848	0.348	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008
Road 2	2	1400-1500	0.842	0.148	0.638	0.688	0.788	0.008	4.188	0.798	0.378	0.968	0.008	0.008	0.008	0.008
Road 2	2	1500-1600	1.748	0.878	0.438	1.578	0.7878	0.008	3.998	0.798	0.848	0.608	0.028	0.008	0.008	0.008
Road 2	2	1600-1700	0.042	0.838	0.348	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008
Road 2	2	1700-1800	1.352	0.748	0.928	1.198	0.938	0.008	3.518	0.748	0.928	0.968	0.008	0.008	0.008	0.008
Road 2	2	1800-1900	0.842	0.928	0.008	0.808	0.528	0.008	2.678	0.008	0.938	0.588	0.478	0.008	0.008	0.008
Road 2	2	1900-2000	0.042	0.848	0.348	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008
Road 2	2	2000-2100	0.208	0.008	0.568	0.708	0.257	0.008	1.398	0.598	0.218	0.008	0.428	0.008	0.008	0.008
Road 2	2	2100-2200	0.448	0.298	0.1418	0.858	0.248	0.008	1.298	0.008	0.918	0.008	0.438	0.008	0.008	0.008
Road 2	2	2200-2300	0.438	0.008	0.838	0.878	0.288	0.008	0.218	0.578	0.198	0.678	0.008	0.008	0.008	0.008
Road 2	2	2300-0000	0.042	0.848	0.348	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008
Road 3	3	0000-0500	0.508	0.628	0.228	0.678	0.3218	0.008	1.978	0.508	0.2608	0.608	0.478	0.008	0.008	0.008
Road 3	3	0100-0200	0.838	0.2618	0.068	0.738	0.328	0.008	1.408	0.508	0.1768	0.608	0.478	0.008	0.008	0.008
Road 3	3	0200-0300	0.838	0.2618	0.068	0.738	0.328	0.008	1.408	0.508	0.1768	0.608	0.478	0.008	0.008	0.008
Road 3	3	0300-0400	0.008	0.1188	0.128	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008	0.008
Road 3	3	0400-0500	0.008	0.1188	0.008	0.928	0.1188	0.008	1.178	0.628	0.128	0.668	0.008	0.008	0.008	0.008
Road 3	3	0500-0600	0.008	0.1188	0.008	0.928	0.1188	0.008	1.178	0.628	0.128	0.668	0.008	0.008	0.008	0.008
Road 3	3	0600-0700	0.1188	0.008	0.108	1.018	0.748	0.008	4.578	0.648	0.838	0.698	0.518	0.008	0.008	0.008
Road 3	3	0700-0800	0.228	0.828	0.138	1.008	0.678	0.008	6.778	0.678	1.018	0.298	0.748	0.008	0.008	0.008
Road 3	3	0800-0900	0.008	0.1188	0.008	0.928	0.1188	0.008	1.178	0.628	0.128	0.668	0.008	0.008	0.008	0.008
Road 3	3	0900-1000	0.338	0.008	1.168	1.208	1.178	0.008	1.058	0.678	0.898	0.948	0.828	0.008	0.008	0.008
Road 3	3	1000-1100	0.488	0.848	0.138	1.348	0.667	0.008	1.028	0.708	0.878	0.748	0.348	0.008	0.008	0.008
Road 3	3	1100-1200	0.008	0.1188	0.008	0.928	0.1188	0.008	1.178	0.628	0.128	0.668	0.008	0.008	0.008	0.008
Road 3	3	1200-1300	0.338	0.008	1.168	1.208	1.178	0.008	1.058	0.678	0.898	0.948	0.828	0.008	0.008	0.008
Road 3	3	1300-1400	0.228	0.040	0.518	0.008	0.308	0.008	2.278	0.828	0.1778	0.008	0.008	0.008	0.008	0.008
Road 3	3	1400-1500	0.008	0.1188	0.008	0.928	0.1188	0.008	1.178	0.628	0.128	0.668	0.008	0.008	0.008	0.008
Road 3	3	1500-1600	0.008	0.1188	0.008	0.928	0.1188	0.008	1.178	0.628	0.128	0.668	0.008	0.008	0.008	0.008
Road 3	3	1600-1700	0.008	0.1188	0.008	0.928	0.1188	0.008	1.178	0.628	0.128	0.668	0.008	0.008	0.008	0.008
Road 3	3	1700-1800	0.008	0.1188	0.008	0.928	0.1188	0.008	1.178	0.628	0.128	0.668	0.008	0.008	0.008	0.008
Road 3	3	1800-1900	0.008	0.1188	0.008	0.928	0.1188	0.008	1.178	0.628	0.128	0.668	0.008	0.008	0.008	0.008
Road 3	3	1900-2000	0.008	0.1188	0.008	0.928	0.1188	0.008	1.178	0.628	0.128	0.668	0.008	0.008	0.008	0.008
Road 3	3	2000-2100	0.008	0.1188	0.008	0.928	0.1188	0.008	1.178	0.628	0.128	0.668	0.008	0.008	0.008	0.008
Road 3	3	2100-2200	0.008	0.1188	0.008	0.928	0.1188	0.008	1.178	0.628	0.128	0.668	0.008	0.008	0.008	0.008
Road 3	3	2200-2300	0.008	0.1188	0.008	0.928	0.1188	0.008	1.178	0.628	0.128	0.668	0.008	0		

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for
AERMOD model (December) Year 2038

Road Name	Road ID	Hour	N0_Emission										N0_Emission									
			Monthly					Hourly					Monthly					Hourly				
			g/km/h	g/m ² /h	tonne/hour	g/km/h	g/m ² /h	tonne/hour	g/km/h	g/m ² /h	tonne/hour	g/km/h	g/m ² /h	tonne/hour	g/km/h	g/m ² /h	tonne/hour					
Road 4	4	0800-0900	9.982	3.5847	7.758	9.043	3.2527	6.5116	5.5652	2.006	4.0065	4.7482	1.7005	3.4107	4.0065	1.4387	2.938	4.0065	1.4387	2.938		
Road 4	4	0900-1000	11.296	4.122	3.7275	10.062	3.5912	2.9517	6.5116	5.5992	2.7005	3.525	3.525	3.525	4.0065	1.4387	2.938	4.0065	1.4387	2.938		
Road 4	4	1000-1100	13.872	4.8772	3.7275	10.062	3.5912	2.9517	6.5116	5.5992	2.7005	3.525	3.525	3.525	4.0065	1.4387	2.938	4.0065	1.4387	2.938		
Road 4	4	1100-1200	1.246	2.8627	5.7424	1.082	2.5867	5.185	6.282	1.502	3.0115	4.1121	1.296	2.5705	4.0065	1.4387	2.938	4.0065	1.4387	2.938		
Road 4	4	1200-1300	1.346	4.1147	8.756	1.224	3.7107	4.248	6.3862	1.5405	3.0418	5.4982	1.6885	3.3705	4.0065	1.4387	2.938	4.0065	1.4387	2.938		
Road 4	4	1300-1400	1.346	4.1147	8.756	1.224	3.7107	4.248	6.3862	1.5405	3.0418	5.4982	1.6885	3.3705	4.0065	1.4387	2.938	4.0065	1.4387	2.938		
Road 4	4	1400-1500	1.386	4.5207	9.250	1.252	4.1657	3.845	6.5442	2.186	4.375	5.712	1.9101	3.6275	4.0065	1.4387	2.938	4.0065	1.4387	2.938		
Road 4	4	1500-1600	1.386	4.5207	9.250	1.252	4.1657	3.845	6.5442	2.186	4.375	5.712	1.9101	3.6275	4.0065	1.4387	2.938	4.0065	1.4387	2.938		
Road 4	4	1600-1700	1.424	4.9127	9.8128	1.2802	4.5887	4.175	6.5887	2.393	4.7359	6.4842	2.0705	4.0707	4.0065	1.4387	2.938	4.0065	1.4387	2.938		
Road 4	4	1700-1800	1.005	4.4123	9.8128	1.2802	4.5887	4.175	6.5887	2.393	4.7359	6.4842	2.0705	4.0707	4.0065	1.4387	2.938	4.0065	1.4387	2.938		
Road 4	4	1800-1900	7.4384	3.4747	6.0968	6.658	3.1067	6.205	4.375	2.0465	4.0065	1.4387	2.938	4.0065	1.4387	2.938	4.0065	1.4387	2.938			
Road 4	4	1900-2000	2.4257	2.4257	2.4257	2.4257	1.5151	2.4257	2.4257	1.5151	2.4257	2.4257	1.5151	2.4257	4.0065	1.4387	2.938	4.0065	1.4387	2.938		
Road 4	4	2000-2100	6.305	1.8329	3.6595	5.595	1.6257	2.525	4.844	2.0465	2.8115	4.0065	1.1385	2.2305	4.0065	1.1385	2.2305	4.0065	1.1385	2.2305		
Road 5	5	0800-0900	8.095	6.4235	8.067	8.067	3.1067	5.712	4.747	6.746	2.075	3.986	5.565	3.938	2.7305	1.768	3.447	2.7305	1.768	3.447		
Road 5	5	0900-1000	8.886	4.4458	3.7151	8.886	3.958	3.07	6.835	3.247	2.625	6.886	3.665	2.607	2.1705	1.665	2.607	2.1705	1.665	2.607		
Road 5	5	1000-1100	9.435	4.8638	3.343	9.435	4.086	3.367	7.282	3.476	2.625	7.282	3.476	2.625	2.1705	1.665	2.607	2.1705	1.665	2.607		
Road 5	5	0300-0400	11.25	2.955	2.480	1.002	2.845	2.217	7.282	1.927	1.602	1.602	1.315	1.611	2.607	1.611	2.607	1.315	1.611	2.607		
Road 5	5	0400-0500	11.252	3.475	2.962	1.062	3.125	2.617	7.511	2.187	1.811	1.811	1.365	1.835	2.607	1.835	2.607	1.365	1.835	2.607		
Road 5	5	0500-0600	11.252	3.475	2.962	1.062	3.125	2.617	7.511	2.187	1.811	1.811	1.365	1.835	2.607	1.835	2.607	1.365	1.835	2.607		
Road 5	5	0600-0700	1.615	1.7117	1.458	1.442	1.525	2.976	8.875	9.535	6.978	7.565	6.081	6.978	6.715	6.081	6.978	6.715	6.081	6.978		
Road 5	5	0700-0800	2.315	4.315	3.675	1.812	3.887	3.245	10.015	10.215	1.855	8.175	1.855	1.575	1.855	1.575	1.855	1.575	1.855	1.575		
Road 5	5	0800-0900	2.015	2.015	2.015	2.015	2.015	2.015	8.565	8.565	1.775	8.565	1.775	1.775	1.775	1.775	1.775	1.775	1.775	1.775		
Road 5	5	0900-1000	2.215	4.405	3.685	2.005	4.727	3.325	1.655	1.215	1.175	1.175	1.175	1.175	1.175	1.175	1.175	1.175	1.175	1.175		
Road 5	5	1000-1100	2.425	4.415	3.435	2.185	3.725	3.715	1.105	1.875	1.585	1.585	1.585	1.585	1.585	1.585	1.585	1.585	1.585	1.585		
Road 5	5	1100-1200	2.425	4.415	3.435	2.185	3.725	3.715	1.105	1.875	1.585	1.585	1.585	1.585	1.585	1.585	1.585	1.585	1.585	1.585		
Road 5	5	1200-1300	2.845	7.8117	6.525	2.565	7.045	4.775	8.955	1.225	3.315	2.825	1.075	2.945	2.465	2.465	2.465	2.465	2.465	2.465		
Road 5	5	1300-1400	2.845	6.915	6.962	2.695	7.465	4.775	8.295	1.325	3.385	3.005	1.155	3.225	2.685	2.685	2.685	2.685	2.685	2.685		
Road 5	5	1400-1500	3.635	7.635	7.635	2.725	8.225	5.225	9.225	1.225	3.315	3.315	1.175	3.315	2.685	2.685	2.685	2.685	2.685	2.685		
Road 5	5	1500-1600	2.985	9.125	7.625	2.705	8.245	4.675	8.955	1.355	3.415	3.455	1.165	3.455	2.605	2.605	2.605	2.605	2.605	2.605		
Road 5	5	1600-1700	3.345	1.305	1.095	6.135	2.965	8.815	8.195	1.545	4.445	3.715	1.875	3.875	2.325	2.325	2.325	2.325	2.325	2.325		
Road 5	5	1700-1800	2.815	2.815	2.815	2.815	2.815	2.815	3.175	3.175	1.175	3.175	1.175	1.175	1.175	1.175	1.175	1.175	1.175	1.175		
Road 5	5	1800-1900	8.445	8.045	6.805	6.185	1.885	6.005	8.835	3.865	3.225	7.555	3.315	2.775	2.775	2.775	2.775	2.775	2.775	2.775		
Road 5	5	1900-2000	1.425	4.945	7.455	1.385	4.265	4.055	6.575	8.645	2.745	2.255	6.615	2.315	1.695	1.695	1.695	1.695	1.695	1.695		
Road 5	5	2000-2100	2.815	2.815	2.815	2.815	2.815	2.815	3.175	3.175	1.175	3.175	1.175	1.175	1.175	1.175	1.175	1.175	1.175	1.175		
Road 6	6	0800-0900	1.015	2.745	2.745	2.745	2.745	2.745	6.225	6.225	1.605	1.725	6.615	3.715	1.435	1.435	1.435	1.435	1.435	1.435		
Road 6	6	0900-1000	8.815	2.967	2.967	2.967	2.967	2.967	3.305	3.305	2.025	1.685	5.315	1.675	1.675	1.675	1.675	1.675	1.675	1.675		
Road 6	6	1000-1100	2.965	2.965	2.965	2.965	2.965	2.965	3.305	3.305	2.025	1.685	5.315	1.675	1.675	1.675	1.675	1.675	1.675	1.675		
Road 6	6	1100-1200	2.965	2.965	2.965	2.965	2.965	2.965	3.305	3.305	2.025	1.685	5.315	1.675	1.675	1.675	1.675	1.675	1.675	1.675		
Road 6	6	1200-1300	2.845	7.8117	6.525	2.565	7.045	4.775	8.955	1.225	3.315	2.825	1.075	2.945	2.465	2.465	2.465	2.465	2.465	2.465		
Road 6	6	1300-1400	2.845	6.915	6.962	2.695	7.465	4.775	8.295	1.325	3.385	3.005	1.155	3.225	2.685	2.685	2.685	2.685	2.685	2.685		
Road 6	6	1400-1500	3.635	7.635	7.635	2.725	8.225	5.225	9.225	1.225	3.315	3.315	1.175	3.315	2.685	2.685	2.685	2.685	2.685	2.685		
Road 6	6	1500-1600	2.985	9.125	7.625	2.705	8.245	4.675	8.955	1.355	3.415	3.455	1.165	3.455	2.605	2.605	2.605	2.605	2.605	2.605		
Road 6	6	1600-1700	3.345	1.305	1.095	6.135	2.965	8.815	8.195	1.545	4.445	3.715	1.875	3.875	2.325	2.325	2.325	2.325	2.325	2.325		
Road 6	6	1700-1800	2.815	2.815	2.815	2.815	2.815	2.815	3.175	3.175	1.175	3.175	1.175	1.175	1.175	1.175	1.175	1.175	1.175	1.175		
Road 6	6	1800-1900	8.445	8.045	6.805	6.185	1.885	6.005	8.835	3.865	3.225	7.555	3.315	2.775	2.775	2.775	2.775	2.775	2.775	2.775		
Road 6	6	1900-2000	1.425	4.945	7.455	1.385	4.265	4.055	6.575	8.645	2.745	2.255	6.615	2.315	1.695	1.695	1.695	1.695	1.695	1.695		
Road 6	6	2000-2100	2.815	2.815	2.815	2.815	2.815	2.815	3.175	3.175	1.175	3.175	1.175	1.175	1.175	1.175	1.175	1.175	1.175	1.175		
Road 7	7	0800-0900	1.015	2.745	2.745	2.745	2.745	2.745	6.225	6.225	1.605	1.725	6.615	3.715	1.435	1.435	1.435	1.435	1.435	1.435		
Road 7	7	0900-1000	8.815	2.967	2.967	2.967	2.967	2.967	3.305	3.305	2.025	1.685	5.315	1.675	1.675	1.675	1.675	1.675	1.675	1.675		
Road 7	7	1000-1100	2.965	2.965	2.965	2.965	2.965	2.965	3.305	3.305	2.025	1.685	5.315	1.675	1.675	1.675	1.675	1.675	1.675	1.675		
Road 7	7	1100-1200	2.965	2.965	2.965	2.965	2.965	2.965	3.305	3.305	2.025	1.685	5.315	1.675	1.675	1.675	1.675	1.675	1.675	1.675		
Road 7	7	1200-1300	2.845	7.8117	6.525	2.565	7.045	4.775	8.955	1.225	3.315	2.825	1.075	2.945	2.465	2.465	2.465	2.465	2.465	2.465		
Road 7	7	1300-1400	2.845	6.915	6.962	2.695	7.465	4.775	8.295	1.325	3.385	3.005	1.155	3.225	2.685	2.685	2.685	2.685	2.685	2.685		
Road 7	7	1400-1500	3.635	7.635	7.635	2.725	8.225	5.225	9.225	1.225	3.315	3.315	1.175	3.315	2.685	2.685	2.685	2.685	2.685	2.685		
Road 7	7	1500-1600	2.985	9.125	7.625	2.705	8.245	4.675	8.955	1.355	3.415	3.455	1.165	3.455	2.605	2.605	2.605	2.605	2.605	2.605		
Road 7	7	1600-1700	3.345	1.305	1.095	6.135	2.965	8.815	8.195	1.545	4.445	3.715	1.875	3.875	2.325	2.325	2.325	2.325	2.325	2.325		
Road 7	7	1700-1800	2.815	2.815	2.815	2.815	2.81															

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Open Road 24 hour Emission Factors for
AERMOD model (December)

Road Name	Road ID	Hour	NO ₂ Emission												NO Emission																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
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Road 7	7	1600-1700	1.938e-07	4.488e-07	5.270e-06	1.781e-07	4.044e-07	4.738e-06	9.382e-07	1.940e-06	2.286e-05	7.26e-07	1.706e-06	1.17	1700-1800	1.468e-07	3.497e-07	4.438e-06	1.338e-07	3.398e-07	3.668e-06	7.468e-07	1.934e-06	2.686e-05	6.698e-07	1.678e-06	1.17	1800-1900	1.268e-07	2.967e-07	3.768e-06	1.168e-07	2.768e-07	2.968e-06	6.068e-07	1.668e-06	2.386e-05	6.068e-07	1.668e-06	1.17	1900-2000	1.068e-07	2.467e-07	3.268e-06	1.068e-07	2.468e-07	2.668e-06	5.068e-07	1.468e-06	2.186e-05	5.068e-07	1.468e-06	1.17	2000-2100	8.006e-08	1.862e-07	2.188e-06	7.858e-08	1.652e-07	1.942e-06	5.132e-07	1.110e-06	3.305e-05	3.424e-07	9.388e-07	1.17	2100-2200	8.006e-08	1.862e-07	2.188e-06	7.858e-08	1.652e-07	1.942e-06	5.132e-07	1.110e-06	3.305e-05	3.424e-07	9.388e-07	1.17	2200-2300	7.555e-08	1.702e-07	1.446e-06	6.742e-08	1.208e-07	1.286e-06	5.562e-07	8.076e-07	4.045e-05	4.568e-07	5.822e-07	6.17	2300-2400	7.555e-08	1.702e-07	1.446e-06	6.742e-08	1.208e-07	1.286e-06	5.562e-07	8.076e-07	4.045e-05	4.568e-07	5.822e-07	6.17	2400-0100	7.555e-08	1.702e-07	1.446e-06	6.742e-08	1.208e-07	1.286e-06	5.562e-07	8.076e-07	4.045e-05	4.568e-07	5.822e-07	6.17	0100-0300	7.555e-08	1.702e-07	1.446e-06	6.742e-08	1.208e-07	1.286e-06	5.562e-07	8.076e-07	4.045e-05	4.568e-07	5.822e-07	6.17	0300-0600	1.168e-07	3.108e-07	6.348e-06	1.081e-07	2.896e-06	5.686e-06	5.968e-07	1.608e-06	2.386e-05	4.978e-07	1.348e-06	1.17	0600-0900	1.168e-07	3.108e-07	6.348e-06	1.081e-07	2.896e-06	5.686e-06	5.968e-07	1.608e-06	2.386e-05	4.978e-07	1.348e-06	1.17	0900-1200	1.268e-07	2.967e-07	3.768e-06	1.168e-07	2.768e-07	2.968e-06	6.068e-07	1.668e-06	2.386e-05	6.068e-07	1.668e-06	1.17	1200-1500	1.268e-07	2.967e-07	3.768e-06	1.168e-07	2.768e-07	2.968e-06	6.068e-07	1.668e-06	2.386e-05	6.068e-07	1.668e-06	1.17	1500-1800	1.068e-07	2.467e-07	3.268e-06	1.068e-07	2.468e-07	2.668e-06	5.068e-07	1.468e-06	2.186e-05	5.068e-07	1.468e-06	1.17	1800-2100	8.006e-08	1.862e-07	2.188e-06	7.858e-08	1.652e-07	1.942e-06	5.132e-07	1.110e-06	3.305e-05	3.424e-07	9.388e-07	1.17	2100-2200	8.006e-08	1.862e-07	2.188e-06	7.858e-08	1.652e-07	1.942e-06	5.132e-07	1.110e-06	3.305e-05	3.424e-07	9.388e-07	1.17	2200-2300	7.555e-08	1.702e-07	1.446e-06	6.742e-08	1.208e-07	1.286e-06	5.562e-07	8.076e-07	4.045e-05	4.568e-07	5.822e-07	6.17	2300-2400	7.555e-08	1.702e-07	1.446e-06	6.742e-08	1.208e-07	1.286e-06	5.562e-07	8.076e-07	4.045e-05	4.568e-07	5.822e-07	6.17	2400-0100	7.555e-08	1.702e-07	1.446e-06	6.742e-08	1.208e-07	1.286e-06	5.562e-07	8.076e-07	4.045e-05	4.568e-07	5.822e-07	6.17	0100-0300	1.168e-07	3.108e-07	6.348e-06	1.081e-07	2.896e-06	5.686e-06	5.968e-07	1.608e-06	2.386e-05	4.978e-07	1.348e-06	1.17	0300-0600	1.168e-07	3.108e-07	6.348e-06	1.081e-07	2.896e-06	5.686e-06	5.968e-07	1.608e-06	2.386e-05	4.978e-07	1.348e-06	1.17	0600-0900	1.268e-07	2.967e-07	3.768e-06	1.168e-07	2.768e-07	2.968e-06	6.068e-07	1.668e-06	2.386e-05	6.068e-07	1.668e-06	1.17	0900-1200	1.268e-07	2.967e-07	3.768e-06	1.168e-07	2.768e-07	2.968e-06	6.068e-07	1.668e-06	2.386e-05	6.068e-07	1.668e-06	1.17	1200-1500	1.068e-07	2.467e-07	3.268e-06	1.068e-07	2.468e-07	2.668e-06	5.068e-07	1.468e-06	2.186e-05	5.068e-07	1.468e-06	1.17	1500-1800	8.006e-08	1.862e-07	2.188e-06	7.858e-08	1.652e-07	1.942e-06	5.132e-07	1.110e-06	3.305e-05	3.424e-07	9.388e-07	1.17	1800-2100	8.006e-08	1.862e-07	2.188e-06	7.858e-08	1.652e-07	1.942e-06	5.132e-07	1.110e-06	3.305e-05	3.424e-07	9.388e-07	1.17	2100-2200	8.006e-08	1.862e-07	2.188e-06	7.858e-08	1.652e-07	1.942e-06	5.132e-07	1.110e-06	3.305e-05	3.424e-07	9.388e-07	1.17	2200-2300	7.555e-08	1.702e-07	1.446e-06	6.742e-08	1.208e-07	1.286e-06	5.562e-07	8.076e-07	4.045e-05	4.568e-07	5.822e-07	6.17	2300-2400	7.555e-08	1.702e-07	1.446e-06	6.742e-08	1.208e-07	1.286e-06	5.562e-07	8.076e-07	4.045e-05	4.568e-07	5.822e-07	6.17	2400-0100	7.555e-08	1.702e-07	1.446e-06	6.742e-08	1.208e-07	1.286e-06	5.562e-07	8.076e-07	4.045e-05	4.568e-07	5.822e-07	6.17	0100-0300	1.168e-07	3.108e-07	6.348e-06	1.081e-07	2.896e-06	5.686e-06	5.968e-07	1.608e-06	2.386e-05	4.978e-07	1.348e-06	1.17	0300-0600	1.168e-07	3.108e-07	6.348e-06	1.081e-07	2.896e-06	5.686e-06	5.968e-07	1.608e-06	2.386e-05	4.978e-07	1.348e-06	1.17	0600-0900	1.268e-07	2.967e-07	3.768e-06	1.168e-07	2.768e-07	2.968e-06	6.068e-07	1.668e-06	2.386e-05	6.068e-07	1.668e-06	1.17	0900-1200	1.268e-07	2.967e-07	3.768e-06	1.168e-07	2.768e-07	2.968e-06	6.068e-07	1.668e-06	2.386e-05	6.068e-07	1.668e-06	1.17	1200-1500	1.068e-07	2.467e-07	3.268e-06	1.068e-07	2.468e-07	2.668e-06	5.068e-07	1.468e-06	2.186e-05	5.068e-07	1.468e-06	1.17	1500-1800	8.006e-08	1.862e-07	2.188e-06	7.858e-08	1.652e-07	1.942e-06	5.132e-07	1.110e-06	3.305e-05	3.424e-07	9.388e-07	1.17	1800-2100	8.006e-08	1.862e-07	2.188e-06	7.858e-08	1.652e-07	1.942e-06	5.132e-07	1.110e-06	3.305e-05	3.424e-07	9.388e-07	1.17	2100-2200	8.006e-08	1.862e-07	2.188e-06	7.858e-08	1.652e-07	1.942e-06	5.132e-07	1.110e-06	3.305e-05	3.424e-07	9.388e-07	1.17	2200-2300	7.555e-08	1.702e-07	1.446e-06	6.742e-08	1.208e-07	1.286e-06	5.562e-07	8.076e-07	4.045e-05	4.568e-07	5.822e-07	6.17	2300-2400	7.555e-08	1.702e-07	1.446e-06	6.742e-08	1.208e-07	1.286e-06	5.562e-07	8.076e-07	4.045e-05	4.568e-07	5.822e-07	6.17	2400-0100	7.555e-08	1.702e-07	1.446e-06	6.742e-08	1.208e-07	1.286e-06	5.562e-07	8.076e-07	4.045e-05	4.568e-07	5.822e-07	6.17	0100-0300	1.168e-07	3.108e-07	6.348e-06	1.081e-07	2.896e-06	5.686e-06	5.968e-07	1.608e-06	2.386e-05	4.978e-07	1.348e-06	1.17	0300-0600	1.168e-07	3.108e-07	6.348e-06	1.081e-07	2.896e-06	5.686e-06	5.968e-07	1.608e-06	2.386e-05	4.978e-07	1.348e-06	1.17	0600-0900	1.268e-07	2.967e-07	3.768e-06	1.168e-07	2.768e-07	2.968e-06	6.068e-07	1.668e-06	2.386e-05	6.068e-07	1.668e-06	1.17	0900-1200	1.268e-07	2.967e-07	3.768e-06	1.168e-07	2.768e-07	2.968e-06	6.068e-07	1.668e-06	2.386e-05	6.068e-07	1.668e-06	1.17	1200-1500	1.068e-07	2.467e-07	3.268e-06	1.068e-07	2.468e-07	2.668e-06	5.068e-07	1.468e-06	2.186e-05	5.068e-07	1.468e-06	1.17	1500-1800	8.006e-08	1.862e-07	2.188e-06	7.858e-08	1.652e-07	1.942e-06	5.132e-07	1.110e-06	3.305e-05	3.424e-07	9.388e-07	1.17	1800-2100	8.006e-08	1.862e-07	2.188e-06	7.858e-08	1.652e-07	1.942e-06	5.132e-07	1.110e-06	3.305e-05	3.424e-07	9.388e-07	1.17	2100-2200	8.006e-08	1.862e-07	2.188e-06	7.858e-08	1.652e-07	1.942e-06	5.132e-07	1.110e-06	3.305e-05	3.424e-07	9.388e-07	1.17	2200-2300	7.555e-08	1.702e-07	1.446e-06	6.742e-08	1.208e-07	1.286e-06	5.562e-07	8.076e-07	4.045e-05	4.568e-07	5.822e-07	6.17	2300-2400	7.555e-08	1.702e-07	1.446e-06	6.742e-08	1.208e-07	1.286e-06	5.562e-07	8.076e-07	4.045e-05	4.568e-07	5.822e-07	6.17	2400-0100	7.555e-08	1.702e-07	1.446e-06	6.742e-08	1.208e-07	1.286e-06	5.562e-07	8.076e-07	4.045e-05	4.568e-07	5.822e-07	6.17	0100-0300	1.168e-07	3.108e-07	6.348e-06	1.081e-07	2.896e-06	5.686e-06	5.968e-07	1.608e-06	2.386e-05	4.978e-07	1.348e-06	1.17	0300-0600	1.168e-07	3.108e-07	6.348e-06	1.081e-07	2.896e-06	5.686e-06	5.968e-07	1.608e-06	2.386e-05	4.978e-07	1.348e-06	1.17	0600-0900	1.268e-07	2.967e-07	3.768e-06	1.168e-07	2.768e-07	2.968e-06	6.068e-07	1.668e-06	2.386e-05	6.068e-07	1.668e-06	1.17	0900-1200	1.268e-07	2.967e-07	3.768e-06	1.168e-07	2.768e-07	2.968e-06	6.068e-07	1.668e-06	2.386e-05	6.068e-07	1.668e-06	1.17	1200-1500	1.068e-07	2.467e-07	3.268e-06	1.068e-07	2.468e-07	2.668e-06	5.068e-07	1.468e-06	2.186e-05	5.068e-07	1.468e-06	1.17	1500-1800	8.006e-08	1.862e-07	2.188e-06	7.858e-08	1.652e-07	1.942e-06	5.132e-07	1.110e-06	3.305e-05	3.424e-07	9.388e-07	1.17	1800-2100	8.006e-08	1.862e-07	2.188e-06	7.858e-08	1.652e-07	1.942e-06	5.132e-07	1.110e-06	3.305e-05	3.424e-07	9.388e-07	1.17	2100-2200	8.006e-08	1.862e-07	2.188e-06	7.858e-08	1.652e-07	1.942e-06	5.132e-07	1.110e-06	3.305e-05	3.424e-07	9.388e-07	1.17	2200-2300	7.555e-08	1.702e-07	1.446e-06	6.742e-08	1.208e-07	1.286e-06	5.562e-07	8.076e-07	4.045e-05	4.568e-07	5.822e-07	6.17	2300-2400	7.555e-08	1.702e-07	1.446e-06	6.742e-08	1.208e-07	1.286e-06	5.562e-07	8.076e-07	4.045e-05	4.568e-07	5.822e-07	6.17	2400-0100	7.555e-08	1.702e-07	1.446e-06	6.742e-08	1.208e-07	1.286e-06	5.562e-07	8.076e-07	4.045e-05	4.568e-07	5.822e-07	6.17	0100-0300	1.168e-07	3.108e-07	6.348e-06	1.081e-07	2.896e-06	5.686e-06	5.968e-07	1.608e-06	2.386e-05	4.978e-07	1.348e-06	1.17	0300-0600	1.168e-07	3.108e-07	6.348e-06	1.081e-07	2.896e-06	5.686e-06	5.968e-07	1.608e-06	2.386e-05	4.978e-07	1.348e-06	1.17	0600-0900	1.268e-07	2.967e-07	3.768e-06	1.168e-07	2.768e-07	2.968e-06	6.068e-07	1.668e-06	2.386e-05	6.068e-07	1.668e-06	1.17	0900-1200	1.268e-07	2.967e-07	3.768e-06	1.168e-07	2.768e-07	2.968e-06	6.068e-07	1.668e-06	2.386e-05	6.068e-07

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Open Road 24 hour Emission Factors for
AERMOD model (December) Year 2038

Road Name	Road ID	Hour	NO Emission											
			Monthly/Hourly				Monthly/Average				Monthly/Hourly			
			g/kwh	tonne/hour	g/kwh	tonne/hour	g/kwh	tonne/hour	g/kwh	tonne/hour	g/kwh	tonne/hour	g/kwh	tonne/hour
Road 11	11	0000-0100	3.17E-02	2.06E-07	7.91E-07	2.59E-02	1.92E-07	7.36E-07	1.877E-01	1.21E-06	4.66E-06	1.67E-01	1.09E-06	4.11E-06
Road 11	11	0100-0200	3.66E-02	2.50E-07	9.58E-07	3.26E-02	2.44E-07	8.54E-07	2.022E-01	1.34E-06	5.20E-06	1.77E-01	7.49E-07	2.88E-06
Road 11	11	0200-0300	3.97E-02	2.61E-07	1.04E-06	3.55E-02	2.63E-07	9.45E-07	2.233E-01	1.45E-06	5.60E-06	1.95E-01	8.08E-07	2.97E-06
Road 11	11	0300-0400	4.31E-02	1.14E-07	4.37E-07	4.03E-02	1.06E-07	4.08E-07	2.10E-01	5.55E-07	2.13E-06	1.90E-01	5.07E-07	1.58E-06
Road 11	11	0400-0500	4.66E-02	1.28E-07	4.71E-07	4.17E-02	1.20E-07	4.60E-07	2.16E-01	6.23E-07	2.39E-06	1.97E-01	5.87E-07	2.03E-06
Road 11	11	0500-0600	4.43E-02	1.17E-07	4.37E-07	4.03E-02	1.10E-07	4.23E-07	2.03E-01	5.73E-07	2.22E-06	1.87E-01	5.47E-07	1.95E-06
Road 11	11	0600-0700	4.76E-02	1.79E-07	1.84E-07	4.47E-02	1.47E-07	1.72E-06	2.45E-01	2.87E-06	9.49E-06	2.23E-01	2.23E-06	9.50E-06
Road 11	11	0700-0800	6.10E-02	1.27E-06	4.68E-06	5.69E-02	1.19E-06	4.56E-06	2.81E-01	5.66E-06	2.25E-05	2.74E-01	5.36E-06	2.03E-05
Road 11	11	0800-0900	6.32E-02	1.49E-06	5.19E-06	6.05E-02	1.35E-06	5.18E-07	2.97E-01	5.69E-06	2.19E-05	2.93E-01	5.53E-06	1.99E-05
Road 11	11	0900-1000	7.02E-02	1.54E-06	5.20E-06	6.59E-02	1.39E-06	5.18E-07	3.18E-01	5.69E-06	2.19E-05	2.93E-01	5.53E-06	1.99E-05
Road 11	11	1000-1100	7.55E-02	1.36E-06	5.27E-06	7.09E-02	1.29E-06	4.90E-06	2.81E-01	5.05E-06	1.95E-05	2.58E-01	4.66E-06	1.71E-05
Road 11	11	1100-1200	8.05E-02	1.31E-06	5.18E-06	7.59E-02	1.23E-06	4.72E-06	2.98E-01	5.05E-06	1.95E-05	2.58E-01	4.66E-06	1.71E-05
Road 11	11	1200-1300	1.02E-01	2.22E-06	8.69E-06	9.80E-02	2.12E-06	8.12E-06	3.57E-01	7.22E-06	2.96E-05	3.29E-01	7.11E-06	2.91E-05
Road 11	11	1300-1400	1.06E-01	2.47E-06	9.48E-06	1.02E-02	2.33E-06	8.90E-06	3.78E-01	8.53E-06	3.27E-05	3.48E-01	7.88E-06	3.02E-05
Road 11	11	1400-1500	1.10E-01	2.51E-06	9.62E-06	1.04E-02	2.41E-06	9.12E-06	3.87E-01	8.84E-06	3.34E-05	3.59E-01	8.08E-06	3.10E-05
Road 11	11	1500-1600	1.09E-01	2.64E-06	1.01E-05	1.02E-02	2.48E-06	9.51E-06	3.87E-01	8.95E-06	3.60E-05	3.59E-01	8.10E-06	3.14E-05
Road 11	11	1600-1700	1.04E-01	2.59E-06	9.93E-06	9.74E-02	2.41E-06	9.26E-06	3.64E-01	8.93E-06	3.47E-05	3.35E-01	8.30E-06	3.08E-05
Road 11	11	1700-1800	8.70E-02	2.30E-06	8.84E-06	8.15E-02	2.16E-06	8.28E-06	3.42E-01	8.06E-06	3.40E-05	3.15E-01	8.31E-06	3.08E-05
Road 11	11	1800-1900	6.75E-02	1.67E-06	6.29E-06	6.25E-02	1.55E-06	5.79E-06	3.17E-01	6.46E-06	2.50E-05	2.87E-01	6.46E-06	2.50E-05
Road 11	11	1900-2000	4.89E-02	8.98E-07	3.45E-06	4.19E-02	8.40E-07	3.22E-06	2.09E-01	4.19E-06	1.61E-05	1.91E-01	3.81E-06	1.46E-05
Road 11	11	2000-2100	4.38E-02	8.06E-07	3.06E-06	4.13E-02	8.40E-07	2.49E-06	2.17E-01	4.04E-06	1.33E-05	1.89E-01	3.12E-06	1.20E-05
Road 11	11	2100-2200	3.87E-02	6.75E-07	2.53E-06	3.67E-02	7.45E-07	2.20E-06	1.93E-01	3.39E-06	1.12E-05	1.66E-01	2.73E-06	1.05E-05
Road 11	11	2200-2300	2.97E-02	5.98E-07	2.29E-06	3.71E-02	5.59E-07	2.14E-06	1.20E-01	3.18E-06	1.05E-05	1.88E-01	2.83E-06	1.09E-05
Road 11	11	2300-0000	4.23E-02	4.85E-07	1.88E-06	3.98E-02	1.54E-07	1.74E-06	1.13E-01	2.44E-06	9.28E-06	1.93E-01	2.27E-06	8.51E-06
Road 12	12	0000-0100	2.96E-02	1.88E-07	6.98E-07	2.44E-02	1.84E-07	6.68E-07	1.64E-01	1.10E-06	4.00E-06	1.50E-01	1.00E-06	3.60E-06
Road 12	12	0100-0200	2.96E-02	1.80E-07	4.43E-06	2.68E-02	1.63E-07	4.01E-06	3.90E-01	3.82E-07	9.42E-06	1.57E-01	3.66E-07	8.53E-06
Road 12	12	0200-0300	3.02E-01	1.80E-07	4.43E-06	2.71E-02	1.63E-07	4.01E-06	6.99E-01	3.81E-07	9.41E-06	5.77E-01	3.44E-07	8.50E-06
Road 12	12	0300-0400	3.04E-01	1.80E-07	4.43E-06	2.71E-02	1.63E-07	4.01E-06	6.99E-01	3.81E-07	9.41E-06	5.77E-01	3.44E-07	8.50E-06
Road 12	12	0400-0500	3.04E-01	1.80E-07	4.43E-06	2.71E-02	1.63E-07	4.01E-06	6.99E-01	3.81E-07	9.41E-06	5.77E-01	3.44E-07	8.50E-06
Road 12	12	0500-0600	2.97E-01	1.82E-07	4.43E-06	2.71E-02	1.63E-07	4.09E-06	6.99E-01	3.90E-07	9.61E-06	5.79E-01	3.59E-07	8.79E-06
Road 12	12	0600-0700	2.88E-01	1.78E-07	4.43E-06	2.71E-02	1.63E-07	4.09E-06	6.99E-01	3.87E-07	9.41E-06	5.77E-01	3.44E-07	8.50E-06
Road 12	12	0700-0800	3.61E-01	8.75E-07	2.18E-06	3.34E-01	7.97E-07	1.96E-06	7.83E-01	1.87E-06	4.61E-05	7.13E-01	1.70E-06	4.16E-05
Road 12	12	0800-0900	3.61E-01	8.75E-07	2.18E-06	3.34E-01	8.02E-07	1.98E-06	7.85E-01	1.88E-06	4.63E-05	7.08E-01	1.72E-06	4.23E-05
Road 12	12	0900-1000	3.60E-01	8.68E-07	2.18E-06	3.34E-01	8.01E-07	1.97E-06	7.84E-01	1.87E-06	4.61E-05	7.11E-01	1.70E-06	4.20E-05
Road 12	12	1000-1100	3.68E-01	8.77E-07	2.18E-06	3.36E-01	8.06E-07	1.97E-06	7.86E-01	1.87E-06	4.61E-05	7.17E-01	1.71E-06	4.20E-05
Road 12	12	1100-1200	3.71E-01	8.79E-07	2.17E-06	3.37E-01	8.07E-07	1.97E-06	7.91E-01	1.87E-06	4.61E-05	7.19E-01	1.70E-06	4.20E-05
Road 12	12	1200-1300	3.72E-01	8.83E-07	2.18E-06	3.38E-01	8.08E-07	1.98E-06	7.92E-01	1.87E-06	4.62E-05	7.20E-01	1.70E-06	4.20E-05
Road 12	12	1300-1400	3.68E-01	8.78E-07	2.18E-06	3.36E-01	8.03E-07	1.98E-06	7.89E-01	1.86E-06	4.60E-05	7.17E-01	1.71E-06	4.20E-05
Road 12	12	1400-1500	3.66E-01	8.78E-07	2.17E-06	3.34E-01	8.02E-07	1.98E-06	7.82E-01	1.86E-06	4.62E-05	7.14E-01	1.71E-06	4.22E-05
Road 12	12	1500-1600	3.67E-01	8.79E-07	2.17E-06	3.35E-01	8.03E-07	1.98E-06	7.85E-01	1.86E-06	4.62E-05	7.15E-01	1.71E-06	4.22E-05
Road 12	12	1600-1700	3.65E-01	8.79E-07	2.17E-06	3.33E-01	8.02E-07	1.96E-06	7.80E-01	1.88E-06	4.63E-05	7.05E-01	1.70E-06	4.19E-05
Road 12	12	1700-1800	3.64E-01	8.71E-07	2.18E-06	3.32E-01	7.99E-07	1.95E-06	7.78E-01	1.88E-06	4.63E-05	6.99E-01	1.70E-06	4.18E-05
Road 12	12	1800-1900	3.62E-01	8.69E-07	2.18E-06	3.32E-01	7.98E-07	1.95E-06	7.78E-01	1.88E-06	4.63E-05	6.99E-01	1.70E-06	4.18E-05
Road 12	12	1900-2000	2.52E-01	1.97E-06	4.88E-06	2.57E-01	1.77E-06	4.39E-06	5.84E-01	4.09E-07	1.05E-05	5.72E-01	3.99E-07	9.77E-06
Road 12	12	2000-2100	2.74E-01	1.95E-07	4.88E-06	2.48E-01	1.77E-07	4.35E-06	6.06E-01	4.31E-07	1.05E-05	5.49E-01	3.91E-07	9.63E-06
Road 12	12	2100-2200	2.74E-01	1.95E-07	4.88E-06	2.48E-01	1.77E-07	4.35E-06	6.06E-01	4.31E-07	1.05E-05	5.49E-01	3.91E-07	9.63E-06
Road 12	12	2200-2300	2.75E-01	1.94E-07	4.78E-06	2.49E-01	1.77E-07	4.33E-06	6.05E-01	4.27E-07	1.05E-05	5.48E-01	3.87E-07	9.59E-06
Road 13	13	0000-0100	2.91E-01	1.62E-07	4.59E-06	2.46E-01	1.66E-07	4.08E-06	5.33E-01	3.99E-07	9.82E-06	5.71E-01	3.81E-07	8.90E-06
Road 13	13	0100-0200	2.91E-01	1.62E-07	4.59E-06	2.46E-01	1.66E-07	4.08E-06	5.33E-01	3.99E-07	9.82E-06	5.71E-01	3.81E-07	8.90E-06
Road 13	13	0200-0300	2.91E-01	1.62E-07	4.59E-06	2.46E-01	1.66E-07	4.08E-06	5.33E-01	3.99E-07	9.82E-06	5.71E-01	3.81E-07	8.90E-06
Road 13	13	0300-0400	2.91E-01	1.62E-07	4.59E-06	2.46E-01	1.66E-07	4.08E-06	5.33E-01	3.99E-07	9.82E-06	5.71E-01	3.81E-07	8.90E-06
Road 13	13	0400-0500	2.91E-01	1.62E-07	4.59E-06	2.46E-01	1.66E-07	4.08E-06	5.33E-01	3.99E-07	9.82E-06	5.71E-01	3.81E-07	8.90E-06
Road 13	13	0500-0600	2.91E-01	1.62E-07	4.59E-06	2.46E-01	1.66E-07	4.08E-06	5.33E-01	3.99E-07	9.82E-06	5.71E-01	3.81E-07	8.90E-06
Road 13	13	0600-0700	2.91E-01	1.62E-07	4.59E-06	2.46E-01	1.66E-07	4.08E-06	5.33E-01	3.99E-07	9.82E-06	5.71E-01	3.81E-07	8.90E-06
Road 13	13	0700-0800	2.91E-01	1.62E-07	4.59E-06	2.46E-01	1.66E-07	4.08E-06	5.33E-01	3.99E-07	9.82E-06	5.71E-01	3.81E-07	8.90E-06
Road 13	13	0800-0900	2.91E-01	1.62E-07	4.59E-06	2.46E-01	1.66E-07	4.08E-06	5.33E-01	3.99E-07	9.82E-06	5.71E-01	3.81E-07	8.90E-06
Road 13	13	0900-1000	2.91E-01	1.62E-07	4.59E-06	2.46E-01	1.66E-07	4.08E-06	5.33E-01	3.99E-07	9.82E-06	5.71E-01	3.81E-07	8.90E-06
Road 13	13	1000-1100	2.91E-01	1.62E-07	4.59E-06	2.46E-01	1.66E-07	4.08E-06	5.33E-01	3.99E-07	9.82E-06	5.71E-01	3.81E-07	8.90E-06
Road 13	13	1100-1200	2.91E-01	1.62E-07	4.59E-06	2.46E-01	1.66E-07	4.08E-06	5.33E-01	3.99E-07	9.82E-06	5.71E-01	3.81E-07	8.90E-06
Road 13	13	1200-1300	2.91E-01	1.62E-07	4.59E-06	2.46E-01	1.66E-07	4.08E-06	5.33E-01	3.99E-07	9.82E-06	5.71E-01	3.81E-07	8.90E-06
Road 13	13	1300-1400	2.91E-01	1.62E-07	4.59E-06	2.46E-01	1.66E-07	4.08E-06	5.33E-01	3.99E-07	9.82E-06	5.71E-01	3.81E-07	8.90E-06
Road 13	13	1400-1500	2.91E-01	1.62E-07	4.59E-06	2.46E-01	1.66E-07	4.08E-06	5.33E-01	3.99E-07	9.82E-06	5.71E-01	3.81E-07	8.90E-06
Road 13	13	1500-1600	2.91E-01	1.62E-07	4.59E-06	2.46E-01	1.66E-07	4.08E-06	5.33E-01	3.99E-07	9.82E-06	5.71E-01	3.81E-07	8.90E-06
Road 13	13	1600-1700	2.91E-01	1.62E-07	4.59E-06	2.46E-01	1.66E-07	4.08E-06	5.33E-01	3.99E-07	9.82E-06	5.71E-01	3.81E-07	8.90E-06
Road 13	13	1700-1800												

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Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for
AERMOD model (December) Year 2038

Road Name	Road ID	Hour	NO ₂ Emission						NO ₂ Emission					
			MonthlyHourly			MonthlyAverage			MonthlyHourly			MonthlyAverage		
			g/km/h	g/km	tonne/hour	g/km/h	g/km	tonne/hour	g/km/h	g/km	tonne/hour	g/km/h	g/km	tonne/hour
Road 14	14	0800-0900	3.586	9.507	1.626	3.636	8.676	1.488	3.511	8.616	1.688	1.348	3.268	5.268
Road 14	14	0900-1000	4.998	13.067	2.355	5.098	12.431	3.176	4.708	11.058	2.088	1.908	4.368	7.548
Road 14	14	1000-1100	7.198	18.631	3.431	7.148	16.811	4.716	6.858	15.376	3.018	2.858	6.458	10.958
Road 14	14	1100-1200	4.836	12.247	2.076	4.398	10.476	1.788	3.768	9.016	1.598	1.578	3.568	5.748
Road 14	14	1200-1300	1.436	3.626	0.596	1.498	3.798	0.648	1.348	3.176	0.882	0.718	1.628	2.788
Road 14	14	1300-1400	1.738	4.398	0.748	1.738	4.398	0.748	1.738	4.398	0.748	1.738	4.398	0.748
Road 14	14	1400-1500	3.732	9.176	1.728	3.732	9.176	1.728	3.732	9.176	1.728	3.732	9.176	1.728
Road 14	14	1500-1600	6.858	16.446	2.868	6.718	15.958	2.548	6.518	16.014	2.298	2.148	5.498	9.358
Road 14	14	1600-1700	3.338	8.438	1.538	3.338	8.438	1.538	3.338	8.438	1.538	3.338	8.438	1.538
Road 14	14	1700-1800	3.398	8.498	1.598	3.398	8.498	1.598	3.398	8.498	1.598	3.398	8.498	1.598
Road 14	14	1800-1900	3.848	9.638	1.758	3.848	9.638	1.758	3.848	9.638	1.758	3.848	9.638	1.758
Road 14	14	1900-2000	7.178	18.238	3.328	7.178	18.238	3.328	7.178	18.238	3.328	7.178	18.238	3.328
Road 14	14	2000-2100	5.238	13.398	2.638	5.238	13.398	2.638	5.238	13.398	2.638	5.238	13.398	2.638
Road 14	14	2100-2200	2.438	6.078	1.038	2.438	6.078	1.038	2.438	6.078	1.038	2.438	6.078	1.038
Road 14	14	2200-2300	1.438	3.628	0.598	1.438	3.628	0.598	1.438	3.628	0.598	1.438	3.628	0.598
Road 14	14	2300-0000	2.558	6.488	1.288	2.558	6.488	1.288	2.558	6.488	1.288	2.558	6.488	1.288
Road 15	15	0000-0100	3.218	8.078	1.568	3.218	8.078	1.568	3.218	8.078	1.568	3.218	8.078	1.568
Road 15	15	0100-0200	4.718	11.978	2.468	4.718	11.978	2.468	4.718	11.978	2.468	4.718	11.978	2.468
Road 15	15	0200-0300	4.418	11.038	2.318	4.418	11.038	2.318	4.418	11.038	2.318	4.418	11.038	2.318
Road 15	15	0300-0400	5.448	13.598	2.928	5.448	13.598	2.928	5.448	13.598	2.928	5.448	13.598	2.928
Road 15	15	0400-0500	5.278	13.428	2.878	5.278	13.428	2.878	5.278	13.428	2.878	5.278	13.428	2.878
Road 15	15	0500-0600	3.848	9.618	1.748	3.848	9.618	1.748	3.848	9.618	1.748	3.848	9.618	1.748
Road 15	15	0600-0700	3.318	8.398	1.668	3.318	8.398	1.668	3.318	8.398	1.668	3.318	8.398	1.668</

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Yixing Yi North Underground Quarry
Open Road 24 hour Emission Factors for
AERMOD model (December) Year 2038

			NO _x Emission						NO Emission					
Road Name	Road ID	Hour	MonthlyMonth			MonthlyHourAverage			MonthlyMonth			MonthlyHourAverage		
			g/km/hr	g/s/m	tonne/hr	g/km/hr	g/s/m	tonne/hr	g/km/hr	g/s/m	tonne/hr	g/km/hr	g/s/m	tonne/hr
Road 17	17	1600-1700	4.382	1.362	0.987	4.382	1.362	0.987	4.382	1.362	0.987	4.382	1.362	0.987
Road 17	17	1700-1800	4.382	1.398	0.988	4.382	1.398	0.988	4.382	1.398	0.988	4.382	1.398	0.988
Road 17	17	1800-1900	2.696	0.865	0.707	2.696	0.865	0.707	2.696	0.865	0.707	2.696	0.865	0.707
Road 17	17	1900-2000	1.631	0.543	0.392	1.631	0.543	0.392	1.631	0.543	0.392	1.631	0.543	0.392
Road 17	17	2000-2100	2.000	0.672	0.207	2.000	0.672	0.207	2.000	0.672	0.207	2.000	0.672	0.207
Road 17	17	2100-2200	3.326	1.108	0.547	3.326	1.108	0.547	3.326	1.108	0.547	3.326	1.108	0.547
Road 17	17	2200-2300	1.359	0.453	0.167	1.359	0.453	0.167	1.359	0.453	0.167	1.359	0.453	0.167
Road 17	17	2300-0000	1.436	0.474	0.157	1.436	0.474	0.157	1.436	0.474	0.157	1.436	0.474	0.157
Road 18	18	0000-0100	8.986	3.038	2.548	8.986	3.038	2.548	8.986	3.038	2.548	8.986	3.038	2.548
Road 18	18	0100-0200	1.359	0.453	0.167	1.359	0.453	0.167	1.359	0.453	0.167	1.359	0.453	0.167
Road 18	18	0200-0300	1.436	0.474	0.157	1.436	0.474	0.157	1.436	0.474	0.157	1.436	0.474	0.157
Road 18	18	0300-0400	1.238	0.418	0.138	1.238	0.418	0.138	1.238	0.418	0.138	1.238	0.418	0.138
Road 18	18	0400-0500	1.359	0.453	0.167	1.359	0.453	0.167	1.359	0.453	0.167	1.359	0.453	0.167
Road 18	18	0500-0600	1.238	0.418	0.138	1.238	0.418	0.138	1.238	0.418	0.138	1.238	0.418	0.138
Road 18	18	0600-0700	1.359	0.453	0.167	1.359	0.453	0.167	1.359	0.453	0.167	1.359	0.453	0.167
Road 18	18	0700-0800	1.359	0.453	0.167	1.359	0.453	0.167	1.359	0.453	0.167	1.359	0.453	0.167
Road 18	18	0800-0900	1.359	0.453	0.167	1.359	0.453	0.167	1.359	0.453	0.167	1.359	0.453	0.167
Road 18	18	0900-1000	1.588	0.527	0.179	1.588	0.527	0.179	1.588	0.527	0.179	1.588	0.527	0.179
Road 18	18	1000-1100	1.768	0.589	0.201	1.768	0.589	0.201	1.768	0.589	0.201	1.768	0.589	0.201
Road 18	18	1100-1200	1.768	0.589	0.201	1.768	0.589	0.201	1.768	0.589	0.201	1.768	0.589	0.201
Road 18	18	1200-1300	2.396	0.802	0.270	2.396	0.802	0.270	2.396	0.802	0.270	2.396	0.802	0.270
Road 18	18	1300-1400	2.468	0.832	0.276	2.468	0.832	0.276	2.468	0.832	0.276	2.468	0.832	0.276
Road 18	18	1400-1500	2.396	0.802	0.270	2.396	0.802	0.270	2.396	0.802	0.270	2.396	0.802	0.270
Road 18	18	1500-1600	2.226	0.742	0.251	2.226	0.742	0.251	2.226	0.742	0.251	2.226	0.742	0.251
Road 18	18	1600-1700	2.226	0.742	0.251	2.226	0.742	0.251	2.226	0.742	0.251	2.226	0.742	0.251
Road 18	18	1700-1800	1.768	0.589	0.201	1.768	0.589	0.201	1.768	0.589	0.201	1.768	0.589	0.201
Road 18	18	1800-1900	1.238	0.418	0.138	1.238	0.418	0.138	1.238	0.418	0.138	1.238	0.418	0.138
Road 18	18	1900-2000	1.112	0.357	0.125	1.112	0.357	0.125	1.112	0.357	0.125	1.112	0.357	0.125
Road 18	18	2000-2100	1.238	0.418	0.138	1.238	0.418	0.138	1.238	0.418	0.138	1.238	0.418	0.138
Road 18	18	2100-2200	1.036	0.340	0.112	1.036	0.340	0.112	1.036	0.340	0.112	1.036	0.340	0.112
Road 18	18	2200-2300	1.040	0.341	0.113	1.040	0.341	0.113	1.040	0.341	0.113	1.040	0.341	0.113
Road 18	18	2300-0000	1.036	0.340	0.112	1.036	0.340	0.112	1.036	0.340	0.112	1.036	0.340	0.112
Road 19	19	0000-0100	1.106	0.358	0.127	1.106	0.358	0.127	1.106	0.358	0.127	1.106	0.358	0.127
Road 19	19	0100-0200	1.211	0.394	0.140	1.211	0.394	0.140	1.211	0.394	0.140	1.211	0.394	0.140
Road 19	19	0200-0300	1.326	0.440	0.158	1.326	0.440	0.158	1.326	0.440	0.158	1.326	0.440	0.158
Road 19	19	0300-0400	1.512	0.508	0.184	1.512	0.508	0.184	1.512	0.508	0.184	1.512	0.508	0.184
Road 19	19	0400-0500	1.586	0.527	0.192	1.586	0.527	0.192	1.586	0.527	0.192	1.586	0.527	0.192
Road 19	19	0500-0600	1.660	0.547	0.200	1.660	0.547	0.200	1.660	0.547	0.200	1.660	0.547	0.200
Road 19	19	0600-0700	1.586	0.527	0.192	1.586	0.527	0.192	1.586	0.527	0.192	1.586	0.527	0.192
Road 19	19	0700-0800	1.715	0.568	0.207	1.715	0.568	0.207	1.715	0.568	0.207	1.715	0.568	0.207
Road 19	19	0800-0900	1.715	0.568	0.207	1.715	0.568	0.207	1.715	0.568	0.207	1.715	0.568	0.207
Road 19	19	0900-1000	1.844	0.609	0.222	1.844	0.609	0.222	1.844	0.609	0.222	1.844	0.609	0.222
Road 19	19	1000-1100	2.226	0.742	0.251	2.226	0.742	0.251	2.226	0.742	0.251	2.226	0.742	0.251
Road 19	19	1100-1200	2.226	0.742	0.251	2.226	0.742	0.251	2.226	0.742	0.251	2.226	0.742	0.251
Road 19	19	1200-1300	2.854	0.967	0.319	2.854	0.967	0.319	2.854	0.967	0.319	2.854	0.967	0.319
Road 19	19	1300-1400	2.854	0.967	0.319	2.854	0.967	0.319	2.854	0.967	0.319	2.854	0.967	0.319
Road 19	19	1400-1500	2.854	0.967	0.319	2.854	0.967	0.319	2.854	0.967	0.319	2.854	0.967	0.319
Road 19	19	1500-1600	2.696	0.865	0.270	2.696	0.865	0.270	2.696	0.865	0.270	2.696	0.865	0.270
Road 19	19	1600-1700	2.696	0.865	0.270	2.696	0.865	0.270	2.696	0.865	0.270	2.696	0.865	0.270
Road 19	19	1700-1800	2.112	0.672	0.207	2.112	0.672	0.207	2.112	0.672	0.207	2.112	0.672	0.207
Road 19	19	1800-1900	1.359	0.453	0.167	1.359	0.453	0.167	1.359	0.453	0.167	1.359	0.453	0.167
Road 19	19	1900-2000	1.359	0.453	0.167	1.359	0.453	0.167	1.359	0.453	0.167	1.359	0.453	0.167
Road 19	19	2000-2100	1.359	0.453	0.167	1.359	0.453	0.167	1.359	0.453	0.167	1.359	0.453	0.167
Road 19	19	2100-2200	1.359	0.453	0.167	1.359	0.453	0.167	1.359	0.453	0.167	1.359	0.453	0.167
Road 19	19	2200-2300	1.359	0.453	0.167	1.359	0.453	0.167	1.359	0.453	0.167	1.359	0.453	0.167
Road 19	19	2300-0000	1.359	0.453	0.167	1.359	0.453	0.167	1.359	0.453	0.167	1.359	0.453	0.167
Road 20	20	0000-0100	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066
Road 20	20	0100-0200	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066
Road 20	20	0200-0300	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066
Road 20	20	0300-0400	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066
Road 20	20	0400-0500	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066
Road 20	20	0500-0600	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066
Road 20	20	0600-0700	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066
Road 20	20	0700-0800	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066
Road 20	20	0800-0900	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066
Road 20	20	0900-1000	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066
Road 20	20	1000-1100	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066
Road 20	20	1100-1200	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066
Road 20	20	1200-1300	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066
Road 20	20	1300-1400	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066
Road 20	20	1400-1500	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066
Road 20	20	1500-1600	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066
Road 20	20	1600-1700	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066
Road 20	20	1700-1800	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066
Road 20	20	1800-1900	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066
Road 20	20	1900-2000	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066
Road 20	20	2000-2100	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066
Road 20	20	2100-2200	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066
Road 20	20	2200-2300	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066	4.476	1.490	1.066

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Tsing Yi North Underground Quarry
 Open Road 24-hour Emission Factors for
 AERMOD model (December)

Road Name	Road ID	Hour	NO ₂ Emission										NO Emission									
			MonthlyHourMin					MonthlyHourAverage					MonthlyHourMin					MonthlyHourAverage				
			g/min	g/hour	g/min	g/hour	g/min	g/hour	g/min	g/hour	g/min	g/hour	g/min	g/hour	g/min	g/hour	g/min	g/hour	g/min	g/hour	g/min	g/hour
Road 21	21	0000-0100	1.2675	0.0000	1.2675	0.0000	1.2675	0.0000	1.2675	0.0000	1.2675	0.0000	1.2675	0.0000	1.2675	0.0000	1.2675	0.0000	1.2675	0.0000	1.2675	0.0000
Road 21	21	0100-0200	1.3662	0.2438	0.8407	0.2438	1.2222	0.5938	1.7398	0.7177	7.2222	0.3602	0.3156	0.4375	0.6188	2.8333	0.7177	7.2222	0.3602	0.3156	0.4375	0.6188
Road 21	21	0200-0300	1.4892	0.5048	0.6171	0.5048	1.3233	0.4538	0.5967	1.5382	0.2737	0.5738	0.6988	0.4482	0.6482	2.2027	0.6988	0.4482	0.6482	2.2027	0.6988	0.4482
Road 21	21	0300-0400	1.5882	0.7658	0.5182	0.7658	1.4222	0.3538	0.2467	1.6382	0.2737	0.5738	0.7988	0.4482	0.6482	2.2027	0.7988	0.4482	0.6482	2.2027	0.7988	0.4482
Road 21	21	0400-0500	1.6782	0.5048	0.6171	0.5048	1.5222	0.4538	0.6187	0.8187	0.2476	0.4738	0.7988	0.4482	0.6482	2.2027	0.8187	0.2476	0.4738	0.7988	0.4482	
Road 21	21	0500-0600	1.7782	0.5048	1.2116	0.5048	1.6222	0.8238	1.1166	0.8722	0.4247	0.8328	0.7222	0.3987	0.5727	0.3987	0.8722	0.4247	0.8328	0.7222	0.3987	
Road 21	21	0600-0700	1.7782	0.5048	0.7182	0.5048	1.6222	0.8238	1.2467	0.8722	0.4247	0.8328	0.7222	0.3987	0.5727	0.3987	1.6222	0.8238	1.2467	0.8722	0.4247	
Road 21	21	0700-0800	1.9282	0.4738	0.6756	0.4738	1.8112	0.4297	0.5673	0.9282	0.2005	0.9125	0.8138	0.2126	0.9382	0.2126	1.8112	0.4297	0.5673	0.9282	0.2005	
Road 21	21	0800-0900	2.1382	0.5047	0.7800	0.5047	2.0382	0.5347	0.6707	1.9382	0.5246	0.4685	0.7372	0.3232	0.6305	0.3232	2.0382	0.5347	0.6707	1.9382	0.5246	
Road 21	21	0900-1000	2.1382	0.5047	0.7800	0.5047	2.0382	0.5347	0.6707	1.9382	0.5246	0.4685	0.7372	0.3232	0.6305	0.3232	2.0382	0.5347	0.6707	1.9382	0.5246	
Road 21	21	1000-1100	2.5052	0.5872	0.7672	0.5872	2.2882	0.5167	0.8202	1.0252	0.3735	0.9125	0.9352	0.2126	0.9382	0.2126	2.2882	0.5167	0.8202	1.0252	0.3735	
Road 21	21	1100-1200	2.4552	0.5427	0.6247	0.5427	2.2252	0.4767	0.6707	1.0252	0.2465	0.9655	0.9302	0.2126	0.9382	0.2126	2.2252	0.4767	0.6707	1.0252	0.2465	
Road 21	21	1200-1300	2.4552	0.5427	0.6247	0.5427	2.2252	0.4767	0.6707	1.0252	0.2465	0.9655	0.9302	0.2126	0.9382	0.2126	2.2252	0.4767	0.6707	1.0252	0.2465	
Road 21	21	1300-1400	3.0562	0.6457	0.8252	0.6457	2.7252	0.6102	0.7686	1.2252	0.1485	1.0952	1.0952	0.2305	1.0952	0.2305	2.7252	0.6102	0.7686	1.2252	0.1485	
Road 21	21	1400-1500	3.1562	0.6957	0.8992	0.6957	2.8462	0.6147	0.8116	1.2252	0.1226	1.0952	1.0952	0.2305	1.0952	0.2305	2.8462	0.6147	0.8116	1.2252	0.1226	
Road 21	21	1500-1600	2.6852	0.6542	0.8545	0.6542	2.6382	0.5857	0.7167	1.2252	0.1226	1.0952	1.0952	0.2305	1.0952	0.2305	2.6382	0.5857	0.7167	1.2252	0.1226	
Road 21	21	1600-1700	1.7162	0.2438	0.7162	0.2438	1.2222	0.5938	0.7162	1.2222	0.5938	0.7162	1.2222	0.5938	0.7162	1.2222	0.5938	0.7162	1.2222	0.5938	0.7162	
Road 21	21	1700-1800	2.3052	0.5127	0.6982	0.5127	2.0882	0.4626	0.6186	1.052	0.3386	0.9382	0.9382	0.2126	0.9382	0.2126	2.0882	0.4626	0.6186	1.052	0.3386	
Road 21	21	1800-1900	1.7082	0.3557	0.4708	0.3557	1.3262	0.3267	0.4297	0.8187	0.2005	0.9382	0.9382	0.2126	0.9382	0.2126	1.3262	0.3267	0.4297	0.8187	0.2005	
Road 21	21	1900-2000	1.7082	0.3557	0.4708	0.3557	1.3262	0.3267	0.4297	0.8187	0.2005	0.9382	0.9382	0.2126	0.9382	0.2126	1.3262	0.3267	0.4297	0.8187	0.2005	
Road 21	21	2000-2100	1.4452	0.1767	0.2332	0.1767	1.3052	0.1592	0.2106	0.6186	0.4267	0.7527	0.7527	0.3156	0.7527	0.3156	1.3052	0.1592	0.2106	0.6186	0.4267	
Road 21	21	2100-2200	1.4112	0.1767	0.2332	0.1767	1.2962	0.1592	0.2106	0.6186	0.4267	0.7527	0.7527	0.3156	0.7527	0.3156	1.2962	0.1592	0.2106	0.6186	0.4267	
Road 21	21	2200-2300	1.4112	0.1767	0.2332	0.1767	1.2962	0.1592	0.2106	0.6186	0.4267	0.7527	0.7527	0.3156	0.7527	0.3156	1.2962	0.1592	0.2106	0.6186	0.4267	
Road 21	21	2300-0000	1.5552	0.1827	0.3697	1.8382	0.4402	1.2527	0.1652	0.7692	0.9655	0.9655	0.2305	0.7527	0.6075	0.7527	0.9655	0.9655	0.2305	0.7527	0.6075	
Road 22	22	0000-0100	1.3752	0.1671	0.2375	1.2452	0.1517	0.2698	0.4987	0.6985	0.4087	0.5852	0.4585	0.5487	0.8308	0.5487	0.4087	0.5852	0.4585	0.5487	0.8308	
Road 22	22	0100-0200	1.3827	0.1827	0.1827	1.3827	0.1827	1.3827	0.1827	1.3827	0.1827	1.3827	0.1827	1.3827	0.1827	1.3827	0.1827	1.3827	0.1827	1.3827	0.1827	
Road 22	22	0200-0300	1.2792	0.1858	1.5382	0.1171	0.7762	1.3862	4.7812	0.3147	0.6058	0.7265	0.2837	0.2837	0.7265	0.2837	4.7812	0.3147	0.6058	0.7265	0.2837	
Road 22	22	0300-0400	1.3232	0.7365	1.3115	1.1978	0.6938	1.1968	1.3862	4.8781	0.6987	0.8505	0.8338	0.2427	0.8338	0.2427	1.1968	1.3862	4.8781	0.6987	0.8505	
Road 22	22	0400-0500	1.3232	0.7365	1.3115	1.1978	0.6938	1.1968	1.3862	4.8781	0.6987	0.8505	0.8338	0.2427	0.8338	0.2427	1.1968	1.3862	4.8781	0.6987	0.8505	
Road 22	22	0500-0600	1.4392	0.1782	0.3787	1.3662	0.1637	0.2306	0.5425	0.4647	0.4647	0.1155	0.9187	0.9887	0.1155	0.9887	0.4647	0.4647	0.1155	0.9187	0.9887	
Road 22	22	0600-0700	1.6712	0.4547	0.8095	1.5321	0.4137	0.7362	0.3862	0.6055	0.6385	0.6055	0.4585	0.4585	0.6055	0.4585	0.7362	0.3862	0.6055	0.6385	0.6055	
Road 22	22	0700-0800	1.6712	0.4547	0.8095	1.5321	0.4137	0.7362	0.3862	0.6055	0.6385	0.6055	0.4585	0.4585	0.6055	0.4585	0.7362	0.3862	0.6055	0.6385	0.6055	
Road 22	22	0800-0900	1.9052	0.1312	0.2345	1.7832	0.1295	0.2135	0.6952	1.8005	0.5555	0.9315	0.4365	0.7307	0.4365	0.7307	1.7832	0.1295	0.2135	0.6952	1.8005	
Road 22	22	0900-1000	1.9552	0.1456	0.2435	1.7832	0.1395	0.2401	0.7171	1.7171	0.4335	0.9585	0.6555	0.9315	0.4365	0.7307	1.7832	0.1295	0.2135	0.6952	1.8005	
Road 22	22	1000-1100	2.1082	0.1555	0.2775	1.8312	0.1435	0.2555	1.7382	0.4335	0.6755	0.6755	0.6755	0.6755	0.6755	0.6755	1.8312	0.1435	0.2555	1.7382	0.4335	
Road 22	22	1100-1200	2.1082	0.1555	0.2775	1.8312	0.1435	0.2555	1.7382	0.4335	0.6755	0.6755	0.6755	0.6755	0.6755	0.6755	1.8312	0.1435	0.2555	1.7382	0.4335	
Road 22	22	1200-1300	2.1552	0.1555	0.2745	1.9852	0.1495	0.2455	1.7245	0.6135	0.9215	0.5585	0.4695	0.8308	0.4695	0.8308	1.9852	0.1495	0.2455	1.7245	0.6135	
Road 22	22	1300-1400	2.0712	0.1655	0.2655	1.8852	0.1495	0.2455	1.7245	0.6135	0.9215	0.5585	0.4695	0.8308	0.4695	0.8308	1.8852	0.1495	0.2455	1.7245	0.6135	
Road 22	22	1400-1500	2.0712	0.1655	0.2655	1.8852	0.1495	0.2455	1.7245	0.6135	0.9215	0.5585	0.4695	0.8308	0.4695	0.8308	1.8852	0.1495	0.2455	1.7245	0.6135	
Road 22	22	1500-1600	1.8952	0.1575	0.2805	1.7832	0.1435	0.2555	1.7162	0.5165	0.9045	0.6515	0.5165	0.9382	0.5165	0.9382	1.7832	0.1435	0.2555	1.7162	0.5165	
Road 22	22	1600-1700	2.0252	0.1575	0.2795	1.8332	0.1425	0.2535	1.7082	0.4985	0.9185	0.6485	0.4985	0.9382	0.4985	0.9382	1.8332	0.1425	0.2535	1.7082	0.4985	
Road 22	22	1700-1800	2.0252	0.1575	0.2795	1.8332	0.1425	0.2535	1.7082	0.4985	0.9185	0.6485	0.4985	0.9382	0.4985	0.9382	1.8332	0.1425	0.2535	1.7082	0.4985	
Road 22	22	1800-1900	1.3952	0.1712	1.2772	1.2772	0.6487	1.1162	0.5835	0.5835	0.2485	0.9185	0.9885	0.2485	0.9885	0.2485	1.2772	1.2772	0.6487	1.1162	0.5835	
Road 22	22	1900-2000	1.2682	0.4537	0.8075	1.4582	0.4107	0.7072	1.5012	0.8025	0.2005	0.4585	0.4585	0.4585	0.4585	0.4585	1.4582	0.4107	0.7072	1.5012	0.8025	
Road 22	22	2000-2100	1.2682	0.4537	0.8075	1.4582	0.4107	0.7072	1.5012	0.8025	0.2005	0.4585	0.4585	0.4585	0.4585	0.4585	1.4582	0.4107	0.7072	1.5012	0.8025	
Road 22	22	2100-2200	1.2752	0.3537	0.6485	1.1382	0.3275	0.5835	0.5835	0.4885	0.6385	0.5585	0.3262	0.3262	0.5585	0.3262	1.1382	0.3275	0.5835	1.1382	0.3275	
Road 22	22	2200-2300	1.3652	0.3527	0.6275	1.2382	0.3187	0.5685	0.4907	0.5985	0.2985	0.4985	0.4985	0.4985	0.4985	0.4985	1.2382	0.3187	0.5685	1.2382	0.3187	
Road 22	22	2300-0000	1.3652	0.3527	0.6275	1.2382	0.3187	0.5685	0.4907	0.5985	0.2985	0.4985	0.4985	0.4985	0.4985	0.4985	1.2382	0.3187	0.5685	1.2382	0.3187	
Road 23	23	0000-0100	1.3005	0.3585	0.6527	0.7182	0.3245	0.5997	0.4747	0.3137	0.4105	0.7285	0.1187	0.2187	0.7285	0.1187	0.7182	0.3245	0.5997	0.4747	0.3137	
Road 23	23	0100-0200	1.3112	0.2552	0.4727	1.1952	0.2312	0.4027	0.4798	0.3138	0.7285	0.6338	0.8411									

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Open Road 24 hour Emission Factors for
AERMOD model (December) Year 2038

Road Name	Road ID	Hour	NO _x Emission						NO Emission						
			MonthlyMaximum			MonthlyAverage			MonthlyMaximum			MonthlyAverage			
			g/min	g/s	g/h	g/min	g/s	g/h	g/min	g/s	g/h	g/min	g/s	g/h	
Road 24	24	0800-0900	1.6447	7.8847	2.8847	1.5087	7.2847	2.6787	1.6087	7.1847	2.9587	5.5387	2.0087	7.1847	2.6787
Road 24	24	0900-1000	1.5447	7.3847	2.6787	1.3787	6.7847	2.4787	1.4087	6.4787	2.9587	5.5387	2.0087	7.1847	2.6787
Road 24	24	1000-1100	1.7447	8.3847	3.0787	1.5087	7.2847	2.6787	1.6087	7.1847	2.9587	5.5387	2.0087	7.1847	2.6787
Road 24	24	1100-1200	1.7447	8.3847	3.0787	1.5087	7.2847	2.6787	1.6087	7.1847	2.9587	5.5387	2.0087	7.1847	2.6787
Road 24	24	1200-1300	1.8387	8.7427	3.2787	1.6787	7.8787	2.8787	1.6787	7.8787	2.8787	5.6787	2.1787	7.8787	2.8787
Road 24	24	1300-1400	1.8447	8.7427	3.2787	1.6787	7.8787	2.8787	1.6787	7.8787	2.8787	5.6787	2.1787	7.8787	2.8787
Road 24	24	1400-1500	1.6987	7.9987	2.8787	1.5087	7.2847	2.6787	1.4487	6.5087	2.9587	5.5387	2.0087	7.1847	2.6787
Road 24	24	1500-1600	1.7387	8.3787	3.0487	1.5747	7.4487	2.7487	1.6187	7.3587	2.9587	5.5387	2.0087	7.1847	2.6787
Road 24	24	1600-1700	1.5187	7.1847	2.6787	1.3787	6.7847	2.4787	1.4087	6.4787	2.9587	5.5387	2.0087	7.1847	2.6787
Road 24	24	1800-1900	1.3387	6.4787	2.3787	1.2087	6.1387	2.1387	1.1087	5.7087	2.9587	5.5387	2.0087	7.1847	2.6787
Road 24	24	1900-2000	1.2287	5.8987	2.2287	1.1387	5.6987	2.0287	1.0487	5.2487	2.9587	5.5387	2.0087	7.1847	2.6787
Road 24	24	2000-2100	1.1387	5.2987	2.0287	1.0487	5.2487	2.0287	0.9587	4.8487	2.9587	5.5387	2.0087	7.1847	2.6787
Road 24	24	2100-2200	1.2987	6.0987	2.3987	1.1987	5.8987	2.1987	1.1087	5.7087	2.9587	5.5387	2.0087	7.1847	2.6787
Road 24	24	2200-2300	1.3587	6.5987	2.5487	1.2787	6.2987	2.3487	1.1887	5.8487	2.9587	5.5387	2.0087	7.1847	2.6787
Road 24	24	2300-2400	1.2687	5.9987	2.2687	1.1887	5.6987	2.0687	1.0987	5.1987	2.9587	5.5387	2.0087	7.1847	2.6787
Road 25	25	0800-0900	1.2687	5.9987	2.2687	1.1887	5.6987	2.0687	1.0987	5.1987	2.9587	5.5387	2.0087	7.1847	2.6787
Road 25	25	0900-1000	1.3787	6.5987	2.5487	1.2787	6.2987	2.3487	1.1887	5.8487	2.9587	5.5387	2.0087	7.1847	2.6787
Road 25	25	1000-1100	1.3787	6.5987	2.5487	1.2787	6.2987	2.3487	1.1887	5.8487	2.9587	5.5387	2.0087	7.1847	2.6787
Road 25	25	1100-1200	1.4787	7.3987	2.8487	1.3787	6.8987	2.6487	1.2887	6.5987	2.9587	5.5387	2.0087	7.1847	2.6787
Road 25	25	1200-1300	1.4787	7.3987	2.8487	1.3787	6.8987	2.6487	1.2887	6.5987	2.9587	5.5387	2.0087	7.1847	2.6787
Road 25	25	1300-1400	1.5787	8.1987	3.0487	1.4787	7.6987	2.8487	1.3887	7.2987	2.9587	5.5387	2.0087	7.1847	2.6787
Road 25	25	1400-1500	1.6787	8.7987	3.2487	1.5787	8.2987	3.0487	1.4887	7.8987	2.9587	5.5387	2.0087	7.1847	2.6787
Road 25	25	1500-1600	1.7387	9.3987	3.4487	1.6787	8.8987	3.2487	1.5887	8.4987	2.9587	5.5387	2.0087	7.1847	2.6787
Road 25	25	1600-1700	1.5187	7.1847	2.6787	1.3787	6.7847	2.4787	1.4087	6.4787	2.9587	5.5387	2.0087	7.1847	2.6787
Road 25	25	1700-1800	1.3387	6.4787	2.3787	1.2087	6.1387	2.1387	1.1087	5.7087	2.9587	5.5387	2.0087	7.1847	2.6787
Road 25	25	1800-1900	1.2287	5.8987	2.2287	1.1387	5.6987	2.0287	1.0487	5.2487	2.9587	5.5387	2.0087	7.1847	2.6787
Road 25	25	1900-2000	1.1387	5.2987	2.0287	1.0487	5.2487	2.0287	0.9587	4.8487	2.9587	5.5387	2.0087	7.1847	2.6787
Road 25	25	2000-2100	1.2987	6.0987	2.3987	1.1987	5.8987	2.1987	1.1087	5.7087	2.9587	5.5387	2.0087	7.1847	2.6787
Road 25	25	2100-2200	1.3587	6.5987	2.5487	1.2787	6.2987	2.3487	1.1887	5.8487	2.9587	5.5387	2.0087	7.1847	2.6787
Road 25	25	2200-2300	1.2687	5.9987	2.2687	1.1887	5.6987	2.0687	1.0987	5.1987	2.9587	5.5387	2.0087	7.1847	2.6787
Road 25	25	2300-2400	1.4187	8.0987	3.0487	1.4787	7.6987	2.8487	1.3887	7.2987	2.9587	5.5387	2.0087	7.1847	2.6787
Road 26	26	0800-0900	1.5447	7.3847	2.6787	1.3787	6.7847	2.4787	1.4087	6.4787	2.9587	5.5387	2.0087	7.1847	2.6787
Road 26	26	0900-1000	1.4447	6.7847	2.4787	1.2787	6.2847	2.3787	1.3087	6.0787	2.9587	5.5387	2.0087	7.1847	2.6787
Road 26	26	1000-1100	1.6447	7.8847	2.8847	1.5087	7.2847	2.6787	1.6087	7.1847	2.9587	5.5387	2.0087	7.1847	2.6787
Road 26	26	1100-1200	1.6447	7.8847	2.8847	1.5087	7.2847	2.6787	1.6087	7.1847	2.9587	5.5387	2.0087	7.1847	2.6787
Road 26	26	1200-1300	1.7447	8.3847	3.0787	1.5087	7.2847	2.6787	1.6087	7.1847	2.9587	5.5387	2.0087	7.1847	2.6787
Road 26	26	1300-1400	1.8447	8.7427	3.2787	1.6787	7.8787	2.8787	1.6787	7.8787	2.8787	5.6787	2.1787	7.8787	2.8787
Road 26	26	1400-1500	1.8447	8.7427	3.2787	1.6787	7.8787	2.8787	1.6787	7.8787	2.8787	5.6787	2.1787	7.8787	2.8787
Road 26	26	1500-1600	1.6987	7.9987	2.8787	1.5087	7.2847	2.6787	1.4487	6.5087	2.9587	5.5387	2.0087	7.1847	2.6787
Road 26	26	1600-1700	1.7387	8.3787	3.0487	1.5747	7.4487	2.7487	1.6187	7.3587	2.9587	5.5387	2.0087	7.1847	2.6787
Road 26	26	1700-1800	1.5187	7.1847	2.6787	1.3787	6.7847	2.4787	1.4087	6.4787	2.9587	5.5387	2.0087	7.1847	2.6787
Road 26	26	1800-1900	1.3387	6.4787	2.3787	1.2087	6.1387	2.1387	1.1087	5.7087	2.9587	5.5387	2.0087	7.1847	2.6787
Road 26	26	1900-2000	1.2287	5.8987	2.2287	1.1387	5.6987	2.0287	1.0487	5.2487	2.9587	5.5387	2.0087	7.1847	2.6787
Road 26	26	2000-2100	1.1387	5.2987	2.0287	1.0487	5.2487	2.0287	0.9587	4.8487	2.9587	5.5387	2.0087	7.1847	2.6787
Road 26	26	2100-2200	1.2987	6.0987	2.3987	1.1987	5.8987	2.1987	1.1087	5.7087	2.9587	5.5387	2.0087	7.1847	2.6787
Road 26	26	2200-2300	1.3587	6.5987	2.5487	1.2787	6.2987	2.3487	1.1887	5.8487	2.9587	5.5387	2.0087	7.1847	2.6787
Road 26	26	2300-2400	1.2687	5.9987	2.2687	1.1887	5.6987	2.0687	1.0987	5.1987	2.9587	5.5387	2.0087	7.1847	2.6787
Road 27	27	0800-0900	1.3687	6.2887	2.4787	1.2787	6.2987	2.3487	1.1887	5.8487	2.9587	5.5387	2.0087	7.1847	2.6787
Road 27	27	0900-1000	1.3687	6.2887	2.4787	1.2787	6.2987	2.3487	1.1887	5.8487	2.9587	5.5387	2.0087	7.1847	2.6787
Road 27	27	1000-1100	1.4687	6.8887	2.6787	1.3787	6.7847	2.4787	1.4087	6.4787	2.9587	5.5387	2.0087	7.1847	2.6787
Road 27	27	1100-1200	1.4687	6.8887	2.6787	1.3787	6.7847	2.4787	1.4087	6.4787	2.9587	5.5387	2.0087	7.1847	2.6787
Road 27	27	1200-1300	1.5687	7.4887	2.8787	1.4787	7.6987	2.8487	1.3887	7.2987	2.9587	5.5387	2.0087	7.1847	2.6787
Road 27	27	1300-1400	1.6687	8.0887	3.0787	1.5787	8.2987	3.0487	1.4887	7.8987	2.9587	5.5387	2.0087	7.1847	2.6787
Road 27	27	1400-1500	1.7687	8.6887	3.2787	1.6787	8.8987	3.2487	1.5887	8.4987	2.9587	5.5387	2.0087	7.1847	2.6787
Road 27	27	1500-1600	1.5687	7.4887	2.8787	1.4787	7.6987	2.8487	1.3887	7.2987	2.9587	5.5387	2.0087	7.1847	2.6787
Road 27	27	1600-1700	1.5687	7.4887	2.8787	1.4787	7.6987	2.8487	1.3887	7.2987	2.9587	5.5387	2.0087	7.1847	2.6787
Road 27	27	1700-1800	1.3687	6.2887	2.4787	1.2787	6.2987	2.3487	1.1887	5.8487	2.9587	5.5387	2.0087	7.1847	2.6787
Road 27	27	1800-1900	1.2687	5.6887	2.2687	1.1787	5.6987	2.0687	1.0887	5.2987	2.9587	5.5387	2.0087	7.1847	2.6787
Road 27	27	1900-2000	1.1687	5.0887	2.0687	1.0787	5.0987	2.0287	0.9887	4.6987	2.9587	5.5387	2.0087	7.1847	2.6787
Road 27	27	2000-2100	1.2687	5.6887	2.2687	1.1787	5.6987	2.0687	1.0887	5.2987	2.9587	5.5387	2.0087	7.1847	2.6787
Road 27	27	2100-2200	1.3687	6.2887	2.4787	1.2787	6.2987	2.3487	1.1887	5.8487	2.9587	5.5387	2.0087	7.1847	2.6787
Road 27	27	2200-2300	1.4687	6.8887	2.6787	1.3787	6.7847	2.4787	1.4087	6.4787	2.9587	5.5387	2.0087	7.1847	2.6787
Road 27	27	2300-2400	1.5687	7.4887	2.8787	1.4787	7.6987	2.8487	1.3887	7.2987	2.9587	5.5387	2.0087	7.1847	2.6787
Road 28	28	0800-0900	1.2687	5.9987	2.2687	1.1887	5.6987	2.0687	1.0987	5.1987	2.9587	5.5387	2.0087	7.1847	2.6787
Road 28	28	0900-1000	1.3687	6.5987	2.5487	1.2787	6.2987	2.3487	1.1887	5.8487	2.9587	5.5387	2.0087	7.1847	2.6787
Road 28	28	1000-1100	1.4687	7.1987	2.7487	1.3787	6.7847	2.4787	1.4087	6.4787	2.9587	5.5387	2.0087	7.1847	2.6787
Road 28	28	1100-1200	1.4687	7.1987	2.7487	1.3787	6.7847	2.4787	1.4087	6.4787	2.9587	5.5387	2.0087	7.1847	2.6787
Road 28	28	1200-1300	1.5687	7.7987	2.9487	1.4787	7.6987	2.8487	1.3887	7.2987	2.9587	5.5387	2.0087	7.1847	2.6787
Road 28	28	1300-1400	1.6687	8.3987	3.1487	1.5787	8.2987	3.0487	1.4887	7.8987	2.9587	5.5387	2.0087		

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Tsing Yi North Underground Quarry
 Open Road 24 hour Emission Factors for
 AERMOD model (December) Year 2038

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry														
Open Road 24 hour Emission Factors for ATRM20 model (December)														
Road Name	Road ID	Hour	NO _x Emission						PM ₁₀ Emission					
			Monthly/tonne			Monthly/km			Monthly/tonne			Monthly/km		
			g/min	g/s	tonne/hour	g/min	g/s	tonne/hour	g/min	g/s	tonne/hour	g/min	g/s	tonne/hour
Year 2038														
Month														
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g/s														
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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry											
Open Road 24 hour Emission Factors for AERMOD model (December)											
Year 2038											
Road Name	Road ID	Hour	NO _x Emission						PM _{2.5} Emission		
			g/m ³ /hr	g/m ³ /m ² /hr	tonne/hr	g/m ³ /hr	g/m ³ /m ² /hr	tonne/hr	g/m ³ /hr	g/m ³ /m ² /hr	tonne/hr
Road 103	103	1600-1700	1.146	1.071	1.071	1.146	1.071	1.071	1.146	1.071	1.071
Road 103	103	1700-1800	1.146	1.071	1.071	1.146	1.071	1.071	1.146	1.071	1.071
Road 103	103	1800-1900	0.816	0.761	0.761	0.816	0.761	0.761	0.816	0.761	0.761
Road 103	103	1900-2000	0.816	0.761	0.761	0.816	0.761	0.761	0.816	0.761	0.761
Road 103	103	2000-2100	0.816	0.761	0.761	0.816	0.761	0.761	0.816	0.761	0.761
Road 103	103	2100-2200	0.816	0.761	0.761	0.816	0.761	0.761	0.816	0.761	0.761
Road 103	103	2200-2300	0.816	0.761	0.761	0.816	0.761	0.761	0.816	0.761	0.761
Road 103	103	2300-2400	0.816	0.761	0.761	0.816	0.761	0.761	0.816	0.761	0.761
Road 104	104	0600-0700	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 104	104	0700-0800	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 104	104	0800-0900	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 104	104	0900-1000	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 104	104	1000-1100	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 104	104	1100-1200	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 104	104	1200-1300	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 104	104	1300-1400	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 104	104	1400-1500	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 104	104	1500-1600	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 104	104	1600-1700	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 104	104	1700-1800	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 104	104	1800-1900	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 104	104	1900-2000	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 104	104	2000-2100	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 104	104	2100-2200	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 104	104	2200-2300	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 104	104	2300-2400	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 105	105	0600-0700	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 105	105	0700-0800	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 105	105	0800-0900	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 105	105	0900-1000	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 105	105	1000-1100	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 105	105	1100-1200	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 105	105	1200-1300	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 105	105	1300-1400	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 105	105	1400-1500	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 105	105	1500-1600	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 105	105	1600-1700	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 105	105	1700-1800	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 105	105	1800-1900	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 105	105	1900-2000	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 105	105	2000-2100	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 105	105	2100-2200	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 105	105	2200-2300	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 105	105	2300-2400	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 106	106	0600-0700	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 106	106	0700-0800	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 106	106	0800-0900	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 106	106	0900-1000	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 106	106	1000-1100	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 106	106	1100-1200	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 106	106	1200-1300	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 106	106	1300-1400	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 106	106	1400-1500	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 106	106	1500-1600	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 106	106	1600-1700	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 106	106	1700-1800	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 106	106	1800-1900	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 106	106	1900-2000	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 106	106	2000-2100	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 106	106	2100-2200	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 106	106	2200-2300	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071
Road 106	106	2300-2400	1.126	1.071	1.071	1.126	1.071	1.071	1.126	1.071	1.071

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry											
Open Road 24 hour Emission Factors for AERMOD model (Summary)											
Year 2043											
Road Name	Road ID	Hour	NO _x Emission			NO ₂ Emission			PM _{2.5} Emission		
			g/m ³ /hr	g/m ³ /m ² /hr	g/m ³ /m ² /hr	g/m ³ /hr	g/m ³ /m ² /hr	g/m ³ /m ² /hr	g/m ³ /hr	g/m ³ /m ² /hr	g/m ³ /m ² /hr
Road 6	6	1800-1900	2.756	2.601	2.601	2.756	2.601	2.601	2.756	2.601	2.601
Road 6	6	1900-2000	2.116	2.016	2.016	2.116	2.016	2.016	2.116	2.016	2.016
Road 6	6	2000-2100	1.916	1.866	1.866	1.916	1.866	1.866	1.916	1.866	1.866
Road 6	6	2100-2200	1.816	1.766	1.766	1.816	1.766	1.766	1.816	1.766	1.766
Road 6	6	2200-2300	1.816	1.766	1.766	1.816	1.766	1.766	1.816	1.766	1.766
Road 6	6	2300-2400	1.816	1.766	1.766	1.816	1.766	1.766	1.816	1.766	1.766
Road 7	7	0100-0200	4.866	4.366	4.366	4.866	4.366	4.366	4.866	4.366	4.366
Road 7	7	0200-0300	5.466	4.966	4.966	5.466	4.966	4.966	5.466	4.966	4.966
Road 7	7	0300-0400	6.066	5.566	5.566	6.066	5.566	5.566	6.066	5.566	5.566
Road 7	7	0400-0500	6.666	6.166	6.166	6.666	6.166	6.166	6.666	6.166	6.166
Road 7	7	0500-0600	7.266	6.766	6.766	7.266	6.766	6.766	7.266	6.766	6.766
Road 7	7	0600-0700	7.866	7.366	7.366	7.866	7.366	7.366	7.866	7.366	7.366
Road 7	7	0700-0800	8.466	7.966	7.966	8.466	7.966	7.966	8.466	7.966	7.966
Road 7	7	0800-0900	9.066	8.566	8.566	9.066	8.566	8.566	9.066	8.566	8.566
Road 7	7	0900-1000	9.666	9.166	9.166	9.666	9.166	9.166	9.666	9.166	9.166
Road 7	7	1000-1100	10.266	9.766	9.766	10.266	9.766	9.766	10.266	9.766	9.766
Road 7	7	1100-1200	10.866	10.366	10.366	10.866	10.366	10.366	10.866	10.366	10.366
Road 7	7	1200-1300	11.466	10.966	10.966	11.466	10.966	10.966	11.466	10.966	10.966
Road 7	7	1300-1400	12.066	11.566	11.566	12.066	11.566	11.566	12.066	11.566	11.566
Road 7	7	1400-1500	12.666	12.166	12.166	12.666	12.166	12.166	12.666	12.166	12.166
Road 7	7	1500-1600	13.266	12.766	12.766	13.266	12.766	12.766	13.266	12.766	12.766
Road 7	7	1600-1700	13.866	13.366	13.366	13.866	13.366	13.366	13.866	13.366	13.366
Road 7	7	1700-1800	14.466	13.966	13.966	14.466	13.966	13.966	14.466	13.966	13.966
Road 7	7	1800-1900	15.066	14.566	14.566	15.066	14.566	14.566	15.066	14.566	14.566

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors
for AERMOD model (Summary) Year 2043

Road Name	Road ID	Hour	NO _x Emission				PM _{2.5} Emission				PM ₁₀ Emission			
			Annual		No Emission		Annual		No Emission		Annual		No Emission	
			g/km ² /h	g/km ² /d	g/km ² /h	g/km ² /d	g/km ² /h	g/km ² /d	g/km ² /h	g/km ² /d	g/km ² /h	g/km ² /d	g/km ² /h	g/km ² /d
Road 18	18	0600-0700	9.53E-03	1.17E-07	1.67E-03	5.01E-02	6.14E-07	8.76E-03	2.44E-03	2.66E-08	4.27E-04	2.66E-03	3.26E-08	4.65E-04
Road 18	18	0700-0800	2.46E-02	2.60E-07	3.75E-03	5.24E-02	6.31E-07	1.88E-02	2.44E-03	6.06E-08	9.51E-04	2.89E-03	7.24E-08	1.03E-03
Road 18	18	0800-0900	1.02E-02	2.99E-07	4.22E-03	4.92E-02	1.43E-06	2.04E-02	2.63E-03	7.63E-08	1.09E-03	2.89E-03	8.29E-08	1.18E-03
Road 18	18	0900-1000	1.17E-02	3.10E-07	4.41E-03	5.50E-02	1.36E-06	1.94E-02	3.14E-03	7.75E-08	1.11E-03	3.04E-03	8.41E-08	1.20E-03
Road 18	18	1000-1100	1.13E-02	2.95E-07	4.13E-03	5.88E-02	1.28E-06	1.82E-02	3.57E-03	7.75E-08	1.10E-03	3.87E-03	8.40E-08	1.20E-03
Road 18	18	1100-1200	2.90E-02	6.90E-07	3.78E-03	6.22E-02	1.20E-06	1.71E-02	3.42E-03	7.03E-08	1.00E-03	3.72E-03	7.65E-08	1.09E-03
Road 18	18	1200-1300	1.60E-02	3.58E-07	5.11E-03	6.52E-02	1.46E-06	2.02E-02	4.73E-03	9.54E-08	1.36E-03	4.63E-03	1.03E-07	1.47E-03
Road 18	18	1300-1400	1.62E-02	3.77E-07	5.36E-03	6.82E-02	1.59E-06	2.27E-02	4.37E-03	1.02E-07	1.45E-03	4.74E-03	1.10E-07	1.57E-03
Road 18	18	1400-1500	1.61E-02	3.74E-07	5.32E-03	6.64E-02	1.62E-06	2.31E-02	4.32E-03	1.06E-07	1.51E-03	4.69E-03	1.14E-07	1.63E-03
Road 18	18	1500-1600	1.49E-02	3.19E-07	4.66E-03	6.06E-02	1.68E-06	2.40E-02	4.11E-03	1.03E-07	1.47E-03	4.45E-03	1.12E-07	1.59E-03
Road 18	18	1600-1700	1.57E-02	4.06E-07	5.79E-03	6.44E-02	1.67E-06	2.38E-02	4.12E-03	1.07E-07	1.52E-03	4.67E-03	1.16E-07	1.65E-03
Road 18	18	1700-1800	1.16E-02	3.28E-07	4.69E-03	5.66E-02	1.54E-06	2.02E-02	3.31E-03	8.76E-08	1.25E-03	3.37E-03	9.52E-08	1.36E-03
Road 18	18	1800-1900	8.32E-03	2.42E-07	4.04E-03	4.18E-02	1.22E-06	1.74E-02	2.21E-03	6.41E-08	9.14E-04	2.40E-03	6.96E-08	9.93E-04
Road 18	18	1900-2000	1.48E-02	3.54E-07	5.16E-03	6.56E-02	1.71E-06	2.37E-02	4.34E-03	1.05E-07	1.50E-03	4.84E-03	1.12E-07	1.61E-03
Road 18	18	2000-2100	6.86E-03	1.18E-07	1.08E-03	4.12E-02	7.24E-07	1.03E-02	1.17E-03	3.10E-08	4.41E-04	1.91E-03	3.36E-08	4.79E-04
Road 18	18	2100-2200	6.26E-03	1.10E-07	1.57E-03	4.07E-02	7.18E-07	1.02E-02	1.66E-03	2.91E-08	4.15E-04	1.80E-03	3.15E-08	4.50E-04
Road 18	18	2200-2300	6.24E-03	1.06E-07	1.81E-03	4.00E-02	6.96E-07	9.59E-05	1.69E-06	3.83E-04	1.72E-03	2.92E-04	4.16E-07	4.69E-05
Road 18	18	2300-0000	6.96E-03	8.63E-08	1.26E-03	4.15E-02	5.31E-07	7.58E-07	1.23E-06	3.24E-04	1.93E-04	2.47E-08	5.53E-04	6.10E-05
Road 19	19	0000-0100	8.36E-03	9.62E-08	7.27E-04	4.62E-02	3.82E-07	4.02E-03	2.17E-03	1.80E-08	1.89E-04	2.37E-03	1.96E-08	2.06E-04
Road 19	19	0100-0200	9.21E-03	5.04E-08	5.30E-04	4.81E-02	2.63E-07	2.77E-03	2.41E-03	1.32E-08	1.39E-04	2.61E-03	1.43E-08	1.50E-04
Road 19	19	0200-0300	1.01E-02	4.12E-08	4.38E-04	5.06E-02	2.08E-07	2.16E-03	2.64E-03	1.07E-06	1.13E-04	2.81E-03	1.17E-08	1.23E-04
Road 19	19	0300-0400	1.10E-02	3.59E-08	3.73E-04	5.30E-02	1.73E-07	1.82E-03	2.67E-03	9.36E-05	9.84E-05	3.11E-03	1.02E-08	1.07E-04
Road 19	19	0400-0500	1.19E-02	4.17E-08	4.39E-04	5.46E-02	1.98E-07	2.08E-03	3.02E-03	1.09E-06	1.15E-04	3.28E-03	1.19E-08	1.25E-04
Road 19	19	0500-0600	1.18E-02	4.72E-08	7.80E-04	5.60E-02	3.53E-07	3.11E-03	3.10E-03	1.96E-06	2.05E-04	3.37E-03	2.12E-08	2.23E-04
Road 19	19	0600-0700	1.22E-02	1.66E-07	1.75E-03	5.84E-02	7.94E-07	8.34E-03	3.22E-03	4.97E-04	4.60E-04	3.50E-03	4.75E-08	4.99E-04
Road 19	19	0700-0800	1.34E-02	3.74E-07	3.94E-03	6.20E-02	1.73E-06	1.82E-03	3.47E-03	9.76E-08	1.02E-03	3.77E-03	1.05E-07	1.11E-03
Road 19	19	0800-0900	1.33E-02	4.32E-07	4.54E-03	5.98E-02	1.90E-06	2.09E-03	3.42E-03	1.12E-07	1.18E-03	3.74E-03	1.22E-07	1.26E-03
Road 19	19	0900-1000	1.51E-02	4.28E-07	4.61E-03	6.70E-02	1.94E-06	2.04E-02	4.07E-03	1.18E-07	1.24E-03	4.12E-03	1.28E-07	1.35E-03
Road 19	19	1000-1100	1.48E-02	4.26E-07	4.71E-03	7.13E-02	1.86E-06	1.95E-02	4.58E-03	1.19E-07	1.25E-04	4.42E-03	1.30E-07	1.36E-03
Road 19	19	1100-1200	1.64E-02	4.03E-07	4.24E-03	6.97E-02	1.72E-06	1.80E-02	4.43E-03	1.09E-07	1.15E-03	4.80E-03	1.18E-07	1.24E-03
Road 19	19	1200-1300	2.06E-02	4.92E-07	5.17E-03	7.94E-02	1.89E-06	1.96E-02	5.54E-03	1.30E-07	1.37E-03	5.92E-03	1.43E-07	1.46E-03
Road 19	19	1300-1400	2.06E-02	5.22E-07	5.49E-03	8.26E-02	2.00E-06	2.20E-02	5.61E-03	1.40E-07	1.47E-03	5.99E-03	1.52E-07	1.60E-03
Road 19	19	1400-1500	2.06E-02	5.36E-07	5.66E-03	8.04E-02	2.11E-06	2.21E-02	5.48E-03	1.43E-07	1.50E-03	5.96E-03	1.56E-07	1.64E-03
Road 19	19	1500-1600	1.89E-02	5.10E-07	5.36E-03	8.09E-02	2.09E-06	2.30E-02	5.17E-03	1.40E-07	1.47E-03	5.61E-03	1.52E-07	1.59E-03
Road 19	19	1600-1700	1.94E-02	5.26E-07	5.53E-03	7.69E-02	2.09E-06	2.19E-02	5.17E-03	1.40E-07	1.48E-03	5.62E-03	1.53E-07	1.60E-03
Road 19	19	1700-1800	1.49E-02	4.22E-07	4.44E-03	6.87E-02	1.95E-06	2.04E-02	4.06E-03	1.15E-07	1.21E-03	4.41E-03	1.43E-07	1.51E-03
Road 19	19	1800-1900	1.07E-02	2.89E-07	3.04E-03	5.13E-02	1.36E-06	1.46E-02	2.95E-03	8.02E-08	8.43E-04	3.20E-03	8.69E-08	9.13E-04
Road 19	19	1900-2000	1.19E-02	3.19E-07	3.36E-03	5.61E-02	1.50E-06	1.59E-02	3.24E-03	9.12E-08	9.53E-04	3.40E-03	9.58E-08	1.00E-04
Road 19	19	2000-2100	9.01E-03	1.45E-07	1.52E-03	4.94E-02	7.95E-07	8.35E-03	2.46E-03	3.95E-04	4.16E-04	2.72E-03	5.58E-08	5.71E-04
Road 19	19	2100-2200	7.84E-03	1.41E-07	1.48E-03	4.93E-02	7.34E-07	7.83E-03	2.40E-03	3.87E-04	4.06E-04	2.60E-03	4.19E-08	4.41E-04
Road 19	19	2200-2300	8.86E-03	1.13E-07	1.43E-03	4.79E-02	7.33E-07	7.71E-03	2.34E-03	3.59E-04	3.77E-04	2.54E-03	3.89E-08	4.09E-04
Road 19	19	2300-0000	9.67E-03	1.36E-07	1.41E-03	4.97E-02	7.58E-07	6.12E-03	2.58E-03	3.17E-04	2.81E-03	3.28E-03	4.49E-08	4.64E-04
Road 20	20	0900-0800	1.24E-02	2.46E-07	2.60E-04	2.11E-02	8.02E-07	8.71E-07	4.34E-03	8.66E-07	3.74E-03	1.57E-07	1.57E-03	1.64E-03
Road 20	20	0100-0200	3.55E-02	2.49E-08	1.67E-04	1.36E-01	9.49E-08	6.39E-04	7.01E-03	4.91E-07	3.30E-05	7.81E-03	5.33E-09	2.98E-05
Road 20	20	0200-0300	3.62E-02	1.98E-08	1.33E-04	1.39E-01	7.53E-08	5.07E-04	7.21E-03	3.91E-07	2.63E-05	7.83E-03	4.24E-09	2.86E-05
Road 20	20	0300-0400	3.77E-02	1.70E-08	1.15E-04	1.42E-01	6.48E-08	4.33E-04	2.79E-03	3.25E-05	8.03E-05	3.63E-04	2.24E-09	2.44E-05
Road 20	20	0400-0500	3.82E-02	2.01E-08	1.39E-04	1.45E-01	7.58E-08	5.10E-04	2.75E-03	3.95E-05	2.06E-05	8.21E-04	4.29E-09	2.89E-05
Road 20	20	0500-0600	3.93E-02	2.34E-08	1.54E-04	1.47E-01	7.40E-08	5.44E-04	2.77E-03	4.36E-05	8.66E-05	3.17E-04	5.17E-09	3.04E-05
Road 20	20	0600-0700	4.28E-02	3.17E-08	1.67E-04	1.59E-01	9.41E-07	2.30E-03	8.63E-03	1.72E-06	1.16E-04	9.72E-03	1.87E-08	1.28E-04
Road 20	20	0700-0800	4.96E-02	2.18E-07	1.47E-04	1.77E-01	8.02E-07	3.02E-03	8.47E-03	3.89E-06	2.59E-04	9.20E-03	4.18E-08	2.86E-04
Road 20	20	0800-0900	4.78E-02	2.59E-07	1.74E-04	1.81E-01	9.81E-07	3.02E-03	8.39E-03	4.53E-06	3.05E-04	9.10E-03	4.92E-08	3.31E-04
Road 20	20	0900-1000	5.20E-02	3.00E-07	1.96E-04	1.94E-01	1.14E-06	3.57E-03	1.14E-03	9.75E-06	3.40E-04	9.75E-03	5.63E-08	3.79E-04
Road 20	20	1000-1100	5.44E-02	3.04E-07	2.05E-04	1.96E-01	1.09E-06	6.36E-03	9.42E-03	5.26E-06	3.54E-04	1.02E-02	5.71E-08	3.84E-04
Road 20	20	1100-1200	5.41E-02	2.83E-07	1.91E-04	1.96E-01	1.03E-06	7.91E-03	9.34E-03	4.89E-06	3.29E-04	1.07E-02	5.31E-08	3.57E-04
Road 20	20	1200-1300	5.63E-02	2.86E-07	1.92E-04	1.95E-01	9.88E-07	6.65E-03	9.57E-03	4.89E-06	3.26E-04	1.04E-02	5.26E-08	3.54E-04
Road 20	20	1300-1400	5.64E-02	3.18E-07	2.14E-04	2.04E-01	1.15E-06	7.79E-03	9.48E-03	5.34E-06	3.60E-04	1.03E-02	5.82E-08	3.91E-04
Road 20	20	1400-1500	5.64E-02	3.36E-07	2.26E-04	2.11E-01	1.26E-06	8.26E-03	9.64E-03	5.64E-06	3.75E-04	1.04E-02	6.16E-08	4.14E-04
Road 20	20	1500-1600	5.32E-02	3.02E-07	2.03E-04	2.00E-01	1.18E-06	7.82E-03	8.94E-03	5.25E-06	3.53E-04	9.73E-03	5.71E-08	3.85E-04
Road 20	20	1600-1700	5.27E-02	2.92E-07	1.97E-04	1.91E-01	1.06E-06	7.10E-03	9.15E-03	5.07E-06	3.41E-04	9.92E-03	5.50E-08	3.76E-04
Road 20	20	1700-1800	4.41E-02	2.30E-07	1.55E-04	1.81E-01	9.41E-07	6.14E-04	4.78E-04	2.78E-04	8.61E-04	4.49E-08	3.02E-04	3.02E-04
Road 20	20	1800-1900	3.47E-02	1.93E-0										

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors
for AERMOD model (Summary) Year 2043

Road Name	Road ID	Hour	NO _x Emission				PM _{2.5} Emission				PM ₁₀ Emission			
			Annual/Average		NO _x Emission		Annual/Average		PM _{2.5} Emission		Annual/Average		PM ₁₀ Emission	
			g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr
Road 41	41	0600-0700	1.53E-02	4.73E-08	1.62E-04	5.61E-02	1.73E-07	5.94E-04	3.69E-03	1.14E-08	3.91E-05	4.01E-03	1.24E-08	4.25E-05
Road 41	41	0700-0800	2.09E-02	1.49E-07	5.10E-04	6.46E-02	4.59E-07	1.57E-05	5.05E-03	3.59E-08	1.23E-04	5.48E-03	3.89E-08	1.33E-04
Road 41	41	0800-0900	1.92E-02	1.53E-07	5.23E-04	5.87E-02	4.66E-07	1.60E-06	4.67E-03	3.71E-08	1.27E-04	5.07E-03	4.03E-08	1.38E-04
Road 41	41	0900-1000	2.20E-02	2.49E-07	5.11E-04	6.50E-02	4.41E-07	1.51E-05	5.39E-03	3.66E-08	1.25E-04	5.85E-03	3.97E-08	1.36E-04
Road 41	41	1000-1100	2.45E-02	1.48E-07	5.06E-04	6.89E-02	4.20E-07	1.44E-05	5.95E-03	4.32E-08	1.24E-04	6.47E-03	3.94E-08	1.35E-04
Road 41	41	1100-1200	2.46E-02	1.44E-07	4.94E-04	7.00E-02	4.11E-07	1.41E-05	5.98E-03	3.52E-08	1.20E-04	6.50E-03	3.81E-08	1.31E-04
Road 41	41	1200-1300	2.72E-02	1.74E-07	5.95E-04	7.79E-02	4.96E-07	1.63E-05	6.78E-03	4.31E-08	1.48E-04	7.58E-03	4.70E-08	1.61E-04
Road 41	41	1300-1400	2.76E-02	1.77E-07	6.05E-04	7.92E-02	5.18E-07	1.78E-05	6.78E-04	4.44E-08	1.52E-04	7.37E-03	4.83E-08	1.65E-04
Road 41	41	1400-1500	2.69E-02	1.77E-07	5.94E-04	7.76E-02	5.18E-07	1.64E-05	6.68E-04	4.44E-08	1.52E-04	7.23E-03	4.73E-08	1.61E-04
Road 41	41	1500-1600	2.55E-02	1.77E-07	6.05E-04	7.74E-02	5.37E-07	1.84E-05	6.49E-08	1.53E-04	7.02E-03	4.87E-07	1.67E-04	1.67E-04
Road 41	41	1600-1700	2.55E-02	1.82E-07	6.22E-04	7.47E-02	5.33E-07	1.83E-05	6.39E-05	1.56E-04	6.95E-03	4.96E-08	1.70E-04	1.56E-04
Road 41	41	1700-1800	2.18E-02	1.67E-07	5.26E-04	6.78E-02	5.20E-07	1.76E-05	6.45E-08	1.43E-04	5.93E-03	4.55E-08	1.56E-04	1.39E-04
Road 41	41	1800-1900	1.96E-02	1.51E-07	4.51E-04	5.70E-02	4.53E-07	1.55E-05	4.71E-03	3.75E-08	1.28E-04	5.12E-03	4.07E-08	1.39E-04
Road 41	41	1900-2000	1.96E-02	1.51E-07	4.51E-04	5.70E-02	4.53E-07	1.59E-05	4.71E-03	3.75E-08	1.28E-04	5.12E-03	4.07E-08	1.39E-04
Road 41	41	2000-2100	1.21E-02	5.07E-08	1.74E-04	4.91E-02	2.06E-07	7.06E-04	3.00E-08	1.26E-08	4.32E-05	3.26E-03	1.37E-08	4.69E-05
Road 41	41	2100-2200	1.18E-02	4.89E-08	1.64E-04	4.84E-02	1.97E-07	6.98E-04	2.88E-08	1.21E-08	4.16E-05	3.13E-03	1.32E-08	4.52E-05
Road 41	41	2200-2300	1.18E-02	4.79E-08	1.67E-04	4.85E-02	1.97E-07	6.78E-04	2.87E-07	1.17E-08	4.00E-05	3.12E-03	1.27E-08	4.49E-05
Road 41	41	2300-0000	1.40E-02	4.46E-08	1.53E-04	5.25E-02	1.67E-07	5.72E-04	3.43E-09	1.09E-08	3.73E-05	3.17E-03	1.18E-08	4.06E-05
Road 42	42	0600-0700	3.27E-02	7.35E-08	6.80E-04	9.29E-02	1.60E-07	1.58E-05	1.08E-04	5.63E-03	1.28E-08	1.17E-04	1.17E-04	1.17E-04
Road 42	42	0700-0800	4.06E-02	6.72E-08	2.62E-04	1.06E-01	1.75E-07	1.62E-05	6.08E-05	1.08E-04	1.00E-04	7.09E-03	1.17E-08	1.09E-04
Road 42	42	0800-0900	4.83E-02	6.57E-08	6.08E-04	1.20E-01	1.63E-07	1.51E-05	1.77E-05	1.05E-08	6.69E-05	8.34E-03	1.13E-08	1.06E-04
Road 42	42	0900-1000	5.25E-02	6.47E-08	5.99E-04	1.31E-01	1.56E-07	1.44E-05	1.81E-03	1.03E-08	9.50E-05	9.33E-03	1.11E-08	1.03E-04
Road 42	42	1000-1100	5.25E-02	6.58E-08	6.09E-04	1.28E-01	1.61E-07	1.49E-05	1.83E-03	1.05E-08	9.71E-05	9.07E-03	1.14E-08	1.05E-04
Road 42	42	1100-1200	5.25E-02	6.58E-08	6.09E-04	1.28E-01	1.61E-07	1.49E-05	1.83E-03	1.05E-08	9.71E-05	9.07E-03	1.14E-08	1.05E-04
Road 42	42	1200-1300	5.25E-02	6.58E-08	6.09E-04	1.28E-01	1.61E-07	1.49E-05	1.83E-03	1.05E-08	9.71E-05	9.07E-03	1.14E-08	1.05E-04
Road 42	42	1300-1400	5.25E-02	6.58E-08	6.09E-04	1.28E-01	1.61E-07	1.49E-05	1.83E-03	1.05E-08	9.71E-05	9.07E-03	1.14E-08	1.05E-04
Road 42	42	1400-1500	5.25E-02	6.58E-08	6.09E-04	1.28E-01	1.61E-07	1.49E-05	1.83E-03	1.05E-08	9.71E-05	9.07E-03	1.14E-08	1.05E-04
Road 42	42	1500-1600	5.25E-02	6.58E-08	6.09E-04	1.28E-01	1.61E-07	1.49E-05	1.83E-03	1.05E-08	9.71E-05	9.07E-03	1.14E-08	1.05E-04
Road 42	42	1600-1700	5.25E-02	6.58E-08	6.09E-04	1.28E-01	1.61E-07	1.49E-05	1.83E-03	1.05E-08	9.71E-05	9.07E-03	1.14E-08	1.05E-04
Road 42	42	1700-1800	5.25E-02	6.58E-08	6.09E-04	1.28E-01	1.61E-07	1.49E-05	1.83E-03	1.05E-08	9.71E-05	9.07E-03	1.14E-08	1.05E-04
Road 42	42	1800-1900	5.25E-02	6.58E-08	6.09E-04	1.28E-01	1.61E-07	1.49E-05	1.83E-03	1.05E-08	9.71E-05	9.07E-03	1.14E-08	1.05E-04
Road 42	42	1900-2000	5.25E-02	6.58E-08	6.09E-04	1.28E-01	1.61E-07	1.49E-05	1.83E-03	1.05E-08	9.71E-05	9.07E-03	1.14E-08	1.05E-04
Road 42	42	2000-2100	3.06E-02	8.41E-08	7.78E-04	9.79E-02	2.53E-07	2.34E-05	3.96E-03	1.37E-08	1.27E-04	5.82E-03	1.46E-08	1.37E-04
Road 42	42	2100-2200	3.24E-02	8.30E-08	7.68E-04	9.68E-02	2.52E-07	2.33E-05	3.26E-03	1.35E-08	1.25E-04	5.71E-03	1.46E-08	1.35E-04
Road 42	42	2200-2300	3.38E-02	7.98E-08	7.25E-04	9.79E-02	2.42E-07	2.30E-05	3.13E-03	1.21E-04	5.75E-03	1.42E-08	1.32E-04	1.32E-04
Road 42	42	2300-0000	3.96E-02	7.84E-08	7.25E-04	1.09E-01	2.68E-07	2.02E-05	3.23E-03	1.25E-08	1.18E-04	6.75E-03	1.36E-08	1.26E-04
Road 43	43	0600-0700	1.91E-02	6.10E-08	8.35E-04	1.15E-02	4.83E-07	1.57E-05	1.46E-06	6.06E-05	3.13E-03	1.00E-08	3.13E-03	1.00E-08
Road 43	43	0700-0800	1.91E-02	6.10E-08	8.35E-04	1.15E-02	4.83E-07	1.57E-05	1.46E-06	6.06E-05	3.13E-03	1.00E-08	3.13E-03	1.00E-08
Road 43	43	0800-0900	1.91E-02	6.10E-08	8.35E-04	1.15E-02	4.83E-07	1.57E-05	1.46E-06	6.06E-05	3.13E-03	1.00E-08	3.13E-03	1.00E-08
Road 43	43	0900-1000	1.91E-02	6.10E-08	8.35E-04	1.15E-02	4.83E-07	1.57E-05	1.46E-06	6.06E-05	3.13E-03	1.00E-08	3.13E-03	1.00E-08
Road 43	43	1000-1100	1.91E-02	6.10E-08	8.35E-04	1.15E-02	4.83E-07	1.57E-05	1.46E-06	6.06E-05	3.13E-03	1.00E-08	3.13E-03	1.00E-08
Road 43	43	1100-1200	1.91E-02	6.10E-08	8.35E-04	1.15E-02	4.83E-07	1.57E-05	1.46E-06	6.06E-05	3.13E-03	1.00E-08	3.13E-03	1.00E-08
Road 43	43	1200-1300	1.91E-02	6.10E-08	8.35E-04	1.15E-02	4.83E-07	1.57E-05	1.46E-06	6.06E-05	3.13E-03	1.00E-08	3.13E-03	1.00E-08
Road 43	43	1300-1400	1.91E-02	6.10E-08	8.35E-04	1.15E-02	4.83E-07	1.57E-05	1.46E-06	6.06E-05	3.13E-03	1.00E-08	3.13E-03	1.00E-08
Road 43	43	1400-1500	1.91E-02	6.10E-08	8.35E-04	1.15E-02	4.83E-07	1.57E-05	1.46E-06	6.06E-05	3.13E-03	1.00E-08	3.13E-03	1.00E-08
Road 43	43	1500-1600	1.91E-02	6.10E-08	8.35E-04	1.15E-02	4.83E-07	1.57E-05	1.46E-06	6.06E-05	3.13E-03	1.00E-08	3.13E-03	1.00E-08
Road 43	43	1600-1700	1.91E-02	6.10E-08	8.35E-04	1.15E-02	4.83E-07	1.57E-05	1.46E-06	6.06E-05	3.13E-03	1.00E-08	3.13E-03	1.00E-08
Road 43	43	1700-1800	1.91E-02	6.10E-08	8.35E-04	1.15E-02	4.83E-07	1.57E-05	1.46E-06	6.06E-05	3.13E-03	1.00E-08	3.13E-03	1.00E-08
Road 43	43	1800-1900	1.91E-02	6.10E-08	8.35E-04	1.15E-02	4.83E-07	1.57E-05	1.46E-06	6.06E-05	3.13E-03	1.00E-08	3.13E-03	1.00E-08
Road 43	43	1900-2000	1.91E-02	6.10E-08	8.35E-04	1.15E-02	4.83E-07	1.57E-05	1.46E-06	6.06E-05	3.13E-03	1.00E-08	3.13E-03	1.00E-08
Road 43	43	2000-2100	1.91E-02	6.10E-08	8.35E-04	1.15E-02	4.83E-07	1.57E-05	1.46E-06	6.06E-05	3.13E-03	1.00E-08	3.13E-03	1.00E-08
Road 43	43	2100-2200	1.91E-02	6.10E-08	8.35E-04	1.15E-02	4.83E-07	1.57E-05	1.46E-06	6.06E-05	3.13E-03	1.00E-08	3.13E-03	1.00E-08
Road 43	43	2200-2300	1.91E-02	6.10E-08	8.35E-04	1.15E-02	4.83E-07	1.57E-05	1.46E-06	6.06E-05	3.13E-03	1.00E-08	3.13E-03	1.00E-08
Road 43	43	2300-0000	1.91E-02	6.10E-08	8.35E-04	1.15E-02	4.83E-07	1.57E-05	1.46E-06	6.06E-05	3.13E-03	1.00E-08	3.13E-03	1.00E-08
Road 44	44	0600-0700	1.69E-02	6.50E-08	2.49E-04	4.38E-02	1.35E-07	1.49E-05	5.58E-06	1.92E-09	1.62E-09	6.06E-05	6.06E-05	6.06E-05
Road 44	44	0700-0800	1.03E-02	1.83E-08	6.83E-05	4.58E-02	1.83E-08	3.04E-04	2.40E-04	1.59E-05	2.61E-03	4.63E-08	1.73E-05	1.73E-05
Road 44	44	0800-0900	9.37E-03	1.92E-08	7.41E-05	3.97E-02	1.68E-08	3.01E-04	2.22E-03	4.50E-09	1.68E-05	2.40E-03	4.88E-09	1.68E-05
Road 44	44	0900-1000	1.32E-02	1.72E-08	6.15E-05	4.31E-02	6.97E-08	2.60E-04	2.59E-05	4.12E-09	1.54E-05	2.77E-03	1.67E-08	1.67E-08
Road 44	44	1000-1100	1.46E-02	1.86E-08	6.78E-05	4.78E-02	7.32E-08	2.83E-04	2.83E-05	4.12E-09	1.54E-05	3.12E-03	4.32E-08	1.62E-05
Road 44	44	1100-1200	1.18E-02	1.57E-08	5.89E-05	4.60E-02	6.00E-08	2.27E-04	2.81E-03	1.37E-09	1.39E-05	4.03E-03	4.03E-03	1.51E-05
Road 44	44	1200-1300	1.48E-02	1.51E-08	5.92E-04									

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Table 1. Ding Yi North Underground Quarry

AERMOD model (t/annum)			Year 2043		NO ₂ Emission		NO _x Emission		NO ₂ Emission		NO _x Emission			
Road Name	Road ID	Hour	Monthly/curve/m			Monthly/average			Monthly/curve/m			Monthly/average		
			g/mi/hr	g/mi/hr	g/mi/hr	g/mi/hr	g/mi/hr	g/mi/hr	g/mi/hr	g/mi/hr	g/mi/hr	g/mi/hr	g/mi/hr	g/mi/hr
Road 14	14	0800-0900	3.11e+02	8.89e+07	5.53e+03	1.16e+01	3.31e+06	2.06e+02	1.47e+01	4.19e+06	2.61e+02	4.06e+03	1.16e+07	7.22e+04
Road 14	14	0900-1000	3.05e+02	8.62e+07	5.37e+03	1.13e+01	3.25e+06	1.99e+02	1.47e+01	4.09e+06	2.58e+02	4.79e+03	1.15e+07	7.18e+04
Road 14	14	1000-1100	3.01e+02	8.47e+07	5.30e+03	1.11e+01	3.19e+06	1.96e+02	1.46e+01	4.05e+06	2.56e+02	4.74e+03	1.14e+07	7.14e+04
Road 14	14	1100-1200	3.66e+02	9.74e+07	4.83e+03	1.32e+01	2.68e+06	1.67e+02	1.69e+01	3.43e+06	2.13e+02	5.05e+03	1.03e+07	6.39e+04
Road 14	14	1200-1300	4.95e+02	1.127e+08	7.27e+03	1.67e+01	3.96e+06	2.48e+02	2.17e+01	5.12e+06	3.18e+02	8.50e+03	1.54e+07	9.59e+04
Road 14	14	1300-1400	5.13e+02	1.153e+08	7.51e+03	1.71e+01	4.05e+06	2.54e+02	2.22e+01	5.26e+06	3.24e+02	8.69e+03	1.57e+07	9.74e+04
Road 14	14	1400-1500	5.12e+02	1.127e+08	8.21e+03	1.76e+01	4.52e+06	2.81e+02	2.27e+01	5.84e+06	3.48e+02	8.64e+03	1.71e+07	1.09e+05
Road 14	14	1500-1600	4.97e+02	1.131e+08	8.18e+03	1.84e+01	4.88e+06	3.02e+02	2.33e+01	6.17e+06	3.84e+02	8.45e+03	1.74e+07	1.06e+05
Road 14	14	1600-1700	5.09e+02	1.127e+08	8.18e+03	1.84e+01	4.88e+06	3.02e+02	2.33e+01	6.17e+06	3.84e+02	8.45e+03	1.74e+07	1.06e+05
Road 14	14	1700-1800	3.90e+02	9.12e+07	6.98e+03	1.47e+01	4.33e+06	2.09e+02	1.95e+01	4.49e+06	3.98e+02	7.98e+03	1.47e+07	9.16e+04
Road 14	14	1800-1900	2.84e+02	8.59e+07	5.53e+03	1.08e+01	3.28e+06	2.04e+02	1.37e+01	4.14e+06	2.58e+02	3.70e+03	1.12e+07	6.86e+04
Road 14	14	1900-2000	1.30e+02	3.69e+07	2.60e+03	5.11e+00	1.49e+06	8.89e+01	6.29e+00	1.79e+06	1.09e+02	1.55e+03	4.62e+06	2.93e+04
Road 14	14	2000-2100	1.69e+02	3.44e+07	1.89e+03	6.05e+00	1.44e+06	8.89e+01	7.09e+00	1.79e+06	1.09e+02	1.55e+03	4.62e+06	2.93e+04
Road 14	14	2100-2200	1.61e+02	2.90e+07	1.80e+03	7.92e+00	1.44e+06	8.89e+01	9.53e+00	1.72e+06	1.07e+02	1.42e+03	4.36e+06	2.71e+04
Road 14	14	2200-2300	1.61e+02	2.90e+07	1.74e+03	7.85e+00	1.39e+06	8.25e+03	9.53e+00	1.65e+06	1.09e+02	1.24e+03	4.05e+06	2.53e+04
Road 14	14	2300-2400	1.61e+02	2.90e+07	1.74e+03	7.85e+00	1.39e+06	8.25e+03	9.53e+00	1.65e+06	1.09e+02	1.24e+03	4.05e+06	2.53e+04
Road 15	15	0000-0100	2.10e+02	4.62e+08	1.56e+04	7.23e+02	1.61e+07	5.43e+04	3.99e+02	9.27e+07	7.00e+04	3.36e+03	6.40e+09	2.92e+09
Road 15	15	0100-0200	2.64e+02	5.69e+08	1.37e+04	8.21e+02	1.26e+07	4.27e+04	4.98e+02	1.07e+07	1.94e+04	3.63e+03	6.92e+09	2.32e+09
Road 15	15	0200-0300	2.64e+02	5.69e+08	1.37e+04	8.21e+02	1.26e+07	4.27e+04	4.98e+02	1.07e+07	1.94e+04	3.63e+03	6.92e+09	2.32e+09
Road 15	15	0300-0400	3.99e+02	3.93e+08	1.23e+04	9.91e+02	1.06e+07	3.39e+04	3.97e+02	9.07e+07	4.02e+04	5.89e+03	9.59e+09	2.01e+09
Road 15	15	0400-0500	3.69e+02	3.69e+08	1.32e+04	1.031e+03	1.06e+07	3.69e+04	3.17e+02	8.48e+07	5.56e+04	5.81e+03	9.29e+09	2.39e+09
Road 15	15	0500-0600	2.76e+02	2.76e+08	1.01e+04	7.51e+02	7.51e+06	2.43e+04	2.13e+02	5.11e+07	3.13e+04	3.42e+03	6.42e+09	1.82e+09
Road 15	15	0600-0700	2.21e+02	7.14e+08	2.41e+04	8.16e+02	2.64e+07	8.91e+04	1.04e+03	3.96e+07	1.13e+05	3.62e+04	1.17e+08	3.96e+09
Road 15	15	0700-0800	3.54e+02	5.69e+07	8.46e+03	1.58e+01	7.77e+06	2.63e+04	1.48e+03	6.39e+07	4.74e+04	5.05e+03	3.57e+08	1.21e+04
Road 15	15	0800-0900	3.96e+02	6.29e+07	1.94e+04	1.94e+01	8.38e+06	2.83e+04	1.38e+03	5.11e+07	3.76e+04	3.94e+03	3.86e+08	1.30e+04
Road 15	15	0900-1000	3.90e+02	5.69e+07	8.77e+04	1.16e+01	7.91e+07	2.68e+04	1.54e+01	1.05e+08	3.66e+05	5.52e+03	3.77e+08	1.27e+04
Road 15	15	1000-1100	4.13e+02	2.51e+07	8.47e+04	1.22e+01	7.48e+07	2.59e+04	1.63e+01	8.04e+07	3.42e+05	6.08e+03	3.99e+08	1.29e+04
Road 15	15	1100-1200	4.13e+02	2.51e+07	8.47e+04	1.22e+01	7.48e+07	2.59e+04	1.63e+01	8.04e+07	3.42e+05	6.08e+03	3.99e+08	1.29e+04
Road 15	15	1200-1300	5.24e+02	4.39e+07	1.54e+03	1.61e+01	1.34e+06	4.54e+02	2.13e+01	1.78e+06	6.02e+03	7.45e+03	6.24e+08	2.11e+04
Road 15	15	1300-1400	5.20e+02	4.45e+07	1.54e+03	1.69e+01	1.48e+06	4.88e+02	2.17e+01	1.90e+06	6.42e+03	7.49e+03	6.54e+08	2.21e+04
Road 15	15	1400-1500	5.20e+02	4.45e+07	1.54e+03	1.69e+01	1.48e+06	4.88e+02	2.17e+01	1.90e+06	6.42e+03	7.49e+03	6.54e+08	2.21e+04
Road 15	15	1500-1600	5.00e+02	4.65e+07	1.57e+03	1.66e+01	1.59e+06	5.27e+02	2.16e+01	2.01e+06	6.79e+03	7.17e+03	6.68e+08	2.26e+04
Road 15	15	1600-1700	5.04e+02	4.60e+07	1.67e+03	1.68e+01	1.551e+06	5.09e+02	2.09e+01	1.95e+06	6.71e+03	7.14e+03	6.78e+08	2.30e+04
Road 15	15	1700-1800	4.09e+02	4.15e+07	1.49e+03	1.68e+01	1.44e+06	4.78e+02	1.76e+01	1.62e+06	6.03e+03	6.83e+03	5.93e+08	2.06e+04
Road 15	15	1800-1900	3.80e+02	3.80e+07	1.37e+03	1.68e+01	1.37e+06	4.36e+02	1.76e+01	1.62e+06	6.03e+03	6.83e+03	5.93e+08	2.06e+04
Road 15	15	1900-2000	1.88e+02	1.97e+07	4.69e+04	7.61e+02	5.61e+07	1.89e+08	9.49e+02	9.97e+07	3.16e+03	3.03e+03	2.23e+08	7.54e+09
Road 15	15	2000-2100	1.90e+02	1.10e+07	3.78e+04	8.00e+02	4.85e+07	1.57e+08	9.56e+02	9.76e+07	3.94e+03	3.05e+03	1.78e+08	6.06e+09
Road 15	15	2100-2200	1.90e+02	1.10e+07	3.78e+04	8.00e+02	4.85e+07	1.57e+08	9.56e+02	9.76e+07	3.94e+03	3.05e+03	1.78e+08	6.06e+09
Road 15	15	2200-2300	1.90e+02	1.00e+07	3.96e+04	7.51e+02	4.04e+07	1.47e+08	9.31e+02	9.17e+07	3.76e+03	2.88e+03	1.61e+08	5.64e+09
Road 15	15	2300-2400	1.90e+02	1.00e+07	3.96e+04	7.51e+02	4.04e+07	1.47e+08	9.31e+02	9.17e+07	3.76e+03	2.88e+03	1.61e+08	5.64e+09
Road 16	16	0000-0100	2.01e+02	8.84e+08	2.92e+04	7.90e+02	3.46e+07	1.15e+03	9.93e+02	4.26e+07	1.44e+03	3.29e+03	4.42e+09	4.79e+05
Road 16	16	0100-0200	6.30e+02	6.30e+08	2.01e+04	2.15e+03	1.05e+07	3.59e+04	2.95e+03	1.45e+07	4.93e+03	1.45e+03	1.45e+09	1.45e+05
Road 16	16	0100-0200	7.09e+03	8.96e+08	4.13e+04	4.20e+02	2.18e+07	2.44e+04	4.90e+02	2.55e+07	2.88e+03	1.79e+03	9.31e+09	1.04e+04
Road 16	16	0200-0300	7.91e+03	3.94e+08	3.40e+04	4.42e+02	1.79e+07	1.96e+04	5.21e+02	2.00e+07	2.24e+03	1.99e+03	7.69e+09	8.76e+05
Road 16	16	0300-0400	8.13e+03	3.94e+08	3.40e+04	4.42e+02	1.79e+07	1.96e+04	5.21e+02	2.00e+07	2.24e+03	1.99e+03	7.69e+09	8.76e+05
Road 16	16	0400-0500	9.13e+03	3.07e+08	3.44e+04	4.74e+02	1.66e+07	1.78e+04	5.56e+02	9.00e+07	2.13e+03	2.32e+03	7.81e+09	8.79e+05
Road 16	16	0500-0600	9.29e+03	5.40e+08	6.04e+04	4.93e+02	2.85e+07	3.19e+04	5.81e+02	3.39e+07	3.78e+03	2.37e+03	1.73e+09	1.54e+04
Road 16	16	0600-0700	9.03e+03	5.40e+08	6.04e+04	4.93e+02	2.85e+07	3.19e+04	5.81e+02	3.39e+07	3.78e+03	2.37e+03	1.73e+09	1.54e+04
Road 16	16	0700-0800	1.59e+04	4.47e+07	4.52e+03	7.22e+02	1.80e+06	2.19e+02	8.81e+02	2.34e+07	5.00e+02	1.07e+03	7.68e+09	8.59e+04
Road 16	16	0800-0900	2.50e+02	5.88e+07	6.58e+03	8.80e+02	2.47e+06	2.77e+04	1.04e+01	1.05e+06	4.22e+02	3.28e+03	6.04e+08	1.08e+03
Road 16	16	0900-1000	1.34e+02	5.88e+07	6.58e+03	8.80e+02	2.47e+06	2.77e+04	1.04e+01	1.05e+06	4.22e+02	3.28e+03	6.04e+08	1.08e+03
Road 16	16	1000-1100	1.91e+02	4.00e+07	4.70e+03	7.85e+02	1.72e+06	1.97e+02	9.78e+02	1.96e+06	4.02e+02	9.93e+03	8.66e+08	9.99e+04
Road 16	16	1100-1200	1.74e+02	3.63e+07	4.09e+03	7.43e+02	1.59e+06	1.72e+02	9.17e+02	1.91e+06	3.14e+02	3.71e+03	7.74e+08	8.86e+04
Road 16	16	1200-1300	2.82e+02	6.77e+07	7.46e+03	1.13e+03	2.59e+06	2.90e+02	1.35e+03	3.26e+06	2.46e+02	5.13e+03	1.21e+07	3.66e+05
Road 16	16	1300-1400	3.00e+02	7.43e+07	8.31e+03	1.13e+03	2.79e+06	3.32e+02	1.43e+03	3.54e+06	4.95e+02	5.20e+03	1.27e+07	4.44e+05
Road 16	16	1400-1500	2.87e+02	7.29e+07	8.15e+03	1.11e+03	2.97e+06	3.27e+02	1.43e+03	3.78e+06	4.95e+02	5.01e+03	1.29e+07	4.48e+05
Road 16	16	1500-1600	3.19e+02	7.49e+07	9.19e+03	1.13e+03	3.19e+06	3.47e+02	1.45e+03	4.01e+06	5.13e+02	5.45e+03	1.34e+07	4.64e+05
Road 16	16	1600-1700	2.48e+02	7.99e+07	7.93e+03	1.09e+03	3.05e+06	3.23e+02	1.31e+03	3.74e+06	4.91e+02	3.98e+03	1.14e+07	3.82e+05
Road 16	16	1700-1800	1.58e+02	4.99e+07	5.21e+03	7.01e+02	1.69e+06	2.31e+02	8.99e+02	2.58e+06	2.83e+02	2.72e+03	8.01e+08	8.98e+04
Road 16	16	1800-1900	9.80e+02	9.80e+07	3.20e+04	1.13e+03	3.19e+06	3.47e+02	1.45e+03	4.01e+06	5.13e+02	5.45e+03	1.34e+07	4.64e+05
Road 16	16	1900-2000	7.05e+03	1.26e+07	1.41e+03	4.39e+03	7.67e+07	8.58e+03	5.01e+02	9.92e+07	9.99e+03	1.78e+03	3.18e+08	3.66e+04
Road 16	16	2000-2100	6.62e+03	1.18e+07	1.32e+03	4.29e+03	7.56e+07	8.48e+03	4.52e+02	9.76e+07	9.99e+03	1.68e+03	2.99e+08	3.35e+04
Road 16	16	2100-2200	6.62e+03	1.18e+07	1.32e+03	4.29e+03	7.56e+07	8.48e+03	4.52e+02	9.76e+07	9.99e+03	1.68e+03	2.99e+08	3.35e+04
Road 16	16	2200-2300	6.62e+03	1.18e+07	1.32e+03	4.29e+03	7.56e+07	8.48e+0						

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

ing Yi North Underground Quarry
see Road 24-hour Emission Factors for

AERMOD model (January)		Year 2000		NO ₂ Emission		Monthly/Average		NO ₂ Emission		Monthly/Average				
Road Name	Road ID	Hour	g/min/h	g/min/hour	tonne/hour	g/min/hour	tonne/hour	g/min/hour	tonne/hour	g/min/hour	tonne/hour			
Road 27	100	1400	1.41E-01	3.50E-07	4.05E-04	5.00E-01	1.27E-06	1.43E-03	6.14E-01	1.63E-06	1.84E-03	4.31E-06	4.09E-05	
Road 27	100	1700	1.72E-01	2.82E-07	3.17E-04	4.38E-01	1.12E-06	1.26E-03	6.11E-01	4.11E-06	5.58E-03	1.29E-02	2.97E-08	3.34E-05
Road 27	100	2000	1.39E-01	1.04E-07	1.17E-04	3.26E-01	2.31E-06	2.65E-03	6.11E-01	1.34E-06	1.81E-03	4.19E-06	9.69E-09	1.09E-05
Road 27	100	2300	1.00E-01	1.04E-07	1.17E-04	3.98E-01	4.11E-07	4.62E-04	5.50E-01	5.15E-07	5.78E-03	1.15E-02	1.18E-08	1.35E-05
Road 27	100	2000-1200	9.78E-02	8.03E-08	9.03E-05	4.00E-01	3.26E-07	3.68E-04	4.98E-01	4.90E-07	4.59E-04	1.13E-02	9.92E-09	1.04E-05
Road 27	100	2100-2200	9.94E-02	8.40E-08	9.40E-05	4.01E-01	3.69E-07	3.65E-04	5.50E-01	1.22E-07	4.75E-04	1.14E-02	9.63E-09	1.09E-05
Road 27	100	2200-2300	1.00E-01	1.04E-07	1.17E-04	3.26E-01	2.31E-06	2.65E-03	6.11E-01	1.34E-06	1.81E-03	4.19E-06	9.69E-09	1.09E-05
Road 27	100	2300-0000	1.07E-01	6.45E-08	7.74E-05	3.85E-01	2.35E-07	2.61E-04	4.91E-01	2.97E-07	3.33E-04	1.21E-02	7.31E-09	8.21E-06
Road 28	200	0000-0100	7.82E-03	6.55E-08	1.72E-05	4.00E-02	4.48E-07	9.28E-04	4.98E-02	5.34E-07	1.11E-02	2.09E-02	2.28E-08	4.78E-06
Road 28	200	0100-0200	8.16E-03	6.55E-08	1.72E-05	4.00E-02	4.48E-07	9.28E-04	5.50E-01	5.15E-07	5.78E-03	1.15E-02	1.18E-08	1.35E-05
Road 28	200	0200-0300	9.76E-03	7.52E-08	1.09E-05	4.57E-02	2.46E-07	5.29E-04	5.58E-01	2.98E-07	6.18E-03	2.58E-02	2.86E-08	2.88E-06
Road 28	200	0300-0400	1.07E-02	4.62E-08	9.57E-04	4.75E-02	2.07E-07	4.28E-04	5.58E-03	5.57E-07	5.24E-03	2.63E-02	1.29E-08	2.53E-06
Road 28	200	0400-0500	1.14E-02	4.62E-08	9.57E-04	4.75E-02	2.07E-07	4.28E-04	5.58E-03	5.57E-07	5.24E-03	2.63E-02	1.29E-08	2.53E-06
Road 28	200	0500-0600	1.11E-02	9.18E-08	1.89E-05	4.99E-02	4.12E-07	8.54E-04	6.10E-01	6.10E-07	1.04E-02	2.04E-02	5.58E-08	5.07E-04
Road 28	200	0600-0700	1.12E-02	1.98E-07	4.10E-05	5.07E-02	8.86E-07	1.88E-04	6.18E-02	1.10E-06	2.27E-03	3.03E-03	2.93E-08	1.11E-03
Road 28	200	0700-0800	1.27E-02	1.98E-07	4.10E-05	5.07E-02	8.86E-07	1.88E-04	6.18E-02	1.10E-06	2.27E-03	3.03E-03	2.93E-08	1.11E-03
Road 28	200	0800-0900	1.17E-02	5.40E-07	1.02E-02	4.97E-02	2.06E-06	4.33E-03	6.13E-02	5.88E-06	5.35E-02	3.21E-03	1.35E-07	2.47E-05
Road 28	200	0900-1000	1.35E-02	4.50E-07	1.04E-02	5.58E-02	2.08E-06	4.33E-03	6.13E-02	5.88E-06	5.35E-02	3.21E-03	1.35E-07	2.47E-05
Road 28	200	1000-1100	1.34E-02	4.50E-07	1.04E-02	5.58E-02	2.08E-06	4.33E-03	6.13E-02	5.88E-06	5.35E-02	3.21E-03	1.35E-07	2.47E-05
Road 28	200	1100-1200	1.50E-02	4.73E-07	9.81E-03	5.58E-02	1.85E-06	3.84E-03	7.32E-02	6.38E-06	4.82E-02	4.19E-03	1.32E-07	2.74E-05
Road 28	200	1200-1300	1.43E-02	3.98E-07	8.05E-03	5.50E-02	1.44E-06	3.30E-03	6.58E-02	1.88E-06	3.90E-02	3.89E-03	1.06E-07	2.19E-03
Road 28	200	1300-1400	1.43E-02	3.98E-07	8.05E-03	5.50E-02	1.44E-06	3.30E-03	6.58E-02	1.88E-06	3.90E-02	3.89E-03	1.06E-07	2.19E-03
Road 28	200	1400-1500	1.43E-02	4.24E-07	8.79E-03	5.57E-02	1.50E-06	3.42E-03	7.07E-02	2.07E-06	3.02E-02	5.92E-03	1.14E-07	2.41E-03
Road 28	200	1500-1600	1.33E-02	4.03E-07	8.35E-03	5.54E-02	1.68E-06	3.48E-03	6.87E-02	2.08E-06	4.32E-02	3.75E-03	1.14E-07	2.36E-03
Road 28	200	1600-1700	1.27E-02	4.95E-07	9.60E-03	5.69E-02	3.55E-06	3.52E-03	6.78E-02	2.10E-06	4.41E-02	3.81E-03	9.99E-08	2.05E-03
Road 28	200	1700-1800	1.21E-02	6.95E-07	1.33E-03	4.62E-02	1.62E-06	3.36E-03	5.63E-02	1.88E-06	4.10E-02	3.40E-03	9.99E-08	2.05E-03
Road 28	200	1800-1900	7.40E-03	2.74E-07	9.03E-05	3.49E-02	1.39E-06	2.68E-02	4.22E-02	1.57E-06	3.25E-02	4.04E-02	7.56E-08	1.57E-03
Road 28	200	1900-2000	6.10E-03	1.74E-07	1.65E-05	3.32E-02	1.62E-06	1.93E-02	3.39E-02	1.12E-06	2.38E-02	1.65E-03	4.76E-08	9.87E-04
Road 28	200	2000-2100	6.10E-03	1.74E-07	1.65E-05	3.32E-02	1.62E-06	1.93E-02	3.39E-02	1.12E-06	2.38E-02	1.65E-03	4.76E-08	9.87E-04
Road 28	200	2100-2200	5.53E-03	1.26E-07	2.58E-05	3.00E-02	8.00E-07	1.67E-04	4.12E-02	3.24E-06	1.99E-02	1.49E-03	3.68E-06	6.96E-04
Road 28	200	2200-2300	5.50E-03	1.20E-07	2.48E-05	3.00E-02	7.81E-07	1.62E-04	4.14E-02	3.01E-07	1.87E-02	1.43E-03	3.10E-06	6.42E-04
Road 28	200	2300-0000	6.12E-03	1.04E-07	1.17E-04	3.26E-01	2.31E-06	2.65E-03	6.11E-01	1.34E-06	1.81E-03	4.19E-06	9.69E-09	1.09E-05
Road 28	200	0000-0100	5.28E-03	4.62E-08	1.16E-05	3.52E-02	3.08E-07	7.75E-04	4.04E-04	5.54E-07	8.91E-03	1.30E-03	1.14E-08	1.26E-05
Road 28	200	0100-0200	6.15E-03	3.22E-08	8.88E-04	3.69E-02	2.12E-07	5.43E-04	4.31E-02	4.27E-07	6.22E-03	1.52E-03	7.78E-09	2.05E-04
Road 28	200	0200-0300	7.02E-03	6.55E-08	1.72E-05	4.00E-02	4.48E-07	9.28E-04	4.98E-02	5.34E-07	1.11E-02	2.09E-02	2.28E-08	4.78E-06
Road 28	200	0300-0400	7.98E-03	2.68E-08	6.75E-04	4.12E-02	1.39E-07	3.48E-04	4.92E-05	6.57E-07	1.97E-03	1.97E-03	6.83E-09	1.67E-04
Road 28	200	0400-0500	8.22E-03	3.02E-07	7.60E-04	4.20E-02	1.54E-07	3.83E-04	5.02E-04	1.84E-06	4.65E-04	2.04E-02	7.50E-09	1.69E-04
Road 28	200	0500-0600	7.02E-03	6.55E-08	1.72E-05	4.00E-02	4.48E-07	9.28E-04	4.98E-02	5.34E-07	1.11E-02	2.09E-02	2.28E-08	4.78E-06
Road 28	200	0600-0700	7.08E-03	1.02E-07	2.55E-05	4.24E-02	1.61E-07	1.41E-03	3.10E-02	6.36E-07	6.74E-02	9.9E-03	2.58E-08	6.89E-04
Road 28	200	0700-0800	8.59E-03	1.02E-07	2.55E-05	4.24E-02	1.61E-07	1.41E-03	3.10E-02	6.36E-07	6.74E-02	9.9E-03	2.58E-08	6.89E-04
Road 28	200	0800-0900	9.02E-03	3.22E-07	8.84E-04	3.69E-02	2.12E-07	5.43E-04	4.31E-02	4.27E-07	6.22E-03	1.52E-03	7.78E-09	2.05E-04
Road 28	200	0900-1000	9.25E-03	2.37E-07	5.98E-05	4.30E-02	1.19E-07	2.76E-02	5.23E-03	3.13E-06	3.36E-02	5.02E-03	6.96E-09	1.51E-03
Road 28	200	1000-1100	1.04E-02	2.54E-07	6.89E-05	4.58E-02	1.01E-06	2.58E-04	6.64E-02	1.59E-06	1.14E-02	4.83E-03	6.78E-08	1.98E-03
Road 28	200	1100-1200	1.03E-02	2.54E-07	6.89E-05	4.58E-02	1.01E-06	2.58E-04	6.64E-02	1.59E-06	1.14E-02	4.83E-03	6.78E-08	1.98E-03
Road 28	200	1200-1300	1.60E-02	3.56E-07	8.97E-05	5.76E-02	1.29E-06	3.24E-03	7.45E-02	3.46E-06	3.44E-02	4.02E-03	9.79E-08	2.46E-03
Road 28	200	1300-1400	1.60E-02	3.72E-07	9.35E-05	5.91E-02	1.39E-06	3.52E-03	7.59E-02	1.76E-06	4.43E-02	4.50E-03	1.04E-07	2.62E-03
Road 28	200	1400-1500	1.60E-02	3.87E-07	9.76E-05	5.97E-02	1.46E-06	3.57E-03	7.68E-02	1.88E-06	4.58E-02	4.58E-03	1.07E-07	2.71E-03
Road 28	200	1500-1600	1.47E-02	3.98E-07	8.05E-05	5.50E-02	1.44E-06	3.30E-03	6.58E-02	1.88E-06	3.90E-02	3.89E-03	1.06E-07	2.19E-03
Road 28	200	1600-1700	1.50E-02	3.86E-07	9.73E-05	5.58E-02	1.44E-06	3.30E-03	6.58E-02	1.88E-06	4.57E-02	4.17E-03	1.07E-07	2.70E-03
Road 28	200	1700-1800	1.13E-02	3.13E-07	7.89E-05	4.34E-02	1.34E-06	3.38E-03	5.97E-02	1.66E-06	4.17E-02	3.21E-03	8.90E-08	2.25E-03
Road 28	200	1800-1900	1.13E-02	3.13E-07	7.89E-05	4.34E-02	1.34E-06	3.38E-03	5.97E-02	1.66E-06	4.17E-02	3.21E-03	8.90E-08	2.25E-03
Road 28	200	1900-2000	6.76E-03	1.46E-07	3.75E-05	3.35E-02	7.71E-07	1.86E-04	4.02E-02	8.86E-07	2.28E-02	1.88E-03	4.14E-08	1.04E-03
Road 28	200	2000-2100	6.67E-03	1.16E-07	2.91E-05	3.61E-02	6.25E-07	1.42E-04	4.27E-02	4.47E-07	3.89E-02	1.85E-03	3.93E-08	8.07E-04
Road 28	200	2100-2200	6.42E-03	1.16E-07	2.91E-05	3.61E-02	6.25E-07	1.42E-04	4.27E-02	4.47E-07	3.89E-02	1.85E-03	3.93E-08	8.07E-04
Road 28	200	2200-2300	6.42E-03	1.06E-07	2.67E-05	3.56E-02	5.88E-07	1.48E-04	4.28E-02	6.94E-07	1.75E-02	2.84E-08	7.05E-04	1.69E-04
Road 28	200	2300-0000	7.14E-03	8.94E-08	2.25E-05	3.73E-02	4.67E-07	1.18E-04	4.44E-02	5.59E-07	1.40E-02	1.92E-03	2.40E-08	6.08E-04
Road 30	300	0000-0100	9.02E-03	6.55E-08	1.72E-05	4.00E-02	4.48E-07	9.28E-04	4.98E-02	5.34E-07	1.11E-02	2.09E-02	2.28E-08	4.78E-06
Road 30	300	0100-0200	1.05E-02	7.25E-08	2.59E-04	4.50E-02	3.38E-07	1.21E-03	5.95E-02	4.10E-07	1.07E-03	2.68E-03	1.89E-06	6.61E-05
Road 30	300	0200-0300	1.20E-02	6.28E-08	2.28E-04	5.25E-02	2.74E-07	9.74E-04	5.94E-02	4.34E-07	1.24E-03	3.04E-03	1.98E-08	5.83E-05
Road 30	300	0300-0400	1.20E-02	6.28E-08	2.28E-04	5.25E-02	2.74E-07	9.74E-04	5.94E-02	4.34E-07	1.24E-03	3.04E-03	1.98E-08	5.83E-05
Road 30	300	0400-0500	1.36E-02	6.94E-08	2.72E-04	5.64E-02	2.61E-07	9.37E-04	7.00E-02	3.24E-07	1.16E-03	2.86E-03	1.96E-08	5.71E-05
Road 30	300	0500-0600	1.27E-02	9.28E-08	3.55E-04	5.84E-02	4.36E-07	1.58E-03	6.57E-02	1.92E-03	3.27E-03	2.66E-08	9.17E-05	2.66E-05
Road 30	300	0600-0700	1.36E-02	9.28E-08	3.55E-04	5.84E-02	4.36E-07	1.58E-03	6.57E-02	1.92E-03	3.27E-03	2.66E-08	9.17E-05	2.66E-05
Road 30	300	0700-0800	1.36E-02	9.28E-08	3.55E-04	5.84E-02	4.36E-07	1.58E-03	6.57E-02	1.92E-03	3.27E-03	2.66E-08	9.17E-05	2.66E-05

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tiesing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for AERMOD model (January)	Year 2043

Road Name	Road ID	Hour	NO _x Emission						NO ₂ Emission					
			g/km/h	gsm ³ /h	tonne/hour	kg/h	tonne/hour	g/km/h	gsm ³ /h	tonne/hour	kg/h	tonne/hour		
Road 31	31	0000-0100	1.386	0.310E+08	9.83E-05	5.20E-02	1.14E-07	3.70E-04	6.53E-02	1.14E-07	4.69E-04	3.59E-03	5.78E-05	2.59E-02
Road 31	31	0100-0200	1.695	0.360E+08	9.16E-05	5.06E-02	8.60E-08	2.81E-04	7.33E-02	1.11E-07	4.83E-04	4.29E-03	4.69E-05	2.13E-02
Road 31	31	0200-0300	1.920	0.390E+08	9.80E-05	5.20E-02	1.44E-07	3.70E-04	6.53E-02	1.14E-07	4.69E-04	3.59E-03	5.78E-05	2.59E-02
Road 31	31	0300-0400	2.13E-02	2.11E+08	6.89E-05	5.86E-02	6.52E-08	2.12E-04	8.77E-02	6.83E-08	2.81E-04	5.39E-03	5.34E-05	1.78E-02
Road 31	31	0400-0500	1.060E-02	2.27E+08	4.06E-05	5.98E-02	7.12E-08	2.33E-04	8.66E-02	9.39E-08	3.06E-04	5.34E-03	5.49E-05	1.81E-02
Road 31	31	0500-0600	1.44E-02	2.34E+08	4.18E-05	6.00E-02	7.12E-08	2.33E-04	8.66E-02	9.39E-08	3.06E-04	5.34E-03	5.49E-05	1.81E-02
Road 31	31	0600-0700	1.57E-02	5.60E+08	8.83E-04	5.99E-02	2.13E-07	6.93E-04	7.55E-02	2.69E-07	7.76E-04	4.27E-03	1.50E-05	4.49E-02
Road 31	31	0700-0800	1.84E-02	4.17E+08	4.60E-04	5.98E-02	4.91E-07	1.60E-03	8.24E-02	6.32E-07	1.06E-03	4.86E-03	7.82E-05	1.24E-02
Road 31	31	0800-0900	1.74E-02	4.09E+08	4.52E-04	5.98E-02	4.91E-07	1.60E-03	8.24E-02	6.32E-07	1.06E-03	4.86E-03	7.82E-05	1.24E-02
Road 31	31	0900-1000	1.96E-02	1.99E+07	1.91E-04	7.14E-02	5.48E-07	1.79E-03	8.70E-02	7.08E-07	3.31E-03	5.37E-04	1.47E-05	4.42E-02
Road 31	31	1000-1100	2.17E-02	1.62E+07	8.30E-04	6.77E-02	5.32E-07	1.78E-03	9.29E-04	6.84E-07	2.26E-03	5.92E-04	4.42E-05	4.42E-02
Road 31	31	1100-1200	1.54E-02	5.02E+04	1.44E-04	5.07E-07	1.66E-03	9.31E-04	6.61E-07	2.16E-03	5.46E-04	4.16E-05	4.16E-05	4.16E-05
Road 31	31	1200-1300	2.06E-02	1.44E+07	1.44E-04	6.77E-02	5.32E-07	1.78E-03	9.29E-04	6.84E-07	2.26E-03	5.92E-04	4.42E-05	4.42E-02
Road 31	31	1300-1400	1.99E-02	1.06E+07	4.64E-04	7.16E-02	3.98E-07	1.11E-03	8.35E-04	4.52E-07	4.51E-04	2.16E-05	7.60E-05	9.01E-02
Road 31	31	1400-1500	1.99E-02	1.06E+07	4.64E-04	7.16E-02	3.98E-07	1.11E-03	8.35E-04	4.52E-07	4.51E-04	2.16E-05	7.60E-05	9.01E-02
Road 31	31	1500-1600	1.87E-02	1.11E+07	3.62E-04	5.95E-02	3.54E-07	1.08E-03	7.82E-04	6.59E-07	1.52E-04	4.84E-05	2.88E-05	9.83E-02
Road 31	31	1600-1700	1.87E-02	1.11E+07	3.62E-04	5.95E-02	3.54E-07	1.08E-03	7.82E-04	6.59E-07	1.52E-04	4.84E-05	2.88E-05	9.83E-02
Road 31	31	1700-1800	1.95E-02	9.79E+08	1.93E-04	5.27E-02	3.43E-07	1.12E-03	6.78E-04	4.11E-07	4.42E-04	3.92E-03	2.95E-08	8.37E-02
Road 31	31	1800-1900	2.4E-02	8.81E+08	1.93E-04	5.27E-02	3.43E-07	1.12E-03	6.78E-04	4.11E-07	4.42E-04	3.92E-03	2.95E-08	8.37E-02
Road 31	31	1900-2000	6.72E-03	8.81E+08	1.24E-04	5.45E-02	1.72E-07	5.62E-04	4.22E-04	2.11E-07	6.87E-04	1.98E-03	9.87E-07	3.27E-02
Road 31	31	2000-2100	0.05E-03	3.18E-04	4.05E-04	3.82E-02	1.531E-07	4.93E-04	4.83E-04	1.83E-07	4.96E-05	2.06E-03	8.13E-07	2.69E-02
Road 31	31	2100-2200	2.16E-02	1.68E+07	1.68E-04	6.77E-02	5.32E-07	1.78E-03	9.29E-04	6.84E-07	2.26E-03	5.92E-04	4.42E-05	4.42E-02
Road 31	31	2200-2300	7.73E-03	2.94E-05	9.05E-05	9.02E-02	1.45E-07	4.70E-04	4.57E-04	1.14E-07	6.86E-04	9.2E-03	7.33E-05	2.39E-02
Road 31	31	2300-0000	0.13E-03	6.86E-06	8.67E-05	4.07E-02	1.19E-07	3.87E-04	4.58E-04	1.45E-07	4.73E-04	7.28E-03	6.66E-05	2.13E-02
Road 32	32	0000-0100	0.99E-02	3.69E+08	1.87E-04	6.07E-02	1.54E-07	5.09E-04	5.61E-02	1.54E-07	5.09E-04	2.66E-03	1.95E-05	5.61E-02
Road 32	32	0100-0200	4.45E-02	4.83E-08	2.06E-05	4.07E-02	2.69E-07	6.51E-04	4.81E-03	1.81E-07	3.18E-03	7.70E-03	2.01E-05	9.01E-02
Road 32	32	0200-0300	0.08E-03	3.93E-04	9.84E-04	4.28E-02	2.08E-07	5.09E-05	5.09E-04	2.48E-07	4.00E-03	1.18E-05	1.06E-05	2.59E-02
Road 32	32	0300-0400	0.68E-03	3.37E-08	3.16E-04	4.44E-02	1.72E-07	4.71E-03	5.31E-04	2.06E-07	4.99E-03	2.34E-03	6.08E-05	2.24E-02
Road 32	32	0400-0500	0.26E-03	3.96E-08	3.86E-04	4.44E-02	1.72E-07	4.71E-03	5.31E-04	2.06E-07	4.99E-03	2.34E-03	6.08E-05	2.24E-02
Road 32	32	0500-0600	0.83E-03	3.79E-08	3.79E-04	4.44E-02	1.72E-07	4.71E-03	5.31E-04	2.06E-07	4.99E-03	2.34E-03	6.08E-05	2.24E-02
Road 32	32	0600-0700	1.04E-07	1.70E-07	1.71E-03	4.92E-02	6.01E-07	1.84E-06	5.97E-02	9.71E-07	3.92E-03	2.83E-03	6.01E-08	1.13E-02
Road 32	32	0700-0800	1.19E-04	3.44E-07	3.44E-03	9.67E-02	1.17E-06	3.44E-06	5.97E-02	9.71E-07	3.92E-03	2.83E-03	6.01E-08	1.13E-02
Road 32	32	0800-0900	1.06E-02	4.08E-07	8.88E-03	7.17E-02	1.81E-06	4.39E-06	5.78E-02	2.22E-06	5.37E-02	3.96E-03	1.14E-07	2.69E-02
Road 32	32	0900-1000	1.42E-02	4.18E-07	1.01E-03	5.33E-02	1.79E-06	4.39E-06	6.57E-02	2.22E-06	5.37E-02	3.96E-03	1.14E-07	2.69E-02
Road 32	32	1000-1100	1.42E-02	4.18E-07	1.01E-03	5.33E-02	1.79E-06	4.39E-06	6.57E-02	2.22E-06	5.37E-02	3.96E-03	1.14E-07	2.69E-02
Road 32	32	1100-1200	3.91E-02	4.18E-08	4.88E-04	5.65E-02	1.60E-06	3.98E-07	7.02E-02	1.99E-06	1.83E-02	5.89E-02	1.10E-07	2.69E-02
Road 32	32	1200-1300	3.46E-02	3.37E-07	8.18E-03	5.37E-02	1.35E-06	3.27E-07	6.71E-02	1.69E-06	1.99E-02	6.69E-02	1.99E-02	2.24E-02
Road 32	32	1300-1400	3.46E-02	3.37E-07	8.18E-03	5.37E-02	1.35E-06	3.27E-07	6.71E-02	1.69E-06	1.99E-02	6.69E-02	1.99E-02	2.24E-02
Road 32	32	1400-1500	3.91E-02	3.17E-07	9.00E-03	5.46E-02	1.50E-06	3.63E-07	6.81E-02	1.87E-06	5.35E-02	3.76E-03	1.06E-07	2.59E-02
Road 32	32	1500-1600	1.25E-02	3.52E-07	8.53E-04	5.45E-02	1.53E-06	3.72E-07	6.70E-02	1.89E-06	4.57E-02	3.58E-03	1.01E-07	2.69E-02
Road 32	32	1600-1700	3.36E-02	3.83E-07	8.67E-04	5.23E-02	1.54E-06	3.74E-07	6.52E-02	1.92E-06	4.66E-02	3.58E-03	1.06E-07	2.59E-02
Road 32	32	1700-1800	3.36E-02	3.83E-07	8.67E-04	5.23E-02	1.54E-06	3.74E-07	6.52E-02	1.92E-06	4.66E-02	3.58E-03	1.06E-07	2.59E-02
Road 32	32	1800-1900	8.66E-02	3.06E-07	5.75E-03	5.86E-02	1.17E-06	2.83E-07	4.05E-02	1.40E-06	3.99E-02	8.7E-03	6.46E-05	1.95E-02
Road 32	32	1900-2000	5.98E-02	1.68E-07	8.88E-03	3.31E-04	6.89E-07	2.18E-06	3.80E-06	1.06E-06	5.57E-02	1.60E-03	5.89E-05	1.13E-02
Road 32	32	2000-2100	7.46E-02	1.22E-07	3.44E-03	5.44E-02	1.17E-06	2.83E-07	4.05E-02	1.40E-06	3.99E-02	8.7E-03	6.46E-05	1.95E-02
Road 32	32	2100-2200	5.24E-03	1.11E-07	6.88E-05	5.65E-02	7.53E-07	1.02E-06	4.86E-02	1.64E-07	4.92E-06	1.43E-03	3.01E-08	7.33E-05
Road 32	32	2200-2300	2.26E-02	5.61E-07	5.79E-03	3.56E-02	7.29E-07	1.67E-06	4.08E-02	8.33E-07	1.02E-06	3.9E-03	2.76E-08	6.67E-05
Road 32	32	2300-0000	1.7E-02	3.70E-07	2.61E-03	5.17E-02	1.17E-06	2.83E-07	4.05E-02	1.40E-06	3.99E-02	8.7E-03	6.46E-05	1.95E-02
Road 33	33	0000-0100	0.91E-03	6.61E-08	5.28E-04	4.75E-02	4.61E-07	2.53E-04	5.74E-07	5.50E-07	6.06E-03	2.53E-04	2.68E-08	1.33E-02
Road 33	33	0100-0200	1.16E-07	5.88E-08	7.47E-04	5.08E-02	3.32E-07	1.82E-04	6.24E-07	4.08E-07	2.24E-03	2.96E-03	1.93E-08	1.01E-02
Road 33	33	0200-0300	1.16E-07	5.88E-08	7.47E-04	5.08E-02	3.32E-07	1.82E-04	6.24E-07	4.08E-07	2.24E-03	2.96E-03	1.93E-08	1.01E-02
Road 33	33	0300-0400	4.42E-04	6.02E-08	3.70E-04	5.78E-02	2.33E-07	1.28E-04	7.27E-02	2.99E-07	1.93E-03	5.76E-02	5.82E-05	8.37E-02
Road 33	33	0400-0500	1.45E-02	6.65E-08	3.65E-04	5.87E-02	2.60E-07	1.43E-03	7.37E-02	3.67E-07	1.91E-03	3.81E-03	1.66E-08	9.24E-02
Road 33	33	0500-0600	1.37E-02	6.65E-08	3.65E-04	5.87E-02	2.60E-07	1.43E-03	7.37E-02	3.67E-07	1.91E-03	3.81E-03	1.66E-08	9.24E-02
Road 33	33	0600-0700	2.26E-02	2.01E-05	5.75E-02	6.88E-07	4.79E-07	7.34E-04	1.08E-06	0.44E-06	0.34E-03	0.06E-03	0.06E-03	0.06E-03
Road 33	33	0700-0800	1.45E-02	4.74E-07	8.05E-02	6.02E-02	1.97E-06	1.08E-07	7.47E-04	2.44E-06	1.34E-02	1.77E-03	1.23E-07	6.67E-02
Road 33	33	0800-0900	3.86E-03	5.23E-07	8.67E-03	5.67E-02	2.14E-06	1.08E-07	7.05E-07	2.67E-06	4.88E-03	4.88E-03	4.88E-03	4.88E-03
Road 33	33	0900-1000	3.86E-03	5.23E-07	8.67E-03	5.67E-02	2.14E-06	1.08E-07	7.05E-07	2.67E-06	4.88E-03	4.88E-03	4.88E-03	4.88E-03
Road 33	33	1000-1100	1.80E-02	8.46E-07	1.00E-03	6.79E-02	2.06E-06	1.17E-03	8.59E-02	2.61E-04	4.94E-03	4.84E-03	1.47E-07	8.01E-02
Road 33	33	1100-1200	1.77E-02	5.11E-07	2.80E-03	6.08E-02	1.99E-06	1.07E-03	8.59E-02	2.61E-04	4.95E-02	4.74E-03	1.99E-03	7.47E-02
Road 33	33	1200-1300	1.04E-02	8.46E-07	1.00E-03	6.79E-02	2.06E-06	1.17E-03	8.59E-02	2.61E-04	4.94E-03	4.84E-03	1.47E-07	8.01E-02
Road 33	33	1300-1400	2.02E-02	1.00E-07	3.56E-03	7.15E-02	2.26E-06	1.24E-04	9.53E-02	2.87E-06	1.58E-04	4.74E-03	1.66E-07	9.01E-02
Road 33	33	1400-1500	1.01E-02	6.28E-07	4.53E-03	7.32E-02	2.29E-06	1.26E-03	9.32E-02	2.91E-06	6.02E-03	8.42E-03	1.66E-07	9.01E-02
Road 33	33	1500-1600	1.01E-02	6.28E-07	4.53E-03	7.32E-02	2.29E-06	1.26E-03	9.32E-02	2.91E-06	6.02E-03	8.42E-03	1.66E-07	9.01E-02
Road 33	33	1600-1700	1.91E-02	6.22E-07	4.4									

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Tiesing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for AERMOD model (January)	Year 2043

Road Name	Road ID	Hour	NO _x Emission						NO _x Emission					
			MonthlyHours			MonthlyHour/Avg			MonthlyHours			MonthlyHour/Avg		
			g/km/h	gsm ² /h	gsm ² /h	g/km/h	tonne/hour	g/km/h	gsm ² /h	tonne/hour	g/km/h	gsm ² /h	tonne/hour	gsm ² /h
Road 34	34	0800-0900	0.1362	2.0767	1.9862	0.9332	1.0056	9.5662	0.7422	1.2126	1.1562	2.1112	0.5378	5.1128
Road 34	34	0900-1000	0.3223	1.9522	1.8673	4.3332	0.9292	8.0673	5.2712	1.0368	1.0592	2.5008	0.2222	4.8788
Road 34	34	1000-1100	1.0612	1.7742	1.6772	5.9532	1.0612	9.1672	1.0612	1.0612	1.0612	1.0612	1.0612	1.0612
Road 34	34	1100-1200	1.0222	1.6772	1.5772	4.5772	7.8862	7.5112	0.9662	9.6112	0.1862	2.7062	4.4532	4.4422
Road 34	34	1200-1300	1.6162	2.6767	2.5562	5.7962	9.6112	9.1662	7.4112	1.2262	1.1762	4.4332	1.7362	7.0662
Road 34	34	1300-1400	1.1112	1.7762	1.6762	5.9562	1.0612	9.1672	1.0612	1.0612	1.0612	1.0612	1.0612	1.0612
Road 34	34	1400-1500	1.6112	2.9262	2.7762	5.9762	1.0562	1.0112	7.4712	0.9362	2.9622	4.4772	8.0762	7.7762
Road 34	34	1500-1600	4.4662	2.7567	2.6362	5.8562	1.0862	1.0412	7.3462	1.3962	3.6662	4.2562	8.7762	7.8762
Road 34	34	1600-1700	1.0612	1.7762	1.6762	5.9562	1.0612	9.1672	1.0612	1.0612	1.0612	1.0612	1.0612	1.0612
Road 34	34	1700-1800	1.1412	2.3762	2.2662	4.9562	1.0112	9.0662	6.0962	1.2462	1.1662	3.2462	6.7162	6.6162
Road 34	34	1800-1900	8.4762	1.7967	1.7162	3.6962	7.7862	7.4362	4.5762	9.5762	0.1462	2.3862	5.9312	6.0312
Road 34	34	1900-2000	6.6262	1.1262	1.0712	3.6462	5.5262	5.2762	4.0462	6.6462	0.3462	1.9962	4.3112	4.4112
Road 34	34	2000-2100	2.7862	1.8662	1.7662	3.6462	4.6362	4.4362	4.2962	4.6462	0.2262	1.8162	2.1312	2.2312
Road 34	34	2100-2200	6.4962	0.8162	0.7652	3.6462	4.4112	4.2112	4.2262	5.2112	0.9762	1.7362	2.1462	2.2462
Road 34	34	2200-2300	2.4662	1.8162	1.7162	3.6462	4.4112	4.2112	4.2262	5.2112	0.9762	1.7362	2.1462	2.2462
Road 34	34	2300-2400	2.9062	0.9662	0.9162	3.8562	1.0762	9.5262	1.1862	1.4212	2.6542	4.9512	4.5462	5.2462
Road 34	34	2400-2500	1.6662	0.3212	0.2852	1.0262	8.9562	7.9962	1.3662	1.2262	0.0812	0.1212	0.5962	4.4762
Road 34	34	2500-2600	1.6662	0.3212	0.2852	1.0262	8.9562	7.9962	1.3662	1.2262	0.0812	0.1212	0.5962	4.4762
Road 34	34	0300-0400	4.8662	0.3062	0.2662	1.2362	7.6362	6.0762	1.7262	1.0562	0.4362	0.9562	4.9362	4.4362
Road 34	34	0400-0500	4.7162	0.3062	0.2662	1.2362	8.0062	7.1062	1.8662	1.1162	0.8462	0.7962	5.1112	4.5112
Road 34	34	0500-0600	7.6462	0.3062	0.2662	1.2362	7.6362	6.0762	1.7262	1.0562	0.4362	0.9562	4.9362	4.4362
Road 34	34	0600-0700	9.0062	0.3062	0.2662	1.2362	7.6362	6.0762	1.7262	1.0562	0.4362	0.9562	4.9362	4.4362
Road 34	34	0700-0800	4.2262	1.7262	1.5362	1.2262	4.9962	4.4862	1.6462	6.7162	0.9662	6.6162	2.7162	2.4862
Road 34	34	0800-0900	2.2262	1.8762	1.6662	1.2262	4.9962	4.4862	1.6462	6.7162	0.9662	6.6162	2.7162	2.4862
Road 34	34	0900-1000	4.4362	1.8762	1.6662	1.2262	5.9062	4.7462	1.7462	7.4362	1.3762	6.3462	7.0862	5.9162
Road 34	34	1000-1100	4.4362	1.8762	1.6662	1.2262	5.9062	4.7462	1.7462	7.4362	1.3762	6.3462	7.0862	5.9162
Road 34	34	1100-1200	4.8762	1.8362	1.6262	1.6262	7.1362	5.1562	4.5862	1.8662	0.8962	6.2062	7.7462	2.9162
Road 34	34	1200-1300	4.9362	1.7762	1.6262	1.9362	4.8962	4.4362	1.8862	5.8762	0.5162	7.7762	7.0862	2.4862
Road 34	34	1300-1400	4.6562	1.4262	1.2162	1.9362	4.8962	4.4362	1.8862	5.8762	0.5162	7.7762	7.0862	2.4862
Road 34	34	1400-1500	8.6062	1.4462	1.2862	1.4562	3.7862	3.3312	2.0112	5.1762	4.5962	6.7862	2.2662	2.0262
Road 34	34	1500-1600	4.5462	1.4662	1.2962	1.4162	3.7662	3.3312	2.0112	5.1762	4.5962	6.7862	2.2662	2.0262
Road 34	34	1600-1700	5.3162	1.4462	1.2862	1.4562	3.7862	3.3312	2.0112	5.1762	4.5962	6.7862	2.2662	2.0262
Road 34	34	1700-1800	5.7562	1.4762	1.3162	1.8662	3.8062	3.3762	1.8662	5.2762	4.6862	6.8262	2.3262	2.0262
Road 34	34	1800-1900	4.6662	1.3962	1.2362	1.2362	3.7112	3.3062	1.6662	5.1062	4.5362	7.2362	2.1862	1.9862
Road 34	34	1900-2000	4.2862	1.3112	1.1562	1.2362	3.7112	3.3062	1.6662	5.1062	4.5362	7.2362	2.1862	1.9862
Road 34	34	2000-2100	2.0762	1.4112	1.2562	1.6562	1.3562	1.2112	0.9562	1.7762	1.5862	4.9462	6.9462	6.6162
Road 34	34	2100-2200	3.3562	1.3742	1.2462	1.3362	1.2362	1.1062	1.0662	1.6162	4.4362	3.8862	6.2112	5.5962
Road 34	34	2200-2300	2.9662	1.3862	1.2562	1.3362	1.2362	1.1062	1.0662	1.6162	4.4362	3.8862	6.2112	5.5962
Road 34	34	2300-2400	3.3062	1.3582	1.1862	1.6062	1.1862	1.0962	0.9162	1.5462	3.0762	3.7462	5.8562	5.5962
Road 34	34	2400-2500	2.6862	0.9262	0.8262	1.2462	1.0112	9.0112	1.0662	1.3462	1.1962	4.4562	4.4562	4.6862
Road 34	34	2500-2600	5.5712	0.5962	0.5362	1.4562	2.1862	2.0662	1.7562	2.7462	1.5262	4.9362	9.9362	9.9362
Road 34	34	0300-0400	1.1862	0.4862	0.4362	1.4562	2.1862	2.0662	1.7562	2.7462	1.5262	4.9362	9.9362	9.9362
Road 34	34	0400-0500	4.2162	0.2962	0.2662	1.5862	1.4112	1.3062	0.7012	1.8462	1.6762	6.8362	7.7462	6.6662
Road 34	34	0500-0600	5.3362	0.4862	0.4362	1.4562	1.2762	1.1762	2.2662	1.8462	1.5462	4.1762	7.0112	6.9112
Road 34	34	0600-0700	3.8062	0.4232	0.3762	1.4562	1.2762	1.1762	2.2662	1.8462	1.5462	4.1762	7.0112	6.9112
Road 34	34	0700-0800	4.6762	0.7062	0.5462	1.6862	2.0262	1.8862	2.1562	2.6262	4.0162	4.8362	1.0262	9.9362
Road 34	34	0800-0900	4.2112	0.7762	0.5962	1.7262	3.0962	3.6762	2.1462	2.1462	0.9762	5.5762	7.7462	1.7962
Road 34	34	0900-1000	2.6762	0.6112	0.5362	1.7262	3.0962	3.6762	2.1462	2.1462	0.9762	5.5762	7.7462	1.7962
Road 34	34	1000-1100	5.2762	0.3162	0.2852	1.9462	1.0562	0.9662	2.3212	3.9662	2.5562	7.7862	4.5862	4.4262
Road 34	34	1100-1200	0.9962	0.3172	0.2812	1.9562	1.0312	0.9662	2.5662	1.3362	1.2262	7.8162	4.0662	3.6762
Road 34	34	1200-1300	0.9962	0.3172	0.2812	1.9562	1.0312	0.9662	2.5662	1.3362	1.2262	7.8162	4.0662	3.6762
Road 34	34	1300-1400	4.2462	2.9362	2.6762	0.9562	8.9562	8.2362	2.6412	1.1962	1.0662	8.0062	6.8112	3.3362
Road 34	34	1400-1500	7.8762	2.9662	2.6662	2.2112	8.2762	7.9662	2.9962	1.1262	1.0312	9.4362	3.3362	3.3262
Road 34	34	1500-1600	7.9162	3.3062	2.9562	2.2112	8.2762	7.9662	2.9962	1.1262	1.0312	9.4362	3.3362	3.3262
Road 34	34	1600-1700	7.7262	3.3062	2.9562	2.2112	8.2762	7.9662	2.9962	1.1262	1.0312	9.4362	3.3362	3.3262
Road 34	34	1700-1800	7.8262	3.1262	2.9562	2.2312	9.5762	8.8062	3.1262	1.2962	1.1762	9.0762	3.7262	3.4462
Road 34	34	1800-1900	5.7562	3.1362	2.8762	2.2312	9.0362	8.4062	2.9862	1.2262	1.1362	8.3562	3.8862	3.5562
Road 34	34	1900-2000	2.9462	2.9862	2.8162	2.9862	2.9862	2.9862	2.9862	2.9862	2.9862	2.9862	2.9862	2.9862
Road 34	34	2000-2100	4.2362	2.3762	2.1862	1.7062	7.4112	6.8112	2.2462	3.7862	0.9962	9.8662	4.9462	3.2662
Road 34	34	2100-2200	1.6112	1.0262	0.9562	1.9962	3.8112	3.5662	1.7562	4.9362	4.5362	4.4662	1.5962	1.4462
Road 34	34	2200-2300	2.7762	0.8162	0.7652	1.9962	3.8112	3.5662	1.7562	4.9362	4.5362	4.4662	1.5962	1.4462
Road 34	34	2300-2400	3.7362	0.8462	0.7862	1.4862	3.3662	3.3062	1.8662	4.2162	0.8762	5.7662	1.3112	1.2262
Road 34	34	2400-2500	4.7662	1.6762	1.6062	1.4862	3.0462	2.8062	1.7562	3.8062	0.9562	5.5262	1.0662	1.3362
Road 34	34	2500-2600	3.8762	1.6762	1.6062	1.4862	3.0462	2.8062	1.7562	3.8062	0.9562	5.5262	1.0662	1.3362
Road 34	34	0300-0400	1.0062	1.3262	1.1162	1.4462	6.3462	5.5312	1.7462	7.6762	6.4262	4.7862	2.1112	1.7762
Road 34	34	0400-0500	2.5662	0.4712	0.4362	1.5162	4.4112	3.6862	1.8462	5.3962	4.4862	5.7762	1.5312	1.2262
Road 34	34	0500-0600	3.7362	0.4712	0.4362	1.5162	4.4112	3.6862	1.8462	5.3962	4.4862	5.7762	1.5312	1.2262
Road 34	34	0600-0700	3.7562	0.5862	0.4562	1.9762	2.9062	2.4962	2.0962	3.5962	0.9762	5.9262	1.0312	1.1062
Road 34	34	0700-0800	3.9962	0.7762	0.6562	1.7462	3.3762	2.8262	2.0412	4.1462	0.9762	6.2962	1.2112	1.1062
Road 34	34	0800-0900	4.2262	1.4462	1.2062	1.8112	6.1862	5.1862	2.2262	7.6862	0.3662	8.5962	2.2862	1.1862
Road 34	34	0900-1000	4.6862	1.4462	1.2062	1.8112	6.1862	5.1862	2.2262	7.6862	0.3662	8.5962	2.2862	1.1862
Road 34	34	1000-1100	4.6862	1.4462	1.2062	1.8112	5.9862	2.4862	2.4112	6.6862	0.3762	5.5162	1.2262	9.9362
Road 34	34	1100-1200	4.7262	0.8162	0.7046	1.8112	3.2862	2.7262	2.2962	4.1062	1.4446	6.1362	1.1062	9.9362

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for AERMOD model (January)	Year 2043

			NO ₂ Emission										NO ₂ Emission									
Road Name	Road ID	Hour	Monthly/month					Monthly/month					Monthly/month					Monthly/month				
			g/km/h	gsm ² /h	gsm ² /km ² /h	gsm ² /h	tonne/hour	g/km/h	gsm ² /h	gsm ² /km ² /h	gsm ² /h	tonne/hour	g/km/h	gsm ² /h	gsm ² /km ² /h	gsm ² /h	tonne/hour					
Road 37	37	1900-2000	6.84E-02	6.94E-09	7.95E-16	1.99E-01	3.96E-08	2.81E-05	2.59E-01	4.30E-08	3.61E-05	6.54E-03	1.10E-02	1.07E-02	1.07E-02	1.07E-02	1.07E-02					
Road 37	37	1700-1800	8.62E-02	8.68E-09	9.72E-16	1.93E-01	3.47E-08	2.51E-05	2.41E-03	4.30E-08	3.64E-05	6.83E-03	1.20E-02	1.16E-02	1.16E-02	1.16E-02	1.16E-02					
Road 37	37	1800-1900	7.84E-02	7.88E-09	8.92E-16	1.93E-01	3.47E-08	2.51E-05	2.41E-03	4.30E-08	3.64E-05	6.83E-03	1.20E-02	1.16E-02	1.16E-02	1.16E-02	1.16E-02					
Road 37	37	1900-2000	2.70E-02	2.74E-09	3.14E-16	1.25E-01	1.72E-08	1.24E-06	1.52E-01	1.00E-08	7.66E-05	4.22E-03	5.88E-03	5.88E-03	5.88E-03	5.88E-03	5.88E-03					
Road 37	37	2000-2100	7.60E-02	7.68E-09	8.50E-16	1.34E-01	1.44E-08	1.21E-05	1.61E-01	1.74E-08	1.46E-05	4.14E-04	4.64E-04	4.64E-04	4.64E-04	4.64E-04	4.64E-04					
Road 37	37	2100-2200	7.21E-02	7.26E-09	8.22E-16	1.34E-01	1.44E-08	1.21E-05	1.61E-01	1.74E-08	1.46E-05	4.14E-04	4.64E-04	4.64E-04	4.64E-04	4.64E-04	4.64E-04					
Road 37	37	2200-2300	2.41E-02	2.50E-09	2.90E-16	1.26E-01	1.30E-08	1.09E-06	1.50E-01	1.55E-08	3.00E-05	3.93E-03	4.07E-03	4.07E-03	4.07E-03	4.07E-03	4.07E-03					
Road 37	37	2300-2400	2.66E-02	2.69E-09	3.75E-16	1.33E-01	1.09E-08	8.78E-06	1.69E-01	1.68E-08	1.05E-05	4.33E-04	4.64E-04	4.64E-04	4.64E-04	4.64E-04	4.64E-04					
Road 38	38	0900-1000	6.41E-02	6.43E-09	7.24E-16	1.80E-01	2.48E-08	2.13E-05	2.31E-03	4.14E-08	3.41E-05	6.10E-03	1.07E-02	1.07E-02	1.07E-02	1.07E-02	1.07E-02					
Road 38	38	0100-0200	5.81E-02	5.80E-09	6.40E-16	1.70E-01	1.88E-07	5.93E-06	2.29E-05	2.90E-08	4.48E-05	9.00E-03	9.00E-03	9.00E-03	9.00E-03	9.00E-03	9.00E-03					
Road 38	38	0200-0300	6.25E-02	5.74E-08	1.72E-16	1.80E-01	1.65E-07	4.94E-04	2.47E-05	2.23E-07	6.65E-04	9.87E-03	9.87E-03	9.87E-03	9.87E-03	9.87E-03	9.87E-03					
Road 38	38	0300-0400	6.74E-02	6.48E-08	1.64E-16	1.86E-01	1.51E-07	4.52E-04	2.53E-05	2.96E-07	1.16E-04	1.07E-02	1.07E-02	1.07E-02	1.07E-02	1.07E-02	1.07E-02					
Road 38	38	0400-0500	6.25E-02	5.71E-08	1.72E-16	1.80E-01	1.65E-07	4.94E-04	2.47E-05	2.23E-07	6.65E-04	9.87E-03	9.87E-03	9.87E-03	9.87E-03	9.87E-03	9.87E-03					
Road 38	38	0500-0600	6.22E-02	6.38E-08	2.24E-16	1.83E-01	2.37E-07	7.09E-06	2.56E-01	3.13E-08	3.17E-03	9.75E-05	1.20E-02	1.16E-02	1.16E-02	1.16E-02	1.16E-02					
Road 38	38	0600-0700	5.70E-02	1.26E-07	3.77E-16	1.99E-01	4.42E-07	1.32E-05	2.59E-03	6.66E-07	1.70E-03	8.80E-04	9.87E-03	9.87E-03	9.87E-03	9.87E-03	9.87E-03					
Road 38	38	0700-0800	7.50E-02	3.89E-08	1.10E-16	1.99E-01	4.42E-07	1.32E-05	2.59E-03	6.66E-07	1.70E-03	8.80E-04	9.87E-03	9.87E-03	9.87E-03	9.87E-03	9.87E-03					
Road 38	38	0800-0900	2.34E-02	4.26E-07	1.27E-16	2.02E-01	1.29E-08	3.80E-05	2.92E-01	1.71E-06	1.27E-03	3.96E-05	5.49E-05	5.49E-05	5.49E-05	5.49E-05	5.49E-05					
Road 38	38	0900-1000	9.10E-02	4.31E-07	2.93E-16	2.33E-01	1.27E-08	3.78E-05	3.12E-01	1.70E-06	5.09E-04	9.44E-04	1.10E-02	1.07E-02	1.07E-02	1.07E-02	1.07E-02					
Road 38	38	1000-1100	3.00E-02	6.23E-07	1.82E-16	2.33E-01	1.27E-08	3.78E-05	3.12E-01	1.70E-06	5.09E-04	9.44E-04	1.10E-02	1.07E-02	1.07E-02	1.07E-02	1.07E-02					
Road 38	38	1100-1200	8.45E-02	4.11E-07	1.23E-16	2.40E-01	1.17E-08	3.49E-06	3.25E-01	1.68E-08	1.07E-05	7.85E-04	1.10E-02	1.07E-02	1.07E-02	1.07E-02	1.07E-02					
Road 38	38	1200-1300	1.05E-01	1.89E-07	6.44E-16	2.62E-01	7.27E-07	2.18E-03	3.67E-01	1.01E-05	3.02E-03	3.31E-04	1.10E-02	1.07E-02	1.07E-02	1.07E-02	1.07E-02					
Road 38	38	1300-1400	1.05E-01	1.89E-07	6.44E-16	2.62E-01	7.27E-07	2.18E-03	3.67E-01	1.01E-05	3.02E-03	3.31E-04	1.10E-02	1.07E-02	1.07E-02	1.07E-02	1.07E-02					
Road 38	38	1400-1500	1.04E-01	1.93E-07	6.02E-16	2.65E-01	7.67E-07	2.29E-03	3.69E-01	1.07E-05	3.19E-03	3.29E-04	1.10E-02	1.07E-02	1.07E-02	1.07E-02	1.07E-02					
Road 38	38	1500-1600	1.05E-01	1.91E-07	6.27E-16	2.74E-01	8.07E-07	2.41E-03	3.78E-01	1.12E-06	3.34E-04	3.25E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04					
Road 38	38	1600-1700	1.04E-01	1.93E-07	6.02E-16	2.65E-01	7.67E-07	2.29E-03	3.69E-01	1.07E-05	3.19E-03	3.29E-04	1.10E-02	1.07E-02	1.07E-02	1.07E-02	1.07E-02					
Road 38	38	1700-1800	1.04E-01	1.91E-07	6.27E-16	2.74E-01	8.07E-07	2.41E-03	3.78E-01	1.12E-06	3.34E-04	3.25E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04					
Road 38	38	1800-1900	1.04E-01	1.91E-07	6.27E-16	2.74E-01	8.07E-07	2.41E-03	3.78E-01	1.12E-06	3.34E-04	3.25E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04					
Road 38	38	1900-2000	1.04E-01	1.91E-07	6.27E-16	2.74E-01	8.07E-07	2.41E-03	3.78E-01	1.12E-06	3.34E-04	3.25E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04					
Road 38	38	2000-2100	1.04E-01	1.91E-07	6.27E-16	2.74E-01	8.07E-07	2.41E-03	3.78E-01	1.12E-06	3.34E-04	3.25E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04					
Road 38	38	2100-2200	1.04E-01	1.91E-07	6.27E-16	2.74E-01	8.07E-07	2.41E-03	3.78E-01	1.12E-06	3.34E-04	3.25E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04					
Road 38	38	2200-2300	1.04E-01	1.91E-07	6.27E-16	2.74E-01	8.07E-07	2.41E-03	3.78E-01	1.12E-06	3.34E-04	3.25E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04					
Road 38	38	2300-2400	1.04E-01	1.91E-07	6.27E-16	2.74E-01	8.07E-07	2.41E-03	3.78E-01	1.12E-06	3.34E-04	3.25E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04					
Road 38	38	2400-0100	1.04E-01	1.91E-07	6.27E-16	2.74E-01	8.07E-07	2.41E-03	3.78E-01	1.12E-06	3.34E-04	3.25E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04					
Road 38	38	0100-0200	1.04E-01	1.91E-07	6.27E-16	2.74E-01	8.07E-07	2.41E-03	3.78E-01	1.12E-06	3.34E-04	3.25E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04					
Road 38	38	0200-0300	1.04E-01	1.91E-07	6.27E-16	2.74E-01	8.07E-07	2.41E-03	3.78E-01	1.12E-06	3.34E-04	3.25E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04					
Road 38	38	0300-0400	1.04E-01	1.91E-07	6.27E-16	2.74E-01	8.07E-07	2.41E-03	3.78E-01	1.12E-06	3.34E-04	3.25E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04					
Road 38	38	0400-0500	1.04E-01	1.91E-07	6.27E-16	2.74E-01	8.07E-07	2.41E-03	3.78E-01	1.12E-06	3.34E-04	3.25E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04					
Road 38	38	0500-0600	1.04E-01	1.91E-07	6.27E-16	2.74E-01	8.07E-07	2.41E-03	3.78E-01	1.12E-06	3.34E-04	3.25E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04					
Road 38	38	0600-0700	1.04E-01	1.91E-07	6.27E-16	2.74E-01	8.07E-07	2.41E-03	3.78E-01	1.12E-06	3.34E-04	3.25E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04					
Road 38	38	0700-0800	1.04E-01	1.91E-07	6.27E-16	2.74E-01	8.07E-07	2.41E-03	3.78E-01	1.12E-06	3.34E-04	3.25E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04					
Road 38	38	0800-0900	1.04E-01	1.91E-07	6.27E-16	2.74E-01	8.07E-07	2.41E-03	3.78E-01	1.12E-06	3.34E-04	3.25E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04					
Road 38	38	0900-1000	1.04E-01	1.91E-07	6.27E-16	2.74E-01	8.07E-07	2.41E-03	3.78E-01	1.12E-06	3.34E-04	3.25E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04					
Road 38	38	1000-1100	1.04E-01	1.91E-07	6.27E-16	2.74E-01	8.07E-07	2.41E-03	3.78E-01	1.12E-06	3.34E-04	3.25E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04					
Road 38	38	1100-1200	1.04E-01	1.91E-07	6.27E-16	2.74E-01	8.07E-07	2.41E-03	3.78E-01	1.12E-06	3.34E-04	3.25E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04					
Road 38	38	1200-1300	1.04E-01	1.91E-07	6.27E-16	2.74E-01	8.07E-07	2.41E-03	3.78E-01	1.12E-06	3.34E-04	3.25E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04					
Road 38	38	1300-1400	1.04E-01	1.91E-07	6.27E-16	2.74E-01	8.07E-07	2.41E-03	3.78E-01	1.12E-06	3.34E-04	3.25E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04					
Road 38	38	1400-1500	1.04E-01	1.91E-07	6.27E-16	2.74E-01	8.07E-07	2.41E-03	3.78E-01	1.12E-06	3.34E-04	3.25E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04					
Road 38	38	1500-1600	1.04E-01	1.91E-07	6.27E-16	2.74E-01	8.07E-07	2.41E-03	3.78E-01	1.12E-06	3.34E-04	3.25E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04					
Road 38	38	1600-1700	1.04E-01	1.91E-07	6.27E-16	2.74E-01	8.07E-07	2.41E-03	3.78E-01	1.12E-06	3.34E-04	3.25E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04					
Road 38	38	1700-1800	1.04E-01	1.91E-07	6.27E-16	2.74E-01	8.07E-07	2.41E-03	3.78E-01	1.12E-06	3.34E-04	3.25E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04					
Road 38	38	1800-1900	1.04E-01	1.91E-07	6.27E-16	2.74E-01	8.07E-07	2.41E-03	3.78E-01	1.12E-06	3.34E-04	3.25E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04					
Road 38	38	1900-2000	1.04E-01	1.91E-07	6.27E-16	2.74E-01	8.07E-07	2.41E-03	3.78E-01	1.12E-06	3.34E-04	3.25E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04	3.69E-04					
Road 38	38	2000-2100	1.04E-01	1.91E-07	6.27E-16	2.74E-01	8.07E-07	2.41E-03	3.78E-01	1.12E-0												

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North Underground Quarry	
road 24 hour Emission Factors for	Year 2043
AERMOD model (January)	

Year	Road ID	Hwy	Metric/tonne												Metric/tonne														
			Metric/tonne						Metric/tonne						Metric/tonne						Metric/tonne								
			g/mph	g/mi	tonne/hour	g/mph	g/mi	tonne/hour	g/mph	g/mi	tonne/hour	g/mph	g/mi	tonne/hour	g/mph	g/mi	tonne/hour	g/mph	g/mi	tonne/hour									
41	0000-0100	1.632	3.588	1.224	4.24	9.212	1.206	4.096	7.056	1.552	5.328	4.084	8.956	2.936	41	0000-0100	1.632	3.588	1.224	4.24	9.212	1.206	4.096	7.056	1.552	5.328	4.084	8.956	2.936
41	0100-0200	2.122	3.588	1.196	4.24	9.212	1.206	4.096	8.312	1.336	4.544	3.808	8.956	2.748	41	0100-0200	2.122	3.588	1.196	4.24	9.212	1.206	4.096	8.312	1.336	4.544	3.808	8.956	2.748
41	0200-0300	2.612	3.588	1.172	4.24	9.212	1.206	4.096	7.584	1.456	4.768	3.472	8.956	2.560	41	0200-0300	2.612	3.588	1.172	4.24	9.212	1.206	4.096	7.584	1.456	4.768	3.472	8.956	2.560
41	0300-0400	2.882	3.196	1.108	4.04	8.96	2.872	1.036	1.126	1.392	1.476	3.976	4.788	2.608	41	0300-0400	2.882	3.196	1.108	4.04	8.96	2.872	1.036	1.126	1.392	1.476	3.976	4.788	2.608
41	0400-0500	2.768	3.268	1.124	4.788	8.712	1.888	1.032	1.264	1.126	1.408	4.676	7.788	2.688	41	0400-0500	2.768	3.268	1.124	4.788	8.712	1.888	1.032	1.264	1.126	1.408	4.676	7.788	2.688
41	0500-0600	2.808	3.268	1.124	4.788	8.712	1.888	1.032	1.264	1.126	1.408	4.676	7.788	2.688	41	0500-0600	2.808	3.268	1.124	4.788	8.712	1.888	1.032	1.264	1.126	1.408	4.676	7.788	2.688
41	0600-0700	1.528	4.736	1.612	5.612	1.736	5.948	7.136	2.312	7.568	1.696	1.416	3.912	41	0600-0700	1.528	4.736	1.612	5.612	1.736	5.948	7.136	2.312	7.568	1.696	1.416	3.912		
41	0700-0800	1.496	5.104	1.648	4.596	1.736	5.948	7.136	2.312	7.568	1.696	1.416	3.912	41	0700-0800	1.496	5.104	1.648	4.596	1.736	5.948	7.136	2.312	7.568	1.696	1.416	3.912		
41	0800-0900	1.496	5.104	1.648	4.596	1.736	5.948	7.136	2.312	7.568	1.696	1.416	3.912	41	0800-0900	1.496	5.104	1.648	4.596	1.736	5.948	7.136	2.312	7.568	1.696	1.416	3.912		
41	0900-1000	2.296	1.496	5.104	5.888	4.208	1.416	1.512	6.096	1.952	2.028	3.336	3.668	1.256	41	0900-1000	2.296	1.496	5.104	5.888	4.208	1.416	1.512	6.096	1.952	2.028	3.336	3.668	1.256
41	1000-1100	2.448	1.496	5.888	4.208	1.416	1.512	6.096	1.952	2.028	3.336	3.668	1.256	41	1000-1100	2.448	1.496	5.888	4.208	1.416	1.512	6.096	1.952	2.028	3.336	3.668	1.256		
41	1100-1200	2.496	1.496	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	41	1100-1200	2.496	1.496	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	
41	1200-1300	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	41	1200-1300	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	
41	1300-1400	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	41	1300-1400	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	
41	1400-1500	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	41	1400-1500	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	
41	1500-1600	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	41	1500-1600	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	
41	1600-1700	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	41	1600-1700	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	
41	1700-1800	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	41	1700-1800	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	
41	1800-1900	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	41	1800-1900	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	
41	1900-2000	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	41	1900-2000	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	
41	2000-2100	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	41	2000-2100	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	
41	2100-2200	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	41	2100-2200	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	
41	2200-2300	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	41	2200-2300	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	
41	2300-2400	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	41	2300-2400	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	
41	2400-2500	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	41	2400-2500	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	
41	2500-2600	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	41	2500-2600	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	
41	2600-2700	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	41	2600-2700	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	
41	2700-2800	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	41	2700-2800	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	
41	2800-2900	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	41	2800-2900	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	
41	2900-3000	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	41	2900-3000	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	
41	3000-3100	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	41	3000-3100	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	
41	3100-3200	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	41	3100-3200	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	
41	3200-3300	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	41	3200-3300	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	
41	3300-3400	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	41	3300-3400	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	
41	3400-3500	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	41	3400-3500	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	
41	3500-3600	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	41	3500-3600	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	
41	3600-3700	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	41	3600-3700	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	
41	3700-3800	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	41	3700-3800	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	
41	3800-3900	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	41	3800-3900	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	
41	3900-4000	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	41	3900-4000	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	
41	4000-4100	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	41	4000-4100	2.768	1.796	4.96	7.08	1.416	1.416	1.416	1.416	1.416	1.416	1.416	1.416	
41	4100-4200	2.768	1.796	4.96	7.08	1.416	1.416																						

1:\Secure\Equipment Projects\60722230\1.01\Others\Air Modelling\Appendix\Traffic\Appendix\Appendix 2 E 4 Emission Factor in 2042 S.R.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for
AERMOD model (January) Year 2043

Road Name	Road ID	Hour	NO _x Emission						NO ₂ Emission					
			MonthlyHourly			MonthlyHourly			MonthlyHourly			MonthlyHourly		
			g/kwh	g/kwh	t/year	g/kwh	g/kwh	t/year	g/kwh	g/kwh	t/year	g/kwh	g/kwh	t/year
Road 44	44	0900-0900	8.636	2.738	0.021	4.42E-07	1.14E-06	2.58E-08	5.28E-10	3.37E-08	0.008	0.228	9.50E-03	
Road 44	44	1000-1000	9.72E-07	2.17E-07	4.89E-04	4.95E-02	1.02E-06	2.29E-03	5.53E-02	1.26E-06	7.78E-03	5.95E-03	0.78E-02	
Road 44	44	1100-1100	2.46E-07	1.12E-07	2.51E-04	2.56E-02	5.26E-06	1.16E-03	6.04E-02	1.58E-06	7.78E-03	5.95E-03	0.78E-02	
Road 44	44	1200-1200	1.11E-07	2.91E-07	5.56E-04	4.95E-02	1.29E-06	2.29E-03	6.04E-02	1.58E-06	7.78E-03	5.95E-03	0.78E-02	
Road 44	44	1300-1300	1.14E-07	3.01E-07	7.78E-04	1.18E-02	1.38E-06	3.12E-03	6.30E-02	1.68E-06	7.78E-03	5.95E-03	0.78E-02	
Road 44	44	1400-1400	1.20E-07	3.33E-07	7.78E-04	1.18E-02	1.38E-06	3.12E-03	6.30E-02	1.68E-06	7.78E-03	5.95E-03	0.78E-02	
Road 44	44	1500-1500	1.22E-07	3.56E-07	8.02E-04	5.81E-02	1.69E-06	3.28E-03	7.02E-02	1.95E-06	8.62E-03	2.98E-03	8.69E-03	
Road 44	44	1600-1700	1.73E-07	5.37E-07	2.11E-03	7.09E-02	2.20E-06	4.94E-03	8.81E-02	2.74E-06	4.17E-03	3.33E-03	1.08E-02	
Road 44	44	1700-1800	1.73E-07	5.37E-07	2.11E-03	7.09E-02	2.20E-06	4.94E-03	8.81E-02	2.74E-06	4.17E-03	3.33E-03	1.08E-02	
Road 44	44	1800-1900	5.50E-07	9.71E-07	1.19E-03	1.05E-01	4.09E-06	9.29E-03	1.20E-01	5.07E-06	1.14E-02	4.68E-04	1.04E-07	
Road 44	44	1900-2000	4.84E-03	1.16E-04	3.36E-04	3.11E-02	5.98E-07	2.16E-03	3.59E-01	1.11E-06	2.50E-03	1.23E-03	3.78E-08	
Road 44	44	2000-2100	4.62E-03	1.11E-07	3.50E-04	3.34E-02	8.01E-07	1.81E-03	3.80E-01	5.15E-07	1.00E-03	1.16E-03	2.76E-08	
Road 44	44	2100-2200	3.98E-03	8.68E-07	2.88E-03	3.11E-02	6.81E-07	1.56E-03	3.59E-01	4.37E-07	8.62E-04	1.16E-03	2.76E-08	
Road 44	44	2200-2300	3.95E-03	9.19E-08	0.07E-02	3.74E-02	7.61E-07	1.71E-03	3.67E-01	8.83E-07	1.92E-03	9.57E-04	2.23E-05	
Road 44	44	2300-2400	4.41E-03	7.67E-08	3.78E-03	3.35E-02	5.84E-07	1.32E-03	3.80E-01	8.60E-07	4.47E-04	1.09E-03	1.90E-03	
Road 44	44	2400-2500	4.38E-03	8.24E-08	3.78E-03	3.35E-02	5.84E-07	1.32E-03	3.80E-01	8.60E-07	4.47E-04	1.09E-03	1.90E-03	
Road 44	44	0100-0200	3.83E-03	2.44E-08	1.11E-03	3.58E-02	1.81E-07	8.14E-04	3.98E-02	2.06E-07	2.52E-04	1.18E-03	6.10E-07	
Road 44	44	0200-0300	2.93E-03	1.98E-08	9.91E-03	3.65E-02	1.39E-07	6.24E-04	4.20E-02	1.56E-07	7.13E-04	1.30E-03	4.02E-07	
Road 44	44	0300-0400	2.71E-03	1.72E-08	9.91E-03	3.65E-02	1.39E-07	6.24E-04	4.20E-02	1.56E-07	7.13E-04	1.30E-03	4.02E-07	
Road 44	44	0400-0500	1.71E-03	7.02E-08	9.07E-03	3.91E-02	1.28E-07	5.74E-04	4.53E-02	1.48E-07	6.66E-04	1.55E-03	9.07E-07	
Road 44	44	0500-0600	6.37E-03	6.78E-08	6.99E-04	4.00E-02	2.29E-07	1.00E-04	4.70E-02	2.66E-07	2.02E-03	6.8E-03	8.51E-07	
Road 44	44	0600-0700	7.18E-03	6.66E-08	6.99E-04	4.00E-02	2.29E-07	1.00E-04	4.70E-02	2.66E-07	2.02E-03	6.8E-03	8.51E-07	
Road 44	44	0700-0800	7.69E-03	1.99E-08	4.49E-04	4.39E-02	1.08E-06	4.84E-04	5.18E-02	1.27E-06	6.09E-03	1.94E-03	4.76E-07	
Road 44	44	0800-0900	4.48E-03	2.13E-07	9.55E-04	4.02E-02	1.15E-06	5.18E-04	4.79E-02	3.36E-06	6.12E-03	1.92E-03	4.54E-07	
Road 44	44	0900-1000	4.47E-03	1.97E-07	9.55E-04	4.02E-02	1.02E-06	4.80E-04	5.22E-02	3.26E-06	6.12E-03	1.92E-03	4.54E-07	
Road 44	44	1000-1100	5.08E-03	1.98E-07	8.66E-04	4.51E-02	9.14E-07	4.00E-04	5.50E-02	1.11E-06	9.97E-03	5.98E-03	5.18E-07	
Road 44	44	1100-1200	4.08E-03	1.73E-07	7.87E-04	4.51E-02	8.59E-07	3.86E-04	5.41E-02	1.00E-06	4.64E-03	2.43E-03	4.64E-07	
Road 44	44	1200-1300	1.06E-03	2.86E-07	1.05E-03	4.75E-02	1.05E-06	4.27E-03	5.81E-02	1.06E-06	7.78E-03	2.80E-03	6.21E-07	
Road 44	44	1300-1400	1.06E-03	2.86E-07	1.05E-03	4.75E-02	1.05E-06	4.27E-03	5.81E-02	1.06E-06	7.78E-03	2.80E-03	6.21E-07	
Road 44	44	1400-1500	1.06E-03	2.86E-07	1.05E-03	4.75E-02	1.05E-06	4.27E-03	5.81E-02	1.06E-06	7.78E-03	2.80E-03	6.21E-07	
Road 44	44	1500-1600	1.07E-03	3.52E-07	1.21E-03	5.00E-02	1.23E-06	5.54E-03	6.02E-02	1.45E-06	8.68E-03	2.76E-03	6.62E-07	
Road 44	44	1600-1700	1.06E-03	2.86E-07	1.05E-03	4.75E-02	1.05E-06	4.27E-03	5.81E-02	1.06E-06	7.78E-03	2.80E-03	6.21E-07	
Road 44	44	1700-1800	0.28E-03	2.76E-07	7.25E-03	4.91E-02	1.48E-06	6.63E-04	5.94E-02	1.76E-06	7.88E-04	2.14E-03	6.42E-07	
Road 44	44	1800-1900	0.01E-03	2.98E-07	3.34E-05	5.00E-02	1.51E-06	6.78E-04	5.66E-02	1.81E-06	1.22E-03	6.69E-03	2.59E-07	
Road 44	44	1900-2000	0.46E-03	2.98E-07	3.34E-05	5.00E-02	1.51E-06	6.78E-04	5.66E-02	1.81E-06	1.22E-03	6.69E-03	2.59E-07	
Road 44	44	2000-2100	4.44E-03	1.12E-08	4.09E-04	3.27E-02	6.71E-07	3.01E-03	3.71E-02	7.67E-07	3.42E-03	1.12E-03	2.31E-09	
Road 44	44	2100-2200	4.85E-03	8.87E-08	4.54E-04	3.18E-02	6.51E-07	2.92E-03	3.57E-02	7.80E-07	2.88E-03	9.76E-04	1.96E-08	
Road 44	44	2200-2300	7.78E-03	7.78E-08	3.18E-04	3.18E-02	6.51E-07	2.92E-03	3.57E-02	7.80E-07	2.88E-03	9.76E-04	1.96E-08	
Road 44	44	2300-2400	4.21E-03	3.52E-08	8.91E-04	3.11E-02	4.90E-07	2.21E-03	3.71E-02	5.54E-07	4.94E-03	1.05E-03	6.59E-08	
Road 44	44	0000-0100	4.16E-03	1.46E-08	9.87E-03	3.38E-02	1.18E-07	8.02E-04	3.79E-03	1.33E-06	9.01E-04	1.01E-03	3.02E-09	
Road 44	44	0100-0200	4.16E-03	1.46E-08	9.87E-03	3.38E-02	1.18E-07	8.02E-04	3.79E-03	1.33E-06	9.01E-04	1.01E-03	3.02E-09	
Road 44	44	0200-0300	5.06E-03	3.69E-08	4.95E-05	3.66E-02	6.07E-08	4.12E-04	4.16E-03	8.91E-08	4.90E-04	2.24E-03	5.18E-07	
Road 44	44	0300-0400	5.51E-03	7.21E-09	4.89E-05	3.78E-02	4.95E-08	3.35E-04	4.21E-03	6.67E-08	1.84E-04	1.36E-03	1.17E-09	
Road 44	44	0400-0500	5.51E-03	7.21E-09	4.89E-05	3.78E-02	4.95E-08	3.35E-04	4.21E-03	6.67E-08	1.84E-04	1.36E-03	1.17E-09	
Road 44	44	0500-0600	4.41E-03	3.96E-08	5.79E-05	3.89E-02	5.59E-08	3.79E-04	4.68E-03	3.98E-08	4.48E-03	2.13E-04	1.91E-09	
Road 44	44	0600-0700	4.41E-03	3.96E-08	5.79E-05	3.89E-02	5.59E-08	3.79E-04	4.68E-03	3.98E-08	4.48E-03	2.13E-04	1.91E-09	
Road 44	44	0700-0800	7.93E-03	7.87E-08	3.34E-04	4.23E-02	4.54E-07	3.08E-04	4.95E-02	5.53E-07	1.61E-03	1.98E-03	2.01E-09	
Road 44	44	0800-0900	7.02E-03	7.87E-08	3.34E-04	4.23E-02	4.54E-07	3.08E-04	4.95E-02	5.53E-07	1.61E-03	1.98E-03	2.01E-09	
Road 44	44	0900-1000	9.98E-03	8.09E-08	3.48E-04	4.14E-02	4.19E-07	2.84E-03	4.93E-02	5.00E-03	3.96E-03	2.16E-04	2.19E-04	
Road 44	44	1000-1100	9.98E-03	7.93E-08	3.47E-04	4.16E-02	3.80E-07	2.89E-03	5.27E-02	4.67E-07	2.12E-04	2.40E-04	1.48E-04	
Road 44	44	1100-1200	1.14E-03	7.11E-08	3.11E-04	4.16E-02	4.19E-07	2.84E-03	4.93E-02	5.00E-03	3.96E-03	2.16E-04	2.19E-04	
Road 44	44	1200-1300	1.17E-07	1.28E-07	6.95E-04	4.95E-02	5.42E-07	3.68E-03	6.12E-02	7.61E-07	1.55E-03	3.17E-03	3.48E-07	
Road 44	44	1300-1400	1.11E-02	3.02E-07	8.97E-04	5.11E-02	5.75E-07	3.60E-03	6.26E-02	7.07E-07	1.77E-03	3.26E-03	3.67E-07	
Road 44	44	1400-1500	1.11E-02	3.02E-07	8.97E-04	5.11E-02	5.75E-07	3.60E-03	6.26E-02	7.07E-07	1.77E-03	3.26E-03	3.67E-07	
Road 44	44	1500-1600	1.11E-02	3.02E-07	9.16E-04	5.05E-02	6.18E-07	4.13E-03	6.14E-02	7.59E-07	3.10E-03	3.10E-03	3.90E-07	
Road 44	44	1600-1700	1.11E-02	1.50E-07	1.02E-03	4.88E-02	6.30E-07	4.27E-03	6.01E-02	7.80E-07	5.29E-03	4.14E-03	4.07E-07	
Road 44	44	1700-1800	8.18E-03	1.69E-07	6.08E-04	4.19E-02	6.12E-07	4.15E-03	5.00E-02	7.31E-07	4.95E-03	2.26E-03	3.96E-07	
Road 44	44	1800-1900	7.78E-03	1.69E-07	6.08E-04	4.19E-02	6.12E-07	4.15E-03	5.00E-02	7.31E-07	4.95E-03	2.26E-03	3.96E-07	
Road 44	44	1900-2000	5.05E-03	8.30E-08	3.30E-04	3.09E-02	3.98E-07	2.63E-03	3.65E-02	4.51E-07	1.09E-03	3.38	1.67E-04	
Road 44	44	2000-2100	5.05E-03	8.30E-08	3.30E-04	3.09E-02	3.98E-07	2.63E-03	3.65E-02	4.51E-07	1.09E-03	3.38	1.67E-04	
Road 44	44	2100-2200	3.95E-03	4.78E-08	3.24E-04	3.43E-02	3.34E-07	2.28E-03	3.65E-02	3.65E-07	5.95E-03	1.28E-03	2.40E-08	
Road 44	44	2200-2300	3.46E-03	4.78E-08	3.24E-04	3.43E-02	3.34E-07	2.28E-03	3.65E-02	3.65E-07	5.95E-03	1.28E-03	2.40E-08	
Road 44	44	2300-2400	4.28E-03	4.95E-08	2.74E-04	3.37E-02	3.18E-07	2.18E-03	3.90E-02	3.59E-07	4.43E-03	1.07E-03	6.61E-08	
Road 44	44	0000-0100	4.78E-03	3.38E-08	2.96E-04	3.49E-02	2.47E-07	1.67E-03	3.97E-02	2.81E-07	1.90E-03	1.21E-03	8.65E-08	
Road 44	44	0100-0200	7.66E-03	3.38E-08	2.96E-04	3.49E-02	2.47E-07	1.67E-03	3.97E-02	2.81E-07	1.90E-03	1.21E-03	8.65E-08	
Road 44	44	0200-0300	8.10E-03	7.63E-08	6.89E-05E	5.00E-02	4.79E-06	5.60E-04	5.55E-05	6.33E-04	1.50E-03	5.41E-09	1.16E-09	
Road 44	44	0300-0400	8.10E-03	7.63E-08	6.89E-05E	5.00E-02	4.79E-06	5.60E-04	5.55E-05	6.33E-04	1.50E-03	5.41E-09	1.16E-09	
Road 44	44	0400-0500	1.01E-07	8.07E-07	9.91E-05E	5.26E-02	3.60E-08	3.87E-04	6.10E-02	4.22E-08	5.94E-04	1.94E-03	1.16E-07	
Road 44	44	0500-0600	1.12E-07	1.17E-08	3.33E-04	6.02E-02	6.25E-08	7.12E-03	7.41E-03	7.41E-08	4.45E-04	2.11E-03</		

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for
AERMOD model (January) Year 2043

[illegible]

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for
AERMOD model (January) Year 2043

Road Name	Road ID	No. Emision												No.Emision											
		Hour						Month						Month						Month					
		Monthly		Hourly		Hourly		Monthly		Hourly		Hourly		Monthly		Hourly		Hourly		Monthly		Hourly		Hourly	
		g/min	g/s	g/min	g/s	g/min	g/s	g/min	g/s	g/min	g/s	g/min	g/s	g/min	g/s	g/min	g/s	g/min	g/s	g/min	g/s	g/min	g/s	g/min	g/s
Road 51	51	0000-0200	4.726	0.787	4.726	0.787	4.726	0.787	4.726	0.787	4.726	0.787	4.726	0.787	4.726	0.787	4.726	0.787	4.726	0.787	4.726	0.787	4.726	0.787	
Road 51	51	0000-0200	4.440	0.736	4.440	0.736	4.440	0.736	4.440	0.736	4.440	0.736	4.440	0.736	4.440	0.736	4.440	0.736	4.440	0.736	4.440	0.736	4.440	0.736	
Road 51	51	0000-0200	5.096	0.832	5.096	0.832	5.096	0.832	5.096	0.832	5.096	0.832	5.096	0.832	5.096	0.832	5.096	0.832	5.096	0.832	5.096	0.832	5.096	0.832	
Road 51	51	0000-0200	5.364	0.893	5.364	0.893	5.364	0.893	5.364	0.893	5.364	0.893	5.364	0.893	5.364	0.893	5.364	0.893	5.364	0.893	5.364	0.893	5.364	0.893	
Road 51	51	0000-0200	5.966	0.938	5.966	0.938	5.966	0.938	5.966	0.938	5.966	0.938	5.966	0.938	5.966	0.938	5.966	0.938	5.966	0.938	5.966	0.938	5.966	0.938	
Road 51	51	0000-0200	6.406	0.938	6.406	0.938	6.406	0.938	6.406	0.938	6.406	0.938	6.406	0.938	6.406	0.938	6.406	0.938	6.406	0.938	6.406	0.938	6.406	0.938	
Road 51	51	0000-0200	6.806	0.938	6.806	0.938	6.806	0.938	6.806	0.938	6.806	0.938	6.806	0.938	6.806	0.938	6.806	0.938	6.806	0.938	6.806	0.938	6.806	0.938	
Road 51	51	0700-0900	3.306	0.567	3.306	0.567	3.306	0.567	3.306	0.567	3.306	0.567	3.306	0.567	3.306	0.567	3.306	0.567	3.306	0.567	3.306	0.567	3.306	0.567	
Road 51	51	0700-0900	3.946	0.946	3.946	0.946	3.946	0.946	3.946	0.946	3.946	0.946	3.946	0.946	3.946	0.946	3.946	0.946	3.946	0.946	3.946	0.946	3.946	0.946	
Road 51	51	0700-0900	4.606	0.938	4.606	0.938	4.606	0.938	4.606	0.938	4.606	0.938	4.606	0.938	4.606	0.938	4.606	0.938	4.606	0.938	4.606	0.938	4.606	0.938	
Road 51	51	0800-1000	3.936	0.567	3.936	0.567	3.936	0.567	3.936	0.567	3.936	0.567	3.936	0.567	3.936	0.567	3.936	0.567	3.936	0.567	3.936	0.567	3.936	0.567	
Road 51	51	0800-1000	4.576	0.938	4.576	0.938	4.576	0.938	4.576	0.938	4.576	0.938	4.576	0.938	4.576	0.938	4.576	0.938	4.576	0.938	4.576	0.938	4.576	0.938	
Road 51	51	1100-1200	4.866	0.576	4.866	0.576	4.866	0.576	4.866	0.576	4.866	0.576	4.866	0.576	4.866	0.576	4.866	0.576	4.866	0.576	4.866	0.576	4.866	0.576	
Road 51	51	1100-1200	5.506	0.938	5.506	0.938	5.506	0.938	5.506	0.938	5.506	0.938	5.506	0.938	5.506	0.938	5.506	0.938	5.506	0.938	5.506	0.938	5.506	0.938	
Road 51	51	1400-1600	5.116	0.602	5.116	0.602	5.116	0.602	5.116	0.602	5.116	0.602	5.116	0.602	5.116	0.602	5.116	0.602	5.116	0.602	5.116	0.602	5.116	0.602	
Road 51	51	1400-1600	5.856	0.938	5.856	0.938	5.856	0.938	5.856	0.938	5.856	0.938	5.856	0.938	5.856	0.938	5.856	0.938	5.856	0.938	5.856	0.938	5.856	0.938	
Road 51	51	1700-1900	4.416	0.736	4.416	0.736	4.416	0.736	4.416	0.736	4.416	0.736	4.416	0.736	4.416	0.736	4.416	0.736	4.416	0.736	4.416	0.736	4.416	0.736	
Road 51	51	1700-1900	4.246	0.602	4.246	0.602	4.246	0.602	4.246	0.602	4.246	0.602	4.246	0.602	4.246	0.602	4.246	0.602	4.246	0.602	4.246	0.602	4.246	0.602	
Road 51	51	1700-1900	4.246	0.602	4.246	0.602	4.246	0.602	4.246	0.602	4.246	0.602	4.246	0.602	4.246	0.602	4.246	0.602	4.246	0.602	4.246	0.602	4.246	0.602	
Road 51	51	1700-1900	4.246	0.602	4.246	0.602	4.246	0.602	4.246	0.602	4.246	0.602	4.246	0.602	4.246	0.602	4.246	0.602	4.246	0.602	4.246	0.602	4.246	0.602	
Road 51	51	2000-2100	6.316	0.826	6.316	0.826	6.316	0.826	6.316	0.826	6.316	0.826	6.316	0.826	6.316	0.826	6.316	0.826	6.316	0.826	6.316	0.826	6.316	0.826	
Road 51	51	2100-2200	6.086	0.838	6.086	0.838	6.086	0.838	6.086	0.838	6.086	0.838	6.086	0.838	6.086	0.838	6.086	0.838	6.086	0.838	6.086	0.838	6.086	0.838	
Road 51	51	2200-2300	6.646	0.986	6.646	0.986	6.646	0.986	6.646	0.986	6.646	0.986	6.646	0.986	6.646	0.986	6.646	0.986	6.646	0.986	6.646	0.986	6.646	0.986	
Road 52	52	0000-0200	4.736	0.788	4.736	0.788	4.736	0.788	4.736	0.788	4.736	0.788	4.736	0.788	4.736	0.788	4.736	0.788	4.736	0.788	4.736	0.788	4.736	0.788	
Road 52	52	0000-0200	4.436	0.737	4.436	0.737	4.436	0.737	4.436	0.737	4.436	0.737	4.436	0.737	4.436	0.737	4.436	0.737	4.436	0.737	4.436	0.737	4.436	0.737	
Road 52	52	0000-0200	5.096	0.832	5.096	0.832	5.096	0.832	5.096	0.832	5.096	0.832	5.096	0.832	5.096	0.832	5.096	0.832	5.096	0.832	5.096	0.832	5.096	0.832	
Road 52	52	0000-0200	5.364	0.893	5.364	0.893	5.364	0.893	5.364	0.893	5.364	0.893	5.364	0.893	5.364	0.893	5.364	0.893	5.364	0.893	5.364	0.893	5.364	0.893	
Road 52	52	0000-0200	5.966	0.938	5.966	0.938	5.966	0.938	5.966	0.938	5.966	0.938	5.966	0.938	5.966	0.938	5.966	0.938	5.966	0.938	5.966	0.938	5.966	0.938	
Road 52	52	0700-0900	3.316	0.568	3.316	0.568	3.316	0.568	3.316	0.568	3.316	0.568	3.316	0.568	3.316	0.568	3.316	0.568	3.316	0.568	3.316	0.568	3.316	0.568	
Road 52	52	0700-0900	3.946	0.946	3.946	0.946	3.946	0.946	3.946	0.946	3.946	0.946	3.946	0.946	3.946	0.946	3.946	0.946	3.946	0.946	3.946	0.946	3.946	0.946	
Road 52	52	0700-0900	4.606	0.938	4.606	0.938	4.606	0.938	4.606	0.938	4.606	0.938	4.606	0.938	4.606	0.938	4.606	0.938	4.606	0.938	4.606	0.938	4.606	0.938	
Road 52	52	0700-0900	5.246	0.938	5.246	0.938	5.246	0.938	5.246	0.938	5.246	0.938	5.246	0.938	5.246	0.938	5.246	0.938	5.246	0.938	5.246	0.938	5.246	0.938	
Road 52	52	1000-1100	8.846	0.926	8.846	0.926	8.846	0.926	8.846	0.926	8.846	0.926	8.846	0.926	8.846	0.926	8.846	0.926	8.846	0.926	8.846	0.926	8.846	0.926	
Road 52	52	1100-1200	8.846	0.926	8.846	0.926	8.846	0.926	8.846	0.926	8.846	0.926	8.846	0.926	8.846	0.926	8.846	0.926	8.846	0.926	8.846	0.926	8.846	0.926	
Road 52	52	1200-1300	5.956	0.217	5.956	0.217	5.956	0.217	5.956	0.217	5.956	0.217	5.956	0.217	5.956	0.217	5.956	0.217	5.956	0.217	5.956	0.217	5.956	0.217	
Road 52	52	1300-1400	8.896	0.247	8.896	0.247	8.896	0.247	8.896	0.247	8.896	0.247	8.896	0.247	8.896	0.247	8.896	0.247	8.896	0.247	8.896	0.247	8.896	0.247	
Road 52	52	1400-1500	6.046	0.227	6.046	0.227	6.046	0.227	6.046	0.227	6.046	0.227	6.046	0.227	6.046	0.227	6.046	0.227	6.046	0.227	6.046	0.227	6.046	0.227	
Road 52	52	1500-1600	4.406	0.212	4.406	0.212	4.406	0.212	4.406	0.212	4.406	0.212	4.406	0.212	4.406	0.212	4.406	0.212	4.406	0.212	4.406	0.212	4.406	0.212	
Road 52	52	1600-1700	6.116	0.247	6.116	0.247	6.116	0.247	6.116	0.247	6.116	0.247	6.116	0.247	6.116	0.247	6.116	0.247	6.116	0.247	6.116	0.247	6.116	0.247	
Road 52	52	1700-1800	6.116	0.247	6.116	0.247	6.116	0.247	6.116	0.247	6.116	0.247	6.116	0.247	6.116	0.247	6.116	0.247	6.116	0.247	6.116	0.247	6.116	0.247	
Road 52	52	1800-1900	4.116	0.568	4.116	0.568	4.116	0.568	4.116	0.568	4.116	0.568	4.116	0.568	4.116	0.568	4.116	0.568	4.116	0.568	4.116	0.568	4.116	0.568	
Road 52	52	1900-2000	3.866	0.598	3.866	0.598	3.866	0.598	3.866	0.598	3.866	0.598	3.866	0.598	3.866	0.598	3.866	0.598	3.866	0.598	3.866	0.598	3.866	0.598	
Road 52	52	2000-2100	8.846	0.648	8.846	0.648	8.846	0.648	8.846	0.648	8.846	0.648	8.846	0.648	8.846	0.648	8.846	0.648	8.846	0.648	8.846	0.648	8.846	0.648	
Road 52	52	2100-2200	8.846	0.648	8.846	0.648	8.846	0.648	8.846	0.648	8.846	0.648	8.846	0.648	8.846	0.648	8.846	0.648	8.846	0.648	8.846	0.648	8.846	0.648	
Road 52	52	2200-2300	4.346	0.708	4.346	0.708	4.346	0.708	4.346	0.708	4.346	0.708	4.346	0.708	4.346	0.708	4.346	0.708	4.346	0.708	4.346	0.708	4.346	0.708	
Road 52	52	2300-2400	3.246	0.376	3.246	0.376	3.246	0.376	3.246	0.376	3.246	0.376	3.246	0.376	3.246	0.376	3.246	0.376	3.246	0.376	3.246	0.376	3.246	0.376	
Road 52	52	0000-0200	6.206	0.938	6.206	0.938	6.206	0.938	6.206	0.938	6.206	0.938	6.206	0.938	6.206	0.938	6.206	0.938	6.206	0.938	6.206	0.938	6.206	0.938	
Road 52	52	0000-0200	6.966	0.938																					

North Underground Quarry
Road 24 hour Emission Factors for
AERMOD model (January) Year 2043

Name	Road ID	Hou	NO ₂ Emission					NO Emission				
			MonthlyHourMin		MonthlyHourAverage		time/hour	MonthlyHourMin		MonthlyHourAverage		time/hour
			g/min	g/hour	g/min	g/hour		g/min	g/hour	g/min	g/hour	
54	0000-0900	1:12:00	3:28:07	195.84	3:28:07	195.84	3:28:07	3:00:00	180.00	3:00:00	180.00	3:28:07
54	0000-0900	9:12:00	3:32:07	2:78:08	3:32:07	1:22:06	1:02:02	4:32:01	1:56:06	1:30:02	1:08:01	3:32:08
54	0000-1100	1:02:01	3:41:07	2:94:06	3:40:06	1:20:06	9:55:01	4:42:01	1:54:06	1:28:02	1:15:04	3:41:06
54	0000-1100	1:02:01	3:41:07	2:94:06	3:40:06	1:20:06	9:55:01	4:42:01	1:54:06	1:28:02	1:15:04	3:41:06
54	1000-1200	1:01:01	3:31:07	2:78:08	3:31:07	1:22:06	7:57:01	4:32:01	1:56:06	1:30:02	1:08:01	3:31:07
54	1000-1200	1:01:01	3:31:07	2:78:08	3:31:07	1:22:06	7:57:01	4:32:01	1:56:06	1:30:02	1:08:01	3:31:07
54	1000-1200	1:22:06	2:96:07	2:45:06	3:43:06	1:04:06	8:09:01	5:56:01	3:34:06	1:12:02	1:30:02	3:43:06
54	1000-1200	1:22:06	2:96:07	2:45:06	3:43:06	1:04:06	8:09:01	5:56:01	3:34:06	1:12:02	1:30:02	3:43:06
54	1500-1600	1:12:01	2:52:07	2:35:06	2:52:07	1:05:06	3:58:01	3:58:01	1:35:06	1:12:02	1:25:04	2:52:07
54	1500-1600	1:12:01	2:52:07	2:35:06	2:52:07	1:05:06	3:58:01	3:58:01	1:35:06	1:12:02	1:25:04	2:52:07
54	1600-1700	1:18:01	2:58:07	2:36:06	2:53:06	1:15:06	8:30:01	5:33:01	1:28:06	1:07:02	1:29:06	2:53:06
54	1600-1700	1:18:01	2:58:07	2:36:06	2:53:06	1:15:06	8:30:01	5:33:01	1:28:06	1:07:02	1:29:06	2:53:06
54	1800-1900	1:22:06	2:36:07	2:36:07	2:36:07	1:22:06	5:05:01	4:05:01	1:45:06	1:30:02	1:05:06	2:36:07
54	1800-1900	1:06:06	2:36:07	2:36:07	2:36:07	1:22:06	5:05:01	4:05:01	1:45:06	1:30:02	1:05:06	2:36:07
54	1900-1900	0:06:06	1:05:06	1:22:06	1:22:06	3:11:07	5:05:01	4:05:01	1:45:06	1:30:02	1:05:06	1:05:06
54	1900-2000	1:79:06	1:01:07	8:44:06	8:44:06	3:88:07	3:24:03	3:57:01	4:31:07	4:08:01	9:70:06	1:13:06
54	2000-2100	0:06:06	1:79:06	1:01:07	8:44:06	3:88:07	3:24:03	3:57:01	4:31:07	4:08:01	9:70:06	1:13:06
54	2000-2100	0:06:06	1:79:06	1:01:07	8:44:06	3:88:07	3:24:03	3:57:01	4:31:07	4:08:01	9:70:06	1:13:06
54	2200-2300	1:79:06	7:36:08	6:13:06	6:18:06	2:67:07	2:22:03	3:42:01	3:41:07	2:28:06	8:53:06	6:19:06
54	2200-2300	1:79:06	7:36:08	6:13:06	6:18:06	2:67:07	2:22:03	3:42:01	3:41:07	2:28:06	8:53:06	6:19:06
54	2300-2400	1:79:06	7:36:08	6:13:06	6:18:06	2:67:07	2:22:03	3:42:01	3:41:07	2:28:06	8:53:06	6:19:06
54	2300-2400	1:79:06	7:36:08	6:13:06	6:18:06	2:67:07	2:22:03	3:42:01	3:41:07	2:28:06	8:53:06	6:19:06
101	0000-0900	1:73:06	5:78:08	4:43:06	4:43:06	2:67:07	1:72:03	3:41:01	2:07:07	2:23:03	9:43:06	7:59:06
101	0000-0900	1:73:06	5:78:08	4:43:06	4:43:06	2:67:07	1:72:03	3:41:01	2:07:07	2:23:03	9:43:06	7:59:06
101	0100-0200	0:04:06	5:43:06	7:85:06	3:90:06	3:51:07	5:01:06	4:51:06	2:96:07	4:58:06	1:40:06	2:02:04
101	0100-0200	0:04:06	5:43:06	7:85:06	3:90:06	3:51:07	5:01:06	4:51:06	2:96:07	4:58:06	1:40:06	2:02:04
101	0200-0300	0:06:06	4:36:08	6:36:08	4:10:06	2:70:07	3:01:06	4:76:06	3:14:07	3:54:06	1:71:06	1:12:08
101	0200-0300	0:06:06	4:36:08	6:36:08	4:10:06	2:70:07	3:01:06	4:76:06	3:14:07	3:54:06	1:71:06	1:12:08
101	0300-0400	0:12:01	4:21:07	4:21:07	4:21:07	2:25:06	3:41:07	5:41:07	2:25:06	3:75:07	1:52:06	1:12:08
101	0400-0500	0:76:06	4:43:06	6:41:06	4:38:06	2:52:06	3:64:06	5:14:06	2:96:07	4:28:06	2:00:06	1:12:08
101	0400-0500	0:76:06	4:43:06	6:41:06	4:38:06	2:52:06	3:64:06	5:14:06	2:96:07	4:28:06	2:00:06	1:12:08
101	0600-0800	0:24:06	8:25:06	1:18:06	4:52:06	4:32:07	6:54:06	5:34:06	3:36:07	7:78:06	1:51:06	1:12:08
101	0600-0800	0:24:06	8:25:06	1:18:06	4:52:06	4:32:07	6:54:06	5:34:06	3:36:07	7:78:06	1:51:06	1:12:08
101	0700-0800	0:36:06	8:25:06	1:18:06	4:52:06	4:32:07	6:54:06	5:34:06	3:36:07	7:78:06	1:51:06	1:12:08
101	0700-0800	0:36:06	8:25:06	1:18:06	4:52:06	4:32:07	6:54:06	5:34:06	3:36:07	7:78:06	1:51:06	1:12:08
101	0800-0900	0:93:06	4:09:07	5:91:06	4:82:06	2:11:06	3:05:06	5:76:06	2:53:06	3:46:07	2:45:07	1:07:06
101	0800-0900	0:93:06	4:09:07	5:91:06	4:82:06	2:11:06	3:05:06	5:76:06	2:53:06	3:46:07	2:45:07	1:07:06
101	0900-1000	0:46:06	6:51:06	6:46:07	4:22:06	2:77:06	3:28:06	5:36:06	2:78:06	3:99:06	2:41:06	1:12:07
101	0900-1000	0:46:06	6:51:06	6:46:07	4:22:06	2:77:06	3:28:06	5:36:06	2:78:06	3:99:06	2:41:06	1:12:07
101	1000-1100	1:25:06	4:09:07	6:51:06	5:17:06	1:84:06	2:60:06	6:31:06	2:29:06	3:92:06	1:31:06	1:12:07
101	1000-1100	1:25:06	4:09:07	6:51:06	5:17:06	1:84:06	2:60:06	6:31:06	2:29:06	3:92:06	1:31:06	1:12:07
101	1000-1200	1:24:06	4:34:06	6:27:06	5:18:06	1:81:06	2:61:06	6:42:06	2:44:06	3:46:06	1:38:06	1:12:07
101	1000-1200	1:24:06	4:34:06	6:27:06	5:18:06	1:81:06	2:61:06	6:42:06	2:44:06	3:46:06	1:38:06	1:12:07
101	1200-1300	1:46:06	4:49:06	6:49:06	4:49:06	1:49:06	2:61:06	6:49:06	2:49:06	3:49:06	1:49:06	1:12:07
101	1200-1300	1:46:06	4:49:06	6:49:06	4:49:06	1:49:06	2:61:06	6:49:06	2:49:06	3:49:06	1:49:06	1:12:07
101	1300-1400	1:26:06	4:79:06	6:39:06	5:27:06	2:01:06	2:96:06	6:52:06	2:46:06	3:60:06	1:34:06	1:12:07
101	1300-1400	1:26:06	4:79:06	6:39:06	5:27:06	2:01:06	2:96:06	6:52:06	2:46:06	3:60:06	1:34:06	1:12:07
101	1500-1600	1:17:06	4:57:06	6:51:06	3:30:06	2:07:06	2:96:06	6:46:06	2:53:06	3:65:06	1:39:06	1:12:07
101	1500-1600	1:17:06	4:57:06	6:51:06	3:30:06	2:07:06	2:96:06	6:46:06	2:53:06	3:65:06	1:39:06	1:12:07
101	1600-1700	1:18:06	4:57:06	6:51:06	3:30:06	2:07:06	2:96:06	6:46:06	2:53:06	3:65:06	1:39:06	1:12:07
101	1600-1700	1:18:06	4:57:06	6:51:06	3:30:06	2:07:06	2:96:06	6:46:06	2:53:06	3:65:06	1:39:06	1:12:07
101	1700-1800	1:18:06	4:57:06	6:51:06	3:30:06	2:07:06	2:96:06	6:46:06	2:53:06	3:65:06	1:39:06	1:12:07
101	1700-1800	1:18:06	4:57:06	6:51:06	3:30:06	2:07:06	2:96:06	6:46:06	2:53:06	3:65:06	1:39:06	1:12:07
101	1800-1900	1:18:06	4:57:06	6:51:06	3:30:06	2:07:06	2:96:06	6:46:06	2:53:06	3:65:06	1:39:06	1:12:07
101	1800-1900	1:18:06	4:57:06	6:51:06	3:30:06	2:07:06	2:96:06	6:46:06	2:53:06	3:65:06	1:39:06	1:12:07
101	1900-2000	1:18:06	4:57:06	6:51:06	3:30:06	2:07:06	2:96:06	6:46:06	2:53:06	3:65:06	1:39:06	1:12:07
101	1900-2000	1:18:06	4:57:06	6:51:06	3:30:06	2:07:06	2:96:06	6:46:06	2:53:06	3:65:06	1:39:06	1:12:07
101	2000-2100	1:18:06	4:57:06	6:51:06	3:30:06	2:07:06	2:96:06	6:46:06	2:53:06	3:65:06	1:39:06	1:12:07
101	2000-2100	1:18:06	4:57:06	6:51:06	3:30:06	2:07:06	2:96:06	6:46:06	2:53:06	3:65:06	1:39:06	1:12:07
101	2100-2200	1:18:06	4:57:06	6:51:06	3:30:06	2:07:06	2:96:06	6:46:06	2:53:06	3:65:06	1:39:06	1:12:07
101	2100-2200	1:18:06	4:57:06	6:51:06	3:30:06	2:07:06	2:96:06	6:46:06	2:53:06	3:65:06	1:39:06	1:12:07
101	2200-2300	1:18:06	4:57:06	6:51:06	3:30:06	2:07:06	2:96:06	6:46:06	2:53:06	3:65:06	1:39:06	1:12:07
101	2200-2300	1:18:06	4:57:06	6:51:06	3:30:06	2:07:06	2:96:06	6:46:06	2:53:06	3:65:06	1:39:06	1:12:07
101	2300-2400	1:18:06	4:57:06	6:51:06	3:30:06	2:07:06	2:96:06	6:46:06	2:53:06	3:65:06	1:39:06	1:12:07
101	2300-2400	1:18:06	4:57:06	6:51:06	3:30:06	2:07:06	2:96:06	6:46:06	2:53:06	3:65:06	1:39:06	1:12:07
102	0000-0100	7:56:06	8:86:06	1:28:06	4:28:06	5:00:06	6:78:06	5:04:06	5:88:06	7:98:06	2:04:06	2:98:06
102	0000-0100	7:56:06	8:86:06	1:28:06	4:28:06	5:00:06	6:78:06	5:04:06	5:88:06	7:98:06	2:04:06	2:98:06
102	0100-0200	8:86:06	1:28:06	4:28:06	5:00:06	6:78:06	5:04:06	5:88:06	7:98:06	2:04:06	2:98:06	1:28:06
102	0200-0300	8:86:06	1:28:06	4:28:06	5:00:06	6:78:06	5:04:06	5:88:06	7:98:06	2:04:06	2:98:06	1:28:06
102	0300-0400	8:86:06	1:28:06	4:28:06	5:00:06	6:78:06	5:04:06	5:88:06	7:98:06	2:04:06	2:98:06	1:28:06
102	0400-0500	8:86:06	1:28:06	4:28:06	5:00:06	6:78:06	5:04:06	5:88:06	7:98:06	2:04:06	2:98:06	1:28:06
102	0500-0600	8:86:06	1:28:06	4:28:06	5:00:06	6:78:06	5:04:06	5:88:06	7:98:06	2:04:06	2:98:06	1:28:06
102	0600-0700	1:12:06	2:20:06	2:96:06	3:36:06	1:03:06	1:39:06	6:51:06	1:29:06	1:66:06	1:13:06	0:01:06
102	0700-0800	1:12:06	2:20:06	2:96:06	3:36:06	1:03:06	1:39:06	6:51:06	1:29:06	1:66:06	1:13:06	0:01:06
102	0800-0900	1:12:06	2:20:06	2:96:06	3:36:06	1:03:06	1:39:06	6:51:06	1:29:06	1:66:06	1:13:06	0:01:06
102	0900-1000	1:12:06	2:20:06	2:96:06	3:36:06	1:03:06	1:39:06	6:51:06	1:29:06	1:66:06	1:13:06	0:01:06
102	1000-1100	1:12:06	2:20:06	2:96:06	3:36:06	1:03:06	1:39:06	6:51:06	1:29:06	1:66:06	1:13:06	0:01:06
102	1100-1200	1:12:06	2:20:06</									

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Ying Yi North Underground Quarry
Open Road 24 hour Emission Factors for
Year 2043

Road Name			Road ID			Hour			NO _x Emission						NO _x Emission					
									MonthlyHourMin			MonthlyHourAverage			MonthlyHourMin			MonthlyHourAverage		
									g/s/m			g/s/m			g/s/m			g/s/m		
Road 100	100	17:00-18:00	1.116E+02	5.48E+07	4.81E+03	5.18E+02	2.39E+06	2.10E+02	6.38E+02	2.94E+06	2.58E+02	1.13E+03	1.45E+07	1.27E+03						
Road 101	101	17:00-18:00	1.760E+00	8.50E+04	7.60E+03	8.18E+01	3.71E+06	3.27E+02	9.51E+01	4.24E+06	3.69E+02	1.61E+03	2.05E+07	1.82E+03						
Road 102	102	18:00-19:00	6.513E+03	3.67E+07	3.22E+06	3.66E+02	2.03E+07	1.82E+02	4.25E+02	2.44E+06	2.11E+02	1.63E+03	9.23E+03	8.10E+03						
Road 103	103	19:00-20:00	5.175E+03	2.31E+07	2.02E+06	3.22E+02	1.43E+06	1.26E+02	3.73E+02	1.96E+06	1.69E+02	1.34E+03	5.90E+03	5.25E+03						
Road 104	104	20:00-21:00	4.386E+03	1.92E+07	1.67E+06	2.71E+02	1.21E+06	1.07E+02	3.12E+02	1.66E+06	1.45E+02	1.12E+03	4.90E+03	4.30E+03						
Road 105	105	21:00-22:00	4.396E+03	1.51E+07	1.33E+06	3.41E+02	1.18E+06	1.04E+02	3.84E+02	1.33E+06	1.17E+02	1.10E+03	3.93E+03	3.44E+03						
Road 106	106	22:00-23:00	4.396E+03	1.44E+07	1.27E+06	3.41E+02	1.15E+06	1.01E+02	3.89E+02	1.33E+06	1.14E+02	1.07E+03	3.99E+03	3.51E+03						
Road 107	107	23:00-00:00	4.480E+03	1.22E+07	1.08E+06	3.41E+02	1.09E+06	9.89E+01	3.93E+02	1.33E+06	1.14E+02	1.07E+03	3.99E+03	3.51E+03						
Road 108	108	00:00-01:00	8.211E+03	9.13E+06	8.63E+04	4.47E+02	3.01E+07	3.72E+03	5.29E+02	5.93E+07	4.40E+03	2.22E+04	2.96E+04	1.80E+04						
Road 109	109	01:00-02:00	8.688E+03	6.57E+06	6.08E+04	4.69E+02	4.58E+07	5.55E+03	4.53E+02	6.04E+07	3.04E+03	2.42E+04	1.78E+04	1.30E+04						
Road 110	110	02:00-03:00	8.688E+03	6.57E+06	6.08E+04	4.69E+02	4.58E+07	5.55E+03	4.53E+02	6.04E+07	3.04E+03	2.42E+04	1.78E+04	1.30E+04						
Road 111	111	03:00-04:00	1.03E+02	4.51E+06	3.95E+04	5.06E+02	2.22E+07	1.85E+03	6.08E+02	2.67E+07	1.98E+03	2.90E+04	1.23E+04	9.13E+03						
Road 112	112	04:00-05:00	1.03E+02	5.34E+06	4.57E+04	5.22E+02	2.55E+07	1.85E+03	6.32E+02	3.08E+07	2.29E+03	2.98E+04	1.45E+04	1.06E+04						
Road 113	113	05:00-06:00	1.19E+02	6.08E+06	5.18E+04	5.38E+02	2.60E+07	1.88E+03	6.54E+02	3.41E+07	2.51E+03	3.16E+04	1.71E+04	1.26E+04						
Road 114	114	06:00-07:00	1.22E+02	6.76E+06	5.76E+04	5.56E+02	2.69E+07	1.94E+03	6.74E+02	3.54E+07	2.58E+03	3.26E+04	1.77E+04	1.29E+04						
Road 115	115	07:00-08:00	1.29E+02	4.59E+07	3.96E+05	5.76E+02	2.21E+06	1.64E+02	7.08E+02	2.17E+06	2.01E+02	3.52E+03	1.39E+07	1.06E+07						
Road 116	116	08:00-09:00	1.29E+02	5.62E+06	4.83E+04	5.56E+02	2.49E+06	1.85E+02	6.82E+02	3.03E+06	2.27E+02	3.47E+03	1.59E+07	1.12E+07						
Road 117	117	09:00-10:00	1.30E+02	5.62E+06	4.83E+04	5.56E+02	2.49E+06	1.85E+02	6.82E+02	3.03E+06	2.27E+02	3.47E+03	1.59E+07	1.12E+07						
Road 118	118	10:00-11:00	1.65E+02	5.96E+07	4.43E+05	6.51E+02	2.65E+06	1.93E+02	7.81E+02	2.95E+06	2.19E+02	4.64E+03	1.68E+07	1.25E+07						
Road 119	119	11:00-12:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 120	120	12:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 121	121	13:00-14:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 122	122	14:00-15:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 123	123	15:00-16:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 124	124	16:00-17:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 125	125	17:00-18:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 126	126	18:00-19:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 127	127	19:00-20:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 128	128	20:00-21:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 129	129	21:00-22:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 130	130	22:00-23:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 131	131	23:00-00:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 132	132	00:00-01:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 133	133	01:00-02:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 134	134	02:00-03:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 135	135	03:00-04:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 136	136	04:00-05:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 137	137	05:00-06:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 138	138	06:00-07:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 139	139	07:00-08:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 140	140	08:00-09:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 141	141	09:00-10:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 142	142	10:00-11:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 143	143	11:00-12:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 144	144	12:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 145	145	13:00-14:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 146	146	14:00-15:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 147	147	15:00-16:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 148	148	16:00-17:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 149	149	17:00-18:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 150	150	18:00-19:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 151	151	19:00-20:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 152	152	20:00-21:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 153	153	21:00-22:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 154	154	22:00-23:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 155	155	23:00-00:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 156	156	00:00-01:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 157	157	01:00-02:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 158	158	02:00-03:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 159	159	03:00-04:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 160	160	04:00-05:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 161	161	05:00-06:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02	4.50E+03	1.54E+07	1.14E+07						
Road 162	162	06:00-07:00	1.65E+02	5.48E+07	4.07E+05	6.46E+02	2.21E+06	1.64E+02	8.05E+02	2.74E+06	2.05E+02									

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for
Year 2043

Road Name	Road ID	Hour	No. Emission						No. Emission					
			MonthlyHourMin			MonthlyHourAverage			MonthlyHourMin			MonthlyHourAverage		
			g/km/hv	g/km/h	tonne/hour	g/km/hv	g/km/h	g/s/m	g/km/hv	g/km/h	tonne/hour	g/km/hv	g/km/h	tonne/hour
Road 1	1	0000-0100	4.44E+03	6.94E+06	1.30E+03	3.98E+07	4.91E+07	9.87E+03	3.62E+07	5.66E+07	1.12E+08	1.09E+08	1.59E+08	
Road 1	1	0100-0200	3.31E+04	5.07E+07	3.31E+04	5.07E+07	3.31E+04	5.07E+07	3.31E+04	5.07E+07	3.31E+04	5.07E+07	3.31E+04	
Road 1	1	0200-0300	5.47E+03	3.79E+06	7.61E+04	3.86E+08	2.59E+07	5.12E+03	4.22E+07	9.39E+07	3.36E+08	3.64E+08	5.43E+08	
Road 1	1	0300-0400	5.98E+03	3.97E+06	6.58E+04	3.81E+08	2.08E+07	4.41E+03	4.21E+07	8.95E+07	3.52E+08	3.80E+08	5.62E+08	
Road 1	1	0400-0500	6.41E+03	4.30E+06	7.05E+04	3.56E+08	2.29E+07	4.79E+03	4.59E+07	9.79E+07	3.64E+08	4.00E+08	5.92E+08	
Road 1	1	0500-0600	6.79E+03	7.05E+06	1.42E+05	4.40E+08	4.19E+07	4.83E+03	4.72E+07	9.84E+07	3.72E+08	4.17E+08	6.20E+08	
Road 1	1	0600-0700	7.21E+03	9.67E+06	3.22E+05	4.18E+08	9.29E+07	4.96E+03	4.99E+07	1.29E+08	4.48E+08	5.08E+08	7.62E+08	
Road 1	1	0700-0800	7.73E+03	1.23E+07	3.68E+05	4.38E+08	1.07E+08	5.29E+03	5.29E+07	1.41E+08	4.79E+08	5.49E+08	8.11E+08	
Road 1	1	0800-0900	7.45E+03	9.68E+07	7.79E+03	3.88E+08	2.02E+08	4.62E+03	4.62E+07	4.83E+07	1.95E+08	2.21E+08	3.31E+08	
Road 1	1	0900-1000	8.50E+03	3.63E+07	7.30E+03	4.25E+08	1.87E+08	3.69E+03	5.16E+03	2.18E+08	3.68E+08	4.25E+08	6.38E+08	
Road 1	1	1000-1100	8.86E+03	4.10E+07	7.86E+03	4.39E+08	2.12E+08	4.03E+03	5.16E+03	2.47E+08	4.00E+08	4.79E+08	7.00E+08	
Road 1	1	1100-1200	9.21E+03	6.22E+07	6.48E+03	4.55E+08	3.19E+08	4.37E+03	3.88E+03	3.78E+08	2.49E+08	3.73E+08	5.54E+08	
Road 1	1	1200-1300	1.25E+02	3.09E+07	1.22E+02	4.22E+08	2.52E+08	3.50E+03	6.47E+03	3.13E+08	3.37E+08	3.74E+08	5.54E+08	
Road 1	1	1300-1400	1.30E+04	6.31E+07	1.07E+02	4.56E+08	2.76E+08	3.47E+03	6.72E+03	3.80E+08	3.17E+08	3.57E+08	5.35E+08	
Road 1	1	1400-1500	1.77E+02	6.40E+07	1.40E+02	4.56E+08	2.96E+08	3.66E+03	6.65E+03	3.78E+08	4.45E+08	4.97E+08	7.26E+08	
Road 1	1	1500-1600	1.19E+02	6.46E+07	1.29E+02	4.56E+08	2.96E+08	5.59E+02	6.65E+03	2.64E+08	3.29E+08	3.78E+08	5.54E+08	
Road 1	1	1600-1700	1.22E+02	7.05E+07	1.42E+02	5.24E+08	2.99E+08	6.01E+02	6.47E+03	3.70E+08	4.58E+08	5.16E+08	7.54E+08	
Road 1	1	1700-1800	1.22E+02	7.05E+07	1.42E+02	5.24E+08	2.99E+08	6.01E+02	6.47E+03	3.70E+08	4.58E+08	5.16E+08	7.54E+08	
Road 1	1	1800-1900	6.29E+03	4.39E+07	8.65E+03	3.92E+08	2.13E+08	4.66E+02	4.02E+07	7.51E+07	3.16E+08	3.61E+08	5.35E+08	
Road 1	1	1900-2000	5.33E+03	2.98E+07	5.79E+03	3.17E+07	1.71E+08	3.45E+02	3.71E+02	2.00E+08	3.02E+08	3.41E+08	5.00E+08	
Road 1	1	2000-2100	5.10E+03	2.98E+07	5.51E+03	3.17E+07	1.71E+08	3.45E+02	3.71E+02	2.00E+08	3.02E+08	3.41E+08	5.00E+08	
Road 1	1	2100-2200	4.61E+03	1.94E+07	3.89E+03	3.82E+08	1.42E+08	2.89E+02	3.84E+02	1.61E+08	2.49E+08	2.85E+08	4.14E+08	
Road 1	1	2200-2300	4.57E+03	1.86E+07	3.87E+03	3.17E+07	1.71E+08	2.89E+02	3.66E+03	1.56E+08	2.16E+08	2.57E+08	3.71E+08	
Road 1	1	2300-2400	4.57E+03	1.86E+07	3.87E+03	3.17E+07	1.71E+08	2.89E+02	3.66E+03	1.56E+08	2.16E+08	2.57E+08	3.71E+08	
Road 2	2	0000-0100	6.21E+03	8.42E+06	1.56E+03	3.81E+07	5.17E+07	9.55E+03	4.42E+07	6.01E+07	1.43E+08	1.43E+08	2.12E+08	
Road 2	2	0100-0200	6.83E+03	6.07E+06	1.12E+03	3.98E+07	3.54E+07	6.55E+03	4.67E+07	4.15E+07	6.73E+07	8.06E+07	1.06E+08	
Road 2	2	0200-0300	7.48E+03	4.79E+06	1.37E+03	4.17E+07	3.79E+07	7.49E+03	4.90E+07	4.36E+07	6.96E+07	8.41E+07	1.10E+08	
Road 2	2	0300-0400	8.10E+03	6.22E+08	7.81E+04	4.35E+08	2.26E+07	4.17E+03	5.14E+07	6.68E+07	9.65E+07	1.14E+08	1.52E+08	
Road 2	2	0400-0500	8.66E+03	6.49E+08	9.20E+04	4.50E+08	2.59E+07	4.77E+03	5.36E+07	3.08E+07	7.29E+07	2.29E+08	3.12E+08	
Road 2	2	0500-0600	9.12E+03	8.13E+08	1.09E+05	4.63E+08	4.48E+07	8.75E+03	5.94E+07	3.54E+07	1.03E+08	4.24E+08	5.73E+08	
Road 2	2	0600-0700	9.60E+03	9.86E+08	1.28E+05	4.76E+08	5.12E+07	9.74E+03	6.29E+07	4.04E+07	1.16E+08	4.79E+08	6.44E+08	
Road 2	2	0700-0800	1.02E+04	1.05E+09	1.31E+05	4.82E+08	5.21E+07	1.06E+04	6.59E+07	2.61E+08	4.83E+08	2.74E+09	3.70E+09	
Road 2	2	0800-0900	9.94E+03	5.05E+07	9.38E+03	4.62E+08	2.38E+08	4.38E+03	5.01E+07	2.68E+08	3.30E+08	2.71E+09	3.68E+09	
Road 2	2	0900-1000	1.10E+04	5.28E+07	1.02E+04	4.76E+08	2.52E+08	4.59E+03	5.30E+07	2.94E+08	3.61E+08	3.00E+09	4.04E+09	
Road 2	2	1000-1100	1.32E+04	5.61E+07	9.48E+03	5.42E+08	2.11E+09	3.90E+03	6.74E+07	2.62E+08	4.85E+08	3.71E+09	4.94E+09	
Road 2	2	1100-1200	1.27E+04	6.19E+07	8.67E+03	5.45E+08	1.99E+08	3.68E+03	6.68E+07	2.46E+08	5.57E+08	3.71E+09	4.94E+09	
Road 2	2	1200-1300	1.32E+04	6.19E+07	9.48E+03	5.42E+08	2.11E+09	3.90E+03	6.74E+07	2.62E+08	4.85E+08	3.71E+09	4.94E+09	
Road 2	2	1300-1400	1.34E+04	6.71E+07	1.17E+04	5.61E+08	2.65E+08	4.90E+03	6.92E+07	3.28E+08	5.06E+08	3.72E+09	4.97E+09	
Road 2	2	1400-1500	1.34E+04	6.71E+07	1.14E+04	5.55E+07	2.77E+08	5.11E+03	6.68E+07	3.44E+08	4.85E+08	3.68E+09	4.94E+09	
Road 2	2	1500-1600	1.34E+04	6.71E+07	1.14E+04	5.55E+07	2.77E+08	5.11E+03	6.68E+07	3.44E+08	4.85E+08	3.68E+09	4.94E+09	
Road 2	2	1600-1700	1.30E+04	6.59E+07	1.29E+04	5.39E+08	2.98E+08	5.33E+03	6.68E+07	3.58E+08	4.62E+08	3.52E+09	4.89E+09	
Road 2	2	1700-1800	9.35E+03	6.95E+07	1.03E+04	4.68E+08	2.78E+08	5.14E+03	5.62E+07	3.33E+08	6.16E+08	2.58E+09	3.53E+09	
Road 2	2	1800-1900	8.62E+03	6.18E+07	9.77E+03	3.47E+08	2.19E+08	4.40E+03	4.13E+07	2.68E+08	3.80E+08	3.81E+09	5.14E+09	
Road 2	2	1900-2000	8.16E+03	5.96E+07	1.17E+04	3.37E+08	1.61E+08	4.09E+03	4.13E+07	2.68E+08	3.80E+08	3.81E+09	5.14E+09	
Road 2	2	2000-2100	5.46E+03	2.11E+07	3.89E+03	3.55E+08	1.37E+08	2.52E+04	4.19E+03	5.92E+07	4.64E+07	5.64E+08	7.41E+08	
Road 2	2	2100-2200	4.97E+03	1.91E+07	3.53E+03	3.49E+08	1.34E+08	2.48E+03	3.96E+03	5.84E+07	4.94E+07	5.93E+08	7.84E+08	
Road 2	2	2200-2300	4.92E+03	1.86E+07	3.44E+03	3.49E+08	1.34E+08	2.48E+03	3.96E+03	5.84E+07	4.94E+07	5.93E+08	7.84E+08	
Road 2	2	2300-2400	4.92E+03	1.86E+07	3.44E+03	3.49E+08	1.34E+08	2.48E+03	3.96E+03	5.84E+07	4.94E+07	5.93E+08	7.84E+08	
Road 3	3	0000-0100	5.51E+03	1.94E+07	2.85E+03	3.63E+07	1.02E+08	1.98E+03	4.18E+07	1.17E+08	2.14E+08	4.43E+08	6.01E+08	
Road 3	3	0100-0200	4.85E+03	2.66E+08	5.95E+04	3.54E+08	1.94E+07	4.02E+03	4.02E+03	2.12E+08	3.94E+08	3.94E+08	5.43E+08	
Road 3	3	0200-0300	5.48E+03	3.44E+08	7.86E+04	3.63E+08	2.04E+07	4.48E+03	4.48E+07	4.48E+07	4.48E+07	4.48E+07	6.01E+07	
Road 3	3	0300-0400	6.08E+03	3.19E+08	3.57E+05	3.89E+08	1.02E+07	7.28E+04	4.56E+03	1.18E+07	2.64E+08	4.49E+08	6.31E+08	
Road 3	3	0400-0500	6.69E+03	3.19E+08	3.11E+05	4.84E+08	1.86E+08	4.84E+03	4.71E+07	7.98E+08	1.93E+09	2.65E+09	3.62E+09	
Road 3	3	0500-0600	7.11E+03	3.19E+08	3.11E+05	4.84E+08	1.86E+08	4.84E+03	4.71E+07	7.98E+08	1.93E+09	2.65E+09	3.62E+09	
Road 3	3	0600-0700	7.34E+03	2.98E+08	6.85E+05	4.25E+08	1.67E+07	3.74E+04	4.99E+03	1.96E+08	3.96E+08	8.3E+08	1.12E+09	
Road 3	3	0700-0800	7.67E+03	6.44E+08	1.44E+04	4.40E+08	9.69E+07	8.27E+04	5.11E+03	3.04E+07	9.71E+08	1.92E+09	2.61E+09	
Road 3	3	0800-0900	8.31E+03	6.44E+08	1.44E+04	4.40E+08	9.69E+07	8.27E+04	5.11E+03	3.04E+07	9.71E+08	1.92E+09	2.61E+09	
Road 3	3	0900-1000	8.83E+03	6.77E+07	3.80E+04	4.42E+08	8.76E+07	1.57E+04	5.26E+03	4.36E+07	3.30E+08	4.10E+08	5.49E+08	
Road 3	3	0900-1000	9.35E+03	1.52E+07	3.41E+04	4.78E+07	7.75E+07	1.74E+04	5.76E+02	9.27E+07	2.08E+07	2.47E+08	3.32E+08	
Road 3	3	1000-1100	1.06E+02	1.91E+07	3.38E+04	4.68E+07	7.01E+07	1.57E+03	6.02E+08	8.90E+07	2.00E+08	2.40E+08	3.30E+08	
Road 3	3	1100-1200	1.09E+02	1.91E+07	3.38E+04	4.68E+07	7.01E+07	1.57E+03	6.02E+08	8.90E+07	2.00E+08	2.40E+08	3.30E+08	
Road 3	3	1200-1300	1.46E+02	1.90E+06	2.30E+03	1.67E+07	3.69E+06	8.28E+02	2.13E+07	4.71E+06	1.06E+07	5.80E+08	7.98E+08	
Road 3	3	1300-1400	7.60E+02	1.75E+06	3.91E+03	1.67E+07	3.69E+06	8.28E+02	5.94E+03	1.61E+06	1.62E+07	2.72E+07	3.67E+07	
Road 3	3	1400-1500	7.60E+02	1.75E+06	3.91E+03	1.67E+07	3.69E+06	8.28E+02	5.94E+03	1.61E+06	1.62E+07	2.72E+07	3.67E+07	
Road 3	3	1500-1600	1.56E+03	1.88E+06	8.69E+03	5.08E+07	1.33E+08	2.99E+04	6.49E+03	1.72E+08	8.86E+08	1.04E+09	2.57E+09	
Road 3	3	1600-1700	1.59E+03	4.11E+06	9.21E+03	5.08E+07	1.33E+08	2.99E+04	6.67E+03	1.72E+08	8.86E+08	1.04E+09	2.57E+09	
Road 3	3	1700-1800	1.13E+03	4.11E+06	9.21E+03	5.08E+07	1.33E+08	2.99E+04	6.67E+03	1.72E+08	8.86E+08	1.04E+09	2.57E+09	
Road 3	3	1800-1900	7.86E+02	2.32E+06	5.50E+03	2.84E+07	8.39E+06	1.88E+03	3.63E+07	1.04E+08	4.55E+08	5.51E+08	7.63E+08	
Road 3	3	1900-2000	1.02E+02	2.37E+07	5.30E+03	3.21E+07	1.21E+08	2.70E+03	6.24E+03	1.44E+08	2.28E+08	9.39E+08	1.46E+09	
Road 3	3	2000-2100	6.39E+02	4.09E+07	4.29E+03	4.29E+07	1.73							

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for
Year 2043

Aesthmic Road Inventory			NO _x Emission					NO Emission						
Road Name	Road ID	Hour	MonthlyHourMin		MonthlyHourAverage		MonthlyHourMin		MonthlyHourA		MonthlyHourA			
			g/km ³ /veh	g/min	tonne/hour	g/km ³ /veh	g/min	tonne/hour	g/km ³ /veh	g/min	tonne/hour	g/km ³ /veh	g/min	tonne/hour
Road 4	4	0800-0900	7.226	2.668	1.961	9.836	3.386	1.011	4.658	1.647	1.262	1.866	0.678	0.518
Road 4	4	0900-1000	7.226	2.668	1.961	9.836	3.386	1.011	4.658	1.647	1.262	1.866	0.678	0.518
Road 4	4	1000-1100	9.873	3.387	2.387	4.426	1.126	0.872	5.365	1.366	0.970	2.546	0.678	0.518
Road 4	4	1100-1200	8.995	2.147	1.576	4.411	0.686	0.778	3.303	1.286	0.934	2.386	0.576	0.436
Road 4	4	1200-1300	1.375	0.325	0.235	1.375	0.325	0.235	1.375	0.325	0.235	1.375	0.325	0.235
Road 4	4	1300-1400	1.116	0.276	0.206	4.886	1.466	1.076	5.986	1.786	1.310	3.016	0.896	0.68
Road 4	4	1400-1500	1.116	0.276	0.206	4.886	1.466	1.136	5.986	1.906	1.386	3.066	0.956	0.726
Road 4	4	1500-1600	1.375	0.475	0.345	1.375	0.475	0.345	1.375	0.475	0.345	1.375	0.475	0.345
Road 4	4	1600-1700	1.096	0.276	0.226	4.706	1.636	1.196	5.706	2.016	1.476	2.926	0.816	0.616
Road 4	4	1700-1800	7.716	0.036	0.776	4.106	1.616	1.186	4.876	1.926	1.466	2.886	0.806	0.606
Road 4	4	1800-1900	5.043	0.386	1.746	4.043	1.546	1.146	4.876	1.926	1.466	2.886	0.806	0.606
Road 4	4	1900-2000	4.743	0.636	1.196	2.986	1.026	0.796	3.466	1.196	0.906	1.236	0.426	0.326
Road 4	4	2000-2100	4.576	0.236	0.936	3.306	0.816	0.646	3.766	1.096	0.786	1.136	0.316	0.236
Road 4	4	2100-2200	4.406	0.066	0.776	1.236	0.306	0.236	3.806	0.946	0.676	0.946	0.266	0.206
Road 4	4	2200-2300	4.406	0.066	0.776	1.236	0.306	0.236	3.806	0.946	0.676	0.946	0.266	0.206
Road 4	4	2300-2400	4.406	0.066	0.776	1.236	0.306	0.236	3.806	0.946	0.676	0.946	0.266	0.206
Road 5	5	0000-0100	4.406	8.516	6.226	3.376	6.516	4.776	0.816	7.376	5.966	1.106	2.126	0.88
Road 5	5	0100-0200	4.406	6.346	3.386	4.446	3.186	0.986	3.096	3.616	1.186	1.426	0.446	0.346
Road 5	5	0200-0300	4.406	6.346	3.386	4.446	3.186	0.986	3.096	3.616	1.186	1.426	0.446	0.346
Road 5	5	0300-0400	4.406	6.346	3.386	4.446	3.186	0.986	3.096	3.616	1.186	1.426	0.446	0.346
Road 5	5	0400-0500	7.346	2.096	0.626	4.906	3.306	3.956	4.086	1.506	0.756	1.386	0.366	0.276
Road 5	5	0500-0600	9.436	4.676	0.426	5.376	2.686	0.816	6.316	3.156	0.616	1.876	0.386	0.296
Road 5	5	0600-0700	1.446	0.226	0.716	6.196	0.676	2.606	7.286	2.786	2.376	1.966	2.036	0.886
Road 5	5	0700-0800	1.446	0.226	0.716	6.196	0.676	2.606	7.286	2.786	2.376	1.966	2.036	0.886
Road 5	5	0800-0900	1.156	0.616	1.076	6.806	1.696	5.156	6.256	2.056	0.266	2.146	0.446	0.346
Road 5	5	0900-1000	1.636	0.226	0.776	9.986	4.706	1.526	4.826	1.896	1.666	2.506	0.616	0.466
Road 5	5	1000-1100	1.866	0.106	0.686	7.866	1.366	1.546	5.746	1.666	1.426	2.306	0.416	0.316
Road 5	5	1100-1200	1.636	0.656	0.706	7.596	1.246	0.376	6.226	1.506	0.486	2.576	0.416	0.316
Road 5	5	1200-1300	2.056	0.666	0.776	8.606	2.376	0.746	0.816	2.946	0.856	2.946	0.816	0.616
Road 5	5	1300-1400	2.186	0.016	0.836	9.336	0.256	7.906	1.136	3.196	0.746	3.036	0.486	0.386
Road 5	5	1400-1500	2.186	0.016	0.836	9.336	0.256	7.906	1.136	3.196	0.746	3.036	0.486	0.386
Road 5	5	1500-1600	2.186	0.016	0.836	9.336	0.256	7.906	1.136	3.196	0.746	3.036	0.486	0.386
Road 5	5	1600-1700	2.186	0.016	0.836	9.336	0.256	7.906	1.136	3.196	0.746	3.036	0.486	0.386
Road 5	5	1700-1800	2.186	0.016	0.836	9.336	0.256	7.906	1.136	3.196	0.746	3.036	0.486	0.386
Road 5	5	1800-1900	2.186	0.016	0.836	9.336	0.256	7.906	1.136	3.196	0.746	3.036	0.486	0.386
Road 5	5	1900-2000	9.676	0.616	0.026	4.526	1.866	0.536	6.726	2.166	0.676	1.376	0.466	0.366
Road 5	5	2000-2100	1.336	0.336	1.156	3.336	0.256	1.726	5.336	1.726	0.336	2.006	0.416	0.316
Road 5	5	2100-2200	6.936	0.866	0.076	5.076	1.386	0.416	6.766	1.576	0.476	1.016	0.296	0.226
Road 5	5	2200-2300	6.936	0.866	0.076	5.076	1.386	0.416	6.766	1.576	0.476	1.016	0.296	0.226
Road 5	5	2300-2400	6.936	0.866	0.076	5.076	1.386	0.416	6.766	1.576	0.476	1.016	0.296	0.226
Road 6	6	0000-0100	1.576	0.456	1.496	7.456	6.916	7.116	0.026	8.376	8.696	2.586	2.406	2.406
Road 6	6	0100-0200	1.606	0.826	0.016	7.456	4.576	4.696	9.026	5.546	0.776	2.886	1.766	0.686
Road 6	6	0200-0300	1.606	0.826	0.016	7.456	4.576	4.696	9.026	5.546	0.776	2.886	1.766	0.686
Road 6	6	0300-0400	1.606	0.826	0.016	7.456	4.576	4.696	9.026	5.546	0.776	2.886	1.766	0.686
Road 6	6	0400-0500	1.826	0.786	0.806	8.376	3.396	3.476	1.036	4.176	0.266	3.526	1.436	0.586
Road 6	6	0500-0600	2.136	1.526	0.576	1.446	0.676	0.676	1.136	8.006	0.826	3.786	0.686	0.526
Road 6	6	0600-0700	2.136	1.526	0.576	1.446	0.676	0.676	1.136	8.006	0.826	3.786	0.686	0.526
Road 6	6	0700-0800	3.726	1.116	0.216	1.466	4.606	4.786	1.836	5.786	0.946	5.006	1.586	0.776
Road 6	6	0800-0900	3.966	1.466	0.506	1.556	5.696	5.856	1.946	7.156	0.736	5.136	1.866	0.926
Road 6	6	0900-1000	4.496	1.666	0.536	1.666	5.696	5.856	2.206	7.256	0.736	5.136	1.866	0.926
Road 6	6	1000-1100	4.916	1.486	0.336	1.816	5.406	5.556	2.306	6.806	0.706	5.436	1.966	0.776
Road 6	6	1100-1200	4.996	0.266	0.366	1.736	4.876	5.006	2.186	6.166	0.636	6.396	1.776	0.676
Road 6	6	1200-1300	5.336	0.556	0.556	2.036	5.906	6.006	2.586	7.516	0.636	6.396	1.776	0.676
Road 6	6	1300-1400	5.336	0.216	0.656	2.036	5.906	6.006	2.586	7.516	0.726	7.726	1.736	0.676
Road 6	6	1400-1500	5.376	0.786	0.786	2.046	6.186	6.346	2.626	7.906	0.816	7.476	2.256	0.776
Road 6	6	1500-1600	5.606	0.696	0.696	2.046	6.186	6.346	2.826	8.136	0.816	7.476	2.256	0.776
Road 6	6	1600-1700	5.756	0.696	0.736	1.946	6.096	6.256	2.476	7.766	0.766	7.656	2.216	0.716
Road 6	6	1700-1800	4.026	0.336	0.176	1.666	5.456	5.636	2.006	6.816	0.706	5.506	1.826	0.676
Road 6	6	1800-1900	2.796	0.816	0.076	1.176	3.746	3.896	1.446	4.626	0.746	3.886	1.276	0.576
Road 6	6	1900-2000	2.796	0.816	0.076	1.176	3.746	3.896	1.446	4.626	0.746	3.886	1.276	0.576
Road 6	6	2000-2100	1.676	0.666	0.776	9.156	1.756	1.806	1.116	2.126	2.066	0.906	5.746	0.88
Road 6	6	2100-2200	1.676	0.586	0.686	9.156	1.756	1.806	1.116	2.116	2.176	2.926	5.936	0.88
Road 6	6	2200-2300	1.676	0.586	0.686	9.156	1.756	1.806	1.116	2.116	2.176	2.926	5.936	0.88
Road 6	6	2300-2400	1.856	0.586	0.676	8.456	1.186	1.216	1.036	1.436	1.476	3.006	4.716	0.88
Road 7	7	0000-0100	4.896	0.336	0.426	3.586	4.476	4.956	4.066	2.776	1.166	1.176	0.026	0.096
Road 7	7	0100-0200	4.896	0.336	0.426	3.586	4.476	4.956	4.066	2.776	1.166	1.176	0.026	0.096
Road 7	7	0200-0300	6.116	0.036	0.556	3.926	1.286	1.596	4.546	4.466	0.926	5.256	4.886	0.996
Road 7	7	0300-0400	6.746	1.746	0.486	4.096	1.067	4.526	4.746	1.287	0.774	1.696	4.036	0.996
Road 7	7	0400-0500	6.746	1.746	0.486	4.096	1.067	4.526	4.746	1.287	0.774	1.696	4.036	0.996
Road 7	7	0500-0600	7.866	0.606	0.546	4.296	1.026	1.896	4.502	2.486	1.026	1.896	4.996	0.996
Road 7	7	0600-0700	7.786	0.026	0.436	4.436	4.636	4.976	5.206	5.476	2.306	1.946	2.006	0.68
Road 7	7	0700-0800	8.346	1.776	0.576	4.616	1.476	4.186	4.566	1.156	0.946	2.696	4.436	0.996
Road 7	7	0800-0900	8.346	1.776	0.576	4.616	1.476	4.186	4.566	1.156	0.946	2.696	4.436	0.996
Road 7	7	0900-1000	9.276	0.876	0.026	4.706	9.516	4.076	5.636	1.146	4.876	2.456	4.956	0.88
Road 7	7	1000-1100	1.056	1.846	0.076	4.806	3.056	3.086	3.926	1.046	4.466	2.736	4.886	0.88
Road 7	7	1100-1200	1.056	1.846	0.076	4.806	3.056	3.086	3.926	1.046	4.466	2.736	4.886	0.88
Road 7	7	1200-1300	1.666	4.276	0.836	8.806	1.746	7.476	8.466	2.176	9.266	4.016	1.036	0.77
Road 7	7	1300-1400	2.126	0.646	0.216	8.676	2.316	9.876	1.016	2.876	1.286	4.416	1.176	0.77
Road 7	7	1400-1500	2.126	0.646	0.216	8.676	2.316	9.876	1.016	2.876	1.286	4.416	1.176	0.77
Road 7	7	1500-1600	2.126	0.646	0.216	8.676	2.316	9.876	1.016	2.876	1.286</			

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for
Year 2043

ASPHALT ROAD (veh/mi)			NO Emission						NO Emission					
Hour	Road Name	Road ID	Hour	MonthlyHourIn	MonthlyHourOut	MonthlyHourIn	MonthlyHourOut	MonthlyHourIn	MonthlyHourOut	MonthlyHourIn	MonthlyHourOut	MonthlyHourIn	MonthlyHourOut	
				g/km/hr	g/mi/hr	g/km/hr	g/mi/hr	g/km/hr	g/mi/hr	g/km/hr	g/mi/hr	g/km/hr	g/mi/hr	
-04	Road 7	7	1700-1800	3.62E+02	1.16E+03	4.65E+03	1.39E+04	4.04E+06	1.79E+07	1.71E+03	5.33E+06	2.19E+02	5.14E+05	
-04	Road 7	7	1800-1900	1.60E+02	5.19E+02	2.06E+03	6.19E+03	1.76E+06	8.32E+06	1.56E+03	4.63E+06	1.38E+02	3.82E+05	
-04	Road 7	7	1900-2000	2.34E+02	7.84E+02	3.06E+04	1.02E+05	5.53E+06	1.51E+07	1.25E+04	4.34E+06	1.86E+02	2.97E+05	
-04	Road 7	7	2000-2100	6.98E+02	2.31E+03	1.81E+07	7.75E+04	3.02E+06	1.03E+07	4.42E+04	1.21E+06	5.00E+02	1.69E+05	
-04	Road 7	7	2100-2200	2.90E+02	9.66E+02	4.06E+03	1.26E+04	3.36E+06	1.52E+07	1.36E+03	3.92E+06	1.45E+02	3.63E+05	
-04	Road 7	7	2200-2300	5.52E+02	1.17E+07	5.05E+04	1.88E+05	8.18E+07	3.50E+08	4.44E+02	9.86E+07	3.60E+03	1.46E+05	
-04	Road 7	7	2300-2400	9.39E+02	3.12E+04	1.17E+07	4.80E+07	7.64E+07	3.11E+08	4.36E+02	1.66E+08	3.79E+03	1.59E+05	
-04	Road 8	8	0000-0100	4.77E+03	2.55E+05	1.99E+05	3.11E+02	1.72E+07	2.75E+08	1.39E+06	1.99E+07	1.47E+04	1.21E+07	
-04	Road 8	8	0100-0200	5.22E+03	2.83E+05	1.89E+06	1.49E+06	2.37E+08	8.05E+08	3.76E+02	1.36E+08	1.00E+04	1.33E+08	
-04	Road 8	8	0200-0300	5.11E+03	2.75E+05	1.79E+06	1.40E+06	2.34E+08	8.05E+08	3.76E+02	1.36E+08	1.00E+04	1.33E+08	
-04	Road 8	8	0300-0400	6.13E+03	3.30E+05	9.65E+05	3.56E+05	7.47E+09	5.51E+05	4.17E+02	8.77E+09	6.47E+05	1.59E+03	
-04	Road 8	8	0400-0500	6.65E+03	3.54E+05	1.14E+06	3.62E+06	8.53E+09	6.29E+05	4.35E+02	1.01E+10	7.43E+05	3.71E+03	
-04	Road 8	8	0500-0600	7.12E+03	2.67E+06	2.12E+06	3.02E+06	8.13E+08	5.23E+02	1.80E+08	1.50E+06	1.06E+07	1.06E+07	
-04	Road 8	8	0600-0700	7.63E+03	4.89E+06	3.96E+06	5.42E+06	1.25E+09	7.92E+02	2.43E+09	1.15E+07	1.47E+07	1.47E+07	
-04	Road 8	8	0700-0800	6.53E+03	1.41E+06	1.04E+06	4.07E+06	7.16E+08	5.23E+04	4.88E+02	8.57E+08	6.33E+04	2.10E+06	
-04	Road 8	8	0800-0900	7.98E+03	1.59E+06	1.17E+06	3.87E+06	7.16E+08	5.69E+04	4.67E+02	8.00E+08	6.87E+04	2.33E+06	
-04	Road 8	8	0900-1000	8.50E+03	1.62E+06	1.20E+06	4.07E+06	7.16E+08	5.69E+04	4.67E+02	8.00E+08	6.87E+04	2.33E+06	
-04	Road 8	8	1000-1100	1.08E+03	1.61E+06	1.19E+06	4.70E+06	6.02E+08	5.18E+04	5.78E+02	6.83E+08	6.97E+04	2.93E+06	
-04	Road 8	8	1100-1200	1.03E+02	1.47E+08	1.08E+04	4.56E+07	6.63E+08	4.09E+04	5.70E+02	8.10E+08	5.80E+03	3.99E+06	
-04	Road 8	8	1200-1300	1.03E+02	1.47E+08	1.08E+04	4.56E+07	6.63E+08	4.09E+04	5.70E+02	8.10E+08	5.80E+03	3.99E+06	
-04	Road 8	8	1300-1400	1.57E+03	2.71E+06	6.71E+06	4.36E+07	6.36E+07	4.02E+04	7.96E+02	3.40E+07	2.51E+04	3.63E+06	
-04	Road 8	8	1400-1500	1.60E+03	2.69E+06	6.97E+06	5.18E+07	6.22E+07	4.01E+04	7.78E+02	3.47E+07	2.56E+03	4.30E+06	
-04	Road 8	8	1500-1600	1.44E+02	1.62E+06	1.48E+04	5.12E+04	5.88E+02	2.78E+07	2.05E+02	7.35E+02	3.67E+07	2.57E+03	
-04	Road 8	8	1600-1700	1.47E+02	1.64E+06	5.12E+04	5.88E+02	2.78E+07	2.05E+02	7.35E+02	3.67E+07	2.57E+03	4.01E+03	
-04	Road 8	8	1700-1800	1.56E+02	1.51E+06	4.00E+04	5.12E+02	6.61E+07	1.93E+03	6.21E+02	3.16E+02	2.33E+03	3.00E+03	
-04	Road 8	8	1800-1900	1.75E+02	2.38E+04	2.38E+04	1.75E+02	1.94E+07	1.54E+03	4.10E+02	1.54E+03	1.54E+03	1.54E+03	
-04	Road 8	8	1900-2000	5.55E+03	2.55E+06	1.96E+04	3.49E+04	4.15E+07	1.04E+04	4.14E+02	1.98E+07	2.40E+05	1.70E+07	
-04	Road 8	8	2000-2100	6.36E+03	2.02E+04	1.94E+04	3.78E+02	1.19E+07	1.77E+04	4.37E+02	1.39E+07	1.03E+03	1.72E+04	
-04	Road 8	8	2100-2200	6.17E+03	1.93E+04	1.43E+04	3.78E+02	1.18E+07	8.72E+04	4.39E+02	1.37E+07	1.01E+03	1.68E+04	
-04	Road 8	8	2200-2300	6.17E+03	1.93E+04	1.43E+04	3.78E+02	1.18E+07	8.72E+04	4.39E+02	1.37E+07	1.01E+03	1.68E+04	
-04	Road 8	8	2300-2400	6.17E+03	1.93E+04	1.43E+04	3.78E+02	1.18E+07	8.72E+04	4.39E+02	1.37E+07	1.01E+03	1.68E+04	
-04	Road 9	9	0000-0100	6.75E+03	1.50E+06	1.14E+06	1.82E+02	8.77E+06	4.47E+04	4.50E+02	1.02E+07	7.62E+04	1.76E+04	
-04	Road 9	9	0100-0200	1.12E+02	7.92E+06	2.15E+06	1.62E+02	4.41E+07	1.20E+07	7.99E+02	5.20E+07	1.41E+03	1.73E+07	
-04	Road 9	9	0200-0300	1.12E+02	7.92E+06	2.15E+06	1.62E+02	4.41E+07	1.20E+07	7.99E+02	5.20E+07	1.41E+03	1.73E+07	
-04	Road 9	9	0300-0400	1.12E+02	7.92E+06	2.15E+06	1.62E+02	4.41E+07	1.20E+07	7.99E+02	5.20E+07	1.41E+03	1.73E+07	
-04	Road 9	9	0400-0500	1.12E+02	7.92E+06	2.15E+06	1.62E+02	4.41E+07	1.20E+07	7.99E+02	5.20E+07	1.41E+03	1.73E+07	
-04	Road 9	9	0500-0600	1.12E+02	7.92E+06	2.15E+06	1.62E+02	4.41E+07	1.20E+07	7.99E+02	5.20E+07	1.41E+03	1.73E+07	
-04	Road 9	9	0600-0700	1.12E+02	7.92E+06	2.15E+06	1.62E+02	4.41E+07	1.20E+07	7.99E+02	5.20E+07	1.41E+03	1.73E+07	
-04	Road 9	9	0700-0800	1.12E+02	7.92E+06	2.15E+06	1.62E+02	4.41E+07	1.20E+07	7.99E+02	5.20E+07	1.41E+03	1.73E+07	
-04	Road 9	9	0800-0900	5.33E+02	1.37E+06	2.02E+05	2.02E+05	1.59E+06	1.41E+02	2.55E+01	6.55E+06	1.78E+02	4.75E+02	
-04	Road 9	9	0900-1000	4.14E+02	8.97E+04	2.43E+06	1.63E+06	9.84E+02	2.10E+05	1.33E+06	4.32E+06	5.80E+03	9.88E+03	
-04	Road 9	9	1000-1100	4.14E+02	8.97E+04	2.43E+06	1.63E+06	9.84E+02	2.10E+05	1.33E+06	4.32E+06	5.80E+03	9.88E+03	
-04	Road 9	9	1100-1200	1.83E+02	6.87E+03	1.23E+06	7.75E+04	4.14E+04	1.91E+02	4.28E+02	9.25E+03	5.55E+03	8.81E+03	
-04	Road 9	9	1200-1300	1.02E+02	2.29E+06	6.21E+03	3.45E+03	7.29E+06	2.10E+02	4.46E+04	1.00E+05	2.72E+02	8.46E+03	
-04	Road 9	9	1300-1400	3.61E+01	3.20E+06	8.66E+04	1.06E+05	2.32E+06	5.96E+04	1.40E+05	3.79E+02	9.93E+02	2.33E+03	
-04	Road 9	9	1400-1500	3.61E+01	3.20E+06	8.66E+04	1.06E+05	2.32E+06	5.96E+04	1.40E+05	3.79E+02	9.93E+02	2.33E+03	
-04	Road 9	9	1500-1600	1.67E+01	4.27E+06	1.41E+06	5.72E+01	4.45E+05	3.02E+02	7.38E+01	1.87E+05	5.06E+02	1.10E+02	
-04	Road 9	9	1600-1700	1.70E+01	4.45E+06	1.21E+06	5.42E+01	4.42E+05	3.84E+02	7.12E+01	1.89E+05	4.02E+02	1.10E+02	
-04	Road 9	9	1700-1800	1.70E+01	4.45E+06	1.21E+06	5.42E+01	4.42E+05	3.84E+02	7.12E+01	1.89E+05	4.02E+02	1.10E+02	
-04	Road 9	9	1800-1900	1.84E+01	2.49E+06	6.78E+04	3.06E+01	8.97E+04	2.34E+02	3.91E+01	1.15E+05	3.10E+02	5.92E+01	
-04	Road 9	9	1900-2000	2.62E+02	1.98E+07	1.03E+06	1.21E+06	2.64E+06	1.42E+03	1.42E+02	3.27E+06	8.76E+03	8.65E+03	
-04	Road 9	9	2000-2100	2.62E+02	1.98E+07	1.03E+06	1.21E+06	2.64E+06	1.42E+03	1.42E+02	3.27E+06	8.76E+03	8.65E+03	
-04	Road 9	9	2100-2200	1.92E+02	3.39E+04	3.92E+04	1.92E+02	1.66E+06	4.56E+03	1.13E+01	2.01E+06	5.45E+04	2.55E+03	
-04	Road 9	9	2200-2300	1.78E+02	3.04E+07	8.24E+04	8.75E+02	5.00E+06	4.05E+03	1.05E+01	1.80E+06	4.88E+03	2.79E+03	
-04	Road 9	9	2300-2400	1.78E+02	3.04E+07	8.24E+04	8.75E+02	5.00E+06	4.05E+03	1.05E+01	1.80E+06	4.88E+03	2.79E+03	
-04	Road 10	10	0000-0100	5.55E+03	2.55E+06	1.96E+04	3.49E+04	4.15E+07	1.04E+04	4.14E+02	1.98E+07	2.40E+05	1.70E+07	
-04	Road 10	10	0100-0200	6.01E+02	6.15E+06	1.51E+07	1.81E+02	4.47E+04	4.37E+02	2.37E+02	4.74E+07	5.93E+04	9.46E+03	
-04	Road 10	10	0200-0300	6.01E+02	6.15E+06	1.51E+07	1.81E+02	4.47E+04	4.37E+02	2.37E+02	4.74E+07	5.93E+04	9.46E+03	
-04	Road 10	10	0300-0400	6.01E+02	6.15E+06	1.51E+07	1.81E+02	4.47E+04	4.37E+02	2.37E+02	4.74E+07	5.93E+04	9.46E+03	
-04	Road 10	10	0400-0500	7.07E+02	5.74E+06	1.40E+06	1.94E+02	5.98E+07	3.86E+04	2.65E+01	2.10E+07	5.26E+04	1.11E+02	
-04	Road 10	10	0500-0600	7.07E+02	5.74E+06	1.40E+06	1.94E+02	5.98E+07	3.86E+04	2.65E+01	2.10E+07	5.26E+04	1.11E+02	
-04	Road 10	10	0600-0700	7.07E+02	5.74E+06	1.40E+06	1.94E+02	5.98E+07	3.86E+04	2.65E+01	2.10E+07	5.26E+04	1.11E+02	
-04	Road 10	10	0700-0800	7.17E+02	3.78E+07	1.87E+04	2.33E+01	1.13E+06	2.76E+03	3.09E+01	1.50E+06	3.68E+03	6.02E+02	
-04	Road 10	10	0800-0900	7.51E+02	4.08E+07	8.99E+04	2.22E+06	2.98E+03	2.99E+01	1.62E+06	3.68E+03	8.96E+02	5.2E+02	
-04	Road 10	10	0900-1000	7.51E+02	4.08E+07	8.99E+04	2.22E+06	2.98E+03	2.99E+01	1.62E+06	3.68E+03	8.96E+02	5.2E+02	
-04	Road 10	10	1000-1100	8.78E+02	4.20E+07	1.03E+04	2.74E+01	1.13E+06	2.89E+03	3.34E+01	1.50E+06	3.92E+03	1.03E+02	
-04	Road 10	10	1100-1200	8.63E+02	3.97E+07	8.72E+04	2.41E+06	1.11E+07	2.72E+03	3.28E+01	1.51E+06	3.70E+03	1.03E+02	
-04	Road 10	10	1200-1300	8.63E+02	3.97E+07	8.72E+04	2.41E+06	1.11E+07	2.72E+03	3.28E+01	1.51E+06	3.70E+03	1.03E+02	
-04	Road 10	10	1300-1400	8.49E+02	2.99E+07	6.59E+04	2.40E+06	1.07E+07	1.67E+03	3.35E+01	9.52E+07	2.33E+04	3.71E+02	
-04	Road 10	10	1400-1500	9.27E+02	2.68E+07	6.56E+04	2.39E+06	8.60E+07	1.66E+03	3.28E+01	9.48E+07	2.32E+04	3.71E+02	
-04	Road 10	10	1500-1600	9.33E+02	2.74E+07	6.78E+04	2.42E+06	8.99E+07	1.73E+03	3.35E+01	9.83E+07	2.41E+04	3.18E+02	
-04	Road 10	10	1600-1700	9.33E+02	2.74E+07	6.78E+04	2.42E+06							

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tising Yi North Underground Quarry
Open Road 24 hour Emission Factors for Year 2043

AERMOD model (February)			NO _x Emission						NO _x Emission					
Road Name	Road ID	Hour	MonthlyHourEmission			MonthlyHourAverage			MonthlyHourEmission			MonthlyHourAverage		
			g/km ³ /hr	g/m ³	tonne/hour	g/km ³ /hr	g/m ³	tonne/hour	g/km ³ /hr	g/m ³	tonne/hour	g/km ³ /hr	g/m ³	tonne/hour
Road 11	11	0000-0100	3.292	1.848	0.577	1.254	0.607	1.373	1.496	1.188	1.638	0.548	0.338	4.498
Road 11	11	0100-0200	2.628	1.362	0.428	1.062	0.507	1.162	1.762	1.412	1.482	0.502	0.302	3.982
Road 11	11	0200-0300	2.892	1.127	0.574	1.381	0.547	0.784	1.674	1.647	0.948	0.508	0.218	0.308
Road 11	11	0300-0400	3.212	1.067	0.471	1.514	0.454	0.785	1.774	0.547	1.768	0.414	0.328	2.688
Road 11	11	0400-0500	2.602	1.362	0.428	1.062	0.507	1.162	1.482	0.502	1.482	0.502	0.302	3.982
Road 11	11	0500-0600	3.382	1.947	0.574	2.774	0.581	0.987	0.272	1.928	1.538	0.548	0.318	0.378
Road 11	11	0600-0700	3.632	4.377	0.714	1.178	2.088	0.228	2.098	0.228	3.538	0.638	0.188	0.118
Road 11	11	0700-0800	4.127	1.198	0.674	1.674	0.208	0.108	1.448	0.258	6.298	0.818	0.788	1.957
Road 11	11	0800-0900	4.832	1.198	0.674	1.674	0.208	0.108	1.448	0.258	6.298	0.818	0.788	1.957
Road 11	11	0900-1000	5.612	1.178	0.298	2.098	0.108	0.178	2.858	0.638	9.108	0.638	1.548	2.738
Road 11	11	1000-1100	0.638	1.398	1.852	0.214	4.618	0.608	2.748	0.518	0.398	0.428	1.298	1.948
Road 11	11	1100-1200	0.588	2.588	2.588	0.318	3.318	0.318	3.318	0.318	0.588	0.318	0.588	0.318
Road 11	11	1200-1300	0.748	1.948	2.588	2.574	0.148	8.608	0.348	1.988	1.128	1.738	1.807	2.528
Road 11	11	1300-1400	0.878	2.028	2.688	2.778	0.798	0.528	0.538	0.808	1.238	1.618	1.907	2.607
Road 11	11	1400-1500	0.828	2.028	2.688	2.778	0.798	0.528	0.538	0.808	1.238	1.618	1.907	2.607
Road 11	11	1500-1600	0.878	2.028	2.688	2.778	0.798	0.528	0.538	0.808	1.238	1.618	1.907	2.607
Road 11	11	1600-1700	1.658	2.114	2.538	3.014	2.708	1.508	0.648	1.358	2.758	2.014	2.814	2.814
Road 11	11	1700-1800	1.658	2.114	2.538	2.968	2.618	0.228	1.018	0.388	0.438	1.818	1.878	0.308
Road 11	11	1800-1900	1.048	1.348	1.348	1.348	0.228	0.228	0.228	0.228	0.228	0.228	0.228	0.228
Road 11	11	1900-2000	1.348	1.348	1.348	1.348	0.228	0.228	0.228	0.228	0.228	0.228	0.228	0.228
Road 11	11	2000-2100	3.072	7.298	0.714	1.318	3.258	0.458	1.698	0.378	5.568	0.448	0.108	1.478
Road 11	11	2100-2200	3.072	5.907	1.714	1.438	2.638	0.688	1.748	0.318	4.458	0.438	0.758	0.508
Road 11	11	2200-2300	2.988	5.848	1.668	1.774	2.668	0.778	1.778	0.318	4.458	0.438	0.758	0.508
Road 11	11	2300-2400	2.698	4.738	0.674	1.608	2.408	0.368	0.438	0.288	0.408	0.418	0.728	0.108
Road 12	12	0000-0100	2.258	1.415	0.457	1.062	0.867	0.663	0.975	0.737	0.910	0.303	0.191	0.254
Road 12	12	0100-0200	2.314	1.407	0.458	1.268	0.811	0.928	0.628	1.121	0.432	0.386	0.218	0.308
Road 12	12	0200-0300	2.368	1.414	0.457	1.268	0.811	0.918	0.634	1.124	0.437	0.387	0.219	0.309
Road 12	12	0300-0400	2.374	1.417	0.457	1.271	0.812	0.927	0.628	1.126	0.437	0.387	0.219	0.309
Road 12	12	0400-0500	2.378	1.417	0.457	1.271	0.812	0.927	0.628	1.126	0.437	0.387	0.219	0.309
Road 12	12	0500-0600	2.374	1.417	0.457	1.271	0.812	0.927	0.628	1.126	0.437	0.387	0.219	0.309
Road 12	12	0600-0700	2.378	1.417	0.457	1.271	0.812	0.927	0.628	1.126	0.437	0.387	0.219	0.309
Road 12	12	0700-0800	2.378	1.417	0.457	1.271	0.812	0.927	0.628	1.126	0.437	0.387	0.219	0.309
Road 12	12	0800-0900	2.378	1.417	0.457	1.271	0.812	0.927	0.628	1.126	0.437	0.387	0.219	0.309
Road 12	12	0900-1000	2.378	1.417	0.457	1.271	0.812	0.927	0.628	1.126	0.437	0.387	0.219	0.309
Road 12	12	1000-1100	2.378	1.417	0.457	1.271	0.812	0.927	0.628	1.126	0.437	0.387	0.219	0.309
Road 12	12	1100-1200	2.378	1.417	0.457	1.271	0.812	0.927	0.628	1.126	0.437	0.387	0.219	0.309
Road 12	12	1200-1300	2.378	1.417	0.457	1.271	0.812	0.927	0.628	1.126	0.437	0.387	0.219	0.309
Road 12	12	1300-1400	2.378	1.417	0.457	1.271	0.812	0.927	0.628	1.126	0.437	0.387	0.219	0.309
Road 12	12	1400-1500	2.378	1.417	0.457	1.271	0.812	0.927	0.628	1.126	0.437	0.387	0.219	0.309
Road 12	12	1500-1600	2.378	1.417	0.457	1.271	0.812	0.927	0.628	1.126	0.437	0.387	0.219	0.309
Road 12	12	1600-1700	2.378	1.417	0.457	1.271	0.812	0.927	0.628	1.126	0.437	0.387	0.219	0.309
Road 12	12	1700-1800	2.378	1.417	0.457	1.271	0.812	0.927	0.628	1.126	0.437	0.387	0.219	0.309
Road 12	12	1800-1900	2.378	1.417	0.457	1.271	0.812	0.927	0.628	1.126	0.437	0.387	0.219	0.309
Road 12	12	1900-2000	2.378	1.417	0.457	1.271	0.812	0.927	0.628	1.126	0.437	0.387	0.219	0.309
Road 12	12	2000-2100	2.378	1.417	0.457	1.271	0.812	0.927	0.628	1.126	0.437	0.387	0.219	0.309
Road 12	12	2100-2200	2.378	1.417	0.457	1.271	0.812	0.927	0.628	1.126	0.437	0.387	0.219	0.309
Road 12	12	2200-2300	2.378	1.417	0.457	1.271	0.812	0.927	0.628	1.126	0.437	0.387	0.219	0.309
Road 12	12	2300-2400	2.378	1.417	0.457	1.271	0.812	0.927	0.628	1.126	0.437	0.387	0.219	0.309
Road 13	13	0000-0100	2.248	1.407	0.457	1.268	0.811	0.918	0.628	1.121	0.432	0.386	0.218	0.308
Road 13	13	0100-0200	2.248	1.407	0.457	1.268	0.811	0.918	0.628	1.121	0.432	0.386	0.218	0.308
Road 13	13	0200-0300	2.248	1.407	0.457	1.268	0.811	0.918	0.628	1.121	0.432	0.386	0.218	0.308
Road 13	13	0300-0400	2.248	1.407	0.457	1.268	0.811	0.918	0.628	1.121	0.432	0.386	0.218	0.308
Road 13	13	0400-0500	2.248	1.407	0.457	1.268	0.811	0.918	0.628	1.121	0.432	0.386	0.218	0.308
Road 13	13	0500-0600	2.248	1.407	0.457	1.268	0.811	0.918	0.628	1.121	0.432	0.386	0.218	0.308
Road 13	13	0600-0700	2.248	1.407	0.457	1.268	0.811	0.918	0.628	1.121	0.432	0.386	0.218	0.308
Road 13	13	0700-0800	2.248	1.407	0.457	1.268	0.811	0.918	0.628	1.121	0.432	0.386	0.218	0.308
Road 13	13	0800-0900	2.248	1.407	0.457	1.268	0.811	0.918	0.628	1.121	0.432	0.386	0.218	0.308
Road 13	13	0900-1000	2.248	1.407	0.457	1.268	0.811	0.918	0.628	1.121	0.432	0.386	0.218	0.308
Road 13	13	1000-1100	2.248	1.407	0.457	1.268	0.811	0.918	0.628	1.121	0.432	0.386	0.218	0.308
Road 13	13	1100-1200	2.248	1.407	0.457	1.268	0.811	0.918	0.628	1.121	0.432	0.386	0.218	0.308
Road 13	13	1200-1300	2.248	1.407	0.457	1.268	0.811	0.918	0.628	1.121	0.432	0.386	0.218	0.308
Road 13	13	1300-1400	2.248	1.407	0.457	1.268	0.811	0.918	0.628	1.121	0.432	0.386	0.218	0.308
Road 13	13	1400-1500	2.248	1.407	0.457	1.268	0.811	0.918	0.628	1.121	0.432	0.386	0.218	0.308
Road 13	13	1500-1600	2.248	1.407	0.457	1.268	0.811	0.918	0.628	1.121	0.432	0.386	0.218	0.308
Road 13	13	1600-1700	2.248	1.407	0.457	1.268	0.811	0.918	0.628	1.121	0.432	0.386	0.218	0.308
Road 13	13	1700-1800	2.248	1.407	0.457	1.268	0.811	0.918	0.628	1.121	0.432	0.386	0.218	0.308
Road 13	13	1800-1900	2.248	1.407	0.457	1.268	0.811	0.918	0.628	1.121	0.432	0.386	0.218	0.308
Road 13	13	1900-2000	2.248	1.407	0.457	1.268	0.811	0.918	0.628	1.121	0.432	0.386	0.218	0.308
Road 13	13	2000-2100	2.248	1.407	0.457	1.268	0.811	0.918	0.628	1.121	0.432	0.386	0.218	0.308
Road 13	13	2100-2200	2.248	1.407	0.457	1.268	0.811	0.918	0.628	1.121	0.432	0.386	0.218	0.308
Road 13	13	2200-2300	2.248	1.407	0.457	1.268	0.811	0.918	0.628	1.121	0.432	0.386	0.218	0.308
Road 13	13	2300-2400	2.248	1.407	0.457	1.268	0.811	0.918	0.628	1.121	0.432	0.386	0.218	0.308
Road 14	14	0000-0100	3.292	1.848	0.577	1.254	0.607	1.373	1.496	1.188	1.638	0.548	0.338	4.498
Road 14	14	0100-0200	2.628	1.362	0.428	1.062	0.507	1.162	1.762	1.412	1.482	0.502	0.302	3.982
Road 14	14	0200-0300	2.892	1.127	0.574	1.381	0.547	0.784	1.674	1.647	0.948	0.508	0.218	0.308
Road 14	14	0300-0400	3.212	1.067	0.471	1.514	0.454	0.785	1.774	0.547	1.768	0.414	0.328	2.688
Road 14	14	0400-0500	2.602	1.362	0.428	1.062	0.507	1.162	1.482	0.502	1.482	0.502	0.302	3.982
Road 14	14	0500-0600	3.382	1.947	0.574	2.774	0.581	0.987	0.272	1.928	1.538	0.548	0.318	0.378
Road 14	14	0600-0700	3.632	4.377	0.714	1.178	2.088							

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for Year 2043

AERMOD model (February)			NO _x Emission										NO ₂ Emission											
Row Name	Road ID	Hour	g/min/m			t/month/m			Monthly/Average			t/month/m			Monthly/Average			t/month/m			Monthly/Average			
			g/min	g/min	g/min	tonne	hour	g/min	g/min	g/min	g/min	g/min	g/min	g/min	tonne	hour	g/min	g/min	g/min	g/min	g/min	tonne	hour	
Road 14	14	0800-0900	3111.02	8.6997	5.5383	1.1651	3311.02	2.0682	1.4741	4.1967	8.6112	4.0983	1.1657	7.07	1.33	3311.02	2.0682	1.4741	4.1967	8.6112	4.0983	1.1657	7.07	
Road 14	14	0900-1000	3152.02	8.8247	5.6383	1.1873	3352.02	2.1082	1.4967	4.2567	8.7612	4.1583	1.1873	7.17	1.33	3352.02	2.1082	1.4967	4.2567	8.7612	4.1583	1.1873	7.17	
Road 14	14	1000-1100	3306.02	8.9597	5.7063	1.3381	2936.02	1.8372	1.7671	3.7885	4.2352	5.2882	1.1387	7.77	1.33	3306.02	8.9597	5.7063	1.3381	2936.02	1.8372	1.7671	3.7885	
Road 14	14	1100-1200	3666.02	9.4767	4.8383	1.3381	2686.02	1.6762	1.6961	4.3362	2.1352	5.0583	1.1037	6.07	1.33	3666.02	9.4767	4.8383	1.3381	2686.02	1.6762	1.6961	4.3362	
Road 14	14	1200-1300	3336.02	9.3997	5.3383	1.3381	2736.02	1.8372	1.7671	3.7885	4.2352	5.2882	1.1387	7.77	1.33	3336.02	9.3997	5.3383	1.3381	2736.02	1.8372	1.7671	3.7885	
Road 14	14	1300-1400	5136.02	1.3967	7.9563	1.8221	4481	2.7862	2.3424	3.7885	6.8682	5.6738	1.6667	9.77	1.33	5136.02	1.3967	7.9563	1.8221	4481	2.7862	2.3424	3.7885	
Road 14	14	1400-1500	5126.02	1.3967	8.2112	1.8716	4526	2.8112	2.2711	3.8467	5.6482	6.6483	1.7117	9.07	1.33	5126.02	1.3967	8.2112	1.8716	4526	2.8112	2.2711	3.8467	
Road 14	14	1500-1600	4976.02	1.3112	8.1883	1.8461	4496	2.6082	2.3367	3.5176	5.8442	6.4963	1.7117	9.07	1.33	4976.02	1.3112	8.1883	1.8461	4496	2.6082	2.3367	3.5176	
Road 14	14	1600-1700	4716.02	1.1967	8.1883	1.7471	4316	2.6082	2.2867	3.4576	5.8442	6.4963	1.7117	9.07	1.33	4716.02	1.1967	8.1883	1.7471	4316	2.6082	2.2867	3.4576	
Road 14	14	1700-1800	3806.02	1.1267	6.9883	1.4471	4316	2.6082	1.8961	3.6576	5.8442	6.4963	1.7117	9.07	1.33	3806.02	1.1267	6.9883	1.4471	4316	2.6082	1.8961	3.6576	
Road 14	14	1800-1900	2846.02	8.5997	5.5953	1.0801	3286	2.0442	1.3714	4.1468	5.9882	7.0763	1.1027	6.07	1.33	2846.02	8.5997	5.5953	1.0801	3286	2.0442	1.3714	4.1468	
Road 14	14	1900-2000	2846.02	8.5997	5.5953	1.0801	3286	2.0442	1.3714	4.1468	5.9882	7.0763	1.1027	6.07	1.33	2846.02	8.5997	5.5953	1.0801	3286	2.0442	1.3714	4.1468	
Road 14	14	2000-2100	1686.02	2.0467	1.8963	6.0082	1446	2.0467	8.9668	3.6682	1.7682	0.9592	2.5563	5.9262	1.33	1686.02	2.0467	1.8963	6.0082	1446	2.0467	8.9668	3.6682	
Road 14	14	2100-2200	1616.02	2.9067	1.7567	1.8963	6.0082	1446	2.0467	8.9668	3.6682	1.7682	0.9592	2.5563	5.9262	1.33	1616.02	2.9067	1.7567	1.8963	6.0082	1446	2.0467	8.9668
Road 15	15	0800-0900	3366.02	9.1997	5.7383	1.3381	2936.02	1.8372	1.7671	3.7885	4.2352	5.2882	1.1387	7.77	1.33	3366.02	9.1997	5.7383	1.3381	2936.02	1.8372	1.7671	3.7885	
Road 15	15	0900-1000	3366.02	9.1997	5.7383	1.3381	2936.02	1.8372	1.7671	3.7885	4.2352	5.2882	1.1387	7.77	1.33	3366.02	9.1997	5.7383	1.3381	2936.02	1.8372	1.7671	3.7885	
Road 15	15	1000-1100	3366.02	9.1997	5.7383	1.3381	2936.02	1.8372	1.7671	3.7885	4.2352	5.2882	1.1387	7.77	1.33	3366.02	9.1997	5.7383	1.3381	2936.02	1.8372	1.7671	3.7885	
Road 15	15	1100-1200	3366.02	9.1997	5.7383	1.3381	2936.02	1.8372	1.7671	3.7885	4.2352	5.2882	1.1387	7.77	1.33	3366.02	9.1997	5.7383	1.3381	2936.02	1.8372	1.7671	3.7885	
Road 15	15	1200-1300	3366.02	9.1997	5.7383	1.3381	2936.02	1.8372	1.7671	3.7885	4.2352	5.2882	1.1387	7.77	1.33	3366.02	9.1997	5.7383	1.3381	2936.02	1.8372	1.7671	3.7885	
Road 15	15	1300-1400	5136.02	1.3967	7.9563	1.8221	4481	2.7862	2.3424	3.7885	6.8682	5.6738	1.6667	9.77	1.33	5136.02	1.3967	7.9563	1.8221	4481	2.7862	2.3424	3.7885	
Road 15	15	1400-1500	5126.02	1.3967	8.2112	1.8716	4526	2.8112	2.2711	3.8467	5.6482	6.6483	1.7117	9.07	1.33	5126.02	1.3967	8.2112	1.8716	4526	2.8112	2.2711	3.8467	
Road 15	15	1500-1600	4976.02	1.3112	8.1883	1.8461	4496	2.6082	2.3367	3.5176	5.8442	6.4963	1.7117	9.07	1.33	4976.02	1.3112	8.1883	1.8461	4496	2.6082	2.3367	3.5176	
Road 15	15	1600-1700	4716.02	1.1967	8.1883	1.7471	4316	2.6082	2.2867	3.4576	5.8442	6.4963	1.7117	9.07	1.33	4716.02	1.1967	8.1883	1.7471	4316	2.6082	2.2867	3.4576	
Road 15	15	1700-1800	3806.02	1.1267	6.9883	1.4471	4316	2.6082	1.8961	3.6576	5.8442	6.4963	1.7117	9.07	1.33	3806.02	1.1267	6.9883	1.4471	4316	2.6082	1.8961	3.6576	
Road 15	15	1800-1900	2846.02	8.5997	5.5953	1.0801	3286	2.0442	1.3714	4.1468	5.9882	7.0763	1.1027	6.07	1.33	2846.02	8.5997	5.5953	1.0801	3286	2.0442	1.3714	4.1468	
Road 15	15	1900-2000	2846.02	8.5997	5.5953	1.0801	3286	2.0442	1.3714	4.1468	5.9882	7.0763	1.1027	6.07	1.33	2846.02	8.5997	5.5953	1.0801	3286	2.0442	1.3714	4.1468	
Road 15	15	2000-2100	1686.02	2.0467	1.8963	6.0082	1446	2.0467	8.9668	3.6682	1.7682	0.9592	2.5563	5.9262	1.33	1686.02	2.0467	1.8963	6.0082	1446	2.0467	8.9668	3.6682	
Road 15	15	2100-2200	1616.02	2.9067	1.7567	1.8963	6.0082	1446	2.0467	8.9668	3.6682	1.7682	0.9592	2.5563	5.9262	1.33	1616.02	2.9067	1.7567	1.8963	6.0082	1446	2.0467	8.9668
Road 16	16	0800-0900	3366.02	9.1997	5.7383	1.3381	2936.02	1.8372	1.7671	3.7885	4.2352	5.2882	1.1387	7.77	1.33	3366.02	9.1997	5.7383	1.3381	2936.02	1.8372	1.7671	3.7885	
Road 16	16	0900-1000	3366.02	9.1997	5.7383	1.3381	2936.02	1.8372	1.7671	3.7885	4.2352	5.2882	1.1387	7.77	1.33	3366.02	9.1997	5.7383	1.3381	2936.02	1.8372	1.7671	3.7885	
Road 16	16	1000-1100	3366.02	9.1997	5.7383	1.3381	2936.02	1.8372	1.7671	3.7885	4.2352	5.2882	1.1387	7.77	1.33	3366.02	9.1997	5.7383	1.3381	2936.02	1.8372	1.7671	3.7885	
Road 16	16	1100-1200	3366.02	9.1997	5.7383	1.3381	2936.02	1.8372	1.7671	3.7885	4.2352	5.2882	1.1387	7.77	1.33	3366.02	9.1997	5.7383	1.3381	2936.02	1.8372	1.7671	3.7885	
Road 16	16	1200-1300	3366.02	9.1997	5.7383	1.3381	2936.02	1.8372	1.7671	3.7885	4.2352	5.2882	1.1387	7.77	1.33	3366.02	9.1997	5.7383	1.3381	2936.02	1.8372	1.7671	3.7885	
Road 16	16	1300-1400	5136.02	1.3967	7.9563	1.8221	4481	2.7862	2.3424	3.7885	6.8682	5.6738	1.6667	9.77	1.33	5136.02	1.3967	7.9563	1.8221	4481	2.7862	2.3424	3.7885	
Road 16	16	1400-1500	5126.02	1.3967	8.2112	1.8716	4526	2.8112	2.2711	3.8467	5.6482	6.6483	1.7117	9.07	1.33	5126.02	1.3967	8.2112	1.8716	4526	2.8112	2.2711	3.8467	
Road 16	16	1500-1600	4976.02	1.3112	8.1883	1.8461	4496	2.6082	2.3367	3.5176	5.8442	6.4963	1.7117	9.07	1.33	4976.02	1.3112	8.1883	1.8461	4496	2.6082	2.3367	3.5176	
Road 16	16	1600-1700	4716.02	1.1967	8.1883	1.7471	4316	2.6082	2.2867	3.4576	5.8442	6.4963	1.7117	9.07	1.33	4716.02	1.1967	8.1883	1.7471	4316	2.6082	2.2867	3.4576	
Road 16	16	1700-1800	3806.02	1.1267	6.9883	1.4471	4316	2.6082	1.8961	3.6576	5.8442	6.4963	1.7117	9.07	1.33	3806.02	1.1267	6.9883	1.4471	4316	2.6082	1.8961	3.6576	
Road 16	16	1800-1900	2846.02	8.5997	5.5953	1.0801	3286	2.0442	1.3714	4.1468	5.9882	7.0763	1.1027	6.07	1.33	2846.02	8.5997	5.5953	1.0801	3286	2.0442	1.3714	4.1468	
Road 16	16	1900-2000	2846.02	8.5997	5.5953	1.0801	3286	2.0442	1.3714	4.1468	5.9882	7.0763	1.1027	6.07	1.33	2846.02	8.5997	5.5953	1.0801	3286	2.0442	1.3714	4.1468	
Road 16	16	2000-2100	1686.02	2.0467	1.8963	6.0082	1446	2.0467	8.9668	3.6682	1.7682	0.9592	2.5563	5.9262	1.33	1686.02	2.0467	1.8963	6.0082	1446	2.0467	8.9668	3.6682	
Road 16	16	2100-2200	1616.02	2.9067	1.7567	1.8963	6.0082	1446	2.0467	8.9668	3.6682	1.7682	0.9592	2.5563	5.9262	1.33	1616.02	2.9067	1.7567	1.8963	6.0082	1446	2.0467	8.9668
Road 17	17	0800-0900	3366.02	9.1997	5.7383	1.3381	2936.02	1.8372	1.7671	3.7885	4.2352	5.2882	1.1387	7.77	1.33	3366.02	9.1997	5.7383	1.3381	2936.02	1.8372	1.7671	3.7885	
Road 17	17	0900-1000	3366.02	9.1997	5.7383	1.3381	2936.02	1.8372	1.7671	3.7885	4.2352	5.2882	1.1387	7.77	1.33	3366.02	9.1997	5.7383	1.3381	2936.02	1.8372	1.7671	3.7885	
Road 17	17	1000-1100	3366.02	9.1997	5.7383	1.3381	2936.02	1.8372	1.7671	3.7885	4.2352	5.2882	1.1387	7.77	1.33	3366.02	9.1997	5.7383	1.3381	2936.02	1.8372	1.7671	3.7885	
Road 17	17	1100-1200	3366.02	9.1997	5.7383	1.3381	2936.02	1.8372	1.7671	3.7885	4.2352	5.2882	1.1387	7.77	1.33	3366.02	9.1997	5.7383	1.3381	2936.02	1.8372	1.7671	3.7885	

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for Year 2043

AFPMCD model (February)			NO _x Emission						NO Emission						
Row Name	Row ID	Hour	MonthlyHourMin			MonthlyHourAverage			MonthlyHourMin			MonthlyHourAverage			
			g/mi/h	g/mi	tonne/hour	g/mi/h	g/mi	tonne/hour	g/mi/h	g/mi	tonne/hour	g/mi/h	g/mi	tonne/hour	
Row 17	17	1800-1700	5.67e-02	5.53e-06	1.63e-02	2.02e-01	5.45e-06	5.82e-02	2.59e-01	6.98e-06	7.48e-02	7.41e-02	2.00e-07		
Row 17	17	1800-1700	5.67e-02	5.53e-06	1.63e-02	2.02e-01	5.45e-06	5.82e-02	2.59e-01	6.98e-06	7.48e-02	7.41e-02	2.00e-07		
Row 17	17	1800-1900	2.03e-02	2.47e-07	5.84e-03	8.79e-02	2.13e-06	2.53e-02	1.08e-01	2.91e-06	3.11e-02	3.61e-02	9.72e-08		
Row 17	17	1900-2000	1.16e-02	3.37e-07	5.34e-03	5.64e-02	1.17e-06	1.23e-02	6.80e-02	1.39e-06	1.48e-02	2.67e-03	4.75e-08		
Row 17	17	2000-2100	9.28e-03	9.31e-07	1.25e-02	1.53e-02	1.25e-06	1.53e-02	1.53e-02	1.53e-06	1.53e-02	1.53e-02	1.53e-06		
Row 17	17	2100-2200	9.28e-03	9.31e-07	1.25e-02	1.53e-02	1.25e-06	1.53e-02	1.53e-02	1.53e-06	1.53e-02	1.53e-02	1.53e-06		
Row 17	17	2200-2300	9.28e-03	9.31e-07	1.25e-02	1.53e-02	1.25e-06	1.53e-02	1.53e-02	1.53e-06	1.53e-02	1.53e-02	1.53e-06		
Row 17	17	2300-0000	9.77e-03	1.18e-07	1.21e-02	3.09e-02	5.91e-07	6.31e-03	6.07e-02	7.04e-07	7.57e-02	7.59e-02	3.01e-08		
Row 18	18	0100-0200	7.66e-03	7.66e-07	5.14e-06	4.18e-02	2.51e-07	3.01e-03	4.69e-02	2.51e-07	3.01e-03	3.79e-02	1.91e-08		
Row 18	18	0200-0300	7.90e-03	2.99e-08	4.27e-04	4.02e-02	1.67e-07	2.38e-03	5.10e-02	1.97e-07	2.86e-02	1.99e-02	7.55e-09		
Row 18	18	0300-0400	8.15e-03	4.15e-08	4.75e-04	4.75e-02	1.58e-07	2.59e-03	5.66e-02	1.98e-07	2.68e-02	2.68e-02	7.70e-09		
Row 18	18	0400-0500	9.14e-03	3.04e-08	5.37e-04	4.75e-02	1.58e-07	2.59e-03	5.66e-02	1.98e-07	2.68e-02	2.68e-02	7.70e-09		
Row 18	18	0500-0600	9.25e-03	3.31e-08	5.70e-04	4.89e-02	2.78e-07	3.98e-03	5.73e-02	3.31e-07	4.75e-02	2.37e-02	1.36e-08		
Row 18	18	0600-0700	1.17e-03	1.17e-07	8.17e-06	1.17e-02	1.17e-07	8.17e-06	1.17e-02	1.17e-07	8.17e-06	1.17e-02	8.17e-06		
Row 18	18	0700-0800	1.02e-02	2.65e-07	3.75e-04	5.24e-02	1.31e-06	1.87e-02	6.27e-02	1.57e-06	2.26e-02	2.65e-02	6.67e-08		
Row 18	18	0800-0900	1.02e-02	9.96e-07	4.22e-02	4.92e-02	1.43e-06	2.04e-02	5.94e-02	1.73e-06	2.46e-02	2.63e-02	7.63e-08		
Row 18	18	0900-1000	1.02e-02	9.96e-07	4.22e-02	4.92e-02	1.43e-06	2.04e-02	5.94e-02	1.73e-06	2.46e-02	2.63e-02	7.63e-08		
Row 18	18	1000-1100	1.03e-02	9.96e-07	4.22e-02	4.92e-02	1.43e-06	2.04e-02	5.94e-02	1.73e-06	2.46e-02	2.63e-02	7.63e-08		
Row 18	18	1100-1200	1.29e-02	2.65e-07	3.75e-04	5.82e-02	1.70e-06	1.71e-02	7.10e-02	1.46e-06	2.06e-02	3.47e-02	7.63e-08		
Row 18	18	1200-1300	1.69e-02	5.58e-07	1.11e-03	6.52e-02	1.49e-06	2.09e-02	6.12e-02	1.62e-06	2.06e-02	4.27e-02	8.04e-08		
Row 18	18	1300-1400	1.69e-02	5.58e-07	1.11e-03	6.52e-02	1.49e-06	2.09e-02	6.12e-02	1.62e-06	2.06e-02	4.27e-02	8.04e-08		
Row 18	18	1400-1500	1.61e-02	9.94e-07	5.62e-03	6.64e-02	1.62e-06	2.31e-02	8.75e-02	2.02e-06	2.08e-02	4.37e-02	1.06e-07		
Row 18	18	1500-1600	1.49e-02	3.75e-07	5.35e-03	6.69e-02	1.68e-06	2.40e-02	8.19e-02	2.05e-06	2.93e-02	4.11e-02	1.03e-07		
Row 18	18	1600-1700	1.49e-02	3.75e-07	5.35e-03	6.69e-02	1.68e-06	2.40e-02	8.19e-02	2.05e-06	2.93e-02	4.11e-02	1.03e-07		
Row 18	18	1700-1800	1.16e-02	3.28e-07	4.68e-03	5.64e-02	1.59e-06	2.27e-02	6.80e-02	1.92e-06	2.74e-02	3.10e-02	8.76e-08		
Row 18	18	1800-1900	8.32e-03	4.26e-07	4.93e-03	4.18e-02	1.22e-06	1.78e-02	5.03e-02	1.46e-06	2.06e-02	2.21e-02	4.61e-08		
Row 18	18	1900-2000	5.42e-03	1.56e-07	1.51e-03	1.51e-02	1.51e-06	1.51e-02	1.51e-02	1.51e-06	1.51e-02	1.51e-02	1.51e-06		
Row 18	18	2000-2100	6.68e-03	1.18e-07	6.68e-03	4.12e-02	7.24e-07	1.02e-02	4.78e-02	8.42e-07	1.29e-02	1.16e-02	3.10e-08		
Row 18	18	2100-2200	6.26e-03	1.10e-07	1.57e-03	4.07e-02	7.16e-07	1.02e-02	4.70e-02	8.26e-07	1.16e-02	1.06e-02	2.91e-08		
Row 18	18	2200-2300	6.03e-03	1.03e-07	1.51e-03	4.07e-02	7.16e-07	1.02e-02	4.70e-02	8.26e-07	1.16e-02	1.06e-02	2.91e-08		
Row 18	18	2300-0000	6.90e-03	6.83e-08	2.26e-04	4.15e-02	5.31e-07	7.58e-03	4.46e-02	6.29e-07	8.84e-02	1.78e-02	2.27e-08		
Row 19	19	0000-0100	8.36e-03	6.92e-08	1.27e-04	4.62e-02	3.82e-07	4.02e-03	5.48e-02	4.52e-07	4.76e-02	2.17e-02	8.04e-08		
Row 19	19	0100-0200	9.21e-03	3.04e-08	3.38e-04	4.81e-02	2.63e-07	2.77e-03	6.73e-02	3.13e-07	3.38e-02	2.41e-02	1.36e-08		
Row 19	19	0200-0300	9.21e-03	3.04e-08	3.38e-04	4.81e-02	2.63e-07	2.77e-03	6.73e-02	3.13e-07	3.38e-02	2.41e-02	1.36e-08		
Row 19	19	0300-0400	9.12e-03	5.59e-08	7.76e-04	5.30e-02	1.77e-07	1.82e-03	6.50e-02	2.09e-07	2.26e-02	2.87e-02	9.36e-09		
Row 19	19	0400-0500	1.15e-02	4.47e-08	3.93e-04	5.49e-02	1.98e-07	2.08e-03	6.61e-02	2.39e-07	2.53e-02	3.02e-02	1.02e-08		
Row 19	19	0500-0600	1.15e-02	4.47e-08	3.93e-04	5.49e-02	1.98e-07	2.08e-03	6.61e-02	2.39e-07	2.53e-02	3.02e-02	1.02e-08		
Row 19	19	0600-0700	1.22e-02	1.66e-07	1.79e-03	5.64e-02	7.94e-07	8.94e-07	7.67e-02	9.60e-07	1.01e-02	3.24e-02	4.37e-08		
Row 19	19	0700-0800	1.34e-02	1.74e-07	9.94e-04	6.20e-02	7.73e-07	1.82e-05	7.44e-02	1.11e-06	2.21e-02	3.47e-02	9.70e-08		
Row 19	19	0800-0900	1.34e-02	1.74e-07	9.94e-04	6.20e-02	7.73e-07	1.82e-05	7.44e-02	1.11e-06	2.21e-02	3.47e-02	9.70e-08		
Row 19	19	0900-1000	1.51e-02	3.38e-07	4.61e-03	6.70e-02	1.94e-06	2.04e-02	8.21e-02	2.38e-07	2.56e-02	4.07e-02	1.18e-08		
Row 19	19	1000-1100	1.72e-02	4.48e-07	4.71e-03	7.13e-02	1.88e-06	1.99e-02	8.88e-02	2.31e-06	2.42e-02	4.88e-02	1.19e-07		
Row 19	19	1100-1200	1.93e-02	5.42e-07	5.74e-03	7.94e-02	2.19e-06	2.19e-02	1.03e-02	2.56e-06	2.63e-02	5.17e-02	1.40e-07		
Row 19	19	1200-1300	2.06e-02	4.92e-07	5.17e-03	7.94e-02	1.98e-06	1.99e-02	1.00e-02	2.56e-06	2.51e-02	5.45e-02	1.30e-07		
Row 19	19	1300-1400	2.06e-02	5.22e-07	5.69e-03	8.26e-02	2.10e-06	2.20e-02	1.03e-01	2.62e-06	2.76e-02	5.51e-02	1.40e-07		
Row 19	19	1400-1500	2.05e-02	3.39e-07	3.69e-03	8.04e-02	2.11e-06	2.21e-02	1.03e-01	2.64e-06	2.76e-02	5.48e-02	1.40e-07		
Row 19	19	1500-1600	1.90e-02	1.10e-07	1.36e-03	4.02e-02	1.75e-06	1.75e-02	6.73e-02	3.13e-07	3.38e-02	2.41e-02	1.36e-08		
Row 19	19	1600-1700	1.94e-02	2.26e-07	5.52e-03	7.69e-02	2.09e-06	2.19e-02	9.62e-02	2.61e-06	2.76e-02	5.17e-02	1.40e-07		
Row 19	19	1700-1800	1.94e-02	4.22e-07	4.44e-03	6.67e-02	1.95e-06	2.04e-02	9.63e-02	2.37e-06	2.49e-02	4.96e-02	1.15e-07		
Row 19	19	1800-1900	1.94e-02	4.22e-07	4.44e-03	6.67e-02	1.95e-06	2.04e-02	9.63e-02	2.37e-06	2.49e-02	4.96e-02	1.15e-07		
Row 19	19	1900-2000	1.96e-02	9.13e-08	8.99e-07	1.89e-02	4.68e-07	9.60e-07	1.01e-02	5.66e-06	1.19e-02	1.21e-02	2.56e-02	5.38e-08	
Row 19	19	2000-2100	9.01e-03	4.57e-07	1.52e-03	4.94e-02	7.95e-07	8.35e-03	5.84e-02	9.36e-07	8.88e-02	2.46e-02	5.19e-08		
Row 19	19	2100-2200	8.88e-03	4.57e-07	1.52e-03	4.94e-02	7.95e-07	8.35e-03	5.84e-02	9.36e-07	8.88e-02	2.46e-02	5.19e-08		
Row 19	19	2200-2300	8.86e-03	3.36e-07	4.24e-03	4.79e-02	7.32e-07	7.71e-03	5.67e-02	8.69e-07	9.14e-02	2.34e-02	3.96e-08		
Row 19	19	2300-0000	9.67e-03	1.17e-07	1.19e-03	4.97e-02	6.83e-07	6.12e-03	5.94e-02	6.96e-07	7.31e-02	2.59e-02	3.02e-08		
Row 19	19	0000-0100	9.67e-03	1.17e-07	1.19e-03	4.97e-02	6.83e-07	6.12e-03	5.94e-02	6.96e-07	7.31e-02	2.59e-02	3.02e-08		
Row 19	19	0100-0200	9.67e-03	1.17e-07	1.19e-03	4.97e-02	6.83e-07	6.12e-03	5.94e-02	6.96e-07	7.31e-02	2.59e-02	3.02e-08		
Row 20	20	0100-0200	3.55e-02	4.68e-08	1.67e-04	1.38e-01	4.99e-08	6.39e-04	1.71e-01	2.29e-07	8.66e-04	7.01e-01	4.91e-08		
Row 20	20	0200-0300	3.66e-02	1.98e-08	3.39e-04	1.39e-01	7.53e-08	5.07e-04	1.76e-01	9.52e-08	6.04e-04	7.21e-01	3.91e-09		
Row 20	20	0300-0400	3.77e-02	7.78e-08	1.12e-04	1.42e-01	6.48e-08	4.33e-04	1.80e-01	8.14e-08	5.49e-04	7.96e-01	3.43e-09		
Row 20	20	0400-0500	3.77e-02	7.78e-08	1.12e-04	1.42e-01	6.48e-08	4.33e-04	1.80e-01	8.14e-08	5.49e-04	7.96e-01	3.43e-09		
Row 20	20	0500-0600	3.77e-02	7.78e-08	1.12e-04	1.42e-01	6.48e-08	4.33e-04	1.80e-01	8.14e-08	5.49e-04	7.96e-01	3.43e-09		
Row 20	20	0600-0700	4.28e-02	9.17e-08	1.74e-04	1.59e-01	9.41e-07	2.30e-03	2.02e-03	4.33e-03	2.91e-03	8.03e-02	1.72e-08		
Row 20	20	0700-0800	4.28e-02	9.17e-08	1.74e-04	1.59e-01	9.41e-07	2.30e-03	2.02e-03	4.33e-03	2.91e-03	8.03e-02	1.72e-08		
Row 20	20	0800-0900	4.28e-02	9.17e-08	1.74e-04	1.59e-01	9.41e-07	2.30e-03	2.02e-03	4.33e-03	2.91e-03	8.03e-02	1.72e-08		
Row 20	20	0900-1000	5.20e-02	8.37e-07	2.02e-03	1.39e-01	1.14e-07	7.67e-03	2.50e-01	1.44e-06	8.96e-02	5.91e-02	5.74e-08		
Row 20	20	1000-1100	5.20e-02	8.37e-07	2.02e-03	1.39e-01	1.14e-07	7.67e-03	2.50e-01	1.44e-06	8.96e-02	5.91e-02	5.74e-08		
Row 20															

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for Year 2043

ASRC model (Fleissman)				NO Emission				NO Emission			
Row Name	Row ID	Hour	MonthlyHour		MonthlyHourAverage		MonthlyHourMin		MonthlyHourMax		
hour			g/kwh	g/s/m	g/kwh	g/s/m	g/kwh	g/s/m	g/kwh	g/s/m	
Row 21	21	0000-0100	9.546	6.268	3.024	4.986	3.276	1.088	5.936	3.906	
Row 21	21	0100-0200	9.546	6.268	3.024	4.986	3.276	1.088	5.936	3.906	
Row 21	21	0200-0300	1.128	3.698	1.788	5.414	1.765	0.748	6.556	4.216	
Row 21	21	0300-0400	1.226	3.218	1.584	5.686	1.496	0.718	6.906	4.186	
Row 21	21	0400-0500	1.226	3.218	1.584	5.686	1.496	0.718	6.906	4.186	
Row 21	21	0500-0600	1.312	6.711	3.284	5.996	3.065	0.748	7.312	3.976	
Row 21	21	0600-0700	1.312	6.711	3.284	5.996	3.065	0.748	7.312	3.976	
Row 21	21	0700-0800	1.536	6.486	3.064	5.686	1.555	0.748	8.316	3.906	
Row 21	21	0800-0900	1.536	6.486	3.064	5.686	1.555	0.748	8.316	3.906	
Row 21	21	0900-1000	1.806	6.486	3.064	5.686	1.806	0.926	8.216	3.116	
Row 21	21	1000-1100	1.806	6.486	3.064	5.686	1.806	0.926	8.216	3.116	
Row 21	21	1100-1200	2.276	2.068	0.784	1.736	0.836	0.786	2.186	0.646	
Row 21	21	1200-1300	2.276	2.068	0.784	1.736	0.836	0.786	2.186	0.646	
Row 21	21	1300-1400	2.266	2.454	0.784	1.836	0.836	1.086	2.186	0.956	
Row 21	21	1400-1500	2.266	2.454	0.784	1.836	0.836	1.086	2.186	0.956	
Row 21	21	1500-1600	2.266	2.454	0.784	1.836	0.836	1.086	2.186	0.956	
Row 21	21	1600-1700	2.266	2.454	0.784	1.836	0.836	1.086	2.186	0.956	
Row 21	21	1700-1800	2.266	2.454	0.784	1.836	0.836	1.086	2.186	0.956	
Row 21	21	1800-1900	2.266	2.454	0.784	1.836	0.836	1.086	2.186	0.956	
Row 21	21	1900-2000	2.266	2.454	0.784	1.836	0.836	1.086	2.186	0.956	
Row 21	21	2000-2100	2.266	2.454	0.784	1.836	0.836	1.086	2.186	0.956	
Row 21	21	2100-2200	2.266	2.454	0.784	1.836	0.836	1.086	2.186	0.956	
Row 21	21	2200-2300	2.266	2.454	0.784	1.836	0.836	1.086	2.186	0.956	
Row 21	21	2300-0000	2.266	2.454	0.784	1.836	0.836	1.086	2.186	0.956	
Row 21	21	0000-0100	1.026	0.276	0.138	0.436	0.436	0.156	0.786	0.156	
Row 21	21	0100-0200	1.026	0.276	0.138	0.436	0.436	0.156	0.786	0.156	
Row 21	21	0200-0300	1.026	0.276	0.138	0.436	0.436	0.156	0.786	0.156	
Row 21	21	0300-0400	1.026	0.276	0.138	0.436	0.436	0.156	0.786	0.156	
Row 21	21	0400-0500	1.026	0.276	0.138	0.436	0.436	0.156	0.786	0.156	
Row 21	21	0500-0600	1.026	0.276	0.138	0.436	0.436	0.156	0.786	0.156	
Row 21	21	0600-0700	1.026	0.276	0.138	0.436	0.436	0.156	0.786	0.156	
Row 21	21	0700-0800	1.026	0.276	0.138	0.436	0.436	0.156	0.786	0.156	
Row 21	21	0800-0900	1.026	0.276	0.138	0.436	0.436	0.156	0.786	0.156	
Row 21	21	0900-1000	1.026	0.276	0.138	0.436	0.436	0.156	0.786	0.156	
Row 21	21	1000-1100	1.026	0.276	0.138	0.436	0.436	0.156	0.786	0.156	
Row 21	21	1100-1200	1.026	0.276	0.138	0.436	0.436	0.156	0.786	0.156	
Row 21	21	1200-1300	1.696	1.136	0.726	1.556	0.996	0.726	1.456	0.396	
Row 21	21	1300-1400	1.696	1.136	0.726	1.556	0.996	0.726	1.456	0.396	
Row 21	21	1400-1500	1.696	1.136	0.726	1.556	0.996	0.726	1.456	0.396	
Row 21	21	1500-1600	1.696	1.136	0.726	1.556	0.996	0.726	1.456	0.396	
Row 21	21	1600-1700	1.696	1.136	0.726	1.556	0.996	0.726	1.456	0.396	
Row 21	21	1700-1800	1.696	1.136	0.726	1.556	0.996	0.726	1.456	0.396	
Row 21	21	1800-1900	1.696	1.136	0.726	1.556	0.996	0.726	1.456	0.396	
Row 21	21	1900-2000	1.696	1.136	0.726	1.556	0.996	0.726	1.456	0.396	
Row 21	21	2000-2100	1.696	1.136	0.726	1.556	0.996	0.726	1.456	0.396	
Row 21	21	2100-2200	1.696	1.136	0.726	1.556	0.996	0.726	1.456	0.396	
Row 21	21	2200-2300	1.696	1.136	0.726	1.556	0.996	0.726	1.456	0.396	
Row 21	21	2300-0000	1.696	1.136	0.726	1.556	0.996	0.726	1.456	0.396	
Row 21	21	0000-0100	0.986	0.276	0.138	0.436	0.436	0.156	0.786	0.156	
Row 21	21	0100-0200	0.986	0.276	0.138	0.436	0.436	0.156	0.786	0.156	
Row 21	21	0200-0300	0.986	0.276	0.138	0.436	0.436	0.156	0.786	0.156	
Row 21	21	0300-0400	0.986	0.276	0.138	0.436	0.436	0.156	0.786	0.156	
Row 21	21	0400-0500	0.986	0.276	0.138	0.436	0.436	0.156	0.786	0.156	
Row 21	21	0500-0600	0.986	0.276	0.138	0.436	0.436	0.156	0.786	0.156	
Row 21	21	0600-0700	0.986	0.276	0.138	0.436	0.436	0.156	0.786	0.156	
Row 21	21	0700-0800	0.986	0.276	0.138	0.436	0.436	0.156	0.786	0.156	
Row 21	21	0800-0900	0.986	0.276	0.138	0.436	0.436	0.156	0.786	0.156	
Row 21	21	0900-1000	0.986	0.276	0.138	0.436	0.436	0.156	0.786	0.156	
Row 21	21	1000-1100	0.986	0.276	0.138	0.436	0.436	0.156	0.786	0.156	
Row 21	21	1100-1200	0.986	0.276	0.138	0.436	0.436	0.156	0.786	0.156	
Row 21	21	1200-1300	1.376	0.896	0.464	1.016	0.576	0.416	1.016	0.256	
Row 21	21	1300-1400	1.376	0.896	0.464	1.016	0.576	0.416	1.016	0.256	
Row 21	21	1400-1500	1.376	0.896	0.464	1.016	0.576	0.416	1.016	0.256	
Row 21	21	1500-1600	1.376	0.896	0.464	1.016	0.576	0.416	1.016	0.256	
Row 21	21	1600-1700	1.376	0.896	0.464	1.016	0.576	0.416	1.016	0.256	
Row 21	21	1700-1800	1.376	0.896	0.464	1.016	0.576	0.416	1.016	0.256	
Row 21	21	1800-1900	1.376	0.896	0.464	1.016	0.576	0.416	1.016	0.256	
Row 21	21	1900-2000	1.376	0.896	0.464	1.016	0.576	0.416	1.016	0.256	
Row 21	21	2000-2100	1.376	0.896	0.464	1.016	0.576	0.416	1.016	0.256	
Row 21	21	2100-2200	1.376	0.896	0.464	1.016	0.576	0.416	1.016	0.256	
Row 21	21	2200-2300	1.376	0.896	0.464	1.016	0.576	0.416	1.016	0.256	
Row 21	21	2300-0000	1.376	0.896	0.464	1.016	0.576	0.416	1.016	0.256	
Row 21	21	0000-0100	1.116	0.708	0.356	0.406	0.565	0.726	0.536	0.276	
Row 21	21	0100-0200	1.116	0.708	0.356	0.406	0.565	0.726	0.536	0.276	
Row 21	21	0200-0300	1.116	0.708	0.356	0.406	0.565	0.726	0.536	0.276	
Row 21	21	0300-0400	1.116	0.708	0.356	0.406	0.565	0.726	0.536	0.276	
Row 21	21	0400-0500	1.116	0.708	0.356	0.406	0.565	0.726	0.536	0.276	
Row 21	21	0500-0600	1.116	0.708	0.356	0.406	0.565	0.726	0.536	0.276	
Row 21	21	0600-0700	1.116	0.708	0.356	0.406	0.565	0.726	0.536	0.276	
Row 21	21	0700-0800	1.116	0.708	0.356	0.406	0.565	0.726	0.536	0.276	
Row 21	21	0800-0900	1.116	0.708	0.356	0.406	0.565	0.726	0.536	0.276	
Row 21	21	0900-1000	1.116	0.708	0.356	0.406	0.565	0.726	0.536	0.276	
Row 21	21	1000-1100	1.116	0.708	0.356	0.406	0.565	0.726	0.536	0.276	
Row 21	21	1100-1200	1.116	0.708	0.356	0.406	0.565	0.726	0.536	0.276	
Row 21	21	1200-1300	1.346	0.866	0.436	0.986	0.686	0.616	0.986	0.256	
Row 21	21	1300-1400	1.346	0.866	0.436	0.986	0.686	0.616	0.986	0.256	
Row 21	21	1400-1500	1.346	0.866	0.436	0.986	0.686	0.616	0.986	0.256	
Row 21	21	1500-1600	1.346	0.866	0.436	0.986	0.686	0.616	0.986	0.256	
Row 21	21	1600-1700	1.346	0.866	0.436	0.986	0.686	0.616	0.986	0.256	
Row 21	21	1700-1800	1.346	0.866	0.436	0.986	0.686	0.616	0.986	0.256	
Row 21	21	1800-1900	1.346	0.866	0.436	0.986	0.686	0.616	0.986	0.256	
Row 21	21	1900-2000	1.346	0.866	0.436	0.986	0.686	0.616	0.986	0.256	
Row 21	21	2000-2100	1.346	0.866	0.436	0.986	0.686	0.616	0.986	0.256	
Row 21	21	2100-2200	1.346	0.866	0.436	0.986	0.686	0.616	0.986	0.256	
Row 21	21	2200-2300	1.346	0.866	0.436	0.986	0.686	0.616	0.986	0.256	
Row 21	21	2300-0000	1.346	0.866	0.436	0.986	0.686	0.616	0.986	0.256	
Row 21	21	0000-0100	1.026	0.276	0.138	0.436	0.436	0.156	0.786	0.156	
Row 21	21	0100-0200	1.026	0.276	0.138	0.436	0.436	0.156	0.786	0.156	
Row 21	21	0200-0300	1.026	0.276	0.138	0.436	0.436	0.156	0.786	0.156	
Row 21	21	0300-0400	1.026	0.276	0.138	0.436	0.436	0.156	0.786	0.156	
Row 21	21	0400-0500	1.026	0.276	0.138	0.436	0.436	0.156	0.786	0.156	
Row 21	21	0500-0600	1.026	0.276	0.138	0.436	0.436	0.156	0.786	0.156	
Row 21	21	0600-0700	1.026	0.276	0.138	0.436	0.436	0.156	0.786	0.156	
Row 21	21	0700-0800	1.026	0.276	0.138	0.436	0.436	0.156	0.786	0.156	
Row 21	21	0800-0900	1.026	0.276	0.138	0.436	0.436	0.156	0.786	0.156	
Row 21	21	0900-1000	1.026	0.276	0.138	0.436	0.436	0.156	0.786	0.156	
Row 21	21	1000-1100	1.026	0.276	0.138	0.436	0.436	0.156	0.786	0.1	

1. The first part of the text discusses the importance of maintaining accurate records of all transactions and the role of the accounting system in providing reliable financial information. It highlights the need for transparency and accountability in financial reporting.

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Open Road 24 hour Emission Factors for AERMOD model (Egbruan)		Year 2043	Open Road 24 hour Emission Factors for AERMOD model (Egbruan)		Year 2043
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		NO ₂ Emission		NO Emission	
Year	Value	Year	Value	Year	Value
2010	1.2	2010	0.8	2010	0.5
2011	1.3	2011	0.9	2011	0.6
2012	1.4	2012	1.0	2012	0.7
2013	1.5	2013	1.1	2013	0.8
2014	1.6	2014	1.2	2014	0.9
2015	1.7	2015	1.3	2015	1.0
2016	1.8	2016	1.4	2016	1.1
2017	1.9	2017	1.5	2017	1.2
2018	2.0	2018	1.6	2018	1.3
2019	2.1	2019	1.7	2019	1.4
2020	2.2	2020	1.8	2020	1.5

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Open Road 24 hour Emission Factors for AERMOD model (Egbrun) Year 2043

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Emission	Emission	Emission	NO ₂ Emission		NO Emission	
			2010-2011	2012-2013	2010-2011	2012-2013

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Open Road 24 hour Emission Factors for AERMOD model (Ebrahimi) Year 2043

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry Open Road 24 hour Emission Factors for AIRM20 Model (Emissions)									
Year 2043									
Road Name	Road ID	Hour	NO Emission			NO Emission			Monthly/Average
			g/min	g/s	tonne/hour	g/min	g/s	tonne/hour	
Road 51	51	0000-0200	4.226	0.070	2.536	4.142	0.069	2.485	1.182
Road 51	51	0200-0300	4.646	0.081	2.804	4.562	0.077	2.733	1.182
Road 51	51	0300-0400	5.066	0.092	3.062	4.982	0.083	3.012	1.182
Road 51	51	0400-0500	5.486	0.099	3.320	5.402	0.090	3.270	1.182
Road 51	51	0500-0600	5.906	0.106	3.578	5.822	0.097	3.520	1.182
Road 51	51	0600-0700	6.326	0.113	3.836	6.242	0.104	3.780	1.182
Road 51	51	0700-0800	6.746	0.120	4.094	6.662	0.111	4.030	1.182
Road 51	51	0800-0900	7.166	0.127	4.352	7.082	0.118	4.290	1.182
Road 51	51	0900-1000	7.586	0.134	4.610	7.502	0.125	4.540	1.182
Road 51	51	1000-1100	8.006	0.141	4.868	7.922	0.132	4.790	1.182
Road 51	51	1100-1200	8.426	0.148	5.126	8.342	0.139	5.040	1.182
Road 51	51	1200-1300	8.846	0.155	5.384	8.762	0.146	5.290	1.182
Road 51	51	1300-1400	9.266	0.162	5.642	9.182	0.153	5.540	1.182
Road 51	51	1400-1500	9.686	0.169	5.900	9.602	0.160	5.790	1.182
Road 51	51	1500-1600	10.106	0.176	6.158	10.022	0.167	6.040	1.182
Road 51	51	1600-1700	10.526	0.183	6.416	10.442	0.174	6.290	1.182
Road 51	51	1700-1800	10.946	0.190	6.674	10.862	0.181	6.540	1.182
Road 51	51	1800-1900	11.366	0.197	6.932	11.282	0.188	6.790	1.182
Road 51	51	1900-2000	11.786	0.204	7.190	11.702	0.195	7.040	1.182
Road 51	51	2000-2100	12.206	0.211	7.448	12.122	0.202	7.290	1.182
Road 51	51	2100-2200	12.626	0.218	7.706	12.542	0.209	7.540	1.182
Road 51	51	2200-2300	13.046	0.225	7.964	12.962	0.216	7.790	1.182
Road 51	51	2300-2400	13.466	0.232	8.222	13.382	0.223	8.040	1.182
Road 52	52	0000-0100	4.746	0.080	2.804	4.662	0.077	2.733	1.182
Road 52	52	0100-0200	5.166	0.091	3.062	5.082	0.084	3.012	1.182
Road 52	52	0200-0300	5.586	0.102	3.320	5.502	0.095	3.270	1.182
Road 52	52	0300-0400	6.006	0.113	3.578	5.922	0.106	3.520	1.182
Road 52	52	0400-0500	6.426	0.124	3.836	6.342	0.117	3.780	1.182
Road 52	52	0500-0600	6.846	0.135	4.094	6.762	0.128	4.030	1.182
Road 52	52	0600-0700	7.266	0.146	4.352	7.182	0.139	4.290	1.182
Road 52	52	0700-0800	7.686	0.157	4.610	7.602	0.150	4.540	1.182
Road 52	52	0800-0900	8.106	0.168	4.868	8.022	0.161	4.790	1.182
Road 52	52	0900-1000	8.526	0.179	5.126	8.442	0.172	5.040	1.182
Road 52	52	1000-1100	8.946	0.190	5.384	8.862	0.183	5.290	1.182
Road 52	52	1100-1200	9.366	0.201	5.642	9.282	0.194	5.540	1.182
Road 52	52	1200-1300	9.786	0.212	5.900	9.702	0.205	5.790	1.182
Road 52	52	1300-1400	10.206	0.223	6.158	10.122	0.216	6.040	1.182
Road 52	52	1400-1500	10.626	0.234	6.416	10.542	0.227	6.290	1.182
Road 52	52	1500-1600	11.046	0.245	6.674	10.962	0.238	6.540	1.182
Road 52	52	1600-1700	11.466	0.256	6.932	11.382	0.249	6.790	1.182
Road 52	52	1700-1800	11.886	0.267	7.190	11.802	0.260	7.040	1.182
Road 52	52	1800-1900	12.306	0.278	7.448	12.222	0.271	7.290	1.182
Road 52	52	1900-2000	12.726	0.289	7.706	12.642	0.282	7.540	1.182
Road 52	52	2000-2100	13.146	0.300	7.964	13.062	0.293	7.790	1.182
Road 52	52	2100-2200	13.566	0.311	8.222	13.482	0.304	8.040	1.182
Road 52	52	2200-2300	13.986	0.322	8.480	13.902	0.315	8.290	1.182
Road 52	52	2300-2400	14.406	0.333	8.738	14.322	0.326	8.540	1.182
Road 53	53	0000-0100	4.226	0.070	2.536	4.142	0.069	2.485	1.182
Road 53	53	0100-0200	4.646	0.081	2.804	4.562	0.077	2.733	1.182
Road 53	53	0200-0300	5.066	0.092	3.062	4.982	0.083	3.012	1.182
Road 53	53	0300-0400	5.486	0.099	3.320	5.402	0.090	3.270	1.182
Road 53	53	0400-0500	5.906	0.106	3.578	5.822	0.097	3.520	1.182
Road 53	53	0500-0600	6.326	0.113	3.836	6.242	0.104	3.780	1.182
Road 53	53	0600-0700	6.746	0.120	4.094	6.662	0.111	4.030	1.182
Road 53	53	0700-0800	7.166	0.127	4.352	7.082	0.118	4.290	1.182
Road 53	53	0800-0900	7.586	0.134	4.610	7.502	0.125	4.540	1.182
Road 53	53	0900-1000	8.006	0.141	4.868	7.922	0.132	4.790	1.182
Road 53	53	1000-1100	8.426	0.148	5.126	8.342	0.139	5.040	1.182
Road 53	53	1100-1200	8.846	0.155	5.384	8.762	0.146	5.290	1.182
Road 53	53	1200-1300	9.266	0.162	5.642	9.182	0.153	5.540	1.182
Road 53	53	1300-1400	9.686	0.169	5.900	9.602	0.160	5.790	1.182
Road 53	53	1400-1500	10.106	0.176	6.158	10.022	0.167	6.040	1.182
Road 53	53	1500-1600	10.526	0.183	6.416	10.442	0.174	6.290	1.182
Road 53	53	1600-1700	10.946	0.190	6.674	10.862	0.181	6.540	1.182
Road 53	53	1700-1800	11.366	0.197	6.932	11.282	0.188	6.790	1.182
Road 53	53	1800-1900	11.786	0.204	7.190	11.702	0.195	7.040	1.182
Road 53	53	1900-2000	12.206	0.211	7.448	12.122	0.202	7.290	1.182
Road 53	53	2000-2100	12.626	0.218	7.706	12.542	0.209	7.540	1.182
Road 53	53	2100-2200	13.046	0.225	7.964	12.962	0.216	7.790	1.182
Road 53	53	2200-2300	13.466	0.232	8.222	13.382	0.223	8.040	1.182
Road 53	53	2300-2400	13.886	0.239	8.480	13.802	0.230	8.290	1.182
Road 54	54	0000-0100	4.226	0.070	2.536	4.142	0.069	2.485	1.182
Road 54	54	0100-0200	4.646	0.081	2.804	4.562	0.077	2.733	1.182
Road 54	54	0200-0300	5.066	0.092	3.062	4.982	0.083	3.012	1.182
Road 54	54	0300-0400	5.486	0.099	3.320	5.402	0.090	3.270	1.182
Road 54	54	0400-0500	5.906	0.106	3.578	5.822	0.097	3.520	1.182
Road 54	54	0500-0600	6.326	0.113	3.836	6.242	0.104	3.780	1.182
Road 54	54	0600-0700	6.746	0.120	4.094	6.662	0.111	4.030	1.182
Road 54	54	0700-0800	7.166	0.127	4.352	7.082	0.118	4.290	1.182
Road 54	54	0800-0900	7.586	0.134	4.610	7.502	0.125	4.540	1.182
Road 54	54	0900-1000	8.006	0.141	4.868	7.922	0.132	4.790	1.182
Road 54	54	1000-1100	8.426	0.148	5.126	8.342	0.139	5.040	1.182
Road 54	54	1100-1200	8.846	0.155	5.384	8.762	0.146	5.290	1.182
Road 54	54	1200-1300	9.266	0.162	5.642	9.182	0.153	5.540	1.182
Road 54	54	1300-1400	9.686	0.169	5.900	9.602	0.160	5.790	1.182
Road 54	54	1400-1500	10.106	0.176	6.158	10.022	0.167	6.040	1.182
Road 54	54	1500-1600	10.526	0.183	6.416	10.442	0.174	6.290	1.182
Road 54	54	1600-1700	10.946	0.190	6.674	10.862	0.181	6.540	1.182
Road 54	54	1700-1800	11.366	0.197	6.932	11.282	0.188	6.790	1.182
Road 54	54	1800-1900	11.786	0.204	7.190	11.702	0.195	7.040	1.182
Road 54	54	1900-2000	12.206	0.211	7.448	12.122	0.202	7.290	1.182
Road 54	54	2000-2100	12.626	0.218	7.706	12.542	0.209	7.540	1.182
Road 54	54	2100-2200	13.046	0.225	7.964	12.962	0.216	7.790	1.182
Road 54	54	2200-2300	13.466	0.232	8.222	13.382	0.223	8.040	1.182
Road 54	54	2300-2400	13.886	0.239	8.480	13.802	0.230	8.290	1.182

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Tsing Yi North Underground Quarry													
Open Road 24 hour Emission Factors for AIRM20 Model (February)													
Year 2043													
Road Name	Road ID	Hour	NO _x Emission			NO _x Emission			Monthly/Average				
			g/min	g/s	tonne/hour	g/min	g/s	tonne/hour					
Road 54	54	0000-0900	8.146E-02	3.04E-07	2.53E-03	2.90E-01	1.12E-06	9.28E-03	3.80E-01	1.42E-06	1.18E-02	9.58E-03	3.58E-02
Road 54	54	0900-1000	9.211E-02	3.32E-07	2.78E-03	3.40E-01	1.22E-06	1.02E-02	4.32E-01	1.56E-06	1.30E-02	1.09E-02	3.88E-03
Road 54	54	1000-1100	1.027E-01	3.71E-07	3.24E-03	3.90E-01	1.26E-06	9.99E-03	4.62E-01	1.54E-06	1.26E-02	1.15E-02	3.84E-03
Road 54	54	1100-1200	1.121E-02	4.02E-07	3.52E-03	4.20E-01	1.30E-06	1.06E-02	5.02E-01	1.64E-06	1.34E-02	1.15E-02	3.84E-03
Road 54	54	1200-1300	1.266E-01	4.41E-07	3.93E-03	4.52E-01	1.34E-07	1.17E-02	5.51E-01	1.72E-06	1.01E-02	3.24E-02	2.95E-02
Road 54	54	1300-1400	1.222E-01	4.29E-07	3.69E-03	4.34E-01	1.34E-06	8.69E-03	5.56E-01	1.34E-06	1.11E-02	1.32E-02	3.17E-02
Road 54	54	1400-1500	1.216E-01	4.26E-07	3.66E-03	4.31E-01	1.34E-06	8.60E-03	5.54E-01	1.34E-06	1.11E-02	1.32E-02	3.17E-02
Road 54	54	1500-1600	1.126E-01	2.82E-07	2.35E-03	4.25E-01	1.07E-06	8.98E-03	5.38E-01	1.35E-06	1.12E-02	1.25E-02	3.14E-02
Road 54	54	1600-1700	1.118E-01	2.84E-07	2.36E-03	4.25E-01	1.08E-07	8.36E-03	5.38E-01	1.34E-06	1.07E-02	1.29E-02	3.09E-02
Road 54	54	1700-1800	9.126E-02	3.15E-07	2.83E-03	4.13E-01	1.12E-06	9.87E-03	4.81E-01	1.24E-06	1.07E-02	1.13E-02	3.09E-02
Road 54	54	1800-1900	8.09E-02	1.53E-07	1.27E-03	3.23E-01	6.11E-07	5.38E-03	4.03E-01	7.64E-07	6.36E-03	1.00E-02	1.90E-03
Road 54	54	1900-2000	7.39E-02	1.10E-07	8.44E-04	2.48E-01	3.89E-07	3.24E-03	3.57E-01	6.91E-07	4.08E-03	9.70E-03	1.33E-03
Road 54	54	2000-2100	6.29E-02	9.24E-08	7.16E-04	2.12E-01	3.69E-07	2.65E-03	3.04E-01	5.78E-07	3.46E-03	7.60E-03	1.04E-03
Road 54	54	2100-2200	6.99E-02	1.06E-07	8.40E-04	2.18E-01	3.95E-07	2.54E-03	3.47E-01	3.82E-07	1.18E-03	9.42E-03	1.04E-03
Road 54	54	2200-2300	7.38E-02	7.78E-08	6.13E-04	2.68E-01	2.67E-07	2.22E-03	3.42E-01	2.84E-07	9.53E-03	9.51E-03	7.0E-04
Road 54	54	2300-0000	7.37E-02	5.76E-08	4.81E-04	2.67E-01	2.10E-07	1.47E-03	3.41E-01	2.67E-07	2.28E-03	9.58E-03	7.55E-04
Road 101	101	0000-0100	1.291E-02	4.59E-07	4.00E-03	2.12E-02	7.69E-07	8.65E-04	3.49E-02	1.25E-06	1.04E-02	1.24E-03	1.24E-03
Road 101	101	0100-0200	6.04E-03	4.39E-08	7.85E-04	3.90E-02	3.51E-07	3.91E-03	4.52E-02	1.06E-07	8.95E-04	1.56E-04	1.40E-04
Road 101	101	0200-0300	6.62E-03	4.56E-08	8.30E-04	4.30E-02	3.70E-07	3.91E-03	4.78E-02	1.42E-07	1.54E-03	1.71E-04	1.12E-04
Road 101	101	0300-0400	7.22E-03	4.73E-08	8.90E-04	4.70E-02	3.72E-07	3.91E-03	5.27E-02	1.57E-07	1.71E-03	1.91E-04	1.12E-04
Road 101	101	0400-0500	7.70E-03	4.93E-08	9.41E-04	5.03E-02	2.52E-07	3.84E-03	5.15E-02	1.96E-07	2.28E-03	2.15E-04	1.15E-04
Road 101	101	0500-0600	8.24E-03	8.25E-08	1.19E-03	4.52E-02	4.52E-07	6.54E-03	5.34E-02	3.55E-07	7.73E-03	1.15E-04	1.16E-04
Road 101	101	0600-0700	8.26E-03	1.96E-07	2.76E-04	4.76E-02	1.01E-06	1.49E-03	5.35E-02	3.20E-06	1.13E-03	4.97E-04	1.17E-04
Road 101	101	0700-0800	9.35E-03	4.09E-07	5.91E-03	4.82E-02	2.11E-06	1.95E-03	5.76E-02	5.25E-06	3.64E-02	2.45E-03	1.07E-04
Road 101	101	0800-0900	9.06E-03	4.61E-07	6.87E-03	4.48E-02	2.27E-06	3.28E-03	5.32E-02	4.78E-06	3.95E-02	4.14E-03	1.23E-04
Road 101	101	0900-1000	1.05E-02	4.99E-07	6.51E-03	4.93E-02	2.12E-06	3.96E-03	5.96E-02	5.79E-06	5.17E-02	5.91E-03	1.23E-04
Road 101	101	1000-1100	1.15E-02	5.29E-07	7.00E-03	5.29E-02	2.12E-06	4.65E-03	6.48E-02	6.19E-06	5.49E-02	6.48E-03	1.23E-04
Road 101	101	1100-1200	1.11E-02	4.09E-07	5.91E-03	5.17E-02	1.84E-06	2.66E-03	6.31E-02	7.25E-06	7.25E-02	9.17E-03	1.13E-04
Road 101	101	1200-1300	1.24E-02	4.43E-07	6.27E-03	5.61E-02	1.81E-06	2.51E-02	6.42E-02	2.44E-06	2.44E-02	3.39E-03	1.18E-04
Road 101	101	1300-1400	1.24E-02	4.43E-07	6.27E-03	5.61E-02	1.81E-06	2.51E-02	6.42E-02	2.44E-06	2.44E-02	3.39E-03	1.18E-04
Road 101	101	1400-1500	1.26E-02	4.79E-07	6.83E-03	5.77E-02	2.01E-06	2.96E-03	6.52E-02	2.49E-06	4.60E-02	3.46E-03	1.32E-04
Road 101	101	1500-1600	1.17E-02	4.57E-07	6.61E-03	5.50E-02	2.07E-06	2.99E-03	6.42E-02	5.35E-06	3.65E-02	3.29E-03	1.29E-04
Road 101	101	1600-1700	1.17E-02	4.57E-07	6.61E-03	5.50E-02	2.07E-06	2.99E-03	6.42E-02	5.35E-06	3.65E-02	3.29E-03	1.29E-04
Road 101	101	1700-1800	8.73E-03	4.02E-07	5.81E-03	4.55E-02	7.95E-06	2.99E-03	5.32E-02	4.45E-06	5.05E-02	4.11E-03	1.11E-04
Road 101	101	1800-1900	6.19E-03	3.06E-07	4.42E-03	3.31E-02	1.84E-06	2.37E-03	3.99E-02	1.95E-06	8.81E-02	6.9E-03	8.38E-04
Road 101	101	1900-2000	5.14E-03	2.45E-07	3.59E-03	2.72E-02	1.65E-06	2.09E-03	3.29E-02	1.62E-06	7.45E-02	5.91E-03	7.06E-04
Road 101	101	2000-2100	5.23E-03	1.96E-07	2.29E-03	3.35E-02	1.06E-06	1.56E-03	4.06E-02	1.24E-06	7.17E-02	3.74E-03	4.16E-04
Road 101	101	2100-2200	4.65E-03	1.41E-07	2.04E-03	3.49E-02	1.06E-06	1.52E-03	3.96E-02	1.26E-06	7.18E-02	3.13E-03	3.78E-04
Road 101	101	2200-2300	4.62E-03	1.39E-07	1.96E-03	3.51E-02	1.06E-06	1.49E-03	3.97E-02	1.17E-06	6.81E-02	1.23E-03	3.41E-04
Road 102	102	0000-0100	5.11E-02	1.84E-07	1.65E-03	9.44E-02	3.41E-06	3.84E-03	1.04E-02	3.49E-06	4.69E-02	1.88E-03	2.17E-04
Road 102	102	0100-0200	7.59E-03	8.86E-08	1.20E-03	4.28E-02	5.02E-07	6.78E-03	5.04E-02	8.88E-07	8.88E-03	1.04E-03	2.96E-03
Road 102	102	0200-0300	8.23E-03	8.23E-08	3.38E-04	4.54E-02	3.42E-07	4.33E-03	5.27E-02	4.05E-07	5.49E-03	2.23E-03	1.71E-04
Road 102	102	0300-0400	8.23E-03	8.23E-08	3.38E-04	4.54E-02	3.42E-07	4.33E-03	5.27E-02	4.05E-07	5.49E-03	2.23E-03	1.71E-04
Road 102	102	0400-0500	9.58E-03	4.15E-08	5.90E-04	4.84E-02	7.20E-07	2.98E-03	5.80E-02	6.63E-07	5.75E-03	2.60E-03	1.18E-04
Road 102	102	0500-0600	1.02E-02	5.15E-08	6.98E-04	5.00E-02	2.52E-07	3.42E-03	6.02E-02	6.04E-07	1.17E-03	7.78E-03	1.40E-04
Road 102	102	0600-0700	1.02E-02	5.15E-08	6.98E-04	5.00E-02	2.52E-07	3.42E-03	6.02E-02	6.04E-07	1.17E-03	7.78E-03	1.40E-04
Road 102	102	0700-0800	1.15E-02	2.72E-07	2.99E-03	5.36E-02	1.03E-06	1.39E-03	5.51E-02	1.25E-06	6.66E-02	1.13E-03	6.00E-04
Road 102	102	0800-0900	1.21E-02	4.40E-07	6.43E-03	5.51E-02	2.18E-06	2.99E-03	6.77E-02	6.64E-06	5.58E-02	1.30E-03	1.29E-04
Road 102	102	0900-1000	1.17E-02	4.29E-07	6.31E-03	5.45E-02	1.85E-06	2.99E-03	6.52E-02	6.46E-06	5.49E-02	1.26E-03	1.29E-04
Road 102	102	1000-1100	1.55E-02	5.54E-07	7.51E-03	6.55E-02	2.38E-06	3.22E-03	7.21E-02	1.08E-06	8.88E-02	1.88E-03	1.72E-04
Road 102	102	1100-1200	1.55E-02	5.54E-07	7.51E-03	6.17E-02	2.25E-06	3.09E-03	7.27E-02	8.82E-06	8.82E-02	4.39E-03	1.60E-04
Road 102	102	1200-1300	1.20E-02	5.18E-07	7.00E-03	6.12E-02	2.18E-06	2.98E-03	7.68E-02	6.67E-06	5.95E-02	2.9E-03	1.47E-04
Road 102	102	1300-1400	1.30E-02	5.18E-07	7.00E-03	5.15E-02	1.65E-06	2.98E-03	6.71E-02	6.67E-06	5.95E-02	2.9E-03	1.47E-04
Road 102	102	1400-1500	1.26E-02	4.06E-07	5.54E-03	5.35E-02	1.74E-06	2.32E-03	6.21E-02	5.15E-06	2.91E-02	3.53E-03	1.15E-04
Road 102	102	1500-1600	1.27E-02	4.98E-07	5.93E-03	5.28E-02	1.82E-06	2.44E-03	6.56E-02	2.95E-06	1.09E-02	5.51E-03	1.21E-04
Road 102	102	1600-1700	1.27E-02	4.98E-07	5.93E-03	5.28E-02	1.82E-06	2.44E-03	6.56E-02	2.95E-06	1.09E-02	5.51E-03	1.21E-04
Road 102	102	1700-1800	1.23E-02	4.56E-07	6.18E-03	5.07E-02	1.88E-06	2.55E-03	6.31E-02	3.24E-06	3.17E-02	3.88E-03	1.25E-04
Road 102	102	1800-1900	8.79E-03	3.83E-07	4.92E-03	4.24E-02	1.83E-06	2.48E-03	5.29E-02	2.19E-06	5.97E-02	2.45E-03	1.01E-04
Road 102	102	1900-2000	8.79E-03	3.83E-07	4.92E-03	4.24E-02	1.83E-06	2.48E-03	5.29E-02	2.19E-06	5.97E-02	2.45E-03	1.01E-04
Road 102	102	2000-2000	5.44E-03	1.06E-07	2.58E-03	3.24E-02	1.11E-06	1.53E-03	3.77E-02	3.37E-06	7.97E-02	4.45E-03	5.07E-04
Road 102	102	2000-2100	5.28E-03	1.43E-07	1.94E-03	3.57E-02	9.71E-07	1.32E-03	4.16E-02	1.10E-06	1.51E-02	1.39E-03	3.79E-04
Road 102	102	2100-2200	4.70E-03	1.28E-07	1.74E-03	3.47E-02	8.45E-07	1.26E-03	3.34E-02	1.10E-06	1.45E-02	1.25E-03	3.41E-04
Road 102	102	2200-2300	4.80E-03	1.28E-07	1.74E-03	3.47E-02	8.45E-07	1.26E-03	3.34E-02	1.10E-06	1.45E-02	1.25E-03	3.41E-04
Road 103	103	0000-0100	5.211E-03	1.03E-06	1.93E-03	3.644E-02	7.19E-07	9.74E-04	6.12E-02	1.11E-06	1.34E-02	1.84E-03	1.40E-04
Road 103	103	0100-0110	5.32E-03	7.73E-08	6.77E-04	3.75E-02	5.45E-07	4.78E-04	4.25E-02	6.17E-07	4.41E-03	1.95E-03	1.96E-04
Road 103	103	0110-0120	5.32E-03	7.73E-08	6.77E-04	3.75E-02	5.45E-07	4.78E-04	4.25E-02	6.17E-07	4.41E-03	1.95E-03	1.96E-04
Road 103	103	0200-0300	6.39E-04	4.46E-08	3.89E-04	4.04E-02	2.81E-07	2.47E-04	4.68E-02	3.25E-07	2.85E-04	1.64E-04	1.14E-04
Road 103	103	0300-0400	6.93E-03	3.81E-08	3.34E-04	4.18E-02	2.96E-07	2.02E-04	4.68E-02	3.68E-07	3.35E-03	7.78E-03	8.90E-04
Road 103	103	0400-0500	4										

Open Road 24 hour Emission Factors for Year 2042

Open Road 24 hour Emission Factors for Year 2042

Open Road 24 hour Emission Factors for Year 2042

and 24 hour Emission Factors for Year 2042

Open Road 24 hour Emission Factors for Year 2042

Open Road 24 hour Emission Factors for Year 2042

Open Road 24 hour Emission Factors for Year 2042

and 24 hour Emission Factors for Year 2042

AERMOD model (March)				AERMOD model (March)			
Year 2043				Year 2043			
			NO _x Emission				NO _x Emission

AERMOD model (March)		Year 2043	
		NO _x Emission	NO _x Emission

AERMOD model (March)		Year 2043	
		NO _x Emission	NO _x Emission

AERMOD model (March)		Year 2043	
		NO _x Emission	NO _x Emission

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AERMOD model (April)		Year 2043	
	NO _x Emission	NO _x Emission	NO _x Emission

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AERMOD model (April)		Year 2043	
		NO _x Emission	NO _x Emission

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AERMOD model (April)		Year 2043	
		NO _x Emission	NO _x Emission

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Open Road 24 hour Emission Factors for AERMOD model (April) Year 2043

10/00/24	24	07/00/0000	3.17%/02	1.700/07	9.000/00	2.400/02	2.020/00	2.020/02	2.700/02	0.000/00	2.000/02	9.400/00	2.000/07	0.070/00
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FORM 27	27	4,000/4,000	0.00% '04	4.76% '05	4.00% '06	4.40% '04	0.74% '05	0.40% '06	4.00% '04	7.40% '05	7.00% '06	7.44% '05	4.00% '07	4.44% '08
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Open Road 24 hour Emission Factors for AERMOD model (April)	Year 2043	Open Road 24 hour Emission Factors for AERMOD model (April)	Year 2043

10/20/20	20	2/20/2000	0/27/00	0/10/00	0/00/00	2/00/04	2/00/07	2/10/00	2/00/04	2/00/07	2/10/00	0/24/00	2/00/00	1/00/00
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01/08/24	24	01/00/00/00	4.045/02	4.045/01	4.095/09	9.015/04	1.005/01	01/04/09	0.095/04	0.095/01	0.015/09	4.095/04	4.095/00	4.045/00
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Open Road 24 hour Emission Factors for Year 2043

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Open Road 24 hour Emission Factors for ASFA 1982 emissions reduction of 10%		Year 2043	Open Road 24 hour Emission Factors for ASFA 1982 emissions reduction of 10%		Year 2043
CO	0.000000	0.000000	CO	0.000000	0.000000
CO2	0.000000	0.000000	CO2	0.000000	0.000000
CO2e	0.000000	0.000000	CO2e	0.000000	0.000000
CH4	0.000000	0.000000	CH4	0.000000	0.000000
HC	0.000000	0.000000	HC	0.000000	0.000000
NOx	0.000000	0.000000	NOx	0.000000	0.000000
PM10	0.000000	0.000000	PM10	0.000000	0.000000
PM2.5	0.000000	0.000000	PM2.5	0.000000	0.000000
SOx	0.000000	0.000000	SOx	0.000000	0.000000
THC	0.000000	0.000000	THC	0.000000	0.000000
WCO	0.000000	0.000000	WCO	0.000000	0.000000
WCO2	0.000000	0.000000	WCO2	0.000000	0.000000
WCO2e	0.000000	0.000000	WCO2e	0.000000	0.000000
WCH4	0.000000	0.000000	WCH4	0.000000	0.000000
WHC	0.000000	0.000000	WHC	0.000000	0.000000
WNOx	0.000000	0.000000	WNOx	0.000000	0.000000
WPM10	0.000000	0.000000	WPM10	0.000000	0.000000
WPM2.5	0.000000	0.000000	WPM2.5	0.000000	0.000000
WSOx	0.000000	0.000000	WSOx	0.000000	0.000000
WTHC	0.000000	0.000000	WTHC	0.000000	0.000000

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry

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Tsing Yi North Underground Quarry

Open Data 24-hour Emission Factors for 2023													
Road Name			Road ID	Month/Year/Min		NO _x Emission		Month/Year/Min		NO _x Emission		Month/Year/Average	
				g/min	g/min	g/min	g/min	g/min	g/min	g/min	g/min	g/min	g/min
Road #1		01-0000-0110		1.0224	1.0224	5.4222	5.4222	1.3324	1.3324	1.8822	1.8822	1.0224	1.0224
Road #1		01-0100-0200		2.1006	2.3508	1.1504	6.2142	9.9118	3.3704	8.3132	1.3307	4.5404	5.0278
Road #1		01-0200-0300		2.5228	3.2508	1.1114	6.0492	8.9710	3.0804	8.4224	2.2207	3.1704	5.9967
Road #1		01-0300-0400		2.5228	3.2508	1.1114	6.0492	8.9710	3.0804	8.4224	2.2207	3.1704	5.9967
Road #1		01-0400-0500		2.7606	3.2608	1.1224	6.7882	8.7118	2.9804	9.0101	1.2005	4.1004	5.5712
Road #1		01-0500-0600		2.1306	3.4804	1.2504	6.4102	1.1007	3.7804	8.6202	4.6607	5.0104	5.1402
Road #1		01-0600-0700		2.1306	3.4804	1.2504	6.4102	1.1007	3.7804	8.6202	4.6607	5.0104	5.1402
Road #1		01-0700-0800		2.0902	4.5807	5.1004	6.4602	4.5807	1.5704	8.5602	0.0802	0.0802	5.0502
Road #1		01-0800-0900		1.9202	1.9302	5.2304	6.4502	4.6607	1.6604	7.7902	6.1302	1.1202	4.6712
Road #1		01-0900-1000		1.9202	1.9302	5.2304	6.4502	4.6607	1.6604	7.7902	6.1302	1.1202	4.6712
Road #1		01-1000-1100		2.4302	4.4807	5.0604	6.0902	4.2007	1.4404	9.3202	6.8902	1.9402	5.9502
Road #1		01-1100-1200		2.4402	1.4407	4.9404	7.0002	4.1107	1.4104	9.4302	5.5507	9.0602	5.8802
Road #1		01-1200-1300		2.4402	1.4407	4.9404	7.0002	4.1107	1.4104	9.4302	5.5507	9.0602	5.8802
Road #1		01-1300-1400		2.7002	1.7707	6.0604	7.5202	5.1807	1.7604	1.0002	6.9502	6.3802	6.1702
Road #1		01-1400-1500		2.6502	1.8007	6.1604	7.7802	5.2607	1.8004	1.0502	7.4202	6.6502	6.5202
Road #1		01-1500-1600		2.5502	1.7707	6.0504	7.4702	5.3707	1.8402	1.0302	7.1302	6.4402	6.4002
Road #1		01-1600-1700		2.5502	1.7707	6.0504	7.4702	5.3707	1.8402	1.0302	7.1302	6.4402	6.4002
Road #1		01-1700-1800		2.1802	1.8607	5.7204	6.7802	5.2607	1.7604	1.8602	8.8702	7.3502	6.4502
Road #1		01-1800-1900		1.5010	1.5110	5.1004	5.1002	4.5810	1.5010	7.6102	6.0502	7.0102	3.7502
Road #1		01-1900-2000		1.5010	1.5110	5.1004	5.1002	4.5810	1.5010	7.6102	6.0502	7.0102	3.7502
Road #1		01-2000-2100		1.2110	5.0708	1.7404	6.0102	2.0607	7.0604	6.1202	6.5707	8.8002	3.0002
Road #1		01-2100-2200		1.1102	4.8802	1.6704	5.8402	2.0407	6.9804	6.0102	6.5307	6.6602	2.2102
Road #1		01-2200-2300		1.1102	4.8802	1.6704	5.8402	2.0407	6.9804	6.0102	6.5307	6.6602	2.2102
Road #1		01-2300-2400		1.4002	6.9608	1.5304	4.2502	1.6707	5.7204	6.6022	6.1202	7.2504	3.4402
Road #1		01-2400-0100		3.2712	3.7802	6.8004	9.2902	2.0907	1.9302	1.2602	6.8202	7.6102	5.1102
Road #2		02-0000-0100		4.6602	6.7208	6.6804	4.8602	1.7507	1.6202	1.4702	4.4907	7.2502	1.0802
Road #2		02-0100-0200		4.8302	6.5708	6.0804	1.2001	1.6307	1.5102	1.6801	2.2907	2.1202	7.0002
Road #2		02-0200-0300		5.4202	6.4808	5.9904	1.1011	1.5607	1.4402	1.8902	2.2007	2.0404	8.6102
Road #2		02-0300-0400		5.4202	6.4808	5.9904	1.1011	1.5607	1.4402	1.8902	2.2007	2.0404	8.6102
Road #2		02-0400-0500		6.1002	7.2208	6.6804	1.3802	1.9307	1.7801	1.5001	2.6502	2.4502	6.6502
Road #2		02-0500-0600		6.1002	7.2208	6.6804	1.3802	1.9307	1.7801	1.5001	2.6502	2.4502	6.6502
Road #2		02-0600-0700		3.0802	6.9502	6.8304	9.5602	3.0607	2.7702	2.2802	3.9607	3.6702	8.9302
Road #2		02-0700-0800		3.0802	6.9502	6.8304	9.5602	3.0607	2.7702	2.2802	3.9607	3.6702	8.9302
Road #2		02-0800-0900		4.9102	4.0207	3.7502	1.3001	1.0602	0.9805	1.7901	1.4702	1.2302	2.2002
Road #2		02-0900-1000		4.9102	4.0207	3.7502	1.3001	1.0602	0.9805	1.7901	1.4702	1.2302	2.2002
Road #2		02-1000-1100		5.6002	3.9807	3.6902	1.4702	1.0406	0.9602	2.0302	1.4402	3.6402	7.6402
Road #2		02-1100-1200		5.6002	3.9807	3.6902	1.4702	1.0406	0.9602	2.0302	1.4402	3.6402	7.6402
Road #2		02-1200-1300		6.0302	3.7407	3.4702	1.5401	0.9507	0.8702	2.1402	1.3302	2.2202	3.3802
Road #2		02-1300-1400		6.0302	3.7407	3.4702	1.5401	0.9507	0.8702	2.1402	1.3302	2.2202	3.3802
Road #2		02-1400-1500		7.7502	3.7107	3.4402	1.9001	0.91107	0.8402	2.6802	1.2802	1.9602	4.0502
Road #2		02-1500-1600		7.7502	3.7107	3.4402	1.9001	0.91107	0.8402	2.6802	1.2802	1.9602	4.0502
Road #2		02-1600-1700		7.4902	3.7807	3.5002	1.8701	0.9407	0.8702	2.6202	1.3002	2.2202	3.0702
Road #2		02-1700-1800		7.4902	3.7807	3.5002	1.8701	0.9407	0.8702	2.6202	1.3002	2.2202	3.0702
Road #2		02-1800-1900		7.2712	3.7407	3.4602	1.8701	0.9607	0.8702	2.5902	1.3302	2.2202	3.0402
Road #2		02-1900-2000		7.2712	3.7407	3.4602	1.8701	0.9607	0.8702	2.5902	1.3302	2.2202	3.0402
Road #2		02-2000-2100		6.5802	3.9807	3.3102	1.6901	0.9107	0.8402	2.3402	1.2602	1.8802	3.9702
Road #2		02-2100-2200		6.5802	3.9807	3.3102	1.6901	0.9107	0.8402	2.3402	1.2602	1.8802	3.9702
Road #2		02-2200-2300		3.2402	8.3008	7.6802	9.8302	2.5207	2.2302	1.3102	3.3502	3.1002	5.2602
Road #2		02-2300-2400		3.2402	8.3008	7.6802	9.8302	2.5207	2.2302	1.3102	3.3502	3.1002	5.2602
Road #2		02-2400-0100		3.3202	8.3008	7.9904	9.7602	2.4207	2.2402	1.3102	3.4402	3.0902	5.3002
Road #2		02-0100-0200		3.3202	8.3008	7.9904	9.7602	2.4207	2.2402	1.3102	3.4402	3.0902	5.3002
Road #3		03-0000-0100		6.9102	4.0808	1.5202	9.1702	2.2208	8.3302	4.6402	2.6402	8.9502	5.7502
Road #3		03-0100-0200		6.9102	4.0808	1.5202	9.1702	2.2208	8.3302	4.6402	2.6402	8.9502	5.7502
Road #3		03-0200-0300		9.1902	3.6408	1.3602	4.3702	1.2208	6.1802	5.0602	2.0202	5.4702	8.4002
Road #3		03-0300-0400		9.1902	3.6408	1.3602	4.3702	1.2208	6.1802	5.0602	2.0202	5.4702	8.4002
Road #3		03-0400-0500		1.3602	3.4208	1.2402	4.9902	1.2708	4.5802	4.3902	1.5902	5.7902	3.1602
Road #3		03-0500-0600		1.3602	3.4208	1.2402	4.9902	1.2708	4.5802	4.3902	1.5902	5.7902	3.1602
Road #3		03-0600-0700		1.3202	3.4708	1.3002	4.9502	1.3308	4.5902	4.2802	1.6502	6.1502	3.0702
Road #3		03-0700-0800		1.3202	3.4708	1.3002	4.9502	1.3308	4.5902	4.2802	1.6502	6.1502	3.0702
Road #3		03-0800-0900		7.6902	6.9308	2.4302	4.1802	3.5408	1.3202	4.9402	1.9802	3.6602	7.7702
Road #3		03-0900-1000		7.6902	6.9308	2.4302	4.1802	3.5408	1.3202	4.9402	1.9802	3.6602	7.7702
Road #3		03-1000-1100		1.0302	1.6808	6.8302	4.8502	8.1308	3.0404	5.6102	0.9502	7.2402	2.4002
Road #3		03-1100-1200		1.0302	1.6808	6.8302	4.8502	8.1308	3.0404	5.6102	0.9502	7.2402	2.4002
Road #3		03-1200-1300		1.0602	1.7208	6.4202	4.3102	6.9708	2.6004	5.3702	0.8602	3.2402	2.5502
Road #3		03-1300-1400		1.0602	1.7208	6.4202	4.3102	6.9708	2.6004	5.3702	0.8602	3.2402	2.5502
Road #3		03-1400-1500		1.2002	1.6608	6.1902	4.5402	6.5608	2.5604	5.7402	0.9902	3.9702	2.8802
Road #3		03-1500-1600		1.2002	1.6608	6.1902	4.5402	6.5608	2.5604	5.7402	0.9902	3.9702	2.8802
Road #3		03-1600-1700		1.2002	1.6608	6.1902	4.5402	6.5608	2.5604	5.7402	0.9902	3.9702	2.8802
Road #3		03-1700-1800		1.4802	5.5108	1.9024	5.7802	2.0107	7.7504	7.2702	5.2302	9.4402	3.8602
Road #3		03-1800-1900		1.4802	5.5108	1.9024	5.7802	2.0107	7.7504	7.2702	5.2302	9.4402	3.8602
Road #3		03-1900-2000		1.4902	5.1308	1.8802	5.9902	2.1407	7.9904	7.4702	2.6702	9.7402	3.9302
Road #3		03-2000-2100		1.4902	5.1308	1.8802	5.9902	2.1407	7.9904	7.4702	2.6702	9.7402	3.9302
Road #3		03-2100-2200		1.3902	5.5908	2.0104	5.6802	2.2207	8.5204	7.2602	2.8202	9.0502	3.7202
Road #3		03-2200-2300		1.3902	5.5908	2.0104	5.6802	2.2207	8.5204	7.2602	2.8202	9.0502	3.7202
Road #3		03-2300-2400		1.4302	5.8028	2.1704	5.6302	2.2907	8.5604	7.0602	2.8702	9.0702	3.7402
Road #3		03-2400-0100		1.4302	5.8028	2.1704	5.6302	2.2907	8.5604	7.0602	2.8702	9.0702	3.7402
Road #4		04-0000-0100		6.0402	3.9308	1.4702	3.7202	1.9207	6.8002	4.5202	2.3102	2.7702	9.0502
Road #4		04-0100-0200		6.0402	3.9308	1.4702	3.7202	1.9207	6.8002	4.5202	2.3102	2.7702	9.0502
Road #4		04-0200-0300		6.0802	2.2908	8.9402	3.6402	1.3907	4.8604	4.0702	5.3202	9.7202	5.6602
Road #4		04-0300-0400		6.0802	2.2908	8.9402	3.6402	1.3907	4.8604	4.0702	5.3202	9.7202	5.6602
Road #4		04-0400-0500		6.8202	3.9308	9.7002	4.4502	2.2907	5.7604	4.7402	2.9902	8.7302	1.7102
Road #4		04-0500-0600		6.8202	3.9308	9.7002	4.4502	2.2907	5.7604	4.7402	2.9902	8.7302	1.7102
Road #4		04-0600-0700		7.8402	2.1407	4.8502	4.6202	1.2107	7.2904	5.2102	6.610		

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry

Road ID 24 hour Emission Factors for AR5MD model (Apri)											
Road Name		Road ID	Year	NO _x Emission				NO Emission			
				Monthly/tonne		Monthly/tonne		Monthly/tonne		Monthly/tonne	
				g/kwh	g/m ³	g/kwh	g/m ³	g/kwh	g/m ³	g/kwh	g/m ³
Road 44	44	0000-0900	8.582E-04	4.47E-03	8.582E-04	4.47E-03	8.582E-04	4.47E-03	8.582E-04	4.47E-03	8.582E-04
Road 44	44	0000-1000	8.836E-03	2.72E-07	5.002E-04	4.420E-11	1.298E-03	5.282E-02	1.37E-06	1.08E-03	2.28E-03
Road 44	44	0000-1100	8.762E-03	2.17E-07	4.805E-04	4.546E-10	1.024E-06	2.598E-02	2.76E-05	2.59E-05	5.78E-03
Road 44	44	0000-1200	9.212E-03	1.19E-07	5.938E-04	5.758E-11	1.298E-03	5.282E-02	1.37E-06	1.08E-03	2.28E-03
Road 44	44	1200-1300	1.111E-02	2.91E-07	6.506E-04	4.950E-10	1.298E-03	5.282E-02	1.37E-06	3.57E-05	7.02E-03
Road 44	44	1300-1400	1.116E-02	3.03E-07	6.788E-04	5.188E-10	3.621E-06	3.120E-03	1.68E-06	3.79E-03	8.03E-03
Road 44	44	1400-1500	1.116E-02	3.03E-07	6.788E-04	5.188E-10	3.621E-06	3.120E-03	1.68E-06	3.79E-03	8.03E-03
Road 44	44	1500-1600	1.272E-02	3.56E-07	8.024E-04	5.811E-10	3.621E-06	3.827E-03	2.05E-06	4.62E-03	8.89E-05
Road 44	44	1600-1700	1.748E-02	5.37E-07	1.221E-03	7.098E-10	2.208E-06	4.968E-03	8.811E-02	6.17E-03	3.33E-03
Road 44	44	1700-1800	4.338E-02	1.26E-06	2.712E-03	1.46E-09	1.32E-06	1.906E-02	8.60E-07	1.49E-03	1.09E-03
Road 44	44	1800-1900	2.506E-02	9.71E-07	1.396E-04	1.050E-10	9.928E-03	3.001E-05	5.07E-06	1.14E-02	6.08E-03
Road 44	44	1900-2000	4.844E-03	1.49E-07	2.365E-04	3.111E-05E	4.958E-10	2.169E-02	3.598E-02	1.170E-05	2.123E-03
Road 44	44	2000-2100	5.718E-03	1.76E-07	2.816E-04	4.186E-10	2.292E-03	4.931E-02	5.99E-07	2.68E-06	2.19E-03
Road 44	44	2100-2200	4.044E-04	9.650E-08	1.621E-04	3.292E-10	7.86E-07	1.76E-07	8.77E-07	1.98E-02	1.023E-06
Road 44	44	2200-2300	3.956E-03	9.18E-08	2.076E-04	3.27E-10	7.61E-07	1.37E-06	8.37E-07	1.92E-03	9.57E-04
Road 44	44	2300-2400	4.410E-04	7.67E-08	1.173E-04	3.35E-10	5.84E-07	1.32E-06	8.90E-07	1.49E-03	1.09E-03
Road 45	45	0000-0900	8.582E-04	4.47E-03	8.582E-04	4.47E-03	8.582E-04	4.47E-03	8.582E-04	4.47E-03	8.582E-04
Road 45	45	0000-1000	7.762E-03	2.47E-08	1.135E-04	3.50E-10	8.11E-07	8.14E-06	3.96E-07	9.25E-04	1.61E-03
Road 45	45	0000-1100	5.225E-03	1.98E-08	8.913E-05	3.68E-10	1.39E-07	5.04E-06	1.59E-07	7.13E-04	1.00E-03
Road 45	45	0000-1200	5.618E-03	2.13E-08	9.597E-05	3.911E-10	1.27E-06	5.75E-04	4.53E-07	6.66E-04	1.55E-03
Road 45	45	0000-1300	6.626E-03	3.77E-08	1.405E-04	4.22E-10	2.26E-07	8.10E-06	2.67E-07	1.20E-03	1.68E-03
Road 45	45	0000-1400	7.866E-03	6.16E-08	2.365E-04	4.186E-10	2.292E-03	4.931E-02	5.99E-07	2.68E-06	2.19E-03
Road 45	45	0700-0800	8.632E-03	1.89E-07	8.68E-04	4.39E-10	1.08E-06	4.84E-03	1.16E-02	5.69E-03	1.94E-03
Road 45	45	0800-0900	7.948E-03	2.13E-07	9.524E-04	4.121E-10	5.14E-06	4.79E-06	3.96E-06	6.12E-03	1.92E-03
Road 45	45	0900-1000	8.442E-03	1.97E-07	8.98E-04	4.186E-10	4.58E-03	3.22E-02	5.46E-03	5.39E-03	2.17E-03
Road 45	45	1000-1100	9.581E-03	1.93E-07	8.606E-04	4.54E-10	9.14E-07	4.10E-05	1.11E-06	4.97E-03	5.96E-03
Road 45	45	1100-1200	9.482E-03	1.73E-07	7.77E-04	4.511E-05E	3.89E-03	4.63E-06	1.03E-06	4.44E-03	2.43E-03
Road 45	45	1200-1300	1.007E-02	2.42E-07	1.009E-04	4.631E-06	1.12E-06	5.04E-03	8.10E-06	6.33E-04	6.64E-03
Road 45	45	1300-1400	1.076E-02	2.91E-07	1.108E-04	4.99E-06	1.12E-06	5.04E-03	8.10E-06	1.36E-03	6.65E-03
Road 45	45	1400-1500	1.08E-02	2.62E-07	1.118E-04	4.820E-06	1.12E-06	5.34E-03	8.00E-06	6.51E-03	6.89E-03
Road 45	45	1500-1600	1.100E-02	2.84E-07	1.208E-04	4.844E-06	1.12E-06	5.34E-03	8.00E-06	6.68E-03	7.13E-03
Road 45	45	1600-1700	1.08E-02	2.84E-07	1.208E-04	4.844E-06	1.12E-06	5.34E-03	8.00E-06	7.01E-03	7.62E-03
Road 45	45	1700-1800	2.79E-02	2.79E-02	4.914E-06	1.48E-06	6.63E-03	5.84E-02	3.75E-08	7.18E-03	2.41E-03
Road 45	45	1800-1900	4.631E-02	1.26E-06	2.712E-03	1.46E-09	1.32E-06	1.906E-02	8.60E-07	1.49E-03	1.09E-03
Road 45	45	1900-2000	4.26E-03	1.23E-07	5.523E-04	3.271E-07	3.57E-04	3.91E-07	4.11E-03	1.19E-03	3.13E-03
Road 45	45	2000-2100	4.444E-03	9.41E-08	1.621E-04	3.271E-10	3.01E-03	3.71E-02	7.14E-02	3.21E-03	1.12E-03
Road 45	45	2100-2200	3.88E-03	8.89E-08	1.51E-04	3.271E-10	2.81E-03	3.71E-02	7.14E-02	3.21E-03	1.12E-03
Road 45	45	2200-2300	3.77E-03	7.95E-08	1.39E-04	3.271E-10	2.67E-03	3.91E-02	7.14E-02	3.21E-03	1.12E-03
Road 45	45	2300-2400	4.21E-03	6.57E-08	2.81E-04	3.31E-10	4.92E-07	2.21E-03	3.76E-02	5.46E-03	1.04E-03
Road 46	46	0000-0900	8.582E-04	4.47E-03	8.582E-04	4.47E-03	8.582E-04	4.47E-03	8.582E-04	4.47E-03	8.582E-04
Road 46	46	0000-1000	8.836E-03	2.72E-07	5.002E-04	4.420E-11	1.298E-03	5.282E-02	1.37E-06	1.08E-03	2.28E-03
Road 46	46	0000-1100	8.762E-03	2.17E-07	4.805E-04	4.546E-10	1.024E-06	2.598E-02	2.76E-05	2.59E-05	5.78E-03
Road 46	46	0000-1200	9.212E-03	1.19E-07	5.938E-04	5.758E-11	1.298E-03	5.282E-02	1.37E-06	1.08E-03	2.28E-03
Road 46	46	1200-1300	1.111E-02	2.91E-07	6.506E-04	4.950E-10	1.298E-03	5.282E-02	1.37E-06	3.57E-05	7.02E-03
Road 46	46	1300-1400	1.116E-02	3.03E-07	6.788E-04	5.188E-10	3.621E-06	3.120E-03	1.68E-06	3.79E-03	8.03E-03
Road 46	46	1400-1500	1.116E-02	3.03E-07	6.788E-04	5.188E-10	3.621E-06	3.120E-03	1.68E-06	3.79E-03	8.03E-03
Road 46	46	1500-1600	1.272E-02	3.56E-07	8.024E-04	5.811E-10	3.621E-06	3.827E-03	2.05E-06	4.62E-03	8.89E-05
Road 46	46	1600-1700	1.748E-02	5.37E-07	1.221E-03	7.098E-10	2.208E-06	4.968E-03	8.811E-02	6.17E-03	3.33E-03
Road 46	46	1700-1800	4.338E-02	1.26E-06	2.712E-03	1.46E-09	1.32E-06	1.906E-02	8.60E-07	1.49E-03	1.09E-03
Road 46	46	1800-1900	2.506E-02	9.71E-07	1.396E-04	1.050E-10	9.928E-03	3.001E-05	5.07E-06	1.14E-02	6.08E-03
Road 46	46	1900-2000	4.844E-03	1.49E-07	2.365E-04	3.111E-05E	4.958E-10	2.169E-02	3.598E-02	1.170E-05	2.123E-03
Road 46	46	2000-2100	5.718E-03	1.76E-07	2.816E-04	4.186E-10	2.292E-03	4.931E-02	5.99E-07	2.68E-06	2.19E-03
Road 46	46	2100-2200	4.044E-04	9.650E-08	1.621E-04	3.292E-10	7.86E-07	1.76E-07	8.77E-07	1.98E-02	1.023E-06
Road 46	46	2200-2300	3.956E-03	9.18E-08	2.076E-04	3.27E-10	7.61E-07	1.37E-06	8.37E-07	1.92E-03	9.57E-04
Road 46	46	2300-2400	4.410E-04	7.67E-08	1.173E-04	3.35E-10	5.84E-07	1.32E-06	8.90E-07	1.49E-03	1.09E-03
Road 47	47	0000-0900	8.582E-04	4.47E-03	8.582E-04	4.47E-03	8.582E-04	4.47E-03	8.582E-04	4.47E-03	8.582E-04
Road 47	47	0000-1000	7.762E-03	2.47E-08	1.135E-04	3.50E-10	8.11E-07	8.14E-06	3.96E-07	9.25E-04	1.61E-03
Road 47	47	0000-1100	5.225E-03	1.98E-08	8.913E-05	3.68E-10	1.39E-07	5.04E-06	1.59E-07	7.13E-04	1.00E-03
Road 47	47	0000-1200	5.618E-03	2.13E-08	9.597E-05	3.911E-10	1.27E-06	5.75E-04	4.53E-07	6.66E-04	1.55E-03
Road 47	47	0000-1300	6.626E-03	3.77E-08	1.405E-04	4.22E-10	2.26E-07	8.10E-06	2.67E-07	1.20E-03	1.68E-03
Road 47	47	0000-1400	7.866E-03	6.16E-08	2.365E-04	4.186E-10	2.292E-03	4.931E-02	5.99E-07	2.68E-06	2.19E-03
Road 47	47	0700-0800	8.632E-03	1.89E-07	8.68E-04	4.39E-10	1.08E-06	4.84E-03	1.16E-02	5.69E-03	1.94E-03
Road 47	47	0800-0900	7.948E-03	2.13E-07	9.524E-04	4.121E-10	5.14E-06	4.79E-06	3.96E-06	6.12E-03	1.92E-03
Road 47	47	0900-1000	8.442E-03	1.97E-07	8.98E-04	4.186E-10	4.58E-03	3.22E-02	5.46E-03	5.39E-03	2.17E-03
Road 47	47	1000-1100	9.581E-03	1.93E-07	8.606E-04	4.54E-10	9.14E-07	4.10E-05	1.11E-06	4.97E-03	5.96E-03
Road 47	47	1100-1200	9.482E-03	1.73E-07	7.77E-04	4.511E-05E	3.89E-03	4.63E-06	1.03E-06	4.44E-03	2.43E-03
Road 47	47	1200-1300	1.007E-02	2.42E-07	1.009E-04	4.631E-06	1.12E-06	5.04E-03	8.10E-06	6.33E-04	6.64E-03
Road 47	47	1300-1400	1.076E-02	2.91E-07	1.108E-04	4.99E-06	1.12E-06	5.04E-03	8.10E-06	1.36E-03	6.65E-03
Road 47	47	1400-1500	1.08E-02	2.62E-07	1.118E-04	4.820E-06	1.12E-06	5.34E-03	8.00E-06	6.51E-03	6.89E-03
Road 47	47	1500-1600	1.100E-02	2.84E-07	1.208E-04	4.844E-06	1.12E-06	5.34E-03	8.00E-06	7.01E-03	7.62E-03
Road 47	47	1600-1700	1.08E-02	2.84E-07	1.208E-04	4.844E-06	1.12E-06	5.34E-03	8.00E-06	7.01E-03	7.62E-03
Road 47	47	1700-1800	2.79E-02	2.79E-02	4.914E-06	1.48E-06	6.63E-03	5.84E-02	3.75E-08	7.18E-03	2.41E-03
Road 47	47	1800-1900	4.631E-02	1.26E-06	2.712E-03	1.46E-09	1.32E-06	1.906E-02	8.60E-07	1.49E-03	1.09E-03
Road 47	47	1900-2000	4.26E-03	1.23E-07	5.523E-04	3.271E-07	3.57E-04	3.91E-07	4.11E-03	1.19E-03	3.13E-03
Road 47	47	2000-2100	4.444E-03	9.41E-08	1.621E-04	3.271E-10	3.01E-03	3.71E-02	7.14E-02	3.21E-03	1.12E-03
Road 47	47	2100-2200	3.88E-03	8.89E-08	1.51E-04	3.271E-10	2.81E-03	3.71E-02	7.14E-02	3.21E-03	1.12E-03
Road 47	47	2200-2300	3.77E-03	7.95E-08	1.39E-04	3.271E-10	2.67E-03	3.91E-02	7.14E-02	3.21E-03	1.12E-03
Road 47	47	2300-2400	4.21E-03	6.57E-08	2.81E-04	3.31E-10	4.92E-07	2.21E-03	3.76E-02	5.46E-03	1.04E-03
Road 48	48	0000-0900	8.582E-04	4.47E-03	8.582E-04	4.47E-03					

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Appendix\Appendix 3.5.4 Emission Factor in 2043-S B.xlsx

g Yi North Underground Quarry

2000 Road 42 Emission Factors for AHMD Model (Metric Tons)														
Road Name	Road ID	Hour	Month/Year/Min				Month/Year/Average				Month/Year/Average			
			g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	g/km/h	
Road #47	1600-1200	2.08E-03	2.08E-03	8.47E-04	1.84E-03	1.84E-03	1.84E-03	1.84E-03	1.84E-03	1.84E-03	1.84E-03	1.84E-03		
Road #47	1700-1800	1.48E-02	3.24E-07	3.69E-03	7.21E-04	1.58E-06	1.80E-02	1.80E-02	1.91E-06	2.17E-02	2.30E-03	5.04E-04		
Road #47	1800-1900	1.07E-02	2.66E-07	3.03E-03	5.25E-04	1.36E-06	4.63E-02	5.76E-06	1.78E-02	1.67E-04	5.14E-04	4.73E-04		
Road #47	1900-2000	1.07E-02	2.66E-07	3.03E-03	5.25E-04	1.36E-06	4.63E-02	5.76E-06	1.78E-02	1.67E-04	5.14E-04	4.73E-04		
Road #47	2000-2100	7.59E-03	1.92E-07	1.39E-03	5.17E-04	7.94E-07	5.09E-02	5.96E-06	1.16E-02	1.04E-02	1.59E-02	2.19E-04		
Road #47	2100-2200	6.69E-03	1.62E-07	1.16E-03	4.95E-04	7.61E-07	8.67E-02	6.83E-07	9.83E-04	1.04E-02	1.80E-04	1.82E-04		
Road #47	2200-2300	6.69E-03	1.62E-07	1.16E-03	4.95E-04	7.61E-07	8.67E-02	6.83E-07	9.83E-04	1.04E-02	1.80E-04	1.82E-04		
Road #47	2300-2400	6.57E-03	7.33E-08	8.95E-04	4.82E-05	5.18E-07	6.13E-04	5.48E-04	6.11E-07	6.96E-03	1.06E-03	1.34E-04		
Road #48	0000-0100	4.52E-03	6.75E-08	2.07E-04	3.42E-04	2.84E-07	5.16E-04	3.88E-02	3.22E-07	1.77E-03	1.13E-03	9.39E-05		
Road #48	0100-0200	4.52E-03	6.75E-08	2.07E-04	3.42E-04	2.84E-07	5.16E-04	3.88E-02	3.22E-07	1.77E-03	1.13E-03	9.39E-05		
Road #48	0200-0300	4.52E-03	6.75E-08	2.07E-04	3.42E-04	2.84E-07	5.16E-04	3.88E-02	3.22E-07	1.77E-03	1.13E-03	9.39E-05		
Road #48	0300-0400	5.43E-03	1.14E-08	1.18E-03	3.71E-04	1.46E-07	4.42E-04	4.29E-07	1.67E-07	9.22E-04	1.37E-03	2.97E-04		
Road #48	0400-0500	5.43E-03	1.14E-08	1.18E-03	3.71E-04	1.46E-07	4.42E-04	4.29E-07	1.67E-07	9.22E-04	1.37E-03	2.97E-04		
Road #48	0500-0600	5.43E-03	1.14E-08	1.18E-03	3.71E-04	1.46E-07	4.42E-04	4.29E-07	1.67E-07	9.22E-04	1.37E-03	2.97E-04		
Road #48	0600-0700	6.81E-02	4.02E-08	2.21E-04	4.06E-04	2.46E-07	1.23E-04	4.78E-07	8.00E-07	1.54E-03	1.74E-03	1.96E-04		
Road #48	0700-0800	6.81E-02	4.02E-08	2.21E-04	4.06E-04	2.46E-07	1.23E-04	4.78E-07	8.00E-07	1.54E-03	1.74E-03	1.96E-04		
Road #48	0800-0900	7.30E-03	9.24E-08	5.09E-04	4.22E-04	5.34E-07	2.34E-04	4.95E-02	6.26E-07	4.93E-04	1.87E-03	1.30E-04		
Road #48	0900-1000	7.30E-03	9.24E-08	5.09E-04	4.22E-04	5.34E-07	2.34E-04	4.95E-02	6.26E-07	4.93E-04	1.87E-03	1.30E-04		
Road #48	1000-1100	7.73E-03	1.09E-07	1.09E-03	4.29E-04	1.16E-06	6.04E-04	5.06E-02	1.29E-06	7.27E-03	2.00E-03	2.61E-04		
Road #48	1100-1200	7.73E-03	1.09E-07	1.09E-03	4.29E-04	1.16E-06	6.04E-04	5.06E-02	1.29E-06	7.27E-03	2.00E-03	2.61E-04		
Road #48	1200-1300	8.49E-03	2.08E-07	1.13E-03	4.29E-04	1.06E-06	5.65E-07	5.07E-02	1.29E-06	6.77E-03	2.32E-03	5.61E-04		
Road #48	1300-1400	8.49E-03	2.08E-07	1.13E-03	4.29E-04	1.06E-06	5.65E-07	5.07E-02	1.29E-06	6.77E-03	2.32E-03	5.61E-04		
Road #48	1400-1500	9.51E-03	2.01E-07	1.11E-03	4.40E-04	9.38E-07	5.14E-04	5.42E-06	1.13E-06	7.25E-03	2.63E-03	5.08E-04		
Road #48	1500-1600	9.51E-03	2.01E-07	1.11E-03	4.40E-04	9.38E-07	5.14E-04	5.42E-06	1.13E-06	7.25E-03	2.63E-03	5.08E-04		
Road #48	1600-1700	1.05E-02	2.89E-07	1.59E-03	5.62E-04	1.06E-06	5.58E-06	7.12E-02	1.37E-07	6.75E-03	4.18E-03	9.07E-04		
Road #48	1700-1800	1.05E-02	2.89E-07	1.59E-03	5.62E-04	1.06E-06	5.58E-06	7.12E-02	1.37E-07	6.75E-03	4.18E-03	9.07E-04		
Road #48	1800-1900	1.50E-02	3.03E-07	1.87E-03	5.81E-04	1.12E-06	6.17E-06	7.34E-06	4.08E-06	8.14E-02	4.29E-03	8.63E-04		
Road #48	1900-2000	1.50E-02	3.03E-07	1.87E-03	5.81E-04	1.12E-06	6.17E-06	7.34E-06	4.08E-06	8.14E-02	4.29E-03	8.63E-04		
Road #48	2000-2100	1.38E-02	2.99E-07	1.65E-03	5.74E-04	1.03E-06	6.43E-06	7.22E-02	1.25E-06	5.37E-03	4.96E-03	4.92E-04		
Road #48	2100-2200	1.38E-02	2.99E-07	1.65E-03	5.74E-04	1.03E-06	6.43E-06	7.22E-02	1.25E-06	5.37E-03	4.96E-03	4.92E-04		
Road #48	2200-2300	1.41E-02	1.74E-07	1.74E-03	5.42E-04	1.21E-06	6.68E-06	6.83E-02	1.53E-06	4.82E-02	3.97E-03	8.89E-04		
Road #48	2300-2400	1.69E-02	2.31E-07	2.31E-03	7.05E-04	1.44E-06	8.26E-06	3.74E-02	1.39E-06	6.46E-03	7.36E-03	4.02E-04		
Road #48	1800-1900	7.38E-03	1.82E-07	1.00E-03	3.50E-04	1.63E-07	6.82E-04	1.04E-06	5.75E-03	2.13E-05	2.58E-04	2.88E-04		
Road #48	1900-2000	6.68E-03	1.75E-07	6.93E-04	3.30E-04	6.41E-07	3.53E-03	3.95E-02	7.67E-07	4.22E-03	1.62E-03	3.54E-04		
Road #48	2000-2100	6.68E-03	1.75E-07	6.93E-04	3.30E-04	6.41E-07	3.53E-03	3.95E-02	7.67E-07	4.22E-03	1.62E-03	3.54E-04		
Road #48	2100-2200	6.07E-03	9.11E-07	5.02E-04	3.56E-04	5.36E-07	2.97E-04	4.17E-02	6.26E-07	3.45E-04	1.72E-03	2.58E-04		
Road #48	2200-2300	6.03E-03	8.78E-08	4.84E-04	3.46E-04	5.08E-07	2.80E-04	4.99E-02	8.95E-07	3.26E-03	1.06E-03	2.38E-04		
Road #48	2300-2400	6.03E-03	8.78E-08	4.84E-04	3.46E-04	5.08E-07	2.80E-04	4.99E-02	8.95E-07	3.26E-03	1.06E-03	2.38E-04		
Road #49	0000-0100	6.13E-03	1.41E-08	1.41E-03	4.41E-04	1.41E-07	5.41E-04	5.41E-04	6.13E-07	6.13E-03	6.13E-03	6.13E-03		
Road #49	0100-0200	6.13E-03	1.41E-08	1.41E-03	4.41E-04	1.41E-07	5.41E-04	5.41E-04	6.13E-07	6.13E-03	6.13E-03	6.13E-03		
Road #49	0200-0300	6.13E-03	1.41E-08	1.41E-03	4.41E-04	1.41E-07	5.41E-04	5.41E-04	6.13E-07	6.13E-03	6.13E-03	6.13E-03		
Road #49	0300-0400	6.13E-03	1.41E-08	1.41E-03	4.41E-04	1.41E-07	5.41E-04	5.41E-04	6.13E-07	6.13E-03	6.13E-03	6.13E-03		
Road #49	0400-0500	6.13E-03	1.41E-08	1.41E-03	4.41E-04	1.41E-07	5.41E-04	5.41E-04	6.13E-07	6.13E-03	6.13E-03	6.13E-03		
Road #49	0500-0600	6.13E-03	1.41E-08	1.41E-03	4.41E-04	1.41E-07	5.41E-04	5.41E-04	6.13E-07	6.13E-03	6.13E-03	6.13E-03		
Road #49	0600-0700	6.13E-03	1.41E-08	1.41E-03	4.41E-04	1.41E-07	5.41E-04	5.41E-04	6.13E-07	6.13E-03	6.13E-03	6.13E-03		
Road #49	0700-0800	6.13E-03	1.41E-08	1.41E-03	4.41E-04	1.41E-07	5.41E-04	5.41E-04	6.13E-07	6.13E-03	6.13E-03	6.13E-03		
Road #49	0800-0900	6.13E-03	1.41E-08	1.41E-03	4.41E-04	1.41E-07	5.41E-04	5.41E-04	6.13E-07	6.13E-03	6.13E-03	6.13E-03		
Road #49	0900-1000	6.13E-03	1.41E-08	1.41E-03	4.41E-04	1.41E-07	5.41E-04	5.41E-04	6.13E-07	6.13E-03	6.13E-03	6.13E-03		
Road #49	1000-1100	6.13E-03	1.41E-08	1.41E-03	4.41E-04	1.41E-07	5.41E-04	5.41E-04	6.13E-07	6.13E-03	6.13E-03	6.13E-03		
Road #49	1100-1200	6.13E-03	1.41E-08	1.41E-03	4.41E-04	1.41E-07	5.41E-04	5.41E-04	6.13E-07	6.13E-03	6.13E-03	6.13E-03		
Road #49	1200-1300	6.13E-03	1.41E-08	1.41E-03	4.41E-04	1.41E-07	5.41E-04	5.41E-04	6.13E-07	6.13E-03	6.13E-03	6.13E-03		
Road #49	1300-1400	6.13E-03	1.41E-08	1.41E-03	4.41E-04	1.41E-07	5.41E-04	5.41E-04	6.13E-07	6.13E-03	6.13E-03	6.13E-03		
Road #49	1400-1500	6.13E-03	1.41E-08	1.41E-03	4.41E-04	1.41E-07	5.41E-04	5.41E-04	6.13E-07	6.13E-03	6.13E-03	6.13E-03		
Road #49	1500-1600	6.13E-03	1.41E-08	1.41E-03	4.41E-04	1.41E-07	5.41E-04	5.41E-04	6.13E-07	6.13E-03	6.13E-03	6.13E-03		
Road #49	1600-1700	6.13E-03	1.41E-08	1.41E-03	4.41E-04	1.41E-07	5.41E-04	5.41E-04	6.13E-07	6.13E-03	6.13E-03	6.13E-03		
Road #49	1700-1800	6.13E-03	1.41E-08	1.41E-03	4.41E-04	1.41E-07	5.41E-04	5.41E-04	6.13E-07	6.13E-03	6.13E-03	6.13E-03		
Road #49	1800-1900	6.13E-03	1.41E-08	1.41E-03	4.41E-04	1.41E-07	5.41E-04	5.41E-04	6.13E-07	6.13E-03	6.13E-03	6.13E-03		
Road #49	1900-2000	6.13E-03	1.41E-08	1.41E-03	4.41E-04	1.41E-07	5.41E-04	5.41E-04	6.13E-07	6.13E-03	6.13E-03	6.13E-03		
Road #49	2000-2100	6.13E-03	1.41E-08	1.41E-03	4.41E-04	1.41E-07	5.41E-04	5.41E-04	6.13E-07	6.13E-03	6.13E-03	6.13E-03		
Road #49	2100-2200	6.13E-03	1.41E-08	1.41E-03	4.41E-04	1.41E-07	5.41E-04	5.41E-04	6.13E-07	6.13E-03	6.13E-03	6.13E-03		
Road #49	2200-2300	6.13E-03	1.41E-08	1.41E-03	4.41E-04	1.41E-07	5.41E-04	5.41E-04	6.13E-07	6.13E-03	6.13E-03	6.13E-03		
Road #49	2300-2400	6.13E-03	1.41E-08	1.41E-03	4.41E-04	1.41E-07	5.41E-04	5.41E-04	6.13E-07	6.13E-03	6.13E-03	6.13E-03		
Road #50	0000-0100	5.18E-03	1.03E-08	5.38E-05	1.37E-04	3.37E-08	1.76E-04	1.40E-08	2.29E-04	7.78E-03	1.94E-03	1.01E-05		
Road #50	0100-0200	3.96E-02	1.87E-08	8.69E-05	1.37E-04	3.37E-08	3.00E-04	1.77E-04	7.43E-08	3.67E-04	7.45E-03	1.83E-05		
Road #50	0200-0300	3.96E-02	1.87E-08	8.69E-05	1.37E-04	3.37E-08	3.00E-04	1.77E-04	7.43E-08	3.67E-04	7.45E-03	1.83E-05		
Road #50	0300-0400	4.31E-02	8.36E-08	4.35E-04	1.46E-07	2.90E-07	1.51E-03	1.90E-04	3.74E-07	9.82E-03	7.82E-03	7.90E-05		
Road #50	0400-0500	4.11E-02	8.36E-08	4.48E-04	1.47E-07	3.36E-07	1.47E-03	1.88E-04	2.23E-07	7.98E-03	1.72E-03	8.88E-05		
Road #50	0500-0600	4.11E-02	8.36E-08	4.48E-04	1.47E-07	3.36E-07	1.47E-03	1.88E-04	2.23E-07	7.98E-03	1.72E-03	8.88E-05		
Road #50	0600-0700	4.31E-02	8.36E-08	4.35E-04	1.46E-07	2.90E-07	1.51E-03	1.90E-04	3.74E-07	9.82E-03	7.82E-03	7.90E-05		
Road #50	0700-0800	4.31E-02	8.36E-08	4.35E-04	1.46E-07	2.90E-07	1.51E-03	1.90E-04	3.74E-07	9.82E-03	7.82E-03	7.90E-05		
Road #50	0800-0900	4.11E-02	8.36E-08	4.48E-04	1.47E-07	3.36E-07	1.47E-03	1.88E-04	2.23E-07	7.98E-03	1.72E-03	8.88E-05		
Road #50	0900-1000	4.11E-02	8.36E-08	4.48E-04	1.47E-07	3.36E-07	1.47E-03							

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry

Road Name		Road ID	Year	NO _x Emission				NO _x Emission			
				t/year				t/year			
				Monthly/ton		Monthly/ton		Monthly/ton		Monthly/ton	
				gpm/h	gpm/h	gpm/h	gpm/h	gpm/h	gpm/h	gpm/h	gpm/h
Road 1	53	0000-0000	4.23	2.30	1.38	2.30	1.38	2.30	1.38	2.30	1.38
Road 1	53	0100-0200	4.64	2.38	1.62	2.44	1.77	2.13	3.91	2.02	1.37
Road 1	53	0300-0400	5.06	1.91	1.08	3.62	0.67	9.28	0.13	1.55	1.05
Road 1	53	0400-0500	5.53	1.01	0.53	4.00	0.10	1.00	0.10	1.00	1.17
Road 1	53	0600-0900	5.96	1.93	1.01	3.84	0.24	5.46	0.44	1.44	0.77
Road 1	53	0900-1200	6.40	3.96	2.44	2.96	2.17	5.11	4.99	2.57	1.76
Road 1	53	1200-1300	6.83	1.91	1.01	3.84	0.24	5.46	0.44	1.44	0.77
Road 1	53	0700-0800	7.30	1.76	1.20	4.17	0.10	0.86	4.90	1.28	0.76
Road 1	53	0800-0900	6.94	1.94	1.32	3.70	0.26	5.04	0.40	1.36	0.86
Road 1	53	0900-1000	7.36	1.41	0.76	3.84	0.13	1.93	0.25	1.00	0.67
Road 1	53	1000-1100	8.96	1.74	1.07	4.27	0.34	5.67	0.16	1.02	0.66
Road 1	53	1100-1200	8.46	1.57	1.10	4.27	0.50	5.88	0.11	0.47	0.64
Road 1	53	1200-1300	8.96	1.74	1.07	4.27	0.34	5.67	0.16	1.02	0.66
Road 1	53	1300-1400	1.51	2.91	1.66	2.96	1.36	0.65	1.35	1.42	0.66
Road 1	53	1400-1500	1.51	2.91	1.66	2.96	1.36	0.65	1.35	1.42	0.66
Road 1	53	1500-1600	1.36	2.85	1.95	5.71	1.08	8.04	0.76	1.47	0.96
Road 1	53	1600-1700	1.36	2.85	1.95	5.71	1.08	8.04	0.76	1.47	0.96
Road 1	53	1700-1800	1.04	2.41	1.64	4.76	1.06	4.05	0.74	1.33	0.94
Road 1	53	1800-1900	1.36	1.47	1.18	3.51	0.28	4.71	0.25	0.99	0.67
Road 1	53	1900-2000	1.36	1.47	1.18	3.51	0.28	4.71	0.25	0.99	0.67
Road 1	53	2000-2100	6.31	9.27	6.27	5.34	5.17	6.32	4.17	6.06	1.71
Road 1	53	2100-2200	6.80	8.74	5.94	3.66	3.24	6.08	4.17	5.99	4.08
Road 1	53	2200-2300	6.80	8.47	5.79	3.49	2.89	3.00	5.78	4.08	4.08
Road 1	53	2300-0000	6.64	6.98	4.76	2.64	8.38	2.60	4.30	4.53	3.08
Road 2	52	0000-0100	4.78	2.38	1.48	2.71	0.65	6.02	0.24	1.10	2.05
Road 2	52	0100-0200	4.78	1.70	0.98	4.68	1.15	4.14	2.00	0.93	1.36
Road 2	52	0300-0400	4.64	1.31	0.68	1.66	0.77	0.91	2.15	1.07	1.14
Road 2	52	0500-0600	4.64	1.17	0.58	1.76	0.59	1.68	1.18	0.52	1.74
Road 2	52	0600-0700	4.64	1.17	0.58	1.76	0.59	1.68	1.18	0.52	1.74
Road 2	52	0700-0800	4.64	2.50	1.47	1.76	0.26	1.74	2.44	1.18	2.21
Road 2	52	0800-0900	4.64	1.17	0.58	1.76	0.59	1.68	1.18	0.52	1.74
Road 2	52	0900-1000	5.32	1.64	0.94	1.82	1.01	0.94	2.27	0.76	1.23
Road 2	52	1000-1100	5.32	1.64	0.94	1.82	1.01	0.94	2.27	0.76	1.23
Road 2	52	1100-1200	5.82	1.89	1.24	2.06	0.77	3.76	0.87	1.67	1.20
Road 2	52	1200-1300	5.96	2.01	1.37	2.04	0.88	2.07	2.54	0.88	1.67
Road 2	52	1300-1400	6.04	2.01	1.37	2.04	0.88	2.07	2.54	0.88	1.67
Road 2	52	1400-1500	6.04	2.27	1.42	2.11	0.94	1.48	2.71	1.02	1.91
Road 2	52	1500-1600	5.46	2.16	1.37	2.04	0.92	2.07	2.53	0.93	1.93
Road 2	52	1600-1700	5.46	2.16	1.37	2.04	0.92	2.07	2.53	0.93	1.93
Road 2	52	1700-1800	4.64	2.07	1.29	1.91	0.26	1.77	2.38	1.04	2.05
Road 2	52	1800-1900	4.16	0.96	0.78	1.76	0.24	1.02	0.58	1.48	0.88
Road 2	52	1900-2000	4.16	0.96	0.78	1.76	0.24	1.02	0.58	1.48	0.88
Road 2	52	2000-2100	4.64	0.87	0.51	1.51	0.47	0.33	1.99	2.46	0.47
Road 2	52	2100-2200	3.91	4.84	0.96	1.62	2.06	0.74	2.01	2.48	0.47
Road 2	52	2200-2300	4.64	4.76	0.78	0.96	1.73	0.40	0.28	2.47	0.47
Road 2	52	2300-0000	4.64	4.76	0.78	0.96	1.73	0.40	0.28	2.47	0.47
Road 3	53	0000-0100	6.62	3.05	2.58	2.31	0.77	9.11	0.99	1.38	1.17
Road 3	53	0100-0200	6.15	2.04	1.74	2.34	0.21	6.13	2.98	1.93	1.44
Road 3	53	0300-0400	6.62	1.74	0.91	3.61	0.17	6.71	0.25	1.98	1.44
Road 3	53	0400-0500	7.04	1.34	0.64	2.44	0.18	4.55	0.14	6.13	0.60
Road 3	53	0500-0600	7.28	1.58	0.84	2.55	0.58	4.02	0.27	7.14	0.68
Road 3	53	0600-0700	7.28	1.58	0.84	2.55	0.58	4.02	0.27	7.14	0.68
Road 3	53	0700-0800	6.96	7.53	6.39	3.04	0.64	2.44	3.91	3.93	2.87
Road 3	53	0800-0900	6.72	1.76	1.48	1.48	0.31	0.93	4.98	0.67	1.26
Road 3	53	0900-1000	6.72	1.76	1.48	1.48	0.31	0.93	4.98	0.67	1.26
Road 3	53	1000-1100	1.08	1.12	0.57	1.83	0.71	6.42	0.86	1.93	0.62
Road 3	53	1100-1200	1.12	2.24	0.87	3.86	0.64	6.48	0.51	0.95	0.67
Road 3	53	1200-1300	1.12	2.24	0.87	3.86	0.64	6.48	0.51	0.95	0.67
Road 3	53	1300-1400	0.78	2.36	1.95	3.35	0.77	0.88	4.33	1.02	0.63
Road 3	53	1400-1500	0.78	2.36	1.95	3.35	0.77	0.88	4.33	1.02	0.63
Road 3	53	1500-1600	0.78	2.36	1.95	3.35	0.77	0.88	4.33	1.02	0.63
Road 3	53	1600-1700	0.78	2.36	1.95	3.35	0.77	0.88	4.33	1.02	0.63
Road 3	53	1700-1800	0.78	2.36	1.95	3.35	0.77	0.88	4.33	1.02	0.63
Road 3	53	1800-1900	0.78	2.36	1.95	3.35	0.77	0.88	4.33	1.02	0.63
Road 3	53	1900-2000	0.78	2.36	1.95	3.35	0.77	0.88	4.33	1.02	0.63
Road 3	53	2000-2100	0.78	2.36	1.95	3.35	0.77	0.88	4.33	1.02	0.63
Road 3	53	2100-2200	0.78	2.36	1.95	3.35	0.77	0.88	4.33	1.02	0.63
Road 3	53	2200-2300	0.78	2.36	1.95	3.35	0.77	0.88	4.33	1.02	0.63
Road 3	53	2300-0000	0.78	2.36	1.95	3.35	0.77	0.88	4.33	1.02	0.63
Road 4	54	0100-0200	4.16	4.04	1.83	0.41	0.68	0.71	0.43	2.17	0.71
Road 4	54	0300-0400	4.16	3.07	2.54	1.93	1.51	9.55	0.44	1.21	0.71
Road 4	54	0500-0600	4.16	2.42	0.24	2.03	0.38	0.51	2.57	1.44	0.58
Road 4	54	0600-0700	4.16	2.42	0.24	2.03	0.38	0.51	2.57	1.44	0.58
Road 4	54	0800-0900	4.16	2.42	0.24	2.03	0.38	0.51	2.57	1.44	0.58
Road 4	54	0900-1000	4.16	2.42	0.24	2.03	0.38	0.51	2.57	1.44	0.58
Road 4	54	1000-1100	4.16	2.42	0.24	2.03	0.38	0.51	2.57	1.44	0.58
Road 4	54	1100-1200	4.16	2.42	0.24	2.03	0.38	0.51	2.57	1.44	0.58
Road 4	54	1200-1300	4.16	2.42	0.24	2.03	0.38	0.51	2.57	1.44	0.58
Road 4	54	1300-1400	4.16	2.42	0.24	2.03	0.38	0.51	2.57	1.44	0.58
Road 4	54	1400-1500	4.16	2.42	0.24	2.03	0.38	0.51	2.57	1.44	0.58
Road 4	54	1500-1600	4.16	2.42	0.24	2.03	0.38	0.51	2.57	1.44	0.58
Road 4	54	1600-1700	4.16	2.42	0.24	2.03	0.38	0.51	2.57	1.44	0.58
Road 4	54	1700-1800	4.16	2.42	0.24	2.03	0.38	0.51	2.57	1.44	0.58
Road 4	54	1800-1900	4.16	2.42	0.24	2.03	0.38	0.51	2.57	1.44	0.58
Road 4	54	1900-2000	4.16	2.42	0.24	2.03	0.38	0.51	2.57	1.44	0.58
Road 4	54	2000-2100	4.16	2.42	0.24	2.03	0.38	0.51	2.57	1.44	0.58
Road 4	54	2100-2200	4.16	2.42	0.24	2.03	0.38	0.51	2.57	1.44	0.58
Road 4	54	2200-2300	4.16	2.42	0.24	2.03	0.38	0.51	2.57	1.44	0.58
Road 4	54	2300-0000	4.16	2.42	0.24	2.03	0.38	0.51	2.57	1.44	0.58

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Tsing Yi North Underground Quarry

Open Data 24 hour Emission Factors for 2023														
AECMO model (Ayrtr)														
Road Name	Road ID	Month	NO _x Emission				PM ₁₀ Emission				PM _{2.5} Emission			
			g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	g/km/hour	
Road 54	54	0600-0900	8.14E-03	1.31E-03	2.98E-03	1.31E-03	1.31E-03	1.31E-03	1.31E-03	1.31E-03	1.31E-03	1.31E-03	1.31E-03	
Road 54	54	0900-1200	9.21E-02	3.32E-07	2.76E-03	3.40E-01	1.22E-06	1.02E-02	4.33E-01	5.56E-06	3.00E-02	1.08E-02	3.88E-03	
Road 54	54	1200-1500	1.02E-01	6.41E-07	2.84E-03	3.60E-01	1.20E-06	9.92E-02	4.62E-01	5.56E-06	3.00E-02	1.15E-02	3.84E-03	
Road 54	54	1500-1800	1.02E-01	6.41E-07	2.84E-03	3.60E-01	1.20E-06	9.92E-02	4.62E-01	5.56E-06	3.00E-02	1.15E-02	3.84E-03	
Road 54	54	1800-2100	1.26E-01	2.77E-07	2.30E-03	4.25E-01	9.34E-07	7.77E-03	5.51E-01	1.21E-06	0.01E-02	1.34E-02	2.95E-02	
Road 54	54	2100-2400	1.22E-01	2.96E-07	2.45E-03	4.34E-01	1.04E-06	8.63E-03	5.56E-01	2.34E-06	0.11E-02	1.32E-02	3.17E-02	
Road 54	54	0600-0900	1.18E-01	2.82E-07	2.35E-03	4.25E-01	9.34E-07	7.77E-03	5.51E-01	1.21E-06	0.01E-02	1.34E-02	2.95E-02	
Road 54	54	0900-1200	1.18E-01	2.82E-07	2.35E-03	4.25E-01	9.34E-07	7.77E-03	5.51E-01	1.21E-06	0.01E-02	1.34E-02	2.95E-02	
Road 54	54	1200-1500	1.18E-01	2.82E-07	2.35E-03	4.25E-01	9.34E-07	7.77E-03	5.51E-01	1.21E-06	0.01E-02	1.34E-02	2.95E-02	
Road 54	54	1500-1800	1.18E-01	2.82E-07	2.35E-03	4.25E-01	9.34E-07	7.77E-03	5.51E-01	1.21E-06	0.01E-02	1.34E-02	2.95E-02	
Road 54	54	1800-2100	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	2100-2400	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	0600-0900	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	0900-1200	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	1200-1500	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	1500-1800	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	1800-2100	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	2100-2400	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	0600-0900	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	0900-1200	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	1200-1500	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	1500-1800	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	1800-2100	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	2100-2400	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	0600-0900	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	0900-1200	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	1200-1500	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	1500-1800	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	1800-2100	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	2100-2400	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	0600-0900	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	0900-1200	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	1200-1500	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	1500-1800	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	1800-2100	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	2100-2400	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	0600-0900	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	0900-1200	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	1200-1500	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	1500-1800	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	1800-2100	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	2100-2400	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	0600-0900	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	0900-1200	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	1200-1500	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	1500-1800	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	1800-2100	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	2100-2400	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	0600-0900	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	0900-1200	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	1200-1500	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	1500-1800	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	1800-2100	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	2100-2400	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	0600-0900	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	0900-1200	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	1200-1500	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	1500-1800	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	1800-2100	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	2100-2400	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	0600-0900	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	0900-1200	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	1200-1500	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	1500-1800	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	1800-2100	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	2100-2400	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	0600-0900	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	0900-1200	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07	7.33E-03	5.05E-01	1.14E-06	0.00E-02	1.20E-02	1.90E-03	
Road 54	54	1200-1500	1.08E-01	2.51E-07	2.17E-03	3.78E-01	8.80E-07							

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry

Road 2012 24 hour Emission Factors for ARMDMO model (g/mi)											
Road Name		Road ID	Year	NO _x Emission				NO Emission			
				Monthly/tonne		Monthly/tonne		Monthly/tonne		Monthly/tonne	
				g/mi/veh	g/mi	g/mi/veh	g/mi	g/mi/veh	g/mi	g/mi/veh	g/mi
Road 103	103	1000-1700	1188.02	3.18E-02	1.31E-02	3.18E-02	1.31E-02	3.18E-02	1.31E-02	3.18E-02	1.31E-02
Road 103	103	1700-1800	8506.03	4.42E-07	3.22E-03	4.50E-07	2.37E-08	4.51E-02	2.81E-06	2.47E-02	2.77E-03
Road 103	103	1800-1900	8506.03	3.67E-07	3.22E-03	3.80E-07	2.37E-08	4.78E-02	2.40E-06	2.11E-02	6.23E-03
Road 103	103	1900-2000	8506.03	3.67E-07	3.22E-03	3.80E-07	2.37E-08	4.78E-02	2.40E-06	2.11E-02	6.23E-03
Road 103	103	2000-2100	4968.03	4.79E-07	1.51E-03	3.50E-07	1.21E-06	1.99E-02	1.38E-06	1.21E-02	1.28E-03
Road 103	103	2100-2200	4968.03	1.53E-07	1.51E-03	3.50E-07	1.21E-06	1.04E-02	1.38E-06	1.17E-03	1.13E-03
Road 103	103	2200-2300	4968.03	1.53E-07	1.51E-03	3.50E-07	1.21E-06	1.04E-02	1.38E-06	1.17E-03	1.13E-03
Road 103	103	2300-2400	4968.03	1.53E-07	1.51E-03	3.50E-07	1.21E-06	1.04E-02	1.38E-06	1.17E-03	1.13E-03
Road 104	104	0000-0000	4906.03	1.21E-07	1.00E-06	3.55E-07	8.93E-07	7.84E-03	4.02E-05	8.90E-03	1.21E-03
Road 104	104	0000-1000	8211.03	4.91E-06	6.68E-04	4.47E-05	5.01E-07	3.72E-03	3.29E-02	5.93E-07	4.22E-03
Road 104	104	1000-1100	8211.03	4.91E-06	6.68E-04	4.47E-05	5.01E-07	3.72E-03	3.29E-02	5.93E-07	4.22E-03
Road 104	104	1100-1200	8211.03	4.91E-06	6.68E-04	4.47E-05	5.01E-07	3.72E-03	3.29E-02	5.93E-07	4.22E-03
Road 104	104	1200-1300	9511.03	5.26E-06	3.95E-04	4.88E-07	2.27E-07	1.98E-02	3.20E-07	2.38E-03	2.61E-03
Road 104	104	1300-1400	10084.03	1.03E-05	4.58E-04	3.95E-04	5.06E-02	2.22E-07	1.65E-03	5.84E-02	1.98E-03
Road 104	104	1400-1500	10084.03	1.03E-05	4.58E-04	3.95E-04	5.06E-02	2.22E-07	1.65E-03	5.84E-02	1.98E-03
Road 104	104	1500-1600	10084.03	1.03E-05	4.58E-04	3.95E-04	5.06E-02	2.22E-07	1.65E-03	5.84E-02	1.98E-03
Road 104	104	1600-1700	10084.03	1.03E-05	4.58E-04	3.95E-04	5.06E-02	2.22E-07	1.65E-03	5.84E-02	1.98E-03
Road 104	104	1700-1800	1125.02	2.28E-07	1.70E-03	5.59E-02	4.04E-06	7.74E-03	8.81E-02	1.67E-06	9.43E-03
Road 104	104	1800-1900	1246.02	4.93E-07	3.69E-03	5.79E-02	2.21E-06	1.64E-02	7.08E-02	2.71E-06	3.52E-03
Road 104	104	1900-2000	1246.02	4.93E-07	3.69E-03	5.79E-02	2.21E-06	1.64E-02	7.08E-02	2.71E-06	3.52E-03
Road 104	104	2000-2100	1465.02	5.89E-07	4.43E-03	6.79E-02	2.52E-06	1.86E-02	7.90E-02	3.20E-06	4.17E-03
Road 104	104	2100-2200	1465.02	5.89E-07	4.43E-03	6.79E-02	2.52E-06	1.86E-02	7.90E-02	3.20E-06	4.17E-03
Road 104	104	2200-2300	1465.02	5.89E-07	4.43E-03	6.79E-02	2.52E-06	1.86E-02	7.90E-02	3.20E-06	4.17E-03
Road 104	104	2300-2400	1465.02	5.89E-07	4.43E-03	6.79E-02	2.52E-06	1.86E-02	7.90E-02	3.20E-06	4.17E-03
Road 104	104	0000-0000	1125.02	2.28E-07	1.70E-03	5.59E-02	4.04E-06	7.74E-03	8.81E-02	1.67E-06	9.43E-03
Road 104	104	0000-1000	8211.03	4.93E-06	6.68E-04	4.47E-05	5.01E-07	3.72E-03	3.29E-02	5.93E-07	4.22E-03
Road 104	104	1000-1100	8211.03	4.93E-06	6.68E-04	4.47E-05	5.01E-07	3.72E-03	3.29E-02	5.93E-07	4.22E-03
Road 104	104	1100-1200	8211.03	4.93E-06	6.68E-04	4.47E-05	5.01E-07	3.72E-03	3.29E-02	5.93E-07	4.22E-03
Road 104	104	1200-1300	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	1300-1400	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	1400-1500	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	1500-1600	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	1600-1700	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	1700-1800	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	1800-1900	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	1900-2000	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	2000-2100	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	2100-2200	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	2200-2300	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	2300-2400	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	0000-0000	1125.02	2.28E-07	1.70E-03	5.59E-02	4.04E-06	7.74E-03	8.81E-02	1.67E-06	9.43E-03
Road 104	104	0000-1000	8211.03	4.93E-06	6.68E-04	4.47E-05	5.01E-07	3.72E-03	3.29E-02	5.93E-07	4.22E-03
Road 104	104	1000-1100	8211.03	4.93E-06	6.68E-04	4.47E-05	5.01E-07	3.72E-03	3.29E-02	5.93E-07	4.22E-03
Road 104	104	1100-1200	8211.03	4.93E-06	6.68E-04	4.47E-05	5.01E-07	3.72E-03	3.29E-02	5.93E-07	4.22E-03
Road 104	104	1200-1300	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	1300-1400	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	1400-1500	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	1500-1600	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	1600-1700	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	1700-1800	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	1800-1900	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	1900-2000	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	2000-2100	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	2100-2200	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	2200-2300	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	2300-2400	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	0000-0000	1125.02	2.28E-07	1.70E-03	5.59E-02	4.04E-06	7.74E-03	8.81E-02	1.67E-06	9.43E-03
Road 104	104	0000-1000	8211.03	4.93E-06	6.68E-04	4.47E-05	5.01E-07	3.72E-03	3.29E-02	5.93E-07	4.22E-03
Road 104	104	1000-1100	8211.03	4.93E-06	6.68E-04	4.47E-05	5.01E-07	3.72E-03	3.29E-02	5.93E-07	4.22E-03
Road 104	104	1100-1200	8211.03	4.93E-06	6.68E-04	4.47E-05	5.01E-07	3.72E-03	3.29E-02	5.93E-07	4.22E-03
Road 104	104	1200-1300	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	1300-1400	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	1400-1500	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	1500-1600	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	1600-1700	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	1700-1800	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	1800-1900	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	1900-2000	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	2000-2100	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	2100-2200	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	2200-2300	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	2300-2400	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	0000-0000	1125.02	2.28E-07	1.70E-03	5.59E-02	4.04E-06	7.74E-03	8.81E-02	1.67E-06	9.43E-03
Road 104	104	0000-1000	8211.03	4.93E-06	6.68E-04	4.47E-05	5.01E-07	3.72E-03	3.29E-02	5.93E-07	4.22E-03
Road 104	104	1000-1100	8211.03	4.93E-06	6.68E-04	4.47E-05	5.01E-07	3.72E-03	3.29E-02	5.93E-07	4.22E-03
Road 104	104	1100-1200	8211.03	4.93E-06	6.68E-04	4.47E-05	5.01E-07	3.72E-03	3.29E-02	5.93E-07	4.22E-03
Road 104	104	1200-1300	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	1300-1400	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	1400-1500	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	4.44E-03
Road 104	104	1500-1600	1058.02	5.99E-07	4.43E-03	6.51E-02	2.36E-07	1.75E-02	1.84E-02	2.99E-06	

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g Yi North Underground Quarry

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for
AERMOD model (May) Year 2043

Road Name	Road ID	Hour	No. Emissions						No. Emissions					
			Monthly/Average			Monthly/Average			Monthly/Average			Monthly/Average		
			g/min/hr	g/min/hr	tonne/hour	g/min/hr	g/min/hr	tonne/hour	g/min/hr	g/min/hr	tonne/hour	g/min/hr	g/min/hr	tonne/hour
Road 14	14	0800-0900	3.11E+02	8.69E+07	5.53E+03	1.13E+04	3.31E+06	2.06E+02	1.47E+01	4.19E+06	2.61E+02	4.06E+03	1.16E+07	7.22E+04
Road 14	14	0900-1000	3.05E+03	8.82E+07	5.37E+03	1.32E+04	3.26E+06	1.98E+02	1.67E+01	4.09E+06	2.58E+02	4.75E+03	1.16E+07	7.08E+04
Road 14	14	1000-1100	2.95E+03	8.75E+07	5.29E+03	1.35E+04	3.28E+06	1.96E+02	1.67E+01	4.09E+06	2.58E+02	4.75E+03	1.16E+07	7.08E+04
Road 14	14	1100-1200	3.66E+02	7.14E+07	4.63E+03	1.32E+04	2.68E+06	1.67E+02	1.69E+01	3.34E+06	2.13E+02	5.05E+03	1.05E+07	6.39E+04
Road 14	14	1200-1300	4.95E+02	7.45E+07	7.27E+03	1.67E+04	3.95E+06	2.46E+02	2.17E+01	5.12E+06	3.18E+02	8.50E+03	1.46E+07	9.95E+04
Road 14	14	1300-1400	4.95E+02	7.45E+07	7.27E+03	1.67E+04	3.95E+06	2.46E+02	2.17E+01	5.12E+06	3.18E+02	8.50E+03	1.46E+07	9.95E+04
Road 14	14	1400-1500	5.12E+02	7.32E+06	8.21E+03	1.76E+04	4.52E+06	2.81E+02	2.27E+01	5.84E+06	3.54E+02	6.64E+03	1.71E+07	1.06E+05
Road 14	14	1500-1600	4.97E+02	7.13E+06	8.18E+03	1.84E+04	4.86E+06	2.92E+02	2.33E+01	6.37E+06	3.84E+02	6.45E+03	1.71E+07	1.06E+05
Road 14	14	1600-1700	4.95E+02	7.45E+07	7.27E+03	1.67E+04	3.95E+06	2.46E+02	2.17E+01	5.12E+06	3.18E+02	8.50E+03	1.46E+07	9.95E+04
Road 14	14	1700-1800	3.80E+02	7.12E+06	6.90E+03	1.47E+04	3.32E+06	2.09E+02	1.85E+01	4.54E+06	3.39E+02	4.93E+03	1.16E+07	9.15E+04
Road 14	14	1800-1900	2.84E+02	6.59E+07	5.35E+03	1.08E+04	3.26E+06	1.94E+02	1.67E+01	4.14E+06	2.58E+02	3.70E+03	1.12E+07	6.96E+04
Road 14	14	1900-2000	2.84E+02	6.59E+07	5.35E+03	1.08E+04	3.26E+06	1.94E+02	1.67E+01	4.14E+06	2.58E+02	3.70E+03	1.12E+07	6.96E+04
Road 14	14	2000-2100	2.84E+02	6.59E+07	5.35E+03	1.08E+04	3.26E+06	1.94E+02	1.67E+01	4.14E+06	2.58E+02	3.70E+03	1.12E+07	6.96E+04
Road 14	14	2100-2200	1.61E+02	3.04E+07	1.89E+03	6.00E+03	1.44E+06	9.89E+02	1.58E+01	2.75E+06	1.09E+02	2.55E+03	4.99E+06	2.86E+04
Road 14	14	2200-2300	1.61E+02	3.04E+07	1.89E+03	7.82E+03	1.43E+06	8.87E+03	9.53E+02	7.75E+06	1.07E+02	4.24E+03	4.98E+06	2.71E+04
Road 14	14	2300-2400	1.61E+02	3.04E+07	1.89E+03	7.82E+03	1.43E+06	8.87E+03	9.53E+02	7.75E+06	1.07E+02	4.24E+03	4.98E+06	2.71E+04
Road 14	14	2400-0100	1.61E+02	3.04E+07	1.89E+03	7.82E+03	1.43E+06	8.87E+03	9.53E+02	7.75E+06	1.07E+02	4.24E+03	4.98E+06	2.71E+04
Road 15	15	0800-0900	1.66E+02	2.23E+07	1.39E+03	7.71E+03	1.01E+06	3.13E+03	9.40E+02	2.34E+06	7.70E+02	2.59E+03	3.39E+06	2.11E+04
Road 15	15	0900-1000	2.10E+02	4.62E+06	1.58E+04	7.29E+04	1.61E+07	5.43E+06	3.99E+02	2.07E+07	7.00E+04	3.36E+06	7.40E+06	2.59E+05
Road 15	15	1000-1100	2.05E+02	4.54E+06	1.56E+04	7.19E+04	1.60E+07	5.40E+06	3.96E+02	2.05E+07	6.95E+04	3.33E+06	7.33E+06	2.56E+05
Road 15	15	1100-1200	3.27E+03	8.37E+08	5.31E+04	9.35E+02	1.12E+07	3.79E+04	1.25E+01	5.51E+07	5.10E+04	1.59E+05	6.24E+05	2.11E+05
Road 15	15	1200-1300	3.59E+02	3.63E+08	1.23E+04	9.51E+02	1.00E+07	3.34E+04	1.35E+01	5.37E+07	4.62E+04	5.89E+05	2.06E+05	2.21E+05
Road 15	15	1300-1400	3.59E+02	3.63E+08	1.23E+04	9.51E+02	1.00E+07	3.34E+04	1.35E+01	5.37E+07	4.62E+04	5.89E+05	2.06E+05	2.21E+05
Road 15	15	1400-1500	3.59E+02	3.63E+08	1.23E+04	9.51E+02	1.00E+07	3.34E+04	1.35E+01	5.37E+07	4.62E+04	5.89E+05	2.06E+05	2.21E+05
Road 15	15	1500-1600	2.79E+03	4.45E+08	1.57E+04	8.85E+02	1.47E+07	4.11E+04	1.16E+01	4.93E+07	5.54E+04	5.92E+05	7.63E+05	2.58E+05
Road 15	15	1600-1700	2.21E+02	7.14E+08	2.41E+04	8.15E+02	2.64E+07	8.91E+04	3.55E+01	1.17E+08	3.62E+04	1.13E+06	3.79E+05	3.98E+05
Road 15	15	1700-1800	2.34E+02	7.44E+08	2.51E+04	8.65E+02	2.78E+07	9.45E+04	3.82E+01	1.22E+08	3.82E+04	1.19E+06	3.98E+05	4.15E+05
Road 15	15	1800-1900	3.39E+02	2.72E+07	9.20E+04	1.04E+03	6.36E+07	2.83E+03	1.38E+01	1.11E+06	3.75E+03	4.78E+03	3.94E+08	1.30E+04
Road 15	15	1900-2000	3.80E+02	2.66E+07	8.77E+04	1.14E+03	7.89E+07	3.24E+03	1.55E+01	1.05E+06	3.56E+03	4.52E+03	3.77E+08	1.27E+04
Road 15	15	2000-2100	4.15E+02	2.66E+07	8.77E+04	1.14E+03	7.89E+07	3.24E+03	1.55E+01	1.05E+06	3.56E+03	4.52E+03	3.77E+08	1.27E+04
Road 15	15	2100-2200	4.15E+02	2.66E+07	8.77E+04	1.14E+03	7.89E+07	3.24E+03	1.55E+01	1.05E+06	3.56E+03	4.52E+03	3.77E+08	1.27E+04
Road 15	15	2200-2300	4.15E+02	2.66E+07	8.77E+04	1.14E+03	7.89E+07	3.24E+03	1.55E+01	1.05E+06	3.56E+03	4.52E+03	3.77E+08	1.27E+04
Road 15	15	2300-2400	4.15E+02	2.66E+07	8.77E+04	1.14E+03	7.89E+07	3.24E+03	1.55E+01	1.05E+06	3.56E+03	4.52E+03	3.77E+08	1.27E+04
Road 15	15	2400-0100	4.15E+02	2.66E+07	8.77E+04	1.14E+03	7.89E+07	3.24E+03	1.55E+01	1.05E+06	3.56E+03	4.52E+03	3.77E+08	1.27E+04
Road 15	15	1500-1600	5.00E+02	4.65E+07	1.57E+03	1.66E+04	1.55E+06	2.52E+02	2.16E+01	2.01E+06	8.73E+03	7.17E+03	6.68E+06	2.26E+04
Road 15	15	1600-1700	5.00E+02	4.65E+07	1.57E+03	1.66E+04	1.55E+06	2.52E+02	2.16E+01	2.01E+06	8.73E+03	7.17E+03	6.68E+06	2.26E+04
Road 15	15	1700-1800	5.00E+02	4.65E+07	1.57E+03	1.66E+04	1.55E+06	2.52E+02	2.16E+01	2.01E+06	8.73E+03	7.17E+03	6.68E+06	2.26E+04
Road 15	15	1800-1900	3.39E+02	4.14E+07	1.13E+03	1.09E+04	1.127E+06	3.80E+03	1.43E+01	1.47E+06	9.09E+03	4.69E+03	4.82E+06	1.63E+04
Road 15	15	1900-2000	3.39E+02	4.14E+07	1.13E+03	1.09E+04	1.127E+06	3.80E+03	1.43E+01	1.47E+06	9.09E+03	4.69E+03	4.82E+06	1.63E+04
Road 15	15	2000-2100	3.39E+02	4.14E+07	1.13E+03	1.09E+04	1.127E+06	3.80E+03	1.43E+01	1.47E+06	9.09E+03	4.69E+03	4.82E+06	1.63E+04
Road 15	15	2100-2200	1.80E+02	1.96E+06	4.69E+04	7.61E+02	5.61E+07	1.89E+03	9.49E+06	8.99E+07	2.36E+03	3.03E+03	2.73E+06	7.64E+03
Road 15	15	2200-2300	1.80E+02	1.96E+06	4.69E+04	7.61E+02	5.61E+07	1.89E+03	9.49E+06	8.99E+07	2.36E+03	3.03E+03	2.73E+06	7.64E+03
Road 15	15	2300-2400	1.80E+02	1.96E+06	4.69E+04	7.61E+02	5.61E+07	1.89E+03	9.49E+06	8.99E+07	2.36E+03	3.03E+03	2.73E+06	7.64E+03
Road 15	15	2400-0100	1.80E+02	1.96E+06	4.69E+04	7.61E+02	5.61E+07	1.89E+03	9.49E+06	8.99E+07	2.36E+03	3.03E+03	2.73E+06	7.64E+03
Road 16	16	0800-0900	6.33E+03	5.02E+08	5.61E+04	4.03E+02	3.26E+07	5.83E+04	4.67E+07	3.70E+04	1.55E+05	1.26E+05	2.68E+05	1.41E+04
Road 16	16	0900-1000	7.09E+03	3.66E+08	4.13E+04	4.26E+02	2.16E+07	2.44E+04	5.59E+07	2.88E+07	1.93E+05	1.79E+05	1.94E+04	1.06E+04
Road 16	16	1000-1100	7.09E+03	3.66E+08	4.13E+04	4.26E+02	2.16E+07	2.44E+04	5.59E+07	2.88E+07	1.93E+05	1.79E+05	1.94E+04	1.06E+04
Road 16	16	1100-1200	6.33E+03	5.02E+08	5.61E+04	4.03E+02	3.26E+07	5.83E+04	4.67E+07	3.70E+04	1.55E+05	1.26E+05	2.68E+05	1.41E+04
Road 16	16	1200-1300	2.62E+02	6.87E+07	3.44E+04	7.47E+04	1.63E+07	1.57E+06	5.66E+02	5.11E+03	2.23E+03	7.81E+03	8.72E+03	8.72E+03
Road 16	16	1300-1400	2.62E+02	6.87E+07	3.44E+04	7.47E+04	1.63E+07	1.57E+06	5.66E+02	5.11E+03	2.23E+03	7.81E+03	8.72E+03	8.72E+03
Road 16	16	1400-1500	2.62E+02	6.87E+07	3.44E+04	7.47E+04	1.63E+07	1.57E+06	5.66E+02	5.11E+03	2.23E+03	7.81E+03	8.72E+03	8.72E+03
Road 16	16	1500-1600	2.87E+02	7.29E+07	8.15E+03	1.17E+04	2.97E+03	3.25E+04	1.45E+01	6.26E+04	5.01E+03	1.27E+03	1.43E+03	1.43E+03
Road 16	16	1600-1700	3.14E+02	8.95E+07	9.23E+03	1.17E+04	3.28E+04	3.45E+04	1.49E+01	3.91E+06	5.12E+03	1.52E+03	1.51E+03	1.51E+03
Road 16	16	1700-1800	2.94E+02	8.45E+07	8.71E+03	1.17E+04	3.28E+04	3.45E+04	1.49E+01	3.91E+06	5.12E+03	1.52E+03	1.51E+03	1.51E+03
Road 16	16	1800-1900	1.58E+02	4.65E+07	5.21E+03	7.01E+03	2.06E+03	2.31E+03	8.59E+02	3.53E+06	2.83E+02	2.72E+03	6.01E+08	8.96E+04
Road 16	16	1900-2000	9.08E+03	2.07E+07	2.32E+03	4.27E+03	1.07E+06	1.61E+06	1.28E+06	1.43E+06	1.96E+06	4.48E+06	5.05E+04	5.05E+04
Road 16	16	2000-2100	9.08E+03	2.07E+07	2.32E+03	4.27E+03	1.07E+06	1.61E+06	1.28E+06	1.43E+06	1.96E+06	4.48E+06	5.05E+04	5.05E+04
Road 16	16	2100-2200	6.62E+03	1.18E+07	1.32E+03	4.26E+07	7.58E+07	8.48E+02	4.92E+07	8.76E+07	9.80E+06	1.68E+06	2.99E+06	3.01E+04
Road 16	16	2200-2300	6.58E+03	1.13E+07	1.28E+03	4.17E+07	7.15E+07	8.00E+02	4.82E+07	8.28E+07	9.28E+06	1.61E+06	2.78E+06	3.05E+04
Road 16	16	2300-2400	6.58E+03	1.13E+07	1.28E+03	4.17E+07	7.15E+07	8.00E+02	4.82E+07	8.28E+07	9.28E+06	1.61E+06	2.78E+06	3.05E+04
Road 17	17	0800-0900	8.38E+03	6.88E+08	7.35E+04	4.65E+02	3.86E+07	4.07E+04	5.41E+07	4.51E+07	4.81E+03	2.18E+03	1.79E+08	1.91E+04
Road 17	17	0900-1000	9.22E+03	5.01E+08	5.35E+04	4.84E+02	2.63E+07	2.80E+07	5.78E+07	3.13E+07	3.24E+03	2.41E+03	1.31E+04	1.40E+04
Road 17	17	1000-1100	9.22E+03	5.01E+08	5.35E+04	4.84E+02	2.63E+07	2.80E+07	5.78E+07	3.13E+07	3.24E+03	2.41E+03	1.31E+04	1.40E+04
Road 17	17	1100-1200	8.38E+03	6.88E+08	7.35E+04	4.65E+02	3.86E+07	4.07E+04	5.41E+07	4.51E+07	4.81E+03	2.18E+03	1.79E+08	1.91E+04

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for
AERMOD model (Max) Year 2043

Road Name	Road ID	Hour	NO ₂ Emission						NO _x Emission						
			g/min/veh			Monthly/Average			g/min/veh			Monthly/Average			
			tonne/hour	g/min/veh	g/min/veh	tonne/hour	g/min/veh	g/min/veh	tonne/hour	g/min/veh	g/min/veh	tonne/hour	g/min/veh	g/min/veh	
Road 27	27	1600-1700	1.236	2.827	3.176	4.886	1.126	1.263	6.111	1.416	1.586	1.296	2.976	3.346	
Road 27	27	1700-1800	1.086	1.176	1.926	4.476	7.056	7.056	5.556	8.766	9.846	1.196	1.886	2.316	
Road 27	27	1800-1900	1.316	1.316	1.316	4.216	4.216	4.216	4.216	4.216	4.216	1.316	1.316	1.316	
Road 27	27	1900-2000	0.976	8.036	9.036	4.056	3.266	3.696	4.496	4.906	5.456	1.136	1.956	1.946	
Road 27	27	2000-2100	0.946	8.406	9.436	4.016	3.386	3.806	5.006	4.226	4.776	1.146	1.926	1.986	
Road 27	27	2100-2200	1.066	7.776	8.736	4.616	2.866	3.156	4.876	5.586	6.036	1.196	2.676	3.856	
Road 28	28	0700-0800	1.436	4.506	4.506	4.506	1.436	1.436	4.506	4.506	4.506	1.436	1.436	1.436	
Road 28	28	0800-0900	7.826	8.566	1.776	4.096	4.246	9.286	4.686	5.346	1.116	2.066	2.286	4.736	
Road 28	28	0900-1000	8.766	8.766	1.316	4.096	3.126	4.676	4.686	3.756	1.776	2.346	1.606	3.026	
Road 28	28	1000-1100	2.466	2.466	2.466	4.266	4.266	4.266	4.266	4.266	4.266	2.466	2.466	2.466	
Road 28	28	0300-0400	1.076	4.626	9.576	4.476	2.076	4.286	5.586	5.536	5.246	2.826	1.226	2.536	
Road 28	28	0400-0500	1.116	5.306	1.106	4.806	2.346	4.856	6.016	2.876	5.956	1.246	1.446	2.926	
Road 28	28	0500-0600	1.136	4.036	4.036	4.036	1.136	1.136	4.036	4.036	4.036	1.136	1.136	1.136	
Road 28	28	0600-0700	1.126	1.986	4.106	5.076	1.986	1.986	6.126	1.106	2.776	3.026	5.396	1.116	
Road 28	28	0700-0800	1.216	4.467	9.116	5.256	1.916	3.966	6.466	2.356	4.687	3.266	1.166	2.866	
Road 28	28	0800-0900	1.356	4.506	1.046	5.586	2.096	4.396	4.646	5.986	5.306	3.826	4.426	2.956	
Road 28	28	0900-1000	1.356	4.506	1.046	5.586	2.096	4.396	4.646	5.986	5.306	3.826	4.426	2.956	
Road 28	28	1000-1100	1.546	5.126	1.086	5.906	1.906	4.076	7.436	2.486	5.126	4.316	1.446	2.986	
Road 28	28	1100-1200	1.526	4.776	9.816	5.636	1.856	3.486	3.786	2.336	4.626	4.196	1.926	2.746	
Road 28	28	1200-1300	1.436	4.326	4.326	4.326	1.436	1.436	4.326	4.326	4.326	1.436	1.436	1.436	
Road 28	28	1300-1400	1.436	4.326	4.326	4.326	1.436	1.436	4.326	4.326	4.326	1.436	1.436	1.436	
Road 28	28	1400-1500	1.436	4.326	4.326	4.326	1.436	1.436	4.326	4.326	4.326	1.436	1.436	1.436	
Road 28	28	1500-1600	1.436	4.326	4.326	4.326	1.436	1.436	4.326	4.326	4.326	1.436	1.436	1.436	
Road 28	28	1600-1700	1.376	4.246	9.036	5.536	1.696	3.566	6.706	2.136	4.146	3.756	1.916	2.466	
Road 28	28	1700-1800	1.016	3.547	7.336	4.636	1.626	3.666	5.636	5.986	6.106	2.816	8.986	2.956	
Road 28	28	1800-1900	1.746	4.036	4.036	4.036	1.746	1.746	4.036	4.036	4.036	1.746	1.746	1.746	
Road 28	28	1900-2000	6.106	1.767	3.656	3.326	1.926	3.926	3.146	2.366	1.656	4.706	9.876	0.946	
Road 28	28	2000-2100	6.026	1.367	2.826	3.656	4.246	8.247	1.124	4.256	9.606	1.496	1.616	3.646	7.556
Road 28	28	2100-2200	6.106	1.367	2.826	3.656	4.246	8.247	1.124	4.256	9.606	1.496	1.616	3.646	7.556
Road 28	28	2200-2300	5.506	1.306	2.486	3.506	7.816	1.676	4.146	9.016	1.876	2.426	3.106	6.426	0.946
Road 29	29	2300-0000	6.156	1.017	2.096	3.736	6.136	1.776	4.396	1.446	1.616	2.646	5.466	0.946	0.946
Road 29	29	0000-0100	5.266	1.826	1.106	3.326	3.086	1.726	4.346	3.547	1.816	1.306	1.416	2.876	0.946
Road 29	29	0100-0200	6.156	1.017	2.096	3.736	6.136	1.776	4.396	1.446	1.616	2.646	5.466	0.946	0.946
Road 29	29	0200-0300	7.086	1.026	2.996	7.546	1.466	1.416	4.346	1.966	4.046	1.756	3.796	1.866	0.946
Road 29	29	0300-0400	7.986	2.986	6.756	4.126	3.396	4.926	1.956	1.476	1.976	6.636	1.676	0.946	0.946
Road 29	29	0400-0500	8.826	1.826	1.826	3.696	1.526	1.526	3.696	1.526	1.526	1.526	1.526	1.526	1.526
Road 29	29	0500-0600	7.856	4.196	1.246	4.226	1.646	1.646	5.016	1.136	1.706	1.976	1.236	3.066	0.946
Road 29	29	0600-0700	7.886	1.926	2.566	4.226	1.616	1.616	6.836	1.676	1.956	2.986	6.896	0.946	0.946
Road 29	29	0700-0800	8.826	1.826	1.826	3.696	1.526	1.526	3.696	1.526	1.526	1.526	1.526	1.526	1.526
Road 29	29	0800-0900	8.096	2.526	6.346	3.896	1.216	3.506	2.426	1.466	3.686	2.116	6.566	1.856	0.946
Road 29	29	0900-1000	9.296	2.376	5.986	4.306	1.106	2.766	5.236	3.386	3.606	2.506	6.396	1.616	0.946
Road 29	29	1000-1100	1.826	1.826	1.826	4.346	1.826	1.826	4.346	1.826	1.826	1.826	1.826	1.826	1.826
Road 29	29	1100-1200	1.026	4.146	5.386	4.576	1.926	5.676	2.426	5.596	1.176	2.966	2.716	5.686	1.436
Road 29	29	1200-1300	1.606	3.567	8.976	6.176	1.296	3.624	7.396	1.646	4.146	4.406	9.786	2.466	0.946
Road 29	29	1300-1400	1.606	3.726	9.366	5.936	1.396	3.506	7.196	1.766	4.426	4.506	1.406	2.626	0.946
Road 29	29	1400-1500	1.606	3.726	9.366	5.936	1.396	3.506	7.196	1.766	4.426	4.506	1.406	2.626	0.946
Road 29	29	1500-1600	1.476	3.667	9.226	5.836	1.456	3.656	7.316	1.816	4.576	2.236	1.056	2.646	0.946
Road 29	29	1600-1700	1.506	3.896	9.736	5.536	1.436	3.566	7.096	1.816	4.576	4.176	1.076	2.706	0.946
Road 29	29	1700-1800	1.156	3.896	9.736	5.536	1.436	3.566	7.096	1.816	4.576	4.176	1.076	2.706	0.946
Road 29	29	1800-1900	8.306	2.356	5.926	3.666	1.036	2.616	4.506	2.776	3.206	2.346	6.616	1.676	0.946
Road 29	29	1900-2000	6.786	1.496	3.756	3.336	1.737	1.866	4.036	8.896	1.236	1.886	4.146	1.046	0.946
Road 29	29	2000-2100	6.786	1.496	3.756	3.336	1.737	1.866	4.036	8.896	1.236	1.886	4.146	1.046	0.946
Road 29	29	2100-2200	6.436	1.106	2.766	3.626	6.116	1.566	4.276	2.716	2.336	1.796	3.066	7.716	0.946
Road 29	29	2200-2300	6.426	1.066	2.676	3.546	5.486	1.486	4.206	6.846	1.756	1.726	2.846	7.356	0.946
Road 30	30	0000-0100	9.056	1.946	3.346	4.606	4.776	1.706	5.516	5.686	2.076	2.316	3.966	8.536	0.946
Road 30	30	0100-0200	1.056	7.236	2.596	4.906	3.386	1.716	5.596	4.106	1.476	2.886	1.856	6.616	0.946
Road 30	30	0200-0300	1.266	6.296	2.236	4.906	2.726	1.876	6.426	3.346	1.206	3.046	1.966	6.636	0.946
Road 30	30	0300-0400	1.266	6.296	2.236	4.906	2.726	1.876	6.426	3.346	1.206	3.046	1.966	6.636	0.946
Road 30	30	0400-0500	1.366	6.296	2.256	5.646	2.616	1.926	7.006	3.246	1.676	3.466	1.606	5.716	0.946
Road 30	30	0500-0600	1.276	6.946	3.556	4.386	3.486	1.566	6.856	5.376	1.926	3.276	3.966	9.176	0.946
Road 30	30	0600-0700	1.276	6.946	3.556	4.386	3.486	1.566	6.856	5.376	1.926	3.276	3.966	9.176	0.946
Road 30	30	0700-0800	1.366	6.486	1.676	5.856	2.026	1.726	7.226	4.946	8.896	3.546	1.226	4.366	0.946
Road 30	30	0800-0900	1.316	6.276	1.876	5.626	2.256	1.806	6.036	2.776	9.906	3.466	1.886	4.486	0.946
Road 30	30	0900-1000	1.316	6.276	1.876	5.626	2.256	1.806	6.036	2.776	9.906	3.466	1.886	4.486	0.946
Road 30	30	1000-1100	1.706	6.386	1.926	6.066	2.096	1.746	8.306	2.636	9.906	3.496	1.456	5.196	0.946
Road 30	30	1100-1200	1.676	5.026	1.796	6.616	1.986	1.796	8.286	2.486	8.876	4.486	1.346	4.806	0.946
Road 30	30	1200-1300	1.676	5.026	1.796	6.616	1.986	1.796	8.286	2.486	8.876	4.486	1.346	4.806	0.946
Road 30	30	1300-1400	2.046	6.826	2.446	7.776	2.606	1.936	9.816	3.286	1.176	5.536	1.956	6.626	0.946
Road 30	30	1400-1500	2.036	6.476	2.516	7.576	2.626	1.936	9.806	3.326	1.176	5.496	1.906	6.786	0.946
Road 30	30	1500-1600	1.886	6.776	2.406	7.176	2.736	1.836	9.996	3.426	1.226	5.216	1.866	6.646	0.946
Road 30	30	1600-1700	2.466	6.826	2.446	7.776	2.606	1.936	9.816	3.286	1.176	5.536	1.956	6.626	0.946
Road 30	30	1700-1800	1.506	5.686	2.036	6.556	2.446	1.856	8.056	1.096	1.436	1.316	1.666	5.986	0.946
Road 30	30	1800-1900	1.146	4.176	1.496	4.896	1.826	1.616	6.106	2.246	8.006	3.106	1.436	4.076	0.946
Road 30	30	1900-2000	1.146	4.176	1.496	4.896	1.826	1.616	6.106	2.246	8.006	3.106	1.436	4.076	0.946
Road 30	30	2000-2100	1.116	1.966	6.996	4.786	1.036	3.676	1.076	1.226	3.476	2.466	5.296	1.886	0.946
Road 30	30	2100-2200	8.816	1.506	6.786	4.776	1.036	3.676	5.556	1.226	4.396				

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Appendix 4.5 Calculation of

Tsing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for	Year 2043
AERMOD model (May)	

Road Name	Road ID	Hwy	No. Emulsion						No. Emulsion						No. Emulsion					
			Month/Year/Time			Month/Year/Time			Month/Year/Time			Month/Year/Time			Month/Year/Time			Month/Year/Time		
			g/m ² /wh	g/m ² /m	tonne/hour	g/m ² /wh	g/m ² /m	tonne/hour	g/m ² /wh	g/m ² /m	tonne/hour	g/m ² /wh	g/m ² /m	tonne/hour	g/m ² /wh	g/m ² /m	tonne/hour	g/m ² /wh	g/m ² /m	tonne/hour
Road #1	41	0000-0100	1.672E+02	3.588E+08	1.722E+04	5.422E+02	1.206E+07	4.09E+04	7.55E+02	1.55E+07	5.32E+04	3.88E+03	8.95E+09	2.93E+09						
Road #1	41	0100-0200	2.10E+02	3.39E+08	1.13E+04	6.27E+02	9.91E+06	4.09E+04	8.13E+02	1.37E+07	5.43E+04	5.02E+03	8.01E+09	2.74E+09						
Road #1	41	0200-0300	2.10E+02	3.39E+08	1.13E+04	6.27E+02	9.91E+06	4.09E+04	8.13E+02	1.37E+07	5.43E+04	5.02E+03	8.01E+09	2.74E+09						
Road #1	41	0300-0400	2.85E+02	3.12E+08	1.09E+04	7.49E+02	8.39E+06	2.87E+04	1.03E+03	1.16E+07	3.97E+04	6.78E+03	7.78E+09	2.60E+09						
Road #1	41	0400-0500	2.78E+02	3.29E+08	1.12E+04	7.89E+02	8.71E+06	2.98E+04	1.02E+03	1.10E+07	4.10E+04	8.57E+03	7.98E+09	2.66E+09						
Road #1	41	0500-0600	3.55E+02	3.15E+08	8.4E+03	1.10E+03	1.07E+07	3.79E+04	1.26E+03	1.26E+07	4.49E+04	1.06E+04	1.06E+10	3.46E+09						
Road #1	41	0600-0700	1.53E+02	4.78E+08	1.62E+04	5.61E+02	1.79E+07	5.54E+04	7.13E+02	2.21E+07	7.56E+04	3.66E+03	1.14E+10	3.91E+09						
Road #1	41	0700-0800	2.09E+02	1.49E+07	5.10E+04	6.49E+02	4.95E+07	1.57E+05	8.56E+02	6.08E+07	2.02E+05	5.05E+03	9.99E+09	1.23E+10						
Road #1	41	0800-0900	1.53E+02	4.78E+08	1.62E+04	5.61E+02	1.79E+07	5.54E+04	7.13E+02	2.21E+07	7.56E+04	3.66E+03	1.14E+10	3.91E+09						
Road #1	41	0900-1000	2.29E+02	1.49E+07	5.11E+04	6.50E+02	4.41E+07	1.51E+05	6.98E+02	5.90E+07	2.02E+05	5.96E+03	3.66E+09	1.75E+10						
Road #1	41	1000-1100	2.43E+02	1.49E+07	5.05E+04	6.89E+02	4.29E+07	1.44E+05	8.32E+02	5.68E+07	1.94E+05	5.95E+03	3.63E+09	1.24E+10						
Road #1	41	1100-1200	2.43E+02	1.49E+07	5.05E+04	6.89E+02	4.29E+07	1.44E+05	8.32E+02	5.68E+07	1.94E+05	5.95E+03	3.63E+09	1.24E+10						
Road #1	41	1200-1300	2.73E+02	1.74E+07	5.95E+04	7.79E+02	4.96E+07	1.70E+05	1.09E+03	6.10E+07	2.29E+05	6.79E+03	4.32E+08	1.48E+04						
Road #1	41	1300-1400	2.70E+02	1.77E+07	6.05E+04	7.69E+02	5.16E+07	1.78E+05	1.06E+03	6.95E+07	2.38E+05	6.78E+03	4.44E+08	1.50E+04						
Road #1	41	1400-1500	2.65E+02	1.82E+07	6.4E+04	7.52E+02	5.25E+07	1.84E+05	1.04E+03	7.46E+07	2.55E+05	7.16E+03	4.66E+08	1.56E+04						
Road #1	41	1500-1600	2.55E+02	1.77E+07	6.05E+04	7.74E+02	5.37E+07	1.84E+05	1.03E+03	7.13E+07	2.44E+05	6.45E+03	4.48E+08	1.53E+04						
Road #1	41	1600-1700	2.55E+02	1.77E+07	6.22E+04	7.74E+02	5.37E+07	1.83E+05	1.03E+03	7.15E+07	2.44E+05	6.45E+03	4.55E+08	1.55E+04						
Road #1	41	1700-1800	2.65E+02	1.82E+07	6.4E+04	7.52E+02	5.25E+07	1.84E+05	1.04E+03	7.46E+07	2.55E+05	7.16E+03	4.66E+08	1.56E+04						
Road #1	41	1800-1900	1.96E+02	1.51E+07	5.19E+04	5.70E+02	4.53E+07	1.55E+05	7.61E+02	6.05E+07	2.07E+05	4.71E+03	3.75E+09	1.28E+10						
Road #1	41	1900-2000	1.95E+02	1.50E+07	5.08E+04	5.61E+02	4.32E+07	1.54E+05	7.51E+02	5.95E+07	9.93E+04	2.77E+03	1.46E+09	4.95E+09						
Road #1	41	2000-2100	1.95E+02	1.50E+07	5.08E+04	5.61E+02	4.32E+07	1.54E+05	7.51E+02	5.95E+07	9.93E+04	2.77E+03	1.46E+09	4.95E+09						
Road #1	41	2100-2200	1.15E+02	4.89E+08	1.67E+04	4.84E+02	1.04E+07	6.98E+04	6.01E+02	2.53E+07	8.66E+04	7.88E+03	1.21E+09	4.16E+09						
Road #1	41	2200-2300	1.18E+02	4.79E+08	1.64E+04	4.95E+02	1.07E+07	6.98E+04	6.02E+02	2.45E+07	8.40E+04	8.0E+03	1.17E+09	4.05E+09						
Road #1	41	2300-2400	1.18E+02	4.79E+08	1.64E+04	4.95E+02	1.07E+07	6.98E+04	6.02E+02	2.45E+07	8.40E+04	8.0E+03	1.17E+09	4.05E+09						
Road #2	42	0000-0100	3.77E+02	7.75E+08	8.60E+04	9.25E+02	2.06E+07	9.39E+04	1.26E+03	2.82E+07	2.51E+05	5.19E+03	1.18E+09	1.08E+10						
Road #2	42	0100-0200	4.06E+02	7.62E+08	8.22E+04	9.60E+02	1.76E+07	8.62E+04	1.47E+03	2.47E+07	2.29E+05	6.54E+03	1.08E+09	1.08E+10						
Road #2	42	0200-0300	4.06E+02	7.62E+08	8.22E+04	9.60E+02	1.76E+07	8.62E+04	1.47E+03	2.47E+07	2.29E+05	6.54E+03	1.08E+09	1.08E+10						
Road #2	42	0300-0400	5.43E+02	6.47E+08	5.99E+04	1.31E+03	1.56E+07	1.44E+05	1.95E+02	2.04E+07	8.61E+03	1.02E+09	9.50E+09							
Road #2	42	0400-0500	5.25E+02	6.58E+08	6.09E+04	1.28E+03	1.61E+07	1.44E+05	1.81E+03	2.26E+07	1.10E+04	8.37E+03	1.05E+09	9.71E+09						
Road #2	42	0500-0600	5.25E+02	6.58E+08	6.09E+04	1.28E+03	1.61E+07	1.44E+05	1.81E+03	2.26E+07	1.10E+04	8.37E+03	1.05E+09	9.71E+09						
Road #2	42	0600-0700	3.03E+02	9.65E+08	8.93E+04	9.55E+02	3.00E+07	2.77E+05	1.02E+02	3.96E+07	3.67E+04	4.93E+03	1.59E+04	1.43E+04						
Road #2	42	0700-0800	5.35E+02	9.62E+07	3.63E+03	1.41E+04	1.04E+06	9.95E+03	1.94E+01	1.43E+06	1.32E+02	7.00E+02	5.30E+08	4.90E+04						
Road #2	42	0800-0900	5.35E+02	9.62E+07	3.63E+03	1.41E+04	1.04E+06	9.95E+03	1.94E+01	1.43E+06	1.32E+02	7.00E+02	5.30E+08	4.90E+04						
Road #2	42	0900-1000	5.60E+02	9.59E+07	3.69E+03	1.47E+04	1.04E+06	9.97E+03	2.13E+01	1.48E+06	1.32E+02	7.44E+02	5.43E+08	5.05E+04						
Road #2	42	1000-1100	5.59E+02	9.82E+07	3.53E+03	1.47E+04	9.97E+03	9.95E+03	2.10E+01	1.46E+06	1.26E+02	8.28E+02	5.33E+08	4.93E+04						
Road #2	42	1100-1200	5.59E+02	9.82E+07	3.53E+03	1.47E+04	9.97E+03	9.95E+03	2.10E+01	1.46E+06	1.26E+02	8.28E+02	5.33E+08	4.93E+04						
Road #2	42	1200-1300	7.75E+02	3.71E+07	3.44E+03	1.95E+03	9.11E+04	8.48E+04	2.68E+02	1.28E+06	1.19E+02	1.09E+02	5.24E+08	4.85E+04						
Road #2	42	1300-1400	7.64E+02	3.76E+07	3.48E+03	1.95E+03	9.45E+04	8.77E+04	2.68E+02	1.32E+06	1.22E+02	1.08E+02	5.34E+08	4.95E+04						
Road #2	42	1400-1500	7.64E+02	3.76E+07	3.48E+03	1.95E+03	9.45E+04	8.77E+04	2.68E+02	1.32E+06	1.22E+02	1.08E+02	5.34E+08	4.95E+04						
Road #2	42	1500-1600	7.71E+02	3.74E+07	3.46E+03	1.97E+03	9.60E+04	8.96E+04	2.59E+02	1.33E+06	1.23E+02	1.04E+02	5.36E+08	4.96E+04						
Road #2	42	1600-1700	7.78E+02	3.78E+07	3.50E+03	1.82E+03	9.46E+04	8.76E+04	2.54E+02	1.32E+06	1.23E+02	1.04E+02	5.40E+08	5.00E+04						
Road #2	42	1700-1800	7.64E+02	3.76E+07	3.48E+03	1.95E+03	9.45E+04	8.77E+04	2.68E+02	1.32E+06	1.22E+02	1.08E+02	5.34E+08	4.95E+04						
Road #2	42	1800-1900	6.14E+02	3.95E+07	3.11E+03	1.51E+03	8.26E+04	7.69E+04	2.12E+02	1.10E+06	1.08E+02	8.61E+02	4.71E+08	4.36E+04						
Road #2	42	1900-2000	3.05E+02	4.48E+08	8.79E+04	9.22E+02	2.87E+06	2.67E+04	1.32E+02	3.82E+06	3.54E+03	4.91E+03	1.75E+08	1.42E+04						
Road #2	42	2000-2100	3.05E+02	4.48E+08	8.79E+04	9.22E+02	2.87E+06	2.67E+04	1.32E+02	3.82E+06	3.54E+03	4.91E+03	1.75E+08	1.42E+04						
Road #2	42	2100-2200	3.24E+02	4.36E+08	8.79E+04	9.98E+02	2.53E+07	2.33E+04	1.31E+02	3.55E+07	3.10E+03	5.26E+03	1.98E+04	1.26E+04						
Road #2	42	2200-2300	3.57E+02	8.20E+08	7.59E+04	9.78E+02	2.24E+07	2.23E+04	1.31E+02	3.24E+07	3.00E+03	5.30E+03	1.31E+09	1.21E+04						
Road #2	42	2300-0000	3.74E+02	7.25E+08	1.04E+05	1.18E+07	2.02E+03	1.48E+02	2.96E+07	2.74E+03	8.22E+03	1.56E+03	1.18E+09	1.18E+04						
Road #3	43	0000-0100	6.91E+02	3.84E+08	3.71E+04	2.23E+03	8.37E+06	3.71E+04	1.35E+02	1.35E+07	3.10E+03	5.26E+03	1.98E+04	1.26E+04						
Road #3	43	0100-0200	9.14E+02	3.14E+08	1.39E+04	4.17E+02	1.65E+08	5.09E+02	2.02E+08	7.54E+02	2.12E+03	8.40E+03	3.14E+08							
Road #3	43	0200-0300	1.15E+04	3.64E+08	1.29E+04	4.66E+02	1.98E+07	5.15E+07	1.77E+08	4.68E+08	2.66E+08	7.90E+08	2.97E+08							
Road #3	43	0300-0400	1.15E+04	3.64E+08	1.29E+04	4.66E+02	1.98E+07	5.15E+07	1.77E+08	4.68E+08	2.66E+08	7.90E+08	2.97E+08							
Road #3	43	0400-0500	1.32E+02	3.47E+09	1.30E+05	4.95E+02	1.90E+08	4.58E+05	6.28E+02	1.55E+08	6.15E+03	3.07E+03	8.06E+03	3.01E+08						
Road #3	43	0500-0600	1.01E+02	3.29E+09	1.25E+05	4.49E+02	1.89E+08	7.06E+05	5.51E+02	2.31E+08	8.75E+03	2.58E+03	4.97E+03	3.69E+08						
Road #3	43	0600-0700	1.01E+02	3.29E+09	1.25E+05	4.49E+02	1.89E+08	7.06E+05	5.51E+02	2.31E+08	8.75E+03	2.58E+03	4.97E+03	3.69E+08						
Road #3	43	0700-0800	1.01E+02	1.83E+08	6.93E+08	4.58E+02	8.12E+08	3.64E+04	6.61E+02	9.95E+08	3.72E+04	2.45E+04	2.92E+08	1.99E+08						
Road #3	43	0800-0900	9.37E+02	1.90E+08	7.11E+03	9.57E+02	8.07E+03	3.												

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Appendix 4.5 Calculation of

Tsing Yi North Underground Quarry	
Open Road 24 hour Emission Factors for	Year 2043
AERMOD model (May)	

Road Name	Road ID	Hour	No. Emphasis						No. Emphasis					
			Month/Highway			Month/Highway			Month/Highway			Month/Highway		
			g/v/hw	g/m	tonne/hour	g/v/hw	g/m	tonne/hour	g/v/hw	g/m	tonne/hour	g/v/hw	g/m	tonne/hour
Road 54	54	0800-0900	8.14E-02	3.04E-07	2.53E-03	2.98E-01	1.12E-06	9.72E-03	8.30E-01	1.42E-06	1.10E-02	9.58E-03	3.98E-08	2.98E-04
Road 54	54	0900-1000	9.21E-02	3.32E-07	2.77E-03	3.28E-01	1.22E-06	1.02E-02	4.32E-01	1.59E-06	1.30E-02	1.08E-02	3.98E-08	3.22E-04
Road 54	54	1000-1100	1.04E-01	3.69E-07	3.09E-03	3.72E-01	1.49E-06	1.29E-02	4.99E-01	1.82E-06	1.50E-02	1.29E-02	4.99E-08	3.62E-04
Road 54	54	1100-1200	1.01E-01	3.61E-07	3.04E-03	3.58E-01	1.13E-06	9.72E-03	4.59E-01	1.44E-06	1.20E-02	1.14E-02	3.99E-08	2.99E-04
Road 54	54	1200-1300	1.26E-01	2.77E-07	2.30E-03	4.22E-01	9.34E-07	7.77E-03	5.51E-01	1.21E-06	1.02E-02	1.34E-02	2.99E-08	2.49E-04
Road 54	54	1300-1400	1.37E-01	2.99E-07	2.52E-03	4.59E-01	1.68E-06	1.48E-02	5.89E-01	1.68E-06	1.48E-02	1.68E-02	3.99E-08	2.99E-04
Road 54	54	1400-1500	1.24E-01	3.01E-07	2.50E-03	4.22E-01	1.03E-06	8.60E-03	5.69E-01	1.33E-06	1.11E-02	1.32E-02	3.24E-08	2.99E-04
Road 54	54	1500-1600	1.12E-01	2.82E-07	2.32E-03	4.22E-01	1.07E-06	8.90E-03	5.39E-01	1.33E-06	1.12E-02	1.25E-02	3.24E-08	2.61E-04
Road 54	54	1600-1700	1.37E-01	2.99E-07	2.52E-03	4.59E-01	1.68E-06	1.48E-02	5.89E-01	1.68E-06	1.48E-02	1.68E-02	3.99E-08	2.99E-04
Road 54	54	1700-1800	9.78E-02	3.27E-07	1.89E-03	3.64E-01	8.93E-07	7.47E-03	4.81E-02	1.12E-06	9.32E-03	1.14E-02	2.65E-08	2.21E-04
Road 54	54	1800-1900	8.06E-02	1.53E-07	1.27E-03	3.22E-01	6.11E-07	5.03E-03	4.03E-02	7.64E-07	6.39E-03	1.00E-02	1.00E-08	1.99E-04
Road 54	54	1900-2000	7.59E-02	1.42E-07	1.19E-03	3.89E-01	2.67E-07	2.22E-03	3.44E-02	7.64E-07	6.39E-03	1.00E-02	1.00E-08	1.99E-04
Road 54	54	2000-2100	6.91E-02	7.65E-08	6.28E-04	2.78E-01	3.01E-07	2.50E-03	3.44E-01	3.76E-07	3.18E-03	9.45E-03	1.04E-08	8.62E-05
Road 54	54	2100-2200	6.99E-02	7.65E-08	6.40E-04	2.78E-01	3.02E-07	2.54E-03	3.47E-01	3.82E-07	3.18E-03	9.47E-03	1.04E-08	8.63E-05
Road 54	54	2200-2300	6.99E-02	7.65E-08	6.40E-04	2.78E-01	3.02E-07	2.54E-03	3.47E-01	3.82E-07	3.18E-03	9.47E-03	1.04E-08	8.63E-05
Road 54	54	2300-0000	7.37E-02	7.59E-08	4.81E-04	2.67E-01	2.16E-07	1.74E-03	3.41E-01	2.67E-07	2.22E-03	9.33E-03	7.55E-09	6.29E-05
Road 101	101	0000-0100	5.52E-03	5.78E-08	1.10E-03	3.77E-01	5.57E-07	7.50E-03	4.23E-02	5.94E-07	8.59E-03	1.41E-03	5.94E-08	2.81E-04
Road 101	101	0100-0200	5.52E-03	5.78E-08	1.10E-03	3.77E-01	5.57E-07	7.50E-03	4.23E-02	5.94E-07	8.59E-03	1.41E-03	5.94E-08	2.81E-04
Road 101	101	0200-0300	6.62E-03	6.39E-08	6.30E-04	4.10E-07	7.32E-07	3.91E-03	4.76E-02	3.14E-07	4.54E-03	1.77E-03	1.17E-03	1.63E-04
Road 101	101	0300-0400	7.17E-03	3.74E-08	5.41E-04	4.24E-07	2.22E-07	3.02E-03	4.69E-02	2.95E-07	3.75E-03	1.89E-03	6.69E-03	4.49E-04
Road 101	101	0400-0500	7.59E-03	2.67E-08	3.89E-04	2.67E-07	1.33E-07	1.74E-03	3.41E-01	2.67E-07	2.22E-03	9.33E-03	7.55E-09	6.29E-05
Road 101	101	0500-0600	8.24E-03	8.25E-08	1.19E-04	4.52E-02	4.52E-07	5.54E-03	5.34E-05	3.93E-07	7.73E-03	7.15E-03	2.66E-08	3.12E-04
Road 101	101	0600-0700	8.82E-03	8.82E-08	1.30E-07	2.75E-07	1.03E-06	1.03E-06	5.58E-05	1.20E-06	1.74E-03	2.13E-03	4.97E-08	7.18E-04
Road 101	101	0700-0800	9.21E-03	9.21E-08	1.42E-07	2.11E-07	8.42E-07	3.36E-03	3.36E-03	1.20E-06	1.74E-03	2.13E-03	4.97E-08	7.18E-04
Road 101	101	0800-0900	9.06E-03	4.61E-07	4.48E-02	4.48E-02	2.27E-06	3.28E-02	3.96E-02	7.73E-05E	9.24E-03	1.73E-07	1.76E-03	1.76E-03
Road 101	101	0900-1000	1.06E-02	4.06E-07	8.51E-03	4.99E-02	2.12E-06	3.68E-02	5.88E-02	2.87E-06	3.71E-02	2.91E-02	1.29E-07	1.80E-03
Road 101	101	1000-1100	1.10E-02	4.06E-07	8.51E-03	4.99E-02	2.12E-06	3.68E-02	5.88E-02	2.87E-06	3.71E-02	2.91E-02	1.29E-07	1.80E-03
Road 101	101	1100-1200	1.15E-02	4.09E-07	5.91E-03	5.17E-01	1.84E-06	2.66E-02	6.31E-02	7.25E-05E	3.25E-02	3.17E-03	1.63E-03	1.63E-03
Road 101	101	1200-1300	1.24E-02	4.34E-07	6.27E-03	5.18E-01	1.81E-06	2.66E-02	6.42E-02	2.46E-06	3.42E-02	3.39E-03	1.18E-07	1.71E-03
Road 101	101	1300-1400	1.24E-02	4.34E-07	6.27E-03	5.18E-01	1.81E-06	2.66E-02	6.42E-02	2.46E-06	3.42E-02	3.39E-03	1.18E-07	1.71E-03
Road 101	101	1400-1500	1.28E-02	4.37E-07	6.93E-03	5.27E-01	2.01E-06	2.99E-02	6.50E-02	2.46E-06	3.60E-02	3.46E-03	1.32E-07	1.91E-03
Road 101	101	1500-1600	1.17E-02	4.57E-07	6.61E-03	5.02E-01	2.07E-06	2.99E-02	6.46E-02	2.53E-06	3.60E-02	3.29E-03	1.29E-07	1.88E-03
Road 101	101	1600-1700	1.17E-02	4.57E-07	6.61E-03	5.02E-01	2.07E-06	2.99E-02	6.46E-02	2.53E-06	3.60E-02	3.29E-03	1.29E-07	1.88E-03
Road 101	101	1700-1800	8.73E-02	4.02E-07	5.81E-04	4.22E-03	1.03E-06	8.60E-03	5.69E-01	1.33E-06	1.11E-02	1.32E-02	3.24E-08	2.99E-04
Road 101	101	1800-1900	6.19E-03	3.08E-07	4.43E-03	3.31E-04	1.64E-06	2.37E-03	3.93E-02	1.95E-06	2.81E-02	1.69E-03	8.38E-03	1.21E-03
Road 101	101	1900-2000	5.23E-03	2.52E-07	3.55E-03	3.31E-04	1.64E-06	2.37E-03	3.93E-02	1.95E-06	2.81E-02	1.69E-03	8.38E-03	1.21E-03
Road 101	101	2000-2100	5.23E-03	2.52E-07	3.55E-03	3.31E-04	1.64E-06	2.37E-03	3.93E-02	1.95E-06	2.81E-02	1.69E-03	8.38E-03	1.21E-03
Road 101	101	2100-2200	4.68E-03	1.14E-07	2.04E-03	3.49E-06	1.06E-06	1.53E-02	3.99E-02	1.95E-06	2.81E-02	1.69E-03	8.38E-03	1.21E-03
Road 101	101	2200-2300	4.68E-03	1.14E-07	2.04E-03	3.49E-06	1.06E-06	1.53E-02	3.99E-02	1.95E-06	2.81E-02	1.69E-03	8.38E-03	1.21E-03
Road 101	101	2300-0000	5.14E-03	1.15E-07	1.64E-03	3.64E-06	8.01E-07	1.17E-02	4.15E-04	1.17E-02	4.15E-04	1.32E-03	3.91E-03	4.18E-04
Road 102	102	0000-0100	7.59E-03	8.88E-08	1.20E-03	4.28E-05	5.07E-06	7.87E-04	5.04E-02	5.88E-07	7.98E-03	2.04E-03	2.99E-08	3.24E-04
Road 102	102	0100-0200	7.59E-03	8.88E-08	1.20E-03	4.28E-05	5.07E-06	7.87E-04	5.04E-02	5.88E-07	7.98E-03	2.04E-03	2.99E-08	3.24E-04
Road 102	102	0200-0300	8.89E-03	5.07E-08	6.88E-04	4.87E-02	2.67E-07	3.08E-03	5.56E-02	1.10E-07	4.29E-03	2.04E-03	1.37E-08	1.96E-04
Road 102	102	0300-0400	9.58E-03	4.35E-08	5.90E-04	4.84E-02	2.26E-07	2.98E-03	5.60E-02	8.63E-07	3.57E-03	2.60E-03	1.18E-08	1.60E-04
Road 102	102	0400-0500	9.58E-03	4.35E-08	5.90E-04	4.84E-02	2.26E-07	2.98E-03	5.60E-02	8.63E-07	3.57E-03	2.60E-03	1.18E-08	1.60E-04
Road 102	102	0500-0600	9.60E-03	9.60E-08	1.30E-03	5.19E-05	4.92E-07	5.27E-02	5.55E-07	1.52E-03	1.95E-03	2.66E-03	8.14E-04	3.54E-04
Road 102	102	0600-0700	1.15E-02	2.20E-07	2.99E-03	5.18E-03	1.03E-06	9.39E-02	6.12E-05E	1.62E-06	1.60E-02	3.13E-03	6.00E-08	1.55E-04
Road 102	102	0700-0800	1.21E-02	4.14E-07	6.43E-03	5.51E-02	2.18E-06	3.27E-02	6.75E-06	2.64E-06	3.30E-02	3.30E-02	1.96E-03	1.76E-03
Road 102	102	0800-0900	1.21E-02	4.14E-07	6.43E-03	5.51E-02	2.18E-06	3.27E-02	6.75E-06	2.64E-06	3.30E-02	3.30E-02	1.96E-03	1.76E-03
Road 102	102	0900-1000	1.36E-02	5.57E-07	7.51E-03	6.58E-02	2.38E-06	3.22E-02	7.71E-02	3.59E-06	3.98E-02	3.88E-03	1.58E-07	2.14E-03
Road 102	102	1000-1100	1.59E-02	6.99E-07	1.65E-03	6.17E-02	2.25E-06	3.04E-02	7.74E-02	3.62E-06	3.62E-02	3.49E-03	1.86E-07	2.17E-03
Road 102	102	1100-1200	1.59E-02	6.99E-07	1.65E-03	6.17E-02	2.25E-06	3.04E-02	7.74E-02	3.62E-06	3.62E-02	3.49E-03	1.86E-07	2.17E-03
Road 102	102	1200-1300	1.25E-02	3.94E-07	5.34E-03	5.18E-02	1.63E-06	7.21E-02	6.42E-06	2.02E-06	2.74E-02	3.44E-03	1.08E-07	1.47E-03
Road 102	102	1300-1400	1.26E-02	4.08E-07	5.35E-03	5.17E-02	1.63E-06	7.21E-02	6.42E-06	2.02E-06	2.74E-02	3.44E-03	1.08E-07	1.47E-03
Road 102	102	1400-1500	1.26E-02	4.08E-07	5.35E-03	5.17E-02	1.63E-06	7.21E-02	6.42E-06	2.02E-06	2.74E-02	3.44E-03	1.08E-07	1.47E-03
Road 102	102	1500-1600	1.18E-02	4.15E-07	5.62E-03	5.28E-02	1.89E-06	7.25E-02	6.46E-06	2.28E-06	2.99E-02	3.35E-03	1.18E-07	1.60E-03
Road 102	102	1600-1700	1.22E-02	4.36E-07	6.13E-03	5.07E-02	1.88E-06	7.55E-02	6.81E-06	2.24E-06	3.17E-02	3.39E-03	1.25E-07	1.70E-03
Road 102	102	1700-1800	8.79E-02	3.08E-07	4.43E-03	3.31E-04	1.64E-06	2.37E-03	3.93E-02	1.95E-06	2.81E-02	1.69E-03	8.38E-03	1.21E-03
Road 102	102	1800-1900	6.20E-03	2.75E-07	3.78E-03	3.28E-04	1.46E-06	1.97E-03	3.90E-02	1.78E-06	2.93E-02	1.72E-03	6.76E-03	1.03E-03
Road 102	102	1900-2000	5.44E-03	1.90E-07	2.58E-03	3.24E-04	1.13E-06	1.53E-02	3.78E-02	1.52E-06	1.79E-02	1.45E-03	5.07E-08	6.88E-04
Road 102	102	2000-2100	4.71E-03	1.28E-07	1.74E-03	3.47E-04	9.45E-07	1.28E-02	3.94E-02	1.07E-06	1.41E-02	1.19E-03	4.22E-04	5.60E-04
Road 102	102	2100-2200	4.70E-03	1.28E-07	1.74E-03	3.47E-04	9.45E-07	1.28E-02	3.94E-02	1.07E-06	1.41E-02	1.19E-03	4.22E-04	5.60E-04
Road 102	102	2200-2300	4.67E-03	1.22E-07	1.69E-03	3.43E-04	9.18E-07	1.24E-02	3.96E-02	1.04E-06	1.41E-02	1.19E-03	4.22E-04	5.60E-04
Road 102	102	2300-0000	5.32E-03	1.72E-07	2.66E-03	3.72E-04	1.17E-06	1						

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Open Road 24 hour Emission Factors for Year 2043

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Open Road 24 hour Emission Factors for
2014-2015 model (g/mi) Year 2043

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Open Road 24 hour Emission Factors for Year 2043

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Urban Road 24 hour Emission Factors for Year 2043

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Open Road 24 hour Emission Factors for Year 2043

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Open Road 24 hour Emission Factors for Year 2043

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Open Road 24 hour Emission Factors for Year 2043

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Urban Road 24 hour Emission Factors for Year 2043

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for
ARMDMO model (t/hrs)

Road Name	Road ID	Hour	NO _x Emission			NO ₂ Emission			PM ₁₀ Emission			PM _{2.5} Emission		
			g/min	g/s	g/hr	g/min	g/s	g/hr	g/min	g/s	g/hr	g/min	g/s	g/hr
Road 24	24	0900-0900	1.266	0.021	2.334	0.412	0.007	1.362	0.136	0.002	4.632	0.001	0.002	7.392
Road 24	24	0900-1000	1.266	0.021	2.514	0.472	0.008	1.506	0.136	0.002	4.938	0.001	0.002	7.764
Road 24	24	1000-1000	1.356	0.023	2.654	0.487	0.008	1.586	0.136	0.002	5.106	0.001	0.002	8.106
Road 24	24	1000-1100	1.356	0.023	2.834	0.502	0.009	1.666	0.136	0.002	5.378	0.001	0.002	8.454
Road 24	24	1100-1200	1.446	0.024	2.974	0.517	0.009	1.746	0.136	0.002	5.650	0.001	0.002	8.802
Road 24	24	1200-1300	1.446	0.024	3.154	0.532	0.010	1.826	0.136	0.002	5.922	0.001	0.002	9.150
Road 24	24	1300-1400	1.446	0.024	3.334	0.547	0.010	1.906	0.136	0.002	6.194	0.001	0.002	9.498
Road 24	24	1400-1500	1.446	0.024	3.514	0.562	0.011	1.986	0.136	0.002	6.466	0.001	0.002	9.846
Road 24	24	1500-1600	1.446	0.024	3.694	0.577	0.011	2.066	0.136	0.002	6.738	0.001	0.002	10.194
Road 24	24	1600-1700	1.356	0.023	3.874	0.592	0.012	2.146	0.136	0.002	7.010	0.001	0.002	10.542
Road 24	24	1700-1800	1.266	0.021	4.054	0.607	0.012	2.226	0.136	0.002	7.282	0.001	0.002	10.890
Road 24	24	1800-1900	1.076	0.018	4.234	0.622	0.013	2.306	0.136	0.002	7.554	0.001	0.002	11.238
Road 24	24	1900-2000	0.986	0.016	4.414	0.637	0.013	2.386	0.136	0.002	7.826	0.001	0.002	11.586
Road 24	24	2000-2100	0.896	0.015	4.594	0.652	0.014	2.466	0.136	0.002	8.098	0.001	0.002	11.934
Road 24	24	2100-2200	0.806	0.013	4.774	0.667	0.014	2.546	0.136	0.002	8.370	0.001	0.002	12.282
Road 24	24	2200-2300	0.716	0.012	4.954	0.682	0.015	2.626	0.136	0.002	8.642	0.001	0.002	12.630
Road 24	24	2300-2400	0.626	0.010	5.134	0.697	0.015	2.706	0.136	0.002	8.914	0.001	0.002	12.978
Road 24	24	2400-0100	0.536	0.009	5.314	0.712	0.016	2.786	0.136	0.002	9.186	0.001	0.002	13.326
Road 24	24	0100-0200	0.446	0.007	5.494	0.727	0.016	2.866	0.136	0.002	9.458	0.001	0.002	13.674
Road 24	24	0200-0300	0.356	0.006	5.674	0.742	0.017	2.946	0.136	0.002	9.730	0.001	0.002	14.022
Road 24	24	0300-0400	0.266	0.004	5.854	0.757	0.017	3.026	0.136	0.002	10.002	0.001	0.002	14.370
Road 24	24	0400-0500	0.176	0.003	6.034	0.772	0.018	3.106	0.136	0.002	10.274	0.001	0.002	14.718
Road 24	24	0500-0600	0.086	0.001	6.214	0.787	0.018	3.186	0.136	0.002	10.546	0.001	0.002	15.066
Road 24	24	0600-0700	0.000	0.000	6.394	0.802	0.019	3.266	0.136	0.002	10.818	0.001	0.002	15.414
Road 24	24	0700-0800	0.000	0.000	6.574	0.817	0.019	3.346	0.136	0.002	11.090	0.001	0.002	15.762
Road 24	24	0800-0900	0.000	0.000	6.754	0.832	0.020	3.426	0.136	0.002	11.362	0.001	0.002	16.110
Road 24	24	0900-1000	0.000	0.000	6.934	0.847	0.020	3.506	0.136	0.002	11.634	0.001	0.002	16.458
Road 24	24	1000-1100	0.000	0.000	7.114	0.862	0.021	3.586	0.136	0.002	11.906	0.001	0.002	16.806
Road 24	24	1100-1200	0.000	0.000	7.294	0.877	0.021	3.666	0.136	0.002	12.178	0.001	0.002	17.154
Road 24	24	1200-1300	0.000	0.000	7.474	0.892	0.022	3.746	0.136	0.002	12.450	0.001	0.002	17.502
Road 24	24	1300-1400	0.000	0.000	7.654	0.907	0.022	3.826	0.136	0.002	12.722	0.001	0.002	17.850
Road 24	24	1400-1500	0.000	0.000	7.834	0.922	0.023	3.906	0.136	0.002	12.994	0.001	0.002	18.198
Road 24	24	1500-1600	0.000	0.000	8.014	0.937	0.023	3.986	0.136	0.002	13.266	0.001	0.002	18.546
Road 24	24	1600-1700	0.000	0.000	8.194	0.952	0.024	4.066	0.136	0.002	13.538	0.001	0.002	18.894
Road 24	24	1700-1800	0.000	0.000	8.374	0.967	0.024	4.146	0.136	0.002	13.810	0.001	0.002	19.242
Road 24	24	1800-1900	0.000	0.000	8.554	0.982	0.025	4.226	0.136	0.002	14.082	0.001	0.002	19.590
Road 24	24	1900-2000	0.000	0.000	8.734	0.997	0.025	4.306	0.136	0.002	14.354	0.001	0.002	19.938
Road 24	24	2000-2100	0.000	0.000	8.914	1.012	0.026	4.386	0.136	0.002	14.626	0.001	0.002	20.286
Road 24	24	2100-2200	0.000	0.000	9.094	1.027	0.026	4.466	0.136	0.002	14.898	0.001	0.002	20.634
Road 24	24	2200-2300	0.000	0.000	9.274	1.042	0.027	4.546	0.136	0.002	15.170	0.001	0.002	20.982
Road 24	24	2300-2400	0.000	0.000	9.454	1.057	0.027	4.626	0.136	0.002	15.442	0.001	0.002	21.330
Road 24	24	2400-0100	0.000	0.000	9.634	1.072	0.028	4.706	0.136	0.002	15.714	0.001	0.002	21.678
Road 24	24	0100-0200	0.000	0.000	9.814	1.087	0.028	4.786	0.136	0.002	15.986	0.001	0.002	22.026
Road 24	24	0200-0300	0.000	0.000	9.994	1.102	0.029	4.866	0.136	0.002	16.258	0.001	0.002	22.374
Road 24	24	0300-0400	0.000	0.000	10.174	1.117	0.029	4.946	0.136	0.002	16.530	0.001	0.002	22.722
Road 24	24	0400-0500	0.000	0.000	10.354	1.132	0.030	5.026	0.136	0.002	16.802	0.001	0.002	23.070
Road 24	24	0500-0600	0.000	0.000	10.534	1.147	0.030	5.106	0.136	0.002	17.074	0.001	0.002	23.418
Road 24	24	0600-0700	0.000	0.000	10.714	1.162	0.031	5.186	0.136	0.002	17.346	0.001	0.002	23.766
Road 24	24	0700-0800	0.000	0.000	10.894	1.177	0.031	5.266	0.136	0.002	17.618	0.001	0.002	24.114
Road 24	24	0800-0900	0.000	0.000	11.074	1.192	0.032	5.346	0.136	0.002	17.890	0.001	0.002	24.462
Road 24	24	0900-1000	0.000	0.000	11.254	1.207	0.032	5.426	0.136	0.002	18.162	0.001	0.002	24.810
Road 24	24	1000-1100	0.000	0.000	11.434	1.222	0.033	5.506	0.136	0.002	18.434	0.001	0.002	25.158
Road 24	24	1100-1200	0.000	0.000	11.614	1.237	0.033	5.586	0.136	0.002	18.706	0.001	0.002	25.506
Road 24	24	1200-1300	0.000	0.000	11.794	1.252	0.034	5.666	0.136	0.002	18.978	0.001	0.002	25.854
Road 24	24	1300-1400	0.000	0.000	11.974	1.267	0.034	5.746	0.136	0.002	19.250	0.001	0.002	26.202
Road 24	24	1400-1500	0.000	0.000	12.154	1.282	0.035	5.826	0.136	0.002	19.522	0.001	0.002	26.550
Road 24	24	1500-1600	0.000	0.000	12.334	1.297	0.035	5.906	0.136	0.002	19.794	0.001	0.002	26.898
Road 24	24	1600-1700	0.000	0.000	12.514	1.312	0.036	5.986	0.136	0.002	20.066	0.001	0.002	27.246
Road 24	24	1700-1800	0.000	0.000	12.694	1.327	0.036	6.066	0.136	0.002	20.338	0.001	0.002	27.594
Road 24	24	1800-1900	0.000	0.000	12.874	1.342	0.037	6.146	0.136	0.002	20.610	0.001	0.002	27.942
Road 24	24	1900-2000	0.000	0.000	13.054	1.357	0.037	6.226	0.136	0.002	20.882	0.001	0.002	28.290
Road 24	24	2000-2100	0.000	0.000	13.234	1.372	0.038	6.306	0.136	0.002	21.154	0.001	0.002	28.638
Road 24	24	2100-2200	0.000	0.000	13.414	1.387	0.038	6.386	0.136	0.002	21.426	0.001	0.002	28.986
Road 24	24	2200-2300	0.000	0.000	13.594	1.402	0.039	6.466	0.136	0.002	21.698	0.001	0.002	29.334
Road 24	24	2300-2400	0.000	0.000	13.774	1.417	0.039	6.546	0.136	0.002	21.970	0.001	0.002	29.682
Road 24	24	2400-0100	0.000	0.000	13.954	1.432	0.040	6.626	0.136	0.002	22.242	0.001	0.002	30.030
Road 24	24	0100-0200	0.000	0.000	14.134	1.447	0.040	6.706	0.136	0.002	22.514	0.001	0.002	30.378
Road 24	24	0200-0300	0.000	0.000	14.314	1.462	0.041	6.786	0.136	0.002	22.786	0.001	0.002	30.726
Road 24	24	0300-0400	0.000	0.000	14.494	1.477	0.041	6.866	0.136	0.002	23.058	0.001	0.002	31.074
Road 24	24	0400-0500	0.000	0.000	14.674	1.492	0.042	6.946	0.136	0.002	23.330	0.001	0.002	31.422
Road 24	24	0500-0600	0.000	0.000	14.854	1.507	0.042	7.026	0.136	0.002	23.602	0.001	0.002	31.770
Road 24	24	0600-0700	0.000	0.000	15.034	1.522	0.043	7.106	0.136	0.002	23.874	0.001	0.002	32.118
Road 24	24	0700-0800	0.000	0.000	15.214	1.537	0.043	7.186	0.136	0.002	24.146	0.001	0.002	32.466
Road 24	24	0800-0900	0.000	0.000	15.394	1.552	0.044	7.266	0.136	0.002	24.418	0.001	0.002	32.814
Road 24	24	0900-1000	0.000	0.000	15.574	1.567	0.044	7.346	0.136	0.002	24.690	0.001	0.002	33.162
Road 24	24	1000-1100	0.000	0.000	15.754	1.582	0.045	7.426	0.136	0.002	24.962	0.001		

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry Open Road 24 hour Emission Factors for AERMOD model (µm³)														
Year 2043														
Road Name	Road ID	Hour	NO _x Emission				NO ₂ Emission				Monthly/Average			
			g/min/veh	g/hour	g/min/veh	g/hour	g/min/veh	g/hour	g/min/veh	g/hour				
Road 51	51	0000-0000	4.236	253.56	2.286	137.16	2.656	160.02	3.776	228.97	2.036	124.02	8.236	498.05
Road 51	51	0100-0200	4.646	278.8	1.8204	109.2	1.7767	106.6	1.216	73.01	1.736	103.92	1.186	71.04
Road 51	51	0200-0300	5.066	303.96	1.3464	80.784	1.3662	81.976	1.236	74.28	1.236	74.28	1.626	97.56
Road 51	51	0300-0400	5.536	334.56	1.116	67.02	1.1076	66.456	1.286	77.07	1.626	97.56	1.386	83.04
Road 51	51	0400-0500	5.996	361.38	1.3164	80.964	1.3462	80.782	1.446	86.776	1.776	106.6	1.896	113.6
Road 51	51	0500-0600	6.466	389.16	1.3164	80.964	1.3164	80.964	1.596	95.76	1.776	106.6	2.426	145.56
Road 51	51	0600-0700	6.886	415.58	5.6164	4.1162	4.9207	3.356	4.806	6.576	3.916	3.740	2.206	142.64
Road 51	51	0700-0800	7.306	442.07	1.766	1.066	1.016	1.016	8.806	1.136	0.706	1.886	4.516	270.74
Road 51	51	0800-0900	7.726	468.48	2.1664	1.3164	1.3164	1.3164	9.906	1.336	0.706	1.886	5.316	318.96
Road 51	51	0900-1000	7.886	476.77	1.226	0.626	0.9287	0.286	0.856	1.106	0.706	2.146	4.866	293.14
Road 51	51	1000-1100	8.036	484.77	1.146	1.196	0.476	0.346	0.586	1.036	0.686	2.476	4.786	322.04
Road 51	51	1100-1200	8.456	510.16	1.146	1.196	0.476	0.346	0.586	1.036	0.686	2.476	4.786	322.04
Road 51	51	1200-1300	1.506	92.77	1.986	5.886	1.046	0.766	1.736	1.326	0.966	4.126	7.746	5.476
Road 51	51	1300-1400	1.516	92.77	1.986	5.886	1.146	0.866	1.636	1.426	0.966	4.266	7.826	5.646
Road 51	51	1400-1500	1.526	92.77	1.986	5.886	1.246	0.966	1.536	1.526	1.066	4.346	7.906	5.716
Road 51	51	1500-1600	1.386	82.67	1.956	5.716	1.186	0.846	1.606	1.476	0.996	4.026	7.346	5.486
Road 51	51	1600-1700	1.416	83.67	2.056	6.426	1.166	0.906	1.636	1.466	0.996	4.026	7.346	5.486
Road 51	51	1700-1800	1.426	83.67	2.056	6.426	1.266	0.966	1.536	1.466	0.996	4.026	7.346	5.486
Road 51	51	1800-1900	7.396	447.18	1.746	1.086	3.516	0.256	1.616	0.256	0.996	4.076	2.106	123.42
Road 51	51	1900-2000	6.496	412.07	8.216	3.636	6.186	0.476	1.356	0.746	0.676	1.876	3.936	2.416
Road 51	51	2000-2100	6.506	412.07	8.216	3.636	6.186	0.476	1.356	0.746	0.676	1.876	3.936	2.416
Road 51	51	2100-2200	6.096	374.58	5.996	3.566	5.126	0.476	1.356	0.746	0.676	1.876	3.936	2.416
Road 51	51	2200-2300	6.056	370.48	5.736	3.486	4.896	0.376	1.096	0.576	0.676	1.846	3.786	2.356
Road 51	51	2300-2400	4.966	300.96	4.756	3.446	3.856	0.206	0.606	0.306	0.306	1.006	1.006	1.006
Road 52	52	0000-0000	4.736	283.56	3.456	205.15	1.726	1.036	1.656	1.036	1.036	2.476	9.366	5.726
Road 52	52	0100-0200	4.756	283.56	3.316	1.766	1.106	0.616	0.586	1.226	0.756	1.476	8.436	3.836
Road 52	52	0200-0300	4.646	278.8	2.456	1.456	0.976	0.476	0.616	1.016	0.676	1.146	7.476	3.266
Road 52	52	0300-0400	4.666	279.8	2.456	1.456	0.976	0.476	0.616	1.016	0.676	1.146	7.476	3.266
Road 52	52	0400-0500	4.686	281.38	2.486	1.506	1.436	0.836	0.516	1.216	0.616	1.156	7.476	3.266
Road 52	52	0500-0600	4.646	278.8	2.456	1.456	1.126	0.526	0.746	1.246	0.616	1.186	7.216	3.066
Road 52	52	0600-0700	4.686	281.38	2.456	1.456	1.096	0.526	0.746	1.246	0.616	1.186	7.216	3.066
Road 52	52	0700-0800	5.376	326.87	2.996	1.946	1.506	0.506	0.356	0.476	0.386	1.196	9.936	2.566
Road 52	52	0800-0900	5.326	323.67	3.096	1.996	1.616	0.156	0.256	0.701	0.446	0.786	3.026	0.866
Road 52	52	0900-1000	5.286	320.27	3.096	1.996	1.616	0.156	0.256	0.701	0.446	0.786	3.026	0.866
Road 52	52	1000-1100	5.846	352.07	4.136	2.786	2.086	0.276	0.456	0.746	0.266	0.786	3.026	0.866
Road 52	52	1100-1200	5.826	350.87	3.546	2.196	1.686	0.276	0.456	0.746	0.266	0.786	3.026	0.866
Road 52	52	1200-1300	5.956	359.11	2.956	1.826	1.356	0.366	0.256	0.686	0.266	0.786	3.026	0.866
Road 52	52	1300-1400	5.896	356.47	4.186	2.626	1.676	0.156	0.256	0.716	0.306	0.926	3.066	0.826
Road 52	52	1400-1500	6.046	374.07	4.296	2.116	1.946	0.476	0.246	0.716	0.306	0.926	3.066	0.826
Road 52	52	1500-1600	6.086	376.47	4.296	2.116	1.946	0.476	0.246	0.716	0.306	0.926	3.066	0.826
Road 52	52	1600-1700	5.616	340.47	3.816	2.026	1.736	0.376	0.256	0.586	0.366	0.716	2.946	0.676
Road 52	52	1700-1800	4.696	281.52	3.046	1.916	1.626	0.186	0.386	0.786	0.246	0.786	2.926	0.846
Road 52	52	1800-1900	4.696	281.52	3.046	1.916	1.626	0.186	0.386	0.786	0.246	0.786	2.926	0.846
Road 52	52	1900-2000	4.696	281.52	3.046	1.916	1.626	0.186	0.386	0.786	0.246	0.786	2.926	0.846
Road 52	52	2000-2100	3.966	239.58	1.126	0.606	1.246	0.156	0.206	0.406	0.106	0.676	1.916	0.246
Road 52	52	2100-2200	3.856	234.46	8.676	1.616	1.946	0.246	0.396	0.406	0.406	0.476	1.776	0.976
Road 52	52	2200-2300	3.856	234.46	8.676	1.616	1.946	0.246	0.396	0.406	0.406	0.476	1.776	0.976
Road 52	52	2300-2400	4.346	260.08	8.796	1.906	1.736	0.076	0.106	0.206	0.126	0.476	8.306	0.706
Road 52	52	0000-0100	4.266	257.78	7.066	1.576	1.396	0.266	0.406	0.506	1.776	3.316	8.496	0.746
Road 52	52	0100-0200	4.266	257.78	7.066	1.576	1.396	0.266	0.406	0.506	1.776	3.316	8.496	0.746
Road 52	52	0200-0300	4.266	257.78	7.066	1.576	1.396	0.266	0.406	0.506	1.776	3.316	8.496	0.746
Road 52	52	0300-0400	6.576	402.04	1.736	1.026	1.216	0.116	0.186	0.926	0.686	1.746	1.236	0.746
Road 53	53	0000-0000	6.826	409.58	1.364	81.41	5.676	0.686	4.026	0.686	0.676	1.696	1.066	0.426
Road 53	53	0100-0200	7.226	438.18	1.364	81.41	6.076	0.686	4.426	0.686	0.676	1.696	1.066	0.426
Road 53	53	0200-0300	7.626	466.78	1.364	81.41	6.476	0.686	4.826	0.686	0.676	1.696	1.066	0.426
Road 53	53	0300-0400	8.026	495.38	1.364	81.41	6.876	0.686	5.226	0.686	0.676	1.696	1.066	0.426
Road 53	53	0400-0500	8.426	523.98	1.364	81.41	7.276	0.686	5.626	0.686	0.676	1.696	1.066	0.426
Road 53	53	0500-0600	8.826	552.58	1.364	81.41	7.676	0.686	6.026	0.686	0.676	1.696	1.066	0.426
Road 53	53	0600-0700	9.226	581.18	1.364	81.41	8.076	0.686	6.426	0.686	0.676	1.696	1.066	0.426
Road 53	53	0700-0800	9.626	609.78	1.364	81.41	8.476	0.686	6.826	0.686	0.676	1.696	1.066	0.426
Road 53	53	0800-0900	10.026	638.38	1.364	81.41	8.876	0.686	7.226	0.686	0.676	1.696	1.066	0.426
Road 53	53	0900-1000	10.426	666.98	1.364	81.41	9.276	0.686	7.626	0.686	0.676	1.696	1.066	0.426
Road 53	53	1000-1100	10.826	695.58	1.364	81.41	9.676	0.686	8.026	0.686	0.676	1.696	1.066	0.426
Road 53	53	1100-1200	11.226	724.18	2.076	1.596	3.886	0.126	0.126	0.926	0.266	0.746	3.566	0.216
Road 53	53	1200-1300	9.796	587.67	1.996	1.536	3.786	0.086	0.106	0.836	0.206	0.596	2.996	0.116
Road 53	53	1300-1400	9.796	587.67	1.996	1.536	3.786	0.086	0.106	0.836	0.206	0.596	2.996	0.116
Road 53	53	1400-1500	9.666	580.27	2.126	1.596	3.886	0.126	0.126	0.926	0.266	0.746	3.566	0.216
Road 53	53	1500-1600	8.876	536.27	2.006	1.396	3.016	0.076	0.046	0.356	0.046	0.046	1.066	0.236
Road 53	53	1600-1700	8.156	491.27	2.006	1.396	2.296	0.046	0.046	0.356	0.046	0.046	1.066	0.236
Road 53	53	1700-1800	7.076	434.67	1.646	1.216	1.716	0.546	0.526	0.646	0.186	0.846	2.316	1.966
Road 53	53	1800-1900	5.296	318.67	1.156	0.336	1.546	0.436	0.656	0.626	0.736	0.736	1.736	1.466
Road 53	53	1900-2000	4.446	269.67	1.156	0.336	1.546	0.436	0.656	0.626	0.736	0.736	1.736	1.466
Road 53	53	2000-2100	4.576	276.08	0.966	0.506	1.296	0.276	0.486	0.366	0.626	0.376	0.286	0.666
Road 53	53	2100-2200	4.506	270.58	0.996	0.546	1.896	0.297	0.446	0.346	0.626	0.376	0.286	0.666
Road 53	53	2200-2300	4.506	270.58	0.996	0.546	1.896	0.297	0.446	0.346	0.626			

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

AERMOD model (July)		Year 2043													
Road Name	Road ID	h _{road}	NO _x Emission			Monthlyburdenage			Monthlyhourlin			NO _x Emission			
			g/kwh	g/m ³	g/kwh	g/m ³	g/kwh	g/m ³	g/kwh	g/m ³	g/kwh	g/m ³	g/kwh	g/m ³	
Road 17	17	1600-1700	5.676	1.536	1.636	2.021	0.548	1.626	2.596	0.696	1.746	7.456	7.416	2.006	2.116
Road 17	17	1700-1800	3.996	1.116	1.186	1.616	0.536	1.436	2.011	0.546	1.606	6.026	6.056	1.696	1.666
Road 17	17	1800-1900	5.676	1.536	1.636	2.021	0.548	1.626	2.596	0.696	1.746	7.456	7.416	2.006	2.116
Road 17	17	1900-2000	1.106	0.276	0.256	0.546	0.156	0.236	0.806	0.236	0.946	1.486	2.876	0.546	0.586
Road 17	17	2000-2100	5.546	1.526	1.626	2.021	0.531	1.676	0.186	0.686	0.936	6.076	2.506	3.986	4.286
Road 17	17	2100-2200	5.546	1.526	1.626	2.021	0.531	1.676	0.186	0.686	0.936	6.076	2.506	3.986	4.286
Road 17	17	2200-2300	1.106	0.276	0.256	0.546	0.156	0.236	0.806	0.236	0.946	1.486	2.876	0.546	0.586
Road 17	17	2300-2400	0.776	0.136	0.121	0.506	0.916	0.316	0.676	0.746	0.746	7.526	0.596	0.136	0.216
Road 17	17	2400-0500	0.776	0.136	0.121	0.506	0.916	0.316	0.676	0.746	0.746	7.526	0.596	0.136	0.216
Road 18	18	0100-0200	7.006	2.386	2.436	2.436	0.546	1.586	0.896	0.216	1.976	3.986	1.936	0.186	0.216
Road 18	18	0200-0300	7.006	2.386	2.436	2.436	0.546	1.586	0.896	0.216	1.976	3.986	1.936	0.186	0.216
Road 18	18	0300-0400	7.006	2.386	2.436	2.436	0.546	1.586	0.896	0.216	1.976	3.986	1.936	0.186	0.216
Road 18	18	0400-0500	7.006	2.386	2.436	2.436	0.546	1.586	0.896	0.216	1.976	3.986	1.936	0.186	0.216
Road 18	18	0500-0600	9.296	3.516	3.576	4.896	0.786	1.966	0.576	0.316	0.726	2.376	1.366	0.196	0.196
Road 18	18	0600-0700	9.296	3.516	3.576	4.896	0.786	1.966	0.576	0.316	0.726	2.376	1.366	0.196	0.196
Road 18	18	0700-0800	9.296	3.516	3.576	4.896	0.786	1.966	0.576	0.316	0.726	2.376	1.366	0.196	0.196
Road 18	18	0800-0900	1.102	0.296	0.276	0.426	0.436	0.046	0.546	1.736	0.466	2.636	1.736	0.196	0.196
Road 18	18	0900-1000	1.102	0.296	0.276	0.426	0.436	0.046	0.546	1.736	0.466	2.636	1.736	0.196	0.196
Road 18	18	1000-1100	1.102	0.296	0.276	0.426	0.436	0.046	0.546	1.736	0.466	2.636	1.736	0.196	0.196
Road 18	18	1100-1200	1.606	0.366	0.376	0.586	0.626	0.046	0.836	1.846	0.596	4.276	0.936	0.196	0.196
Road 18	18	1200-1300	1.606	0.366	0.376	0.586	0.626	0.046	0.836	1.846	0.596	4.276	0.936	0.196	0.196
Road 18	18	1300-1400	1.606	0.366	0.376	0.586	0.626	0.046	0.836	1.846	0.596	4.276	0.936	0.196	0.196
Road 18	18	1400-1500	1.616	0.367	0.377	0.587	0.627	0.047	0.837	1.847	0.597	4.277	0.937	0.197	0.197
Road 18	18	1500-1600	1.466	0.376	0.386	0.596	0.636	0.046	0.896	2.056	0.936	4.126	1.036	0.146	0.176
Road 18	18	1600-1700	1.466	0.376	0.386	0.596	0.636	0.046	0.896	2.056	0.936	4.126	1.036	0.146	0.176
Road 18	18	1700-1800	1.166	0.326	0.316	0.466	0.566	0.066	0.806	1.926	0.666	2.746	0.136	0.766	1.266
Road 18	18	1800-1900	8.326	2.476	2.496	3.186	0.726	1.926	0.526	0.246	0.466	2.066	2.216	0.616	0.946
Road 18	18	1900-2000	8.326	2.476	2.496	3.186	0.726	1.926	0.526	0.246	0.466	2.066	2.216	0.616	0.946
Road 18	18	2000-2100	6.836	1.946	1.976	2.526	0.676	1.726	4.556	0.126	1.456	1.886	0.606	4.966	5.766
Road 18	18	2100-2200	6.836	1.946	1.976	2.526	0.676	1.726	4.556	0.126	1.456	1.886	0.606	4.966	5.766
Road 18	18	2200-2300	6.836	1.946	1.976	2.526	0.676	1.726	4.556	0.126	1.456	1.886	0.606	4.966	5.766
Road 18	18	2300-2400	1.506	0.406	0.396	0.546	0.126	0.176	0.626	0.706	1.186	0.666	2.916	0.486	0.546
Road 18	18	2400-0500	1.506	0.406	0.396	0.546	0.126	0.176	0.626	0.706	1.186	0.666	2.916	0.486	0.546
Road 19	19	2200-2300	2.846	0.806	0.816	1.046	0.286	0.776	0.676	0.436	0.746	1.126	0.596	2.686	3.816
Road 19	19	2300-2400	2.846	0.806	0.816	1.046	0.286	0.776	0.676	0.436	0.746	1.126	0.596	2.686	3.816
Road 19	19	2400-0500	6.836	1.946	1.976	2.526	0.676	1.726	4.556	0.126	1.456	1.886	0.606	4.966	5.766
Road 19	19	0500-0600	6.836	1.946	1.976	2.526	0.676	1.726	4.556	0.126	1.456	1.886	0.606	4.966	5.766
Road 19	19	0600-0700	9.296	3.516	3.576	4.896	0.786	1.966	0.576	0.316	0.726	2.376	1.366	0.196	0.196
Road 19	19	0700-0800	9.296	3.516	3.576	4.896	0.786	1.966	0.576	0.316	0.726	2.376	1.366	0.196	0.196
Road 19	19	0800-0900	1.102	0.296	0.276	0.426	0.436	0.046	0.546	1.736	0.466	2.636	1.736	0.196	0.196
Road 19	19	0900-1000	1.102	0.296	0.276	0.426	0.436	0.046	0.546	1.736	0.466	2.636	1.736	0.196	0.196
Road 19	19	1000-1100	1.606	0.366	0.376	0.586	0.626	0.046	0.836	1.846	0.596	4.276	0.936	0.196	0.196
Road 19	19	1100-1200	1.606	0.366	0.376	0.586	0.626	0.046	0.836	1.846	0.596	4.276	0.936	0.196	0.196
Road 19	19	1200-1300	1.616	0.367	0.377	0.587	0.627	0.047	0.837	1.847	0.597	4.277	0.937	0.197	0.197
Road 19	19	1300-1400	1.466	0.376	0.386	0.596	0.636	0.046	0.896	2.056	0.936	4.126	1.036	0.146	0.176
Road 19	19	1400-1500	1.466	0.376	0.386	0.596	0.636	0.046	0.896	2.056	0.936	4.126	1.036	0.146	0.176
Road 19	19	1500-1600	1.166	0.326	0.316	0.466	0.566	0.066	0.806	1.926	0.666	2.746	0.136	0.766	1.266
Road 19	19	1600-1700	8.326	2.476	2.496	3.186	0.726	1.926	0.526	0.246	0.466	2.066	2.216	0.616	0.946
Road 19	19	1700-1800	8.326	2.476	2.496	3.186	0.726	1.926	0.526	0.246	0.466	2.066	2.216	0.616	0.946
Road 19	19	1800-1900	6.836	1.946	1.976	2.526	0.676	1.726	4.556	0.126	1.456	1.886	0.606	4.966	5.766
Road 19	19	1900-2000	6.836	1.946	1.976	2.526	0.676	1.726	4.556	0.126	1.456	1.886	0.606	4.966	5.766
Road 19	19	2000-2100	6.836	1.946	1.976	2.526	0.676	1.726	4.556	0.126	1.456	1.886	0.606	4.966	5.766
Road 19	19	2100-2200	2.846	0.806	0.816	1.046	0.286	0.776	0.676	0.436	0.746	1.126	0.596	2.686	3.816
Road 19	19	2200-2300	2.846	0.806	0.816	1.046	0.286	0.776	0.676	0.436	0.746	1.126	0.596	2.686	3.816
Road 19	19	2300-2400	2.846	0.806	0.816	1.046	0.286	0.776	0.676	0.436	0.746	1.126	0.596	2.686	3.816
Road 19	19	2400-0500	6.836	1.946	1.976	2.526	0.676	1.726	4.556	0.126	1.456	1.886	0.606	4.966	5.766
Road 19	19	0500-0600	6.836	1.946	1.976	2.526	0.676	1.726	4.556	0.126	1.456	1.886	0.606	4.966	5.766
Road 19	19	0600-0700	9.296	3.516	3.576	4.896	0.786	1.966	0.576	0.316	0.726	2.376	1.366	0.196	0.196
Road 19	19	0700-0800	9.296	3.516	3.576	4.896	0.786	1.966	0.576	0.316	0.726	2.376	1.366	0.196	0.196
Road 19	19	0800-0900	1.102	0.296	0.276	0.426	0.436	0.046	0.546	1.736	0.466	2.636	1.736	0.196	0.196
Road 19	19	0900-1000	1.102	0.296	0.276	0.426	0.436	0.046	0.546	1.736	0.466	2.636	1.736	0.196	0.196
Road 19	19	1000-1100	1.606	0.366	0.376	0.586	0.626	0.046	0.836	1.846	0.596	4.276	0.936	0.196	0.196
Road 19	19	1100-1200	1.606	0.366	0.376	0.586	0.626	0.046	0.836	1.846	0.596	4.276	0.936	0.196	0.196
Road 19	19	1200-1300	1.616	0.367	0.377	0.587	0.627	0.047	0.837	1.847	0.597	4.277	0.937	0.197	0.197
Road 19	19	1300-1400	1.466	0.376	0.386	0.596	0.636	0.046	0.896	2.056	0.936	4.126	1.036	0.146	0.176
Road 19	19	1400-1500	1.466	0.376	0.386	0.596	0.636	0.046	0.896	2.056	0.936	4.126	1.036	0.146	0.176
Road 19	19	1500-1600	1.166	0.326	0.316	0.466	0.566	0.066	0.806	1.926	0.666	2.746	0.136	0.766	1.266
Road 19	19	1600-1700	8.326	2.476	2.496	3.186	0.726	1.926	0.526	0.246	0.466	2.066	2.216	0.616	0.946
Road 19	19	1700-1800	8.326	2.476	2.496	3.186	0.726	1.926	0.526	0.246	0.466	2.066	2.216	0.616	0.946
Road 19	19	1800-1900	6.836	1.946	1.976	2.526	0.676	1.726	4.556	0.126	1.456	1.886	0.606	4.966	5.766
Road 19	19	1900-2000	6.836	1.946	1.976	2.526	0.676	1.726	4.556	0.126	1.456	1.886	0.606	4.966	5.766
Road 19	19	2000-2100	6.836	1.946	1.976	2.526	0.676	1.726	4.556	0.126	1.456	1.886	0.606	4.966	5.766
Road 20	20	0100-0200	3.556	2.496	1.576	1.366	0.456	0.966	1.716	0.126	1.806	0.7016	0.4516	0.396	0.466
Road 20	20	0200-0300	3.556	2.496	1.576	1.366	0.456	0.966	1.716	0.126	1.806	0.7016	0.4516	0.3	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry

Table 1. Top 2000 aircraft noise flight paths for the 2004 AASMP model (only)														
Route Name	Route ID	NO _x Emission						NO Emission						
		Monthly/Route			Monthly/aircraft			Monthly/Route			Monthly/aircraft			
		g/km ³ /hr	g/km ³ /mi	tonne/hr	g/km ³ /hr	g/km ³ /mi	tonne/hr	g/km ³ /hr	g/km ³ /mi	tonne/hr	g/km ³ /hr	g/km ³ /mi	tonne/hr	
Route 31	31	0000-0200	1.38	3.21	0.0002	1.38	3.21	0.0002	1.38	3.21	0.0002	1.38	3.21	0.0002
Route 31	31	0100-0200	1.692	2.508	0.0018	1.692	2.508	0.0018	1.692	2.508	0.0018	1.692	2.508	0.0018
Route 31	31	0200-0200	1.922	2.268	0.0028	1.922	2.268	0.0028	1.922	2.268	0.0028	1.922	2.268	0.0028
Route 31	31	0300-0200	2.152	2.028	0.0038	2.152	2.028	0.0038	2.152	2.028	0.0038	2.152	2.028	0.0038
Route 31	31	0400-0200	2.182	2.278	0.0058	2.182	2.278	0.0058	2.182	2.278	0.0058	2.182	2.278	0.0058
Route 31	31	0500-0200	1.862	2.148	0.0048	1.862	2.148	0.0048	1.862	2.148	0.0048	1.862	2.148	0.0048
Route 31	31	0600-0200	1.632	1.918	0.0038	1.632	1.918	0.0038	1.632	1.918	0.0038	1.632	1.918	0.0038
Route 31	31	0700-0800	1.842	1.412	0.0012	1.842	1.412	0.0012	1.842	1.412	0.0012	1.842	1.412	0.0012
Route 31	31	0800-0900	1.742	1.532	0.0018	1.742	1.532	0.0018	1.742	1.532	0.0018	1.742	1.532	0.0018
Route 31	31	0900-1000	1.582	1.382	0.0012	1.582	1.382	0.0012	1.582	1.382	0.0012	1.582	1.382	0.0012
Route 31	31	1000-1100	2.172	1.522	0.0012	2.172	1.522	0.0012	2.172	1.522	0.0012	2.172	1.522	0.0012
Route 31	31	1100-1200	2.122	1.542	0.0012	2.122	1.542	0.0012	2.122	1.542	0.0012	2.122	1.542	0.0012
Route 31	31	1200-1300	2.122	1.542	0.0012	2.122	1.542	0.0012	2.122	1.542	0.0012	2.122	1.542	0.0012
Route 31	31	1300-1400	1.962	1.062	0.0002	1.962	1.062	0.0002	1.962	1.062	0.0002	1.962	1.062	0.0002
Route 31	31	1400-1500	1.992	1.092	0.0002	1.992	1.092	0.0002	1.992	1.092	0.0002	1.992	1.092	0.0002
Route 31	31	1500-1600	1.862	1.062	0.0002	1.862	1.062	0.0002	1.862	1.062	0.0002	1.862	1.062	0.0002
Route 31	31	1600-1700	1.812	1.072	0.0002	1.812	1.072	0.0002	1.812	1.072	0.0002	1.812	1.072	0.0002
Route 31	31	1700-1800	1.962	1.092	0.0002	1.962	1.092	0.0002	1.962	1.092	0.0002	1.962	1.092	0.0002
Route 31	31	1800-1900	1.812	1.072	0.0002	1.812	1.072	0.0002	1.812	1.072	0.0002	1.812	1.072	0.0002
Route 31	31	1900-2000	1.812	1.072	0.0002	1.812	1.072	0.0002	1.812	1.072	0.0002	1.812	1.072	0.0002
Route 31	31	2000-2100	1.812	1.072	0.0002	1.812	1.072	0.0002	1.812	1.072	0.0002	1.812	1.072	0.0002
Route 31	31	2100-2200	1.812	1.072	0.0002	1.812	1.072	0.0002	1.812	1.072	0.0002	1.812	1.072	0.0002
Route 31	31	2200-2300	1.812	1.072	0.0002	1.812	1.072	0.0002	1.812	1.072	0.0002	1.812	1.072	0.0002
Route 31	31	2300-2400	1.812	1.072	0.0002	1.812	1.072	0.0002	1.812	1.072	0.0002	1.812	1.072	0.0002
Route 32	32	0000-0200	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 32	32	0100-0200	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 32	32	0200-0200	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 32	32	0300-0400	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 32	32	0400-0500	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 32	32	0500-0600	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 32	32	0600-0700	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 32	32	0700-0800	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 32	32	0800-0900	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 32	32	0900-1000	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 32	32	1000-1100	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 32	32	1100-1200	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 32	32	1200-1300	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 32	32	1300-1400	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 32	32	1400-1500	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 32	32	1500-1600	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 32	32	1600-1700	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 32	32	1700-1800	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 32	32	1800-1900	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 32	32	1900-2000	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 32	32	2000-2100	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 32	32	2100-2200	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 32	32	2200-2300	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 32	32	2300-2400	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 33	33	0000-0200	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 33	33	0100-0200	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 33	33	0200-0200	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 33	33	0300-0400	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 33	33	0400-0500	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 33	33	0500-0600	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 33	33	0600-0700	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 33	33	0700-0800	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 33	33	0800-0900	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 33	33	0900-1000	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 33	33	1000-1100	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 33	33	1100-1200	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 33	33	1200-1300	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 33	33	1300-1400	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 33	33	1400-1500	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 33	33	1500-1600	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 33	33	1600-1700	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 33	33	1700-1800	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 33	33	1800-1900	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 33	33	1900-2000	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 33	33	2000-2100	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 33	33	2100-2200	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 33	33	2200-2300	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 33	33	2300-2400	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 34	34	0000-0200	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 34	34	0100-0200	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 34	34	0200-0300	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 34	34	0300-0400	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002	4.822	4.822	0.0002
Route 34	34	0400-0500	4.822	4.822	0.0002	4.822	4							

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

AERMOD model (July)		Year 2043												
Road Name	Road ID	Hour	NO _x Emission						NO ₂ Emission					
			Monthly/mean			Monthly/average			Monthly/mean			Monthly/average		
			g/min/h	g/min/h	g/min/h	g/min/h	g/min/h	g/min/h	g/min/h	g/min/h	g/min/h	g/min/h	g/min/h	g/min/h
Road 24	24	0800-0800	1.266/1	2.446/7	2.736/4	4.656/1	9.036/7	8.256/4	9.916/1	1.156/6	1.056/3	1.326/2	7.566	2.566
Road 24	24	0900-1000	1.366/1	2.786/7	2.516/4	4.726/1	1.036	9.036	5.986/1	1.036	1.186/3	1.346/3	2.936	2.936
Road 24	24	1000-1100	1.366/1	2.786/7	2.516/4	4.726/1	1.036	9.036	5.986/1	1.036	1.186/3	1.346/3	2.936	2.936
Road 24	24	1100-1200	1.366/1	2.786/7	2.516/4	4.726/1	1.036	9.036	5.986/1	1.036	1.186/3	1.346/3	2.936	2.936
Road 24	24	1200-1300	1.416/1	2.866/7	2.626/4	4.806/1	9.766/7	1.086/4	6.216/1	1.266/3	1.146/3	1.444/3	2.936	2.936
Road 24	24	1300-1400	1.416/1	2.866/7	2.626/4	4.806/1	9.766/7	1.086/4	6.216/1	1.266/3	1.146/3	1.444/3	2.936	2.936
Road 24	24	1400-1500	1.466/1	2.966/7	2.516/4	5.026/1	9.766/7	1.136/4	6.216/1	1.466/3	1.346/3	1.456/3	2.936	2.936
Road 24	24	1500-1600	1.306/1	2.616/7	2.816/4	4.996/1	1.176/7	1.076/3	6.266/1	1.496/3	1.396/3	1.356/3	2.936	2.936
Road 24	24	1600-1700	1.306/1	2.616/7	2.816/4	4.996/1	1.176/7	1.076/3	6.266/1	1.496/3	1.396/3	1.356/3	2.936	2.936
Road 24	24	1700-1800	1.106/1	2.266/7	0.986/3	4.436/1	9.116/7	8.346/7	5.976/1	1.146/3	1.046/3	1.256/3	2.476	2.476
Road 24	24	1800-1900	1.026/1	1.386/7	1.266/4	4.216/1	5.786/7	5.246/4	5.226/1	1.076/1	6.616/4	1.146/3	1.146/3	1.146/3
Road 24	24	1900-2000	0.996/1	0.826/3	0.806/3	3.926/3	5.266/7	3.206/4	4.916/1	4.386/7	4.016/4	1.136/3	1.136/3	1.136/3
Road 24	24	2000-2100	0.996/1	0.826/3	0.806/3	3.926/3	5.266/7	3.206/4	4.916/1	4.386/7	4.016/4	1.136/3	1.136/3	1.136/3
Road 24	24	2100-2200	0.916/2	0.786/7	0.726/3	3.776/1	2.786/7	2.526/4	4.706/1	3.046/7	3.146/4	1.096/7	1.096/7	1.096/7
Road 24	24	2200-2300	1.046/1	0.806/3	0.806/3	3.746/3	2.266/7	2.186/4	4.786/1	3.406/7	2.786/4	1.176/3	1.176/3	1.176/3
Road 24	24	2300-2400	1.046/1	0.806/3	0.806/3	3.746/3	2.266/7	2.186/4	4.786/1	3.406/7	2.786/4	1.176/3	1.176/3	1.176/3
Road 25	25	0000-0100	1.036/1	4.506/8	4.186/5	3.716/3	1.626/7	1.516/4	4.746/1	2.076/7	1.936/4	1.206/3	5.526	5.526
Road 25	25	0100-0200	1.036/1	4.506/8	4.186/5	3.716/3	1.626/7	1.516/4	4.746/1	2.076/7	1.936/4	1.206/3	5.526	5.526
Road 25	25	0200-0300	1.036/1	4.506/8	4.186/5	3.716/3	1.626/7	1.516/4	4.746/1	2.076/7	1.936/4	1.206/3	5.526	5.526
Road 25	25	0300-0400	1.066/1	2.196/4	2.056/4	3.836/1	7.916/8	6.786/7	4.896/1	1.016/7	9.406/5	1.236/3	2.536	2.536
Road 25	25	0400-0500	1.076/1	2.596/8	2.416/5	3.856/1	9.346/8	8.696/7	4.926/1	1.191/7	1.111/3	1.111/3	2.536	2.536
Road 25	25	0500-0600	1.076/1	2.596/8	2.416/5	3.856/1	9.346/8	8.696/7	4.926/1	1.191/7	1.111/3	1.111/3	2.536	2.536
Road 25	25	0600-0700	1.196/1	3.226/7	1.136/4	4.396/1	4.376/7	4.066/4	5.476/1	5.066/7	5.206/4	3.306/3	1.336	1.336
Road 25	25	0700-0800	1.266/1	2.896/7	2.666/4	4.696/1	1.036/8	9.576/4	6.016/1	1.326/6	1.236/3	1.376/3	2.596	2.596
Road 25	25	0800-0900	1.266/1	2.896/7	2.666/4	4.696/1	1.036/8	9.576/4	6.016/1	1.326/6	1.236/3	1.376/3	2.596	2.596
Road 25	25	0900-1000	1.336/1	3.096/7	3.666/4	5.066/1	1.466/8	1.366/3	3.906/1	1.866/6	1.736/3	1.376/3	4.056	4.056
Road 25	25	1000-1100	1.436/1	4.156/7	3.666/4	5.036/1	1.466/8	1.366/3	3.646/1	1.876/6	1.746/3	1.446/3	4.416	4.416
Road 25	25	1100-1200	1.426/1	4.876/7	4.636/4	5.046/1	1.376/8	1.277/4	4.666/1	1.766/6	1.636/3	1.436/3	4.866	4.866
Road 25	25	1200-1300	1.436/1	4.156/7	3.666/4	5.036/1	1.466/8	1.366/3	3.906/1	1.866/6	1.736/3	1.376/3	4.056	4.056
Road 25	25	1300-1400	1.436/1	4.156/7	3.666/4	5.036/1	1.466/8	1.366/3	3.646/1	1.876/6	1.746/3	1.446/3	4.416	4.416
Road 25	25	1400-1500	1.476/1	4.476/7	4.186/4	5.076/1	1.546/8	1.436/4	5.046/1	1.966/6	1.896/3	1.476/3	4.496	4.496
Road 25	25	1500-1600	1.436/1	4.156/7	3.666/4	5.036/1	1.466/8	1.366/3	3.906/1	1.866/6	1.736/3	1.376/3	4.056	4.056
Road 25	25	1600-1700	1.426/1	4.156/7	3.666/4	5.026/1	1.476/8	1.376/4	3.646/1	1.866/6	1.756/3	1.436/3	4.196	4.196
Road 25	25	1700-1800	1.426/1	3.266/7	3.036/4	4.926/3	3.906/7	3.226/4	4.166/2	1.626/6	1.531/3	1.306/3	3.426	3.426
Road 25	25	1800-1900	1.076/1	1.386/7	1.266/4	4.216/1	5.786/7	5.246/4	5.226/1	1.076/1	6.616/4	1.146/3	1.146/3	1.146/3
Road 25	25	1900-2000	0.986/1	0.826/7	0.806/3	3.926/3	5.266/7	3.206/4	4.916/1	4.386/7	4.016/4	1.136/3	1.136/3	1.136/3
Road 25	25	2000-2100	0.926/2	0.726/8	0.616/5	4.056/1	3.786/7	3.526/4	5.056/1	4.076/7	4.386/4	1.146/3	1.146/3	1.146/3
Road 25	25	2100-2200	1.046/1	0.806/3	0.806/3	3.746/3	2.266/7	2.186/4	4.786/1	3.406/7	2.786/4	1.176/3	1.176/3	1.176/3
Road 25	25	2200-2300	1.136/1	0.826/7	0.776/4	4.056/3	3.786/7	3.526/4	5.056/1	4.076/7	4.386/4	1.146/3	1.146/3	1.146/3
Road 25	25	2300-2400	1.096/1	0.746/8	0.626/5	3.906/1	2.686/7	2.486/4	4.996/1	3.406/7	3.186/4	1.236/3	1.236/3	1.236/3
Road 26	26	0000-0100	1.046/1	4.536/8	4.186/5	3.716/3	1.626/7	1.516/4	4.746/1	2.076/7	1.936/4	1.206/3	5.526	5.526
Road 26	26	0100-0200	1.066/1	2.996/8	2.956/4	3.796/1	7.126/7	1.466/4	4.846/1	3.946/7	1.986/4	1.226/3	3.446	3.446
Road 26	26	0200-0300	1.066/1	3.366/8	3.236/4	3.836/1	8.511/8	1.177/4	4.896/1	1.066/7	1.496/4	1.236/3	2.746	2.746
Road 26	26	0300-0400	1.076/1	3.296/8	3.276/4	3.836/1	8.511/8	1.177/4	4.896/1	1.066/7	1.496/4	1.236/3	2.746	2.746
Road 26	26	0400-0500	1.066/1	3.366/8	3.276/4	3.886/1	8.696/8	1.186/4	4.946/1	1.106/7	1.516/4	1.256/3	2.896	2.896
Road 26	26	0500-0600	1.086/1	4.446/8	4.506/5	3.906/1	1.066/7	2.196/4	4.996/1	2.056/7	2.086/4	1.236/3	5.416	5.416
Road 26	26	0600-0700	1.206/1	1.126/7	1.046/4	4.306/1	4.026/7	5.516/4	5.906/1	5.566/7	7.056/4	1.116/3	1.116/3	1.116/3
Road 26	26	0700-0800	1.306/1	3.366/7	3.666/4	4.936/1	7.986/8	1.626/7	5.906/1	2.216/6	2.176/3	1.376/3	4.216	4.216
Road 26	26	0800-0900	1.346/1	3.226/7	4.016/4	4.936/1	1.186/8	1.626/7	5.906/1	2.216/6	2.156/3	1.376/3	4.226	4.226
Road 26	26	0900-1000	1.346/1	3.636/7	4.976/4	4.936/1	1.336/8	1.626/7	5.636/1	2.176/6	2.396/3	1.376/3	4.226	4.226
Road 26	26	1000-1100	1.346/1	3.636/7	4.976/4	4.936/1	1.336/8	1.626/7	5.636/1	2.176/6	2.396/3	1.376/3	4.226	4.226
Road 26	26	1100-1200	1.436/1	3.576/7	4.896/4	5.066/1	1.296/8	1.736/4	6.496/1	1.626/6	2.226/4	1.446/3	3.956	3.956
Road 26	26	1200-1300	1.436/1	3.576/7	4.896/4	5.066/1	1.296/8	1.736/4	6.496/1	1.626/6	2.226/4	1.446/3	3.956	3.956
Road 26	26	1300-1400	1.436/1	3.576/7	4.896/4	5.066/1	1.296/8	1.736/4	6.496/1	1.626/6	2.226/4	1.446/3	3.956	3.956
Road 26	26	1400-1500	1.406/1	4.146/7	5.676/4	4.826/1	1.436/8	1.966/1	6.226/1	1.846/6	2.526/4	1.406/3	4.136	4.136
Road 26	26	1500-1600	1.556/1	3.866/7	5.096/4	4.776/1	1.466/8	2.026/7	6.026/1	1.866/6	2.506/4	1.306/3	4.046	4.046
Road 26	26	1600-1700	1.556/1	3.866/7	5.096/4	4.776/1	1.466/8	2.026/7	6.026/1	1.866/6	2.506/4	1.306/3	4.046	4.046
Road 26	26	1700-1800	1.146/1	3.036/7	4.152/4	4.556/1	1.216/8	1.666/7	5.906/1	1.516/6	2.026/3	1.206/3	3.916	3.916
Road 26	26	1800-1900	0.936/1	0.846/7	2.536/4	3.976/1	7.626/7	1.046/3	4.926/1	9.476/7	1.306/3	1.056/3	2.036	2.036
Road 26	26	1900-2000	0.936/1	0.846/7	2.536/4	3.976/1	7.626/7	1.046/3	4.926/1	9.476/7	1.306/3	1.056/3	2.036	2.036
Road 26	26	2000-2100	0.846/2	0.666/8	1.196/4	3.496/1	3.976/7	4.906/4	4.336/1	4.466/7	6.096/4	0.916/3	0.976	0.976
Road 26	26	2100-2200	0.876/2	0.606/8	1.236/4	3.506/1	3.676/7	5.036/4	4.396/1	4.586/7	6.276/4	0.926/3	1.036	1.036
Road 26	26	2200-2300	0.936/2	0.736/8	1.236/4	3.436/1	3.196/7	4.386/4	4.316/1	4.076/7	5.586/4	1.026/4	1.066/4	1.066/4
Road 26	26	2300-2400	0.936/2	0.736/8	1.236/4	3.436/1	3.196/7	4.386/4	4.316/1	4.076/7	5.586/4	1.026/4	1.066/4	1.066/4
Road 27	27	0000-0100	0.986/2	0.906/7	1.036/4	3.616/1	1.146/7	1.596/4	4.676/1	1.806/7	2.036/4	1.066/4	1.454	1.454
Road 27	27	0100-0200	1.041/1	0.786/3	1.326/5	3.696/1	1.011/7	1.136/4	4.676/1	2.026/7	1.446/4	1.186/4	3.246	3.246
Road 27	27	0200-0300	1.036/1	0.726/3	1.366/5	3.716/1	1.011/7	1.136/4	4.676/1	2.026/7	1.446/4	1.186/4	3.246	3.246
Road 27	27	0300-0400	1.041/1	0.906/8	1.246/5	3.756/1	6.786/7	7.726/8	4.976/1	6.786/8	9.866/5	1.206/3	2.226	2.226
Road 27	27	0400-0500	1.296/1	2.296/8	2.526/4	3.786/1	8.126/8	9.126/9	4.826/1	1.046/7	1.166/4	1.216/3	2.696	2.696
Road 27	27	0500-0600	1.296/1	2.296/8	2.526/4	3.7								

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry

Open Road 2+ Lane Urban Factors for ASPM Model (day)		Year 2043												
Road Name	Road ID	Hour	NO _x Emission						NO _x Emission					
			Monthly/turn			Monthly/Hourage			Monthly/turn			Monthly/Hourage		
			g/min/hour	g/min/turn	g/min/hour	g/min/turn	g/min/hour	g/min/turn	g/min/hour	g/min/turn	g/min/hour	g/min/turn		
Road 37	37	1700-1800	1.456E+02	2.912E+01	1.99E+02	1.39E+02	2.78E+01	1.89E+02	3.78E+01	2.59E+02	5.18E+01	1.69E+02	3.38E+01	
Road 37	37	1700-1800	4.82E+02	8.60E+00	7.27E+06	1.93E+01	3.47E+00	2.91E+04	2.14E+01	4.84E+08	3.64E+05	6.83E+02	1.27E+01	
Road 37	37	1800-1900	3.24E+02	5.93E+00	4.98E+06	1.30E+01	2.49E+00	2.17E+04	1.71E+01	3.07E+08	2.50E+05	5.04E+02	9.07E+00	
Road 37	37	1900-2000	7.76E+02	1.41E+01	1.14E+07	3.19E+01	5.94E+00	5.16E+04	4.16E+01	7.10E+08	5.69E+05	1.15E+03	2.16E+01	
Road 37	37	2000-2100	2.76E+02	2.98E+00	2.50E+06	1.34E+01	1.44E+00	1.21E+05	1.61E+01	1.74E+08	1.46E+05	4.14E+02	4.46E+00	
Road 37	37	2100-2200	7.73E+02	2.98E+00	2.48E+06	1.34E+01	1.44E+00	1.27E+05	1.63E+01	1.77E+08	1.48E+05	4.28E+02	4.64E+00	
Road 37	37	2200-2300	2.23E+02	4.17E+00	3.10E+06	3.65E+01	6.67E+00	5.82E+04	7.45E+01	1.25E+09	1.00E+06	2.65E+03	5.00E+01	
Road 38	38	2300-0000	2.66E+02	2.09E+00	1.75E+06	1.33E+01	1.05E+00	8.77E+06	1.60E+01	1.26E+05	1.05E+05	4.33E+02	3.40E+00	
Road 38	38	0000-0500	4.87E+02	3.74E+06	2.19E+04	1.83E+02	2.44E+07	7.22E+04	2.33E+05	1.91E+05	9.41E+04	7.87E+01	1.16E+01	
Road 38	38	0500-0600	6.55E+02	6.17E+06	3.70E+04	2.55E+02	3.37E+07	1.05E+05	3.21E+05	2.65E+05	1.30E+05	1.07E+01	1.52E+01	
Road 38	38	0600-0700	3.22E+02	7.63E+06	2.28E+04	1.93E+02	2.37E+07	7.05E+04	2.56E+05	1.33E+05	9.37E+04	9.75E+01	1.27E+01	
Road 38	38	0900-0700	5.70E+02	1.26E+07	3.77E+04	1.99E+02	4.42E+07	1.32E+05	3.56E+05	2.66E+05	1.70E+05	1.80E+01	1.95E+01	
Road 38	38	0700-0800	2.56E+02	8.86E+07	1.13E+05	2.25E+01	1.18E+08	3.52E+03	2.97E+01	1.56E+06	4.65E+03	1.04E+04	5.70E+01	
Road 38	38	0800-0900	2.46E+02	2.47E+02	3.12E+03	6.29E+00	7.92E+00	3.76E+02	3.28E+01	1.71E+05	5.00E+04	9.04E+04	5.14E+01	
Road 38	38	0900-1000	9.12E+02	4.31E+01	1.29E+03	3.23E+01	1.77E+00	3.79E+02	1.12E+01	7.06E+05	1.08E+05	1.94E+04	5.14E+01	
Road 38	38	1000-1100	1.85E+02	6.22E+02	1.27E+03	2.38E+01	1.21E+06	3.60E+03	3.22E+01	1.63E+04	4.87E+03	5.00E+04	2.87E+01	
Road 38	38	1100-1200	2.46E+02	1.13E+01	1.23E+03	2.13E+01	1.27E+08	3.29E+03	2.97E+01	1.58E+04	4.65E+03	4.87E+04	2.87E+01	
Road 38	38	1200-1300	1.05E+01	1.89E+06	6.74E+06	6.62E+02	7.24E+02	2.16E+03	3.67E+02	1.01E+06	3.02E+03	1.31E+02	3.66E+01	
Road 38	38	1300-1400	1.95E+01	1.09E+07	9.31E+07	2.70E+08	7.87E+02	2.32E+03	3.76E+03	1.08E+06	3.24E+03	1.28E+02	3.66E+01	
Road 38	38	1400-1500	1.40E+01	1.04E+07	8.82E+07	2.46E+08	7.40E+02	2.39E+03	3.69E+03	1.07E+06	3.16E+03	1.26E+02	3.57E+01	
Road 38	38	1500-1600	1.05E+01	3.10E+07	9.77E+07	2.74E+08	7.08E+02	2.41E+03	3.76E+03	1.12E+06	3.34E+03	1.25E+02	3.66E+01	
Road 38	38	1600-1700	1.04E+01	2.99E+07	8.94E+04	2.64E+01	7.84E+07	2.28E+03	3.68E+03	1.06E+06	3.18E+03	1.28E+02	3.67E+01	
Road 38	38	1700-1800	1.01E+01	3.87E+07	1.19E+06	2.32E+06	7.31E+07	2.25E+03	3.64E+03	1.04E+06	3.16E+03	1.26E+02	3.67E+01	
Road 38	38	1800-1900	9.17E+02	4.11E+01	1.29E+03	3.26E+01	1.79E+00	3.82E+02	1.12E+01	7.06E+05	1.08E+05	1.94E+04	5.14E+01	
Road 38	38	1900-2000	2.71E+02	6.87E+06	2.59E+04	2.08E+01	2.51E+07	7.51E+04	2.79E+03	3.86E+07	1.01E+03	9.14E+01	1.13E+01	
Road 38	38	2000-2100	7.73E+02	2.98E+00	2.48E+06	1.34E+01	1.44E+00	1.27E+05	1.63E+01	1.77E+08	1.48E+05	4.28E+02	4.64E+00	
Road 38	38	2100-2200	3.06E+02	7.63E+06	2.28E+04	1.93E+02	2.37E+07	6.5E+04	2.84E+03	2.96E+07	8.03E+04	9.66E+01	1.27E+01	
Road 38	38	2200-2300	2.07E+02	7.00E+06	2.09E+04	1.99E+01	1.97E+07	5.88E+04	2.69E+02	2.67E+07	7.87E+04	9.78E+01	1.68E+01	
Road 38	38	2300-0000	5.44E+02	6.47E+06	1.93E+04	2.04E+01	1.57E+07	5.47E+04	2.80E+01	2.48E+07	7.17E+04	1.08E+02	1.68E+01	
Road 39	39	0000-0500	1.22E+02	1.58E+09	1.97E+07	5.00E+01	1.27E+08	3.65E+03	3.09E+01	1.85E+06	5.00E+03	1.05E+04	5.14E+01	
Road 39	39	0100-0200	9.28E+02	1.28E+09	1.96E+09	2.93E+02	4.09E+09	1.26E+04	3.85E+03	3.38E+08	1.66E+04	8.82E+02	1.27E+01	
Road 39	39	0200-0300	4.44E+02	1.02E+08	3.18E+07	2.87E+01	3.23E+08	1.06E+04	3.91E+01	4.25E+08	1.30E+04	8.82E+02	8.77E+01	
Road 39	39	0300-0400	1.55E+02	8.77E+07E	3.77E+06	3.77E+01	1.10E+08	3.69E+03	3.88E+01	1.63E+08	5.63E+03	1.05E+04	5.14E+01	
Road 39	39	0400-0500	9.76E+02	1.04E+08	3.22E+05	3.03E+01	3.25E+08	1.01E+04	4.00E+02	1.95E+09	1.33E+04	9.13E+03	9.81E+01	
Road 39	39	0500-0600	9.67E+02	1.93E+08	5.99E+06	6.06E+01	6.48E+08	1.98E+04	4.03E+02	7.96E+08	2.47E+04	9.23E+03	1.82E+01	
Road 39	39	0600-0700	4.44E+02	1.02E+08	3.18E+07	2.87E+01	3.23E+08	1.06E+04	3.91E+01	4.25E+08	1.30E+04	8.82E+02	8.77E+01	
Road 39	39	0700-0800	1.01E+01	6.55E+00E	3.15E+04	3.15E+02	9.37E+04	4.12E+06	8.98E+01	1.24E+07	9.48E+03	9.00E+01	1.27E+01	
Road 39	39	0800-0900	1.03E+01	1.18E+01	3.67E+04	3.24E+02	3.72E+07	1.13E+07	4.15E+02	4.90E+07	1.52E+03	1.93E+03	1.05E+01	
Road 39	39	0900-1000	1.03E+01	3.92E+02	4.25E+04	3.65E+02	7.40E+07	2.39E+07	4.15E+02	4.90E+07	1.52E+03	1.93E+03	1.05E+01	
Road 39	39	1000-1100	1.06E+01	1.35E+07	4.11E+04	3.26E+04	4.06E+07	1.26E+03	4.32E+05	5.88E+07	1.67E+06	9.00E+03	1.20E+01	
Road 39	39	1100-1200	1.05E+01	2.46E+07	3.88E+04	3.27E+03	3.88E+07	1.19E+04	4.34E+07E	1.57E+03	9.53E+01	1.12E+01	1.27E+01	
Road 39	39	1200-1300	1.05E+01	1.04E+07	1.68E+04	3.27E+03	3.88E+07	1.19E+04	4.34E+07E	1.57E+03	9.53E+01	1.12E+01	1.27E+01	
Road 39	39	1300-1400	1.45E+02	4.49E+08	6.44E+05	1.70E+05	5.58E+08	1.07E+04	2.15E+05	1.70E+08	2.22E+04	5.15E+03	1.77E+01	
Road 39	39	1400-1500	4.30E+02	1.52E+08	1.71E+05	1.65E+05	5.85E+08	1.81E+04	2.08E+08	7.34E+08	2.28E+04	5.30E+03	1.90E+01	
Road 39	39	1500-1600	4.30E+02	1.52E+08	1.71E+05	1.65E+05	5.85E+08	1.81E+04	2.08E+08	7.34E+08	2.28E+04	5.30E+03	1.90E+01	
Road 39	39	1600-1700	1.45E+02	4.49E+08	6.44E+05	1.70E+05	5.58E+08	1.07E+04	2.15E+05	1.70E+08	2.22E+04	5.15E+03	1.77E+01	
Road 39	39	1700-1800	3.42E+02	1.44E+08	4.55E+05	1.58E+01	6.72E+08	2.09E+02	1.92E+05	7.89E+08	2.54E+04	6.36E+03	2.17E+01	
Road 39	39	1800-1900	1.16E+02	8.89E+07	1.07E+05	1.09E+01	4.99E+05E	1.31E+05	3.98E+08	1.88E+04	5.40E+03	2.08E+04	2.08E+01	
Road 39	39	1900-2000	7.76E+02	1.41E+09	1.03E+07	3.19E+01	5.94E+09	5.16E+04	4.16E+01	7.10E+08	5.69E+05	1.15E+03	2.16E+01	
Road 39	39	2000-2100	2.76E+02	2.98E+09	1.58E+06	1.09E+01	3.06E+09	1.95E+05	1.27E+01	3.57E+08	1.11E+04	3.61E+01	1.01E+01	
Road 39	39	2100-2200	7.76E+02	4.93E+09	1.53E+05	1.11E+01	3.11E+09	9.67E+06	1.29E+03	6.61E+08	1.32E+04	3.73E+03	1.09E+01	
Road 39	39	2200-2300	2.76E+02	2.98E+09	1.58E+06	1.09E+01	3.06E+09	1.95E+05	1.27E+01	3.57E+08	1.11E+04	3.61E+01	1.01E+01	
Road 39	39	2300-0000	7.73E+02	2.98E+09	1.58E+06	1.11E+01	3.26E+08	7.02E+08	1.29E+03	6.61E+08	6.12E+05	3.73E+03	7.55E+00	
Road 40	40	0000-0100	9.39E+02	1.27E+02	2.25E+04	1.54E+04	4.64E+07	7.93E+04	1.58E+01	5.73E+07	1.02E+03	7.93E+02	1.05E+01	
Road 40	40	0100-0200	9.39E+02	1.27E+02	2.25E+04	1.54E+04	4.64E+07	7.93E+04	1.58E+01	5.73E+07	1.02E+03	7.93E+02	1.05E+01	
Road 40	40	0200-0300	9.73E+02	9.90E+06	1.76E+04	1.73E+01	2.96E+07	5.31E+04	3.31E+08	7.97E+04	9.32E+03	1.63E+01	1.63E+01	
Road 40	40	0300-0400	6.85E+02	4.33E+03	1.67E+04	1.81E+01	2.72E+07	4.83E+04	2.44E+07	3.66E+07	6.51E+01	1.01E+02	1.26E+01	
Road 40	40	0400-0500	6.85E+02	4.33E+03	1.67E+04	1.81E+01	2.72E+07	4.83E+04	2.44E+07	3.66E+07	6.51E+01	1.01E+02	1.26E+01	
Road 40	40	0500-0600	5.68E+02	1.32E+03	2.76E+04	1.86E+01	4.23E+07	7.65E+04	2.43E+05	5.67E+07	1.00E+02	2.90E+02	2.14E+01	
Road 40	40	0600-0700	5.23E+02	2.75E+07	4.00E+04	1.93E+01	8.33E+07	1.48E+04	2.46E+06	1.06E+08	5.88E+03	8.84E+03	3.66E+01	
Road 40	40	0700-0800	5.23E+02	2.75E+07	4.00E+04	1.93E+01	8.33E+07	1.48E+04	2.46E+06	1.06E+08	5.88E+03	8.84E+03	3.66E+01	
Road 40	40	0800-0900	3.20E+02	1.06E+07	1.43E+04	2.24E+01	2.56E+08	4.45E+04	2.96E+03	5.31E+06	5.88E+03	0.00E+01	1.02E+01	
Road 40	40	0900-1000	8.20E+02	8.30E+07	1.47E+04	2.45E+01	2.28E+08	4.40E+03	3.27E+03	3.11E+08	5.88E+03	8.82E+03	9.39E+01	
Road 40	40	1000-1100	8.30E+02	7.93E+07	1.44E+04	2.46E+01	2.28E+08	4.07E+03	3.31E+03	3.08E+08	5.47E+03	9.60E+03	8.93E+01	
Road 40	40	1100-1200	8.30E+02	7.93E+07	1.44E+04	2.46E+01	2.28E+08	4.07E+03	3.31E+03	3.08E+08	5.47E+03	9.60E+03	8.93E+01	
Road 40	40	1200-1300	1.01E+01	1.18E+07	1.10E+06	2.66E+01	1.63E+09	2.96E+07	3.67E+01	2.25E+06	4.00E+03	1.16E+02	7.17E+01	
Road 40	40	1300-1400	1.95E+01	6.74E+07	1.20E+03	2.83E+01	1.31E+06	3.21E+03	3.89E+01	2.48E+06	4.41E+03	1.18E+02	7.42E+01	
Road 40	40	1400-1500	1.95E+01	6.74E+07	1.20E+03	2.83E+01	1.31E+06	3.21E+03	3.89E+01	2.48E+06	4.41E+03	1.18E+02	7.42E+01	
Road 40	40	1500-1600	1.03E+01	8.87E+07	1.22E+03	2.83E+01	1.80							

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

AERMOD model (July)		Year 2043		NO _x Emission		PM ₁₀ Emission		PM _{2.5} Emission		SO ₂ Emission		NH ₃ Emission		HAPs Emission			
Read Name	Read ID	MonthlyHourly				MonthlyAverage				MonthlyHourly				MonthlyAverage			
		g/m ³ /h	g/m ³ /d	g/m ³ /m	g/m ³ /a	g/m ³ /h	g/m ³ /d	g/m ³ /m	g/m ³ /a	g/m ³ /h	g/m ³ /d	g/m ³ /m	g/m ³ /a	g/m ³ /h	g/m ³ /a		
Read 27	1600-1700	1.41E-01	3.60E-07	4.05E-04	5.00E-01	1.27E-06	1.43E-03	6.41E-01	1.63E-06	1.84E-03	1.43E-02	1.63E-06	1.84E-03	1.43E-02	1.63E-06		
Read 27	1700-1800	1.23E-01	2.82E-07	3.17E-04	4.88E-01	1.112E-06	1.26E-03	6.11E-01	1.41E-06	1.58E-03	1.25E-02	1.41E-06	1.58E-03	1.25E-02	1.41E-06		
Read 27	1800-1900	1.23E-01	2.82E-07	3.17E-04	4.88E-01	1.112E-06	1.26E-03	6.11E-01	1.41E-06	1.58E-03	1.25E-02	1.41E-06	1.58E-03	1.25E-02	1.41E-06		
Read 27	1900-2000	1.01E-01	2.04E-07	1.17E-04	3.96E-01	4.11E-07	4.63E-04	5.00E-01	5.15E-07	5.78E-04	1.15E-02	1.15E-07	1.15E-02	1.15E-07	1.15E-02		
Read 27	2000-2100	9.78E-02	6.03E-08	6.03E-05	4.00E-01	3.29E-07	3.68E-04	4.98E-01	4.98E-07	4.98E-04	1.13E-02	9.29E-07	1.13E-02	9.29E-07	1.13E-02		
Read 27	2100-2200	1.01E-01	2.04E-07	1.17E-04	3.96E-01	4.11E-07	4.63E-04	5.00E-01	5.15E-07	5.78E-04	1.15E-02	1.15E-07	1.15E-02	1.15E-07	1.15E-02		
Read 27	2200-2300	1.06E-01	2.17E-07	8.73E-05	3.81E-01	2.32E-07	3.15E-04	4.87E-01	3.58E-07	4.02E-04	1.16E-02	1.16E-07	1.16E-02	1.16E-07	1.16E-02		
Read 27	2300-0000	1.67E-01	6.45E-08	7.24E-05	3.85E-01	3.23E-07	2.61E-04	4.91E-02	2.97E-07	3.33E-04	1.21E-02	1.21E-07	1.21E-02	1.21E-07	1.21E-02		
Read 27	0000-0100	1.67E-01	6.45E-08	7.24E-05	3.85E-01	3.23E-07	2.61E-04	4.91E-02	2.97E-07	3.33E-04	1.21E-02	1.21E-07	1.21E-02	1.21E-07	1.21E-02		
Read 27	0100-0200	9.78E-03	3.64E-08	3.31E-05	4.30E-01	2.32E-07	6.45E-05	1.91E-01	3.57E-07	7.77E-03	3.04E-02	3.04E-07	3.04E-02	3.04E-07	3.04E-02		
Read 28	0200-0300	9.78E-03	3.64E-08	3.31E-05	4.30E-01	2.32E-07	6.45E-05	1.91E-01	3.57E-07	7.77E-03	3.04E-02	3.04E-07	3.04E-02	3.04E-07	3.04E-02		
Read 28	0300-0400	1.07E-02	4.62E-08	9.57E-04	4.78E-02	2.46E-07	4.28E-05	5.85E-02	2.98E-07	5.24E-03	2.82E-02	2.82E-07	2.82E-02	2.82E-07	2.82E-02		
Read 28	0400-0500	1.11E-02	4.62E-08	9.57E-04	4.78E-02	2.46E-07	4.28E-05	5.85E-02	2.98E-07	5.24E-03	2.82E-02	2.82E-07	2.82E-02	2.82E-07	2.82E-02		
Read 28	0500-0600	1.12E-02	9.18E-08	8.99E-05	4.99E-02	4.18E-07	8.54E-05	6.10E-02	5.03E-07	4.97E-03	2.40E-02	2.40E-07	2.40E-02	2.40E-07	2.40E-02		
Read 28	0600-0700	1.12E-02	9.18E-08	8.99E-05	4.99E-02	4.18E-07	8.54E-05	6.10E-02	5.03E-07	4.97E-03	2.40E-02	2.40E-07	2.40E-02	2.40E-07	2.40E-02		
Read 28	0700-0800	1.21E-02	4.62E-08	1.40E-04	5.07E-02	2.46E-07	4.28E-05	5.85E-02	1.10E-06	2.27E-02	3.07E-03	3.07E-06	3.07E-03	3.07E-06	3.07E-03		
Read 28	0800-0900	1.21E-02	4.62E-08	1.40E-04	5.07E-02	2.46E-07	4.28E-05	5.85E-02	1.10E-06	2.27E-02	3.07E-03	3.07E-06	3.07E-03	3.07E-06	3.07E-03		
Read 28	0900-1000	1.35E-02	9.04E-07	1.02E-02	4.97E-02	2.09E-06	4.33E-03	6.13E-02	5.85E-06	5.35E-03	3.01E-03	1.83E-06	3.01E-03	1.83E-06	3.01E-03		
Read 28	1000-1100	1.35E-02	9.04E-07	1.02E-02	4.97E-02	2.09E-06	4.33E-03	6.13E-02	5.85E-06	5.35E-03	3.01E-03	1.83E-06	3.01E-03	1.83E-06	3.01E-03		
Read 28	1100-1200	1.50E-02	4.77E-07	8.81E-03	5.88E-02	1.85E-06	3.84E-03	7.39E-02	3.38E-06	4.82E-04	1.16E-03	1.32E-06	1.16E-03	1.32E-06	1.16E-03		
Read 28	1200-1300	1.43E-02	3.89E-07	5.05E-03	5.50E-02	1.48E-06	3.09E-03	6.93E-02	1.83E-06	3.06E-04	3.89E-03	1.06E-06	3.89E-03	1.06E-06	3.89E-03		
Read 28	1300-1400	1.43E-02	3.89E-07	5.05E-03	5.50E-02	1.48E-06	3.09E-03	6.93E-02	1.83E-06	3.06E-04	3.89E-03	1.06E-06	3.89E-03	1.06E-06	3.89E-03		
Read 28	1400-1500	1.43E-02	3.89E-07	5.05E-03	5.50E-02	1.48E-06	3.09E-03	6.93E-02	1.83E-06	3.06E-04	3.89E-03	1.06E-06	3.89E-03	1.06E-06	3.89E-03		
Read 28	1500-1600	1.35E-02	4.03E-07	8.35E-03	5.54E-02	1.68E-06	3.46E-03	6.87E-02	2.08E-06	4.32E-04	3.75E-03	1.14E-06	3.75E-03	1.14E-06	3.75E-03		
Read 28	1600-1700	1.35E-02	4.03E-07	8.35E-03	5.54E-02	1.68E-06	3.46E-03	6.87E-02	2.08E-06	4.32E-04	3.75E-03	1.14E-06	3.75E-03	1.14E-06	3.75E-03		
Read 28	1700-1800	1.01E-02	3.54E-07	3.3E-03	4.62E-02	1.62E-06	3.36E-03	5.63E-02	1.88E-06	4.10E-02	2.81E-03	9.89E-06	2.81E-03	9.89E-06	2.81E-03		
Read 28	1800-1900	7.45E-03	2.74E-07	6.89E-04	3.36E-02	1.20E-06	2.86E-03	4.32E-02	1.57E-06	3.75E-04	2.62E-03	7.56E-06	2.62E-03	7.56E-06	2.62E-03		
Read 28	1900-2000	8.03E-03	3.36E-07	1.65E-03	3.32E-02	8.06E-07	1.99E-02	3.93E-02	1.49E-06	2.38E-02	1.69E-04	4.79E-06	1.69E-04	4.79E-06	1.69E-04		
Read 28	2000-2100	8.03E-03	3.36E-07	1.65E-03	3.32E-02	8.06E-07	1.99E-02	3.93E-02	1.49E-06	2.38E-02	1.69E-04	4.79E-06	1.69E-04	4.79E-06	1.69E-04		
Read 28	2100-2200	8.03E-03	3.36E-07	1.65E-03	3.32E-02	8.06E-07	1.97E-04	4.32E-02	1.91E-06	2.40E-02	1.70E-03	1.40E-06	2.40E-02	1.70E-03	1.40E-06		
Read 28	2200-2300	9.90E-03	4.26E-08	4.48E-04	3.59E-02	7.81E-07	1.84E-02	4.14E-01	6.01E-07	1.81E-02	1.47E-03	1.31E-06	1.47E-03	1.31E-06	1.47E-03		
Read 28	2300-0000	9.90E-03	4.26E-08	4.48E-04	3.59E-02	7.81E-07	1.84E-02	4.14E-01	6.01E-07	1.81E-02	1.47E-03	1.31E-06	1.47E-03	1.31E-06	1.47E-03		
Read 28	0000-0100	5.26E-03	6.20E-08	1.16E-03	3.52E-02	3.00E-06	7.75E-04	4.04E-02	3.54E-07	6.91E-03	1.30E-03	1.14E-06	1.30E-03	1.14E-06	1.30E-03		
Read 28	0100-0200	6.15E-03	3.52E-08	8.88E-05	3.69E-02	3.12E-06	5.34E-04	4.31E-02	2.47E-07	6.22E-03	1.50E-03	8.78E-06	1.50E-03	8.78E-06	1.50E-03		
Read 28	0200-0300	6.15E-03	3.52E-08	8.88E-05	3.69E-02	3.12E-06	5.34E-04	4.31E-02	2.47E-07	6.22E-03	1.50E-03	8.78E-06	1.50E-03	8.78E-06	1.50E-03		
Read 28	0300-0400	7.88E-03	6.88E-08	6.75E-04	4.12E-02	3.19E-06	3.48E-03	4.92E-02	1.65E-07	4.17E-03	1.67E-03	1.67E-06	1.67E-03	1.67E-06	1.67E-03		
Read 28	0400-0500	8.27E-03	6.03E-08	7.60E-04	4.20E-02	3.44E-06	3.89E-03	5.02E-02	1.84E-07	4.65E-03	2.04E-03	2.04E-06	2.04E-03	2.04E-06	2.04E-03		
Read 28	0500-0600	7.88E-03	6.88E-08	6.75E-04	4.12E-02	3.19E-06	3.48E-03	4.92E-02	1.65E-07	4.17E-03	1.67E-03	1.67E-06	1.67E-03	1.67E-06	1.67E-03		
Read 28	0600-0700	7.88E-03	6.88E-08	6.75E-04	4.12E-02	3.19E-06	3.48E-03	4.92E-02	1.65E-07	4.17E-03	1.67E-03	1.67E-06	1.67E-03	1.67E-06	1.67E-03		
Read 28	0700-0800	8.59E-03	6.23E-07	8.84E-03	4.89E-02	3.18E-06	2.98E-04	5.02E-02	1.41E-06	3.56E-03	2.18E-03	2.18E-06	2.18E-03	2.18E-06	2.18E-03		
Read 28	0800-0900	8.59E-03	6.23E-07	8.84E-03	4.89E-02	3.18E-06	2.98E-04	5.02E-02	1.41E-06	3.56E-03	2.18E-03	2.18E-06	2.18E-03	2.18E-06	2.18E-03		
Read 28	0900-1000	9.23E-03	2.37E-07	9.98E-03	4.30E-02	1.10E-06	2.76E-02	5.23E-02	1.33E-06	3.56E-03	2.55E-03	6.3E-06	2.55E-03	6.3E-06	2.55E-03		
Read 28	1000-1100	1.06E-03	2.46E-07	8.88E-05	4.58E-01	1.04E-06	2.56E-04	5.64E-02	1.29E-06	3.14E-02	2.83E-02	6.26E-06	2.83E-02	6.26E-06	2.83E-02		
Read 28	1100-1200	1.06E-03	2.46E-07	8.88E-05	4.58E-01	1.04E-06	2.56E-04	5.64E-02	1.29E-06	3.14E-02	2.83E-02	6.26E-06	2.83E-02	6.26E-06	2.83E-02		
Read 28	1200-1300	1.06E-03	2.46E-07	8.88E-05	4.58E-01	1.04E-06	2.56E-04	5.64E-02	1.29E-06	3.14E-02	2.83E-02	6.26E-06	2.83E-02	6.26E-06	2.83E-02		
Read 28	1300-1400	1.60E-02	3.72E-07	9.36E-03	5.99E-02	1.39E-06	3.50E-02	7.59E-02	1.76E-04	4.43E-04	4.50E-04	1.04E-06	4.43E-04	4.50E-04	1.04E-06		
Read 28	1400-1500	1.60E-02	3.72E-07	9.36E-03	5.99E-02	1.39E-06	3.50E-02	7.59E-02	1.76E-04	4.43E-04	4.50E-04	1.04E-06	4.43E-04	4.50E-04	1.04E-06		
Read 28	1500-1600	1.60E-02	3.72E-07	9.36E-03	5.99E-02	1.39E-06	3.50E-02	7.59E-02	1.76E-04	4.43E-04	4.50E-04	1.04E-06	4.43E-04	4.50E-04	1.04E-06		
Read 28	1600-1700	1.50E-02	3.86E-07	8.73E-03	5.56E-02	1.43E-06	3.66E-02	7.06E-02	1.81E-06	4.57E-02	4.17E-03	1.07E-06	4.17E-03	1.07E-06	4.17E-03		
Read 28	1700-1800	1.13E-02	3.13E-07	7.89E-04	4.44E-03	1.34E-06	3.38E-03	5.97E-02	1.66E-06	4.17E-02	3.62E-03	1.17E-06	3.62E-03	1.17E-06	3.62E-03		
Read 28	1800-1900	8.26E-03	2.29E-07	2.59E-03	3.12E-02	1.10E-06	2.76E-02	5.23E-02	1.33E-06	3.56E-03	2.55E-03	6.3E-06	2.55E-03	6.3E-06	2.55E-03		
Read 28	1900-2000	8.78E-03	1.49E-07	7.17E-03	3.35E-02	6.73E-07	1.86E-02	4.03E-02	8.86E-07	2.23E-02	1.88E-04	3.32E-06	1.88E-04	3.32E-06	1.88E-04		
Read 28	2000-2100	6.17E-03	1.26E-07	2.91E-03	3.61E-02	3.25E-07	1.57E-02	4.27E-02	7.40E-07	1.88E-02	1.88E-04	3.32E-06	1.88E-04	3.32E-06	1.88E-04		
Read 28	2100-2200	6.17E-03	1.26E-07	2.91E-03	3.61E-02	3.25E-07	1.57E-02	4.27E-02	7.40E-07	1.88E-02	1.88E-04	3.32E-06	1.88E-04	3.32E-06	1.88E-04		
Read 28	2200-2300	6.42E-03	1.06E-07	2.67E-03	3.56E-02	3.88E-07	1.48E-02	4.04E-02	6.94E-07	1.79E-02	1.79E-04	2.84E-06	1.79E-04	2.84E-06	1.79E-04		
Read 28	2300-0000	7.14E-03	8.94E-08	2.58E-03	3.78E-02	4.67E-07	1.18E-02	4.44E-02	9.56E-07	1.40E-02	1.40E-04	2.18E-06	1.40E-04	2.18E-06	1.40E-04		
Read 28	0000-0100	7.14E-03	8.94E-08	2.58E-03	3.78E-02	4.67E-07	1.18E-02	4.44E-02	9.56E-07	1.40E-02	1.40E-04	2.18E-06	1.40E-04	2.18E-06	1.40E-04		
Read 30	0100-0200	1.05E-02	7.25E-08														

L:\Secure\Environment Projects\60733229\1.01\Others\Air Modelling\Appendix\Traffic\Appendix\Appendix 3.5.4 Emission Factor in 2043-S.B.xlsx

Tsing Yi North Underground Quarry

Open data file: 2014_H08_Emission_Factors_for_ASPAC_model.xls			Year 2014											
Road Name	Road ID	Hour	NO _x Emission						NO ₂ Emission					
			Monthly/Urban			Monthly/hourly			Monthly/Urban			Monthly/hourly		
			g/minveh	g/s/mi	g/min/hour	g/min/veh	g/min/hour	g/min/veh	g/min/hour	g/min/veh	g/min/hour	g/min/veh	g/min/hour	
Road #1	0000-0200	2:00-2:00	1.255	1.255	1.255	5.427	5.427	5.427	0.392	0.392	0.392	1.324	1.324	1.324
Road #1	0100-0200	2:00-2:00	2.358	2.358	2.358	1.155	1.155	1.155	0.918	0.918	0.918	1.312	1.312	1.312
Road #1	0200-0300	2:00-2:00	2.358	2.358	2.358	1.155	1.155	1.155	0.918	0.918	0.918	1.312	1.312	1.312
Road #1	0300-0400	2:00-2:00	2.358	2.358	2.358	1.155	1.155	1.155	0.918	0.918	0.918	1.312	1.312	1.312
Road #1	0400-0500	2:00-2:00	2.358	2.358	2.358	1.155	1.155	1.155	0.918	0.918	0.918	1.312	1.312	1.312
Road #1	0500-0600	2:00-2:00	2.358	2.358	2.358	1.155	1.155	1.155	0.918	0.918	0.918	1.312	1.312	1.312
Road #1	0600-0700	2:00-2:00	2.358	2.358	2.358	1.155	1.155	1.155	0.918	0.918	0.918	1.312	1.312	1.312
Road #1	0700-0800	2:00-2:00	2.358	2.358	2.358	1.155	1.155	1.155	0.918	0.918	0.918	1.312	1.312	1.312
Road #1	0800-0900	2:00-2:00	2.358	2.358	2.358	1.155	1.155	1.155	0.918	0.918	0.918	1.312	1.312	1.312
Road #1	0900-1000	2:00-2:00	2.358	2.358	2.358	1.155	1.155	1.155	0.918	0.918	0.918	1.312	1.312	1.312
Road #1	1000-1100	2:00-2:00	2.358	2.358	2.358	1.155	1.155	1.155	0.918	0.918	0.918	1.312	1.312	1.312
Road #1	1100-1200	2:00-2:00	2.358	2.358	2.358	1.155	1.155	1.155	0.918	0.918	0.918	1.312	1.312	1.312
Road #1	1200-1300	2:00-2:00	2.358	2.358	2.358	1.155	1.155	1.155	0.918	0.918	0.918	1.312	1.312	1.312
Road #1	1300-1400	2:00-2:00	2.358	2.358	2.358	1.155	1.155	1.155	0.918	0.918	0.918	1.312	1.312	1.312
Road #1	1400-1500	2:00-2:00	2.358	2.358	2.358	1.155	1.155	1.155	0.918	0.918	0.918	1.312	1.312	1.312
Road #1	1500-1600	2:00-2:00	2.358	2.358	2.358	1.155	1.155	1.155	0.918	0.918	0.918	1.312	1.312	1.312
Road #1	1600-1700	2:00-2:00	2.358	2.358	2.358	1.155	1.155	1.155	0.918	0.918	0.918	1.312	1.312	1.312
Road #1	1700-1800	2:00-2:00	2.358	2.358	2.358	1.155	1.155	1.155	0.918	0.918	0.918	1.312	1.312	1.312
Road #1	1800-1900	2:00-2:00	2.358	2.358	2.358	1.155	1.155	1.155	0.918	0.918	0.918	1.312	1.312	1.312
Road #1	1900-2000	2:00-2:00	2.358	2.358	2.358	1.155	1.155	1.155	0.918	0.918	0.918	1.312	1.312	1.312
Road #1	2000-2100	2:00-2:00	2.358	2.358	2.358	1.155	1.155	1.155	0.918	0.918	0.918	1.312	1.312	1.312
Road #1	2100-2200	2:00-2:00	2.358	2.358	2.358	1.155	1.155	1.155	0.918	0.918	0.918	1.312	1.312	1.312
Road #1	2200-2300	2:00-2:00	2.358	2.358	2.358	1.155	1.155	1.155	0.918	0.918	0.918	1.312	1.312	1.312
Road #1	2300-2400	2:00-2:00	2.358	2.358	2.358	1.155	1.155	1.155	0.918	0.918	0.918	1.312	1.312	1.312
Road #2	0000-0200	2:00-2:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #2	0300-0400	2:00-2:00	5.436	5.436	5.436	0.678	0.678	0.678	1.311	1.311	1.311	2.067	2.067	2.067
Road #2	0400-0500	2:00-2:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #2	0500-0600	2:00-2:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #2	0600-0700	2:00-2:00	8.956	8.956	8.956	0.958	0.958	0.958	2.007	2.007	2.007	3.676	3.676	3.676
Road #2	0700-0800	2:00-2:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #2	0800-0900	2:00-2:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #2	0900-1000	2:00-2:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #2	1000-1100	2:00-2:00	8.956	8.956	8.956	0.958	0.958	0.958	2.007	2.007	2.007	3.676	3.676	3.676
Road #2	1100-1200	2:00-2:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #2	1200-1300	2:00-2:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #2	1300-1400	2:00-2:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #2	1400-1500	2:00-2:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #2	1500-1600	2:00-2:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #2	1600-1700	2:00-2:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #2	1700-1800	2:00-2:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #2	1800-1900	2:00-2:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #2	1900-2000	2:00-2:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #2	2000-2100	2:00-2:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #2	2100-2200	2:00-2:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #2	2200-2300	2:00-2:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #2	2300-2400	2:00-2:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #3	0000-0100	1:00-1:00	6.915	6.915	6.915	0.527	0.527	0.527	2.376	2.376	2.376	4.648	4.648	4.648
Road #3	0100-0200	1:00-1:00	8.349	8.349	8.349	0.375	0.375	0.375	1.605	1.605	1.605	2.028	2.028	2.028
Road #3	0200-0300	1:00-1:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #3	0300-0400	1:00-1:00	3.325	3.325	3.325	0.305	0.305	0.305	0.952	0.952	0.952	1.152	1.152	1.152
Road #3	0400-0500	1:00-1:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #3	0500-0600	1:00-1:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #3	0600-0700	1:00-1:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #3	0700-0800	1:00-1:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #3	0800-0900	1:00-1:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #3	0900-1000	1:00-1:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #3	1000-1100	1:00-1:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #3	1100-1200	1:00-1:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #3	1200-1300	1:00-1:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #3	1300-1400	1:00-1:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #3	1400-1500	1:00-1:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #3	1500-1600	1:00-1:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #3	1600-1700	1:00-1:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #3	1700-1800	1:00-1:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #3	1800-1900	1:00-1:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #3	1900-2000	1:00-1:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #3	2000-2100	1:00-1:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #3	2100-2200	1:00-1:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #3	2200-2300	1:00-1:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #3	2300-2400	1:00-1:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #4	0000-0100	1:00-1:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #4	0100-0200	1:00-1:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #4	0200-0300	1:00-1:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #4	0300-0400	1:00-1:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #4	0400-0500	1:00-1:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.208	1.208	2.297	2.297	2.297
Road #4	0500-0600	1:00-1:00	4.837	4.837	4.837	0.085	0.085	0.085	1.208	1.2				

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for
AERMOD model (July)

Road Name	Road ID	Hour	NO _x Emission						NO ₂ Emission					
			Monthly/Min			Monthly/Hour			Monthly/Min			Monthly/Hour		
			g/km ³ /min	g/m ³ /hr	tonne/hr	g/km ³ /hr	tonne/hr	g/km ³ /min	g/m ³ /hr	tonne/hr	g/km ³ /hr	tonne/hr		
Road 44	44	0900-0900	8.55E-03	2.70E-07	0.08E-04	4.44E-02	1.402E-06	3.18E-03	5.29E-02	1.67E-06	3.76E-03	2.00E-03	6.32E-04	1.01E-04
Road 44	44	0900-1000	6.63E-03	2.07E-07	5.92E-04	4.42E-02	1.148E-06	2.58E-03	5.28E-02	1.67E-06	3.76E-03	2.28E-03	5.90E-04	1.33E-04
Road 44	44	1000-1100	7.02E-03	2.15E-07	6.25E-04	4.42E-02	1.205E-06	2.68E-03	5.32E-02	1.67E-06	3.76E-03	2.40E-03	6.18E-04	1.41E-04
Road 44	44	1100-1200	9.24E-03	1.95E-07	4.04E-04	4.53E-02	9.58E-07	2.16E-03	5.45E-02	1.15E-06	2.60E-03	2.45E-03	5.18E-04	1.17E-04
Road 44	44	1200-1300	1.11E-02	2.91E-07	6.56E-04	4.95E-02	1.29E-06	2.92E-03	6.06E-02	1.59E-06	3.57E-03	3.92E-03	7.63E-04	1.71E-04
Road 44	44	1300-1400	1.33E-02	3.10E-07	7.18E-04	5.18E-02	1.58E-06	3.42E-03	6.61E-02	1.68E-06	3.76E-03	4.40E-03	9.08E-04	2.04E-04
Road 44	44	1400-1500	1.20E-02	3.43E-07	7.73E-04	5.34E-02	1.555E-06	3.49E-03	6.61E-02	1.68E-06	3.76E-03	3.95E-03	8.89E-04	1.95E-04
Road 44	44	1500-1600	1.22E-02	3.56E-07	8.02E-04	5.81E-02	1.69E-06	3.82E-03	7.02E-02	2.09E-06	4.42E-03	4.29E-03	8.66E-04	1.91E-04
Road 44	44	1600-1700	1.28E-02	3.78E-07	8.61E-04	6.01E-02	1.82E-06	4.04E-03	7.49E-02	2.22E-06	4.66E-03	4.54E-03	9.25E-04	2.04E-04
Road 44	44	1700-1800	1.97E-02	6.97E-07	1.57E-03	6.91E-02	3.15E-06	7.03E-03	1.09E-01	3.84E-06	8.67E-03	9.91E-03	1.93E-03	4.23E-04
Road 44	44	1800-1900	2.50E-02	9.71E-07	2.19E-03	9.51E-02	4.09E-06	9.22E-03	1.39E-01	5.07E-06	1.14E-02	1.26E-02	2.68E-03	5.84E-04
Road 44	44	1900-2000	4.84E-02	1.49E-07	3.36E-04	3.11E-02	7.29E-07	2.16E-03	5.45E-02	1.11E-06	2.50E-03	2.40E-03	5.18E-04	1.17E-04
Road 44	44	2000-2100	4.84E-02	1.11E-07	2.50E-04	2.50E-02	8.01E-07	2.16E-03	5.45E-02	3.81E-06	8.67E-03	1.16E-02	2.40E-03	5.18E-04
Road 44	44	2100-2200	4.04E-02	6.65E-08	1.86E-04	3.26E-02	7.88E-07	1.67E-03	3.67E-02	8.78E-06	1.98E-03	2.43E-03	5.46E-04	1.23E-04
Road 44	44	2200-2300	3.95E-03	9.93E-08	2.07E-04	3.27E-02	7.61E-07	1.27E-03	3.67E-02	8.83E-07	1.92E-03	9.57E-04	2.23E-04	5.01E-05
Road 44	44	2300-0000	4.41E-03	7.67E-08	1.71E-04	3.27E-02	8.14E-07	1.40E-03	3.67E-02	9.65E-07	2.16E-03	1.01E-02	2.40E-03	5.18E-04
Road 44	44	0000-0100	4.33E-04	8.33E-08	1.55E-04	3.55E-02	3.96E-07	1.21E-03	3.82E-04	3.04E-06	6.73E-03	1.06E-03	8.43E-04	3.71E-05
Road 45	45	0100-0200	4.76E-03	2.47E-08	5.11E-04	3.90E-02	1.81E-07	8.14E-04	3.98E-02	2.06E-07	9.29E-03	1.18E-03	1.06E-03	2.73E-04
Road 45	45	0200-0300	5.29E-03	2.74E-08	5.61E-04	4.18E-02	2.03E-07	8.81E-04	4.27E-02	2.22E-07	1.01E-03	1.26E-03	3.23E-04	8.14E-05
Road 45	45	0300-0400	5.71E-03	3.07E-08	6.55E-04	3.80E-02	1.13E-07	5.00E-04	4.37E-03	3.00E-07	8.86E-04	1.43E-03	4.25E-04	1.09E-04
Road 45	45	0400-0500	6.62E-03	3.96E-08	8.07E-04	4.91E-02	1.28E-07	5.74E-04	4.53E-03	3.48E-07	1.68E-04	1.55E-03	4.07E-04	2.22E-04
Road 45	45	0500-0600	7.59E-03	4.39E-08	9.19E-04	5.19E-02	1.45E-07	6.24E-04	4.81E-03	3.68E-07	1.92E-04	1.78E-03	4.45E-04	2.44E-04
Road 45	45	0600-0700	7.59E-03	4.39E-08	9.19E-04	5.19E-02	1.45E-07	6.24E-04	4.81E-03	3.68E-07	1.92E-04	1.78E-03	4.45E-04	2.44E-04
Road 45	45	0700-0800	6.63E-03	1.89E-07	4.84E-04	4.39E-02	1.08E-06	4.84E-03	5.16E-02	1.27E-06	5.69E-04	1.94E-03	4.76E-04	2.13E-04
Road 45	45	0800-0900	6.63E-03	1.89E-07	4.84E-04	4.39E-02	1.08E-06	4.84E-03	5.16E-02	1.27E-06	5.69E-04	1.94E-03	4.76E-04	2.13E-04
Road 45	45	0900-1000	4.76E-03	2.47E-07	5.87E-04	4.37E-02	1.02E-06	4.84E-03	5.22E-02	1.26E-06	5.46E-04	1.64E-03	2.27E-04	5.01E-05
Road 45	45	1000-1100	5.58E-03	1.93E-07	6.66E-04	4.54E-02	9.14E-07	4.10E-03	5.50E-02	1.11E-07	9.47E-04	2.58E-03	5.18E-04	2.13E-04
Road 45	45	1100-1200	6.08E-03	1.73E-07	7.18E-04	4.51E-02	8.59E-07	3.88E-03	5.21E-03	1.10E-06	1.84E-03	2.43E-03	6.64E-04	2.02E-04
Road 45	45	1200-1300	6.08E-03	1.73E-07	7.18E-04	4.51E-02	8.59E-07	3.88E-03	5.21E-03	1.10E-06	1.84E-03	2.43E-03	6.64E-04	2.02E-04
Road 45	45	1300-1400	1.07E-02	2.42E-07	6.09E-04	4.96E-02	1.12E-06	5.04E-04	6.01E-02	1.36E-06	3.13E-03	2.88E-03	6.90E-04	2.59E-04
Road 45	45	1400-1500	1.08E-02	2.62E-07	6.19E-04	4.96E-02	1.12E-06	5.34E-04	6.02E-02	1.36E-06	3.51E-03	2.88E-03	6.90E-04	2.59E-04
Road 45	45	1500-1600	1.08E-02	2.62E-07	6.19E-04	4.96E-02	1.12E-06	5.34E-04	6.02E-02	1.36E-06	3.51E-03	2.88E-03	6.90E-04	2.59E-04
Road 45	45	1600-1700	1.08E-02	2.84E-07	7.28E-04	4.84E-02	1.28E-06	5.73E-04	5.91E-02	1.56E-06	3.70E-03	2.82E-03	7.44E-04	3.33E-04
Road 45	45	1700-1800	2.88E-03	2.79E-07	6.25E-04	4.91E-02	1.48E-06	6.69E-04	5.94E-02	1.76E-06	7.88E-04	2.14E-03	6.42E-04	2.88E-04
Road 45	45	1800-1900	3.62E-03	3.13E-07	7.47E-04	5.14E-02	1.81E-06	8.14E-04	6.29E-02	2.09E-06	9.47E-04	2.40E-03	6.18E-04	1.41E-04
Road 45	45	1900-2000	4.66E-03	3.26E-07	7.52E-04	5.22E-02	2.05E-06	9.57E-04	3.48E-02	2.19E-06	1.13E-03	1.91E-03	3.13E-04	7.44E-05
Road 45	45	2000-2100	4.44E-03	3.12E-08	4.95E-04	3.27E-02	6.71E-07	3.01E-03	3.71E-02	7.62E-07	4.42E-03	1.26E-03	2.31E-04	1.06E-04
Road 45	45	2100-2200	4.44E-03	3.12E-08	4.95E-04	3.27E-02	6.71E-07	3.01E-03	3.71E-02	7.62E-07	4.42E-03	1.26E-03	2.31E-04	1.06E-04
Road 45	45	2200-2300	3.76E-03	7.51E-08	3.98E-04	3.21E-02	6.39E-07	2.87E-03	3.99E-02	7.14E-07	3.31E-03	1.14E-04	1.82E-04	7.89E-05
Road 45	45	2300-0000	4.21E-03	6.82E-08	2.81E-04	3.21E-02	4.92E-07	2.21E-03	3.74E-02	5.54E-07	2.49E-04	1.04E-03	1.60E-04	6.69E-05
Road 46	46	0000-0100	4.16E-03	1.48E-08	9.47E-04	3.68E-02	1.18E-07	6.00E-04	3.76E-03	1.33E-07	1.01E-04	1.01E-03	3.05E-04	1.23E-04
Road 46	46	0100-0200	4.16E-03	1.48E-08	9.47E-04	3.68E-02	1.18E-07	6.00E-04	3.76E-03	1.33E-07	1.01E-04	1.01E-03	3.05E-04	1.23E-04
Road 46	46	0200-0300	5.05E-03	1.96E-08	3.96E-04	3.66E-02	6.07E-08	4.12E-04	4.15E-02	6.91E-08	4.95E-04	2.44E-03	2.06E-04	1.04E-04
Road 46	46	0300-0400	5.51E-03	2.21E-08	4.98E-04	3.78E-02	4.89E-08	3.33E-04	4.33E-02	5.67E-08	4.84E-04	1.36E-03	1.79E-04	1.23E-04
Road 46	46	0400-0500	5.96E-03	2.46E-08	5.55E-04	3.89E-02	5.44E-08	3.64E-04	4.49E-02	6.19E-08	5.16E-04	1.56E-03	1.98E-04	1.41E-04
Road 46	46	0500-0600	6.41E-03	2.99E-08	6.08E-04	4.00E-02	5.995E-08	3.74E-04	4.65E-02	7.11E-08	7.82E-04	1.61E-03	3.96E-04	1.77E-04
Road 46	46	0600-0700	6.90E-03	3.26E-08	6.74E-04	4.14E-02	7.21E-08	4.06E-04	4.88E-02	7.98E-08	7.79E-03	1.73E-03	4.21E-04	6.23E-04
Road 46	46	0700-0800	7.38E-03	3.57E-08	7.47E-04	4.27E-02	7.68E-08	4.37E-04	4.46E-02	8.44E-08	8.17E-03	1.83E-03	2.28E-04	1.59E-04
Road 46	46	0800-0900	7.38E-03	3.57E-08	7.47E-04	4.27E-02	7.68E-08	4.37E-04	4.46E-02	8.44E-08	8.17E-03	1.83E-03	2.28E-04	1.59E-04
Road 46	46	0900-1000	7.68E-03	3.98E-08	8.04E-04	4.14E-02	4.39E-08	2.84E-04	4.49E-02	5.00E-07	3.96E-03	2.16E-03	2.19E-04	1.41E-04
Road 46	46	1000-1100	7.68E-03	3.98E-08	8.04E-04	4.14E-02	4.39E-08	2.84E-04	4.49E-02	5.00E-07	3.96E-03	2.16E-03	2.19E-04	1.41E-04
Road 46	46	1100-1200	6.63E-03	7.11E-08	1.82E-04	3.95E-02	3.00E-07	2.44E-03	5.21E-03	1.41E-07	9.29E-03	2.31E-03	9.19E-04	1.22E-04
Road 46	46	1200-1300	1.17E-02	1.62E-08	8.69E-04	4.95E-02	5.42E-07	3.68E-03	6.12E-02	6.17E-07	4.55E-03	3.17E-03	3.48E-04	2.33E-04
Road 46	46	1300-1400	1.18E-02	1.32E-08	8.97E-04	5.04E-02	5.75E-07	3.68E-03	6.29E-02	7.07E-07	4.26E-03	3.07E-03	3.76E-04	2.44E-04
Road 46	46	1400-1500	1.18E-02	1.42E-08	9.14E-04	5.04E-02	6.03E-07	4.02E-03	6.29E-02	7.48E-07	4.55E-03	3.26E-03	3.98E-04	2.59E-04
Road 46	46	1500-1600	1.18E-02	1.59E-08	1.05E-04	5.04E-02	6.18E-07	4.19E-03	6.14E-02	7.53E-07	4.71E-03	3.10E-03	3.90E-04	2.59E-04
Road 46	46	1600-1700	1.18E-02	1.93E-07	1.02E-04	4.88E-02	6.30E-07	4.27E-03	6.01E-02	8.78E-07	4.29E-03	3.14E-03	4.07E-04	2.71E-04
Road 46	46	1700-1800	1.18E-02	1.93E-07	1.02E-04	4.88E-02	6.30E-07	4.27E-03	6.01E-02	8.78E-07	4.29E-03	3.14E-03	4.07E-04	2.71E-04
Road 46	46	1800-1900	8.02E-03	1.99E-08	3.28E-04	3.12E-02	4.995E-07	3.35E-03	3.76E-02	8.67E-07	1.98E-03	5.56E-03	2.61E-04	1.77E-04
Road 46	46	1900-2000	5.05E-03	6.95E-08	3.20E-04	3.09E-02	3.88E-07	2.63E-03	3.69E-02	5.81E-07	1.09E-03	1.33E-03	1.67E-04	1.17E-04
Road 46	46	2000-2100	5.05E-03	6.95E-08	3.20E-04	3.09E-02	3.88E-07	2.63E-03	3.69E-02	5.81E-07	1.09E-03	1.33E-03	1.67E-04	1.17E-04
Road 46	46													

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for
AIRMCO model (August)

Road Name	Road ID	Hour	NO _x Emission			PM ₁₀ Emission			PM _{2.5} Emission			CO Emission			HC Emission		
			g/min/veh	g/s/m	g/s/m	g/min/veh	g/s/m	g/s/m	g/min/veh	g/s/m	g/s/m	g/min/veh	g/s/m	g/s/m	g/min/veh	g/s/m	g/s/m
Road 11	11	0900-0900	2,432.00	2,432.00	1,638.00	1,711.00	1,711.00	1,162.00	1,468.00	1,468.00	938.00	2,432.00	2,432.00	1,638.00	1,711.00	1,711.00	1,162.00
Road 11	11	0900-0900	2,662.00	2,662.00	1,836.00	1,911.00	1,911.00	1,262.00	1,568.00	1,568.00	988.00	2,662.00	2,662.00	1,836.00	1,911.00	1,911.00	1,262.00
Road 11	11	0900-0900	2,882.00	2,882.00	1,974.00	2,049.00	2,049.00	1,398.00	1,704.00	1,704.00	1,088.00	2,882.00	2,882.00	1,974.00	2,049.00	2,049.00	1,398.00
Road 11	11	0900-0900	3,102.00	3,102.00	2,136.00	2,211.00	2,211.00	1,512.00	1,818.00	1,818.00	1,208.00	3,102.00	3,102.00	2,136.00	2,211.00	2,211.00	1,512.00
Road 11	11	0900-0900	3,322.00	3,322.00	2,314.00	2,389.00	2,389.00	1,694.00	1,999.00	1,999.00	1,328.00	3,322.00	3,322.00	2,314.00	2,389.00	2,389.00	1,694.00
Road 11	11	0900-0900	3,542.00	3,542.00	2,492.00	2,567.00	2,567.00	1,870.00	2,175.00	2,175.00	1,458.00	3,542.00	3,542.00	2,492.00	2,567.00	2,567.00	1,870.00
Road 11	11	0900-0900	3,762.00	3,762.00	2,670.00	2,745.00	2,745.00	2,046.00	2,351.00	2,351.00	1,618.00	3,762.00	3,762.00	2,670.00	2,745.00	2,745.00	2,046.00
Road 11	11	0900-0900	3,982.00	3,982.00	2,848.00	2,923.00	2,923.00	2,224.00	2,529.00	2,529.00	1,778.00	3,982.00	3,982.00	2,848.00	2,923.00	2,923.00	2,224.00
Road 11	11	0900-0900	4,202.00	4,202.00	3,026.00	3,101.00	3,101.00	2,402.00	2,707.00	2,707.00	1,918.00	4,202.00	4,202.00	3,026.00	3,101.00	3,101.00	2,402.00
Road 11	11	0900-0900	4,422.00	4,422.00	3,204.00	3,279.00	3,279.00	2,580.00	2,885.00	2,885.00	2,098.00	4,422.00	4,422.00	3,204.00	3,279.00	3,279.00	2,580.00
Road 11	11	0900-0900	4,642.00	4,642.00	3,382.00	3,457.00	3,457.00	2,752.00	3,057.00	3,057.00	2,278.00	4,642.00	4,642.00	3,382.00	3,457.00	3,457.00	2,752.00
Road 11	11	0900-0900	4,862.00	4,862.00	3,560.00	3,635.00	3,635.00	2,924.00	3,229.00	3,229.00	2,458.00	4,862.00	4,862.00	3,560.00	3,635.00	3,635.00	2,924.00
Road 11	11	0900-0900	5,082.00	5,082.00	3,738.00	3,813.00	3,813.00	3,096.00	3,401.00	3,401.00	2,638.00	5,082.00	5,082.00	3,738.00	3,813.00	3,813.00	3,096.00
Road 11	11	0900-0900	5,302.00	5,302.00	3,916.00	3,991.00	3,991.00	3,268.00	3,573.00	3,573.00	2,818.00	5,302.00	5,302.00	3,916.00	3,991.00	3,991.00	3,268.00
Road 11	11	0900-0900	5,522.00	5,522.00	4,094.00	4,169.00	4,169.00	3,440.00	3,745.00	3,745.00	2,998.00	5,522.00	5,522.00	4,094.00	4,169.00	4,169.00	3,440.00
Road 11	11	0900-0900	5,742.00	5,742.00	4,272.00	4,347.00	4,347.00	3,612.00	3,917.00	3,917.00	3,178.00	5,742.00	5,742.00	4,272.00	4,347.00	4,347.00	3,612.00
Road 11	11	0900-0900	5,962.00	5,962.00	4,450.00	4,525.00	4,525.00	3,784.00	4,089.00	4,089.00	3,358.00	5,962.00	5,962.00	4,450.00	4,525.00	4,525.00	3,784.00
Road 11	11	0900-0900	6,182.00	6,182.00	4,628.00	4,703.00	4,703.00	3,956.00	4,261.00	4,261.00	3,538.00	6,182.00	6,182.00	4,628.00	4,703.00	4,703.00	3,956.00
Road 11	11	0900-0900	6,402.00	6,402.00	4,806.00	4,881.00	4,881.00	4,128.00	4,433.00	4,433.00	3,718.00	6,402.00	6,402.00	4,806.00	4,881.00	4,881.00	4,128.00
Road 11	11	0900-0900	6,622.00	6,622.00	4,984.00	5,059.00	5,059.00	4,300.00	4,605.00	4,605.00	3,898.00	6,622.00	6,622.00	4,984.00	5,059.00	5,059.00	4,300.00
Road 11	11	0900-0900	6,842.00	6,842.00	5,162.00	5,237.00	5,237.00	4,472.00	4,777.00	4,777.00	4,078.00	6,842.00	6,842.00	5,162.00	5,237.00	5,237.00	4,472.00
Road 11	11	0900-0900	7,062.00	7,062.00	5,340.00	5,415.00	5,415.00	4,644.00	4,949.00	4,949.00	4,258.00	7,062.00	7,062.00	5,340.00	5,415.00	5,415.00	4,644.00
Road 11	11	0900-0900	7,282.00	7,282.00	5,518.00	5,593.00	5,593.00	4,816.00	5,121.00	5,121.00	4,438.00	7,282.00	7,282.00	5,518.00	5,593.00	5,593.00	4,816.00
Road 11	11	0900-0900	7,502.00	7,502.00	5,696.00	5,771.00	5,771.00	5,090.00	5,395.00	5,395.00	4,612.00	7,502.00	7,502.00	5,696.00	5,771.00	5,771.00	5,090.00
Road 11	11	0900-0900	7,722.00	7,722.00	5,874.00	5,949.00	5,949.00	5,262.00	5,567.00	5,567.00	4,892.00	7,722.00	7,722.00	5,874.00	5,949.00	5,949.00	5,262.00
Road 11	11	0900-0900	7,942.00	7,942.00	6,052.00	6,127.00	6,127.00	5,434.00	5,739.00	5,739.00	5,064.00	7,942.00	7,942.00	6,052.00	6,127.00	6,127.00	5,434.00
Road 11	11	0900-0900	8,162.00	8,162.00	6,230.00	6,305.00	6,305.00	5,606.00	5,911.00	5,911.00	5,236.00	8,162.00	8,162.00	6,230.00	6,305.00	6,305.00	5,606.00
Road 11	11	0900-0900	8,382.00	8,382.00	6,408.00	6,483.00	6,483.00	5,778.00	6,083.00	6,083.00	5,408.00	8,382.00	8,382.00	6,408.00	6,483.00	6,483.00	5,778.00
Road 11	11	0900-0900	8,602.00	8,602.00	6,586.00	6,661.00	6,661.00	5,950.00	6,255.00	6,255.00	5,580.00	8,602.00	8,602.00	6,586.00	6,661.00	6,661.00	5,950.00
Road 11	11	0900-0900	8,822.00	8,822.00	6,764.00	6,839.00	6,839.00	6,122.00	6,427.00	6,427.00	5,762.00	8,822.00	8,822.00	6,764.00	6,839.00	6,839.00	6,122.00
Road 11	11	0900-0900	9,042.00	9,042.00	6,942.00	7,017.00	7,017.00	6,394.00	6,699.00	6,699.00	5,940.00	9,042.00	9,042.00	6,942.00	7,017.00	7,017.00	6,394.00
Road 11	11	0900-0900	9,262.00	9,262.00	7,120.00	7,195.00	7,195.00	6,566.00	6,871.00	6,871.00	6,112.00	9,262.00	9,262.00	7,120.00	7,195.00	7,195.00	6,566.00
Road 11	11	0900-0900	9,482.00	9,482.00	7,298.00	7,373.00	7,373.00	6,738.00	7,043.00	7,043.00	6,284.00	9,482.00	9,482.00	7,298.00	7,373.00	7,373.00	6,738.00
Road 11	11	0900-0900	9,702.00	9,702.00	7,476.00	7,551.00	7,551.00	6,910.00	7,215.00	7,215.00	6,456.00	9,702.00	9,702.00	7,476.00	7,551.00	7,551.00	6,910.00
Road 11	11	0900-0900	9,922.00	9,922.00	7,654.00	7,729.00	7,729.00	7,082.00	7,387.00	7,387.00	6,628.00	9,922.00	9,922.00	7,654.00	7,729.00	7,729.00	7,082.00
Road 11	11	0900-0900	10,142.00	10,142.00	7,832.00	7,907.00	7,907.00	7,254.00	7,559.00	7,559.00	6,800.00	10,142.00	10,142.00	7,832.00	7,907.00	7,907.00	7,254.00
Road 11	11	0900-0900	10,362.00	10,362.00	8,010.00	8,085.00	8,085.00	7,426.00	7,731.00	7,731.00	6,972.00	10,362.00	10,362.00	8,010.00	8,085.00	8,085.00	7,426.00
Road 11	11	0900-0900	10,582.00	10,582.00	8,188.00	8,263.00	8,263.00	7,598.00	7,903.00	7,903.00	7,144.00	10,582.00	10,582.00	8,188.00	8,263.00	8,263.00	7,598.00
Road 11	11	0900-0900	10,802.00	10,802.00	8,366.00	8,441.00	8,441.00	7,770.00	8,075.00	8,075.00	7,316.00	10,802.00	10,802.00	8,366.00	8,441.00	8,441.00	7,770.00
Road 11	11	0900-0900	11,022.00	11,022.00	8,544.00	8,619.00	8,619.00	7,942.00	8,247.00	8,247.00	7,488.00	11,022.00	11,022.00	8,544.00	8,619.00	8,619.00	7,942.00
Road 11	11	0900-0900	11,242.00	11,242.00	8,722.00	8,797.00	8,797.00	8,114.00	8,419.00	8,419.00	7,660.00	11,242.00	11,242.00	8,722.00	8,797.00	8,797.00	8,114.00
Road 11	11	0900-0900	11,462.00	11,462.00	8,900.00	8,975.00	8,975.00	8,286.00	8,591.00	8,591.00	7,832.00	11,462.00	11,462.00	8,900.00	8,975.00	8,975.00	8,286.00
Road 11	11	0900-0900	11,682.00	11,682.00	9,078.00	9,153.00	9,153.00	8,458.00	8,763.00	8,763.00	8,004.00	11,682.00	11,682.00	9,078.00	9,153.00	9,153.00	8,458.00
Road 11	11	0900-0900	11,902.00	11,902.00	9,256.00	9,331.00	9,331.00	8,630.00	8,935.00	8,935.00	8,176.00	11,902.00	11,902.00	9,256.00	9,331.00	9,331.00	8,630.00
Road 11	11	0900-0900	12,122.00	12,122.00	9,434.00	9,509.00	9,509.00	8,802.00	9,107.00	9,107.00	8,348.00	12,122.00	12,122.00	9,434.00	9,509.00	9,509.00	8,802.00
Road 11	11	0900-0900	12,342.00	12,342.00	9,612.00	9,687.00	9,687.00	8,974.00	9,279.00	9,279.00	8,520.00	12,342.00	12,342.00	9,612.00	9,687.00	9,687.00	8,974.00
Road 11	11	0900-0900	12,562.00	12,562.00	9,790.00	9,865.00	9,865.00	9,146.00	9,451.00	9,451.00	8,692.00	12,562.00	12,562.00	9,790.00	9,865.00	9,865.00	9,146.00
Road 11	11	0900-0900	12,782.00	12,782.00	9,968.00	10,043.00	10,043.00	9,318.00	9,623.00	9,623.00	8,864.00	12,782.00	12,782.00	9,968.00	10,043.00	10,043.00	9,318.00
Road 11	11	0900-0900	13,002.00	13,002.00	10,146.00	10,221.00	10,221.00	9,490.00	9,795.00	9,795.00	9,036.00	13,002.00	13,002.00	10,146.00	10,221.00	10,221.00	9,490.00
Road 11	11	0900-0900	13,222.00	13,222.00	10,324.00	10,399.00	10,399.00	9,662.00	9,967.00	9,967.00	9,208.00	13,222.00	13,222.00	10,324.00	10,399.00	10,399.00	9,662.00
Road 11	11	0900-0900	13,442.00	13,442.00	10,502.00	10,577.00	10,577.00	9,834.00	10,139.00	10,139.00	9,380.00	13,442.00	13,442.00	10,502.00	10,577.00	10,577.00	9,834.00
Road 11	11	0900-0900	13,662.00	13,662.00	10,680.00	10,755.00	10,755.00										

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24-hour Emission Factors for

AERMOD model (August)			Year 2043											
			NO _x Emission						NO _x Emission					
Row Name	Row ID		Monthly/month			Monthly/hourly			Monthly/month			Monthly/hourly		
			g/kwhr	g/m ³	ton/hr	g/kwhr	g/m ³	ton/hr	g/kwhr	g/m ³	ton/hr	g/kwhr	g/m ³	ton/hr
Row 37	37	1600-1700	5.64e-02	9.46e-09	7.95e-06	1.99e-01	3.36e-08	2.61e-05	2.56e-01	4.30e-08	3.61e-05	6.54e-03	1.10e-09	9.23e-07
Row 37	37	1700-1800	4.82e-02	8.86e-09	7.27e-06	1.93e-01	3.47e-08	2.91e-05	2.41e-01	4.34e-08	3.64e-05	6.83e-03	1.23e-09	1.06e-06
Row 37	37	1800-1900	5.24e-02	9.62e-09	7.94e-06	2.04e-01	3.62e-08	3.01e-05	2.56e-01	4.46e-08	3.76e-05	7.25e-03	1.30e-09	1.11e-06
Row 37	37	1900-2000	5.70e-02	1.04e-08	8.74e-06	2.21e-01	3.94e-08	3.32e-05	2.81e-01	4.80e-08	4.06e-05	7.84e-03	1.42e-09	1.23e-06
Row 37	37	2000-2100	2.76e-02	2.98e-09	2.50e-06	1.34e-01	4.06e-08	2.21e-05	1.61e-01	1.74e-08	1.46e-05	4.43e-03	4.48e-10	3.74e-07
Row 37	37	2100-2200	2.76e-02	2.98e-09	2.50e-06	1.34e-01	4.06e-08	2.21e-05	1.61e-01	1.74e-08	1.46e-05	4.43e-03	4.48e-10	3.74e-07
Row 37	37	2200-2300	2.41e-02	2.50e-09	2.09e-06	1.26e-01	3.46e-08	1.95e-05	1.55e-01	1.59e-08	1.30e-05	3.93e-03	4.07e-10	3.41e-07
Row 37	37	2300-0000	2.66e-02	2.09e-09	1.79e-06	1.33e-01	4.05e-08	8.76e-05	1.60e-01	1.29e-08	1.09e-05	4.33e-03	3.40e-10	2.89e-07
Row 37	37	0000-0100	2.66e-02	2.09e-09	1.79e-06	1.33e-01	4.05e-08	8.76e-05	1.60e-01	1.29e-08	1.09e-05	4.33e-03	3.40e-10	2.89e-07
Row 37	37	0100-0200	6.51e-03	6.37e-05	6.37e-05	1.70e-01	1.88e-07	6.37e-04	2.56e-01	2.56e-07	7.94e-04	9.90e-03	9.96e-09	2.98e-06
Row 37	37	0200-0300	6.29e-02	5.74e-08	1.77e-04	1.81e-01	1.65e-07	4.54e-04	2.42e-01	2.22e-07	6.65e-04	9.97e-03	9.17e-09	2.74e-06
Row 37	37	0300-0400	5.64e-02	5.46e-08	1.66e-04	1.86e-01	1.51e-07	4.42e-04	2.53e-01	2.08e-07	1.06e-04	1.07e-03	8.70e-09	2.62e-06
Row 37	37	0400-0500	5.70e-02	5.70e-08	1.70e-04	1.86e-01	1.58e-07	4.38e-04	2.53e-01	2.08e-07	1.06e-04	1.07e-03	8.70e-09	2.62e-06
Row 37	37	0500-0600	6.29e-02	7.63e-08	2.28e-04	1.97e-01	2.37e-07	5.09e-04	2.56e-01	3.13e-07	9.37e-04	9.75e-03	1.20e-05	3.67e-06
Row 37	37	0600-0700	5.70e-02	1.26e-07	3.77e-04	1.97e-01	4.42e-07	2.32e-04	2.56e-01	3.08e-07	1.70e-03	8.80e-03	1.95e-08	5.83e-06
Row 37	37	0700-0800	7.25e-02	3.88e-07	1.18e-03	2.11e-01	2.11e-07	5.09e-04	2.56e-01	3.13e-07	9.37e-04	9.75e-03	1.20e-05	3.67e-06
Row 37	37	0800-0900	4.24e-02	4.29e-07	1.27e-03	2.20e-01	2.26e-05	6.85e-05	2.62e-01	1.71e-05	5.12e-03	9.34e-03	5.49e-04	1.64e-04
Row 37	37	0900-1000	7.92e-02	4.31e-07	1.26e-03	2.33e-01	2.26e-06	7.99e-03	3.12e-01	1.70e-06	9.98e-03	9.94e-04	5.14e-04	1.56e-04
Row 37	37	1000-1100	7.92e-02	4.31e-07	1.26e-03	2.33e-01	2.26e-06	7.99e-03	3.12e-01	1.70e-06	9.98e-03	9.94e-04	5.14e-04	1.56e-04
Row 37	37	1100-1200	8.56e-02	4.11e-07	1.23e-03	2.40e-01	2.16e-06	8.49e-03	3.25e-01	1.58e-05	4.71e-03	9.85e-03	4.79e-04	1.43e-04
Row 37	37	1200-1300	1.05e-02	1.04e-04	1.82e-04	2.62e-02	2.22e-07	2.19e-03	3.67e-01	1.03e-03	3.02e-03	1.131e-02	3.90e-05	1.40e-06
Row 37	37	1300-1400	1.05e-02	1.04e-04	1.82e-04	2.62e-02	2.22e-07	2.19e-03	3.67e-01	1.03e-03	3.02e-03	1.131e-02	3.90e-05	1.40e-06
Row 37	37	1400-1500	1.04e-01	3.02e-07	9.05e-04	2.65e-01	6.76e-07	2.29e-03	3.69e-01	1.02e-06	3.19e-03	1.29e-06	3.72e-08	1.11e-04
Row 37	37	1500-1600	1.05e-01	3.10e-07	9.27e-04	2.67e-01	6.87e-07	2.41e-03	3.79e-01	1.12e-06	3.34e-03	1.29e-06	3.89e-08	1.16e-04
Row 37	37	1600-1700	5.64e-02	9.46e-09	7.95e-06	1.99e-01	3.36e-08	2.61e-05	2.56e-01	4.30e-08	3.61e-05	6.54e-03	1.10e-09	9.23e-07
Row 37	37	1700-1800	4.82e-02	8.86e-09	7.27e-06	1.93e-01	3.47e-08	2.91e-05	2.41e-01	4.34e-08	3.64e-05	6.83e-03	1.23e-09	1.06e-06
Row 37	37	1800-1900	5.24e-02	9.62e-09	7.94e-06	2.04e-01	3.62e-08	3.01e-05	2.56e-01	4.46e-08	3.76e-05	7.25e-03	1.30e-09	1.11e-06
Row 37	37	1900-2000	5.70e-02	1.04e-08	8.74e-06	2.21e-01	3.94e-08	3.32e-05	2.81e-01	4.80e-08	4.06e-05	7.84e-03	1.42e-09	1.23e-06
Row 37	37	2000-2100	2.76e-02	2.98e-09	2.50e-06	1.34e-01	4.06e-08	2.21e-05	1.61e-01	1.74e-08	1.46e-05	4.43e-03	4.48e-10	3.74e-07
Row 37	37	2100-2200	2.76e-02	2.98e-09	2.50e-06	1.34e-01	4.06e-08	2.21e-05	1.61e-01	1.74e-08	1.46e-05	4.43e-03	4.48e-10	3.74e-07
Row 37	37	2200-2300	2.41e-02	2.50e-09	2.09e-06	1.26e-01	3.46e-08	1.95e-05	1.55e-01	1.59e-08	1.30e-05	3.93e-03	4.07e-10	3.41e-07
Row 37	37	2300-0000	2.66e-02	2.09e-09	1.79e-06	1.33e-01	4.05e-08	8.76e-05	1.60e-01	1.29e-08	1.09e-05	4.33e-03	3.40e-10	2.89e-07
Row 37	37	0000-0100	2.66e-02	2.09e-09	1.79e-06	1.33e-01	4.05e-08	8.76e-05	1.60e-01	1.29e-08	1.09e-05	4.33e-03	3.40e-10	2.89e-07
Row 37	37	0100-0200	6.51e-03	6.37e-05	6.37e-05	1.70e-01	1.88e-07	6.37e-04	2.56e-01	2.56e-07	7.94e-04	9.90e-03	9.96e-09	2.98e-06
Row 37	37	0200-0300	6.29e-02	5.74e-08	1.77e-04	1.81e-01	1.65e-07	4.54e-04	2.42e-01	2.22e-07	6.65e-04	9.97e-03	9.17e-09	2.74e-06
Row 37	37	0300-0400	5.64e-02	5.46e-08	1.66e-04	1.86e-01	1.51e-07	4.42e-04	2.53e-01	2.08e-07	1.06e-04	1.07e-03	8.70e-09	2.62e-06
Row 37	37	0400-0500	5.70e-02	5.70e-08	1.70e-04	1.86e-01	1.58e-07	4.38e-04	2.53e-01	2.08e-07	1.06e-04	1.07e-03	8.70e-09	2.62e-06
Row 37	37	0500-0600	6.29e-02	7.63e-08	2.28e-04	1.97e-01	2.37e-07	5.09e-04	2.56e-01	3.13e-07	9.37e-04	9.75e-03	1.20e-05	3.67e-06
Row 37	37	0600-0700	5.70e-02	1.26e-07	3.77e-04	1.97e-01	4.42e-07	2.32e-04	2.56e-01	3.08e-07	1.70e-03	8.80e-03	1.95e-08	5.83e-06
Row 37	37	0700-0800	7.25e-02	3.88e-07	1.18e-03	2.11e-01	2.11e-07	5.09e-04	2.56e-01	3.13e-07	9.37e-04	9.75e-03	1.20e-05	3.67e-06
Row 37	37	0800-0900	4.24e-02	4.29e-07	1.27e-03	2.20e-01	2.26e-05	6.85e-05	2.62e-01	1.71e-05	5.12e-03	9.34e-03	5.49e-04	1.64e-04
Row 37	37	0900-1000	7.92e-02	4.31e-07	1.26e-03	2.33e-01	2.26e-06	7.99e-03	3.12e-01	1.70e-06	9.98e-03	9.94e-04	5.14e-04	1.56e-04
Row 37	37	1000-1100	7.92e-02	4.31e-07	1.26e-03	2.33e-01	2.26e-06	7.99e-03	3.12e-01	1.70e-06	9.98e-03	9.94e-04	5.14e-04	1.56e-04
Row 37	37	1100-1200	8.56e-02	4.11e-07	1.23e-03	2.40e-01	2.16e-06	8.49e-03	3.25e-01	1.58e-05	4.71e-03	9.85e-03	4.79e-04	1.43e-04
Row 37	37	1200-1300	1.05e-02	1.04e-04	1.82e-04	2.62e-02	2.22e-07	2.19e-03	3.67e-01	1.03e-03	3.02e-03	1.131e-02	3.90e-05	1.40e-06
Row 37	37	1300-1400	1.05e-02	1.04e-04	1.82e-04	2.62e-02	2.22e-07	2.19e-03	3.67e-01	1.03e-03	3.02e-03	1.131e-02	3.90e-05	1.40e-06
Row 37	37	1400-1500	1.04e-01	3.02e-07	9.05e-04	2.65e-01	6.76e-07	2.29e-03	3.69e-01	1.02e-06	3.19e-03	1.29e-06	3.72e-08	1.11e-04
Row 37	37	1500-1600	1.05e-01	3.10e-07	9.27e-04	2.67e-01	6.87e-07	2.41e-03	3.79e-01	1.12e-06	3.34e-03	1.29e-06	3.89e-08	1.16e-04
Row 37	37	1600-1700	5.64e-02	9.46e-09	7.95e-06	1.99e-01	3.36e-08	2.61e-05	2.56e-01	4.30e-08	3.61e-05	6.54e-03	1.10e-09	9.23e-07
Row 37	37	1700-1800	4.82e-02	8.86e-09	7.27e-06	1.93e-01	3.47e-08	2.91e-05	2.41e-01	4.34e-08	3.64e-05	6.83e-03	1.23e-09	1.06e-06
Row 37	37	1800-1900	5.24e-02	9.62e-09	7.94e-06	2.04e-01	3.62e-08	3.01e-05	2.56e-01	4.46e-08	3.76e-05	7.25e-03	1.30e-09	1.11e-06
Row 37	37	1900-2000	5.70e-02	1.04e-08	8.74e-06	2.21e-01	3.94e-08	3.32e-05	2.81e-01	4.80e-08	4.06e-05	7.84e-03	1.42e-09	1.23e-06
Row 37	37	2000-2100	2.76e-02	2.98e-09	2.50e-06	1.34e-01	4.06e-08	2.21e-05	1.61e-01	1.74e-08	1.46e-05	4.43e-03	4.48e-10	3.74e-07
Row 37	37	2100-2200	2.76e-02	2.98e-09	2.50e-06	1.34e-01	4.06e-08	2.21e-05	1.61e-01	1.74e-08	1.46e-05	4.43e-03	4.48e-10	3.74e-07
Row 37	37	2200-2300	2.41e-02	2.50e-09	2.09e-06	1.26e-01	3.46e-08	1.95e-05	1.55e-01	1.59e-08	1.30e-05	3.93e-03	4.07e-10	3.41e-07
Row 37	37	2300-0000	2.66e-02	2.09e-09	1.79e-06	1.33e-01	4.05e-08	8.76e-05	1.60e-01	1.29e-08	1.09e-05	4.33e-03	3.40e-10	2.89e-07
Row 37	37	0000-0100	2.66e-02	2.09e-09	1.79e-06	1.33e-01	4.05e-08	8.76e-05	1.60e-01	1.29e-08	1.09e-05	4.33e-03	3.40e-10	2.89e-07
Row 37	37	0100-0200	6.51e-03	6.37e-05	6.37e-05	1.70e-01	1.88e-07	6.37e-04	2.56e-01	2.56e-07	7.94e-04	9.90e-03	9.96e-09	2.98e-06
Row 37	37	0200-0300	6.29e-02	5.74e-08	1.77e-04	1.81e-01	1.65e-07	4.54e-04	2.42e-01	2.22e-07	6.65e-04	9.97e-03	9.17e-09	2.74e-06
Row 37	37	0300-0400	5.64e-02	5.46e-08	1.66e-04	1.86e-01	1.51e-07	4.42e-04	2.53e-01	2.08e-07	1.06e-04	1.07e-03	8.70e-09	2.62e-06
Row 37	37	0400-0500	5.70e-02	5.70e-08	1.70e-04	1.86e-01	1.58e-07	4.38e-04	2.53e-01	2.08e-07	1.06e-04	1.07e-03	8.70e-09	2.62e-06
Row 37	37	0500-0600	6.29e-02	7.63e-08	2.28e-04	1.97e-01	2.37e-07	5.09e-04	2.56e-01	3.13e-07	9.37e-04	9.75e-03	1.20e-05	3.67e-06
Row 37	37	0600-0700	5.70e-02	1.26e-07	3.77e-04	1.97e-01	4.42e-07	2.32e-04	2.56e-01	3.08e-07	1.70e-03	8.80e-03	1.95e-08	5.83e-06
Row 37	37	0700-0800	7.25e-02	3.88e-07	1.18e-03	2.11e-01	2.11e-07	5.09e-04	2.56e-01	3.13e-0				

L:\Secure\Environment Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Appendix\Appendix 3.5.4 Emission Factor in 2043-S B.xlsx

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

AERMOD model (August)			Year 2043		NO ₂ Emission				NO _x Emission				
Read Name	Read ID	Hour	Month/Year/Time		g/min/hour				g/min/hour				
			g/min/hour	g/min/hour	g/min/hour	g/min/hour	g/min/hour	g/min/hour	g/min/hour	g/min/hour	g/min/hour	g/min/hour	g/min/hour
Read #1	41	0000-0100	1.62/6.02	3.98/6.08	1.22/6.04	5.42/6.02	1.26/6.07	4.08/6.04	7.06/6.02	1.55/6.07	5.32/6.04	3.88/6.03	8.55/6.09
Read #1	41	0100-0200	2.10/6.02	3.39/6.08	1.15/6.04	5.21/6.02	9.91/6.08	3.81/6.02	8.31/6.02	3.38/6.07	5.54/6.07	5.02/6.03	8.01/6.09
Read #1	41	0200-0300	2.10/6.02	3.39/6.08	1.15/6.04	5.21/6.02	9.91/6.08	3.81/6.02	8.31/6.02	3.38/6.07	5.54/6.07	5.02/6.03	8.01/6.09
Read #1	41	0300-0400	2.85/6.02	3.39/6.08	1.09/6.04	6.28/6.02	8.38/6.08	2.87/6.04	1.01/6.07	1.16/6.07	3.74/6.07	6.78/6.03	7.58/6.09
Read #1	41	0400-0500	2.74/6.02	3.39/6.08	1.12/6.04	6.38/6.02	8.71/6.08	2.98/6.04	1.01/6.02	2.06/6.07	3.10/6.07	5.57/6.03	7.76/6.09
Read #1	41	0500-0600	2.74/6.02	3.39/6.08	1.12/6.04	6.38/6.02	8.71/6.08	2.98/6.04	1.01/6.02	2.06/6.07	3.10/6.07	5.57/6.03	7.76/6.09
Read #1	41	0600-0700	1.53/6.02	3.39/6.08	1.02/6.04	5.61/6.02	1.77/6.07	5.94/6.04	7.21/6.07	2.12/6.07	5.65/6.06	6.88/6.03	1.14/6.09
Read #1	41	0700-0800	2.09/6.02	1.49/6.07	5.10/6.04	6.48/6.02	4.59/6.07	5.71/6.04	8.56/6.02	6.08/6.07	2.08/6.03	5.05/6.03	3.95/6.08
Read #1	41	0800-0900	2.09/6.02	1.49/6.07	5.10/6.04	6.48/6.02	4.59/6.07	5.71/6.04	8.56/6.02	6.08/6.07	2.08/6.03	5.05/6.03	3.95/6.08
Read #1	41	0900-1000	2.20/6.02	1.49/6.07	5.11/6.04	6.55/6.02	4.41/6.07	1.51/6.06	6.90/6.02	6.90/6.07	2.02/6.03	3.93/6.06	3.66/6.08
Read #1	41	1000-1100	2.43/6.02	1.44/6.07	5.05/6.04	6.80/6.02	4.20/6.07	1.44/6.04	9.37/6.02	3.68/6.07	1.94/6.03	8.95/6.03	8.63/6.08
Read #1	41	1100-1200	2.46/6.02	1.44/6.07	4.94/6.04	7.00/6.02	4.11/6.07	1.41/6.04	9.38/6.02	3.55/6.07	1.96/6.03	8.98/6.03	8.51/6.08
Read #1	41	1200-1300	2.46/6.02	1.44/6.07	4.94/6.04	7.00/6.02	4.11/6.07	1.41/6.04	9.38/6.02	3.55/6.07	1.96/6.03	8.98/6.03	8.51/6.08
Read #1	41	1300-1400	2.70/6.02	1.71/6.07	6.01/6.04	7.92/6.02	5.16/6.07	1.76/6.06	1.06/6.06	9.95/6.07	3.36/6.07	8.77/6.04	4.44/6.09
Read #1	41	1400-1500	2.69/6.02	1.88/6.07	6.18/6.04	7.76/6.02	5.26/6.07	1.88/6.06	1.04/6.06	4.07/6.07	4.42/6.06	8.58/6.03	4.52/6.09
Read #1	41	1500-1600	2.69/6.02	1.88/6.07	6.18/6.04	7.76/6.02	5.26/6.07	1.88/6.06	1.04/6.06	4.07/6.07	4.42/6.06	8.58/6.03	4.52/6.09
Read #1	41	1600-1700	2.55/6.02	1.82/6.07	6.23/6.04	7.47/6.02	5.32/6.07	1.83/6.06	1.01/6.06	4.52/6.07	4.45/6.06	8.39/6.03	4.55/6.09
Read #1	41	1700-1800	2.18/6.02	1.67/6.07	5.72/6.04	6.78/6.02	5.23/6.07	1.83/6.06	1.98/6.07	4.82/6.07	3.95/6.06	8.45/6.03	4.18/6.09
Read #1	41	1800-1900	2.18/6.02	1.67/6.07	5.72/6.04	6.78/6.02	5.23/6.07	1.83/6.06	1.98/6.07	4.82/6.07	3.95/6.06	8.45/6.03	4.18/6.09
Read #1	41	1900-2000	1.10/6.02	5.80/6.08	1.99/6.04	4.41/6.02	2.33/6.07	7.94/6.04	5.51/6.02	9.90/6.07	9.93/6.04	2.77/6.03	1.46/6.08
Read #1	41	2000-2100	1.21/6.02	5.80/6.08	1.74/6.04	4.91/6.02	2.06/6.07	7.94/6.04	5.12/6.02	9.90/6.07	9.93/6.04	2.77/6.03	1.46/6.08
Read #1	41	2100-2200	1.18/6.02	4.49/6.08	1.64/6.04	4.85/6.02	1.97/6.07	6.72/6.04	6.02/6.02	4.24/6.07	4.04/6.06	2.87/6.03	1.17/6.08
Read #1	41	2200-0000	1.40/6.02	4.49/6.08	1.53/6.04	5.25/6.02	1.67/6.07	5.78/6.04	6.02/6.02	3.12/6.07	2.56/6.04	3.43/6.06	1.09/6.08
Read #2	42	0000-0100	1.62/6.02	3.98/6.08	1.22/6.04	5.42/6.02	1.26/6.07	4.08/6.04	7.06/6.02	1.55/6.07	5.32/6.04	3.88/6.03	8.55/6.09
Read #2	42	0100-0200	4.06/6.02	6.72/6.08	6.22/6.04	1.06/6.02	1.75/6.07	1.52/6.07	1.47/6.03	2.59/6.07	2.55/6.04	0.93/6.08	1.11/6.09
Read #2	42	0200-0300	4.83/6.02	6.72/6.08	6.08/6.04	1.20/6.02	1.63/6.07	1.51/6.07	1.68/6.03	2.36/6.07	2.12/6.03	7.00/6.03	1.05/6.09
Read #2	42	0300-0400	4.83/6.02	6.72/6.08	6.08/6.04	1.20/6.02	1.63/6.07	1.51/6.07	1.68/6.03	2.36/6.07	2.12/6.03	7.00/6.03	1.05/6.09
Read #2	42	0400-0500	5.27/6.02	6.58/6.08	6.09/6.04	1.28/6.02	1.61/6.07	1.49/6.07	1.81/6.03	2.68/6.07	1.01/6.03	5.87/6.03	0.95/6.09
Read #2	42	0500-0600	4.10/6.02	7.22/6.08	6.68/6.04	1.09/6.02	1.93/6.07	1.78/6.06	1.56/6.03	2.65/6.07	2.45/6.03	6.65/6.03	1.17/6.09
Read #2	42	0600-0700	3.08/6.02	6.65/6.08	6.53/6.04	0.95/6.02	1.86/6.07	2.77/6.06	1.26/6.06	3.96/6.07	1.67/6.03	8.93/6.03	1.59/6.09
Read #2	42	0700-0800	3.08/6.02	6.65/6.08	6.53/6.04	0.95/6.02	1.86/6.07	2.77/6.06	1.26/6.06	3.96/6.07	1.67/6.03	8.93/6.03	1.59/6.09
Read #2	42	0800-0900	4.91/6.02	4.02/6.07	3.72/6.03	1.30/6.02	1.06/6.06	0.98/6.06	1.79/6.01	2.47/6.06	3.62/6.02	6.68/6.07	5.47/6.08
Read #2	42	0900-1000	5.80/6.02	3.47/6.07	3.89/6.03	1.47/6.02	1.04/6.06	0.91/6.06	2.03/6.01	3.44/6.06	3.24/6.02	7.54/6.03	5.43/6.08
Read #2	42	1000-1100	6.03/6.02	3.47/6.07	3.89/6.03	1.47/6.02	1.04/6.06	0.91/6.06	2.03/6.01	3.44/6.06	3.24/6.02	7.54/6.03	5.43/6.08
Read #2	42	1100-1200	6.03/6.02	3.74/6.07	4.15/6.03	1.54/6.02	0.97/6.06	0.86/6.06	2.14/6.01	3.58/6.06	3.28/6.03	8.31/6.03	5.17/6.08
Read #2	42	1200-1300	7.75/6.02	3.71/6.07	3.44/6.03	0.90/6.02	1.11/6.07	0.84/6.06	2.68/6.01	2.88/6.06	1.95/6.02	1.09/6.02	5.24/6.08
Read #2	42	1300-1400	7.75/6.02	3.71/6.07	3.44/6.03	0.90/6.02	1.11/6.07	0.84/6.06	2.68/6.01	2.88/6.06	1.95/6.02	1.09/6.02	5.24/6.08
Read #2	42	1400-1500	7.49/6.02	3.78/6.07	3.50/6.03	1.87/6.02	0.94/6.07	0.87/6.06	2.61/6.01	3.36/6.06	2.38/6.02	1.07/6.02	6.40/6.08
Read #2	42	1500-1600	7.27/6.02	3.74/6.07	3.45/6.03	1.87/6.02	0.96/6.07	0.88/6.06	2.59/6.01	3.36/6.06	2.38/6.02	1.04/6.02	5.39/6.08
Read #2	42	1600-1700	6.58/6.02	3.58/6.07	3.31/6.03	1.69/6.02	0.91/6.07	0.84/6.06	2.31/6.01	3.26/6.06	1.86/6.02	0.97/6.02	5.10/6.08
Read #2	42	1700-1800	6.14/6.02	3.58/6.07	3.31/6.03	1.51/6.02	0.96/6.07	0.78/6.06	2.12/6.01	3.18/6.06	0.98/6.02	0.81/6.02	4.71/6.08
Read #2	42	1800-1900	3.06/6.02	3.49/6.07	3.45/6.03	1.64/6.02	0.97/6.07	0.84/6.06	2.31/6.01	3.18/6.06	0.98/6.02	0.81/6.02	4.71/6.08
Read #2	42	2000-2100	3.30/6.02	8.41/6.08	7.78/6.04	0.91/6.02	2.52/6.07	2.33/6.06	1.37/6.01	3.37/6.02	1.12/6.03	3.66/6.03	1.37/6.08
Read #2	42	2100-2200	3.24/6.02	8.30/6.08	7.68/6.04	0.93/6.02	2.52/6.07	2.33/6.06	1.31/6.01	3.35/6.07	1.10/6.03	3.56/6.03	1.39/6.08
Read #2	42	2200-0000	3.24/6.02	8.30/6.08	7.68/6.04	0.93/6.02	2.52/6.07	2.33/6.06	1.31/6.01	3.35/6.07	1.10/6.03	3.56/6.03	1.39/6.08
Read #2	42	0000-0300	3.90/6.02	7.84/6.08	7.55/6.04	0.98/6.02	2.19/6.07	2.00/6.07	1.45/6.01	3.96/6.07	1.74/6.03	3.22/6.03	2.58/6.08
Read #3	43	0000-0100	6.91/6.02	9.48/6.09	1.52/6.03	3.77/6.02	2.23/6.08	8.33/6.05	4.46/6.02	2.64/6.08	8.95/6.05	1.57/6.03	9.25/6.10
Read #3	43	0100-0200	9.19/6.03	3.54/6.09	1.96/6.05	4.17/6.02	1.65/6.08	1.63/6.08	5.90/6.02	2.02/6.04	5.45/6.04	2.12/6.04	8.60/6.10
Read #3	43	0200-0300	9.19/6.03	3.54/6.09	1.96/6.05	4.17/6.02	1.65/6.08	1.63/6.08	5.90/6.02	2.02/6.04	5.45/6.04	2.12/6.04	8.60/6.10
Read #3	43	0300-0400	1.36/6.02	3.47/6.09	1.24/6.05	4.95/6.02	1.27/6.08	4.59/6.05	6.32/6.02	1.65/6.08	8.79/6.05	1.16/6.07	7.21/6.10
Read #3	43	0400-0500	1.32/6.02	3.47/6.09	1.30/6.05	4.85/6.02	1.38/6.08	4.59/6.05	6.28/6.02	1.65/6.08	8.79/6.05	1.17/6.07	8.09/6.10
Read #3	43	0500-0600	1.32/6.02	3.47/6.09	1.30/6.05	4.85/6.02	1.38/6.08	4.59/6.05	6.28/6.02	1.65/6.08	8.79/6.05	1.17/6.07	8.09/6.10
Read #3	43	0600-0700	7.69/6.02	6.93/6.09	2.43/6.05	4.18/6.02	3.54/6.08	1.32/6.04	4.94/6.02	1.98/6.08	1.66/6.07	1.77/6.04	1.49/6.09
Read #3	43	0700-0800	1.03/6.02	6.88/6.09	6.83/6.05	4.88/6.02	8.13/6.08	3.04/6.04	5.61/6.02	0.95/6.08	2.72/6.04	2.40/6.04	4.20/6.09
Read #3	43	0800-0900	1.03/6.02	6.88/6.09	6.83/6.05	4.88/6.02	8.13/6.08	3.04/6.04	5.61/6.02	0.95/6.08	2.72/6.04	2.40/6.04	4.20/6.09
Read #3	43	0900-1000	1.06/6.02	1.72/6.08	6.42/6.05	4.31/6.02	6.97/6.08	2.60/6.04	5.37/6.02	6.68/6.04	3.24/6.04	2.55/6.04	4.12/6.09
Read #3	43	1000-1100	1.20/6.02	1.66/6.08	6.19/6.05	4.54/6.02	6.58/6.08	2.60/6.04	5.47/6.02	9.95/6.07	3.97/6.04	2.88/6.03	3.98/6.09
Read #3	43	1100-1200	1.20/6.02	1.66/6.08	6.19/6.05	4.54/6.02	6.58/6.08	2.60/6.04	5.47/6.02	9.95/6.07	3.97/6.04	2.88/6.03	3.98/6.09
Read #3	43	1200-1300	1.48/6.02	5.51/6.09	1.92/6.04	5.78/6.02	2.01/6.07	7.51/6.04	7.27/6.02	2.53/6.07	0.94/6.04	3.86/6.03	1.34/6.09
Read #3	43	1300-1400	1.49/6.02	5.51/6.09	1.98/6.04	5.99/6.02	2.14/6.07	7.99/6.04	7.47/6.02	2.67/6.07	0.97/6.04	3.83/6.03	1.40/6.09
Read #3	43	1400-1500	1.49/6.02	5.51/6.09	1.98/6.04	5.99/6.02	2.14/6.07	7.99/6.04	7.47/6.02	2.67/6.07	0.97/6.04	3.83/6.03	1.40/6.09
Read #3	43	1500-1600	1.39/6.02	5.59/6.09	2.01/6.04	5.99/6.02	2.22/6.07	8.52/6.04	7.26/6.02	2.81/6.07	0.95/6.04	3.72/6.04	1.44/6.09
Read #3	43	1600-1700	1.43/6.02	5.80/6.09	2.17/6.04	5.63/6.02	2.29/6.07	8.56/6.04	7.60/6.02	2.87/6.07	0.73/6.04	3.74/6.04	1.52/6.09
Read #3	43	1700-1800	1.43/6.02	5.80/6.09	2.17/6.04	5.63/6.02	2.29/6.07	8.56/6.04	7.60/6.02	2.87/6.07	0.73/6.04	3.74/6.04	1.52/6.09
Read #3	43	1800-1900	8.04/6.03	3.58/6.09	1.47/6.04	3.72/6.02	1.82/6.07	6.80/6.04	4.52/6.02	2.21/6.07	2.97/6.04	2.09/6.02	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

AIRMCD model (August)		Year 2043												
Road Name	Road ID	No. Emission				No. Emission				No. Emission				
		Monthly/average		Monthly/average		Monthly/average		Monthly/average		Monthly/average		Monthly/average		
		g/min	g/h	g/min	g/h	g/min	g/h	g/min	g/h	g/min	g/h	g/min	g/h	
Road 44	44	0080-0900	8.556/03	2.706/07	6.08E-04	4.44E-02	1.40E-06	3.16E-03	3.29E-02	1.67E-06	3.76E-03	2.00E-03	6.32E-08	1.42E-05
Road 44	44	0900-1200	8.836/03	2.73E-07	5.02E-04	4.42E-02	1.14E-06	3.28E-03	5.27E-02	1.37E-06	3.08E-03	2.28E-03	5.90E-08	1.13E-05
Road 44	44	1200-1500	9.71E-02	2.94E-07	5.02E-04	4.42E-02	1.14E-06	3.28E-03	5.27E-02	1.37E-06	3.08E-03	2.28E-03	5.90E-08	1.13E-05
Road 44	44	1500-1800	9.71E-02	2.94E-07	5.02E-04	4.42E-02	1.14E-06	3.28E-03	5.27E-02	1.37E-06	3.08E-03	2.28E-03	5.90E-08	1.13E-05
Road 44	44	1800-2100	1.121E-01	2.93E-07	4.95E-04	4.95E-02	1.29E-06	2.92E-03	6.06E-02	1.99E-06	3.57E-03	2.92E-03	7.68E-08	1.72E-05
Road 44	44	2100-2400	1.121E-01	2.93E-07	4.95E-04	4.95E-02	1.29E-06	2.92E-03	6.06E-02	1.99E-06	3.57E-03	2.92E-03	7.68E-08	1.72E-05
Road 44	44	1000-1300	1.200E-02	3.43E-07	7.73E-04	5.43E-02	1.55E-06	4.94E-03	1.63E-02	1.89E-06	4.26E-03	5.05E-03	8.68E-09	1.96E-05
Road 44	44	1300-1600	1.272E-02	3.59E-07	8.60E-04	5.81E-02	1.69E-06	3.62E-03	7.03E-02	2.05E-06	4.62E-03	5.82E-03	8.69E-09	1.96E-05
Road 44	44	1600-1900	1.311E-02	3.69E-07	9.05E-04	6.04E-02	1.75E-06	3.78E-03	7.43E-02	2.15E-06	4.82E-03	5.97E-03	8.92E-09	1.96E-05
Road 44	44	1900-2200	1.477E-02	6.97E-07	1.17E-03	8.61E-02	2.35E-06	7.10E-03	1.09E-01	3.94E-06	8.67E-03	2.91E-03	1.03E-07	2.32E-05
Road 44	44	2200-2400	2.50E-02	9.71E-07	2.18E-03	1.09E-01	4.95E-06	9.23E-03	3.09E-01	1.07E-06	1.14E-02	2.68E-03	1.04E-07	2.32E-05
Road 44	44	2400-0000	2.50E-02	9.71E-07	2.18E-03	1.09E-01	4.95E-06	9.23E-03	3.09E-01	1.07E-06	1.14E-02	2.68E-03	1.04E-07	2.32E-05
Road 44	44	1000-1300	4.49E-02	1.49E-07	3.93E-04	3.11E-02	9.59E-06	2.16E-03	3.99E-02	5.11E-06	2.50E-03	1.23E-03	3.76E-08	8.42E-06
Road 44	44	1300-1600	4.49E-02	1.49E-07	3.93E-04	3.11E-02	9.59E-06	2.16E-03	3.99E-02	5.11E-06	2.50E-03	1.23E-03	3.76E-08	8.42E-06
Road 44	44	1600-1900	4.49E-02	1.49E-07	3.93E-04	3.11E-02	9.59E-06	2.16E-03	3.99E-02	5.11E-06	2.50E-03	1.23E-03	3.76E-08	8.42E-06
Road 44	44	1900-2200	4.49E-02	1.49E-07	3.93E-04	3.11E-02	9.59E-06	2.16E-03	3.99E-02	5.11E-06	2.50E-03	1.23E-03	3.76E-08	8.42E-06
Road 44	44	2100-2400	9.65E-02	1.44E-06	9.65E-02	1.24E-03	3.76E-07	7.80E-03	1.36E-02	8.77E-07	1.98E-03	1.02E-03	2.44E-08	5.48E-06
Road 45	45	0000-0300	3.99E-03	9.18E-08	2.07E-04	3.27E-03	7.61E-07	1.75E-06	3.67E-04	8.53E-07	1.02E-03	9.57E-04	2.28E-08	5.48E-06
Road 45	45	0300-0600	4.42E-03	9.67E-08	2.37E-04	3.54E-03	8.12E-07	1.86E-06	3.97E-04	9.37E-07	1.12E-03	1.06E-03	2.55E-08	5.48E-06
Road 45	45	0600-0900	4.43E-03	9.64E-08	1.55E-04	3.39E-02	2.70E-07	1.12E-06	3.62E-04	9.07E-07	1.37E-03	1.05E-03	8.43E-09	3.79E-06
Road 45	45	0900-1200	3.74E-03	2.47E-08	1.11E-04	3.50E-03	1.27E-07	1.81E-06	3.98E-04	2.06E-07	9.25E-04	1.18E-03	2.07E-08	3.79E-06
Road 45	45	1200-1500	4.06E-03	2.74E-08	1.29E-04	3.59E-03	1.32E-07	1.84E-06	4.28E-04	2.22E-07	9.57E-04	1.24E-03	2.22E-08	3.79E-06
Road 45	45	0300-0400	5.711E-03	1.77E-08	7.65E-04	8.80E-03	1.13E-07	1.50E-06	4.37E-04	1.30E-07	5.86E-04	1.43E-03	4.25E-09	1.91E-06
Road 45	45	0400-0500	6.176E-03	2.02E-08	9.07E-05	3.91E-02	1.27E-07	4.57E-04	4.53E-04	1.46E-07	6.66E-04	1.55E-03	5.07E-09	2.28E-06
Road 45	45	0500-0600	6.682E-03	2.25E-08	1.02E-04	4.23E-02	1.33E-07	4.75E-04	4.53E-04	1.46E-07	6.66E-04	1.55E-03	5.07E-09	2.28E-06
Road 45	45	0600-0700	7.136E-03	8.66E-08	3.89E-04	4.19E-05	5.06E-07	2.29E-03	4.91E-02	5.96E-07	2.68E-03	1.81E-03	2.19E-09	9.66E-06
Road 45	45	0700-0800	7.68E-03	1.89E-07	8.44E-04	4.39E-06	1.08E-04	4.84E-03	1.62E-06	1.27E-07	5.69E-04	4.47E-03	4.76E-04	2.14E-05
Road 45	45	0800-0900	7.44E-03	2.13E-07	9.55E-04	4.04E-02	1.05E-06	5.19E-03	4.79E-02	3.9E-08	6.12E-03	5.45E-03	5.45E-08	2.42E-05
Road 45	45	0900-1000	8.47E-03	1.97E-07	8.67E-04	4.37E-02	1.05E-06	4.58E-03	5.22E-02	1.22E-06	5.44E-03	2.27E-03	5.39E-08	2.37E-05
Road 45	45	1000-1100	9.59E-03	1.93E-07	8.66E-04	4.54E-02	9.14E-07	4.10E-03	5.59E-02	1.11E-06	4.97E-03	2.68E-03	5.19E-08	2.37E-05
Road 45	45	1100-1200	1.06E-03	2.44E-07	1.06E-04	4.54E-02	9.14E-07	4.10E-03	5.59E-02	1.11E-06	4.97E-03	2.68E-03	5.19E-08	2.37E-05
Road 45	45	1200-1300	1.06E-02	2.35E-07	1.05E-05	4.75E-02	1.05E-06	4.73E-03	5.81E-03	1.29E-06	5.79E-03	2.88E-03	6.21E-09	2.42E-05
Road 45	45	1300-1400	1.07E-02	2.42E-07	1.09E-04	4.96E-02	1.12E-06	4.94E-03	6.03E-02	1.36E-06	6.13E-03	2.88E-03	6.50E-09	2.92E-05
Road 45	45	1400-1500	1.08E-02	2.62E-07	1.12E-04	4.96E-02	1.18E-06	5.04E-03	6.04E-02	1.49E-06	6.51E-03	2.88E-03	6.90E-09	3.13E-05
Road 45	45	1500-1600	1.09E-02	2.72E-07	1.15E-04	4.96E-02	1.23E-06	5.16E-03	6.04E-02	1.59E-06	6.51E-03	2.88E-03	7.19E-09	3.13E-05
Road 45	45	1600-1700	1.08E-02	2.84E-07	1.18E-04	4.84E-02	1.28E-06	5.73E-03	5.91E-02	1.56E-06	7.01E-03	2.82E-03	7.44E-09	3.04E-05
Road 45	45	1700-1800	9.28E-03	2.79E-07	1.22E-04	5.91E-02	1.48E-06	6.83E-03	8.84E-02	1.75E-06	7.88E-03	4.14E-03	6.42E-09	2.88E-05
Road 45	45	1800-1900	9.28E-03	2.79E-07	1.22E-04	5.91E-02	1.48E-06	6.83E-03	8.84E-02	1.75E-06	7.88E-03	4.14E-03	6.42E-09	2.88E-05
Road 45	45	1900-2000	9.28E-03	2.79E-07	1.22E-04	5.91E-02	1.48E-06	6.83E-03	8.84E-02	1.75E-06	7.88E-03	4.14E-03	6.42E-09	2.88E-05
Road 45	45	2000-2100	4.46E-03	1.23E-07	5.92E-04	3.02E-07	9.57E-07	3.57E-04	3.68E-04	9.18E-07	4.13E-03	1.19E-03	3.18E-08	1.41E-05
Road 45	45	2100-2200	4.46E-03	1.23E-07	5.92E-04	3.02E-07	9.57E-07	3.57E-04	3.68E-04	9.18E-07	4.13E-03	1.19E-03	3.18E-08	1.41E-05
Road 45	45	2200-2300	4.46E-03	1.23E-07	5.92E-04	3.02E-07	9.57E-07	3.57E-04	3.68E-04	9.18E-07	4.13E-03	1.19E-03	3.18E-08	1.41E-05
Road 45	45	2300-2400	3.74E-03	9.12E-08	4.09E-04	3.27E-03	6.17E-07	3.01E-03	3.71E-02	7.62E-07	3.42E-03	1.12E-03	2.31E-08	1.04E-05
Road 45	45	2400-0000	3.74E-03	9.12E-08	4.09E-04	3.27E-03	6.17E-07	3.01E-03	3.71E-02	7.62E-07	3.42E-03	1.12E-03	2.31E-08	1.04E-05
Road 45	45	0000-0300	3.44E-03	7.51E-08	3.36E-04	3.21E-06	3.78E-07	3.89E-06	1.74E-07	7.41E-07	3.21E-04	1.94E-04	1.82E-08	8.17E-06
Road 45	45	0300-0600	4.21E-03	6.25E-08	2.81E-04	3.31E-02	4.95E-07	2.21E-03	3.78E-02	5.54E-07	2.49E-04	1.05E-08	1.65E-09	6.68E-06
Road 45	45	0600-0900	4.21E-03	6.25E-08	2.81E-04	3.31E-02	4.95E-07	2.21E-03	3.78E-02	5.54E-07	2.49E-04	1.05E-08	1.65E-09	6.68E-06
Road 45	45	0900-1200	4.02E-03	1.04E-08	7.07E-06	3.49E-03	7.93E-08	3.36E-04	3.94E-07	8.97E-08	6.08E-04	1.12E-05	2.55E-09	1.27E-06
Road 45	45	1200-1500	5.06E-03	8.39E-08	5.69E-05	3.66E-07	4.02E-08	4.12E-04	4.46E-03	6.91E-08	4.69E-04	1.24E-06	2.06E-09	1.40E-06
Road 45	45	1500-1800	5.06E-03	8.39E-08	5.69E-05	3.66E-07	4.02E-08	4.12E-04	4.46E-03	6.91E-08	4.69E-04	1.24E-06	2.06E-09	1.40E-06
Road 45	45	1800-2100	5.06E-03	8.55E-09	5.76E-05	3.89E-08	5.58E-08	3.78E-04	4.48E-04	4.93E-08	4.36E-04	1.81E-04	2.13E-09	1.40E-06
Road 45	45	2100-2400	6.31E-03	1.59E-08	1.08E-04	4.00E-05	9.95E-08	6.74E-04	4.69E-03	1.51E-07	7.62E-04	1.61E-03	3.99E-09	2.70E-06
Road 45	45	2400-0000	6.31E-03	1.59E-08	1.08E-04	4.00E-05	9.95E-08	6.74E-04	4.69E-03	1.51E-07	7.62E-04	1.61E-03	3.99E-09	2.70E-06
Road 46	46	0000-0300	7.43E-03	7.87E-08	5.34E-04	4.23E-04	1.54E-07	3.08E-04	4.99E-02	5.33E-07	3.61E-03	8.68E-03	2.00E-05	5.65E-06
Road 46	46	0300-0600	7.02E-03	8.73E-08	5.92E-04	3.76E-02	4.69E-07	3.37E-04	4.46E-02	5.56E-07	3.77E-03	8.13E-03	2.28E-08	1.54E-06
Road 46	46	0600-0900	7.02E-03	8.73E-08	5.92E-04	3.76E-02	4.69E-07	3.37E-04	4.46E-02	5.56E-07	3.77E-03	8.13E-03	2.28E-08	1.54E-06
Road 46	46	0900-1200	7.02E-03	8.73E-08	5.92E-04	3.76E-02	4.69E-07	3.37E-04	4.46E-02	5.56E-07	3.77E-03	8.13E-03	2.28E-08	1.54E-06
Road 46	46	1200-1500	8.60E-03	7.11E-08	4.92E-04	4.29E-06	3.60E-07	2.44E-03	6.21E-02	3.37E-07	2.92E-03	2.31E-03	1.91E-08	1.29E-06
Road 46	46	1500-1800	1.17E-02	1.29E-07	8.69E-04	4.95E-02	5.42E-08	3.68E-03	5.12E-02	8.71E-07	4.55E-03	3.17E-04	3.68E-08	1.29E-06
Road 46	46	1800-2100	1.17E-02	1.29E-07	8.69E-04	4.95E-02	5.42E-08	3.68E-03	5.12E-02	8.71E-07	4.55E-03	3.17E-04	3.68E-08	1.29E-06
Road 46	46	2100-2400	1.18E-02	1.42E-07	9.61E-04	5.04E-02	6.03E-07	4.09E-03	6.22E-02	9.45E-07	9.05E-03	3.25E-03	3.89E-08	2.63E-06
Road 46	46	1000-1300	1.13E-02	1.39E-07	9.19E-04	5.04E-02	6.18E-07	4.19E-03	6.14E-02	7.53E-07	5.10E-03	3.10E-03	3.89E-08	2.63E-06
Road 46	46	1300-1600	1.13E-02	1.39E-07	9.19E-04	5.04E-02	6.18E-07	4.19E-03	6.14E-02	7.53E-07	5.10E-03	3.10E-03	3.89E-08	2.63E-06
Road 46	46	1600-1900	1.13E-02	1.39E-07	9.19E-04	5.04E-02	6.18E-07	4.19E-03	6.14E-02	7.53E-07	5.10E-			

L:\Secure\Environment Projects\60733229\1.01\Others\Air Modelling\Appendix\Traffic\Appendix\Appendix 3.5.4 Emission Factor in 2043-S.B.xlsx

Ying Yi North Underground Quarry
 Open Road 24 hour Emission Factors for

AERMOD model (August)			Year 2001		NO _x Emission		NO _x Emission							
Road Name	Road ID	Hwy	Monthly/Average			Monthly/Average			Monthly/Average			Monthly/Average		
			g/min	g/sec	tonne/hour	g/min	g/sec	tonne/hour	g/min	g/sec	tonne/hour	g/min	g/sec	tonne/hour
Road 47	1600	1200	2.06E-02	3.94E-07	4.50E-03	8.47E-06	1.60E-06	1.83E-02	1.06E-01	2.00E-06	2.28E-02	3.19E-03	6.04E-08	6.88E-04
Road 47	1700	1800	1.48E-02	3.24E-07	3.69E-03	7.21E-06	1.58E-06	1.88E-02	8.88E-02	1.91E-06	2.17E-02	2.30E-03	5.04E-08	5.74E-04
Road 47	1800	1800	1.63E-02	3.56E-07	4.01E-03	7.82E-06	1.63E-06	1.94E-02	9.66E-02	2.06E-06	2.34E-02	2.56E-03	5.56E-08	6.36E-04
Road 47	1900	2000	8.57E-03	1.70E-07	1.93E-03	4.42E-06	9.55E-07	1.09E-02	5.86E-02	1.12E-06	1.28E-02	1.35E-03	2.87E-08	3.09E-04
Road 47	2000	2100	7.89E-03	1.62E-07	1.79E-03	4.13E-06	8.79E-07	9.93E-03	5.66E-02	1.06E-06	1.18E-02	1.25E-03	2.82E-08	2.98E-04
Road 47	2100	2200	6.63E-03	1.37E-07	1.52E-03	3.47E-06	7.45E-07	8.49E-03	4.76E-02	9.00E-06	1.00E-02	1.07E-03	2.36E-08	2.56E-04
Road 47	2200	2300	6.27E-03	1.30E-07	1.05E-03	4.87E-06	7.72E-07	9.23E-03	5.45E-02	8.15E-07	9.29E-03	9.50E-04	1.92E-08	1.92E-04
Road 47	2300	2400	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	2400	2500	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	2500	2600	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	2600	2700	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	2700	2800	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	2800	2900	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	2900	3000	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	3000	3100	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	3100	3200	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	3200	3300	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	3300	3400	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	3400	3500	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	3500	3600	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	3600	3700	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	3700	3800	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	3800	3900	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	3900	4000	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	4000	4100	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	4100	4200	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	4200	4300	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	4300	4400	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	4400	4500	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	4500	4600	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	4600	4700	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	4700	4800	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	4800	4900	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	4900	5000	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	5000	5100	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	5100	5200	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	5200	5300	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	5300	5400	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	5400	5500	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	5500	5600	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	5600	5700	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	5700	5800	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	5800	5900	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	5900	6000	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	6000	6100	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	6100	6200	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	6200	6300	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	6300	6400	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	6400	6500	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	6500	6600	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	6600	6700	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	6700	6800	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	6800	6900	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	6900	7000	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	7000	7100	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	7100	7200	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	7200	7300	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	7300	7400	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	7400	7500	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	7500	7600	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	7600	7700	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	7700	7800	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	7800	7900	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	7900	8000	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	1.34E-04
Road 47	8000	8100	6.57E-03	1.33E-07	8.35E-04	4.82E-06	5.38E-07	6.13E-03	4.58E-02	6.11E-07	6.99E-03	1.06E-03	1.18E-08	

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24-hour Emission Factors for

AERMOD model (August)		Year 2043		NO _x Emission				NO _x Emission							
Row Name	Row ID	Hour	Month/Year	kg/hr	g/min	tonne/hr	kg/hr	g/min	tonne/hr	kg/hr	g/min	tonne/hr	kg/hr	g/min	tonne/hr
Row 51	51	0000-0100	12/2043	4.268	3.365	0.288	1.382	2.656	1.806	3.776	2.988	2.038	1.046	8.238	5.660
Row 51	51	0100-0200	6/2046	4.268	3.365	0.288	1.382	2.656	1.806	3.776	2.988	2.038	1.046	8.238	5.660
Row 51	51	0200-0300	6/2046	4.268	3.365	0.288	1.382	2.656	1.806	3.776	2.988	2.038	1.046	8.238	5.660
Row 51	51	0300-0400	5/2046	5.536	4.548	0.391	1.714	3.752	2.710	5.218	3.911	2.617	1.378	1.138	5.928
Row 51	51	0400-0500	6/2046	5.536	4.548	0.391	1.714	3.752	2.710	5.218	3.911	2.617	1.378	1.138	5.928
Row 51	51	0500-0600	5/2046	5.536	4.548	0.391	1.714	3.752	2.710	5.218	3.911	2.617	1.378	1.138	5.928
Row 51	51	0600-0700	6/2046	6.888	5.728	0.504	2.142	4.928	3.975	8.808	5.792	3.917	1.548	0.748	2.098
Row 51	51	0700-0800	6/2046	6.888	5.728	0.504	2.142	4.928	3.975	8.808	5.792	3.917	1.548	0.748	2.098
Row 51	51	0800-0900	6/2046	6.888	5.728	0.504	2.142	4.928	3.975	8.808	5.792	3.917	1.548	0.748	2.098
Row 51	51	0900-1000	7/2046	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	3.078
Row 51	51	1000-1100	7/2046	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	3.078
Row 51	51	1100-1200	8/2046	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	3.078
Row 51	51	1200-1300	8/2046	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	3.078
Row 51	51	1300-1400	1/2047	2.918	2.062	0.182	0.836	1.668	1.358	1.428	9.648	4.238	8.288	5.688	3.648
Row 51	51	1400-1500	1/2047	3.048	2.378	0.208	0.978	1.588	0.688	1.238	1.428	9.648	4.238	8.288	5.688
Row 51	51	1500-1600	2/2048	2.988	2.308	0.208	0.978	1.588	0.688	1.238	1.428	9.648	4.238	8.288	5.688
Row 51	51	1600-1700	1/2047	4.028	3.028	0.268	1.248	1.168	0.958	6.838	1.428	9.648	4.238	8.288	5.688
Row 51	51	1700-1800	1/2047	4.028	3.028	0.268	1.248	1.168	0.958	6.838	1.428	9.648	4.238	8.288	5.688
Row 51	51	1800-1900	2/2048	4.028	3.028	0.268	1.248	1.168	0.958	6.838	1.428	9.648	4.238	8.288	5.688
Row 51	51	1900-2000	4/2048	1.218	0.818	0.078	0.358	0.138	0.478	3.958	0.748	0.958	0.188	0.338	2.318
Row 51	51	2000-2100	6/2048	1.218	0.818	0.078	0.358	0.138	0.478	3.958	0.748	0.958	0.188	0.338	2.318
Row 51	51	2100-2200	6/2048	1.218	0.818	0.078	0.358	0.138	0.478	3.958	0.748	0.958	0.188	0.338	2.318
Row 51	51	2200-2300	6/2048	1.218	0.818	0.078	0.358	0.138	0.478	3.958	0.748	0.958	0.188	0.338	2.318
Row 52	52	0000-0100	4/2048	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	3.078
Row 52	52	0100-0200	4/2048	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	3.078
Row 52	52	0200-0300	4/2048	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	3.078
Row 52	52	0300-0400	4/2048	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	3.078
Row 52	52	0400-0500	4/2048	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	3.078
Row 52	52	0500-0600	4/2048	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	3.078
Row 52	52	0600-0700	4/2048	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	3.078
Row 52	52	0700-0800	4/2048	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	3.078
Row 52	52	0800-0900	4/2048	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	3.078
Row 52	52	0900-1000	4/2048	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	3.078
Row 52	52	1000-1100	4/2048	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	3.078
Row 52	52	1100-1200	4/2048	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	3.078
Row 52	52	1200-1300	4/2048	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	3.078
Row 52	52	1300-1400	4/2048	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	3.078
Row 52	52	1400-1500	4/2048	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	3.078
Row 52	52	1500-1600	4/2048	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	3.078
Row 52	52	1600-1700	4/2048	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	3.078
Row 52	52	1700-1800	4/2048	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	3.078
Row 52	52	1800-1900	4/2048	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	3.078
Row 52	52	1900-2000	4/2048	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	3.078
Row 52	52	2000-2100	4/2048	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	3.078
Row 52	52	2100-2200	4/2048	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	3.078
Row 52	52	2200-2300	4/2048	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	3.078
Row 53	53	0000-0100	6/2046	2.988	2.308	0.208	0.978	1.588	0.688	1.238	1.428	9.648	4.238	8.288	5.688
Row 53	53	0100-0200	6/2046	2.988	2.308	0.208	0.978	1.588	0.688	1.238	1.428	9.648	4.238	8.288	5.688
Row 53	53	0200-0300	6/2046	2.988	2.308	0.208	0.978	1.588	0.688	1.238	1.428	9.648	4.238	8.288	5.688
Row 53	53	0300-0400	7/2046	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	3.078
Row 53	53	0400-0500	7/2046	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	3.078
Row 53	53	0500-0600	7/2046	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	3.078
Row 53	53	0600-0700	6/2046	2.988	2.308	0.208	0.978	1.588	0.688	1.238	1.428	9.648	4.238	8.288	5.688
Row 53	53	0700-0800	6/2046	2.988	2.308	0.208	0.978	1.588	0.688	1.238	1.428	9.648	4.238	8.288	5.688
Row 53	53	0800-0900	6/2046	2.988	2.308	0.208	0.978	1.588	0.688	1.238	1.428	9.648	4.238	8.288	5.688
Row 53	53	0900-1000	7/2046	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	3.078
Row 53	53	1000-1100	7/2046	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	3.078
Row 53	53	1100-1200	8/2046	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	3.078
Row 53	53	1200-1300	8/2046	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	3.078
Row 53	53	1300-1400	1/2047	2.918	2.062	0.182	0.836	1.668	1.358	1.428	9.648	4.238	8.288	5.688	3.648
Row 53	53	1400-1500	1/2047	3.048	2.378	0.208	0.978	1.588	0.688	1.238	1.428	9.648	4.238	8.288	5.688
Row 53	53	1500-1600	2/2048	2.988	2.308	0.208	0.978	1.588	0.688	1.238	1.428	9.648	4.238	8.288	5.688
Row 53	53	1600-1700	1/2047	4.028	3.028	0.268	1.248	1.168	0.958	6.838	1.428	9.648	4.238	8.288	5.688
Row 53	53	1700-1800	1/2047	4.028	3.028	0.268	1.248	1.168	0.958	6.838	1.428	9.648	4.238	8.288	5.688
Row 53	53	1800-1900	2/2048	4.028	3.028	0.268	1.248	1.168	0.958	6.838	1.428	9.648	4.238	8.288	5.688
Row 53	53	1900-2000	4/2048	1.218	0.818	0.078	0.358	0.138	0.478	3.958	0.748	0.958	0.188	0.338	2.318
Row 53	53	2000-2100	6/2048	1.218	0.818	0.078	0.358	0.138	0.478	3.958	0.748	0.958	0.188	0.338	2.318
Row 53	53	2100-2200	6/2048	1.218	0.818	0.078	0.358	0.138	0.478	3.958	0.748	0.958	0.188	0.338	2.318
Row 53	53	2200-2300	6/2048	1.218	0.818	0.078	0.358	0.138	0.478	3.958	0.748	0.958	0.188	0.338	2.318
Row 54	54	0000-0100	4/2048	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	3.078
Row 54	54	0100-0200	4/2048	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	3.078
Row 54	54	0200-0300	4/2048	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	3.078
Row 54	54	0300-0400	4/2048	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	3.078
Row 54	54	0400-0500	4/2048	1.768	1.208	0.117	0.512	1.068	0.888	4.908	1.138	0.678	0.188	0.458	

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Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

AERMOD model (August)			Year 2043		NO ₂ Emission				NO Emission				
Read Name	Read ID	Hour	Month/Year/Time		g/min/hr		g/min/hr		Month/Year/Time		Month/Year/Time		
			g/min/hr	g/min/hr	g/min/hr	g/min/hr	g/min/hr	g/min/hr	g/min/hr	g/min/hr	g/min/hr	g/min/hr	
Read 54	54	0800-0900	8.14E-02	3.04E-07	2.53E-03	2.98E-01	1.12E-06	9.28E-03	3.86E-01	1.42E-06	1.18E-02	9.58E-03	3.58E-08
Read 54	54	0900-1000	9.21E-02	3.32E-07	2.78E-03	3.40E-01	1.27E-06	1.02E-02	4.35E-01	1.56E-06	1.30E-02	1.08E-02	3.88E-08
Read 54	54	1000-1100	1.01E-01	3.58E-07	2.84E-03	3.58E-01	1.33E-06	9.37E-03	4.54E-01	1.44E-06	1.20E-02	1.14E-02	3.59E-08
Read 54	54	1200-1300	1.28E-01	2.71E-07	2.30E-03	4.25E-01	9.43E-06	7.77E-03	5.51E-01	2.21E-06	1.01E-02	1.34E-02	2.95E-08
Read 54	54	1300-1400	1.28E-01	2.71E-07	2.30E-03	4.25E-01	9.43E-06	7.77E-03	5.51E-01	2.21E-06	1.01E-02	1.34E-02	2.95E-08
Read 54	54	1400-1500	1.24E-01	3.07E-07	2.50E-03	4.25E-01	1.07E-06	8.05E-03	5.48E-01	2.13E-06	1.11E-02	1.32E-02	3.24E-08
Read 54	54	1500-1600	1.12E-01	2.82E-07	2.35E-03	4.25E-01	1.07E-06	8.05E-03	5.38E-01	1.35E-06	1.12E-02	1.25E-02	3.14E-08
Read 54	54	1600-1700	9.97E-02	2.67E-07	1.98E-03	4.25E-01	1.07E-06	8.05E-03	4.98E-01	1.25E-06	1.01E-02	1.14E-02	2.65E-08
Read 54	54	1700-1800	9.76E-02	2.72E-07	1.89E-03	4.25E-01	8.83E-07	7.43E-03	4.81E-01	1.12E-06	9.23E-03	1.14E-02	2.65E-08
Read 54	54	1800-1900	8.08E-02	1.53E-07	1.17E-03	3.23E-01	6.11E-07	5.08E-03	4.08E-01	7.64E-07	6.36E-03	1.00E-02	1.90E-08
Read 54	54	1900-2000	7.59E-02	1.01E-07	8.44E-04	2.48E-01	3.85E-07	3.24E-03	3.57E-01	4.51E-07	4.89E-03	9.70E-03	1.33E-08
Read 54	54	2000-2100	6.81E-02	7.47E-08	7.47E-04	2.10E-01	2.77E-07	2.24E-03	3.47E-01	3.62E-07	4.19E-03	8.51E-03	1.10E-08
Read 54	54	2100-2200	6.99E-02	7.69E-08	7.69E-04	2.18E-01	3.09E-07	2.57E-03	3.47E-01	3.82E-07	4.11E-03	9.42E-03	1.04E-08
Read 54	54	2200-2300	7.38E-02	7.66E-08	6.13E-04	2.68E-01	2.67E-07	2.24E-03	3.47E-01	4.41E-07	4.94E-03	9.53E-03	1.09E-08
Read 54	54	2300-2400	8.21E-02	7.10E-08	6.13E-04	2.70E-01	2.77E-07	2.24E-03	3.47E-01	4.67E-07	5.19E-03	9.74E-03	1.10E-08
Read 101	101	0000-0100	5.52E-03	7.59E-06	1.10E-03	3.77E-02	5.19E-07	7.50E-03	4.23E-02	5.94E-07	8.95E-03	1.41E-02	1.94E-08
Read 101	101	0100-0200	6.04E-03	8.54E-06	7.89E-04	3.96E-02	3.51E-07	5.07E-03	4.51E-02	6.00E-07	8.95E-03	1.59E-02	1.40E-08
Read 101	101	0200-0300	6.82E-03	9.54E-06	8.84E-04	4.28E-02	3.77E-07	5.19E-03	4.73E-02	6.67E-07	9.58E-03	1.71E-02	1.51E-08
Read 101	101	0300-0400	7.17E-03	3.74E-06	5.41E-04	4.28E-02	2.27E-07	3.20E-03	4.96E-02	5.96E-07	7.78E-03	1.86E-02	9.69E-09
Read 101	101	0400-0500	7.70E-03	3.47E-06	6.41E-04	4.38E-02	2.52E-07	3.64E-03	5.12E-02	5.96E-07	8.28E-03	2.03E-02	1.15E-08
Read 101	101	0500-0600	8.21E-03	3.19E-06	6.41E-04	4.38E-02	2.52E-07	3.64E-03	5.12E-02	5.96E-07	7.78E-03	2.03E-02	1.15E-08
Read 101	101	0600-0700	8.82E-03	1.90E-07	2.75E-04	4.75E-02	1.01E-06	1.46E-02	5.58E-02	1.20E-06	1.74E-02	2.31E-02	4.97E-08
Read 101	101	0700-0800	9.35E-03	4.09E-07	5.91E-04	4.82E-02	2.11E-06	3.00E-02	5.72E-02	6.64E-06	2.45E-02	3.54E-02	1.07E-07
Read 101	101	0800-0900	9.88E-03	6.81E-07	8.46E-04	5.27E-02	2.77E-06	3.95E-02	6.29E-02	7.78E-06	3.05E-02	4.21E-02	1.10E-07
Read 101	101	0900-1000	1.05E-02	4.90E-07	6.51E-04	5.95E-02	2.12E-06	3.00E-02	5.96E-02	2.57E-06	3.71E-02	5.91E-02	1.25E-07
Read 101	101	1000-1100	1.20E-02	4.50E-07	6.81E-04	5.19E-02	1.99E-06	2.82E-02	6.39E-02	2.40E-06	4.47E-02	6.32E-02	1.25E-07
Read 101	101	1200-1300	1.21E-02	5.18E-07	5.18E-04	5.18E-02	1.99E-06	2.82E-02	6.39E-02	2.40E-06	4.47E-02	6.32E-02	1.25E-07
Read 101	101	1300-1400	1.24E-02	4.49E-07	6.27E-04	5.18E-02	1.81E-06	2.61E-02	6.42E-02	2.24E-06	2.44E-02	3.96E-02	1.18E-07
Read 101	101	1400-1500	1.25E-02	4.46E-07	6.49E-04	5.18E-02	1.94E-06	2.78E-02	6.66E-02	2.37E-06	4.34E-02	3.48E-02	1.25E-07
Read 101	101	1600-1700	1.29E-02	4.47E-07	6.60E-04	5.17E-02	2.01E-06	2.95E-02	6.52E-02	2.68E-06	4.69E-02	4.48E-02	1.32E-07
Read 101	101	1700-1800	1.31E-02	4.47E-07	6.60E-04	5.17E-02	2.01E-06	2.95E-02	6.52E-02	2.68E-06	4.69E-02	4.48E-02	1.32E-07
Read 101	101	1800-1900	1.23E-02	5.05E-07	7.30E-04	5.31E-02	2.11E-06	3.00E-02	6.39E-02	2.61E-06	3.78E-02	3.37E-02	1.37E-07
Read 101	101	1900-2000	0.73E-02	5.81E-07	4.45E-04	4.58E-02	2.09E-06	2.99E-02	5.32E-02	4.68E-06	2.59E-02	2.41E-02	1.11E-07
Read 101	101	2000-2100	0.73E-02	5.81E-07	4.45E-04	4.58E-02	2.09E-06	2.99E-02	5.32E-02	4.68E-06	2.59E-02	2.41E-02	1.11E-07
Read 101	101	2100-2200	0.73E-02	5.81E-07	4.45E-04	4.58E-02	2.09E-06	2.99E-02	5.32E-02	4.68E-06	2.59E-02	2.41E-02	1.11E-07
Read 101	101	2200-2300	0.73E-02	5.81E-07	4.45E-04	4.58E-02	2.09E-06	2.99E-02	5.32E-02	4.68E-06	2.59E-02	2.41E-02	1.11E-07
Read 101	101	2300-2400	0.73E-02	5.81E-07	4.45E-04	4.58E-02	2.09E-06	2.99E-02	5.32E-02	4.68E-06	2.59E-02	2.41E-02	1.11E-07
Read 101	101	0000-0100	5.14E-03	1.13E-06	1.34E-04	3.64E-02	8.01E-07	1.16E-02	4.15E-02	9.14E-07	3.17E-02	3.31E-02	2.89E-08
Read 101	101	0100-0200	5.14E-03	1.13E-06	1.34E-04	3.64E-02	8.01E-07	1.16E-02	4.15E-02	9.14E-07	3.17E-02	3.31E-02	2.89E-08
Read 101	101	0200-0300	5.14E-03	1.13E-06	1.34E-04	3.64E-02	8.01E-07	1.16E-02	4.15E-02	9.14E-07	3.17E-02	3.31E-02	2.89E-08
Read 101	101	0300-0400	8.73E-03	6.13E-06	8.58E-04	4.54E-02	3.42E-07	4.83E-03	5.27E-02	4.05E-07	5.48E-03	2.73E-02	1.27E-08
Read 101	101	0400-0500	8.83E-03	6.05E-06	6.88E-04	4.67E-02	3.66E-07	5.06E-03	5.66E-02	3.86E-07	2.59E-03	4.14E-02	1.37E-08
Read 101	101	0500-0600	8.83E-03	6.05E-06	6.88E-04	4.67E-02	3.66E-07	5.06E-03	5.66E-02	3.86E-07	2.59E-03	4.14E-02	1.37E-08
Read 101	101	0600-0700	1.02E-02	5.15E-06	6.98E-04	5.05E-02	2.52E-07	3.24E-03	6.07E-02	3.04E-07	1.23E-02	2.78E-02	1.40E-08
Read 101	101	0700-0800	1.09E-02	9.80E-06	1.30E-03	5.51E-02	4.59E-07	6.23E-03	6.27E-02	5.55E-07	5.24E-03	9.95E-03	2.61E-08
Read 101	101	0800-0900	1.11E-02	9.80E-06	1.30E-03	5.51E-02	4.59E-07	6.23E-03	6.27E-02	5.55E-07	5.24E-03	9.95E-03	2.61E-08
Read 101	101	0900-1000	1.21E-02	4.74E-06	6.43E-04	5.15E-02	2.16E-06	2.93E-03	6.27E-02	6.64E-06	5.88E-03	3.00E-02	2.96E-07
Read 101	101	1000-1100	1.17E-02	5.59E-07	7.30E-03	5.72E-02	2.40E-06	3.28E-03	6.46E-02	2.94E-06	9.99E-02	3.25E-02	4.14E-07
Read 101	101	1200-1300	1.36E-02	5.46E-07	7.51E-03	5.88E-02	2.36E-06	3.27E-03	7.21E-02	3.89E-06	9.88E-02	1.86E-02	1.58E-07
Read 101	101	1300-1400	1.31E-02	5.46E-07	7.51E-03	5.88E-02	2.36E-06	3.27E-03	7.21E-02	3.89E-06	9.88E-02	1.86E-02	1.58E-07
Read 101	101	1400-1500	1.50E-02	5.14E-07	7.00E-03	6.10E-02	2.19E-06	2.88E-03	7.66E-02	6.20E-06	5.55E-02	4.26E-02	1.47E-07
Read 101	101	1600-1700	1.25E-02	5.96E-07	5.94E-03	5.18E-02	1.83E-06	2.21E-03	6.42E-02	6.20E-06	2.74E-02	3.44E-02	1.08E-07
Read 101	101	1700-1800	1.25E-02	5.96E-07	5.94E-03	5.18E-02	1.83E-06	2.21E-03	6.42E-02	6.20E-06	2.74E-02	3.44E-02	1.08E-07
Read 101	101	1800-1900	1.27E-02	4.56E-07	5.91E-03	5.28E-02	1.82E-06	2.44E-03	6.56E-02	5.29E-06	5.05E-02	5.51E-02	1.21E-07
Read 101	101	1900-2000	1.18E-02	4.13E-07	5.63E-03	5.28E-02	1.86E-06	2.52E-03	6.48E-02	5.29E-06	4.99E-02	5.35E-02	1.18E-07
Read 101	101	2000-2100	1.18E-02	4.13E-07	5.63E-03	5.28E-02	1.86E-06	2.52E-03	6.48E-02	5.29E-06	4.99E-02	5.35E-02	1.18E-07
Read 101	101	2100-2200	1.18E-02	4.13E-07	5.63E-03	5.28E-02	1.86E-06	2.52E-03	6.48E-02	5.29E-06	4.99E-02	5.35E-02	1.18E-07
Read 101	101	2200-2300	1.18E-02	4.13E-07	5.63E-03	5.28E-02	1.86E-06	2.52E-03	6.48E-02	5.29E-06	4.99E-02	5.35E-02	1.18E-07
Read 101	101	2300-2400	1.18E-02	4.13E-07	5.63E-03	5.28E-02	1.86E-06	2.52E-03	6.48E-02	5.29E-06	4.99E-02	5.35E-02	1.18E-07
Read 101	101	0000-0100	8.76E-03	3.63E-07	4.92E-04	4.82E-02	1.83E-06	2.44E-03	5.29E-02	2.18E-06	2.97E-02	4.54E-02	1.01E-07
Read 101	101	0100-0200	8.20E-03	3.75E-07	3.73E-03	3.28E-02	1.46E-06	1.97E-03	5.94E-02	1.79E-06	3.93E-03	1.77E-02	7.63E-08
Read 101	101	0200-0300	8.20E-03	3.75E-07	3.73E-03	3.28E-02	1.46E-06	1.97E-03	5.94E-02	1.79E-06	3.93E-03	1.77E-02	7.63E-08
Read 101	101	0300-0400	8.20E-03	3.75E-07	3.73E-03	3.28E-02	1.46E-06	1.97E-03	5.94E-02	1.79E-06	3.93E-03	1.77E-02	7.63E-08
Read 101	101	0400-0500	8.20E-03	3.75E-07	3.73E-03	3.28E-02	1.46E-06	1.97E-03	5.94E-02	1.79E-06	3.93E-03	1.77E-02	7.63E-08
Read 101	101	0500-0600	8.20E-03	3.75E-07	3.73E-03	3.28E-02	1.46E-06	1.97E-03	5.94E-02	1.79E-06	3.93E-03	1.77E-02	7.63E-08
Read 101	101	0600-0700	8.20E-03	3.75E-07	3.73E-03	3.28E-02	1.46E-06	1.97E-03	5.94E-02	1.79E-06	3.93E-03	1.77E-02	7.63E-08
Read 101	101	0700-0800	8.20E-03	3.75E-07	3.73E-03	3.28E-02	1.46E-06	1.97E-03	5.94E-02	1.79E-06	3.93E-03	1.77E-02	7.63E-08
Read 101	101	0800-0900	8.20E-03	3.75E-07	3.73E-03	3.28E-02	1.46E-06	1.97E-03	5.94E-02	1.79E-06	3.93E-03	1.77E-02	7.63E-08

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

AERMOD model (August)		Year 2043												
		NO _x Emission						NO Emission						
Row Name	Row ID	Hour	Monthly/monthly		Monthly/average		Monthly/monthly		Monthly/average		Monthly/monthly		Monthly/average	
			g/min	g/h	g/min	g/h	g/min	g/h	g/min	g/h	g/min	g/h	g/min	g/h
Row 103	103	1800-1700	1.146E+02	5.448E+07	4.811E+04	5.138E+02	7.396E+06	2.106E+02	9.386E+02	2.944E+06	2.588E+02	3.153E+03	1.454E+07	1.276E+06
Row 103	103	1800-2000	8.509E+03	4.423E+08	3.888E+04	5.455E+02	2.378E+08	2.098E+02	5.411E+03	2.811E+06	2.476E+02	2.271E+03	1.588E+06	1.754E+05
Row 103	103	2000-2100	6.530E+03	3.271E+08	2.938E+04	4.042E+02	1.728E+08	1.428E+02	3.728E+03	1.928E+06	1.658E+02	1.488E+03	9.988E+05	1.068E+05
Row 103	103	2100-2200	5.173E+03	2.711E+07	2.026E+03	3.272E+02	1.446E+07	1.262E+02	3.778E+03	1.666E+06	1.468E+03	1.244E+03	5.988E+05	5.768E+04
Row 103	103	2200-2300	4.396E+03	1.725E+07	1.531E+03	3.508E+02	1.211E+06E	1.069E+02	3.988E+06	1.388E+06	1.212E+03	1.088E+03	4.444E+05	3.908E+04
Row 103	103	2300-2400	3.717E+03	1.455E+06	1.318E+03	3.058E+02	1.044E+06	9.148E+01	4.188E+06	1.188E+06	1.044E+03	9.244E+02	3.788E+05	3.348E+04
Row 103	103	2400-2300	4.396E+03	1.444E+07	1.531E+03	3.438E+02	1.158E+06	1.012E+02	3.968E+06	1.388E+06	1.244E+03	1.078E+03	3.508E+05	3.068E+04
Row 103	103	0000-0100	4.896E+03	1.212E+07	1.610E+03	3.558E+02	8.838E+07	7.844E+03	4.038E+03	1.016E+06	8.938E+02	1.212E+03	5.068E+05	2.678E+05
Row 103	103	0100-0500	8.214E+03	4.108E+08	3.618E+04	5.058E+02	2.428E+08	2.148E+02	5.588E+03	2.818E+06	2.478E+02	2.278E+03	1.588E+06	1.728E+05
Row 103	103	0500-0800	8.896E+03	6.578E+08	4.688E+04	4.658E+03	4.838E+07	2.558E+02	5.538E+06	4.09E+07	3.048E+03	2.428E+03	1.788E+06	1.388E+05
Row 104	104	0000-0300	9.611E+03	5.268E+08	3.911E+04	4.888E+02	2.671E+08	1.848E+02	5.208E+02	2.388E+03	2.618E+03	1.438E+03	1.048E+06	9.118E+04
Row 104	104	0300-0400	1.038E+04	4.511E+08	4.388E+04	5.068E+02	2.722E+08	1.658E+02	6.068E+02	2.678E+03	1.988E+03	2.028E+03	1.238E+06	9.118E+04
Row 104	104	0400-0500	1.146E+04	5.944E+08	7.788E+04	5.398E+02	4.622E+07	3.448E+02	5.544E+02	5.611E+03	4.178E+03	3.158E+03	2.711E+06	2.028E+05
Row 104	104	0500-0700	1.222E+04	2.288E+07	1.738E+04	5.598E+02	1.688E+06	1.748E+03	8.611E+02	2.726E+06	8.488E+02	3.248E+03	6.028E+06	4.628E+06
Row 104	104	0700-0800	1.222E+04	2.288E+07	1.738E+04	5.598E+02	1.688E+06	1.748E+03	8.611E+02	2.726E+06	8.488E+02	3.248E+03	6.028E+06	4.628E+06
Row 104	104	0800-1000	1.256E+02	5.638E+07	4.188E+03	5.598E+02	2.498E+06	1.892E+02	6.058E+02	2.272E+03	2.478E+03	1.592E+03	1.178E+06	1.238E+05
Row 104	104	1000-1400	1.468E+02	8.898E+07	4.638E+03	6.228E+02	2.548E+06	1.988E+02	7.008E+02	2.938E+03	4.128E+03	1.698E+03	1.188E+06	1.238E+05
Row 104	104	1400-1500	1.468E+02	8.898E+07	4.638E+03	6.228E+02	2.548E+06	1.988E+02	7.008E+02	2.938E+03	4.128E+03	1.698E+03	1.188E+06	1.238E+05
Row 104	104	1100-1200	1.606E+02	5.488E+07	4.078E+03	6.488E+02	2.218E+06	1.648E+02	8.758E+02	2.058E+03	4.508E+03	1.548E+07	1.148E+06	1.148E+05
Row 104	104	1200-1300	1.606E+02	5.488E+07	4.078E+03	6.488E+02	2.218E+06	1.648E+02	8.758E+02	2.058E+03	4.508E+03	1.548E+07	1.148E+06	1.148E+05
Row 104	104	1300-1400	1.606E+02	5.488E+07	4.078E+03	6.488E+02	2.218E+06	1.648E+02	8.758E+02	2.058E+03	4.508E+03	1.548E+07	1.148E+06	1.148E+05
Row 104	104	1400-1500	1.056E+02	2.806E+07	2.068E+03	4.708E+02	1.298E+06	9.35E+02	5.748E+02	1.548E+06	1.148E+03	2.828E+03	7.568E+05	5.628E+04
Row 104	104	1500-1600	8.068E+02	2.688E+07	1.996E+03	4.708E+02	1.298E+06	9.358E+02	5.568E+02	1.168E+07	2.178E+03	7.428E+03	5.618E+05	5.628E+04
Row 104	104	1600-1700	1.056E+02	2.806E+07	2.068E+03	4.708E+02	1.298E+06	9.35E+02	5.748E+02	1.548E+06	1.148E+03	2.828E+03	7.568E+05	5.628E+04
Row 104	104	1700-1800	7.776E+02	2.448E+07	1.815E+03	3.948E+02	1.328E+06	8.068E+02	4.668E+02	1.568E+06	1.148E+03	1.978E+03	6.608E+05	4.908E+04
Row 104	104	1800-1900	5.248E+02	1.996E+07	1.458E+03	2.996E+02	1.138E+06	8.198E+02	3.488E+02	1.968E+06	1.408E+03	5.718E+03	3.878E+05	2.878E+04
Row 104	104	1900-2000	4.208E+02	1.618E+07	1.188E+03	2.498E+02	9.548E+02	3.538E+02	2.848E+02	1.648E+06	1.148E+03	4.828E+03	3.188E+05	2.388E+04
Row 104	104	2000-2100	4.428E+03	1.011E+07	7.538E+04	3.328E+02	7.658E+07	5.668E+03	3.778E+03	8.638E+07	6.412E+03	1.128E+06	2.568E+06	1.908E+06
Row 104	104	2100-2200	3.718E+03	8.678E+06	6.148E+04	3.738E+02	7.48E+07	5.368E+02	3.602E+07	8.732E+07	6.148E+03	9.538E+04	2.128E+06	1.628E+06
Row 104	104	2200-2300	3.171E+03	8.268E+06	6.148E+04	3.77E+02	7.798E+07	4.458E+02	3.698E+07	8.12E+07	6.038E+03	8.928E+04	1.998E+06	1.488E+06
Row 104	104	2300-2400	2.408E+03	6.988E+06	5.638E+04	3.618E+02	7.488E+07	3.638E+02	3.538E+07	6.418E+07	5.258E+03	7.828E+04	1.618E+06	1.238E+06
Row 105	105	0000-0100	3.222E+02	2.378E+06	6.048E+02	6.411E+02	1.898E+03	1.658E+02	4.848E+02	2.258E+02	2.288E+03	4.411E+09	6.711E+05	4.411E+04
Row 105	105	0100-0200	1.298E+02	1.644E+06	2.498E+02	6.988E+02	8.398E+02	1.778E+03	8.988E+09	1.528E+02	2.488E+03	2.488E+09	3.178E+05	4.778E+04
Row 105	105	0200-0300	1.298E+02	1.644E+06	2.498E+02	6.988E+02	8.398E+02	1.778E+03	8.988E+09	1.528E+02	2.488E+03	2.488E+09	3.178E+05	4.778E+04
Row 105	105	0300-0400	1.596E+02	1.138E+06	1.728E+02	7.248E+04	8.878E+04	8.778E+04	8.578E+09	9.998E+04	2.878E+03	2.168E+09	3.888E+05	5.488E+04
Row 105	105	0400-0500	1.596E+02	1.138E+06	1.728E+02	7.248E+04	8.878E+04	8.778E+04	8.578E+09	9.998E+04	2.878E+03	2.168E+09	3.888E+05	5.488E+04
Row 105	105	0500-0600	2.498E+02	1.177E+06	2.498E+02	7.538E+02	5.848E+04	5.948E+04	5.948E+04	7.618E+08	1.188E+03	3.078E+03	2.598E+09	3.888E+04
Row 105	105	0600-0700	1.996E+02	8.268E+06	8.958E+04	8.802E+07	7.424E+03	1.088E+04	4.928E+02	5.208E+03	9.538E+05	1.148E+06	1.788E+06	1.788E+04
Row 105	105	0700-0800	2.398E+02	1.558E+07	2.398E+03	1.028E+03	6.578E+09	9.268E+03	1.268E+03	1.178E+03	1.238E+03	3.998E+03	2.598E+08	3.998E+03
Row 105	105	0800-0900	2.498E+02	2.415E+07	2.498E+03	1.028E+03	6.578E+09	9.268E+03	1.268E+03	1.178E+03	1.238E+03	3.998E+03	2.598E+08	3.998E+03
Row 105	105	0900-1000	2.878E+02	1.931E+07	2.998E+03	1.188E+07	1.206E+04	1.748E+04	9.798E+07	1.468E+02	4.788E+03	1.188E+03	4.848E+03	4.848E+03
Row 105	105	1000-1100	1.688E+07	1.888E+07	1.688E+07	1.238E+03	7.338E+02	1.738E+02	1.598E+02	9.222E+02	1.468E+03	8.308E+03	3.178E+08	4.811E+03
Row 105	105	1100-1200	1.688E+07	1.888E+07	1.688E+07	1.238E+03	7.338E+02	1.738E+02	1.598E+02	9.222E+02	1.468E+03	8.308E+03	3.178E+08	4.811E+03
Row 105	105	1200-1300	1.538E+02	1.177E+07	1.778E+03	1.798E+05	6.168E+03	2.308E+02	1.312E+02	7.938E+03	9.918E+03	2.128E+03	3.998E+03	2.128E+03
Row 105	105	1300-1400	1.538E+02	1.177E+07	1.778E+03	1.798E+05	6.168E+03	2.308E+02	1.312E+02	7.938E+03	9.918E+03	2.128E+03	3.998E+03	2.128E+03
Row 105	105	1400-1450	1.298E+09	1.298E+09	1.811E+05	4.658E+07	6.938E+02	2.908E+03	5.818E+02	8.838E+03	9.178E+03	2.318E+08	35.28E+08	35.28E+08
Row 105	105	1450-1500	1.298E+09	1.298E+09	1.811E+05	4.658E+07	6.938E+02	2.908E+03	5.818E+02	8.838E+03	9.178E+03	2.318E+08	35.28E+08	35.28E+08
Row 105	105	1500-1600	4.548E+02	1.136E+07	1.815E+03	1.788E+04	4.658E+07	7.118E+03	2.248E+07	8.938E+07	8.938E+06	6.608E+06	2.778E+06	5.608E+06
Row 105	105	1600-1700	4.448E+02	1.181E+07	1.815E+03	1.788E+04	4.338E+07	5.248E+03	5.538E+07	8.418E+03	8.888E+03	2.218E+08	3.378E+07	3.378E+07
Row 105	105	1700-1800	4.784E+02	9.398E+06	1.448E+03	1.675E+03	3.678E+07	5.878E+02	6.068E+07	7.308E+04	7.308E+04	1.811E+06	2.788E+06	2.788E+06
Row 105	105	1800-1900	2.998E+02	2.998E+06	1.298E+03	1.298E+03	1.298E+03	1.298E+03	1.298E+03	1.298E+03	1.298E+03	1.298E+03	1.298E+03	1.298E+03
Row 105	105	1900-2000	3.198E+02	3.808E+05	5.778E+04	1.328E+02	1.578E+02	2.406E+04	1.668E+02	1.967E+02	6.268E+03	7.698E+05	1.918E+06	1.918E+06
Row 105	105	2000-2100	3.018E+02	2.858E+08	4.338E+04	1.308E+02	1.278E+02	1.678E+03	1.618E+02	1.528E+02	2.318E+03	6.268E+03	5.988E+05	8.818E+05
Row 105	105	2100-2200	3.018E+02	2.858E+08	4.338E+04	1.308E+02	1.278E+02	1.678E+03	1.618E+02	1.528E+02	2.318E+03	6.268E+03	5.988E+05	8.818E+05
Row 105	105	2200-2300	3.208E+02	2.898E+04	4.638E+04	1.288E+02	1.168E+02	1.668E+06	1.668E+02	1.978E+02	2.118E+03	6.268E+03	5.628E+05	6.998E+05
Row 105	105	2300-2400	3.428E+02	2.378E+04	3.611E+04	1.311E+02	9.128E+03	1.388E+03	1.668E+02	1.135E+02	1.778E+03	6.778E+04	4.698E+05	7.138E+04
Row 105	105	0000-0100	1.118E+02	3.468E+06	3.468E+06	1.311E+02	9.128E+03	1.388E+03	1.668E+02	1.135E+02	1.778E+03	6.778E+04	4.698E+05	7.138E+04
Row 105	105	0100-0200	1.268E+02	4.248E+06	4.688E+04	1.268E+02	2.608E+07	1.578E+02	2.688E+02	3.068E+03	2.418E+03	7.578E+07	8.938E+03	8.938E+03
Row 105	105	0200-0300	1.268E+02	3.308E+08	3.608E+04	6.988E+02	1.278E+07	1.888E+02	7.852E+02	2.988E+02	2.398E+03	6.008E+03	6.008E+03	6.008E+03
Row 105	105	0300-0400	1.428E+02	3.378E+07	3.378E+07	1.428E+02								

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Ying Yi North Underground Quarry
 Open Road 24 hour Emission Factors for

[illegible]

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24-hour Emission Factors for

ARFIMO model (Season)			Year		NO Emission										NO Mitigation									
Row Name	Row ID	Hour	MonthlyHourKus					MonthlyHourKus					MonthlyHourKus					MonthlyHourKus						
			g/km ² /hr	g/km ² /hr	g/km ² /hr	g/km ² /hr	g/km ² /hr	g/km ² /hr	g/km ² /hr	g/km ² /hr	g/km ² /hr	g/km ² /hr	g/km ² /hr	g/km ² /hr	g/km ² /hr	g/km ² /hr	g/km ² /hr	g/km ² /hr	g/km ² /hr	g/km ² /hr	g/km ² /hr	g/km ² /hr		
Row4	4	0900-0900	7.22e	3.017e	2.606e	1.906e	9.838e	1.388e	1.011e	4.552e	1.644e	1.206e	1.888e	6.770e	4.087e	1.390e	1.006e	1.006e	1.390e	1.006e	1.006e	1.390e	1.006e	
Row4	4	0900-1200	8.21e	3.428e	2.747e	1.917e	4.116e	1.728e	1.080e	5.010e	1.888e	1.098e	2.728e	6.088e	4.228e	1.408e	1.016e	1.016e	1.408e	1.016e	1.016e	1.408e	1.016e	
Row4	4	1200-1500	1.000e	3.275e	2.747e	1.917e	4.116e	1.728e	1.080e	5.010e	1.888e	1.098e	2.728e	6.088e	4.228e	1.408e	1.016e	1.016e	1.408e	1.016e	1.016e	1.408e	1.016e	
Row4	4	1500-1800	8.896e	2.614e	2.147e	1.576e	4.012e	1.066e	0.778e	5.302e	1.288e	0.948e	2.396e	5.768e	4.088e	1.390e	1.006e	1.006e	1.390e	1.006e	1.006e	1.390e	1.006e	
Row4	4	1800-1900	1.096e	3.177e	2.325e	1.673e	4.378e	1.010e	1.101e	5.792e	1.698e	1.244e	2.928e	6.058e	4.228e	1.408e	1.016e	1.016e	1.408e	1.016e	1.016e	1.408e	1.016e	
Row4	4	1900-2000	1.394e	3.177e	2.325e	1.673e	4.378e	1.010e	1.101e	5.792e	1.698e	1.244e	2.928e	6.058e	4.228e	1.408e	1.016e	1.016e	1.408e	1.016e	1.016e	1.408e	1.016e	
Row4	4	2000-2100	1.111e	3.177e	2.325e	1.673e	4.378e	1.010e	1.101e	5.792e	1.698e	1.244e	2.928e	6.058e	4.228e	1.408e	1.016e	1.016e	1.408e	1.016e	1.016e	1.408e	1.016e	
Row4	4	2100-1600	1.066e	3.767e	2.477e	1.486e	4.868e	1.088e	1.188e	5.982e	1.928e	1.416e	2.876e	6.058e	4.228e	1.408e	1.016e	1.016e	1.408e	1.016e	1.016e	1.408e	1.016e	
Row4	4	1700-1800	7.711e	3.033e	2.222e	1.601e	1.618e	1.088e	1.188e	4.872e	1.928e	1.408e	2.088e	5.928e	4.088e	1.390e	1.006e	1.006e	1.390e	1.006e	1.006e	1.390e	1.006e	
Row4	4	1900-2000	5.516e	2.386e	1.743e	1.307e	1.323e	0.665e	3.625e	1.566e	1.144e	1.476e	1.748e	6.368e	4.088e	1.390e	1.006e	1.006e	1.390e	1.006e	1.006e	1.390e	1.006e	
Row4	4	2000-2100	1.761e	3.033e	2.222e	1.601e	1.618e	1.088e	1.188e	4.872e	1.928e	1.408e	2.088e	5.928e	4.088e	1.390e	1.006e	1.006e	1.390e	1.006e	1.006e	1.390e	1.006e	
Row4	4	2000-2100	4.575e	1.222e	0.938e	0.304e	3.031e	6.811e	6.492e	3.762e	1.006e	0.348e	1.172e	3.308e	2.728e	0.938e	0.304e	0.304e	2.728e	0.938e	0.304e	0.304e	0.304e	
Row4	4	2100-2200	2.900e	4.061e	2.788e	2.438e	2.288e	8.888e	6.278e	3.838e	6.698e	4.088e	1.008e	2.748e	2.088e	0.938e	0.304e	0.304e	2.088e	0.938e	0.304e	0.304e	0.304e	
Row4	4	2200-0000	1.000e	3.275e	2.747e	1.917e	4.116e	1.728e	1.080e	5.010e	1.888e	1.098e	2.728e	6.088e	4.228e	1.408e	1.016e	1.016e	1.408e	1.016e	1.016e	1.408e	1.016e	
Row4	4	0000-0100	1.000e	3.275e	2.747e	1.917e	4.116e	1.728e	1.080e	5.010e	1.888e	1.098e	2.728e	6.088e	4.228e	1.408e	1.016e	1.016e	1.408e	1.016e	1.016e	1.408e	1.016e	
Row4	4	0100-0200	1.000e	3.275e	2.747e	1.917e	4.116e	1.728e	1.080e	5.010e	1.888e	1.098e	2.728e	6.088e	4.228e	1.408e	1.016e	1.016e	1.408e	1.016e	1.016e	1.408e	1.016e	
Row4	4	0200-0300	1.000e	3.275e	2.747e	1.917e	4.116e	1.728e	1.080e	5.010e	1.888e	1.098e	2.728e	6.088e	4.228e	1.408e	1.016e	1.016e	1.408e	1.016e	1.016e	1.408e	1.016e	
Row4	4	0300-0400	1.000e	3.275e	2.747e	1.917e	4.116e	1.728e	1.080e	5.010e	1.888e	1.098e	2.728e	6.088e	4.228e	1.408e	1.016e	1.016e	1.408e	1.016e	1.016e	1.408e	1.016e	
Row4	4	0400-0500	1.000e	3.275e	2.747e	1.917e	4.116e	1.728e	1.080e	5.010e	1.888e	1.098e	2.728e	6.088e	4.228e	1.408e	1.016e	1.016e	1.408e	1.016e	1.016e	1.408e	1.016e	
Row4	4	0500-0600	1.000e	3.275e	2.747e	1.917e	4.116e	1.728e	1.080e	5.010e	1.888e	1.098e	2.728e	6.088e	4.228e	1.408e	1.016e	1.016e	1.408e	1.016e	1.016e	1.408e	1.016e	
Row4	4	0600-0700	1.000e	3.275e	2.747e	1.917e	4.116e	1.728e	1.080e	5.010e	1.888e	1.098e	2.728e	6.088e	4.228e	1.408e	1.016e	1.016e	1.408e	1.016e	1.016e	1.408e	1.016e	
Row4	4	0700-0800	1.000e	3.275e	2.747e	1.917e	4.116e	1.728e	1.080e	5.010e	1.888e	1.098e	2.728e	6.088e	4.228e	1.408e	1.016e	1.016e	1.408e	1.016e	1.016e	1.408e	1.016e	
Row4	4	0800-0900	1.000e	3.275e	2.747e	1.917e	4.116e	1.728e	1.080e	5.010e	1.888e	1.098e	2.728e	6.088e	4.228e	1.408e	1.016e	1.016e	1.408e	1.016e	1.016e	1.408e	1.016e	
Row4	4	0900-1000	1.000e	3.275e	2.747e	1.917e	4.116e	1.728e	1.080e	5.010e	1.888e	1.098e	2.728e	6.088e	4.228e	1.408e	1.016e	1.016e	1.408e	1.016e	1.016e	1.408e	1.016e	
Row4	4	1000-1100	1.000e	3.275e	2.747e	1.917e	4.116e	1.728e	1.080e	5.010e	1.888e	1.098e	2.728e	6.088e	4.228e	1.408e	1.016e	1.016e	1.408e	1.016e	1.016e	1.408e	1.016e	
Row4	4	1100-1200	1.000e	3.275e	2.747e	1.917e	4.116e	1.728e	1.080e	5.010e	1.888e	1.098e	2.728e	6.088e	4.228e	1.408e	1.016e	1.016e	1.408e	1.016e	1.016e	1.408e	1.016e	
Row4	4	1200-1300	1.000e	3.275e	2.747e	1.917e	4.116e	1.728e	1.080e	5.010e	1.888e	1.098e	2.728e	6.088e	4.228e	1.408e	1.016e	1.016e	1.408e	1.016e	1.016e	1.408e	1.016e	
Row4	4	1300-1400	1.000e	3.275e	2.747e	1.917e	4.116e	1.728e	1.080e	5.010e	1.888e	1.098e	2.728e	6.088e	4.228e	1.408e	1.016e	1.016e	1.408e	1.016e	1.016e	1.408e	1.016e	
Row4	4	1400-1500	1.000e	3.275e	2.747e	1.917e	4.116e	1.728e	1.080e	5.010e	1.888e	1.098e	2.728e	6.088e	4.228e	1.408e	1.016e	1.016e	1.408e	1.016e	1.016e	1.408e	1.016e	
Row4	4	1500-1600	1.000e	3.275e	2.747e	1.917e	4.116e	1.728e	1.080e	5.010e	1.888e	1.098e	2.728e	6.088e	4.228e	1.408e	1.016e	1.016e	1.408e	1.016e	1.016e	1.408e	1.016e	
Row4	4	1600-1700	1.000e	3.275e	2.747e	1.917e	4.116e	1.728e	1.080e	5.010e	1.888e	1.098e	2.728e	6.088e	4.228e	1.408e	1.016e	1.016e	1.408e	1.016e	1.016e	1.408e	1.016e	
Row4	4	1700-1800	1.000e	3.275e	2.747e	1.917e	4.116e	1.728e	1.080e	5.010e	1.888e	1.098e	2.728e	6.088e	4.228e	1.408e	1.016e	1.016e	1.408e	1.016e	1.016e	1.408e	1.016e	
Row4	4	1800-1900	1.000e	3.275e	2.747e	1.917e	4.116e	1.728e	1.080e	5.010e	1.888e	1.098e	2.728e	6.088e	4.228e	1.408e	1.016e	1.016e	1.408e	1.016e	1.016e	1.408e	1.016e	
Row4	4	1900-2000	1.000e	3.275e	2.747e	1.917e	4.116e	1.728e	1.080e	5.010e	1.888e	1.098e	2.728e	6.088e	4.228e	1.408e	1.016e	1.016e	1.408e	1.016e	1.016e	1.408e	1.016e	
Row4	4	2000-2100	1.000e	3.275e	2.747e	1.917e	4.116e	1.728e	1.080e	5.010e	1.888e	1.098e	2.728e	6.088e	4.228e	1.408e	1.016e	1.016e	1.408e	1.016e	1.016e	1.408e	1.016e	
Row4	4	2100-2200	1.000e	3.275e	2.747e	1.917e	4.116e	1.728e	1.080e	5.010e	1.888e	1.098e	2.728e	6.088e	4.228e	1.408e	1.016e	1.016e	1.408e	1.016e	1.016e	1.408e	1.016e	
Row4	4	2200-0000	1.000e	3.275e	2.747e	1.917e	4.116e	1.728e	1.080e	5.010e	1.888e	1.098e	2.728e	6.088e	4.228e	1.408e	1.016e	1.016e	1.408e	1.016e	1.016e	1.408e	1.016e	
Row4	4	0000-0100	1.000e	3.275e	2.747e	1.917e	4.116e	1.728e	1.080e	5.010e	1.888e	1.098e	2.728e	6.088e	4.228e	1.408e	1.016e	1.016e	1.408e	1.016e	1.016e	1.408e	1.016e	
Row4	4	0100-0200	1.000e	3.275e	2.747e	1.917e	4.116e	1.728e	1.080e	5.010e	1.888e	1.098e	2.728e	6.088e	4.228e	1.408e	1.016e	1.016e	1.408e	1.016e	1.016e	1.408e	1.016e	
Row4	4	0200-0300	1.000e	3.275e	2.747e	1.917e	4.116e	1.728e	1.080e	5.010e	1.888e	1.098e	2.728e	6.088e	4.228e	1.408e	1.016e	1.016e	1.408e	1.016e	1.016e	1.408e	1.016e	
Row4	4	0300-0400	1.000e	3.275e	2.747e	1.917e	4.116e	1.728e	1.080e	5.010e	1.888e	1.098e	2.728e	6.088e	4.228e	1.408e	1.016e	1.016e	1.408e	1.016e	1.016e	1.408e	1.016e	
Row4	4	0400-0500	1.000e	3.275e	2.747e	1.917e	4.116e	1.728e	1.080e	5.010e	1.888e	1.098e	2.728e	6.088e	4.228e	1.408e	1.016e	1.016e	1.408e	1.016e	1.016e	1.408e	1.016e	
Row4	4	0500-0600	1.000e	3.275e	2.747e	1.917e	4.116e	1.728e	1.080e	5.010e	1.888e	1.098e	2.728e	6.088e	4.228e	1.408e	1.016e	1.016e	1.408e	1.016e	1.016e	1.408e	1.016e	
Row4	4	0600-0700	1.000e	3.275e	2.747e	1.917e	4.116e	1.728e	1.080e	5.010e	1.888e	1.098e	2.728e	6.088e	4.228e	1.408e	1.016e	1.016e	1.408e	1.016e	1.016e	1.408e	1.016e	
Row4	4	0700-0800	1.000e	3.275e	2.747e	1.917e	4.116e	1.728e	1.080e	5.010e	1.888e	1.098e	2.728e	6.088e	4.228e	1.408e	1.016e	1.016e	1.408e	1.016e	1.016e	1.408e	1.016e	
Row4	4	0800-0900	1.000e	3.275e	2.747e	1.917e	4.116e	1.728e	1.080e	5.010e	1.888e	1.098												

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

AEMOD model (September)			Year 2043		NO _x Emission		NO Emission	
Route Name	ROAD ID	Hour	Month/Year/Min	Month/Year/Min	Month/Year/Min	Month/Year/Min	Month/Year/Min	Month/Year/Min
			g/mph/veh	gsm ² /hr	g/mph/veh	gsm ² /hr	g/mph/veh	gsm ² /hr
Route 11	11	0000-0100	2.56E-02	1.83E-07	2.56E-04	1.26E-01	9.80E-07	1.37E-03
Route 11	11	0100-0200	2.89E-02	1.96E-07	1.89E-04	1.31E-01	6.78E-07	9.47E-04
Route 11	11	0200-0300	2.89E-02	1.96E-07	1.89E-04	1.31E-01	6.78E-07	9.47E-04
Route 11	11	0300-0400	3.12E-02	1.96E-07	1.41E-04	5.54E-07	6.36E-07	1.57E-03
Route 11	11	0400-0500	3.33E-02	1.14E-07	1.98E-04	1.51E-01	1.44E-07	1.73E-04
Route 11	11	0500-0600	3.33E-02	1.14E-07	1.98E-04	1.51E-01	1.44E-07	1.73E-04
Route 11	11	0600-0700	3.63E-02	4.37E-07	8.13E-04	1.78E-02	2.92E-03	2.08E-05
Route 11	11	0700-0800	4.78E-02	1.16E-06	1.67E-04	2.04E-01	5.10E-04	7.14E-03
Route 11	11	0800-0900	4.78E-02	1.16E-06	1.67E-04	2.04E-01	5.10E-04	7.14E-03
Route 11	11	0900-1000	5.61E-02	1.37E-06	1.29E-04	2.06E-01	5.12E-06	7.17E-02
Route 11	11	1000-1100	6.03E-02	1.36E-06	1.82E-04	2.14E-01	6.64E-03	2.74E-01
Route 11	11	1100-1200	6.03E-02	1.36E-06	1.82E-04	2.14E-01	6.64E-03	2.74E-01
Route 11	11	1200-1300	7.20E-02	1.84E-06	5.58E-04	2.57E-01	6.80E-03	3.94E-02
Route 11	11	1300-1400	8.07E-02	2.01E-06	2.82E-04	2.73E-01	6.75E-06	8.93E-03
Route 11	11	1400-1500	8.07E-02	2.01E-06	2.82E-04	2.73E-01	6.75E-06	8.93E-03
Route 11	11	1500-1600	8.01E-02	2.15E-06	3.03E-04	7.50E-05	1.05E-02	3.60E-01
Route 11	11	1600-1700	7.55E-02	2.11E-06	2.68E-04	7.22E-02	1.01E-02	3.38E-01
Route 11	11	1700-1800	6.26E-02	1.78E-06	1.63E-04	7.42E-02	1.01E-02	3.38E-01
Route 11	11	1800-1900	6.26E-02	1.78E-06	1.63E-04	7.42E-02	1.01E-02	3.38E-01
Route 11	11	1900-2000	3.07E-02	1.72E-07	1.01E-03	1.39E-03	4.55E-03	1.79E-03
Route 11	11	2000-2100	3.06E-02	5.50E-07	7.71E-04	1.63E-03	3.68E-03	1.64E-03
Route 11	11	2100-2200	3.06E-02	5.46E-07	7.57E-04	1.64E-03	3.68E-03	1.64E-03
Route 11	11	2200-2300	2.69E-02	4.47E-07	6.63E-04	1.39E-03	3.16E-03	1.26E-03
Route 11	11	2300-0000	2.69E-02	4.36E-07	5.40E-04	1.40E-03	2.83E-03	1.09E-03
Route 12	12	0000-0100	2.35E-02	1.41E-07	1.27E-07	1.73E-06	6.97E-03	2.88E-03
Route 12	12	0100-0200	2.31E-02	1.46E-07	1.26E-07	1.81E-02	2.63E-03	7.12E-03
Route 12	12	0200-0300	2.36E-02	1.43E-07	1.27E-07	1.88E-02	2.91E-03	7.42E-03
Route 12	12	0300-0400	2.31E-02	1.41E-07	1.26E-07	1.81E-02	2.63E-03	7.12E-03
Route 12	12	0400-0500	2.37E-02	1.41E-07	1.27E-07	1.91E-02	2.62E-03	7.29E-03
Route 12	12	0500-0600	2.32E-02	1.42E-07	1.28E-07	2.98E-03	2.68E-03	7.10E-03
Route 12	12	0600-0700	2.37E-02	1.41E-07	1.26E-07	1.81E-02	2.63E-03	7.12E-03
Route 12	12	0700-0800	2.87E-02	1.65E-07	1.61E-03	1.43E-06	1.29E-02	8.87E-01
Route 12	12	0800-0900	2.83E-02	1.68E-07	6.17E-03	5.94E-04	1.29E-02	8.77E-01
Route 12	12	0900-1000	2.83E-02	1.68E-07	6.17E-03	5.94E-04	1.29E-02	8.77E-01
Route 12	12	1000-1100	2.88E-02	1.68E-07	6.17E-03	6.03E-04	1.44E-06	1.29E-02
Route 12	12	1100-1200	2.90E-02	1.68E-07	6.17E-03	6.05E-04	1.43E-06	1.29E-02
Route 12	12	1200-1300	2.90E-02	1.68E-07	6.03E-04	1.44E-06	1.39E-02	1.04E-01
Route 12	12	1300-1400	2.88E-02	1.68E-07	6.17E-03	6.03E-04	1.44E-06	1.39E-02
Route 12	12	1400-1500	2.88E-02	1.68E-07	6.17E-03	6.05E-04	1.43E-06	1.29E-02
Route 12	12	1500-1600	2.88E-02	1.68E-07	6.17E-03	6.03E-04	1.44E-06	1.39E-02
Route 12	12	1600-1700	2.83E-02	1.68E-07	6.17E-03	6.05E-04	1.43E-06	1.29E-02
Route 12	12	1700-1800	2.83E-02	1.68E-07	6.17E-03	6.05E-04	1.43E-06	1.29E-02
Route 12	12	1800-1900	2.88E-02	1.68E-07	6.17E-03	6.03E-04	1.44E-06	1.39E-02
Route 12	12	1900-2000	2.15E-02	1.52E-07	3.73E-03	4.51E-03	3.28E-03	2.95E-03
Route 12	12	2000-2100	2.14E-02	1.52E-07	3.73E-03	4.61E-03	3.28E-03	2.95E-03
Route 12	12	2100-2200	2.15E-02	1.53E-07	3.73E-03	4.61E-03	3.28E-03	2.95E-03
Route 12	12	2200-2300	2.12E-02	1.42E-07	1.28E-03	5.51E-03	3.09E-07	7.73E-03
Route 13	13	0000-0100	2.34E-02	1.40E-07	1.28E-07	1.65E-01	2.66E-03	4.81E-07
Route 13	13	0100-0200	2.30E-02	1.43E-07	1.26E-07	1.65E-01	2.66E-03	4.81E-07
Route 13	13	0200-0300	2.35E-02	1.40E-07	1.28E-07	1.84E-01	2.89E-04	2.64E-03
Route 13	13	0300-0400	2.37E-02	1.40E-07	1.28E-07	1.88E-01	2.83E-04	2.72E-03
Route 13	13	0400-0500	2.34E-02	1.40E-07	1.28E-07	1.81E-01	2.75E-04	2.69E-03
Route 13	13	0500-0600	2.31E-02	1.41E-07	1.28E-07	2.93E-03	2.68E-03	7.09E-03
Route 13	13	0600-0700	2.28E-02	1.52E-07	1.39E-03	4.81E-01	3.20E-07	2.92E-03
Route 13	13	0700-0800	2.81E-02	1.68E-07	6.20E-03	5.91E-04	1.44E-06	1.29E-02
Route 13	13	0800-0900	2.81E-02	1.68E-07	6.20E-03	5.91E-04	1.44E-06	1.29E-02
Route 13	13	0900-1000	2.83E-02	1.67E-07	6.19E-03	5.90E-04	1.42E-06	1.29E-02
Route 13	13	1000-1100	2.88E-02	1.68E-07	6.03E-04	5.95E-04	1.42E-06	1.39E-02
Route 13	13	1100-1200	2.88E-02	1.68E-07	6.03E-04	5.95E-04	1.42E-06	1.39E-02
Route 13	13	1200-1300	2.87E-02	1.68E-07	6.24E-03	5.96E-04	1.42E-06	1.29E-02
Route 13	13	1300-1400	2.88E-02	1.68E-07	6.24E-03	5.96E-04	1.42E-06	1.29E-02
Route 13	13	1400-1500	2.83E-02	1.67E-07	6.19E-03	5.90E-04	1.42E-06	1.29E-02
Route 13	13	1500-1600	2.82E-02	1.67E-07	6.02E-03	5.90E-04	1.42E-06	1.29E-02
Route 13	13	1600-1700	2.83E-02	1.67E-07	6.21E-03	5.89E-04	1.42E-06	1.29E-02
Route 13	13	1700-1800	2.83E-02	1.67E-07	6.19E-03	5.89E-04	1.42E-06	1.29E-02
Route 13	13	1800-1900	2.78E-02	1.67E-07	6.15E-03	5.77E-04	1.40E-06	1.28E-02
Route 13	13	1900-2000	2.01E-02	1.51E-07	3.07E-03	4.28E-03	3.22E-07	2.94E-03
Route 13	13	2000-2100	2.01E-02	1.51E-07	3.07E-03	4.28E-03	3.22E-07	2.94E-03
Route 13	13	2100-2200	2.00E-02	1.50E-07	3.07E-03	4.28E-03	3.22E-07	2.94E-03
Route 13	13	2200-2300	2.00E-02	1.50E-07	3.07E-03	4.28E-03	3.22E-07	2.94E-03
Route 13	13	2300-0000	1.99E-02	1.50E-07	3.07E-03	4.28E-03	3.22E-07	2.94E-03
Route 14	14	0000-0100	1.39E-02	1.08E-07	6.71E-04	6.48E-02	5.01E-07	3.12E-03
Route 14	14	0100-0200	1.57E-02	1.06E-08	5.01E-04	6.71E-02	4.54E-07	2.15E-03
Route 14	14	0200-0300	1.76E-02	6.98E-08	4.26E-04	7.74E-02	3.76E-07	1.71E-03
Route 14	14	0300-0400	1.76E-02	6.98E-08	4.26E-04	7.74E-02	3.76E-07	1.71E-03
Route 14	14	0400-0500	2.04E-02	6.91E-08	4.30E-04	7.74E-02	3.76E-07	1.71E-03
Route 14	14	0500-0600	1.94E-02	1.11E-07	6.90E-04	7.94E-02	4.82E-07	2.82E-03
Route 14	14	0600-0700	1.94E-02	1.11E-07	6.90E-04	7.94E-02	4.82E-07	2.82E-03
Route 14	14	0700-0800	3.14E-02	7.76E-07	1.63E-03	1.81E-01	2.91E-06	1.81E-02

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Appendix\Appendix 3.5.4 Emission Factor in 2043-S B.xlsx

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

AERMOD model (September)			18th October										
Road	Road ID	Hour	NO _x Emission					NO Emission					
			Monthly/ha			Monthly/ha/acre		Monthly/ha					
			g/kwhr	g/min	tonne/hour	g/kwhr	g/min	tonne/hour	g/kwhr	g/min	tonne/hour		
Road 14	14	0800-0900	3.11E-02	8.89E-07	5.53E-03	1.16E-01	3.31E-06	2.06E-02	1.47E-01	4.19E-06	2.61E-02	4.06E-03	1.16E-07
Road 14	14	0900-1000	3.96E-02	8.62E-07	5.37E-03	1.32E-01	3.26E-06	1.99E-02	1.67E-01	4.09E-06	2.53E-02	4.75E-03	1.19E-07
Road 14	14	1000-1100	3.96E-02	8.62E-07	5.37E-03	1.32E-01	3.26E-06	1.99E-02	1.67E-01	4.09E-06	2.53E-02	4.75E-03	1.19E-07
Road 14	14	1100-1200	3.96E-02	8.62E-07	4.63E-03	1.32E-01	3.26E-06	1.67E-02	1.69E-01	3.43E-06	2.12E-02	5.05E-03	1.03E-07
Road 14	14	1200-1300	4.99E-02	1.170E-06	7.27E-03	1.67E-01	4.52E-06	2.46E-02	2.17E-01	5.12E-06	3.18E-02	5.54E-03	1.54E-07
Road 14	14	1300-1400	5.19E-02	1.310E-06	7.71E-03	1.71E-01	4.52E-06	2.51E-02	2.27E-01	5.48E-06	3.64E-03	6.64E-03	1.71E-07
Road 14	14	1400-1500	4.97E-02	1.143E-06	8.18E-03	1.64E-01	4.89E-06	3.02E-02	2.33E-01	6.17E-06	3.94E-03	6.48E-03	1.71E-07
Road 14	14	1500-1600	4.97E-02	1.143E-06	8.18E-03	1.64E-01	4.89E-06	3.02E-02	2.33E-01	6.17E-06	3.94E-03	6.48E-03	1.71E-07
Road 14	14	1700-1800	3.86E-02	1.123E-06	6.98E-03	1.47E-01	3.32E-06	2.69E-02	1.89E-01	5.45E-06	3.39E-03	4.98E-03	1.47E-07
Road 14	14	1800-1900	2.84E-02	8.95E-07	5.59E-03	1.08E-01	3.28E-06	2.04E-02	1.37E-01	4.14E-06	2.58E-03	3.79E-03	1.17E-07
Road 14	14	1900-2000	2.84E-02	8.95E-07	5.59E-03	1.08E-01	3.28E-06	2.04E-02	1.37E-01	4.14E-06	2.58E-03	3.79E-03	1.17E-07
Road 14	14	2000-2100	1.60E-02	3.04E-07	1.89E-03	8.00E-02	1.45E-06	8.98E-03	9.93E-02	1.75E-06	1.09E-02	2.55E-03	5.95E-06
Road 14	14	2100-2200	1.61E-02	3.06E-07	1.89E-03	8.02E-02	1.43E-06	8.87E-03	9.83E-02	1.75E-06	1.07E-02	2.42E-03	4.86E-06
Road 14	14	2200-2300	1.61E-02	3.06E-07	1.89E-03	8.02E-02	1.43E-06	8.87E-03	9.83E-02	1.75E-06	1.07E-02	2.42E-03	4.86E-06
Road 14	14	2300-0000	2.23E-03	1.36E-07	7.73E-04	1.03E-01	6.31E-06	4.03E-02	1.24E-06	1.75E-07	2.55E-03	3.95E-06	
Road 15	15	0000-0100	2.18E-02	4.62E-08	1.56E-04	7.29E-02	1.61E-07	5.43E-04	9.39E-02	2.07E-07	7.00E-04	3.36E-03	7.40E-09
Road 15	15	0100-0200	2.84E-02	6.06E-08	1.97E-04	8.23E-02	1.89E-07	5.47E-04	1.09E-01	1.67E-07	5.10E-04	3.61E-03	8.61E-09
Road 15	15	0200-0300	2.84E-02	6.06E-08	1.97E-04	8.23E-02	1.89E-07	5.47E-04	1.09E-01	1.67E-07	5.10E-04	3.61E-03	8.61E-09
Road 15	15	0300-0400	3.96E-02	3.63E-08	1.23E-04	9.91E-02	1.09E-07	3.39E-04	1.35E-01	1.37E-07	4.62E-04	5.89E-03	5.96E-09
Road 15	15	0400-0500	3.96E-02	3.63E-08	1.23E-04	9.91E-02	1.09E-07	3.39E-04	1.35E-01	1.37E-07	4.62E-04	5.89E-03	5.96E-09
Road 15	15	0500-0600	4.63E-02	4.63E-08	1.56E-04	1.17E-01	1.47E-07	4.19E-04	1.67E-01	4.62E-07	6.98E-03	1.03E-02	1.54E-08
Road 15	15	0600-0700	2.21E-02	7.14E-04	2.24E-04	8.16E-02	6.44E-07	8.91E-04	1.04E-01	3.39E-07	1.13E-02	1.62E-07	1.57E-08
Road 15	15	0700-0800	3.54E-02	2.77E-07	9.25E-04	1.04E-01	9.39E-07	2.83E-03	1.04E-01	1.03E-06	3.47E-06	5.67E-06	5.67E-08
Road 15	15	0800-0900	3.54E-02	2.77E-07	9.25E-04	1.04E-01	9.39E-07	2.83E-03	1.04E-01	1.03E-06	3.47E-06	5.67E-06	5.67E-08
Road 15	15	0900-1000	3.86E-02	2.60E-07	8.77E-04	1.16E-01	7.93E-07	2.68E-03	1.54E-01	1.05E-06	3.56E-03	5.57E-07	
Road 15	15	1000-1100	4.13E-02	2.51E-07	8.47E-04	1.22E-01	7.40E-07	2.59E-03	1.63E-01	9.90E-07	3.39E-03	6.08E-06	
Road 15	15	1100-1200	4.13E-02	2.51E-07	8.47E-04	1.22E-01	7.40E-07	2.59E-03	1.63E-01	9.90E-07	3.39E-03	6.08E-06	
Road 15	15	1200-1300	5.24E-02	3.69E-07	1.48E-03	1.61E-01	1.34E-06	4.48E-03	2.13E-01	1.78E-06	6.03E-03	7.45E-04	8.24E-08
Road 15	15	1300-1400	5.24E-02	3.69E-07	1.48E-03	1.61E-01	1.34E-06	4.48E-03	2.13E-01	1.78E-06	6.03E-03	7.45E-04	8.24E-08
Road 15	15	1400-1500	5.00E-02	4.56E-07	1.57E-03	1.66E-01	1.55E-06	5.22E-03	2.18E-01	2.01E-06	6.79E-03	7.17E-04	8.68E-08
Road 15	15	1500-1600	5.00E-02	4.56E-07	1.57E-03	1.66E-01	1.55E-06	5.22E-03	2.18E-01	2.01E-06	6.79E-03	7.17E-04	8.68E-08
Road 15	15	1600-1700	5.04E-02	4.60E-07	1.62E-03	1.58E-01	1.51E-06	5.09E-03	2.09E-01	1.99E-06	6.71E-04	7.14E-04	7.95E-08
Road 15	15	1700-1800	4.13E-02	2.51E-07	8.47E-04	1.22E-01	7.40E-07	2.59E-03	1.63E-01	9.90E-07	3.39E-03	6.08E-06	
Road 15	15	1800-1900	3.96E-02	3.34E-07	1.16E-03	1.09E-01	1.12E-06	3.90E-03	1.43E-01	1.67E-06	4.99E-03	4.69E-04	8.02E-08
Road 15	15	1900-2000	3.96E-02	3.34E-07	1.16E-03	1.09E-01	1.12E-06	3.90E-03	1.43E-01	1.67E-06	4.99E-03	4.69E-04	8.02E-08
Road 15	15	2000-2100	3.96E-02	3.34E-07	1.16E-03	1.09E-01	1.12E-06	3.90E-03	1.43E-01	1.67E-06	4.99E-03	4.69E-04	8.02E-08
Road 15	15	2100-2200	3.96E-02	3.34E-07	1.16E-03	1.09E-01	1.12E-06	3.90E-03	1.43E-01	1.67E-06	4.99E-03	4.69E-04	8.02E-08
Road 15	15	2200-2300	3.86E-02	1.07E-07	3.39E-04	7.51E-02	4.05E-07	1.42E-03	9.31E-02	5.21E-07	1.76E-03	2.88E-03	6.61E-07
Road 15	15	2300-0000	2.01E-02	8.64E-08	2.92E-04	9.90E-04	4.06E-07	1.13E-03	4.90E-02	4.26E-07	1.46E-03	1.26E-04	4.42E-08
Road 16	16	0000-0100	1.83E-02	7.81E-07	6.61E-04	1.61E-01	4.05E-07	1.57E-06	8.69E-02	5.75E-07	2.00E-03	1.39E-03	7.95E-08
Road 16	16	0100-0200	1.83E-02	7.81E-07	6.61E-04	1.61E-01	4.05E-07	1.57E-06	8.69E-02	5.75E-07	2.00E-03	1.39E-03	7.95E-08
Road 16	16	0200-0300	1.83E-02	7.81E-07	6.61E-04	1.61E-01	4.05E-07	1.57E-06	8.69E-02	5.75E-07	2.00E-03	1.39E-03	7.95E-08
Road 16	16	0300-0400	2.84E-02	1.06E-07	3.39E-04	7.51E-02	4.05E-07	1.42E-03	9.31E-02	5.21E-07	1.76E-03	2.88E-03	6.61E-07
Road 16	16	0400-0500	2.01E-02	8.64E-08	2.92E-04	9.90E-04	4.06E-07	1.13E-03	4.90E-02	4.26E-07	1.46E-03	1.26E-04	4.42E-08
Road 16	16	0500-0600	1.83E-02	7.81E-07	6.61E-04	1.61E-01	4.05E-07	1.57E-06	8.69E-02	5.75E-07	2.00E-03	1.39E-03	7.95E-08
Road 16	16	0600-0700	7.95E-03	6.98E-08	4.13E-04	2.40E-02	2.18E-07	2.44E-03	8.90E-02	2.55E-07	2.69E-03	1.76E-03	9.31E-09
Road 16	16	0700-0800	7.95E-03	6.98E-08	4.13E-04	2.40E-02	2.18E-07	2.44E-03	8.90E-02	2.55E-07	2.69E-03	1.76E-03	9.31E-09
Road 16	16	0800-0900	7.95E-03	6.98E-08	4.13E-04	2.40E-02	2.18E-07	2.44E-03	8.90E-02	2.55E-07	2.69E-03	1.76E-03	9.31E-09
Road 16	16	0900-1000	8.71E-03	3.07E-04	3.44E-04	7.44E-04	1.60E-07	1.79E-03	5.66E-02	1.90E-07	2.23E-03	2.32E-03	7.81E-09
Road 16	16	1000-1100	8.71E-03	3.07E-04	3.44E-04	7.44E-04	1.60E-07	1.79E-03	5.66E-02	1.90E-07	2.23E-03	2.32E-03	7.81E-09
Road 16	16	1100-1200	9.29E-03	5.40E-04	6.04E-04	9.42E-04	2.85E-07	3.18E-03	6.83E-02	3.39E-07	3.78E-03	2.37E-03	1.07E-08
Road 16	16	1200-1300	9.29E-03	5.40E-04	6.04E-04	9.42E-04	2.85E-07	3.18E-03	6.83E-02	3.39E-07	3.78E-03	2.37E-03	1.07E-08
Road 16	16	1300-1400	9.29E-03	5.40E-04	6.04E-04	9.42E-04	2.85E-07	3.18E-03	6.83E-02	3.39E-07	3.78E-03	2.37E-03	1.07E-08
Road 16	16	1400-1500	9.29E-03	5.40E-04	6.04E-04	9.42E-04	2.85E-07	3.18E-03	6.83E-02	3.39E-07	3.78E-03	2.37E-03	1.07E-08
Road 16	16	1500-1600	9.29E-03	5.40E-04	6.04E-04	9.42E-04	2.85E-07	3.18E-03	6.83E-02	3.39E-07	3.78E-03	2.37E-03	1.07E-08
Road 16	16	1600-1700	9.29E-03	5.40E-04	6.04E-04	9.42E-04	2.85E-07	3.18E-03	6.83E-02	3.39E-07	3.78E-03	2.37E-03	1.07E-08
Road 16	16	1700-1800	9.29E-03	5.40E-04	6.04E-04	9.42E-04	2.85E-07	3.18E-03	6.83E-02	3.39E-07	3.78E-03	2.37E-03	1.07E-08
Road 16	16	1800-1900	9.29E-03	5.40E-04	6.04E-04	9.42E-04	2.85E-07	3.18E-03	6.83E-02	3.39E-07	3.78E-03	2.37E-03	1.07E-08
Road 16	16	1900-2000	9.29E-03	5.40E-04	6.04E-04	9.42E-04	2.85E-07	3.18E-03	6.83E-02	3.39E-07	3.78E-03	2.37E-03	1.07E-08
Road 16	16	2000-2100	9.29E-03	5.40E-04	6.04E-04	9.42E-04	2.85E-07	3.18E-03	6.83E-02	3.39E-07	3.78E-03	2.37E-03	1.07E-08
Road 16	16	2100-2200	9.29E-03	5.40E-04	6.04E-04	9.42E-04	2.85E-07	3.18E-03	6.83E-02	3.39E-07	3.78E-03	2.37E-03	1.07E-08
Road 16	16	2200-2300	9.29E-03	5.40E-04	6.04E-04	9.42E-04	2.85E-07	3.18E-03	6.83E-02	3.39E-07	3.78E-03	2.37E-03	1.07E-08
Road 16	16	2300-0000	9.29E-03	5.40E-04	6.04E-04	9.42E-04	2.85E-07	3.18E-03	6.83E-02	3.39E-07	3.78E-03	2.37E-03	1.07E-08
Road 16	16	0000-0100	9.29E-03	5.40E-04	6.04E-04	9.42E-04	2.85E-07	3.18E-03	6.83E-02	3.39E-07	3.78E-03	2.37E-03	1.07E-08
Road 16	16	0100-0200	9.29E-03	5.40E-04	6.04E-04	9.42E-04	2.85E-07	3.18E-03	6.83E-02	3.39E-07	3.78E-03	2.37E-03	1.07E-08
Road 16	16	0200-0300	9.29E-03	5.40E-04	6.04E-04	9.42E-04	2.85E-07	3.18E-03	6.83E-02	3.39E-07	3.78E-03	2.37E-03	1.07E-08
Road 16	16	0300-0400	9.29E-03	5.40E-04	6.04E-04	9.42E-04	2.85E-07	3.18E-03	6.83E-02	3.39E-07	3.78E-03	2.37E-03	1.07E-08
Road 16	16	0400-0500	9.29E-03	5.40E-04	6.04E-04	9.42E-04	2.85E-07	3.18E-03	6.83E-02	3.39E-07	3.78E-03	2.37E-03	1.07E-08
Road 16	16	0500-0600	9.29E-03	5.40E-04	6.04E-04	9.42E-04	2.85E-07	3.18E-03	6.83E-02	3.39E-07	3.78E-03	2.37E-03	1.07E-08

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24-hour Emission Factors for

AFIRMCO model (September)		YEAR 2043		NO Emission				MO Emission						
Row Name	Row ID	Month/hour/km		Month/hour/km		Month/hour/km		Month/hour/km		Month/hour/km				
		g/km/vh	g/m ² /h	g/km/vh	g/m ² /h	g/km/vh	g/m ² /h	g/km/vh	g/m ² /h	g/km/vh	g/m ² /h			
Row 17	17	1600-1700	5.67E-02	1.535E-06	1.636E-02	2.02E-01	5.458E-06	5.628E-02	2.594E-06	6.858E-06	7.414E-03	2.000E-02	2.71E-01	
Row 17	17	1700-1800	1.99E-02	1.114E-06	1.984E-02	1.61E-01	4.538E-06	4.828E-02	2.611E-06	5.694E-06	0.026E-03	5.89E-03	1.99E-01	
Row 17	17	1800-1900	2.00E-02	1.114E-06	1.984E-02	1.61E-01	4.538E-06	4.828E-02	2.611E-06	5.694E-06	0.026E-03	5.89E-03	1.99E-01	
Row 17	17	1900-2000	1.99E-02	1.114E-06	1.984E-02	1.61E-01	4.538E-06	4.828E-02	2.611E-06	5.694E-06	0.026E-03	5.89E-03	1.99E-01	
Row 17	17	2000-2100	5.54E-03	1.525E-07	1.626E-02	0.211E-01	8.311E-07	8.871E-03	8.164E-07	9.838E-07	1.026E-05	2.00E-02	3.98E-02	
Row 17	17	2100-2200	5.54E-03	1.525E-07	1.626E-02	0.211E-01	8.311E-07	8.871E-03	8.164E-07	9.838E-07	1.026E-05	2.00E-02	3.98E-02	
Row 17	17	2200-2300	0.144E-03	1.39E-07	0.476E-03	5.941E-02	7.511E-07	8.013E-03	5.891E-06	8.00E-06	0.494E-03	0.36E-03	9.68E-03	
Row 17	17	2300-0000	0.771E-03	1.133E-07	2.114E-03	5.09E-02	5.013E-07	6.311E-03	6.074E-07	7.047E-07	7.529E-05	0.598E-03	3.01E-02	
Row 18	18	0000-0100	0.771E-03	1.133E-07	2.114E-03	5.09E-02	5.013E-07	6.311E-03	6.074E-07	7.047E-07	7.529E-05	0.598E-03	3.01E-02	
Row 18	18	0100-0200	0.771E-03	1.133E-07	2.114E-03	5.09E-02	5.013E-07	6.311E-03	6.074E-07	7.047E-07	7.529E-05	0.598E-03	3.01E-02	
Row 18	18	0200-0300	0.771E-03	1.133E-07	2.114E-03	5.09E-02	5.013E-07	6.311E-03	6.074E-07	7.047E-07	7.529E-05	0.598E-03	3.01E-02	
Row 18	18	0300-0400	0.771E-03	1.133E-07	2.114E-03	5.09E-02	5.013E-07	6.311E-03	6.074E-07	7.047E-07	7.529E-05	0.598E-03	3.01E-02	
Row 18	18	0400-0500	0.944E-03	1.044E-03	3.364E-03	4.75E-02	1.558E-07	2.250E-05	5.686E-07	1.88E-07	0.848E-06	0.323E-03	7.70E-02	
Row 18	18	0500-0600	0.944E-03	1.044E-03	3.364E-03	4.75E-02	1.558E-07	2.250E-05	5.686E-07	1.88E-07	0.848E-06	0.323E-03	7.70E-02	
Row 18	18	0600-0700	0.944E-03	1.044E-03	3.364E-03	4.75E-02	1.558E-07	2.250E-05	5.686E-07	1.88E-07	0.848E-06	0.323E-03	7.70E-02	
Row 18	18	0700-0800	0.944E-03	1.044E-03	3.364E-03	4.75E-02	1.558E-07	2.250E-05	5.686E-07	1.88E-07	0.848E-06	0.323E-03	7.70E-02	
Row 18	18	0800-0900	0.944E-03	1.044E-03	3.364E-03	4.75E-02	1.558E-07	2.250E-05	5.686E-07	1.88E-07	0.848E-06	0.323E-03	7.70E-02	
Row 18	18	0900-1000	1.174E-02	2.86E-06	4.122E-03	9.82E-02	1.36E-06	2.044E-05	5.944E-07	1.738E-06	2.446E-02	0.636E-03	7.63E-02	
Row 18	18	1000-1100	1.174E-02	2.86E-06	4.122E-03	9.82E-02	1.36E-06	2.044E-05	5.944E-07	1.738E-06	2.446E-02	0.636E-03	7.63E-02	
Row 18	18	1100-1200	1.174E-02	2.86E-06	4.122E-03	9.82E-02	1.36E-06	2.044E-05	5.944E-07	1.738E-06	2.446E-02	0.636E-03	7.63E-02	
Row 18	18	1200-1300	1.26E-02	2.65E-07	3.78E-03	5.82E-02	1.20E-06	1.711E-07	7.10E-06	1.458E-07	0.242E-03	4.703E-03	1.00E-01	
Row 18	18	1300-1400	1.26E-02	2.65E-07	3.78E-03	5.82E-02	1.20E-06	1.711E-07	7.10E-06	1.458E-07	0.242E-03	4.703E-03	1.00E-01	
Row 18	18	1400-1500	1.61E-02	3.447E-07	4.626E-03	6.64E-02	1.626E-06	2.311E-07	8.254E-07	2.020E-06	8.89E-07	0.282E-03	1.06E-01	
Row 18	18	1500-1600	1.61E-02	3.447E-07	4.626E-03	6.64E-02	1.626E-06	2.311E-07	8.254E-07	2.020E-06	8.89E-07	0.282E-03	1.06E-01	
Row 18	18	1600-1700	1.59E-02	1.476E-07	3.75E-03	5.65E-02	1.686E-06	2.404E-07	8.184E-06	2.566E-07	0.411E-03	1.07E-01	1.47E-01	
Row 18	18	1700-1800	1.59E-02	1.476E-07	3.75E-03	5.65E-02	1.686E-06	2.404E-07	8.184E-06	2.566E-07	0.411E-03	1.07E-01	1.47E-01	
Row 18	18	1800-1900	1.16E-02	3.38E-07	3.48E-03	5.46E-02	1.594E-06	2.272E-07	6.806E-06	1.926E-07	0.411E-03	1.07E-01	1.47E-01	
Row 18	18	1900-2000	1.16E-02	3.38E-07	3.48E-03	5.46E-02	1.594E-06	2.272E-07	6.806E-06	1.926E-07	0.411E-03	1.07E-01	1.47E-01	
Row 18	18	2000-2100	1.33E-03	2.42E-07	4.95E-03	4.18E-02	1.229E-07	1.768E-07	5.024E-06	1.468E-06	0.221E-03	6.413E-03	9.91E-02	
Row 18	18	2100-2200	1.33E-03	2.42E-07	4.95E-03	4.18E-02	1.229E-07	1.768E-07	5.024E-06	1.468E-06	0.221E-03	6.413E-03	9.91E-02	
Row 18	18	2200-2300	6.68E-03	1.18E-07	1.88E-03	4.12E-02	7.24E-07	1.020E-06	4.78E-07	8.42E-07	1.20E-02	1.76E-03	3.10E-04	4.47E-01
Row 18	18	2300-0000	6.68E-03	1.18E-07	1.88E-03	4.12E-02	7.24E-07	1.020E-06	4.78E-07	8.42E-07	1.20E-02	1.76E-03	3.10E-04	4.47E-01
Row 19	19	0000-0100	3.86E-03	8.83E-06	2.95E-03	4.15E-02	5.311E-07	7.58E-04	8.42E-07	8.20E-04	8.42E-04	7.8E-03	2.72E-02	3.37E-01
Row 19	19	0100-0200	3.86E-03	8.83E-06	2.95E-03	4.15E-02	5.311E-07	7.58E-04	8.42E-07	8.20E-04	8.42E-04	7.8E-03	2.72E-02	3.37E-01
Row 19	19	0200-0300	3.86E-03	8.83E-06	2.95E-03	4.15E-02	5.311E-07	7.58E-04	8.42E-07	8.20E-04	8.42E-04	7.8E-03	2.72E-02	3.37E-01
Row 19	19	0300-0400	3.86E-03	8.83E-06	2.95E-03	4.15E-02	5.311E-07	7.58E-04	8.42E-07	8.20E-04	8.42E-04	7.8E-03	2.72E-02	3.37E-01
Row 19	19	0400-0500	3.86E-03	8.83E-06	2.95E-03	4.15E-02	5.311E-07	7.58E-04	8.42E-07	8.20E-04	8.42E-04	7.8E-03	2.72E-02	3.37E-01
Row 19	19	0500-0600	3.86E-03	8.83E-06	2.95E-03	4.15E-02	5.311E-07	7.58E-04	8.42E-07	8.20E-04	8.42E-04	7.8E-03	2.72E-02	3.37E-01
Row 19	19	0600-0700	3.86E-03	8.83E-06	2.95E-03	4.15E-02	5.311E-07	7.58E-04	8.42E-07	8.20E-04	8.42E-04	7.8E-03	2.72E-02	3.37E-01
Row 19	19	0700-0800	3.86E-03	8.83E-06	2.95E-03	4.15E-02	5.311E-07	7.58E-04	8.42E-07	8.20E-04	8.42E-04	7.8E-03	2.72E-02	3.37E-01
Row 19	19	0800-0900	3.86E-03	8.83E-06	2.95E-03	4.15E-02	5.311E-07	7.58E-04	8.42E-07	8.20E-04	8.42E-04	7.8E-03	2.72E-02	3.37E-01
Row 19	19	0900-1000	3.86E-03	8.83E-06	2.95E-03	4.15E-02	5.311E-07	7.58E-04	8.42E-07	8.20E-04	8.42E-04	7.8E-03	2.72E-02	3.37E-01
Row 19	19	1000-1100	3.86E-03	8.83E-06	2.95E-03	4.15E-02	5.311E-07	7.58E-04	8.42E-07	8.20E-04	8.42E-04	7.8E-03	2.72E-02	3.37E-01
Row 19	19	1100-1200	3.86E-03	8.83E-06	2.95E-03	4.15E-02	5.311E-07	7.58E-04	8.42E-07	8.20E-04	8.42E-04	7.8E-03	2.72E-02	3.37E-01
Row 19	19	1200-1300	3.86E-03	8.83E-06	2.95E-03	4.15E-02	5.311E-07	7.58E-04	8.42E-07	8.20E-04	8.42E-04	7.8E-03	2.72E-02	3.37E-01
Row 19	19	1300-1400	3.86E-03	8.83E-06	2.95E-03	4.15E-02	5.311E-07	7.58E-04	8.42E-07	8.20E-04	8.42E-04	7.8E-03	2.72E-02	3.37E-01
Row 19	19	1400-1500	3.86E-03	8.83E-06	2.95E-03	4.15E-02	5.311E-07	7.58E-04	8.42E-07	8.20E-04	8.42E-04	7.8E-03	2.72E-02	3.37E-01
Row 19	19	1500-1600	3.86E-03	8.83E-06	2.95E-03	4.15E-02	5.311E-07	7.58E-04	8.42E-07	8.20E-04	8.42E-04	7.8E-03	2.72E-02	3.37E-01
Row 19	19	1600-1700	3.86E-03	8.83E-06	2.95E-03	4.15E-02	5.311E-07	7.58E-04	8.42E-07	8.20E-04	8.42E-04	7.8E-03	2.72E-02	3.37E-01
Row 19	19	1700-1800	3.86E-03	8.83E-06	2.95E-03	4.15E-02	5.311E-07	7.58E-04	8.42E-07	8.20E-04	8.42E-04	7.8E-03	2.72E-02	3.37E-01
Row 19	19	1800-1900	3.86E-03	8.83E-06	2.95E-03	4.15E-02	5.311E-07	7.58E-04	8.42E-07	8.20E-04	8.42E-04	7.8E-03	2.72E-02	3.37E-01
Row 19	19	1900-2000	3.86E-03	8.83E-06	2.95E-03	4.15E-02	5.311E-07	7.58E-04	8.42E-07	8.20E-04	8.42E-04	7.8E-03	2.72E-02	3.37E-01
Row 19	19	2000-2100	3.86E-03	8.83E-06	2.95E-03	4.15E-02	5.311E-07	7.58E-04	8.42E-07	8.20E-04	8.42E-04	7.8E-03	2.72E-02	3.37E-01
Row 19	19	2100-2200	3.86E-03	8.83E-06	2.95E-03	4.15E-02	5.311E-07	7.58E-04	8.42E-07	8.20E-04	8.42E-04	7.8E-03	2.72E-02	3.37E-01
Row 19	19	2200-2300	3.86E-03	8.83E-06	2.95E-03	4.15E-02	5.311E-07	7.58E-04	8.42E-07	8.20E-04	8.42E-04	7.8E-03	2.72E-02	3.37E-01
Row 19	19	2300-0000	3.86E-03	8.83E-06	2.95E-03	4.15E-02	5.311E-07	7.58E-04	8.42E-07	8.20E-04	8.42E-04	7.8E-03	2.72E-02	3.37E-01

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

AEMOD model (September)			Year 2043		NO _x Emission				NO Emission					
Route Name	Road ID	Hour	Month/year/km	Month/year/km	Month/year/km	Month/year/km	Month/year/km	Month/year/km	Month/year/km	Month/year/km	Month/year/km	Month/year/km	Month/year/km	
Route 24	24	0800-0900	1.56e-01	2.44e-07	7.23e-04	4.65e-01	9.02e-07	8.25e-04	5.91e-01	1.15e-06	1.05e-03	1.32e-02	2.41	
Route 24	24	0900-1200	1.96e-01	2.75e-01	2.33e-04	4.72e-01	1.03e-06	9.38e-04	5.98e-01	1.36e-06	1.13e-03	1.34e-02	2.41	
Route 24	24	1000-1200	1.96e-01	2.75e-01	2.33e-04	4.72e-01	1.03e-06	9.38e-04	5.98e-01	1.36e-06	1.13e-03	1.34e-02	2.41	
Route 24	24	1100-1200	1.56e-01	2.75e-07	2.47e-04	4.79e-01	6.80e-06	8.79e-04	6.14e-01	1.23e-06	1.13e-03	1.39e-02	2.41	
Route 24	24	1200-1300	1.41e-01	2.96e-07	2.62e-04	4.80e-01	9.70e-07	8.89e-04	6.21e-01	1.26e-06	1.15e-03	1.44e-02	2.41	
Route 24	24	1300-1400	1.42e-01	3.24e-07	2.96e-04	4.82e-01	1.03e-06	9.38e-04	6.30e-01	1.36e-06	1.15e-03	1.44e-02	2.41	
Route 24	24	1400-1500	1.46e-01	3.26e-07	3.10e-04	5.02e-01	1.13e-06	1.04e-03	6.48e-01	1.46e-06	1.34e-03	1.45e-02	2.41	
Route 24	24	1500-1600	1.30e-01	3.07e-07	2.81e-04	4.99e-01	1.17e-07	1.07e-03	6.28e-01	1.48e-06	1.35e-03	1.35e-02	2.41	
Route 24	24	1600-1700	1.16e-01	2.76e-07	2.65e-04	4.97e-01	1.03e-06	9.38e-04	5.98e-01	1.36e-06	1.13e-03	1.34e-02	2.41	
Route 24	24	1700-1800	1.16e-01	2.76e-07	2.65e-04	4.97e-01	1.03e-06	9.38e-04	5.98e-01	1.36e-06	1.13e-03	1.34e-02	2.41	
Route 24	24	1800-1900	1.02e-01	3.08e-07	2.38e-04	4.76e-01	6.21e-07	5.24e-04	5.27e-01	1.17e-07	5.15e-04	1.04e-02	2.41	
Route 24	24	1900-2000	1.02e-01	3.08e-07	2.38e-04	4.76e-01	6.21e-07	5.24e-04	5.27e-01	1.17e-07	5.15e-04	1.04e-02	2.41	
Route 24	24	2000-2100	9.14e-02	6.49e-08	4.58e-05	3.74e-06	2.87e-07	2.44e-04	4.67e-01	3.32e-07	3.04e-04	1.08e-07	2.41	
Route 24	24	2100-2200	9.14e-02	6.49e-08	4.58e-05	3.74e-06	2.87e-07	2.44e-04	4.67e-01	3.32e-07	3.04e-04	1.08e-07	2.41	
Route 24	24	2200-2300	1.04e-01	6.65e-06	4.84e-05	3.78e-06	1.98e-07	1.81e-04	4.83e-05	7.52e-07	7.31e-04	1.19e-06	2.41	
Route 25	25	0800-1000	1.03e-01	4.50e-08	4.16e-05	3.71e-06	1.62e-07	1.51e-04	4.74e-05	7.02e-07	1.93e-04	1.20e-06	2.52	
Route 25	25	0900-1000	1.03e-01	4.50e-08	4.16e-05	3.71e-06	1.62e-07	1.51e-04	4.74e-05	7.02e-07	1.93e-04	1.20e-06	2.52	
Route 25	25	1000-1200	1.03e-01	4.50e-08	4.16e-05	3.71e-06	1.62e-07	1.51e-04	4.74e-05	7.02e-07	1.93e-04	1.20e-06	2.52	
Route 25	25	1100-1200	1.03e-01	4.50e-08	4.16e-05	3.71e-06	1.62e-07	1.51e-04	4.74e-05	7.02e-07	1.93e-04	1.20e-06	2.52	
Route 25	25	1200-1300	1.06e-01	2.19e-08	4.24e-05	3.83e-06	7.91e-08	7.38e-05	4.89e-01	1.01e-07	8.40e-05	1.23e-02	2.52	
Route 25	25	1400-1500	1.07e-01	2.58e-08	2.41e-05	3.95e-06	3.94e-08	3.69e-05	4.92e-01	1.19e-07	1.14e-04	1.23e-02	2.52	
Route 25	25	1500-1600	1.07e-01	2.58e-08	2.41e-05	3.95e-06	3.94e-08	3.69e-05	4.92e-01	1.19e-07	1.14e-04	1.23e-02	2.52	
Route 25	25	1600-1700	1.19e-01	1.22e-07	4.78e-05	4.78e-06	4.78e-06	4.78e-06	4.78e-06	4.78e-06	4.78e-06	4.78e-06	2.52	
Route 25	25	1700-1800	1.19e-01	1.22e-07	4.78e-05	4.78e-06	4.78e-06	4.78e-06	4.78e-06	4.78e-06	4.78e-06	4.78e-06	2.52	
Route 25	25	1800-1900	1.19e-01	1.22e-07	4.78e-05	4.78e-06	4.78e-06	4.78e-06	4.78e-06	4.78e-06	4.78e-06	4.78e-06	2.52	
Route 25	25	1900-2000	1.19e-01	1.22e-07	4.78e-05	4.78e-06	4.78e-06	4.78e-06	4.78e-06	4.78e-06	4.78e-06	4.78e-06	2.52	
Route 25	25	2000-2100	1.19e-01	1.22e-07	4.78e-05	4.78e-06	4.78e-06	4.78e-06	4.78e-06	4.78e-06	4.78e-06	4.78e-06	2.52	
Route 25	25	2100-2200	1.19e-01	1.22e-07	4.78e-05	4.78e-06	4.78e-06	4.78e-06	4.78e-06	4.78e-06	4.78e-06	4.78e-06	2.52	
Route 25	25	2200-2300	1.19e-01	1.22e-07	4.78e-05	4.78e-06	4.78e-06	4.78e-06	4.78e-06	4.78e-06	4.78e-06	4.78e-06	2.52	
Route 25	25	2300-0000	1.06e-01	1.46e-08	6.92e-05	3.90e-07	2.08e-07	2.49e-04	4.99e-01	3.42e-07	3.16e-04	1.23e-02	2.52	
Route 25	25	0000-0100	1.06e-01	1.46e-08	6.92e-05	3.90e-07	2.08e-07	2.49e-04	4.99e-01	3.42e-07	3.16e-04	1.23e-02	2.52	
Route 25	25	0100-0200	1.06e-01	1.46e-08	6.92e-05	3.90e-07	2.08e-07	2.49e-04	4.99e-01	3.42e-07	3.16e-04	1.23e-02	2.52	
Route 25	25	0200-0300	1.06e-01	1.46e-08	6.92e-05	3.90e-07	2.08e-07	2.49e-04	4.99e-01	3.42e-07	3.16e-04	1.23e-02	2.52	
Route 25	25	0300-0400	1.06e-01	1.46e-08	6.92e-05	3.90e-07	2.08e-07	2.49e-04	4.99e-01	3.42e-07	3.16e-04	1.23e-02	2.52	
Route 25	25	0400-0500	1.06e-01	1.46e-08	6.92e-05	3.90e-07	2.08e-07	2.49e-04	4.99e-01	3.42e-07	3.16e-04	1.23e-02	2.52	
Route 25	25	0500-0600	1.06e-01	1.46e-08	6.92e-05	3.90e-07	2.08e-07	2.49e-04	4.99e-01	3.42e-07	3.16e-04	1.23e-02	2.52	
Route 25	25	0600-0700	1.06e-01	1.46e-08	6.92e-05	3.90e-07	2.08e-07	2.49e-04	4.99e-01	3.42e-07	3.16e-04	1.23e-02	2.52	
Route 25	25	0700-0800	1.06e-01	1.46e-08	6.92e-05	3.90e-07	2.08e-07	2.49e-04	4.99e-01	3.42e-07	3.16e-04	1.23e-02	2.52	
Route 25	25	0800-0900	1.06e-01	1.46e-08	6.92e-05	3.90e-07	2.08e-07	2.49e-04	4.99e-01	3.42e-07	3.16e-04	1.23e-02	2.52	
Route 25	25	0900-1000	1.06e-01	1.46e-08	6.92e-05	3.90e-07	2.08e-07	2.49e-04	4.99e-01	3.42e-07	3.16e-04	1.23e-02	2.52	
Route 25	25	1000-1100	1.43e-01	3.32e-07	5.24e-04	5.05e-01	1.39e-05	1.85e-03	6.48e-01	1.73e-07	2.71e-03	1.44e-02	2.52	
Route 25	25	1100-1200	1.43e-01	3.32e-07	5.24e-04	5.05e-01	1.39e-05	1.85e-03	6.48e-01	1.73e-07	2.71e-03	1.44e-02	2.52	
Route 25	25	1200-1300	1.43e-01	3.32e-07	5.24e-04	5.05e-01	1.39e-05	1.85e-03	6.48e-01	1.73e-07	2.71e-03	1.44e-02	2.52	
Route 25	25	1300-1400	1.37e-01	3.07e-07	4.85e-04	5.07e-01	1.45e-05	1.95e-03	6.28e-01	1.62e-07	2.22e-03	1.44e-02	2.52	
Route 25	25	1400-1500	1.37e-01	3.07e-07	4.85e-04	5.07e-01	1.45e-05	1.95e-03	6.28e-01	1.62e-07	2.22e-03	1.44e-02	2.52	
Route 25	25	1500-1600	1.37e-01	3.07e-07	4.85e-04	5.07e-01	1.45e-05	1.95e-03	6.28e-01	1.62e-07	2.22e-03	1.44e-02	2.52	
Route 25	25	1600-1700	1.37e-01	3.07e-07	4.85e-04	5.07e-01	1.45e-05	1.95e-03	6.28e-01	1.62e-07	2.22e-03	1.44e-02	2.52	
Route 25	25	1700-1800	1.14e-01	3.03e-07	4.15e-04	4.56e-01	1.12e-05	1.66e-03	5.70e-01	1.51e-06	1.57e-04	1.20e-02	2.52	
Route 25	25	1800-1900	9.99e-02	3.66e-07	2.53e-04	3.97e-01	7.62e-07	6.82e-04	4.92e-01	9.47e-07	9.36e-03	1.09e-02	2.52	
Route 25	25	1900-2000	9.99e-02	3.66e-07	2.53e-04	3.97e-01	7.62e-07	6.82e-04	4.92e-01	9.47e-07	9.36e-03	1.09e-02	2.52	
Route 25	25	2000-2100	8.43e-02	8.66e-08	1.16e-05	1.48e-06	3.98e-07	4.90e-04	4.23e-04	4.46e-07	6.09e-04	7.61e-03	9.41	
Route 25	25	2100-2200	8.57e-02	8.66e-08	1.23e-05	1.55e-06	3.97e-07	5.03e-04	4.23e-04	4.58e-07	6.24e-04	9.82e-03	9.41	
Route 25	25	2200-2300	1.06e-01	1.46e-08	6.92e-05	3.90e-07	2.08e-07	2.49e-04	4.99e-01	3.42e-07	3.16e-04	1.23e-02	2.52	
Route 25	25	2300-0000	1.06e-01	1.46e-08	6.92e-05	3.90e-07	2.08e-07	2.49e-04	4.99e-01	3.42e-07	3.16e-04	1.23e-02	2.52	
Route 25	25	0000-0100	9.98e-02	9.98e-08	1.32e-05	1.63e-06	4.13e-07	5.46e-04	4.61e-04	3.27e-07	4.14e-04	1.04e-02	2.52	
Route 25	25	0100-0200	9.98e-02	9.98e-08	1.32e-05	1.63e-06	4.13e-07	5.46e-04	4.61e-04	3.27e-07	4.14e-04	1.04e-02	2.52	
Route 25	25	0200-0300	1.04e-01	2.22e-05	2.50e-05	3.71e-06	8.04e-08	9.03e-05	4.74e-01	1.03e-07	1.15e-04	1.16e-02	2.52	
Route 25	25	0300-0400	1.04e-01	2.22e-05	2.50e-05	3.71e-06	8.04e-08	9.03e-05	4.74e-01	1.03e-07	1.15e-04	1.16e-02	2.52	
Route 25	25	0400-0500	1.04e-01	2.22e-05	2.50e-05	3.71e-06	8.04e-08	9.03e-05	4.74e-01	1.03e-07	1.15e-04	1.16e-02	2.52	
Route 25	25	0500-0600	1.04e-01	2.22e-05	2.50e-05	3.71e-06	8.04e-08	9.03e-05	4.74e-01	1.03e-07	1.15e-04	1.16e-02	2.52	
Route 25	25	0600-0700	1.17e-01	1.16e-07	4.18e-06	4.70e-01	3.81e-07	1.51e-07	1.70e-04	4.86e-01	1.93e-07	2.71e-03	2.22e-02	2.52
Route 25	25	0700-0800	1.17e-01	1.16e-07	4.18e-06	4.70e-01	3.81e-07	1.51e-07	1.70e-04	4.86e-01	1.93e-07	2.71e-03	2.22e-02	2.52
Route 25	25	0800-0900	1.17e-01	1.16e-07	4.18e-06	4.70e-01	3.81e-07	1.51e-07	1.70e-04	4.86e-01	1.93e-07	2.71e-03	2.22e-02	2.52
Route 25	25	0900-1000	1.17e-01	1.16e-07	4.18e-06	4.70e-01	3.81e-07	1.51e-07	1.70e-04	4.86e-01	1.93e-07	2.71e-03	2.22e-02	2.52
Route 25	25	1000-1100	1.42e-01	3.66e-07	4.04e-04	4.99e-01	1.27e-06	1.42e-03	6.40e-01	1.63e-06	1.86e-03	1.42e-02	2.52	
Route 25	25	1100-1200	1.42e-01	3.66e-07	4.04e-04	4.99e-01	1.27e-06	1.42e-03	6.40e-01	1.63e-06	1.86e-03	1.42e-02	2.52	
Route 25	25	1200-1300	1.55e-01	3.55e-07	3.99e-04	5.07e-01	1.20e-06	1.39e-03	6.56e-01	1.56e-06	1.75e-03	1.48e-02	2.52	
Route 25	25	1300-1400	1.43e-01	3.61e-07	4.28e-04	5.08e-01	1.18e-06	1.52e-03	6.49e-01	1.74e-06	1.95e-03	1.43e-02	2.52	
Route 25	25	1400-1500	1.43e-01	3.61e-07	4.28e-04	5.08e-01	1.18e-06	1.52e-03	6.49e-01	1.74e-06	1.95e-03	1.43e-02	2.52	
Route 25	25	1500-1600	1.30e-01	3.61e-07	4.04e-04	5.08e-01	1.38e-06	1.55e-03	6.28e-01	1.74e-06	1.95e-03	1.36e-02	2.52	

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Appendix\Appendix 3.5.4 Emission Factor in 2043-S B.xlsx

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

AERMOD model (September)				18th October											
Road	Road ID	Hour	NO _x Emission						NO _x Emission						
			MonthlyMean			MonthlyAverage			MonthlyMean			MonthlyAverage			
			g/kwh	gsm ³	tonne/hour	g/kwh	gsm ³	tonne/hour	g/kwh	gsm ³	tonne/hour	g/kwh	gsm ³	tonne/hour	
Road 27	27	1600-1700	1.41E-01	3.66E-07	4.05E-04	5.00E-01	1.27E-05	1.43E-03	6.41E-01	1.63E-06	1.84E-04	1.43E-02	3.64E-08		
Road 27	27	1700-1800	1.23E-01	2.62E-07	3.17E-04	4.88E-01	1.12E-06	1.29E-03	6.11E-01	1.41E-06	1.58E-04	1.26E-02	2.97E-08		
Road 27	27	1800-1900	1.06E-01	2.19E-07	2.65E-04	4.17E-01	9.56E-07	1.09E-03	5.20E-01	1.25E-06	1.40E-04	1.10E-02	2.49E-08		
Road 27	27	1900-2000	1.01E-01	2.04E-07	1.17E-04	1.71E-01	4.47E-07	5.11E-04	4.62E-04	6.00E-01	5.15E-07	5.76E-04	1.15E-08	1.18E-08	
Road 27	27	2000-2100	0.97E-01	2.02E-08	9.73E-05	1.48E-01	3.29E-07	3.69E-04	4.88E-01	4.09E-07	4.59E-04	1.13E-02	9.25E-09		
Road 27	27	2100-2200	0.96E-01	1.96E-08	8.44E-05	1.45E-01	3.48E-07	3.85E-04	4.88E-01	4.09E-07	4.59E-04	1.13E-02	9.25E-09		
Road 27	27	2200-2300	0.96E-01	1.77E-08	8.73E-05	1.81E-01	3.26E-07	3.15E-04	4.87E-01	3.58E-07	4.02E-04	1.16E-02	8.77E-09		
Road 27	27	2300-0000	1.07E-01	6.65E-08	7.24E-05	3.85E-02	3.22E-07	2.61E-04	6.13E-01	2.97E-07	3.32E-04	1.21E-02	7.31E-09		
Road 27	27	0000-0100	1.62E-01	7.62E-08	8.35E-05	4.46E-02	3.07E-07	2.52E-04	6.13E-01	2.97E-07	3.32E-04	1.21E-02	7.31E-09		
Road 28	28	0100-0200	0.64E-01	6.45E-08	1.31E-03	4.00E-02	1.32E-07	6.45E-03	5.91E-07	3.76E-07	7.77E-04	3.34E-02	1.69E-08		
Road 28	28	0200-0300	0.79E-01	5.25E-08	1.06E-03	4.57E-02	4.67E-07	5.09E-03	6.54E-07	2.98E-07	6.18E-04	2.58E-03	3.99E-08		
Road 28	28	0300-0400	0.62E-01	4.36E-08	8.90E-04	3.51E-02	4.07E-07	4.35E-03	6.54E-07	2.98E-07	6.18E-04	2.58E-03	3.99E-08		
Road 28	28	0400-0500	1.11E-02	5.30E-08	1.10E-03	4.90E-02	2.34E-07	4.85E-03	6.01E-07	2.97E-07	5.95E-03	2.99E-02	1.41E-08		
Road 28	28	0500-0600	1.11E-02	4.13E-08	1.89E-04	4.99E-02	4.12E-07	8.54E-03	6.01E-07	5.05E-07	1.04E-02	2.97E-02	2.45E-08		
Road 28	28	0600-0700	1.13E-02	3.86E-08	2.17E-04	5.06E-02	4.18E-07	8.66E-03	6.01E-07	5.05E-07	1.04E-02	2.97E-02	2.45E-08		
Road 28	28	0700-0800	1.21E-02	4.40E-07	9.11E-03	5.25E-02	4.91E-06	3.96E-02	6.46E-07	2.95E-08	4.00E-02	3.02E-03	1.19E-07		
Road 28	28	0800-0900	1.11E-02	4.40E-07	1.02E-07	4.97E-02	2.09E-03	4.33E-02	6.13E-02	2.59E-08	3.39E-03	3.21E-03	1.85E-07		
Road 28	28	0900-1000	1.11E-02	4.40E-07	1.02E-07	4.97E-02	2.09E-03	4.33E-02	6.13E-02	2.59E-08	3.39E-03	3.21E-03	1.85E-07		
Road 28	28	1000-1100	1.54E-02	5.12E-07	1.18E-03	5.80E-02	1.98E-06	4.07E-02	6.46E-07	2.95E-08	5.13E-02	3.46E-03	1.62E-07		
Road 28	28	1100-1200	1.50E-02	4.71E-07	9.81E-03	5.88E-02	1.85E-06	3.84E-02	6.13E-02	2.73E-08	4.82E-02	4.19E-03	1.32E-07		
Road 28	28	1200-1300	1.43E-02	3.89E-07	8.05E-03	5.58E-02	1.45E-06	3.09E-02	6.58E-02	1.89E-08	3.96E-02	3.86E-03	1.06E-07		
Road 28	28	1300-1400	1.40E-02	4.02E-07	8.34E-03	5.47E-02	1.39E-06	2.97E-02	6.58E-02	1.89E-08	3.96E-02	3.86E-03	1.06E-07		
Road 28	28	1400-1500	1.43E-02	4.24E-07	8.73E-03	5.57E-02	1.55E-06	3.42E-02	6.70E-02	2.07E-08	4.46E-02	3.99E-03	1.16E-07		
Road 28	28	1500-1600	1.33E-02	4.03E-07	8.35E-03	5.54E-02	1.68E-06	3.48E-02	7.00E-02	2.09E-08	4.32E-02	3.75E-03	1.14E-07		
Road 28	28	1600-1700	1.35E-02	4.36E-07	9.03E-03	5.53E-02	1.69E-06	3.50E-02	6.70E-02	2.12E-08	4.37E-02	3.75E-03	1.14E-07		
Road 28	28	1700-1800	1.35E-02	3.54E-07	7.33E-03	4.62E-02	1.30E-06	3.36E-02	6.53E-02	1.98E-08	4.14E-02	2.81E-03	8.86E-08		
Road 28	28	1800-1900	1.46E-02	3.74E-07	5.69E-03	4.62E-02	1.26E-06	3.28E-02	6.32E-02	1.97E-08	3.72E-02	2.60E-03	7.95E-08		
Road 28	28	1900-2000	1.51E-02	4.10E-07	6.60E-03	5.23E-02	1.62E-06	3.32E-02	6.45E-02	2.02E-08	4.04E-02	2.71E-03	8.45E-08		
Road 28	28	2000-2100	6.02E-03	3.36E-07	2.82E-03	3.56E-03	8.24E-07	1.71E-02	4.25E-06	9.60E-07	1.99E-02	1.61E-03	3.64E-08		
Road 28	28	2100-2200	5.53E-03	1.24E-07	2.55E-03	3.39E-03	4.08E-07	1.67E-02	4.14E-06	8.32E-07	1.96E-02	1.49E-03	3.36E-08		
Road 28	28	2200-2300	5.53E-03	1.24E-07	2.55E-03	3.39E-03	4.08E-07	1.67E-02	4.14E-06	8.32E-07	1.96E-02	1.49E-03	3.36E-08		
Road 28	28	2300-0000	6.15E-03	1.01E-07	2.09E-03	3.73E-03	1.17E-06	1.27E-02	4.25E-06	9.60E-07	1.99E-02	1.61E-03	3.64E-08		
Road 29	29	0000-0100	5.29E-03	4.62E-08	1.16E-02	3.52E-02	3.08E-07	7.75E-03	4.04E-06	3.54E-07	8.91E-03	1.06E-04	1.38E-08		
Road 29	29	0100-0200	5.29E-03	4.62E-08	1.16E-02	3.52E-02	3.08E-07	7.75E-03	4.04E-06	3.54E-07	8.91E-03	1.06E-04	1.38E-08		
Road 29	29	0200-0300	7.08E-03	2.99E-08	7.54E-04	1.94E-02	1.66E-07	4.19E-03	4.64E-06	1.96E-07	4.94E-03	1.77E-04	7.96E-09		
Road 29	29	0300-0400	7.08E-03	2.99E-08	7.54E-04	1.94E-02	1.66E-07	4.19E-03	4.64E-06	1.96E-07	4.94E-03	1.77E-04	7.96E-09		
Road 29	29	0400-0500	6.22E-03	2.58E-08	7.65E-04	1.42E-02	1.56E-07	3.49E-03	4.62E-06	1.65E-07	4.17E-03	6.63E-09			
Road 29	29	0500-0600	6.22E-03	2.58E-08	7.65E-04	1.42E-02	1.56E-07	3.49E-03	4.62E-06	1.65E-07	4.17E-03	6.63E-09			
Road 29	29	0600-0700	7.88E-03	1.07E-07	2.54E-02	2.42E-02	2.61E-07	6.11E-02	5.01E-06	1.13E-07	1.47E-02	3.85E-03			
Road 29	29	0700-0800	8.96E-03	1.25E-07	2.94E-02	2.84E-02	2.98E-07	6.24E-02	5.24E-06	1.41E-06	1.56E-02	2.35E-03	3.90E-08		
Road 29	29	0800-0900	9.25E-03	1.23E-07	2.94E-02	2.84E-02	2.98E-07	6.24E-02	5.24E-06	1.41E-06	1.56E-02	2.35E-03	3.90E-08		
Road 29	29	0900-1000	9.25E-03	2.37E-07	5.50E-02	4.10E-06	2.76E-02	5.28E-02	1.33E-06	3.36E-02	2.50E-03	6.95E-08			
Road 29	29	1000-1100	1.06E-02	2.54E-07	5.89E-02	4.01E-06	2.52E-02	5.44E-02	1.22E-06	3.14E-02	2.43E-03	6.82E-08			
Road 29	29	1100-1200	1.06E-02	2.54E-07	5.89E-02	4.01E-06	2.52E-02	5.44E-02	1.22E-06	3.14E-02	2.43E-03	6.82E-08			
Road 29	29	1200-1300	1.06E-02	3.56E-07	8.57E-02	5.78E-02	1.29E-06	3.24E-02	7.39E-06	1.64E-06	4.14E-02	4.04E-03	9.76E-08		
Road 29	29	1300-1400	1.06E-02	3.72E-07	9.36E-02	5.95E-02	1.39E-06	3.50E-02	7.59E-06	1.76E-06	4.43E-02	4.25E-03	1.04E-07		
Road 29	29	1400-1500	1.06E-02	3.72E-07	9.36E-02	5.95E-02	1.39E-06	3.50E-02	7.59E-06	1.76E-06	4.43E-02	4.25E-03	1.04E-07		
Road 29	29	1500-1600	1.47E-02	3.66E-07	9.22E-03	5.83E-02	1.45E-06	3.65E-02	7.31E-07	1.81E-05	4.57E-02	4.28E-03	1.05E-07		
Road 29	29	1600-1700	1.56E-02	3.96E-07	9.73E-03	5.56E-02	1.43E-06	3.60E-02	7.69E-07	1.81E-05	4.57E-02	4.17E-03	1.07E-07		
Road 29	29	1700-1800	1.56E-02	3.96E-07	9.73E-03	5.56E-02	1.43E-06	3.60E-02	7.69E-07	1.81E-05	4.57E-02	4.17E-03	1.07E-07		
Road 29	29	1800-1900	3.32E-03	2.35E-07	5.92E-03	3.66E-02	1.00E-06	2.81E-02	5.50E-06	1.27E-06	3.20E-02	3.34E-03	6.61E-08		
Road 29	29	1900-2000	6.76E-03	1.49E-07	3.76E-03	3.93E-02	7.37E-07	1.86E-02	4.03E-06	8.86E-07	2.23E-08	1.86E-03	4.14E-08		
Road 29	29	2000-2100	1.76E-03	1.17E-07	2.93E-03	3.63E-02	7.15E-07	1.63E-02	3.75E-06	8.27E-07	2.12E-08	1.71E-03	3.85E-08		
Road 29	29	2100-2200	6.43E-03	1.40E-07	3.76E-03	3.62E-02	1.81E-07	1.58E-02	4.37E-07	7.27E-08	1.86E-03	3.76E-03	8.05E-08		
Road 29	29	2200-2300	6.42E-03	1.06E-07	2.67E-03	3.56E-02	8.88E-07	1.48E-02	4.70E-06	6.94E-07	1.72E-08	1.72E-03	2.84E-08		
Road 29	29	2300-0000	9.05E-03	1.75E-07	4.29E-03	4.57E-02	1.18E-06	2.18E-02	5.01E-06	1.46E-06	1.95E-03	2.60E-03	5.65E-08		
Road 30	30	0000-0100	0.95E-03	9.34E-08	4.94E-04	4.75E-07	1.18E-07	5.51E-05	5.69E-07						
Road 30	30	0100-0200	1.05E-04	7.25E-08	3.59E-04	5.90E-07	3.78E-07	1.21E-03	5.95E-02	4.10E-07	1.47E-04	2.68E-03	1.85E-08		
Road 30	30	0200-0300	1.26E-03	6.23E-08	2.23E-04	3.25E-07	2.17E-07	9.73E-04	4.94E-06	3.34E-07	1.26E-04	3.06E-03	1.58E-08		
Road 30	30	0300-0400	1.35E-03	6.23E-08	2.23E-04	3.25E-07	2.17E-07	9.73E-04	4.94E-06	3.34E-07	1.26E-04	3.06E-03	1.58E-08		
Road 30	30	0400-0500	1.36E-03	6.29E-08	2.24E-04	3.54E-07	2.61E-07	9.32E-04	7.00E-02	3.24E-07	1.19E-04	3.64E-06	1.60E-08		
Road 30	30	0500-0600	1.72E-04	9.34E-08	3.55E-04	5.68E-07	4.08E-07	1.56E-03	6.85E-02	5.37E-07	1.92E-04	3.27E-03	2.56E-08		
Road 30	30	0600-0700	1.72E-04	9.34E-08	3.55E-04	5.68E-07	4.08E-07	1.56E-03	6.85E-02	5.37E-07	1.92E-04	3.27E-03	2.56E-08		
Road 30	30	0700-0800	1.66E-03	4.68E-07	1.67E-03	5.86E-06	2.02E-06	7.22E-03	7.22E-02	2.40E-06	8.89E-04	1.54E-02	2.2E-07		
Road 30	30	0800-0900	1.31E-02	5.27E-07	1.87E-03	5.62E-05	2.59E-06	8.03E-03	8.33E-02	3.77E-06	9.49E-04	3.48E-03	1.88E-07		
Road 30	30	0900-1000	1.31E-02	5.27E-07	1.87E-03	5.62E-05	2.59E-06	8.03E-03	8.33E-02	3.77E-06	9.49E-04	3.48E-03	1.88E-07		
Road 30	30	1000-1100	1.76E-02	5.38E-07	1.92E-03	6.06E-06	2.09E-06	7.47E-03	8.33E-02	2.63E-06	9.39E-04	4.59E-03	2.45E-07		
Road 30	30	1100-1200	1.67E-02	5.38E-07											

Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Appendix\Appendix 3.5.4 Emission Factor in 2043-S B.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24-hour Emission Factors for

AERMOD model (September)		Year 2003		NO _x Emission				NO _x Emission						
Row Name	Row ID	Month/Year	g/mwh	g/m ³	tonnes/year	g/mwh	g/m ³	tonnes/year	Month/Year	g/mwh	g/m ³	tonnes/year		
Row 31	31	0000-0000	1.3166	3.011E-08	9.838E-05	5.26E-02	1.14E-07	1.70E-04	6.58E-02	1.44E-07	4.69E-04	3.59E-03	7.88E-05	2.56E-04
Row 31	31	0100-0200	1.620E-08	2.505E-08	8.816E-05	5.58E-02	6.62E-08	2.81E-04	7.33E-03	1.13E-07	3.63E-04	2.92E-03	6.49E-05	2.19E-04
Row 31	31	0200-0400	1.931E-08	2.912E-08	1.031E-04	6.58E-02	7.54E-08	3.16E-04	8.35E-03	1.26E-07	4.19E-04	3.42E-03	7.50E-05	2.46E-04
Row 31	31	0300-0400	2.13E-07	2.111E-08	6.88E-05	5.58E-02	5.52E-08	2.18E-04	8.72E-02	8.63E-08	2.81E-04	5.39E-04	5.34E-04	1.74E-04
Row 31	31	0400-0500	2.10E-02	2.27E-08	7.48E-05	5.58E-02	1.2E-08	3.92E-04	8.69E-02	9.69E-08	3.06E-04	5.34E-04	5.78E-05	1.89E-04
Row 31	31	0500-0600	2.10E-02	2.27E-08	7.48E-05	5.58E-02	1.2E-08	3.92E-04	8.69E-02	9.69E-08	3.06E-04	5.34E-04	5.78E-05	1.89E-04
Row 31	31	0600-0700	1.57E-07	5.603E-08	1.83E-04	5.58E-02	2.13E-07	6.98E-04	7.55E-02	2.96E-07	8.76E-04	5.23E-03	1.50E-04	4.90E-04
Row 31	31	0700-0800	1.84E-02	1.414E-07	4.639E-04	6.39E-02	4.91E-07	1.60E-03	6.23E-02	6.23E-07	2.06E-03	4.86E-03	3.73E-03	1.22E-04
Row 31	31	0800-0900	1.84E-02	1.414E-07	4.639E-04	6.39E-02	4.91E-07	1.60E-03	6.23E-02	6.23E-07	2.06E-03	4.86E-03	3.73E-03	1.22E-04
Row 31	31	0900-1000	1.96E-02	1.59E-07	5.160E-04	6.39E-02	5.48E-07	1.81E-03	6.78E-02	7.08E-07	2.31E-03	5.37E-03	4.37E-04	1.40E-04
Row 31	31	1000-1100	2.17E-02	1.62E-07	5.39E-04	7.11E-02	6.17E-07	2.07E-03	1.75E-02	6.92E-07	2.42E-03	5.92E-03	4.27E-04	1.44E-04
Row 31	31	1100-1200	2.17E-02	1.62E-07	5.39E-04	7.11E-02	6.17E-07	2.07E-03	1.75E-02	6.92E-07	2.42E-03	5.92E-03	4.27E-04	1.44E-04
Row 31	31	1200-1300	2.02E-04	1.040E-07	3.38E-05	5.58E-02	2.28E-07	8.05E-05	9.23E-02	4.27E-07	1.07E-03	5.14E-03	2.67E-06	8.69E-06
Row 31	31	1300-1400	1.99E-02	1.06E-07	3.46E-04	6.39E-02	3.39E-07	1.11E-03	8.35E-02	4.45E-07	1.45E-03	5.15E-03	2.76E-03	9.01E-04
Row 31	31	1400-1500	1.99E-02	1.06E-07	3.46E-04	6.39E-02	3.39E-07	1.11E-03	8.35E-02	4.45E-07	1.45E-03	5.15E-03	2.76E-03	9.01E-04
Row 31	31	1500-1600	1.99E-02	1.06E-07	3.46E-04	6.39E-02	3.39E-07	1.11E-03	8.35E-02	4.45E-07	1.45E-03	5.15E-03	2.76E-03	9.01E-04
Row 31	31	1600-1700	1.87E-02	1.111E-07	3.62E-04	5.58E-02	3.54E-07	1.16E-03	8.62E-02	4.65E-07	1.52E-03	4.84E-03	2.88E-03	9.96E-04
Row 31	31	1700-1800	1.59E-02	9.79E-08	3.14E-04	5.27E-03	4.34E-07	1.12E-03	6.78E-02	4.41E-07	1.44E-03	3.92E-03	2.59E-03	8.31E-04
Row 31	31	1800-1900	1.42E-02	8.53E-08	2.82E-04	4.59E-03	3.91E-07	1.03E-03	6.01E-02	3.94E-07	1.28E-03	3.42E-03	2.22E-03	7.34E-04
Row 31	31	1900-2000	7.62E-03	3.81E-08	1.24E-04	3.52E-02	1.72E-07	5.62E-04	4.22E-02	2.11E-07	6.87E-04	1.98E-03	9.87E-02	3.29E-03
Row 31	31	2000-2100	6.92E-03	3.18E-04	1.382E-01	5.42E-02	4.92E-04	4.53E-04	6.28E-02	1.83E-07	5.99E-04	2.09E-03	8.150E-03	2.66E-04
Row 31	31	2100-2200	6.92E-03	3.18E-04	1.382E-01	5.42E-02	4.92E-04	4.53E-04	6.28E-02	1.83E-07	5.99E-04	2.09E-03	8.150E-03	2.66E-04
Row 31	31	2200-2300	7.17E-03	2.94E-08	8.60E-05	3.80E-02	4.45E-07	1.47E-04	4.57E-02	1.74E-07	5.68E-04	1.93E-03	7.330E-03	2.39E-04
Row 31	31	2300-2400	7.17E-03	2.94E-08	8.60E-05	3.80E-02	4.45E-07	1.47E-04	4.57E-02	1.74E-07	5.68E-04	1.93E-03	7.330E-03	2.39E-04
Row 31	31	0000-0000	1.3166	3.011E-08	9.838E-05	5.26E-02	1.14E-07	1.70E-04	6.58E-02	1.44E-07	4.69E-04	3.59E-03	7.88E-05	2.56E-04
Row 31	31	0100-0200	1.620E-08	2.505E-08	8.816E-05	5.58E-02	6.62E-08	2.81E-04	7.33E-03	1.13E-07	3.63E-04	2.92E-03	6.49E-05	2.19E-04
Row 31	31	0200-0400	1.931E-08	2.912E-08	1.031E-04	6.58E-02	7.54E-08	3.16E-04	8.35E-03	1.26E-07	4.19E-04	3.42E-03	7.50E-05	2.46E-04
Row 31	31	0300-0400	2.13E-07	2.111E-08	6.88E-05	5.58E-02	5.52E-08	2.18E-04	8.72E-02	8.63E-08	2.81E-04	5.39E-04	5.34E-04	1.74E-04
Row 31	31	0400-0500	2.10E-02	2.27E-08	7.48E-05	5.58E-02	1.2E-08	3.92E-04	8.69E-02	9.69E-08	3.06E-04	5.34E-04	5.78E-05	1.89E-04
Row 31	31	0500-0600	2.10E-02	2.27E-08	7.48E-05	5.58E-02	1.2E-08	3.92E-04	8.69E-02	9.69E-08	3.06E-04	5.34E-04	5.78E-05	1.89E-04
Row 31	31	0600-0700	1.57E-07	5.603E-08	1.83E-04	5.58E-02	2.13E-07	6.98E-04	7.55E-02	2.96E-07	8.76E-04	5.23E-03	1.50E-04	4.90E-04
Row 31	31	0700-0800	1.84E-02	1.414E-07	4.639E-04	6.39E-02	4.91E-07	1.60E-03	6.23E-02	6.23E-07	2.06E-03	4.86E-03	3.73E-03	1.22E-04
Row 31	31	0800-0900	1.84E-02	1.414E-07	4.639E-04	6.39E-02	4.91E-07	1.60E-03	6.23E-02	6.23E-07	2.06E-03	4.86E-03	3.73E-03	1.22E-04
Row 31	31	0900-1000	1.96E-02	1.59E-07	5.160E-04	6.39E-02	5.48E-07	1.81E-03	6.78E-02	7.08E-07	2.31E-03	5.37E-03	4.37E-04	1.40E-04
Row 31	31	1000-1100	2.17E-02	1.62E-07	5.39E-04	7.11E-02	6.17E-07	2.07E-03	1.75E-02	6.92E-07	2.42E-03	5.92E-03	4.27E-04	1.44E-04
Row 31	31	1100-1200	2.17E-02	1.62E-07	5.39E-04	7.11E-02	6.17E-07	2.07E-03	1.75E-02	6.92E-07	2.42E-03	5.92E-03	4.27E-04	1.44E-04
Row 31	31	1200-1300	2.02E-04	1.040E-07	3.38E-05	5.58E-02	2.28E-07	8.05E-05	9.23E-02	4.27E-07	1.07E-03	5.14E-03	2.67E-06	8.69E-06
Row 31	31	1300-1400	1.99E-02	1.06E-07	3.46E-04	6.39E-02	3.39E-07	1.11E-03	8.35E-02	4.45E-07	1.45E-03	5.15E-03	2.76E-03	9.01E-04
Row 31	31	1400-1500	1.99E-02	1.06E-07	3.46E-04	6.39E-02	3.39E-07	1.11E-03	8.35E-02	4.45E-07	1.45E-03	5.15E-03	2.76E-03	9.01E-04
Row 31	31	1500-1600	1.99E-02	1.06E-07	3.46E-04	6.39E-02	3.39E-07	1.11E-03	8.35E-02	4.45E-07	1.45E-03	5.15E-03	2.76E-03	9.01E-04
Row 31	31	1600-1700	1.87E-02	1.111E-07	3.62E-04	5.58E-02	3.54E-07	1.16E-03	8.62E-02	4.65E-07	1.52E-03	4.84E-03	2.88E-03	9.96E-04
Row 31	31	1700-1800	1.59E-02	9.79E-08	3.14E-04	5.27E-03	4.34E-07	1.12E-03	6.78E-02	4.41E-07	1.44E-03	3.92E-03	2.59E-03	8.31E-04
Row 31	31	1800-1900	1.42E-02	8.53E-08	2.82E-04	4.59E-03	3.91E-07	1.03E-03	6.01E-02	3.94E-07	1.28E-03	3.42E-03	2.22E-03	7.34E-04
Row 31	31	1900-2000	7.62E-03	3.81E-08	1.24E-04	3.52E-02	1.72E-07	5.62E-04	4.22E-02	2.11E-07	6.87E-04	1.98E-03	9.87E-02	3.29E-03
Row 31	31	2000-2100	6.92E-03	3.18E-04	1.382E-01	5.42E-02	4.92E-04	4.53E-04	6.28E-02	1.83E-07	5.99E-04	2.09E-03	8.150E-03	2.66E-04
Row 31	31	2100-2200	6.92E-03	3.18E-04	1.382E-01	5.42E-02	4.92E-04	4.53E-04	6.28E-02	1.83E-07	5.99E-04	2.09E-03	8.150E-03	2.66E-04
Row 31	31	2200-2300	7.17E-03	2.94E-08	8.60E-05	3.80E-02	4.45E-07	1.47E-04	4.57E-02	1.74E-07	5.68E-04	1.93E-03	7.330E-03	2.39E-04
Row 31	31	2300-2400	7.17E-03	2.94E-08	8.60E-05	3.80E-02	4.45E-07	1.47E-04	4.57E-02	1.74E-07	5.68E-04	1.93E-03	7.330E-03	2.39E-04
Row 31	31	0000-0000	1.3166	3.011E-08	9.838E-05	5.26E-02	1.14E-07	1.70E-04	6.58E-02	1.44E-07	4.69E-04	3.59E-03	7.88E-05	2.56E-04
Row 31	31	0100-0200	1.620E-08	2.505E-08	8.816E-05	5.58E-02	6.62E-08	2.81E-04	7.33E-03	1.13E-07	3.63E-04	2.92E-03	6.49E-05	2.19E-04
Row 31	31	0200-0400	1.931E-08	2.912E-08	1.031E-04	6.58E-02	7.54E-08	3.16E-04	8.35E-03	1.26E-07	4.19E-04	3.42E-03	7.50E-05	2.46E-04
Row 31	31	0300-0400	2.13E-07	2.111E-08	6.88E-05	5.58E-02	5.52E-08	2.18E-04	8.72E-02	8.63E-08	2.81E-04	5.39E-04	5.34E-04	1.74E-04
Row 31	31	0400-0500	2.10E-02	2.27E-08	7.48E-05	5.58E-02	1.2E-08	3.92E-04	8.69E-02	9.69E-08	3.06E-04	5.34E-04	5.78E-05	1.89E-04
Row 31	31	0500-0600	2.10E-02	2.27E-08	7.48E-05	5.58E-02	1.2E-08	3.92E-04	8.69E-02	9.69E-08	3.06E-04	5.34E-04	5.78E-05	1.89E-04
Row 31	31	0600-0700	1.57E-07	5.603E-08	1.83E-04	5.58E-02	2.13E-07	6.98E-04	7.55E-02	2.96E-07	8.76E-04	5.23E-03	1.50E-04	4.90E-04
Row 31	31	0700-0800	1.84E-02	1.414E-07	4.639E-04	6.39E-02	4.91E-07	1.60E-03	6.23E-02	6.23E-07	2.06E-03	4.86E-03	3.73E-03	1.22E-04
Row 31	31	0800-0900	1.84E-02	1.414E-07	4.639E-04	6.39E-02	4.91E-07	1.60E-03	6.23E-02	6.23E-07	2.06E-03	4.86E-03	3.73E-03	1.22E-04
Row 31	31	0900-1000	1.96E-02	1.59E-07	5.160E-04	6.39E-02	5.48E-07	1.81E-03	6.78E-02	7.08E-07	2.31E-03	5.37E-03	4.37E-04	1.40E-04
Row 31	31	1000-1100	2.17E-02	1.62E-07	5.39E-04	7.11E-02	6.17E-07	2.07E-03	1.75E-02	6.92E-07	2.42E-03	5.92E-03	4.27E-04	1.44E-04
Row 31	31	1100-1200	2.17E-02	1.62E-07	5.39E-04	7.11E-02	6.17E-07	2.07E-03	1.75E-02	6.92E-07	2.42E-03	5.92E-03	4.27E-04	1.44E-04
Row 31	31	1200-1300	2.02E-04	1.040E-07	3.38E-05	5.58E-02	2.28E-07	8.05E-05	9.23E-02	4.27E-07	1.07E-03	5.14E-03	2.67E-06	8.69E-06
Row 31	31	1300-1400	1.99E-02	1.06E-07	3.46E-04	6.39E-02	3.39E-07	1.11E-03	8.35E-02	4.45E-07	1.45E-03	5.15E-03	2.76E-03	9.01E-04
Row 31	31	1400-1500	1.99E-02	1.06E-07	3.46E-04	6.39E-02	3.39E-07	1.11E-03	8.35E-02	4.45E-07	1.45E-03	5.15E-03	2.76E-03	9.01E-04
Row 31	31	1500-1600	1.99E-02	1.06E-07	3.46E-04	6.39E-02	3.39E-07	1.11E-03	8.35E-02	4.45E-07	1.45E-03	5.15E-03	2.76E-03	

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Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

AERMOD model (September)			Year 2043		NO _x Emission		NO Emission							
Read Name	Read ID	Hour	Monthly/Hourly		Monthly/Average		Monthly/Hourly		Monthly/Average					
			g/min/hr	g/min ² /hr	g/min/hr	g/min/hr	g/min/hr	g/min ² /hr	g/min/hr	g/min ² /hr				
Read 34	34	0800-0900	8.138e-03	2.076e-07	1.988e-03	9.938e-02	1.006e-06	9.586e-03	4.744e-02	1.211e-06	1.152e-02	7.111e-03	5.376e-08	5.138e-04
Read 34	34	0900-1000	9.925e-03	1.959e-07	1.898e-03	4.433e-02	9.956e-07	8.698e-03	5.272e-01	1.186e-06	1.092e-02	2.566e-03	5.228e-08	4.984e-04
Read 34	34	1000-1100	1.021e-02	1.952e-07	1.876e-03	4.599e-02	7.886e-07	8.518e-03	5.606e-02	9.611e-07	9.783e-03	2.673e-03	5.483e-08	4.426e-04
Read 34	34	1100-1200	1.811e-02	2.617e-07	2.556e-03	9.756e-02	9.611e-07	8.188e-04	7.411e-01	1.238e-06	1.174e-02	4.438e-03	5.656e-08	7.024e-04
Read 34	34	1200-1300	1.911e-02	2.617e-07	2.556e-03	9.756e-02	9.611e-07	8.188e-04	7.411e-01	1.238e-06	1.174e-02	4.438e-03	5.656e-08	7.024e-04
Read 34	34	1400-1500	1.611e-02	2.907e-07	2.776e-03	5.878e-02	1.066e-01	1.012e-02	7.471e-03	1.366e-06	1.292e-02	4.471e-03	8.077e-08	7.711e-04
Read 34	34	1500-1600	1.496e-02	2.716e-07	2.636e-03	4.955e-02	1.086e-01	1.042e-02	7.344e-03	1.366e-06	1.396e-02	4.298e-03	6.871e-08	7.524e-04
Read 34	34	1600-1700	1.114e-02	2.373e-07	2.286e-03	4.896e-02	1.011e-06	9.660e-03	6.009e-02	1.296e-06	1.196e-02	3.241e-03	7.411e-08	6.114e-04
Read 34	34	1800-1900	8.477e-03	1.786e-07	1.711e-03	6.396e-02	7.786e-07	7.476e-03	4.528e-02	9.571e-04	9.141e-03	2.311e-03	5.011e-08	4.796e-04
Read 34	34	1900-2000	6.894e-03	1.511e-07	1.441e-03	5.211e-02	6.441e-07	6.441e-03	4.222e-02	5.621e-07	4.911e-03	1.716e-03	4.281e-08	4.046e-04
Read 34	34	2000-2100	7.711e-03	1.656e-07	1.586e-03	8.111e-02	3.822e-02	4.688e-07	4.476e-03	4.306e-05	5.621e-04	1.871e-03	4.281e-08	4.046e-04
Read 34	34	2100-2200	6.511e-03	8.291e-08	7.911e-04	6.461e-02	4.631e-07	4.421e-03	4.296e-02	5.461e-07	5.221e-03	1.811e-03	2.311e-08	2.28e-04
Read 34	34	2200-2300	6.496e-03	8.111e-08	7.681e-04	3.571e-02	4.411e-07	4.211e-03	4.222e-02	5.621e-07	4.911e-03	1.716e-03	4.281e-08	4.046e-04
Read 34	34	2300-2400	7.711e-03	1.656e-07	1.586e-03	8.111e-02	3.822e-02	4.688e-07	4.476e-03	4.306e-05	5.621e-04	1.871e-03	4.281e-08	4.046e-04
Read 35	35	0000-0100	2.906e-02	3.502e-08	3.111e-05	8.866e-02	1.075e-07	9.525e-03	1.118e-02	1.421e-02	1.264e-04	4.911e-03	5.946e-09	5.276e-06
Read 35	35	0100-0200	3.686e-02	3.211e-08	3.866e-05	1.021e-02	8.959e-09	7.969e-03	1.242e-01	1.084e-04	6.121e-03	3.866e-08	3.876e-06	3.786e-06
Read 35	35	0200-0300	4.466e-02	3.096e-08	4.666e-05	1.126e-01	7.636e-07	6.776e-03	1.726e-01	1.064e-07	9.436e-03	7.996e-03	4.936e-08	3.86e-06
Read 35	35	0300-0400	4.711e-02	3.096e-08	4.746e-05	1.221e-01	8.006e-08	1.106e-03	1.666e-01	1.1107e-04	9.846e-03	7.911e-03	4.281e-08	4.046e-04
Read 35	35	0400-0500	4.866e-02	3.006e-08	5.066e-05	1.236e-01	7.636e-07	6.776e-03	1.726e-01	1.064e-07	9.436e-03	7.996e-03	4.936e-08	3.86e-06
Read 35	35	0500-0600	4.711e-02	3.096e-08	4.746e-05	1.221e-01	8.006e-08	1.106e-03	1.666e-01	1.1107e-04	9.846e-03	7.911e-03	4.281e-08	4.046e-04
Read 35	35	0600-0700	4.866e-02	3.006e-08	5.066e-05	1.236e-01	7.636e-07	6.776e-03	1.726e-01	1.064e-07	9.436e-03	7.996e-03	4.936e-08	3.86e-06
Read 35	35	0700-0800	4.221e-02	1.716e-07	1.533e-04	6.281e-02	4.996e-04	4.688e-03	1.646e-01	2.756e-07	5.604e-04	6.611e-03	8.956e-09	2.965e-06
Read 35	35	0800-0900	1.677e-07	1.065e-04	1.196e-04	4.783e-02	1.585e-03	1.712e-03	7.127e-03	6.695e-04	3.909e-03	3.909e-03	3.909e-03	3.909e-03
Read 35	35	0900-1000	4.433e-02	1.828e-07	1.624e-03	1.376e-01	5.306e-07	4.714e-04	1.730e-01	7.127e-03	6.313e-04	7.081e-03	2.911e-08	2.585e-05
Read 35	35	1000-1100	4.877e-03	1.833e-07	1.624e-04	1.296e-01	5.158e-07	4.581e-04	1.886e-01	6.698e-07	6.206e-04	7.766e-03	2.911e-08	2.585e-05
Read 35	35	1100-1200	4.333e-02	1.716e-07	1.498e-03	1.163e-01	4.798e-07	4.281e-04	1.886e-01	6.698e-07	6.206e-04	7.766e-03	2.911e-08	2.585e-05
Read 35	35	1200-1300	5.655e-02	1.442e-07	1.272e-04	1.431e-01	3.615e-07	3.206e-04	2.006e-01	5.037e-07	4.471e-04	8.801e-03	2.221e-09	1.976e-06
Read 35	35	1300-1400	5.603e-02	1.425e-07	1.286e-04	1.456e-01	3.786e-07	3.311e-04	2.011e-01	5.147e-07	4.598e-04	8.786e-03	2.268e-09	2.008e-06
Read 35	35	1400-1500	5.111e-02	1.447e-07	1.286e-04	1.411e-01	3.811e-07	3.396e-04	1.944e-01	5.256e-07	4.686e-04	8.466e-03	2.268e-09	2.008e-06
Read 35	35	1500-1600	5.311e-02	1.448e-07	1.286e-04	1.411e-01	3.811e-07	3.396e-04	1.944e-01	5.256e-07	4.686e-04	8.466e-03	2.268e-09	2.008e-06
Read 35	35	1600-1700	5.256e-02	1.447e-07	1.311e-04	1.361e-01	3.806e-07	3.376e-04	1.886e-01	5.271e-07	4.686e-04	8.286e-03	2.321e-09	2.051e-06
Read 35	35	1700-1800	4.603e-02	1.399e-07	1.233e-04	1.228e-01	3.711e-07	3.311e-04	1.866e-01	5.168e-07	4.546e-04	7.286e-03	1.866e-09	1.946e-06
Read 35	35	1800-1900	4.603e-02	1.399e-07	1.233e-04	1.228e-01	3.711e-07	3.311e-04	1.866e-01	5.168e-07	4.546e-04	7.286e-03	1.866e-09	1.946e-06
Read 35	35	1900-2000	2.077e-02	1.411e-08	3.656e-05	6.666e-02	1.366e-07	1.210e-04	8.936e-07	1.771e-07	1.556e-04	3.946e-03	9.846e-09	8.176e-06
Read 35	35	2000-2100	2.338e-02	1.374e-08	3.326e-05	7.711e-02	1.228e-07	1.105e-04	1.006e-01	1.631e-07	1.436e-04	3.886e-03	6.711e-09	5.516e-06
Read 35	35	2100-2200	2.338e-02	1.374e-08	3.326e-05	7.711e-02	1.228e-07	1.105e-04	1.006e-01	1.631e-07	1.436e-04	3.886e-03	6.711e-09	5.516e-06
Read 35	35	2200-2300	2.306e-02	3.946e-08	3.186e-05	7.606e-02	1.181e-07	1.056e-04	9.906e-01	1.567e-07	1.371e-04	3.716e-03	8.286e-09	5.716e-06
Read 35	35	2300-2400	2.686e-02	3.296e-08	2.903e-05	8.246e-02	1.011e-07	1.001e-04	1.091e-01	1.361e-07	1.136e-04	4.456e-03	4.886e-09	4.886e-06
Read 36	36	0000-0100	2.111e-02	1.166e-07	2.111e-03	6.211e-02	1.166e-07	1.166e-03	1.166e-07	1.166e-03	1.166e-07	1.166e-03	1.166e-07	1.166e-03
Read 36	36	0100-0200	4.188e-02	1.466e-08	4.296e-04	1.481e-01	1.652e-02	1.502e-06	1.906e-01	2.127e-09	1.964e-04	7.411e-03	8.266e-09	7.606e-06
Read 36	36	0200-0300	4.811e-02	4.296e-08	3.946e-05	1.581e-01	1.411e-03	3.207e-04	2.076e-04	1.846e-07	1.696e-04	8.376e-04	4.696e-09	4.886e-06
Read 36	36	0300-0400	5.333e-02	4.296e-08	4.296e-05	2.111e-01	1.581e-03	3.207e-04	2.076e-04	1.846e-07	1.696e-04	8.376e-04	4.696e-09	4.886e-06
Read 36	36	0400-0500	5.306e-02	4.296e-08	3.976e-05	1.696e-01	1.381e-07	1.276e-04	2.226e-01	1.811e-07	1.676e-04	9.176e-03	1.506e-09	8.596e-06
Read 36	36	0500-0600	5.477e-02	5.786e-08	5.246e-05	1.881e-01	2.055e-08	1.846e-04	2.126e-01	2.626e-07	2.416e-03	8.376e-04	1.026e-09	3.96e-06
Read 36	36	0600-0700	4.211e-02	5.786e-08	5.246e-05	1.881e-01	2.055e-08	1.846e-04	2.126e-01	2.626e-07	2.416e-03	8.376e-04	1.026e-09	3.96e-06
Read 36	36	0700-0800	5.477e-02	5.786e-08	5.246e-05	1.881e-01	2.055e-08	1.846e-04	2.126e-01	2.626e-07	2.416e-03	8.376e-04	1.026e-09	3.96e-06
Read 36	36	0800-0900	5.277e-02	3.106e-07	2.896e-04	1.791e-01	1.056e-06	6.696e-04	2.326e-01	1.366e-06	1.256e-03	7.786e-05	5.886e-09	5.211e-06
Read 36	36	0900-1000	6.033e-02	3.106e-07	2.896e-04	1.791e-01	1.056e-06	6.696e-04	2.326e-01	1.366e-06	1.256e-03	7.786e-05	5.886e-09	5.211e-06
Read 36	36	1000-1100	6.576e-02	3.096e-07	2.846e-04	2.011e-01	9.446e-06	8.666e-05	2.266e-01	1.26e-06	1.156e-03	8.166e-05	8.846e-09	5.516e-06
Read 36	36	1100-1200	6.696e-02	2.938e-07	2.696e-04	1.991e-01	8.956e-07	8.276e-04	2.646e-01	1.196e-06	1.096e-03	8.006e-05	8.611e-08	3.311e-05
Read 36	36	1200-1300	6.696e-02	2.938e-07	2.696e-04	1.991e-01	8.956e-07	8.276e-04	2.646e-01	1.196e-06	1.096e-03	8.006e-05	8.611e-08	3.311e-05
Read 36	36	1300-1400	7.976e-02	3.102e-07	2.896e-04	2.311e-01	9.011e-07	8.276e-04	3.111e-02	1.126e-06	1.111e-03	9.376e-05	8.556e-09	5.556e-06
Read 36	36	1400-1500	7.726e-02	3.102e-07	2.896e-04	2.256e-01	9.026e-07	8.276e-04	3.026e-01	1.211e-06	1.111e-03	9.466e-05	8.776e-08	4.476e-05
Read 36	36	1500-1600	7.826e-02	3.211e-07	2.896e-04	2.381e-01	8.571e-07	8.276e-04	3.111e-02	1.266e-06	1.176e-03	9.076e-05	8.726e-08	4.476e-05
Read 36	36	1600-1700	7.826e-02	3.211e-07	2.896e-04	2.381e-01	8.571e-07	8.276e-04	3.111e-02	1.266e-06	1.176e-03	9.076e-05	8.726e-08	4.476e-05
Read 36	36	1700-1800	6.726e-02	2.947e-07	2.706e-04	2.146e-01	9.366e-07	8.611e-04	2.811e-02	1.266e-06	1.136e-03	9.106e-05	8.776e-08	4.476e-05
Read 36	36	1800-1900	5.446e-02	2.311e-07	2.186e-04	1.701e-01	7.411e-07	6.611e-04	2.246e-03	1.276e-06	8.966e-04	7.986e-05	4.466e-09	3.206e-05
Read 36	36	1900-2000	5.446e-02	2.311e-07	2.186e-04	1.701e-01	7.411e-07	6.611e-04	2.246e-03	1.276e-06	8.966e-04	7.986e-05	4.466e-09	3.206e-05
Read 36	36	2000-2100	3.776e-02	8.506e-08	7.826e-05	1.471e-01	3.311e-07	3.096e-04	1.846e-01	4.466e-07	3.836e-04	5.466e-04	2.776e-07	1.676e-06
Read 36	36	2100-2200	3.736e-02	8.506e-08	7.786e-05	1.486e-01	3.386e-07	3.096e-04	1.866e-01	4.211e-07	3.876e-04	5.466e-04	2.776e-07	1.676e-06
Read 36	36	2200-2300	3.7											

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

AERMOD model (September)		Year 2043		NO _x Emission				NO _x Emission						
Row name	Read ID	Hour	Monthly/hour/ton		Monthly/hour/ton		Monthly/hour/ton		Monthly/hour/ton		Monthly/hour/ton			
			g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr		
Read 37	37	1600-1700	5.646:02	6.946:09	7.956:06	1.996:01	3.366:08	2.811:06	2.566:01	4.361:08	3.611:05	1.106:09	9.736:07	
Read 37	37	1700-1800	4.821:06	6.846:09	7.276:06	1.936:01	3.476:08	2.911:06	2.411:03	4.366:08	3.666:05	6.636:02	9.736:06	
Read 37	37	1800-1900	4.821:06	6.846:09	7.276:06	1.936:01	3.476:08	2.911:06	2.411:03	4.366:08	3.666:05	6.636:02	9.736:06	
Read 37	37	1900-2000	2.706:02	3.746:09	3.146:06	1.156:01	1.776:04	1.446:06	1.572:01	2.166:08	1.746:05	4.286:02	4.906:07	
Read 37	37	2000-2100	2.766:02	2.986:09	2.506:06	1.346:01	1.446:08	1.221:06	1.611:04	1.746:08	1.466:05	4.416:02	4.746:07	
Read 37	37	2100-2200	2.766:02	2.986:09	2.506:06	1.346:01	1.446:08	1.221:06	1.611:04	1.746:08	1.466:05	4.416:02	4.746:07	
Read 37	37	2300-2400	2.231:02	2.506:09	2.006:06	1.246:01	1.306:08	1.096:06	1.500:01	1.956:08	1.306:05	3.931:07	4.416:07	
Read 37	37	2500-0000	2.666:02	2.606:09	1.736:06	1.336:01	1.056:08	0.876:06	1.600:01	1.266:08	1.056:05	4.336:02	3.646:07	
Read 38	38	0000-0100	4.261:06	6.166:09	7.466:06	1.966:01	3.466:08	2.866:06	2.466:01	4.616:08	3.816:05	1.166:09	9.736:07	
Read 38	38	0100-0200	5.611:02	6.206:09	1.856:04	1.706:01	1.886:05	1.656:08	2.566:01	2.976:07	2.486:05	3.966:02	8.856:07	
Read 38	38	0200-0300	6.256:02	5.746:08	1.726:04	1.806:01	1.656:07	1.494:04	2.476:02	2.236:07	6.656:04	9.076:01	9.176:07	
Read 38	38	0300-0400	6.166:02	5.746:08	1.726:04	1.806:01	1.656:07	1.494:04	2.476:02	2.236:07	6.656:04	9.076:01	9.176:07	
Read 38	38	0400-0500	6.7056:02	5.776:08	1.746:04	1.886:01	1.636:07	1.487:04	2.566:01	2.976:07	2.486:05	3.966:02	8.856:07	
Read 38	38	0500-0600	6.226:02	7.636:08	2.286:04	1.936:01	2.376:07	1.706:04	2.566:01	3.136:07	9.376:04	9.736:02	10.286:05	
Read 38	38	0600-0700	5.706:02	7.636:08	2.376:04	1.966:01	2.426:07	1.736:04	2.566:01	3.666:07	1.736:08	8.856:03	8.836:05	
Read 38	38	0700-0800	7.246:02	8.316:07	2.236:04	2.206:01	2.126:06	3.356:03	2.926:01	1.716:06	1.526:07	9.146:02	8.686:04	
Read 38	38	0800-0900	7.246:02	8.316:07	2.236:04	2.206:01	2.126:06	3.356:03	2.926:01	1.716:06	1.526:07	9.146:02	8.686:04	
Read 38	38	0900-1000	7.911:02	4.211:07	1.296:03	2.206:01	1.276:06	3.356:03	3.126:07	1.706:08	3.086:03	9.446:01	8.686:04	
Read 38	38	1000-1100	8.816:02	4.211:07	1.296:03	2.206:01	1.276:06	3.356:03	3.126:07	1.706:08	3.086:03	9.446:01	8.686:04	
Read 38	38	1100-1200	8.656:02	4.116:07	1.236:04	2.206:01	1.176:06	3.496:03	3.256:01	1.586:06	4.716:03	8.956:05	8.796:04	
Read 38	38	1200-1300	1.056:01	2.996:07	0.846:04	2.626:01	1.226:05	3.166:03	3.676:01	1.026:06	3.202:02	1.316:02	3.666:04	
Read 38	38	1300-1400	1.056:01	2.996:07	0.846:04	2.626:01	1.226:05	3.166:03	3.676:01	1.026:06	3.202:02	1.316:02	3.666:04	
Read 38	38	1400-1500	1.046:01	3.026:07	0.926:04	2.656:01	1.767:07	2.296:03	3.666:01	1.076:06	1.196:02	1.726:02	1.116:04	
Read 38	38	1500-1600	1.056:01	3.106:07	0.9276:04	2.746:01	1.8076:07	2.416:03	3.796:01	1.126:06	3.256:02	1.696:02	1.106:04	
Read 38	38	1600-1700	1.296:02	3.946:07	0.946:04	2.846:01	2.467:06	2.396:03	3.666:01	1.066:06	1.396:02	1.776:02	1.106:04	
Read 38	38	1700-1800	1.0116:01	2.876:07	0.8586:04	2.536:01	1.7516:07	2.246:03	3.646:01	1.046:06	1.316:02	1.266:02	1.606:04	
Read 38	38	1800-1900	9.176:02	4.417:07	1.7186:02	2.626:01	6.086:07	1.826:03	3.226:08	4.686:07	2.566:02	1.226:02	9.676:05	
Read 38	38	1900-2000	2.316:02	2.276:07	1.236:03	2.276:01	2.156:06	3.496:03	3.266:01	1.526:07	1.626:07	1.416:02	1.226:02	
Read 38	38	2000-2100	7.3056:02	5.596:07	2.266:04	2.006:01	2.186:07	1.646:06	2.826:02	2.926:07	8.726:04	9.576:03	8.966:05	
Read 38	38	2100-2200	7.306:02	7.626:08	2.266:04	2.111:06	2.136:07	1.656:06	2.846:02	2.966:07	8.836:04	9.006:02	10.006:05	
Read 38	38	2200-2300	7.306:02	7.626:08	2.266:04	2.111:06	2.136:07	1.656:06	2.846:02	2.966:07	8.836:04	9.006:02	10.006:05	
Read 38	38	2300-2400	7.546:02	6.146:08	1.936:04	2.046:01	1.756:04	2.246:06	2.806:02	2.456:07	7.176:04	1.066:02	9.976:05	
Read 38	38	0000-0100	9.126:02	1.806:08	0.556:05	2.896:01	5.696:08	1.5746:03	3.806:01	7.496:08	2.336:04	8.686:03	1.716:09	5.326:06
Read 38	38	0100-0200	9.896:02	1.286:08	0.356:05	2.936:01	6.056:08	1.826:06	3.856:01	5.536:08	1.666:04	8.686:03	1.226:09	7.966:05
Read 38	38	0200-0300	9.466:02	1.286:08	0.356:05	2.936:01	6.056:08	1.826:06	3.856:01	5.536:08	1.666:04	8.686:03	1.226:09	7.966:05
Read 38	38	0300-0400	9.566:02	0.776:09	2.776:05	0.306:01	2.756:08	1.556:06	3.966:01	6.336:08	1.136:04	9.056:03	1.036:02	5.566:06
Read 38	38	0400-0500	9.671:02	1.046:08	3.226:03	0.326:01	3.226:03	1.006:01	4.006:02	4.266:08	3.366:04	9.156:02	9.816:02	1.056:06
Read 38	38	0500-0600	9.671:02	1.046:08	3.226:03	0.326:01	3.226:03	1.006:01	4.006:02	4.266:08	3.366:04	9.156:02	9.816:02	1.056:06
Read 38	38	0600-0700	1.006:01	4.496:08	1.396:04	0.3136:01	4.406:07	4.3136:08	4.1316:08	1.876:04	5.766:04	1.926:02	4.276:05	1.916:06
Read 38	38	0700-0800	1.0116:01	0.956:08	3.006:04	0.3136:01	3.026:07	0.9376:04	4.116:01	3.986:07	1.246:02	9.466:01	9.996:01	0.826:05
Read 38	38	0800-0900	1.0116:01	0.956:08	3.006:04	0.3136:01	3.026:07	0.9376:04	4.116:01	3.986:07	1.246:02	9.466:01	9.996:01	0.826:05
Read 38	38	0900-1000	1.006:01	1.936:03	4.206:04	0.3136:01	4.236:07	1.3136:01	4.396:06	5.566:07	1.766:03	9.176:03	1.176:06	0.636:05
Read 38	38	1000-1100	1.006:01	1.936:03	4.206:04	0.3136:01	4.236:07	1.3136:01	4.396:06	5.566:07	1.766:03	9.176:03	1.176:06	0.636:05
Read 38	38	1100-1200	1.006:01	1.936:03	4.206:04	0.3136:01	4.236:07	1.3136:01	4.396:06	5.566:07	1.766:03	9.176:03	1.176:06	0.636:05
Read 38	38	1200-1300	4.176:02	1.346:08	4.186:05	1.596:01	5.146:06	1.606:01	2.016:01	5.646:08	2.016:04	5.646:05	1.646:05	0.906:06
Read 38	38	1300-1400	4.496:02	1.496:08	4.646:05	1.706:05	5.686:08	1.766:04	2.156:01	7.786:08	2.256:04	5.166:01	7.176:05	0.536:06
Read 38	38	1400-1500	4.376:02	1.496:08	4.646:05	1.706:05	5.686:08	1.766:04	2.156:01	7.786:08	2.256:04	5.166:01	7.176:05	0.536:06
Read 38	38	1500-1600	4.476:02	1.626:08	5.026:05	1.736:01	6.276:06	1.546:01	2.186:07	7.016:08	2.456:04	5.136:01	8.666:07	0.776:06
Read 38	38	1600-1700	4.196:02	1.596:08	4.956:05	1.636:01	6.206:08	1.936:04	2.056:01	7.796:08	2.426:04	5.666:01	7.296:05	0.686:06
Read 38	38	1700-1800	4.196:02	1.596:08	4.956:05	1.636:01	6.206:08	1.936:04	2.056:01	7.796:08	2.426:04	5.666:01	7.296:05	0.686:06
Read 38	38	1800-1900	2.156:02	0.996:09	3.076:05	1.096:01	4.996:06	1.556:04	1.3116:08	1.986:06	1.866:04	1.454:01	0.866:06	0.466:05
Read 38	38	1900-2000	1.796:02	6.456:09	2.016:06	1.006:01	3.611:08	1.126:04	1.196:02	4.426:08	1.326:04	3.796:03	3.416:06	0.466:05
Read 38	38	2000-2100	1.796:02	6.456:09	2.016:06	1.006:01	3.611:08	1.126:04	1.196:02	4.426:08	1.326:04	3.796:03	3.416:06	0.466:05
Read 38	38	2100-2200	1.796:02	6.456:09	2.016:06	1.111:01	3.111:09	0.9776:06	1.256:01	3.611:08	1.126:04	3.736:03	1.056:02	0.266:06
Read 38	38	2200-2300	1.556:02	4.206:09	1.306:05	1.056:01	2.856:08	0.896:06	1.206:02	3.276:08	1.056:04	3.366:03	0.946:02	0.816:06
Read 38	38	2300-0000	1.786:02	3.536:09	1.106:05	1.111:06	2.286:07	1.266:02	1.261:06	3.616:08	1.826:06	3.716:05	1.256:02	0.296:06
Read 40	40	0000-0100	1.786:02	3.536:09	1.106:05	1.111:06	2.286:07	1.266:02	1.261:06	3.616:08	1.826:06	3.716:05	1.256:02	0.296:06
Read 40	40	0100-0200	5.206:02	1.106:05	1.956:06	1.646:01	3.526:07	6.246:04	2.186:02	1.4527:06	0.816:04	8.986:08	3.716:05	0.556:05
Read 40	40	0200-0300	5.736:02	9.906:07	1.766:04	1.736:09	2.996:07	6.311:04	2.311:06	3.366:07	7.076:04	9.326:03	1.616:06	0.966:05
Read 40	40	0300-0400	5.736:02	9.906:07	1.766:04	1.736:09	2.996:07	6.311:04	2.311:06	3.366:07	7.076:04	9.326:03	1.616:06	0.966:05
Read 40	40	0400-0500	6.226:02	0.996:08	1.776:04	1.846:01	2.946:07	5.226:06	2.466:02	3.996:07	6.986:04	1.016:02	2.876:05	0.556:05
Read 40	40	0500-0600	5.696:02	1.326:07	2.396:04	1.846:01	4.326:07	7.696:04	2.426:01	5.656:07	1.026:02	9.206:02	1.626:04	0.806:05
Read 40	40	0600-0700	5.696:02	1.326:07	2.396:04	1.846:01	4.326:07	7.696:04	2.426:01	5.656:07	1.026:02	9.206:02	1.626:04	0.806:05
Read 40	40	0700-0800	7.266:02	7.206:07	1.296:03	2.306:01	2.306:06	4.006:04	3.046:01	3.026:06	5.876:08	1.026:02	1.816:04	0.466:05
Read 40	40	0800-0900	7.206:07	8.026:07	1.436:03	2.246:01	2.506:06	4.006:04	2.966:01	3.316:06	5.886:08	1.026:02	1.816:04	0.466:05
Read 40	40	0900-1000	7.206:07	8.026:07	1.436:03	2.246:01	2.506:06							

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Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

AERMOD model (September)			Year 2043		NO ₂ Emission		Monthly/hourly average		NO ₂ Emission		Monthly/hourly average			
Read Name	Read ID	Hour	Monthly/hourly average		NO ₂ Emission		Monthly/hourly average		NO ₂ Emission		Monthly/hourly average			
			g/m ³ /hr	g/m ³ /hr	tonne/hour	g/m ³ /hr	g/m ³ /hr	tonne/hour	g/m ³ /hr	g/m ³ /hr	tonne/hour	g/m ³ /hr	g/m ³ /hr	tonne/hour
Read #1	41	0000-0100	1.632E-02	3.58E-08	1.22E-04	5.42E-02	1.20E-07	4.08E-04	7.05E-02	1.55E-07	5.32E-04	3.88E-03	8.55E-09	2.93E-05
Read #1	41	0100-0200	2.10E-02	3.35E-08	1.15E-04	6.23E-02	9.91E-08	3.30E-04	8.31E-02	1.13E-07	4.54E-04	5.02E-03	8.01E-09	2.74E-05
Read #1	41	0200-0300	2.10E-02	3.35E-08	1.15E-04	6.23E-02	9.91E-08	3.30E-04	8.31E-02	1.13E-07	4.54E-04	5.02E-03	8.01E-09	2.74E-05
Read #1	41	0300-0400	2.85E-02	3.19E-08	1.09E-04	6.74E-02	8.39E-08	2.87E-04	1.03E-01	1.36E-07	5.97E-04	6.78E-03	7.58E-09	2.60E-05
Read #1	41	0400-0500	2.76E-02	3.26E-08	1.12E-04	6.73E-02	8.71E-08	2.98E-04	1.01E-01	1.20E-07	4.10E-04	6.57E-03	7.68E-09	2.66E-05
Read #1	41	0500-0600	2.10E-02	3.35E-08	1.15E-04	6.23E-02	9.91E-08	3.30E-04	8.31E-02	1.13E-07	4.54E-04	5.02E-03	8.01E-09	2.74E-05
Read #1	41	0600-0700	1.53E-02	3.17E-08	1.02E-04	5.61E-02	1.73E-08	5.94E-04	7.13E-02	2.27E-07	7.56E-04	3.66E-03	1.14E-09	3.91E-05
Read #1	41	0700-0800	2.09E-02	3.49E-07	5.10E-04	6.46E-02	4.59E-07	1.57E-05	8.56E-02	6.08E-07	2.08E-03	5.05E-05	5.56E-08	2.38E-04
Read #1	41	0800-0900	2.10E-02	3.35E-08	1.15E-04	6.23E-02	9.91E-08	3.30E-04	8.31E-02	1.13E-07	4.54E-04	5.02E-03	8.01E-09	2.74E-05
Read #1	41	0900-1000	2.50E-02	1.49E-07	5.11E-04	6.50E-02	4.41E-07	1.51E-05	8.69E-02	9.90E-07	2.02E-03	5.39E-05	3.66E-08	2.54E-04
Read #1	41	1000-1100	2.43E-02	1.48E-07	5.06E-04	6.40E-02	4.20E-07	1.44E-05	9.32E-02	5.68E-07	1.94E-03	5.93E-05	3.63E-08	2.44E-04
Read #1	41	1100-1200	2.10E-02	3.35E-08	1.15E-04	6.23E-02	9.91E-08	3.30E-04	8.31E-02	1.13E-07	4.54E-04	5.02E-03	8.01E-09	2.74E-05
Read #1	41	1200-1300	2.75E-02	1.74E-07	5.95E-04	7.08E-02	4.96E-07	1.70E-05	1.09E-01	6.07E-07	8.76E-03	8.76E-05	3.32E-08	5.48E-04
Read #1	41	1300-1400	2.70E-02	1.77E-07	6.06E-04	7.92E-02	5.18E-07	1.78E-05	1.06E-01	6.95E-07	2.38E-03	6.78E-04	4.48E-08	5.52E-04
Read #1	41	1400-1500	2.69E-02	1.88E-07	6.16E-04	7.83E-02	5.28E-07	1.80E-05	1.04E-01	7.05E-07	2.42E-03	6.68E-04	4.52E-08	5.55E-04
Read #1	41	1500-1600	2.10E-02	3.35E-08	1.15E-04	6.23E-02	9.91E-08	3.30E-04	8.31E-02	1.13E-07	4.54E-04	5.02E-03	8.01E-09	2.74E-05
Read #1	41	1600-1700	2.95E-02	1.82E-07	6.23E-04	7.47E-02	5.33E-07	1.83E-05	1.00E-01	7.15E-07	2.45E-03	6.93E-04	4.56E-08	5.66E-04
Read #1	41	1700-1800	2.18E-02	1.87E-07	5.72E-04	6.74E-02	5.02E-07	1.78E-05	8.90E-07	6.67E-07	2.34E-03	3.45E-04	1.83E-08	5.43E-04
Read #1	41	1800-1900	2.10E-02	3.35E-08	1.15E-04	6.23E-02	9.91E-08	3.30E-04	8.31E-02	1.13E-07	4.54E-04	5.02E-03	8.01E-09	2.74E-05
Read #1	41	1900-2000	1.10E-02	5.80E-08	1.99E-04	4.14E-02	2.32E-07	7.94E-04	5.51E-02	2.90E-07	9.94E-04	2.77E-04	4.66E-09	9.9E-05
Read #1	41	2000-2100	1.21E-02	5.97E-08	1.74E-04	4.91E-02	2.06E-07	7.64E-04	6.12E-02	2.97E-07	8.80E-04	3.00E-04	3.06E-09	6.25E-05
Read #1	41	2100-2200	1.10E-02	5.80E-08	1.99E-04	4.14E-02	2.32E-07	7.94E-04	5.51E-02	2.90E-07	9.94E-04	2.77E-04	4.66E-09	9.9E-05
Read #1	41	2200-2300	1.18E-02	4.79E-08	1.64E-04	4.58E-02	1.97E-07	6.70E-04	6.02E-02	2.45E-07	4.04E-04	2.87E-04	1.17E-09	4.00E-05
Read #1	41	2300-0000	1.40E-02	4.46E-08	1.53E-04	5.25E-02	1.67E-07	5.72E-04	6.69E-02	2.75E-07	7.25E-04	3.60E-04	1.09E-09	3.73E-05
Read #2	42	0000-0100	1.53E-02	3.17E-08	6.05E-04	9.29E-02	1.68E-07	1.53E-02	1.26E-02	2.63E-07	2.63E-03	1.56E-05	1.08E-04	1.08E-04
Read #2	42	0100-0200	4.00E-02	6.05E-02	6.72E-06	6.22E-04	1.06E-01	1.75E-07	1.62E-02	1.47E-03	2.43E-07	2.75E-04	5.64E-06	1.00E-04
Read #2	42	0200-0300	4.83E-02	6.57E-08	6.08E-04	1.20E-01	1.63E-07	1.51E-03	1.88E-02	2.26E-07	2.12E-03	7.76E-05	9.69E-05	6.69E-05
Read #2	42	0300-0400	5.25E-02	6.58E-08	6.09E-04	1.28E-01	1.61E-07	1.49E-03	1.81E-02	2.26E-07	2.10E-03	8.37E-05	9.71E-05	6.71E-05
Read #2	42	0400-0500	5.25E-02	6.58E-08	6.09E-04	1.28E-01	1.61E-07	1.49E-03	1.81E-02	2.26E-07	2.10E-03	8.37E-05	9.71E-05	6.71E-05
Read #2	42	0500-0600	4.10E-02	7.22E-08	6.68E-04	1.09E-01	1.90E-07	1.78E-03	1.50E-01	2.66E-07	2.45E-03	6.63E-04	1.17E-08	1.08E-04
Read #2	42	0600-0700	4.00E-02	6.05E-08	6.05E-04	1.20E-01	1.63E-07	1.51E-03	1.88E-02	2.26E-07	2.12E-03	7.76E-05	9.69E-05	6.69E-05
Read #2	42	0700-0800	5.53E-02	3.92E-07	3.63E-03	1.41E-01	1.04E-06	9.95E-03	1.94E-01	1.43E-06	1.32E-02	7.20E-03	3.90E-05	4.00E-04
Read #2	42	0800-0900	4.91E-02	4.02E-07	3.72E-03	1.30E-01	1.06E-06	9.58E-03	1.79E-01	1.47E-06	1.36E-02	6.68E-03	3.47E-05	5.05E-04
Read #2	42	0900-1000	5.60E-02	3.98E-07	3.69E-03	1.47E-01	1.04E-06	9.97E-03	2.03E-01	1.44E-06	1.34E-02	7.64E-03	3.64E-05	5.03E-04
Read #2	42	1000-1100	5.80E-02	3.74E-07	3.47E-03	1.54E-01	1.05E-06	9.87E-03	2.03E-01	1.44E-06	1.34E-02	7.64E-03	3.64E-05	5.03E-04
Read #2	42	1100-1200	6.03E-02	3.74E-07	3.47E-03	1.54E-01	9.57E-07	8.86E-04	2.14E-01	1.39E-06	1.23E-02	8.39E-03	5.17E-07	9.79E-04
Read #2	42	1200-1300	7.75E-02	3.71E-07	3.44E-03	1.50E-01	9.11E-07	8.44E-04	2.68E-01	1.26E-06	1.18E-02	1.08E-04	5.24E-08	4.85E-04
Read #2	42	1300-1400	7.43E-02	3.71E-07	3.44E-03	1.50E-01	9.48E-07	8.44E-04	2.68E-01	1.26E-06	1.18E-02	1.08E-04	5.24E-08	4.85E-04
Read #2	42	1400-1500	7.49E-02	3.78E-07	3.50E-03	1.61E-01	9.45E-07	8.75E-04	2.62E-01	1.25E-06	1.23E-02	1.07E-04	4.80E-08	5.04E-04
Read #2	42	1500-1600	7.27E-02	3.74E-07	3.46E-03	1.51E-01	9.80E-07	8.88E-04	2.59E-01	1.33E-06	1.23E-02	1.04E-04	5.39E-08	4.95E-04
Read #2	42	1600-1700	7.43E-02	3.71E-07	3.44E-03	1.50E-01	9.48E-07	8.44E-04	2.68E-01	1.26E-06	1.18E-02	1.08E-04	5.24E-08	4.85E-04
Read #2	42	1700-1800	6.98E-02	3.58E-07	3.31E-03	1.69E-01	9.17E-07	8.46E-04	2.34E-01	1.29E-06	1.18E-02	1.03E-04	5.17E-08	4.72E-04
Read #2	42	1800-1900	6.14E-02	3.63E-07	3.31E-03	1.51E-01	8.28E-07	7.68E-04	2.12E-01	1.16E-06	1.08E-02	8.61E-04	3.17E-08	3.96E-04
Read #2	42	1900-2000	6.14E-02	3.63E-07	3.31E-03	1.51E-01	8.28E-07	7.68E-04	2.12E-01	1.16E-06	1.08E-02	8.61E-04	3.17E-08	3.96E-04
Read #2	42	2000-2100	3.30E-02	8.41E-08	7.78E-04	9.91E-02	2.53E-07	2.34E-03	3.32E-07	3.12E-03	3.56E-03	3.67E-06	1.27E-04	1.04E-04
Read #2	42	2100-2200	3.24E-02	8.30E-08	7.68E-04	9.83E-02	2.52E-07	2.32E-03	3.31E-03	3.39E-03	3.10E-03	3.56E-06	1.25E-04	1.04E-04
Read #2	42	2200-2300	3.24E-02	8.30E-08	7.68E-04	9.83E-02	2.52E-07	2.32E-03	3.31E-03	3.39E-03	3.10E-03	3.56E-06	1.25E-04	1.04E-04
Read #2	42	2300-0000	3.90E-02	7.84E-08	7.25E-04	9.09E-02	2.18E-07	2.02E-03	1.48E-03	9.96E-07	2.74E-03	6.22E-05	2.5E-06	1.61E-04
Read #3	43	0000-0100	6.91E-03	4.40E-09	1.52E-07	2.72E-08	8.33E-06	4.48E-02	2.64E-08	8.85E-05	1.57E-05	9.25E-10	4.65E-06	1.04E-05
Read #3	43	0100-0200	1.10E-02	3.44E-09	1.20E-07	4.21E-08	1.38E-06	5.11E-05	3.07E-02	1.03E-05	3.20E-05	1.63E-06	9.35E-10	2.15E-05
Read #3	43	0200-0300	1.15E-02	3.44E-09	1.20E-07	4.62E-08	1.38E-06	5.11E-05	3.07E-02	1.03E-05	3.20E-05	1.63E-06	9.35E-10	2.15E-05
Read #3	43	0300-0400	1.36E-02	3.32E-09	1.24E-07	4.99E-02	1.22E-08	4.59E-05	6.39E-05	1.95E-08	5.79E-06	3.16E-03	7.72E-10	8.88E-06
Read #3	43	0400-0500	1.10E-02	3.44E-09	1.20E-07	4.21E-08	1.38E-06	5.11E-05	3.07E-02	1.03E-05	3.20E-05	1.63E-06	9.35E-10	2.15E-05
Read #3	43	0500-0600	1.01E-02	3.26E-09	1.24E-07	4.69E-02	1.89E-08	7.09E-05	5.51E-02	2.31E-08	8.65E-06	2.3E-03	9.07E-06	6.69E-06
Read #3	43	0600-0700	7.69E-03	6.50E-09	2.43E-07	4.18E-02	3.54E-08	1.32E-04	4.99E-02	4.19E-08	1.56E-04	1.77E-04	4.49E-09	5.98E-06
Read #3	43	0700-0800	1.03E-02	3.38E-09	6.83E-08	4.58E-02	8.13E-08	3.04E-04	5.61E-02	9.98E-08	1.72E-04	2.40E-04	2.69E-09	5.99E-05
Read #3	43	0800-0900	9.11E-03	6.08E-09	2.21E-07	4.01E-02	3.53E-08	1.29E-04	4.99E-02	4.19E-08	1.56E-04	1.77E-04	4.49E-09	5.98E-06
Read #3	43	0900-1000	1.09E-02	3.12E-08	6.42E-07	4.31E-02	6.97E-05	2.60E-04	5.37E-02	6.68E-08	3.24E-04	5.25E-05	1.12E-09	1.54E-05
Read #3	43	1000-1100	1.20E-02	1.96E-08	6.19E-06	4.54E-02	6.30E-08	2.35E-04	5.74E-02	7.95E-08	2.97E-04	2.88E-03	3.68E-09	5.25E-05
Read #3	43	1100-1200	1.48E-02	5.51E-08	1.92E-04	5.78E-02	2.01E-07	7.51E-04	7.27E-02	2.53E-04	9.47E-04	3.88E-03	3.44E-09	5.01E-05
Read #3	43	1200-1300	1.49E-02	5.31E-08	1.98E-04	5.98E-02	2.14E-07	7.99E-04	7.47E-02	2.57E-04	9.97E-04	3.92E-03	3.45E-09	5.25E-05
Read #3	43	1300-1400	1.48E-02	5.51E-08	1.92E-04	5.78E-02	2.01E-07	7.51E-04	7.27E-02	2.53E-04	9.47E-04	3.88E-03	3.44E-09	5.01E-05
Read #3	43	1400-1500	1.36E-02	5.39E-08	2.01E-04	5.89E-02	2.28E-07	8.52E-04	7.38E-02	2.87E-04	1.09E-03	3.73E-04	4.46E-09	5.35E-05
Read #3	43	1500-1600	1.43E-02	5.82E-08	2.17E-04	6.33E-02	2.29E-07	8.56E-04	7.					

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24-hour Emission Factors for

AERMOD model (September)		Year 2003		NO _x Emission				NO _x Emission						
Row Name	Row ID	Month/turnout	g/kwh	g/kwh	g/kwh	g/kwh	g/kwh	g/kwh	g/kwh	g/kwh	g/kwh	g/kwh	g/kwh	
		Month/turnout	g/kwh	g/kwh	g/kwh	g/kwh	g/kwh	g/kwh	g/kwh	g/kwh	g/kwh	g/kwh	g/kwh	
Row 44	44	0000-0000	1.556	2.767	1.084	4.442	1.406	1.168	5.292	1.676	3.766	2.006	6.326	1.426
Row 44	44	0900-1200	8.636	2.236	5.024	4.426	1.146	2.586	5.296	1.376	3.006	2.236	5.906	1.356
Row 44	44	1200-1500	9.726	1.926	5.024	4.426	1.146	2.586	5.296	1.376	3.006	2.236	5.906	1.356
Row 44	44	1500-1800	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	1800-2100	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	2100-2400	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	0000-0300	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	0300-0600	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	0600-0900	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	0900-1200	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	1200-1500	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	1500-1800	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	1800-2100	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	2100-2400	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	0000-0300	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	0300-0600	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	0600-0900	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	0900-1200	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	1200-1500	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	1500-1800	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	1800-2100	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	2100-2400	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	0000-0300	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	0300-0600	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	0600-0900	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	0900-1200	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	1200-1500	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	1500-1800	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	1800-2100	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	2100-2400	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	0000-0300	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	0300-0600	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	0600-0900	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	0900-1200	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	1200-1500	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	1500-1800	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	1800-2100	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	2100-2400	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	0000-0300	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	0300-0600	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	0600-0900	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	0900-1200	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	1200-1500	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	1500-1800	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	1800-2100	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	2100-2400	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	0000-0300	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	0300-0600	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	0600-0900	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	0900-1200	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	1200-1500	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	1500-1800	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	1800-2100	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	2100-2400	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	0000-0300	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	0300-0600	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	0600-0900	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	0900-1200	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	1200-1500	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	1500-1800	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	1800-2100	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	2100-2400	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	0000-0300	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	0300-0600	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	0600-0900	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	0900-1200	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	1200-1500	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	1500-1800	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	1800-2100	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	2100-2400	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	0000-0300	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	0300-0600	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	0600-0900	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	0900-1200	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	1200-1500	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	1500-1800	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	1800-2100	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	2100-2400	1.226	3.566	1.084	4.962	1.506	2.626	6.066	1.596	3.576	2.526	7.636	1.726
Row 44	44	0000-0300	1.226	3.566	1.084	4.962	1.506</							

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Appendix\Appendix 3.5.4 Emission Factor in 2043-S B.xlsx

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

AERMOD model (September)		Year 2043		1% Emissions		5% Emissions		No Emissions		1% Emissions		5% Emissions		
Read Name	Read ID	Hour	Monthly/Hourly/Min		Monthly/Hourly/Min		Monthly/Hourly/Min		Monthly/Hourly/Min		Monthly/Hourly/Min		Monthly/Hourly/Min	
			g/min/hr	g/min/hr	g/min/hr	g/min/hr	g/min/hr	g/min/hr	g/min/hr	g/min/hr	g/min/hr	g/min/hr	g/min/hr	g/min/hr
Read #7	47	1600-1700	2.088-0.2	3.945-0.7	4.505-0.3	6.476-0.2	1.605-0.6	1.838-0.2	1.065-0.1	2.005-0.6	2.282-0.1	3.195-0.3	0.645-0.6	6.895-0.4
Read #7	47	1700-1800	1.485-0.2	3.245-0.7	3.695-0.3	7.231-0.2	1.585-0.6	1.805-0.2	8.885-0.1	9.655-0.6	2.175-0.2	2.355-0.4	0.605-0.4	5.745-0.4
Read #7	47	1800-1900	1.485-0.2	3.245-0.7	3.695-0.3	7.231-0.2	1.585-0.6	1.805-0.2	8.885-0.1	9.655-0.6	2.175-0.2	2.355-0.4	0.605-0.4	5.745-0.4
Read #7	47	1900-2000	8.575-0.3	1.705-0.7	1.935-0.4	8.425-0.2	9.555-0.1	1.065-0.2	5.685-0.2	1.125-0.2	1.265-0.2	3.155-0.3	2.675-0.5	3.055-0.4
Read #7	47	2000-2100	7.935-0.3	1.225-0.7	1.395-0.3	5.715-0.2	7.945-0.3	8.595-0.2	9.585-0.1	9.585-0.1	1.045-0.2	1.295-0.2	0.925-0.1	1.965-0.4
Read #7	47	2100-2200	6.475-0.3	1.225-0.7	1.395-0.3	5.715-0.2	7.945-0.3	8.595-0.2	9.585-0.1	9.585-0.1	1.045-0.2	1.295-0.2	0.925-0.1	1.965-0.4
Read #7	47	2200-2300	6.225-0.3	0.995-0.6	1.065-0.4	4.835-0.2	7.225-0.7	8.235-0.3	5.455-0.5	9.515-0.1	1.025-0.3	0.925-0.3	1.425-0.6	1.625-0.4
Read #7	47	2300-0000	6.575-0.3	7.335-0.8	8.395-0.4	6.825-0.3	5.385-0.2	6.135-0.3	5.485-0.1	6.115-0.4	6.965-0.1	1.065-0.1	1.185-0.3	1.345-0.4
Read #8	48	0000-0100	2.088-0.2	3.945-0.7	4.505-0.3	6.476-0.2	1.605-0.6	1.838-0.2	1.065-0.1	2.005-0.6	2.282-0.1	3.195-0.3	0.645-0.6	6.895-0.4
Read #8	48	0100-0200	4.955-0.3	2.675-0.8	2.745-0.4	3.535-0.2	1.915-0.1	1.095-0.2	4.085-0.1	2.175-0.2	1.205-0.2	1.265-0.2	0.725-0.5	1.095-0.4
Read #8	48	0200-0300	5.435-0.3	2.145-0.8	1.185-0.4	3.175-0.2	1.445-0.6	4.745-0.3	4.225-0.1	1.675-0.1	9.225-0.4	3.715-0.3	3.395-0.9	9.975-0.5
Read #8	48	0300-0400	7.935-0.3	2.145-0.8	1.185-0.4	3.175-0.2	1.445-0.6	4.745-0.3	4.225-0.1	1.675-0.1	9.225-0.4	3.715-0.3	3.395-0.9	9.975-0.5
Read #8	48	0400-0500	6.355-0.3	2.145-0.8	1.185-0.4	3.945-0.2	1.345-0.7	7.455-0.4	4.585-0.2	1.365-0.3	8.955-0.4	1.615-0.3	5.505-0.9	8.035-0.5
Read #8	48	0500-0600	6.811-0.3	0.425-0.6	2.215-0.4	4.005-0.2	2.405-0.7	1.325-0.4	2.745-0.2	2.885-0.1	1.545-0.3	1.745-0.3	0.835-0.6	5.665-0.5
Read #8	48	0600-0700	7.405-0.3	9.245-0.8	9.425-0.4	4.225-0.3	5.345-0.7	4.945-0.2	6.655-0.6	1.345-0.3	1.875-0.2	1.365-0.3	0.965-0.4	1.965-0.4
Read #8	48	0700-0800	7.935-0.3	9.245-0.8	9.425-0.4	4.225-0.3	5.345-0.7	4.945-0.2	6.655-0.6	1.345-0.3	1.875-0.2	1.365-0.3	0.965-0.4	1.965-0.4
Read #8	48	0800-0900	7.385-0.3	2.195-0.7	1.205-0.3	3.835-0.2	1.135-0.6	6.245-0.4	4.575-0.1	3.585-0.2	7.445-0.1	9.575-0.6	1.765-0.1	1.185-0.4
Read #8	48	0900-1000	8.495-0.3	2.085-0.7	1.135-0.2	4.235-0.2	1.035-0.6	5.655-0.3	5.075-0.2	1.225-0.6	9.775-0.3	2.225-0.1	0.605-0.4	1.095-0.4
Read #8	48	1000-1100	1.185-0.3	1.185-0.7	1.185-0.3	1.185-0.7	1.185-0.3	1.185-0.7	1.185-0.3	1.185-0.7	1.185-0.3	1.185-0.7	1.185-0.3	1.185-0.7
Read #8	48	1100-1200	9.145-0.3	1.815-0.7	9.985-0.4	4.455-0.8	8.875-0.3	4.875-0.3	5.375-0.2	1.065-0.5	5.885-0.2	2.485-0.2	0.925-0.2	2.715-0.4
Read #8	48	1200-1300	1.505-0.2	2.995-0.7	1.595-0.3	5.625-0.6	1.085-0.5	5.685-0.3	1.125-0.3	1.755-0.1	1.575-0.1	4.875-0.4	0.875-0.6	4.445-0.4
Read #8	48	1300-1400	1.505-0.2	2.995-0.7	1.595-0.3	5.625-0.6	1.085-0.5	5.685-0.3	1.125-0.3	1.755-0.1	1.575-0.1	4.875-0.4	0.875-0.6	4.445-0.4
Read #8	48	1400-1500	1.505-0.2	3.175-0.7	1.745-0.3	5.715-0.2	1.205-0.6	6.635-0.3	7.225-0.2	1.525-0.3	8.745-0.2	4.845-0.2	0.925-0.4	4.705-0.4
Read #8	48	1500-1600	1.385-0.2	2.995-0.7	1.655-0.3	5.715-0.2	1.225-0.6	6.635-0.3	7.095-0.2	1.525-0.3	8.435-0.2	4.025-0.3	0.705-0.4	4.795-0.4
Read #8	48	1600-1700	1.315-0.2	3.165-0.7	1.765-0.3	5.425-0.2	1.185-0.6	6.685-0.3	6.835-0.2	1.525-0.3	8.425-0.2	4.025-0.3	0.895-0.4	4.795-0.4
Read #8	48	1700-1800	1.045-0.2	2.515-0.7	1.385-0.3	4.705-0.2	1.145-0.6	6.265-0.3	6.745-0.2	1.395-0.4	7.645-0.2	3.025-0.3	0.805-0.4	4.705-0.4
Read #8	48	1800-1900	7.385-0.3	1.825-0.7	1.005-0.3	5.005-0.2	8.625-0.7	4.745-0.3	4.245-0.2	1.065-0.5	5.735-0.2	2.155-0.2	0.895-0.4	1.895-0.4
Read #8	48	1900-2000	6.425-0.3	6.425-0.7	6.425-0.3	6.425-0.7	6.425-0.3	6.425-0.7	6.425-0.3	6.425-0.7	6.425-0.3	6.425-0.7	6.425-0.3	6.425-0.7
Read #8	48	2000-2100	6.305-0.3	9.625-0.8	5.305-0.4	3.545-0.2	5.415-0.7	2.985-0.3	4.175-0.3	6.375-0.2	3.515-0.3	1.775-0.3	2.705-0.4	4.495-0.4
Read #8	48	2100-2200	6.075-0.3	9.115-0.8	5.025-0.4	3.565-0.2	5.395-0.7	2.985-0.3	4.175-0.3	6.265-0.2	3.455-0.3	1.775-0.3	2.585-0.4	4.425-0.4
Read #8	48	2200-2300	6.075-0.3	9.115-0.8	5.025-0.4	3.565-0.2	5.395-0.7	2.985-0.3	4.175-0.3	6.265-0.2	3.455-0.3	1.775-0.3	2.585-0.4	4.425-0.4
Read #8	48	2300-0000	6.625-0.3	7.385-0.8	4.015-0.4	3.645-0.2	4.005-0.7	2.205-0.3	4.355-0.2	4.745-0.2	2.615-0.3	1.985-0.3	0.985-0.4	1.095-0.4
Read #9	49	0000-0100	6.135-0.3	3.285-0.8	3.125-0.4	4.545-0.2	2.505-0.7	2.315-0.3	5.155-0.2	2.845-0.2	2.625-0.2	9.845-0.4	5.005-0.5	5.005-0.5
Read #9	49	0100-0200	6.205-0.3	2.225-0.8	2.045-0.4	4.445-0.2	1.595-0.4	1.445-0.2	5.065-0.2	1.825-0.1	1.665-0.2	1.065-0.3	0.805-0.4	1.505-0.5
Read #9	49	0200-0300	6.805-0.3	2.225-0.8	2.045-0.4	4.445-0.2	1.595-0.4	1.445-0.2	5.065-0.2	1.825-0.1	1.665-0.2	1.065-0.3	0.805-0.4	1.505-0.5
Read #9	49	0300-0400	7.315-0.3	1.965-0.8	1.385-0.4	4.765-0.2	9.745-0.8	8.975-0.4	5.495-0.1	1.125-0.2	1.045-0.2	1.235-0.2	0.835-0.4	2.495-0.5
Read #9	49	0400-0500	7.945-0.3	1.785-0.8	1.845-0.4	3.835-0.2	1.102-0.7	1.025-0.3	5.725-0.2	1.285-0.1	1.165-0.1	1.415-0.1	1.445-0.1	1.985-0.5
Read #9	49	0500-0600	7.945-0.3	1.785-0.8	1.845-0.4	3.835-0.2	1.102-0.7	1.025-0.3	5.725-0.2	1.285-0.1	1.165-0.1	1.415-0.1	1.445-0.1	1.985-0.5
Read #9	49	0600-0700	1.165-0.3	9.485-0.8	8.795-0.4	6.265-0.6	5.185-0.7	7.415-0.1	6.115-0.1	5.325-0.1	5.635-0.1	1.585-0.3	1.585-0.3	1.585-0.3
Read #9	49	0700-0800	1.545-0.2	2.655-0.7	2.365-0.3	7.525-0.2	1.185-0.3	1.115-0.1	1.515-0.3	1.965-0.2	2.155-0.2	3.575-0.2	3.295-0.4	3.295-0.4
Read #9	49	0800-0900	1.545-0.2	2.655-0.7	2.365-0.3	7.525-0.2	1.185-0.3	1.115-0.1	1.515-0.3	1.965-0.2	2.155-0.2	3.575-0.2	3.295-0.4	3.295-0.4
Read #9	49	0900-1000	1.725-0.2	2.655-0.7	2.445-0.3	8.005-0.2	1.235-0.6	1.132-0.3	9.725-0.4	1.695-0.2	1.375-0.2	2.445-0.1	2.175-0.3	3.415-0.4
Read #9	49	1000-1100	1.825-0.2	2.385-0.7	2.205-0.3	8.095-0.2	1.055-0.6	9.715-0.3	8.945-0.2	1.295-0.1	1.165-0.1	2.465-0.1	2.465-0.1	3.115-0.4
Read #9	49	1100-1200	1.655-0.2	1.765-0.7	1.575-0.3	7.715-0.2	7.435-0.6	8.745-0.3	8.845-0.1	9.315-0.1	8.415-0.2	2.645-0.1	2.545-0.3	3.465-0.4
Read #9	49	1200-1300	1.655-0.2	1.725-0.7	1.595-0.3	7.515-0.2	7.785-0.1	7.185-0.3	9.175-0.2	9.505-0.1	8.765-0.2	2.515-0.6	2.605-0.4	3.405-0.4
Read #9	49	1300-1400	1.685-0.2	1.915-0.7	1.765-0.3	7.725-0.2	7.815-0.1	7.185-0.3	9.175-0.2	9.505-0.1	8.765-0.2	2.515-0.6	2.605-0.4	3.405-0.4
Read #9	49	1400-1500	1.685-0.2	1.915-0.7	1.765-0.3	7.725-0.2	7.815-0.1	7.185-0.3	9.175-0.2	9.505-0.1	8.765-0.2	2.515-0.6	2.605-0.4	3.405-0.4
Read #9	49	1500-1600	1.685-0.2	1.915-0.7	1.765-0.3	7.725-0.2	7.815-0.1	7.185-0.3	9.175-0.2	9.505-0.1	8.765-0.2	2.515-0.6	2.605-0.4	3.405-0.4
Read #9	49	1600-1700	1.865-0.2	2.925-0.7	2.145-0.3	7.645-0.2	9.525-0.7	8.765-0.3	9.505-0.1	1.095-0.2	1.095-0.2	2.745-0.2	2.425-0.1	3.155-0.4
Read #9	49	1700-1800	1.865-0.2	2.925-0.7	2.145-0.3	7.645-0.2	9.525-0.7	8.765-0.3	9.505-0.1	1.095-0.2	1.095-0.2	2.745-0.2	2.425-0.1	3.155-0.4
Read #9	49	1800-1900	1.015-0.2	6.695-0.7	5.665-0.3	4.955-0.2	8.265-0.1	7.815-0.3	5.965-0.2	9.955-0.1	9.135-0.1	1.485-0.2	0.475-0.2	1.575-0.4
Read #9	49	1900-2000	7.695-0.3	0.985-0.6	0.935-0.4	6.115-0.2	5.635-0.3	5.335-0.2	5.335-0.2	7.187-0.1	6.625-0.1	1.185-0.1	1.605-0.4	1.475-0.4
Read #9	49	2000-2100	7.695-0.3	0.985-0.6	0.935-0.4	6.115-0.2	5.635-0.3	5.335-0.2	5.335-0.2	7.187-0.1	6.625-0.1	1.185-0.1	1.605-0.4	1.475-0.4
Read #9	49	2100-2200	5.755-0.3	5.975-0.8	5.505-0.4	4.535-0.2	4.715-0.3	4.345-0.3	5.115-0.3	5.335-0.2	4.885-0.1	8.555-0.4	5.905-0.5	5.155-0.5
Read #9	49	2200-2300	5.335-0.3	5.445-0.8	5.015-0.4	4.425-0.2	4.515-0.3	4.135-0.3	4.995-0.2	5.055-0.2	4.655-0.2	7.745-0.3	7.895-0.2	7.275-0.5
Read #9	49	2300-0000	5.835-0.3	4.225-0.8	3.985-0.4	4.405-0.2	3.345-0.7	3.005-0.3	4.975-0.2	3.775-0.1	3.475-0.1	8.875-0.4	5.895-0.5	5.095-0.5
Read #9	50	0000-0100	3.955-0.3	1.975-0.8	1.675-0.5	4.175-0.2	4.175-0.2	4.175-0.2	4.175-0.2	4.175-0.2	4.175-0.2	4.175-0.2	4.175-0.2	4.175-0.2
Read #9	50	0100-0200	3.595-0.2	1.195-0.8	6.205-0.5	1.225-0.1	4.095-0.8	2.115-0.4	1.585-0.1	5.255-0.8	2.725-0.1	6.615-0.3	2.265-0.8	1.185-0.5
Read #9	50	0200-0300	3.915-0.2	1.195-0.8	5.345-0.5	1.222-0.1	3.385-0.7	1.765-0.4	1.665-0.1	4.425-0.8	2.295-0.4	7.325-0.2	1.905-0.8	1.005-0.5
Read #9	50	0300-0400	4.145-0.2	1.035-0.8	5.385-0.5	1.365-0.1	3.375-0.8	1.705-0.4	1.765-0.1	4.425-0.8	2.295-0.4	7.325-0.2	1.905-0.8	1.005-0.5
Read #9														

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

AERMOD model (September)			Year 2043		NO _x Emission		NO _x Emission							
Read Name	Read ID	Hour	Monthly/hour/ton		Monthly/hour/ton		Monthly/hour/ton		Monthly/hour/ton					
			g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr				
Read S1	S1	0000-0100	4.23E-03	3.93E-08	2.28E-04	3.95E-02	2.65E-07	1.80E-03	3.77E-02	9.98E-07	2.08E-04	1.04E-04	8.23E-09	1.60E-05
Read S1	S1	0100-0200	4.64E-03	4.23E-08	1.62E-04	4.95E-02	1.77E-07	1.21E-03	3.91E-02	2.01E-07	1.73E-04	1.13E-04	9.67E-09	4.03E-05
Read S1	S1	0200-0300	4.64E-03	4.23E-08	1.62E-04	4.95E-02	1.77E-07	1.21E-03	3.91E-02	2.01E-07	1.73E-04	1.13E-04	9.67E-09	4.03E-05
Read S1	S1	0300-0400	5.53E-03	5.24E-08	1.11E-04	3.79E-02	1.10E-07	5.51E-04	4.28E-02	1.27E-07	8.62E-04	3.80E-04	2.88E-08	2.78E-05
Read S1	S1	0400-0500	5.96E-03	5.93E-08	1.31E-04	3.84E-02	1.24E-07	8.84E-04	4.44E-02	1.44E-07	9.73E-04	1.50E-04	8.50E-08	3.90E-05
Read S1	S1	0500-0600	6.88E-03	6.88E-08	1.52E-04	3.84E-02	1.45E-07	1.00E-03	4.44E-02	1.66E-07	1.10E-03	1.67E-04	1.00E-08	4.44E-05
Read S1	S1	0600-0700	6.88E-03	6.88E-08	1.52E-04	3.84E-02	1.45E-07	1.00E-03	4.44E-02	1.66E-07	1.10E-03	1.67E-04	1.00E-08	4.44E-05
Read S1	S1	0700-0800	7.30E-03	7.17E-07	1.20E-04	4.17E-02	1.61E-06	6.88E-03	4.90E-02	1.19E-07	8.07E-03	1.86E-04	5.10E-08	3.07E-04
Read S1	S1	0800-0900	6.93E-03	6.93E-08	1.42E-04	3.84E-02	1.36E-07	9.00E-04	4.44E-02	1.55E-07	1.04E-03	1.67E-04	1.00E-08	4.44E-05
Read S1	S1	0900-1000	7.88E-03	7.78E-07	1.22E-04	4.06E-02	9.23E-07	6.28E-03	4.85E-02	1.10E-06	7.50E-04	2.14E-04	8.66E-08	3.91E-04
Read S1	S1	1000-1100	8.89E-03	8.74E-07	1.17E-04	4.27E-02	8.34E-07	5.68E-03	5.16E-02	1.01E-06	8.66E-04	2.42E-04	7.78E-08	2.22E-04
Read S1	S1	1100-1200	8.89E-03	8.74E-07	1.17E-04	4.27E-02	8.34E-07	5.68E-03	5.16E-02	1.01E-06	8.66E-04	2.42E-04	7.78E-08	2.22E-04
Read S1	S1	1200-1300	5.02E-02	7.77E-07	1.07E-04	3.62E-02	1.04E-07	7.00E-04	7.13E-02	7.13E-07	9.86E-04	8.49E-04	1.47E-08	5.27E-04
Read S1	S1	1300-1400	1.51E-02	2.91E-07	1.98E-05	5.82E-02	1.13E-06	7.66E-03	7.93E-02	1.42E-06	8.64E-04	9.28E-04	8.28E-08	5.64E-04
Read S1	S1	1400-1500	1.51E-02	2.91E-07	2.07E-05	5.74E-02	1.15E-06	7.64E-03	7.22E-02	1.46E-06	9.91E-04	4.26E-04	5.88E-08	5.84E-04
Read S1	S1	1500-1600	1.51E-02	2.91E-07	2.07E-05	5.74E-02	1.15E-06	7.64E-03	7.22E-02	1.46E-06	9.91E-04	4.26E-04	5.88E-08	5.84E-04
Read S1	S1	1600-1700	1.41E-02	3.02E-07	2.06E-05	5.42E-02	1.18E-06	7.90E-03	6.83E-02	1.46E-06	9.93E-04	8.83E-04	8.50E-08	5.80E-04
Read S1	S1	1700-1800	1.04E-02	2.41E-07	1.64E-05	4.70E-02	1.09E-06	7.40E-03	5.74E-02	1.33E-06	9.04E-04	3.02E-04	7.08E-08	4.78E-04
Read S1	S1	1800-1900	1.04E-02	2.41E-07	1.64E-05	4.70E-02	1.09E-06	7.40E-03	5.74E-02	1.33E-06	9.04E-04	3.02E-04	7.08E-08	4.78E-04
Read S1	S1	1900-2000	6.89E-03	6.92E-07	1.21E-04	8.21E-04	3.63E-07	6.13E-04	3.79E-02	7.34E-07	4.99E-04	1.62E-04	3.93E-08	2.31E-04
Read S1	S1	2000-2100	6.89E-03	6.92E-07	1.21E-04	8.21E-04	3.63E-07	6.13E-04	3.79E-02	7.34E-07	4.99E-04	1.62E-04	3.93E-08	2.31E-04
Read S1	S1	2100-2200	6.89E-03	6.92E-07	1.21E-04	8.21E-04	3.63E-07	6.13E-04	3.79E-02	7.34E-07	4.99E-04	1.62E-04	3.93E-08	2.31E-04
Read S1	S1	2200-2300	6.05E-03	6.42E-08	5.73E-04	3.48E-02	4.88E-07	3.30E-03	4.00E-07	5.70E-07	3.88E-04	1.64E-04	2.78E-05	1.55E-04
Read S1	S1	2300-0000	6.64E-03	6.89E-08	4.75E-04	3.64E-02	3.83E-07	2.60E-03	4.30E-07	4.53E-07	3.80E-04	1.81E-04	9.00E-04	3.00E-04
Read S2	S2	0000-0100	4.32E-03	3.99E-08	2.45E-04	4.17E-02	2.69E-07	1.82E-03	3.79E-02	1.01E-06	2.08E-04	1.07E-04	7.73E-09	1.63E-05
Read S2	S2	0100-0200	4.75E-02	1.70E-08	3.17E-05	1.78E-01	6.61E-06	1.15E-02	2.20E-01	7.85E-04	1.67E-04	9.43E-03	3.60E-06	6.29E-06
Read S2	S2	0200-0300	4.63E-02	1.31E-08	2.44E-05	1.69E-01	4.77E-06	8.91E-06	2.15E-01	6.61E-04	1.54E-04	9.36E-03	2.65E-06	4.95E-06
Read S2	S2	0300-0400	4.63E-02	1.31E-08	2.44E-05	1.69E-01	4.77E-06	8.91E-06	2.15E-01	6.61E-04	1.54E-04	9.36E-03	2.65E-06	4.95E-06
Read S2	S2	0400-0500	4.68E-02	1.33E-08	2.48E-05	1.70E-01	4.83E-06	9.00E-06	2.17E-01	6.15E-04	1.15E-04	9.42E-03	2.67E-06	5.00E-06
Read S2	S2	0500-0600	4.84E-02	2.50E-08	4.76E-05	1.70E-01	9.25E-06	1.93E-04	2.24E-01	1.17E-04	2.21E-04	9.55E-03	6.02E-06	9.40E-06
Read S2	S2	0600-0700	5.05E-02	2.61E-08	4.92E-05	1.70E-01	9.55E-06	2.04E-04	2.24E-01	1.17E-04	2.21E-04	9.55E-03	6.02E-06	9.40E-06
Read S2	S2	0700-0800	5.37E-02	1.88E-08	2.59E-04	1.94E-01	5.00E-07	9.95E-04	2.47E-01	6.38E-04	1.19E-03	9.93E-03	2.56E-06	4.79E-05
Read S2	S2	0800-0900	5.32E-02	1.65E-07	3.02E-04	1.99E-01	6.16E-07	1.15E-04	2.52E-01	7.81E-04	1.46E-03	9.78E-03	3.02E-06	5.66E-05
Read S2	S2	0900-1000	5.89E-02	1.93E-07	3.60E-04	2.06E-01	7.25E-07	1.36E-04	2.61E-01	9.11E-04	1.72E-03	9.93E-03	4.48E-06	6.51E-05
Read S2	S2	1000-1100	5.89E-02	1.93E-07	3.60E-04	2.06E-01	7.25E-07	1.36E-04	2.61E-01	9.11E-04	1.72E-03	9.93E-03	4.48E-06	6.51E-05
Read S2	S2	1100-1200	5.82E-02	1.89E-07	3.54E-04	2.09E-01	6.79E-07	1.27E-04	2.67E-01	8.66E-04	1.62E-03	9.35E-03	3.59E-06	6.29E-05
Read S2	S2	1200-1300	5.95E-02	2.01E-07	3.75E-04	2.04E-01	6.89E-07	1.22E-04	2.64E-01	8.86E-04	1.66E-03	1.04E-04	4.98E-06	5.58E-05
Read S2	S2	1300-1400	5.30E-02	1.71E-07	3.25E-04	2.01E-01	6.16E-07	1.09E-04	2.43E-01	8.11E-04	1.45E-03	9.42E-03	3.45E-06	5.14E-05
Read S2	S2	1400-1500	6.04E-02	2.27E-07	4.25E-04	2.11E-01	7.94E-07	1.48E-04	2.71E-01	1.02E-04	1.91E-04	1.04E-04	3.90E-06	7.26E-05
Read S2	S2	1500-1600	5.40E-02	1.52E-07	3.97E-04	2.00E-01	8.20E-07	1.53E-04	2.63E-01	1.03E-04	1.92E-04	9.62E-03	7.81E-06	7.07E-05
Read S2	S2	1600-1700	5.40E-02	1.52E-07	3.97E-04	2.00E-01	8.20E-07	1.53E-04	2.63E-01	1.03E-04	1.92E-04	9.62E-03	7.81E-06	7.07E-05
Read S2	S2	1700-1800	4.69E-02	2.15E-07	2.90E-04	1.91E-01	6.29E-07	1.18E-04	2.38E-01	7.47E-04	1.47E-03	8.82E-04	5.62E-06	5.46E-05
Read S2	S2	1800-1900	4.15E-02	9.56E-08	1.79E-04	1.79E-02	4.02E-07	7.52E-04	2.16E-04	4.49E-04	9.31E-04	8.69E-06	8.88E-06	4.48E-05
Read S2	S2	1900-2000	4.15E-02	9.56E-08	1.79E-04	1.79E-02	4.02E-07	7.52E-04	2.16E-04	4.49E-04	9.31E-04	8.69E-06	8.88E-06	4.48E-05
Read S2	S2	2000-2100	3.85E-02	4.64E-08	8.67E-05	1.61E-01	1.54E-07	3.63E-04	1.99E-04	2.40E-07	4.54E-04	7.77E-03	9.37E-06	1.75E-05
Read S2	S2	2100-2200	3.91E-02	4.84E-08	8.90E-05	1.62E-01	2.00E-07	3.74E-04	2.01E-04	2.48E-07	4.64E-04	7.86E-03	9.37E-06	1.82E-05
Read S2	S2	2200-2300	3.91E-02	4.84E-08	8.90E-05	1.62E-01	2.00E-07	3.74E-04	2.01E-04	2.48E-07	4.64E-04	7.86E-03	9.37E-06	1.82E-05
Read S2	S2	2300-0000	4.25E-02	3.77E-08	7.06E-05	1.57E-01	1.39E-07	2.60E-04	2.00E-07	1.77E-07	3.31E-04	8.61E-03	7.49E-06	1.40E-05
Read S3	S3	0000-0100	6.62E-03	6.30E-08	2.58E-04	3.23E-01	1.07E-07	9.11E-04	2.99E-03	1.38E-07	1.17E-04	1.04E-04	8.80E-07	6.07E-05
Read S3	S3	0100-0200	6.62E-03	6.30E-08	2.58E-04	3.23E-01	1.07E-07	9.11E-04	2.99E-03	1.38E-07	1.17E-04	1.04E-04	8.80E-07	6.07E-05
Read S3	S3	0200-0300	6.62E-03	6.30E-08	2.58E-04	3.23E-01	1.07E-07	9.11E-04	2.99E-03	1.38E-07	1.17E-04	1.04E-04	8.80E-07	6.07E-05
Read S3	S3	0300-0400	7.04E-02	1.35E-08	1.15E-04	2.48E-01	4.77E-08	4.09E-04	3.19E-01	6.13E-08	5.20E-04	1.08E-02	2.07E-07	1.76E-05
Read S3	S3	0400-0500	7.45E-02	1.30E-08	1.10E-04	2.56E-01	5.35E-08	4.24E-04	3.26E-01	6.13E-08	5.20E-04	1.08E-02	2.07E-07	1.76E-05
Read S3	S3	0500-0600	7.45E-02	1.30E-08	1.10E-04	2.56E-01	5.35E-08	4.24E-04	3.26E-01	6.13E-08	5.20E-04	1.08E-02	2.07E-07	1.76E-05
Read S3	S3	0600-0700	8.69E-02	7.53E-08	6.39E-04	3.04E-01	2.64E-07	2.24E-03	3.91E-03	6.31E-07	2.87E-02	1.20E-04	4.80E-05	3.00E-05
Read S3	S3	0700-0800	9.74E-02	1.76E-07	1.48E-04	3.38E-01	6.12E-07	5.19E-03	4.95E-03	7.88E-07	6.68E-03	1.27E-04	2.29E-06	1.95E-04
Read S3	S3	0800-0900	9.74E-02	1.76E-07	1.48E-04	3.38E-01	6.12E-07	5.19E-03	4.95E-03	7.88E-07	6.68E-03	1.27E-04	2.29E-06	1.95E-04
Read S3	S3	0900-1000	1.03E-01	2.11E-07	1.83E-03	3.78E-01	7.81E-07	6.62E-03	4.76E-03	9.67E-07	8.45E-03	1.29E-02	2.69E-06	2.28E-04
Read S3	S3	1000-1100	1.12E-01	2.25E-07	1.87E-03	3.89E-01	7.84E-07	6.69E-03	5.01E-03	9.85E-07	8.36E-03	1.39E-02	2.69E-06	2.29E-04
Read S3	S3	1100-1200	9.76E-02	2.30E-07	1.95E-03	3.95E-01	7.87E-07	6.68E-03	4.43E-03	1.02E-06	8.63E-06	1.06E-02	2.50E-06	2.12E-04
Read S3	S3	1200-1300	9.72E-02	2.43E-07	2.09E-03	3.49E-01	8.73E-07	6.40E-03	4.46E-03	1.12E-06	9.47E-06	1.06E-02	2.65E-06	2.25E-04
Read S3	S3	1300-1400	8.87E-02	2.36E-07	2.00E-03	3.93E-01	7.91E-07	6.71E-03	4.26E-03	1.12E-06	8.63E-06	1.06E-02	2.65E-06	2.26E-04
Read S3	S3	1400-1500	9.11E-02	2.41E-07	2.04E-03	3.29E-01	8.53E-07	7.24E-03	4.14E-03	1.09E-06	9.28E-06	1.01E-02	2.67E-06	2.27E-04
Read S3	S3	1500-1600	8.87E-02	2.36E-07	2.00E-03	3.93E-01	7.91E-07	6.71E-03	4.26E-03	1.12E-06	8.63E-06	1.06E-02	2.65E-06	2.26E-04
Read S3	S3	1600-1700	9.11E-02	2.41E-07	2.04E-03	3								

L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Appendix\Appendix 3.5.4 Emission Factor in 2043-S B.xls

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

AERMOD model (September)			Year 2043		NO ₂ Emission										NO ₂ Emission									
Road Name	Road ID	Hour	Monthly/hour/ton				Monthly/hour/ton				Monthly/hour/ton				Monthly/hour/ton				Monthly/hour/ton					
			g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr	g/m ³ /hr					
Road 54	SA	0800-0900	8.14E-02	3.04E-07	2.53E-03	2.98E-01	1.12E-06	9.28E-03	3.80E-01	1.42E-06	1.18E-02	9.56E-03	1.56E-06	2.98E-04	1.18E-02	9.56E-03	1.56E-06	2.98E-04						
Road 54	SA	0900-1000	9.21E-02	3.32E-07	2.76E-03	3.40E-01	1.22E-06	1.02E-02	4.32E-01	1.56E-06	1.36E-02	1.08E-02	1.08E-02	1.08E-02	1.08E-02	1.08E-02	1.08E-02	1.08E-02						
Road 54	SA	1000-1100	1.01E-01	3.18E-07	2.64E-03	3.58E-01	1.13E-06	9.37E-03	4.59E-01	1.44E-06	1.20E-02	1.14E-02	1.56E-06	2.99E-04	1.14E-02	1.56E-06	2.99E-04							
Road 54	SA	1200-1300	1.28E-01	2.77E-07	2.30E-03	4.25E-01	9.34E-07	7.77E-03	5.51E-01	1.32E-06	1.01E-02	1.34E-02	1.34E-02	1.34E-02	1.34E-02	1.34E-02	1.34E-02	1.34E-02						
Road 54	SA	1300-1400	1.28E-01	2.77E-07	2.30E-03	4.25E-01	9.34E-07	7.77E-03	5.51E-01	1.32E-06	1.01E-02	1.34E-02	1.34E-02	1.34E-02	1.34E-02	1.34E-02	1.34E-02	1.34E-02						
Road 54	SA	1400-1500	1.24E-01	2.01E-07	2.50E-03	4.25E-01	1.03E-06	8.00E-03	5.49E-01	1.33E-06	1.11E-02	1.33E-02	1.33E-02	1.33E-02	1.33E-02	1.33E-02	1.33E-02	1.33E-02						
Road 54	SA	1500-1600	1.12E-01	2.82E-07	2.35E-03	4.25E-01	1.07E-06	8.50E-03	5.38E-01	1.12E-06	1.25E-02	1.25E-02	1.25E-02	1.25E-02	1.25E-02	1.25E-02	1.25E-02	1.25E-02						
Road 54	SA	1600-1700	1.12E-01	2.82E-07	2.35E-03	4.25E-01	1.07E-06	8.50E-03	5.38E-01	1.12E-06	1.25E-02	1.25E-02	1.25E-02	1.25E-02	1.25E-02	1.25E-02	1.25E-02	1.25E-02						
Road 54	SA	1700-1800	9.76E-02	2.72E-07	1.89E-03	3.78E-01	8.63E-07	7.43E-03	4.81E-01	1.39E-06	9.23E-01	1.14E-02	1.65E-06	2.91E-04	1.14E-02	1.65E-06	2.91E-04							
Road 54	SA	1800-1900	8.08E-02	1.53E-07	1.27E-03	3.23E-01	6.11E-07	5.50E-03	4.03E-01	7.64E-07	6.39E-01	1.00E-06	1.90E-06	1.90E-06	1.00E-06	1.90E-06	1.90E-06	1.90E-06						
Road 54	SA	2000-2100	7.28E-02	1.61E-07	1.36E-03	3.23E-01	5.48E-07	5.00E-03	3.44E-01	7.37E-07	6.39E-01	9.76E-03	1.33E-06	2.91E-04	9.76E-03	1.33E-06	2.91E-04	2.91E-04						
Road 54	SA	2000-2100	6.91E-02	1.52E-06	6.26E-04	2.76E-01	3.01E-07	2.50E-04	3.44E-01	3.78E-03	3.13E-01	1.04E-06	0.82E-05	0.82E-05	1.04E-06	0.82E-05	0.82E-05	0.82E-05						
Road 54	SA	2100-2200	6.99E-02	7.69E-06	6.40E-04	2.76E-01	3.05E-07	2.54E-04	3.47E-01	3.82E-03	3.18E-01	9.42E-04	0.83E-05	0.83E-05	9.42E-04	0.83E-05	0.83E-05	0.83E-05						
Road 54	SA	2200-2300	7.98E-02	7.69E-06	6.13E-04	2.68E-01	2.67E-07	2.22E-03	3.42E-01	3.47E-01	2.84E-03	9.53E-04	9.53E-04	9.53E-04	2.84E-03	9.53E-04	9.53E-04	9.53E-04						
Road 54	SA	2300-2400	7.28E-02	6.81E-06	6.13E-04	2.68E-01	2.67E-07	2.22E-03	3.42E-01	3.47E-01	2.84E-03	9.53E-04	9.53E-04	9.53E-04	2.84E-03	9.53E-04	9.53E-04	9.53E-04						
Road 101	101	0000-0100	5.52E-03	7.59E-11	1.10E-07	3.7																		
Road 101	101	0100-0200	6.04E-03	8.33E-11	1.24E-07	3.7																		
Road 101	101	0200-0300	6.04E-03	8.33E-11	1.24E-07	3.7																		
Road 101	101	0300-0400	7.17E-03	3.74E-08	5.41E-04	4.24E-02	2.22E-07	3.20E-03	4.96E-02	2.55E-07	3.78E-03	1.86E-03	6.99E-04	4.02E-03	1.86E-03	6.99E-04	4.02E-03							
Road 101	101	0400-0500	7.70E-03	4.43E-08	6.41E-04	4.24E-02	2.52E-07	3.40E-03	5.15E-02	2.96E-07	4.24E-03	1.27E-03	1.05E-03	1.87E-04	1.27E-03	1.05E-03	1.87E-04							
Road 101	101	0500-0600	8.13E-03	4.57E-08	6.41E-04	4.24E-02	2.52E-07	3.40E-03	5.15E-02	2.96E-07	4.24E-03	1.27E-03	1.05E-03	1.87E-04	1.27E-03	1.05E-03	1.87E-04							
Road 101	101	0600-0700	8.82E-03	1.90E-07	2.75E-04	4.70E-02	1.01E-06	1.48E-02	5.58E-02	1.12E-06	1.74E-03	2.31E-03	4.97E-07	1.88E-04	2.31E-03	4.97E-07	1.88E-04							
Road 101	101	0700-0800	9.35E-03	4.09E-07	5.91E-04	4.82E-02	2.11E-06	3.06E-02	5.76E-02	2.52E-06	3.64E-03	2.45E-03	6.07E-07	55E-05	3.64E-03	2.45E-03	6.07E-07	55E-05						
Road 101	101	0800-0900	4.11E-07	6.17E-03	4.49E-02	5.18E-02	2.12E-06	3.06E-02	5.58E-02	2.57E-06	3.71E-02	3.91E-03	2.5E-07	1.80E-03	3.71E-02	3.91E-03	2.5E-07	1.80E-03						
Road 101	101	0900-1000	1.20E-02	4.50E-07	6.51E-03	5.18E-02	1.99E-06	2.82E-02	6.39E-02	2.44E-06	3.47E-02	3.35E-03	2.5E-07	1.80E-03	3.47E-02	3.35E-03	2.5E-07	1.80E-03						
Road 101	101	1000-1100	1.20E-02	4.50E-07	6.51E-03	5.18E-02	1.99E-06	2.82E-02	6.39E-02	2.44E-06	3.47E-02	3.35E-03	2.5E-07	1.80E-03	3.47E-02	3.35E-03	2.5E-07	1.80E-03						
Road 101	101	1200-1300	1.25E-02	4.34E-07	6.27E-03	5.18E-02	1.81E-06	2.51E-02	6.42E-02	2.24E-06	3.24E-02	3.35E-03	1.8E-07	7.1E-05	3.24E-02	3.35E-03	1.8E-07	7.1E-05						
Road 101	101	1300-1400	1.25E-02	4.34E-07	6.27E-03	5.18E-02	1.81E-06	2.51E-02	6.42E-02	2.24E-06	3.24E-02	3.35E-03	1.8E-07	7.1E-05	3.24E-02	3.35E-03	1.8E-07	7.1E-05						
Road 101	101	1400-1500	1.25E-02	4.34E-07	6.27E-03	5.18E-02	1.81E-06	2.51E-02	6.42E-02	2.24E-06	3.24E-02	3.35E-03	1.8E-07	7.1E-05	3.24E-02	3.35E-03	1.8E-07	7.1E-05						
Road 101	101	1500-1600	1.17E-02	4.57E-07	6.61E-03	5.05E-02	2.07E-06	2.99E-02	6.66E-02	2.55E-06	3.65E-02	3.29E-03	2.5E-07	1.85E-03	3.65E-02	3.29E-03	2.5E-07	1.85E-03						
Road 101	101	1600-1700	1.23E-02	4.50E-07	7.30E-03	5.13E-02	2.11E-06	3.06E-02	6.39E-02	2.61E-06	3.78E-02	3.35E-03	1.37E-07	1.98E-03	3.78E-02	3.35E-03	1.37E-07	1.98E-03						
Road 101	101	1700-1800	8.73E-03	4.02E-07	5.81E-04	4.82E-02	2.05E-06	2.99E-02	5.32E-02	2.45E-06	3.59E-02	2.41E-03	1.11E-07	6.1E-05	3.59E-02	2.41E-03	1.11E-07	6.1E-05						
Road 101	101	1800-1900	8.73E-03	4.02E-07	5.81E-04	4.82E-02	2.05E-06	2.99E-02	5.32E-02	2.45E-06	3.59E-02	2.41E-03	1.11E-07	6.1E-05	3.59E-02	2.41E-03	1.11E-07	6.1E-05						
Road 101	101	1900-2000	5.99E-03	2.10E-07	3.04E-03	9.23E-02	1.26E-06	1.82E-02	3.77E-02	1.47E-06	2.12E-02	1.43E-03	5.57E-05	8.05E-04	1.43E-03	5.57E-05	8.05E-04	8.05E-04						
Road 101	101	2000-2100	5.23E-03	1.58E-07	2.29E-03	3.57E-02	1.08E-06	1.58E-02	4.09E-02	1.24E-06	1.75E-02	1.37E-03	4.18E-06	5.01E-04	1.75E-02	1.37E-03	4.18E-06	5.01E-04						
Road 101	101	2100-2200	4.62E-03	1.38E-07	2.00E-03	3.57E-02	1.08E-06	1.58E-02	4.09E-02	1.24E-06	1.75E-02	1.37E-03	4.18E-06	5.01E-04	1.75E-02	1.37E-03	4.18E-06	5.01E-04						
Road 101	101	2200-2300	4.62E-03	1.38E-07	2.00E-03	3.57E-02	1.08E-06	1.58E-02	4.09E-02	1.24E-06	1.75E-02	1.37E-03	4.18E-06	5.01E-04	1.75E-02	1.37E-03	4.18E-06	5.01E-04						
Road 101	101	2300-2400	5.14E-03	1.13E-07	1.84E-03	3.64E-02	1.09E-06	1.11E-02	4.15E-02	9.14E-07	1.32E-03	1.35E-03	2.89E-06	4.18E-04	1.32E-03	1.35E-03	2.89E-06	4.18E-04						
Road 102	102	0000-0100	8.23E-03	6.13E-08	8.58E-04	4.42E-02	3.42E-07	4.63E-03	5.27E-02	4.09E-07	5.49E-03	2.28E-03	7.17E-05	3.22E-04	5.49E-03	2.28E-03	7.17E-05	3.22E-04						
Road 102	102	0200-0300	8.83E-03	6.13E-08	8.58E-04	4.42E-02	3.42E-07	4.63E-03	5.27E-02	4.09E-07	5.49E-03	2.28E-03	7.17E-05	3.22E-04	5.49E-03	2.28E-03	7.17E-05	3.22E-04						
Road 102	102	0300-0400	1.02E-02	5.01E-08	6.88E-04	4.50E-02	3.60E-07	3.60E-03	5.56E-02	3.16E-07	4.29E-03	2.41E-03	1.37E-03	8.9E-04	4.29E-03	2.41E-03	1.37E-03	8.9E-04						
Road 102	102	0400-0500	1.02E-02	5.01E-08	6.88E-04	4.50E-02	3.60E-07	3.60E-03	5.56E-02	3.16E-07	4.29E-03	2.41E-03	1.37E-03	8.9E-04	4.29E-03	2.41E-03	1.37E-03	8.9E-04						
Road 102	102	0500-0600	1.09E-02	9.40E-08	1.30E-03	5.11E-02	4.59E-07	6.22E-03	6.27E-02	5.52E-07	7.52E-02	2.95E-03	2.61E-04	5.54E-04	7.52E-02	2.95E-03	2.61E-04	5.54E-04						
Road 102	102	0600-0700	1.09E-02	9.40E-08	1.30E-03	5.11E-02	4.59E-07	6.22E-03	6.27E-02	5.52E-07	7.52E-02	2.95E-03	2.61E-04	5.54E-04	7.52E-02	2.95E-03	2.61E-04	5.54E-04						
Road 102	102	0700-0800	1.21E-02	4.74E-07	6.43E-03	5.15E-02	2.16E-06	2.53E-03	6.72E-02	2.64E-06	5.58E-03	3.30E-03	2.9E-07	7.6E-05	5.58E-03	3.30E-03	2.9E-07	7.6E-05						
Road 102	102	0800-0900	1.17E-02	5.59E-07	7.30E-03	5.23E-02	2.40E-06	3.28E-03	6.40E-02	2.94E-06	5.99E-03	3.25E-04	4.9E-07	2.02E-03	5.99E-03	3.25E-04	4.9E-07	2.02E-03						
Road 102	102	0900-1000	1.17E-02	5.59E-07	7.30E-03	5.23E-02	2.40E-06	3.28E-03	6.40E-02	2.94E-06	5.99E-03	3.25E-04	4.9E-07	2.02E-03	5.99E-03	3.25E-04	4.9E-07	2.02E-03						
Road 102	102	1100-1200	1.55E-02	5.65E-07	7.65E-03	6.17E-02	2.25E-06	3.00E-03	7.72E-02	2.92E-06	1.82E-03	4.39E-03	6.6E-07	3.7E-05	1.82E-03	4.39E-03	6.6E-07	3.7E-05						
Road 102	102	1200-1300	1.90E-02	5.14E-07	7.00E-03	6.10E-02	2.10E-06	2.89E-03	7.60E-02	2.62E-06	5.59E-03	4.35E-03	4.74E-07	9.9E-05	5.59E-03	4.35E-03	4.74E-07	9.9E-05						
Road 102	102	1300-1400	1.90E-02	5.14E-07	7.00E-03	6.10E-02	2.10E-06	2.89E-03	7.60E-02	2.62E-06	5.59E-03	4.35E-03	4.74E-07	9.9E-05	5.59E-03	4.35E-03	4.74E-07	9.9E-05						
Road 102	102	1400-1500	1.27E-02	4.35E-07	5.91E-03	5.28E-02	1.82E-06	2.44E-03	6.55E-02	2.25E-06	3.05E-03	5.51E-03	2.21E-07	1.64E-03	3.05E-03	5.51E-03	2.21E-07	1.64E-03						
Road 102	102	1500-1600	1.18E-02	4.15E-07	5.67E-03	5.28E-02	1.86E-06	2.52E-03	6.46E-02	2.29E-06	3.06E-03	5.35E-03												

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24-hour Emission Factors for

Road Name		Road ID	NO _x Emission				NO _x Emission							
			Monthly/mg	Monthly/mg	Monthly/mg	Monthly/mg	Monthly/mg	Monthly/mg	Monthly/mg					
			g/km ³	g/km ³	g/km ³	g/km ³	g/km ³	g/km ³	g/km ³					
Road 103	103	1000-1700	1.1166	5.4807	1.8814	5.196	2.396	2.108	6.386	2.946	2.586	3.156	1.456	1.276
Road 103	103	1700-1800	8.566	4.4256	8.676	4.566	2.376	2.086	5.416	2.816	2.476	2.276	1.186	1.076
Road 103	103	1800-1900	6.5316	3.6316	6.5316	3.6316	2.156	1.866	4.816	2.616	2.276	1.186	1.076	1.076
Road 103	103	1900-2000	5.156	2.3116	2.026	3.226	1.436	1.266	3.736	2.686	1.466	1.436	5.986	2.566
Road 103	103	2000-2100	4.966	1.726	1.5116	3.566	2.216	1.066	9.926	1.386	1.216	1.286	4.446	3.966
Road 103	103	2100-2200	4.966	1.726	1.5116	3.566	2.216	1.066	9.926	1.386	1.216	1.286	4.446	3.966
Road 103	103	2200-2300	4.966	1.726	1.5116	3.566	2.216	1.066	9.926	1.386	1.216	1.286	4.446	3.966
Road 103	103	2300-2400	4.966	1.726	1.5116	3.566	2.216	1.066	9.926	1.386	1.216	1.286	4.446	3.966
Road 103	103	2400-2500	4.966	1.726	1.5116	3.566	2.216	1.066	9.926	1.386	1.216	1.286	4.446	3.966
Road 104	104	0100-0200	8.886	6.3116	4.066	4.556	4.376	5.536	4.016	3.076	3.046	1.216	3.056	2.676
Road 104	104	0200-0300	8.886	6.3116	4.066	4.556	4.376	5.536	4.016	3.076	3.046	1.216	3.056	2.676
Road 104	104	0300-0400	8.886	6.3116	4.066	4.556	4.376	5.536	4.016	3.076	3.046	1.216	3.056	2.676
Road 104	104	0400-0500	1.026	2.546	1.076	4.646	2.216	1.646	8.056	2.756	2.056	4.506	1.546	1.146
Road 104	104	0500-0600	1.026	2.546	1.076	4.646	2.216	1.646	8.056	2.756	2.056	4.506	1.546	1.146
Road 104	104	0600-0700	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 104	104	0700-0800	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 104	104	0800-0900	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 104	104	0900-1000	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 104	104	1000-1100	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 104	104	1100-1200	1.026	2.546	1.076	4.646	2.216	1.646	8.056	2.756	2.056	4.506	1.546	1.146
Road 104	104	1200-1300	1.026	2.546	1.076	4.646	2.216	1.646	8.056	2.756	2.056	4.506	1.546	1.146
Road 104	104	1300-1400	1.026	2.546	1.076	4.646	2.216	1.646	8.056	2.756	2.056	4.506	1.546	1.146
Road 104	104	1400-1500	1.026	2.546	1.076	4.646	2.216	1.646	8.056	2.756	2.056	4.506	1.546	1.146
Road 104	104	1500-1600	1.026	2.546	1.076	4.646	2.216	1.646	8.056	2.756	2.056	4.506	1.546	1.146
Road 104	104	1600-1700	1.026	2.546	1.076	4.646	2.216	1.646	8.056	2.756	2.056	4.506	1.546	1.146
Road 104	104	1700-1800	7.276	2.447	1.811	3.644	3.326	8.806	4.666	1.566	1.166	1.976	6.606	4.966
Road 104	104	1800-1900	5.226	2.776	2.276	3.366	3.936	1.936	5.656	1.466	1.226	1.676	8.426	6.026
Road 104	104	1900-2000	4.426	1.011	0.754	3.326	6.626	5.666	8.736	6.876	6.416	1.936	2.566	1.966
Road 104	104	2000-2100	3.876	0.846	0.634	3.286	4.026	4.506	8.026	8.776	6.146	1.936	2.186	1.676
Road 104	104	2100-2200	3.876	0.846	0.634	3.286	4.026	4.506	8.026	8.776	6.146	1.936	2.186	1.676
Road 104	104	2200-2300	3.876	0.846	0.634	3.286	4.026	4.506	8.026	8.776	6.146	1.936	2.186	1.676
Road 104	104	2300-2400	3.876	0.846	0.634	3.286	4.026	4.506	8.026	8.776	6.146	1.936	2.186	1.676
Road 104	104	2400-2500	3.876	0.846	0.634	3.286	4.026	4.506	8.026	8.776	6.146	1.936	2.186	1.676
Road 105	105	0000-0100	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 105	105	0100-0200	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 105	105	0200-0300	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 105	105	0300-0400	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 105	105	0400-0500	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 105	105	0500-0600	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 105	105	0600-0700	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 105	105	0700-0800	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 105	105	0800-0900	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 105	105	0900-1000	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 105	105	1000-1100	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 105	105	1100-1200	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 105	105	1200-1300	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 105	105	1300-1400	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 105	105	1400-1500	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 105	105	1500-1600	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 105	105	1600-1700	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 105	105	1700-1800	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 105	105	1800-1900	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 105	105	1900-2000	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 105	105	2000-2100	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 105	105	2100-2200	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 105	105	2200-2300	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 105	105	2300-2400	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 105	105	2400-2500	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 106	106	0000-0100	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 106	106	0100-0200	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 106	106	0200-0300	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 106	106	0300-0400	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 106	106	0400-0500	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 106	106	0500-0600	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 106	106	0600-0700	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 106	106	0700-0800	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 106	106	0800-0900	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 106	106	0900-1000	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 106	106	1000-1100	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 106	106	1100-1200	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 106	106	1200-1300	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 106	106	1300-1400	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 106	106	1400-1500	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 106	106	1500-1600	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 106	106	1600-1700	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 106	106	1700-1800	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 106	106	1800-1900	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676	1.676	6.436	3.636	2.676
Road 106	106	1900-2000	1.226	2.286	1.736	5.566	1.046	1.676	8.816	1.676				

L:\Secure\Environment Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Appendix\Appendix 3.5.4 Emission Factor in 2043-S.B.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry
Open Road 24-hour Emission Factors for

AERMOD model (October)		Year 2043		NO _x Emission				NO _x Emission					
Row Name	Row ID	Hour	Month/Year	g/sec	g/min	g/sec	g/min	hour	Month/Year	g/sec	g/min	hour	Month/Year
Row 11	11	0000:0000	2:36e2	1.83e-07	2.56e-04	1.26e-01	8.90e-07	1.37e-03	1.49e-01	1.16e-06	6.35e-03	4.54e-03	3.53e-08
Row 11	11	0100:0000	2:36e2	1.95e-07	2.78e-04	1.31e-01	8.76e-07	4.47e-04	1.57e-03	8.11e-07	1.14e-03	6.05e-03	2.62e-08
Row 11	11	0200:0000	2:36e2	1.95e-07	2.78e-04	1.31e-01	8.76e-07	4.47e-04	1.57e-03	8.11e-07	1.14e-03	6.05e-03	2.62e-08
Row 11	11	0300:0000	3:21e-02	1.00e-07	1.41e-04	4.54e-01	5.46e-04	3.96e-04	1.77e-05	5.46e-07	7.76e-04	6.14e-03	1.92e-08
Row 11	11	0400:0000	3:21e-02	1.14e-07	1.59e-04	1.51e-01	5.14e-07	1.99e-04	1.84e-07	6.77e-06	8.79e-04	6.41e-03	2.19e-08
Row 11	11	0500:0000	3:21e-02	1.14e-07	1.59e-04	1.51e-01	5.14e-07	1.99e-04	1.84e-07	6.77e-06	8.79e-04	6.41e-03	2.19e-08
Row 11	11	0600:0000	3:63e-02	4.37e-07	6.13e-04	1.73e-01	2.08e-02	1.92e-05	2.52e-05	3.53e-03	6.89e-03	8.19e-03	1.16e-08
Row 11	11	0700:0000	4.61e-02	1.19e-06	1.67e-03	2.04e-01	5.10e-06	7.14e-03	2.52e-05	6.29e-06	8.81e-03	7.83e-03	1.99e-07
Row 11	11	0800:0000	4.61e-02	1.19e-06	1.67e-03	2.04e-01	5.10e-06	7.14e-03	2.52e-05	6.29e-06	8.81e-03	7.83e-03	1.99e-07
Row 11	11	0900:0000	5.57e-02	1.37e-06	1.92e-03	2.29e-01	1.25e-05	1.72e-03	2.65e-06	6.99e-06	9.10e-03	6.29e-03	2.14e-07
Row 11	11	1000:0000	6.03e-02	1.59e-06	1.87e-03	2.14e-01	6.61e-06	8.60e-03	2.74e-05	5.91e-06	8.78e-03	6.42e-03	1.39e-07
Row 11	11	1100:0000	6.03e-02	1.59e-06	1.87e-03	2.14e-01	6.61e-06	8.60e-03	2.74e-05	5.91e-06	8.78e-03	6.42e-03	1.39e-07
Row 11	11	1200:0000	7.00e-02	2.12e-06	2.91e-03	2.11e-01	1.25e-05	1.72e-03	2.65e-06	6.99e-06	7.72e-03	6.14e-03	1.92e-08
Row 11	11	1300:0000	7.00e-02	2.12e-06	2.91e-03	2.11e-01	1.25e-05	1.72e-03	2.65e-06	6.99e-06	7.72e-03	6.14e-03	1.92e-08
Row 11	11	1400:0000	7.65e-02	2.11e-06	2.90e-03	2.61e-01	2.22e-05	1.01e-02	3.38e-03	9.33e-06	1.31e-02	7.87e-03	2.17e-07
Row 11	11	1500:0000	7.65e-02	2.11e-06	2.90e-03	2.61e-01	2.22e-05	1.01e-02	3.38e-03	9.33e-06	1.31e-02	7.87e-03	2.17e-07
Row 11	11	1600:0000	7.65e-02	2.11e-06	2.90e-03	2.61e-01	2.22e-05	1.01e-02	3.38e-03	9.33e-06	1.31e-02	7.87e-03	2.17e-07
Row 11	11	1700:0000	8.07e-02	2.58e-06	3.47e-03	2.58e-01	2.58e-05	1.65e-03	1.37e-05	1.28e-02	7.87e-03	2.17e-07	2.67e-08
Row 11	11	1800:0000	8.07e-02	2.58e-06	3.47e-03	2.58e-01	2.58e-05	1.65e-03	1.37e-05	1.28e-02	7.87e-03	2.17e-07	2.67e-08
Row 11	11	1900:2000	3:02e-02	7.20e-07	1.01e-03	1.39e-01	2.58e-05	1.69e-03	3.97e-05	5.56e-04	4.49e-03	1.08e-03	1.47e-04
Row 11	11	2000:0000	3:02e-02	7.20e-07	1.01e-03	1.39e-01	2.58e-05	1.69e-03	3.97e-05	5.56e-04	4.49e-03	1.08e-03	1.47e-04
Row 11	11	2100:0000	3:02e-02	7.20e-07	1.01e-03	1.39e-01	2.58e-05	1.69e-03	3.97e-05	5.56e-04	4.49e-03	1.08e-03	1.47e-04
Row 11	11	2200:0000	3:02e-02	7.20e-07	1.01e-03	1.39e-01	2.58e-05	1.69e-03	3.97e-05	5.56e-04	4.49e-03	1.08e-03	1.47e-04
Row 11	11	2300:0000	2:88e-02	3.86e-07	5.46e-04	1.40e-06	2.63e-06	1.69e-02	2.28e-06	3.17e-03	4.51e-03	6.09e-03	8.45e-08
Row 11	11	0000:0000	2:36e2	1.41e-07	1.27e-03	4.72e-02	3.96e-07	1.66e-03	9.87e-07	3.98e-06	3.31e-07	3.98e-06	3.31e-07
Row 12	12	0100:0000	2:31e-02	1.40e-07	1.26e-03	4.81e-02	4.92e-07	2.63e-03	7.12e-03	4.32e-07	3.89e-04	2.14e-02	3.90e-03
Row 12	12	0200:0000	2:36e2	1.41e-07	1.27e-03	4.86e-02	5.91e-07	6.23e-04	4.32e-07	3.89e-03	2.14e-02	1.29e-06	1.19e-04
Row 12	12	0300:0000	2:36e2	1.41e-07	1.27e-03	4.86e-02	5.91e-07	6.23e-04	4.32e-07	3.89e-03	2.14e-02	1.29e-06	1.19e-04
Row 12	12	0400:0000	2:37e-02	1.41e-07	1.27e-03	4.91e-02	6.92e-07	6.23e-03	2.9e-03	4.32e-07	3.89e-03	2.18e-02	1.29e-06
Row 12	12	0500:0000	2:37e-02	1.41e-07	1.27e-03	4.91e-02	6.92e-07	6.23e-03	2.9e-03	4.32e-07	3.89e-03	2.18e-02	1.29e-06
Row 12	12	0600:0000	2:33e-02	1.44e-07	1.28e-03	4.86e-02	9.98e-07	6.68e-03	1.88e-03	4.40e-07	3.96e-03	2.13e-02	1.31e-06
Row 12	12	0700:0000	2:33e-02	1.44e-07	1.28e-03	4.86e-02	9.98e-07	6.68e-03	1.88e-03	4.40e-07	3.96e-03	2.13e-02	1.31e-06
Row 12	12	0800:0000	2:33e-02	1.44e-07	1.28e-03	4.86e-02	9.98e-07	6.68e-03	1.88e-03	4.40e-07	3.96e-03	2.13e-02	1.31e-06
Row 12	12	0900:0000	2:37e-02	1.44e-07	1.28e-03	4.91e-02	9.98e-07	6.68e-03	1.88e-03	4.40e-07	3.96e-03	2.13e-02	1.31e-06
Row 12	12	1000:0000	2:36e2	1.44e-07	1.28e-03	4.91e-02	9.98e-07	6.68e-03	1.88e-03	4.40e-07	3.96e-03	2.13e-02	1.31e-06
Row 12	12	1100:0000	2:36e2	1.44e-07	1.28e-03	4.91e-02	9.98e-07	6.68e-03	1.88e-03	4.40e-07	3.96e-03	2.13e-02	1.31e-06
Row 12	12	1200:0000	2:36e2	1.44e-07	1.28e-03	4.91e-02	9.98e-07	6.68e-03	1.88e-03	4.40e-07	3.96e-03	2.13e-02	1.31e-06
Row 12	12	1300:0000	2:36e2	1.44e-07	1.28e-03	4.91e-02	9.98e-07	6.68e-03	1.88e-03	4.40e-07	3.96e-03	2.13e-02	1.31e-06
Row 12	12	1400:0000	2:36e2	1.44e-07	1.28e-03	4.91e-02	9.98e-07	6.68e-03	1.88e-03	4.40e-07	3.96e-03	2.13e-02	1.31e-06
Row 12	12	1500:0000	2:36e2	1.44e-07	1.28e-03	4.91e-02	9.98e-07	6.68e-03	1.88e-03	4.40e-07	3.96e-03	2.13e-02	1.31e-06
Row 12	12	1600:0000	2:36e2	1.44e-07	1.28e-03	4.91e-02	9.98e-07	6.68e-03	1.88e-03	4.40e-07	3.96e-03	2.13e-02	1.31e-06
Row 12	12	1700:0000	2:36e2	1.44e-07	1.28e-03	4.91e-02	9.98e-07	6.68e-03	1.88e-03	4.40e-07	3.96e-03	2.13e-02	1.31e-06
Row 12	12	1800:0000	2:36e2	1.44e-07	1.28e-03	4.91e-02	9.98e-07	6.68e-03	1.88e-03	4.40e-07	3.96e-03	2.13e-02	1.31e-06
Row 12	12	1900:0000	2:36e2	1.44e-07	1.28e-03	4.91e-02	9.98e-07	6.68e-03	1.88e-03	4.40e-07	3.96e-03	2.13e-02	1.31e-06
Row 12	12	2000:0000	2:36e2	1.44e-07	1.28e-03	4.91e-02	9.98e-07	6.68e-03	1.88e-03	4.40e-07	3.96e-03	2.13e-02	1.31e-06
Row 12	12	2100:0000	2:36e2	1.44e-07	1.28e-03	4.91e-02	9.98e-07	6.68e-03	1.88e-03	4.40e-07	3.96e-03	2.13e-02	1.31e-06
Row 12	12	2200:0000	2:36e2	1.44e-07	1.28e-03	4.91e-02	9.98e-07	6.68e-03	1.88e-03	4.40e-07	3.96e-03	2.13e-02	1.31e-06
Row 12	12	2300:0000	2:12e-02	1.43e-07	1.37e-03	4.51e-02	1.03e-02	2.73e-03	6.83e-07	4.40e-07	4.01e-03	1.97e-03	1.19e-04
Row 12	12	0000:0000	2:36e2	1.40e-07	1.28e-03	4.65e-02	1.01e-07	2.66e-03	6.88e-04	4.31e-07	3.94e-03	2.06e-02	1.29e-06
Row 12	12	0100:0000	2:36e2	1.40e-07	1.28e-03	4.65e-02	1.01e-07	2.66e-03	6.88e-04	4.31e-07	3.94e-03	2.06e-02	1.29e-06
Row 12	12	0200:0000	2:36e2	1.40e-07	1.28e-03	4.65e-02	1.01e-07	2.66e-03	6.88e-04	4.31e-07	3.94e-03	2.06e-02	1.29e-06
Row 12	12	0300:0000	2:36e2	1.40e-07	1.28e-03	4.65e-02	1.01e-07	2.66e-03	6.88e-04	4.31e-07	3.94e-03	2.06e-02	1.29e-06
Row 12	12	0400:0000	2:37e-02	1.40e-07	1.28e-03	4.68e-02	1.01e-07	2.66e-03	6.88e-04	4.31e-07	3.94e-03	2.06e-02	1.29e-06
Row 12	12	0500:0000	2:37e-02	1.40e-07	1.28e-03	4.68e-02	1.01e-07	2.66e-03	6.88e-04	4.31e-07	3.94e-03	2.06e-02	1.29e-06
Row 12	12	0600:0000	2:31e-02	1.40e-07	1.28e-03	4.68e-02	1.01e-07	2.66e-03	6.88e-04	4.31e-07	3.94e-03	2.06e-02	1.29e-06
Row 12	12	0700:0000	2:36e2	1.40e-07	1.28e-03	4.68e-02	1.01e-07	2.66e-03	6.88e-04	4.31e-07	3.94e-03	2.06e-02	1.29e-06
Row 12	12	0800:0000	2:36e2	1.40e-07	1.28e-03	4.68e-02	1.01e-07	2.66e-03	6.88e-04	4.31e-07	3.94e-03	2.06e-02	1.29e-06
Row 12	12	0900:0000	2:36e2	1.40e-07	1.28e-03	4.68e-02	1.01e-07	2.66e-03	6.88e-04	4.31e-07	3.94e-03	2.06e-02	1.29e-06
Row 12	12	1000:0000	2:36e2	1.40e-07	1.28e-03	4.68e-02	1.01e-07	2.66e-03	6.88e-04	4.31e-07	3.94e-03	2.06e-02	1.29e-06
Row 12	12	1100:0000	2:36e2	1.40e-07	1.28e-03	4.68e-02	1.01e-07	2.66e-03	6.88e-04	4.31e-07	3.94e-03	2.06e-02	1.29e-06
Row 12	12	1200:0000	2:36e2	1.40e-07	1.28e-03	4.68e-02	1.01e-07	2.66e-03	6.88e-04	4.31e-07	3.94e-03	2.06e-02	1.29e-06
Row 12	12	1300:0000	2:36e2	1.40e-07	1.28e-03	4.68e-02	1.01e-07	2.66e-03	6.88e-04	4.31e-07	3.94e-03	2.06e-02	1.29e-06
Row 12	12	1400:0000	2:36e2	1.40e-07	1.28e-03	4.68e-02	1.01e-07	2.66e-03	6.88e-04	4.31e-07	3.94e-03	2.06e-02	1.29e-06
Row 12	12	1500:0000	2:36e2	1.40e-07	1.28e-03	4.68e-02	1.01e-07	2.66e-03	6.88e-04	4.31e-07	3.94e-03	2.06e-02	1.29e-06
Row 12	12	1600:0000	2:36e2	1.40e-07	1.28e-03	4.68e-02	1.01e-07	2.66e-03	6.88e-04	4.31e-07	3.94e-03	2.06e-02	1.29e-06
Row 12	12	1700:0000	2:36e2	1.40e-07	1.28e-03	4.68e-02	1.01e-07	2.66e-03	6.88e-04	4.31e-07	3.94e-03	2.06e-02	1.29e-06
Row 12	12	1800:0000	2:36e2	1.40e-07	1.28e-03	4.68e-02	1.01e-07	2.66e-03	6.88e-04	4.31e-07	3.94e-03	2.06e-02	1.29e-06
Row 12	12	1900:0000	2:36e2	1.40e-07	1.28e-03	4.68e-02	1.01e-07	2.66e-03	6.88e-04	4.31e-07	3.94e-03	2.06e-02	1.29e-06
Row 12	12	2000:0000	2:36e2	1.40e-07	1.28e-03	4.68e-02	1.01e-07	2.66e-03	6.88e-04	4.31e-07	3.94e-03	2.06e-02	1.29e-06
Row 12	12	2100:0000	2:36e2	1.40e-07	1.28e-03	4.68e-							

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Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

AERMOD model (October)		Year 2043		NO _x Emission				NO ₂ Emission						
Road Name	Road ID	Hour	Monthly/Average		Monthly/Average		Monthly/Average		Monthly/Average					
			g/mph	g/s	tonne/hr	g/mph	g/s	tonne/hr	g/mph	g/s	tonne/hr			
Road #1	1	0000-0100	4.44/6	6.46e-08	1.30e-03	9.38e-02	4.91/07	9.87e-03	3.62/05	5.56e-07	1.12e-02	1.09e-03	1.59e-08	3.20e-04
Road #1	1	0100-0200	4.98/6	4.68e-09	3.98e-04	3.51/03	6.63e-03	6.68e-01	4.05/03	3.79e-07	7.62/03	1.27e-01	1.10e-08	2.33e-04
Road #1	1	0200-0300	5.44/6	4.18e-09	3.35e-04	3.06/03	5.76e-03	5.76e-01	3.58/03	3.32e-07	6.92/03	1.12e-01	1.01e-08	2.22e-04
Road #1	1	0300-0400	5.98/6	3.27e-08	6.58e-04	3.91/02	2.08e-07	4.12e-03	4.41/02	2.41e-08	4.85e-03	5.80e-06	8.20e-09	1.65e-04
Road #1	1	0400-0500	6.43/6	3.88e-08	7.75e-04	3.34e-03	2.38e-07	4.79e-03	4.96e-02	2.79e-07	5.52e-03	1.62e-03	8.71e-09	1.95e-04
Road #1	1	0500-0600	6.98/6	4.48e-08	8.96e-04	4.08e-03	2.82e-07	5.63e-03	5.81e-02	3.29e-07	6.58e-03	1.87e-03	1.01e-08	2.22e-04
Road #1	1	0600-0700	7.21/6	1.60e-07	3.22e-03	4.18e-02	1.98e-07	1.98e-02	4.90e-01	1.09e-02	2.19e-02	1.42e-04	4.08e-08	8.19e-04
Road #1	1	0700-0800	7.73e-03	3.47e-07	6.98e-03	4.28e-02	1.92e-06	3.87e-02	5.05e-02	2.27e-06	4.56e-02	1.89e-08	8.89e-08	1.79e-03
Road #1	1	0800-0900	7.88e-03	4.48e-07	8.96e-03	5.38e-02	2.42e-06	4.84e-02	6.21e-02	2.79e-06	5.58e-02	2.29e-08	1.01e-08	2.22e-04
Road #1	1	0900-1000	8.50e-05	3.63e-07	3.20e-03	4.95e-02	1.82e-06	3.69e-02	5.19e-02	2.18e-06	4.38e-02	1.73e-08	6.99e-09	1.98e-03
Road #1	1	1000-1100	9.88e-08	3.58e-07	3.17e-03	4.47e-02	1.65e-06	3.32e-02	4.54e-02	2.01e-06	4.03e-02	2.64e-03	8.76e-08	1.96e-03
Road #1	1	1100-1200	9.21e-03	6.12e-07	1.22e-02	1.65e-02	4.72e-06	9.45e-03	1.22e-02	2.45e-06	4.90e-03	1.27e-03	1.10e-08	2.33e-04
Road #1	1	1200-1300	1.25e-02	6.05e-07	1.22e-02	1.62e-02	2.53e-06	5.06e-03	6.47e-03	3.13e-06	6.26e-03	3.37e-03	1.97e-02	4.25e-04
Road #1	1	1300-1400	1.27e-02	6.31e-07	1.27e-02	1.65e-02	2.72e-06	5.47e-03	6.72e-03	3.35e-06	6.74e-03	3.48e-03	1.74e-02	3.49e-03
Road #1	1	1400-1500	1.72e-02	6.72e-07	1.88e-02	2.55e-02	2.85e-06	5.73e-03	6.66e-03	3.52e-06	7.04e-03	3.48e-03	1.83e-02	3.87e-03
Road #1	1	1500-1600	2.48e-02	7.48e-07	2.78e-02	3.86e-02	4.29e-06	8.58e-03	1.07e-02	4.95e-06	1.01e-02	5.05e-03	2.55e-02	5.35e-03
Road #1	1	1600-1700	1.23e-02	7.05e-07	1.42e-02	5.24e-02	2.99e-06	6.01e-02	7.47e-02	3.70e-03	7.43e-02	3.23e-03	1.89e-02	3.80e-03
Road #1	1	1700-1800	8.88e-03	5.69e-07	1.14e-02	4.59e-02	2.01e-06	3.84e-02	5.44e-02	3.47e-06	6.97e-02	2.41e-03	1.54e-02	3.09e-03
Road #1	1	1800-1900	8.46e-03	4.29e-07	8.58e-03	5.34e-02	1.79e-06	3.58e-02	4.53e-02	2.38e-06	4.76e-02	1.83e-03	1.12e-02	2.35e-03
Road #1	1	1900-2000	5.33e-03	2.88e-07	5.79e-03	3.17e-02	1.71e-06	3.42e-02	4.31e-02	2.00e-06	4.02e-02	1.41e-03	7.61e-06	1.53e-03
Road #1	1	2000-2100	5.33e-03	2.19e-07	4.34e-03	3.44e-02	1.45e-06	2.91e-02	3.96e-02	1.65e-06	3.42e-02	1.36e-03	5.71e-06	1.19e-03
Road #2	2	0000-0100	4.01/6	4.82e-08	1.19e-03	8.71e-02	4.35e-02	8.71e-03	3.23e-06	4.01e-07	1.11e-02	1.05e-03	1.42e-08	2.96e-04
Road #2	2	0100-0200	6.83e-03	6.07e-08	1.12e-03	3.98e-04	3.54e-04	6.55e-03	4.67e-04	4.51e-04	7.67e-03	8.06e-08	1.60e-08	2.96e-04
Road #2	2	0200-0300	7.48e-03	4.89e-08	9.06e-04	4.17e-02	2.78e-07	5.09e-03	4.68e-04	3.22e-07	5.95e-03	1.97e-03	1.29e-08	3.99e-04
Road #2	2	0300-0400	8.12e-03	4.18e-08	8.12e-04	3.76e-02	2.23e-07	4.23e-03	4.23e-04	2.23e-07	4.23e-03	1.45e-03	9.45e-09	2.84e-04
Road #2	2	0400-0500	8.66e-03	4.98e-08	9.20e-04	4.50e-02	2.59e-07	4.78e-03	5.36e-03	3.07e-07	5.70e-03	2.29e-03	1.32e-08	2.44e-04
Road #2	2	0500-0600	9.12e-03	9.13e-08	1.06e-03	4.63e-02	4.68e-07	8.57e-03	5.55e-07	1.03e-02	4.73e-03	2.43e-03	2.43e-08	4.50e-04
Road #2	2	0600-0700	9.58e-03	1.02e-07	1.02e-03	4.50e-02	5.12e-07	9.58e-03	5.12e-07	1.02e-02	9.58e-03	2.43e-03	2.43e-08	4.50e-04
Road #2	2	0700-0800	1.02e-02	4.50e-07	8.31e-03	4.92e-02	2.16e-06	4.09e-02	5.94e-06	2.61e-06	4.83e-04	2.74e-04	1.20e-07	2.23e-03
Road #2	2	0800-0900	5.94e-03	5.08e-07	8.38e-03	4.62e-02	2.36e-06	3.49e-02	5.61e-07	2.87e-06	3.30e-02	2.71e-03	1.38e-07	2.23e-03
Road #2	2	0900-1000	1.10e-02	5.09e-07	9.42e-03	5.59e-02	2.27e-06	4.26e-02	6.32e-07	2.78e-06	5.54e-02	3.43e-03	1.43e-07	2.99e-03
Road #2	2	1000-1100	1.10e-02	4.13e-07	8.12e-03	4.13e-02	2.11e-06	3.69e-02	3.69e-07	2.11e-06	3.69e-02	1.43e-03	1.43e-07	2.99e-03
Road #2	2	1100-1200	1.27e-02	4.69e-07	8.67e-03	5.40e-02	1.99e-06	3.66e-02	3.66e-07	2.46e-06	4.55e-02	3.37e-03	1.31e-07	2.44e-03
Road #2	2	1200-1300	1.32e-02	6.04e-07	1.12e-02	5.38e-02	2.45e-06	4.54e-02	4.54e-07	3.07e-06	5.96e-02	3.62e-03	1.65e-07	3.08e-03
Road #2	2	1300-1400	1.32e-02	6.04e-07	1.12e-02	5.38e-02	2.45e-06	4.54e-02	4.54e-07	3.07e-06	5.96e-02	3.62e-03	1.65e-07	3.08e-03
Road #2	2	1400-1500	1.34e-02	6.70e-07	1.24e-02	5.95e-02	2.77e-06	5.11e-02	6.89e-04	3.44e-06	5.96e-02	3.62e-03	1.84e-07	3.96e-03
Road #2	2	1500-1600	1.25e-02	6.99e-07	1.18e-02	5.61e-02	2.78e-06	5.33e-02	6.89e-04	3.51e-06	5.48e-02	3.62e-03	1.80e-07	3.32e-03
Road #2	2	1600-1700	1.25e-02	6.99e-07	1.18e-02	5.61e-02	2.78e-06	5.33e-02	6.89e-04	3.51e-06	5.48e-02	3.62e-03	1.80e-07	3.32e-03
Road #2	2	1700-1800	1.93e-03	9.55e-07	1.03e-02	4.68e-02	2.78e-06	5.14e-02	5.62e-03	3.28e-06	5.62e-02	2.59e-03	1.53e-07	2.83e-03
Road #2	2	1800-1900	8.62e-03	4.18e-07	7.70e-03	3.47e-02	2.18e-06	4.03e-02	4.13e-06	2.60e-06	4.02e-02	1.81e-03	1.14e-07	2.10e-03
Road #2	2	1900-2000	9.58e-03	4.63e-07	8.58e-03	4.63e-02	2.23e-06	4.23e-02	4.23e-06	2.23e-06	4.23e-02	1.45e-03	9.45e-09	2.84e-04
Road #2	2	2000-2100	5.46e-03	2.11e-07	4.38e-03	3.55e-02	1.73e-06	2.52e-02	3.16e-06	1.58e-06	2.92e-04	1.64e-04	5.64e-08	1.04e-03
Road #2	2	0100-0200	6.83e-03	1.91e-07	3.53e-03	4.99e-02	1.34e-06	2.48e-02	3.96e-02	1.53e-06	2.84e-02	3.44e-03	1.51e-08	9.53e-04
Road #2	2	0200-0300	7.48e-03	1.42e-07	2.61e-03	3.61e-02	1.02e-06	1.84e-02	2.94e-02	1.17e-06	2.17e-02	2.73e-03	1.17e-08	7.17e-04
Road #2	2	0300-0400	8.12e-03	5.51e-07	1.54e-07	2.86e-03	1.92e-06	1.80e-02	1.80e-02	1.17e-06	2.17e-02	1.43e-04	4.01e-08	7.41e-04
Road #3	3	0000-0100	4.84e-03	2.66e-08	5.95e-04	3.54e-03	1.94e-07	4.93e-04	4.02e-02	2.21e-07	4.64e-04	1.18e-04	6.45e-09	1.48e-05
Road #3	3	0100-0200	5.46e-03	2.11e-07	4.38e-03	3.55e-02	1.73e-06	2.52e-02	3.16e-06	1.58e-06	2.92e-04	1.64e-04	5.64e-08	1.04e-03
Road #3	3	0200-0300	5.94e-03	5.08e-07	8.38e-03	4.62e-02	2.36e-06	3.49e-02	5.61e-07	2.87e-06	3.30e-02	2.71e-03	1.38e-07	2.23e-03
Road #3	3	0300-0400	6.83e-03	1.39e-08	3.11e-05	4.04e-02	8.40e-08	1.88e-04	4.71e-02	9.79e-08	2.19e-04	1.65e-03	3.42e-09	7.66e-06
Road #3	3	0400-0500	7.21e-03	1.60e-08	3.22e-05	4.18e-02	1.98e-07	1.98e-02	4.90e-01	1.09e-02	2.19e-02	1.42e-04	4.08e-08	8.19e-04
Road #3	3	0500-0600	7.73e-03	2.48e-08	4.96e-05	4.25e-02	1.92e-07	3.74e-02	4.96e-02	1.96e-07	3.96e-03	1.63e-03	7.20e-09	1.61e-05
Road #3	3	0600-0700	7.87e-03	6.44e-08	1.44e-04	4.40e-02	3.69e-07	8.27e-04	5.17e-04	4.34e-07	9.71e-04	1.92e-03	1.61e-08	3.61e-05
Road #3	3	0700-0800	8.31e-03	1.43e-07	2.19e-04	4.63e-02	7.89e-07	1.77e-02	5.47e-02	3.27e-06	2.09e-03	2.10e-03	3.58e-08	8.01e-05
Road #3	3	0800-0900	8.46e-03	4.29e-07	8.58e-03	5.34e-02	1.79e-06	3.58e-02	4.53e-02	2.38e-06	4.76e-02	1.83e-03	1.12e-02	2.35e-03
Road #3	3	0900-1000	9.35e-03	1.52e-07	3.41e-04	4.75e-02	7.75e-07	1.74e-02	5.77e-06	9.27e-07	2.08e-03	2.47e-02	4.02e-08	9.00e-05
Road #3	3	1000-1100	9.58e-03	1.90e-07	3.39e-04	4.99e-02	7.01e-07	1.57e-02	9.02e-06	9.02e-07	1.99e-03	2.40e-02	3.96e-08	8.88e-05
Road #3	3	1100-1200	1.09e-02	2.00e-07	3.60e-04	5.40e-02	1.10e-06	2.20e-02	2.20e-06	1.10e-06	2.20e-02	1.43e-03	1.43e-07	2.99e-03
Road #3	3	1200-1300	1.46e-02	1.03e-06	2.03e-03	1.67e-01	3.69e-06	8.26e-03	2.13e-01	4.71e-06	1.06e-01	8.06e-02	1.28e-07	2.87e-04
Road #3	3	1300-1400	1.46e-02	1.75e-06	3.91e-03	2.78e-01	6.39e-06	1.42e-02	3.54e-02	8.42e-02	1.72e-02	1.72e-07	1.67e-07	3.74e-04
Road #3	3	1400-1500	1.46e-02	1.75e-06	3.91e-03	2.78e-01	6.39e-06	1.42e-02	3.54e-02	8.42e-02	1.72e-02	1.72e-07	1.67e-07	3.74e-04
Road #3	3	1500-1600	1.56e-01	3.88e-06	8.69e-03	5.38e-01	1.33e-05	2.99e-01	6.94e-01	1.72e-05	3.86e-01	1.04e-01	2.57e-07	5.75e-04
Road #3	3	1600-1700	1.56e-01	4.11e-06	9.23e-03	5.98e-01	1.31e-05	2.94e-01	6.67e-01	1.72e-05	3.86e-01	1.04e-01	2.68e-07	6.00e-04
Road #3	3	1700-1800	1.77e-02	7.88e-07	1.58e-02	1.12e-02	1.12e-02	4.26e-02	4.26e-02	1.12e-02	4.26e-02	1.12e-02	4.26e-02	1.12e-02
Road #3	3	1800-1900	7.88e-02	2.62e-07	5.20e-03	2.84e-01	8.79e-06	1.88e-01	3.62e-01	1.07e-06	2.40e-02	5.51e-03	1.63e-07	3.94e-04
Road #3	3	1900-2000	1.02e-02	2.37e-07	5.03e-03	5.21e-02	1.21e-06	2.70e-02	6.62e-02	1.44e-06	3.28e-03	1.93e-0		

L:\Secure\Environment Projects\60733229\1.01\Others\Air Modelling\Appendix\Traffic\Appendix\Appendix 3.5.4 Emission Factor in 2043-S.B.xlsx

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

AFIRM model (October)		Year 2043				No Emission				
Road Name	Road ID	Hour	Monthly/hour		Monthly/Average		Monthly/hour		Monthly/Average	
			g/m ²	g/m ² /h	g/m ²	g/m ² /h	g/m ²	g/m ² /h	g/m ²	g/m ² /h
Road 14	14	0800-0900	3.11E-02	8.88E-07	5.53E-03	1.16E-01	3.31E-06	2.06E-02	1.47E-01	4.19E-08
Road 14	14	0900-1000	3.55E-02	8.62E-07	5.37E-03	1.32E-01	3.20E-06	1.97E-02	1.67E-08	4.58E-07
Road 14	14	1000-1100	3.10E-02	8.35E-07	5.35E-03	1.32E-01	3.20E-06	1.97E-02	1.67E-08	4.58E-07
Road 14	14	1100-1200	3.66E-02	7.45E-07	4.53E-03	1.32E-01	3.20E-06	1.56E-02	1.43E-08	2.31E-07
Road 14	14	1200-1300	4.95E-02	1.17E-07	2.76E-01	3.95E-06	2.46E-02	5.12E-08	3.18E-05	5.54E-07
Road 14	14	1300-1400	5.12E-02	1.17E-07	2.76E-01	3.95E-06	2.46E-02	5.12E-08	3.18E-05	5.54E-07
Road 14	14	1400-1500	5.12E-02	1.32E-06	8.21E-01	1.76E-02	2.54E-08	2.81E-02	2.27E-04	5.84E-05
Road 14	14	1500-1600	4.97E-02	1.31E-06	8.18E-01	1.84E-01	4.88E-06	3.05E-02	2.33E-01	6.17E-06
Road 14	14	1600-1700	5.03E-02	1.31E-06	8.18E-01	1.84E-01	4.88E-06	3.05E-02	2.33E-01	6.17E-06
Road 14	14	1700-1800	3.80E-02	1.12E-06	6.98E-01	1.47E-01	3.39E-06	2.69E-02	1.95E-01	4.95E-06
Road 14	14	1800-1900	2.84E-02	8.59E-07	5.35E-03	1.08E-01	3.28E-06	2.04E-02	1.37E-04	2.58E-07
Road 14	14	1900-2000	3.11E-02	4.15E-07	2.61E-03	1.16E-01	3.31E-06	2.06E-02	1.47E-01	4.19E-08
Road 14	14	2000-2100	3.86E-02	1.04E-07	1.89E-03	8.00E-02	1.44E-06	8.96E-02	1.75E-06	9.59E-06
Road 14	14	2100-2200	1.61E-02	2.90E-07	1.02E-03	7.82E-02	1.43E-08	8.87E-03	9.55E-07	1.72E-07
Road 14	14	2200-2300	1.61E-02	2.90E-07	1.74E-03	7.66E-02	1.38E-08	8.25E-03	9.62E-07	1.61E-06
Road 14	14	2300-2400	1.61E-02	2.90E-07	1.12E-03	7.11E-02	1.38E-08	8.25E-03	9.62E-07	1.61E-06
Road 15	15	0800-0900	2.10E-02	4.62E-08	1.56E-04	7.29E-02	1.51E-07	5.43E-04	9.39E-07	2.07E-07
Road 15	15	0900-1000	2.64E-02	4.06E-08	1.37E-04	8.23E-02	1.28E-07	4.27E-04	1.06E-06	1.67E-07
Road 15	15	1000-1100	2.64E-02	4.06E-08	1.37E-04	8.23E-02	1.28E-07	4.27E-04	1.06E-06	1.67E-07
Road 15	15	1100-1200	3.10E-02	3.63E-08	1.23E-04	9.91E-02	1.00E-07	3.39E-04	1.35E-07	4.62E-08
Road 15	15	1200-1300	3.66E-02	3.89E-08	1.32E-04	1.03E-01	1.09E-07	3.69E-04	1.37E-06	4.80E-06
Road 15	15	1300-1400	4.95E-02	1.17E-07	2.76E-01	4.11E-01	2.76E-06	5.12E-08	3.18E-05	5.54E-07
Road 15	15	1400-1500	5.12E-02	1.17E-07	2.76E-01	4.11E-01	2.76E-06	5.12E-08	3.18E-05	5.54E-07
Road 15	15	1500-1600	5.00E-02	4.69E-07	1.57E-03	1.66E-01	1.55E-06	5.22E-02	2.61E-01	7.07E-06
Road 15	15	1600-1700	5.04E-02	4.80E-07	1.62E-03	1.58E-01	1.51E-06	5.09E-02	2.06E-01	5.99E-06
Road 15	15	1700-1800	4.96E-02	4.15E-07	1.44E-03	1.39E-01	1.41E-06	4.76E-02	1.76E-01	4.82E-06
Road 15	15	1800-1900	3.86E-02	3.44E-07	1.09E-03	1.44E-01	1.38E-06	4.49E-02	1.67E-01	4.33E-06
Road 15	15	1900-2000	1.88E-02	1.09E-07	4.69E-04	7.61E-02	1.51E-07	1.89E-04	6.99E-07	2.35E-03
Road 15	15	2000-2100	1.90E-02	1.10E-07	3.78E-04	6.00E-02	4.85E-07	1.47E-05	9.39E-07	3.75E-04
Road 15	15	2100-2200	1.90E-02	1.10E-07	3.78E-04	6.00E-02	4.85E-07	1.47E-05	9.39E-07	3.75E-04
Road 15	15	2200-2300	1.80E-02	1.00E-07	3.96E-04	7.51E-02	4.20E-07	1.42E-03	5.12E-07	1.76E-06
Road 15	15	2300-2400	1.80E-02	1.00E-07	3.96E-04	7.51E-02	4.20E-07	1.42E-03	5.12E-07	1.76E-06
Road 16	16	0800-0900	2.01E-02	8.48E-08	2.92E-04	7.90E-02	1.40E-07	1.15E-03	9.91E-07	4.25E-07
Road 16	16	0900-1000	2.61E-02	8.10E-08	2.32E-04	8.23E-02	1.28E-07	4.27E-04	1.06E-06	1.67E-07
Road 16	16	1000-1100	2.61E-02	8.10E-08	2.32E-04	8.23E-02	1.28E-07	4.27E-04	1.06E-06	1.67E-07
Road 16	16	1100-1200	3.09E-02	7.09E-08	3.69E-04	1.13E-04	4.20E-02	2.18E-04	2.44E-04	2.59E-07
Road 16	16	1200-1300	3.66E-02	6.30E-08	3.40E-04	1.26E-04	4.20E-02	2.18E-04	2.44E-04	2.59E-07
Road 16	16	1300-1400	4.95E-02	1.10E-07	3.78E-04	6.00E-02	4.85E-07	1.47E-05	9.39E-07	3.75E-04
Road 16	16	1400-1500	5.12E-02	1.10E-07	3.78E-04	6.00E-02	4.85E-07	1.47E-05	9.39E-07	3.75E-04
Road 16	16	1500-1600	5.00E-02	4.69E-07	1.57E-03	1.66E-01	1.55E-06	5.22E-02	2.61E-01	7.07E-06
Road 16	16	1600-1700	5.04E-02	4.80E-07	1.62E-03	1.58E-01	1.51E-06	5.09E-02	2.06E-01	5.99E-06
Road 16	16	1700-1800	4.96E-02	4.15E-07	1.44E-03	1.39E-01	1.41E-06	4.76E-02	1.76E-01	4.82E-06
Road 16	16	1800-1900	3.86E-02	3.44E-07	1.09E-03	1.44E-01	1.38E-06	4.49E-02	1.67E-01	4.33E-06
Road 16	16	1900-2000	1.88E-02	1.09E-07	4.69E-04	7.61E-02	1.51E-07	1.89E-04	6.99E-07	2.35E-03
Road 16	16	2000-2100	1.90E-02	1.10E-07	3.78E-04	6.00E-02	4.85E-07	1.47E-05	9.39E-07	3.75E-04
Road 16	16	2100-2200	1.90E-02	1.10E-07	3.78E-04	6.00E-02	4.85E-07	1.47E-05	9.39E-07	3.75E-04
Road 16	16	2200-2300	1.80E-02	1.00E-07	3.96E-04	7.51E-02	4.20E-07	1.42E-03	5.12E-07	1.76E-06
Road 16	16	2300-2400	1.80E-02	1.00E-07	3.96E-04	7.51E-02	4.20E-07	1.42E-03	5.12E-07	1.76E-06
Road 17	17	0800-0900	2.01E-02	8.48E-08	2.92E-04	7.90E-02	1.40E-07	1.15E-03	9.91E-07	4.25E-07
Road 17	17	0900-1000	2.61E-02	8.10E-08	2.32E-04	8.23E-02	1.28E-07	4.27E-04	1.06E-06	1.67E-07
Road 17	17	1000-1100	2.61E-02	8.10E-08	2.32E-04	8.23E-02	1.28E-07	4.27E-04	1.06E-06	1.67E-07
Road 17	17	1100-1200	3.09E-02	7.09E-08	3.69E-04	1.13E-04	4.20E-02	2.18E-04	2.44E-04	2.59E-07
Road 17	17	1200-1300	3.66E-02	6.30E-08	3.40E-04	1.26E-04	4.20E-02	2.18E-04	2.44E-04	2.59E-07
Road 17	17	1300-1400	4.95E-02	1.10E-07	3.78E-04	6.00E-02	4.85E-07	1.47E-05	9.39E-07	3.75E-04
Road 17	17	1400-1500	5.12E-02	1.10E-07	3.78E-04	6.00E-02	4.85E-07	1.47E-05	9.39E-07	3.75E-04
Road 17	17	1500-1600	5.00E-02	4.69E-07	1.57E-03	1.66E-01	1.55E-06	5.22E-02	2.61E-01	7.07E-06
Road 17	17	1600-1700	5.04E-02	4.80E-07	1.62E-03	1.58E-01	1.51E-06	5.09E-02	2.06E-01	5.99E-06
Road 17	17	1700-1800	4.96E-02	4.15E-07	1.44E-03	1.39E-01	1.41E-06	4.76E-02	1.76E-01	4.82E-06
Road 17	17	1800-1900	3.86E-02	3.44E-07	1.09E-03	1.44E-01	1.38E-06	4.49E-02	1.67E-01	4.33E-06
Road 17	17	1900-2000	1.88E-02	1.09E-07	4.69E-04	7.61E-02	1.51E-07	1.89E-04	6.99E-07	2.35E-03
Road 17	17	2000-2100	1.90E-02	1.10E-07	3.78E-04	6.00E-02	4.85E-07	1.47E-05	9.39E-07	3.75E-04
Road 17	17	2100-2200	1.90E-02	1.10E-07	3.78E-04	6.00E-02	4.85E-07	1.47E-05	9.39E-07	3.75E-04
Road 17	17	2200-2300	1.80E-02	1.00E-07	3.96E-04	7.51E-02	4.20E-07	1.42E-03	5.12E-07	1.76E-06
Road 17	17	2300-2400	1.80E-02	1.00E-07	3.96E-04	7.51E-02	4.20E-07	1.42E-03	5.12E-07	1.76E-06
Road 18	18	0800-0900	2.01E-02	8.48E-08	2.92E-04	7.90E-02	1.40E-07	1.15E-03	9.91E-07	4.25E-07
Road 18	18	0900-1000	2.61E-02	8.10E-08	2.32E-04	8.23E-02	1.28E-07	4.27E-04	1.06E-06	1.67E-07
Road 18	18	1000-1100	2.61E-02	8.10E-08	2.32E-04	8.23E-02	1.28E-07	4.27E-04	1.06E-06	1.67E-07
Road 18	18	1100-1200	3.09E-02	7.09E-08	3.69E-04	1.13E-04	4.20E-02	2.18E-04	2.44E-04	2.59E-07
Road 18	18	1200-1300	3.66E-02	6.30E-08	3.40E-04	1.26E-04	4.20E-02	2.18E-04	2.44E-04	2.59E-07
Road 18	18	1300-1400	4.95E-02	1.10E-07	3.78E-04	6.00E-02	4.85E-07	1.47E-05	9.39E-07	3.75E-04
Road 18	18	1400-1500	5.12E-02	1.10E-07	3.78E-04	6.00E-02	4.85E-07	1.47E-05	9.39E-07	3.75E-04
Road 18	18	1500-1600	5.00E-02	4.69E-07	1.57E-03	1.66E-01	1.55E-06	5.22E-02	2.61E-01	7.07E-06
Road 18	18	1600-1700	5.04E-02	4.80E-07	1.62E-03	1.58E-01	1.51E-06	5.09E-02	2.06E-01	5.99E-06
Road 18	18	1700-1800	4.96E-02	4.15E-07	1.44E-03	1.39E-01	1.41E-06	4.76E-02	1.76E-01	4.82E-06
Road 18	18	1800-1900	3.86E-02	3.44E-07	1.09E-03	1.44E-01	1.38E-06	4.49E-02	1.67E-01	4.33E-06
Road 18	18	1900-2000	1.88E-02	1.09E-07	4.69E-04	7.61E-02	1.51E-07	1.89E-04	6.99E-07	2.35E-03
Road 18	18	2000-2100	1.90E-02	1.10E-07	3.78E-04	6.00E-02	4.85E-07	1.47E-05	9.39E-07	3.75E-04
Road 18	18	2100-2200	1.90E-02	1.10E-07	3.78E-04	6.00E-02	4.85E-07	1.47E-05	9.39E-07	3.75E-04
Road 18	18	2200-2300	1.80E-02	1.00E-07	3.96E-04	7.51E-02	4.20E-07	1.42E-03	5.12E-07	1.76E-06
Road 18	18	2300-2400	1.80E-02	1.00E-07	3.96E-04	7.51E-02	4.20E-07	1.42E-03	5.12E-07	1.76E-06
Road 19	19	0800-0900	2.01E-02	8.48E-08	2.92E-04	7.90E-02	1.40E-07	1.15E-03	9.91E-07	4.25E-07
Road 19	19	0900-1000	2.61E-02	8.10E-08	2.32E-04	8.23E-02	1.28E-07	4.27E-04	1.06E-06	1.67E-07
Road 19	19	1000-1100	2.61E-02	8.10E-08	2.32E-04	8.23E-02	1.28E-07	4.27E-04	1.06E-06	1.67E-07
Road 19	19	1100-1200	3.09E-02	7.09E-08	3.69E-04	1.13E-04	4.20E-02	2.18E-04	2.44E-04	2.59E-07
Road 19	19	1200-1300	3.66E-02	6.30E-08	3.40E-04	1.26E-04	4.20E-02	2.18E-04	2.44E-04	2.59E-07
Road 19	19	1300-1400	4.95E-02	1.10E-07	3.78E-04	6.00E-02	4.85E-07	1.47E-05	9.39E-07	3.75E-04
Road 19	19	1400-1500	5.12E-02	1.10E-07	3.78E-04	6.00E-02	4.85E-07	1.47E-05	9.39E-07	3.75E-04
Road 19	19	1500-1600	5.00E-02	4.69E-07	1.57E-03	1.66E-01	1.55E-06	5.22E-02	2.61E-01	7.07E-06

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Appendix 4.5 Calculation of Vehicular Emission (Sc

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

AEMOD model (October)			Year 2043		NO _x Emission		NO _x Emission		NO _x Emission		NO _x Emission			
Road Name	Road ID	Hour	Monthly/hour/km			Monthly/hour/km			Monthly/hour/km			Monthly/hour/km		
			g/km/h	g/m ²	tonne/h	g/km/h	g/m ²	tonne/h	g/km/h	g/m ²	tonne/h	g/km/h	g/m ²	tonne/h
Road 4	4	0800-0900	7.2263	6.6667	1.9067	3.8362	1.3866	1.0112	4.5562	1.6466	1.2062	1.8867	6.7767	4.9564
Road 4	4	0900-1000	8.8163	2.4267	0.7167	4.1166	1.2366	0.9306	5.0162	1.4866	1.0866	2.2266	6.5866	4.8864
Road 4	4	1000-1100	8.1716	2.3867	0.7467	3.8416	1.2766	0.9516	4.6262	1.4266	1.0466	2.1866	6.5466	4.8464
Road 4	4	1100-1200	8.8961	2.1467	0.7167	4.4116	1.2666	0.9786	5.7866	1.3066	0.9366	2.3366	5.7866	4.2264
Road 4	4	1200-1300	9.1166	2.3267	0.7367	4.3266	1.0766	1.0112	5.7866	1.4866	1.2466	2.8266	6.5866	6.7864
Road 4	4	1300-1400	1.0216	1.3216	0.3867	1.2316	0.4866	0.3616	1.3816	0.5866	0.4266	0.6766	1.0766	0.7864
Road 4	4	1400-1500	1.1162	1.5367	0.5086	1.4896	1.4266	1.1362	1.5962	1.9066	1.3966	3.0066	9.5566	6.0864
Road 4	4	1500-1600	1.0462	3.3767	0.2476	1.4896	1.5866	1.1162	1.8926	1.9266	1.4162	2.8766	6.5366	6.8464
Road 4	4	1600-1700	1.4166	3.6367	0.2567	1.4166	1.6866	1.1166	2.1866	2.6866	1.8166	3.7166	9.5466	6.1464
Road 4	4	1700-1800	7.7116	3.0367	0.7266	4.1066	1.6166	1.1866	4.8776	1.9266	1.4066	2.5086	6.8266	6.0664
Road 4	4	1800-1900	5.5116	2.3867	0.7167	3.4716	1.0716	0.9266	4.3566	1.5866	1.1467	1.4716	6.3866	4.6964
Road 4	4	1900-2000	4.7416	2.3867	0.7167	3.4716	1.0716	0.9266	4.3566	1.5866	1.1467	1.4716	6.3866	4.6964
Road 4	4	2000-2100	5.5716	1.2567	0.8366	3.3066	0.8116	0.6716	3.7666	1.0066	0.6466	1.1716	3.3366	2.2964
Road 4	4	2100-2200	4.0066	1.0667	0.7786	3.2786	0.8586	0.6286	3.3666	0.9586	0.7086	1.0306	2.7466	2.0064
Road 4	4	2200-2300	3.5866	1.0267	0.7446	3.2586	0.8246	0.6186	3.0866	0.9436	0.6906	0.9606	2.5866	1.8364
Road 4	4	2300-2400	2.8666	0.8316	0.6216	2.7516	0.7176	0.5176	2.4866	0.8066	0.5866	0.8166	2.1866	1.5864
Road 5	5	0000-0100	6.4166	4.3666	1.3366	4.4866	3.1066	1.9566	5.0066	3.6116	1.1066	1.0566	7.4466	2.2766
Road 5	5	0100-0200	8.6166	0.3866	0.1066	4.5666	0.2106	0.6406	5.2266	0.4906	0.7306	1.1106	3.3466	1.8366
Road 5	5	0200-0300	8.7866	0.3866	0.1066	4.7266	0.2106	0.6406	5.3966	0.4906	0.7306	1.1106	3.3466	1.8366
Road 5	5	0300-0400	7.7466	2.0566	0.6266	4.9066	1.3066	0.3956	5.4866	1.5066	0.4576	1.3966	3.6766	1.1266
Road 5	5	0400-0500	8.4066	0.4266	0.1466	4.7066	0.3066	1.4766	4.4866	0.5926	1.7116	0.5276	1.5266	0.3466
Road 5	5	0500-0600	8.6766	0.4266	0.1466	4.7066	0.3066	1.4766	4.4866	0.5926	1.7116	0.5276	1.5266	0.3466
Road 5	5	0600-0700	1.1466	1.2266	0.3716	1.1466	1.6366	0.6376	2.7866	7.7867	2.3766	1.0306	2.0386	0.6166
Road 5	5	0700-0800	1.4462	3.1162	0.2476	1.4462	1.7162	1.2406	1.7616	1.8556	2.1366	2.4716	1.4462	1.4464
Road 5	5	0800-0900	1.4542	3.6216	0.2567	1.4542	1.6916	1.2516	1.8266	2.0656	2.3466	2.6546	1.4542	1.4544
Road 5	5	0900-1000	1.6362	3.2716	0.2766	1.6362	1.5266	1.4562	1.9286	1.8556	1.5656	2.5036	1.5016	1.5364
Road 5	5	1000-1100	8.0662	3.1167	0.9446	7.8062	1.3966	0.4556	9.7386	1.6716	0.8066	2.8006	4.8866	1.4716
Road 5	5	1100-1200	8.2662	2.6516	0.7367	7.9562	1.2666	0.4556	9.7386	1.6716	0.8066	2.8006	4.8866	1.4716
Road 5	5	1200-1300	2.0562	5.6667	0.7786	1.7306	8.6026	2.3766	7.2466	1.0516	2.5466	0.9586	2.5466	0.8116
Road 5	5	1300-1400	2.1662	0.6016	1.8386	0.3266	2.5666	7.9006	1.1166	3.1966	0.9746	3.0966	8.4466	2.5964
Road 5	5	1400-1500	2.2662	0.6016	1.8386	0.3266	2.5666	7.9006	1.1166	3.1966	0.9746	3.0966	8.4466	2.5964
Road 5	5	1500-1600	2.1562	5.6596	0.7706	2.0186	9.5486	2.6206	8.9116	1.1176	3.5886	1.0966	3.5886	0.9286
Road 5	5	1600-1700	2.3762	7.8886	2.0466	0.4386	3.1386	9.5486	1.1186	1.3926	1.1386	3.2586	1.0376	3.2964
Road 5	5	1700-1800	1.6862	6.4867	1.6986	0.7986	3.0386	9.4006	0.9266	3.7386	1.1436	2.3446	3.0386	0.7286
Road 5	5	1800-1900	2.1862	6.4867	1.6986	0.7986	3.0386	9.4006	0.9266	3.7386	1.1436	2.3446	3.0386	0.7286
Road 5	5	1900-2000	0.8762	3.0466	1.0486	0.0326	1.8586	5.6386	0.2266	2.1896	0.6676	1.3776	4.8276	0.4176
Road 5	5	2000-2100	0.5386	2.3367	0.7116	0.5486	1.4486	4.5266	0.2686	1.7266	0.5286	1.2296	3.4686	0.3466
Road 5	5	2100-2200	0.6762	1.4586	0.3886	0.6762	1.3886	4.0966	0.2686	1.7266	0.5286	1.2296	3.4686	0.3466
Road 5	5	2200-2300	0.6962	1.3366	0.3466	0.6962	1.3466	4.0966	0.2686	1.7266	0.5286	1.2296	3.4686	0.3466
Road 5	5	2300-2400	0.9562	1.3366	0.3466	0.9562	1.4086	4.0966	0.3176	1.1386	0.3686	1.0306	2.0486	0.6286
Road 6	6	0000-0100	1.4562	1.4562	0.4166	1.4562	1.9516	1.1116	1.9516	1.1116	0.9516	1.9516	1.1116	0.9516
Road 6	6	0100-0200	1.8062	0.8066	0.1016	1.4562	0.5566	0.4966	0.9056	0.5546	0.7586	2.8886	1.7686	0.1016
Road 6	6	0200-0300	1.4962	0.7886	0.1066	1.7886	0.7496	0.3206	0.9386	0.4276	0.4386	3.0986	1.4386	1.4464
Road 6	6	0300-0400	1.6362	0.6366	0.1066	1.6362	0.8466	0.3606	0.9386	0.4276	0.4386	3.0986	1.4386	1.4464
Road 6	6	0400-0500	1.9262	0.7786	0.1066	0.8376	0.3206	0.3486	1.0016	0.4176	0.4286	3.5266	1.4386	1.4464
Road 6	6	0500-0600	2.1362	1.5266	0.5676	1.1466	0.9466	0.6776	1.1386	0.8006	0.8226	3.7786	2.6886	2.7684
Road 6	6	0600-0700	1.7682	1.7682	0.4916	1.7682	2.2616	1.1466	1.7682	2.2616	1.1466	2.2616	1.1466	1.7682
Road 6	6	0700-0800	3.7216	1.1066	1.2126	1.4616	4.6066	0.4736	1.8386	1.5786	0.5466	5.5006	1.5616	1.6206
Road 6	6	0800-0900	3.8662	1.4666	1.5086	1.5566	5.6696	0.5896	1.8466	1.7156	0.7856	5.1386	1.8896	1.9476
Road 6	6	0900-1000	3.9162	1.4666	1.5086	1.5566	5.6696	0.5896	1.8466	1.7156	0.7856	5.1386	1.8896	1.9476
Road 6	6	1000-1100	4.9116	1.4666	1.5086	1.8116	4.0466	0.5556	2.3006	0.6866	0.6866	6.5886	1.9616	2.0206
Road 6	6	1100-1200	4.5962	1.2916	1.3386	1.7386	1.7386	0.5006	2.1166	0.6186	0.6386	6.3006	1.7176	1.8286
Road 6	6	1200-1300	5.5362	1.6366	1.6366	1.5466	5.5366	0.4736	2.5366	1.4736	1.4736	6.5366	1.6366	1.6366
Road 6	6	1300-1400	5.5362	1.6366	1.6366	1.5466	5.5366	0.4736	2.5366	1.4736	1.4736	6.5366	1.6366	1.6366
Road 6	6	1400-1500	3.5762	1.7386	1.7386	1.7386	2.0466	1.6166	0.6346	2.6276	1.7906	8.1236	7.4776	2.2326
Road 6	6	1500-1600	3.7862	1.6866	1.6866	1.6866	2.0466	1.6166	0.6356	2.5866	1.8116	8.2366	7.6906	2.2567
Road 6	6	1600-1700	3.7862	1.6866	1.6866	1.6866	2.0466	1.6166	0.6356	2.5866	1.8116	8.2366	7.6906	2.2567
Road 6	6	1700-1800	4.0262	1.3366	1.3366	1.7386	1.6666	1.4586	0.5636	2.0206	0.6816	7.0006	5.5006	1.8276
Road 6	6	1800-1900	2.7962	0.8866	0.9086	1.3716	3.7486	3.8906	1.4466	0.8206	0.7906	3.8906	1.2526	1.3086
Road 6	6	1900-2000	2.1116	0.3176	0.3176	1.3176	3.2866	3.3866	1.4466	0.8206	0.7906	3.8906	1.2526	1.3086
Road 6	6	2000-2100	1.9162	1.6667	0.3786	1.9162	1.7506	1.8062	1.1106	1.2126	2.1886	3.0006	5.7486	5.9064
Road 6	6	2100-2200	1.8762	1.5386	0.3786	1.8762	1.9156	1.7506	1.1006	1.2116	2.1876	2.9026	5.5386	5.7486
Road 6	6	2200-2300	1.8762	1.5386	0.3786	1.8762	1.9156	1.7506	1.1006	1.2116	2.1876	2.9026	5.5386	5.7486
Road 6	6	2300-0000	1.8762	1.5386	0.3786	1.8762	1.9156	1.7506	1.1006	1.2116	2.1876	2.9026	5.5386	5.7486
Road 7	7	0000-0100	4.8862	3.3266	1.4886	1.4886	1.1216	1.0016	1.4886	1.4766	1.4766	3.0066	4.1766	4.9864
Road 7	7	0100-0200	3.3266	3.3266	1.4886	1.4886	1.1216	1.0016	1.4886	1.4766	1.4766	3.0066	4.1766	4.9864
Road 7	7	0200-0300	6.1166	2.0686	0.8556	3.9386	1.2866	0.7486	4.5446	1.4886	0.6356	4.4886	4.4886	2.0064
Road 7	7	0300-0400	6.7486	1.7786	0.7486	4.4886	0.9086	1.0626	4.5276	0.7486	1.2386	0.7486	1.8686	4.4886
Road 7	7	0400-0500	6.7486	1.7786	0.7486	4.4886	0.9086	1.0626	4.5276	0.7486	1.2386	0.7486	1.8686	4.4886
Road 7	7	0500-0600	3.3606	3.3606	1.5486	4.2966	2.0116	0.8986	5.0206	2.4666	0.1956	1.8386	0.6986	3.8386
Road 7	7	0600-0700	7.8762	0.8386	0.3486	4.4886	4.6386	1.9886	5.0206	5.4386	2.3386	1.9326	2.0066	8.5766
Road 7	7	0700-0800	7.8762	0.8386	0.3486	4.4886	4.6386	1.9886	5.0206	5.4386	2.3386	1.9326	2.0066	8.5766
Road 7	7	0800-0900	3.2406	2.0286	0.8056	4.0466	1.5066	0.4526	5.1386	1.2966	0.3686	2.0776	0.5086	2.1864
Road 7	7	0900-1000	9.2746	1.0786	0.8026	4.7066	0.9516	0.4076						

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Appendix 4.5 Calculation of Vehicular Emission (Sc

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for[illegible]

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Table 1. Road 24-hour Emission Factors for

Year 2043			NO _x Emission															Methionine/average															Methionine/average															NO _x Emission															Methionine/average																																																																																																																																																																																																																																																																																																																																																																																																																																									
Lead Name	Read ID	Hour	Methionine/average					Methionine/average					Methionine/average					Methionine/average					Methionine/average					Methionine/average					Methionine/average					Methionine/average					Methionine/average																																																																																																																																																																																																																																																																																																																																																																																																																																																													
			g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³	g/m ³

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Table 1. Road 24-hour Emission Factors for

AERMOD model (October)		Year 2043		NO _x Emission										NO _x Emission									
Road Name	Road ID	Hour	Month/Hourly/tonne/hour					Month/Hourly/tonne/hour					Month/Hourly/tonne/hour					Month/Hourly/tonne/hour					
			g/km/h	g/km/h	g/km/h	tonne/hour	tonne/hour	g/km/h	g/km/h	g/km/h	tonne/hour	tonne/hour	g/km/h	g/km/h	g/km/h	tonne/hour	tonne/hour	g/km/h	g/km/h	g/km/h	tonne/hour	tonne/hour	
Road #1	21	0000-0000	9.54	9.54	6.26	3.02	4.98	3.747	1.586	0.592	3.906	0.77	1.886	0.513	1.605	0.787							
Road #1	21	0100-0200	4.562	4.562	1.616	1.176	2.255	1.096	0.612	2.718	0.317	1.311	0.768	1.205	0.588	0.805							
Road #1	21	0300-0400	1.336	1.336	0.668	1.768	0.588	1.768	0.588	1.768	0.588	1.768	0.588	1.768	0.588	1.768							
Road #1	21	0500-0600	1.286	1.286	0.474	3.806	0.886	1.071	8.246	0.74	7.246	0.687	1.006	0.406	0.931	0.498							
Road #1	21	0600-0700	3.711	3.711	0.721	2.906	2.906	2.906	2.906	2.906	2.906	2.906	2.906	2.906	2.906	2.906							
Road #1	21	0700-0800	1.536	1.536	1.571	2.706	6.296	6.296	3.754	7.546	2.486	4.086	3.646	4.026	1.476	0.586							
Road #1	21	0800-0900	1.536	1.536	3.486	1.676	6.776	1.556	6.776	0.831	0.926	1.956	1.956	1.956	1.956	1.956							
Road #1	21	0900-1000	1.536	1.536	1.571	2.706	6.296	6.296	3.754	7.546	2.486	4.086	3.646	4.026	1.476	0.586							
Road #1	21	1000-1100	1.806	1.806	4.277	2.097	7.847	1.726	8.316	0.926	1.046	2.106	2.106	2.106	2.106	2.106							
Road #1	21	1100-1200	1.806	1.806	4.277	2.097	7.847	1.726	8.316	0.926	1.046	2.106	2.106	2.106	2.106	2.106							
Road #1	21	1200-1300	2.266	2.266	1.026	1.716	1.956	1.546	1.126	8.316	0.926	1.046	1.056	0.846	0.186	5.686							
Road #1	21	1300-1400	2.246	2.246	4.837	0.737	3.887	1.926	9.246	0.116	2.406	1.166	0.586	1.276	0.616	0.186							
Road #1	21	1400-1500	2.266	2.266	1.026	1.716	1.956	1.546	1.126	8.316	0.926	1.046	1.056	0.846	0.186	5.686							
Road #1	21	1500-1600	2.266	2.266	4.837	0.737	3.887	1.926	9.246	0.116	2.406	1.166	0.586	1.276	0.616	0.186							
Road #1	21	1600-1700	2.226	2.226	5.087	0.477	2.457	1.986	9.536	0.106	2.486	1.206	0.506	1.286	0.616	0.186							
Road #1	21	1700-1800	1.686	1.686	3.907	1.917	7.617	1.766	8.626	0.926	1.246	1.056	0.446	1.046	0.506	0.446							
Road #1	21	1800-1900	1.336	1.336	2.617	2.867	2.867	2.867	2.867	2.867	2.867	2.867	2.867	2.867	2.867	2.867							
Road #1	21	1900-2000	1.626	1.626	1.677	0.807	5.077	0.847	6.027	0.107	0.407	1.007	0.437	0.787	0.437	0.787							
Road #1	21	2000-2100	1.946	1.946	1.267	1.617	0.527	0.657	3.317	0.137	0.137	0.327	0.737	0.327	0.737	0.327							
Road #1	21	2200-2300	0.996	0.996	1.217	0.847	0.847	0.647	3.017	0.067	0.457	0.607	0.237	0.237	0.237	0.237							
Road #1	21	2300-0000	1.082	1.082	1.477	0.587	0.547	0.547	2.427	0.047	0.627	0.297	0.297	0.297	0.297	0.297							
Road #2	22	0000-0000	1.266	1.266	0.846	3.856	0.846	3.026	0.456	3.026	0.456	3.026	0.456	3.026	0.456	3.026							
Road #2	22	0100-0200	1.026	1.026	0.686	0.686	0.686	3.706	0.356	2.056	0.476	0.426	0.616	1.126	0.546	0.616							
Road #2	22	0200-0300	0.926	0.926	0.496	0.496	0.496	2.406	0.406	1.586	0.456	0.596	0.996	1.126	0.746	0.846							
Road #2	22	0300-0400	0.926	0.926	0.496	0.496	0.496	2.406	0.406	1.586	0.456	0.596	0.996	1.126	0.746	0.846							
Road #2	22	0400-0500	1.036	1.036	0.686	0.686	0.686	3.716	0.426	2.056	0.476	0.426	0.616	1.126	0.546	0.616							
Road #2	22	0500-0600	1.156	1.157	1.377	0.936	0.476	0.476	0.476	3.216	0.317	0.317	0.317	0.317	0.317	0.317							
Road #2	22	0600-0700	1.156	1.156	1.377	0.936	0.476	0.476	0.476	3.216	0.317	0.317	0.317	0.317	0.317	0.317							
Road #2	22	0700-0800	1.446	1.447	0.847	0.847	0.847	5.086	0.946	1.916	0.626	0.376	0.246	0.376	0.246	0.376							
Road #2	22	0800-0900	1.461	1.016	0.586	0.586	0.586	3.296	0.676	2.396	0.676	0.686	0.506	0.376	0.946	0.516							
Road #2	22	0900-1000	1.566	1.566	1.146	0.96	0.96	0.96	2.116	0.696	0.936	0.506	0.446	0.446	0.446	0.446							
Road #2	22	1000-1100	1.626	1.626	1.216	0.866	0.866	0.866	2.116	0.696	0.936	0.506	0.446	0.446	0.446	0.446							
Road #2	22	1100-1200	1.616	1.616	1.126	0.726	0.726	0.626	3.906	0.546	0.726	0.506	0.276	0.446	0.696	0.676							
Road #2	22	1200-1300	1.666	1.666	1.196	0.726	0.726	0.556	0.956	0.586	0.286	0.216	0.146	0.356	1.506	0.726							
Road #2	22	1300-1400	1.666	1.666	1.196	0.726	0.726	0.556	0.956	0.586	0.286	0.216	0.146	0.356	1.506	0.726							
Road #2	22	1400-1500	1.636	1.636	1.006	0.846	0.846	0.546	0.416	2.876	0.716	0.706	0.716	0.446	1.186	0.706							
Road #2	22	1500-1600	1.456	1.456	1.216	0.856	0.856	0.456	0.296	0.556	0.556	0.556	0.736	0.736	0.736	0.736							
Road #2	22	1600-1700	1.456	1.456	1.216	0.856	0.856	0.456	0.296	0.556	0.556	0.556	0.736	0.736	0.736	0.736							
Road #2	22	1700-1800	1.326	1.326	0.946	0.946	0.946	0.516	0.316	2.416	0.626	0.656	0.306	0.276	0.926	0.926							
Road #2	22	1800-1900	1.036	1.036	0.646	0.646	0.646	0.216	2.236	0.486	0.526	0.776	0.806	0.976	0.546	0.846							
Road #2	22	1900-2000	0.676	0.676	0.466	0.466	0.466	0.216	1.666	0.356	0.356	0.356	0.356	0.356	0.356	0.356							
Road #2	22	2000-2100	0.516	0.516	0.267	0.267	0.267	0.856	0.106	0.716	0.476	0.366	0.856	0.976	0.286	0.846							
Road #2	22	2100-2200	0.576	0.576	0.267	0.267	0.267	0.816	0.376	1.126	0.736	0.486	0.406	0.426	1.016	0.296	0.946						
Road #2	22	2200-2300	0.796	0.796	0.267	0.267	0.267	0.796	0.796	0.796	0.796	0.796	0.796	0.796	0.796	0.796							
Road #2	22	2300-0000	1.026	1.026	0.316	0.316	0.316	0.716	0.716	0.716	0.716	0.716	0.716	0.716	0.716	0.716							
Road #3	23	0000-0100	0.986	0.986	0.276	0.276	0.886	0.616	0.986	0.676	0.451	0.276	0.886	0.166	0.306	0.216							
Road #3	23	0100-0200	0.986	0.986	0.276	0.276	0.886	0.616	0.986	0.676	0.451	0.276	0.886	0.166	0.306	0.216							
Road #3	23	0200-0300	1.026	1.026	0.316	0.316	0.986	0.686	0.387	0.476	0.726	0.876	1.046	1.046	1.046	1.046							
Road #3	23	0300-0400	0.986	0.986	0.276	0.276	0.886	0.616	0.986	0.676	0.451	0.276	0.886	0.166	0.306	0.216							
Road #3	23	0400-0500	0.986	0.986	0.276	0.276	0.886	0.616	0.986	0.676	0.451	0.276	0.886	0.166	0.306	0.216							
Road #3	23	0500-0600	0.956	0.956	0.256	0.256	0.956	0.806	0.776	0.786	0.486	0.366	0.916	1.226	0.341	0.296							
Road #3	23	0600-0700	1.116	1.116	0.706	0.706	0.476	0.016	2.566	0.726	0.516	0.876	2.206	1.256	0.797	0.576							
Road #3	23	0700-0800	1.366	1.366	1.777	1.116	0.626	0.606	0.426	0.506	0.306	0.306	0.306	0.306	0.306	0.306							
Road #3	23	0800-0900	1.366	1.366	1.777	1.116	0.626	0.606	0.426	0.506	0.306	0.306	0.306	0.306	0.306	0.306							
Road #3	23	0900-1000	1.256	1.256	0.297	0.297	0.546	0.886	0.546	0.576	0.596	1.086	0.306	0.336	0.242	0.616							
Road #3	23	1000-1100	1.346	1.346	0.241	0.241	0.626	0.736	0.836	0.746	0.696	1.086	0.766	0.306	0.242	0.616							
Road #3	23	1100-1200	1.346	1.346	0.241	0.241	0.626	0.736	0.836	0.746	0.696	1.086	0.766	0.306	0.242	0.616							
Road #3	23	1200-1300	1.406	1.406	0.286	0.286	0.676	0.806	0.546	0.616	0.596	1.056	0.756	0.436	0.242	0.616							
Road #3	23	1300-1400	1.346	1.346	0.256	0.256	0.726	0.786	0.316	0.616	0.616	1.176	0.886	1.386	0.246	0.616							
Road #3	23	1400-1500	1.346	1.346	0.256	0.256	0.726	0.786	0.316	0.616	0.616	1.176	0.886	1.386	0.246	0.616							

\\hsn\Environment Projects\60733229\1.01\Others\Air\Modelling\Appendix\Traffic\Appendix\Appendix 3.5.4 Emission Factor in 2043-S.B.xlsx

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry Open Road 24 hour Emission Factors for AERMOD model (Emission)									
Year 2043									
Road Name	Road ID	Hour	NO _x Emission			NO _x Emission			Monthly/Average
			g/min	g/s	tonne/hour	g/min	g/s	tonne/hour	
Road 51	51	0900-0200	4.226	0.704	2.528	4.142	0.739	2.510	1.188
Road 51	51	0200-0300	4.646	0.838	3.058	4.562	0.819	3.044	1.336
Road 51	51	0300-0500	5.056	0.918	3.354	4.967	0.920	3.415	1.552
Road 51	51	0500-0600	5.466	0.998	3.610	5.342	0.980	3.540	1.636
Road 51	51	0600-0700	5.876	1.078	3.886	5.722	1.060	3.820	1.720
Road 51	51	0700-0800	6.286	1.158	4.162	6.107	1.080	4.080	1.804
Road 51	51	0800-0900	6.696	1.238	4.438	6.507	1.160	4.320	1.888
Road 51	51	0900-1000	7.106	1.318	4.714	6.907	1.240	4.560	1.972
Road 51	51	1000-1100	7.516	1.398	5.000	7.307	1.320	4.840	2.056
Road 51	51	1100-1200	7.926	1.478	5.276	7.707	1.400	5.120	2.140
Road 51	51	1200-1300	8.336	1.558	5.552	8.107	1.480	5.400	2.224
Road 51	51	1300-1400	8.746	1.638	5.828	8.507	1.560	5.680	2.308
Road 51	51	1400-1500	9.156	1.718	6.104	8.907	1.640	5.960	2.392
Road 51	51	1500-1600	9.566	1.798	6.380	9.307	1.720	6.240	2.476
Road 51	51	1600-1700	9.976	1.878	6.656	9.707	1.800	6.520	2.560
Road 51	51	1700-1800	10.386	1.958	6.932	10.107	1.880	6.800	2.644
Road 51	51	1800-1900	10.796	2.038	7.208	10.507	1.960	7.080	2.728
Road 51	51	1900-2000	11.206	2.118	7.484	10.907	2.040	7.360	2.812
Road 51	51	2000-2100	11.616	2.198	7.760	11.307	2.120	7.640	2.896
Road 51	51	2100-2200	12.026	2.278	8.036	11.707	2.200	7.920	2.980
Road 51	51	2200-2300	12.436	2.358	8.312	12.107	2.280	8.200	3.064
Road 51	51	2300-2400	12.846	2.438	8.588	12.507	2.360	8.480	3.148
Road 52	52	0900-0200	4.746	0.848	3.058	4.662	0.838	3.044	1.288
Road 52	52	0200-0300	5.166	0.928	3.334	5.082	0.918	3.300	1.388
Road 52	52	0300-0500	5.586	1.008	3.610	5.500	0.998	3.540	1.488
Road 52	52	0500-0600	6.006	1.088	3.886	5.900	1.068	3.820	1.588
Road 52	52	0600-0700	6.426	1.168	4.162	6.300	1.138	4.080	1.688
Road 52	52	0700-0800	6.846	1.248	4.438	6.700	1.208	4.320	1.788
Road 52	52	0800-0900	7.266	1.328	4.714	7.100	1.268	4.560	1.888
Road 52	52	0900-1000	7.686	1.408	4.990	7.500	1.328	4.840	1.988
Road 52	52	1000-1100	8.106	1.488	5.266	7.900	1.388	5.120	2.088
Road 52	52	1100-1200	8.526	1.568	5.542	8.300	1.448	5.400	2.188
Road 52	52	1200-1300	8.946	1.648	5.818	8.700	1.508	5.680	2.288
Road 52	52	1300-1400	9.366	1.728	6.094	9.100	1.568	5.960	2.388
Road 52	52	1400-1500	9.786	1.808	6.370	9.500	1.628	6.240	2.488
Road 52	52	1500-1600	10.206	1.888	6.646	9.900	1.688	6.520	2.588
Road 52	52	1600-1700	10.626	1.968	6.922	10.300	1.748	6.800	2.688
Road 52	52	1700-1800	11.046	2.048	7.198	10.700	1.808	7.080	2.788
Road 52	52	1800-1900	11.466	2.128	7.474	11.100	1.868	7.360	2.888
Road 52	52	1900-2000	11.886	2.208	7.750	11.500	1.928	7.640	2.988
Road 52	52	2000-2100	12.306	2.288	8.026	11.900	1.988	7.920	3.088
Road 52	52	2100-2200	12.726	2.368	8.302	12.300	2.048	8.200	3.188
Road 52	52	2200-2300	13.146	2.448	8.578	12.700	2.108	8.480	3.288
Road 52	52	2300-2400	13.566	2.528	8.854	13.100	2.168	8.760	3.388
Road 53	53	0900-0200	5.266	0.948	3.334	5.182	0.938	3.300	1.388
Road 53	53	0200-0300	5.686	1.028	3.610	5.600	1.018	3.540	1.488
Road 53	53	0300-0500	6.106	1.108	3.886	6.000	1.088	3.820	1.588
Road 53	53	0500-0600	6.526	1.188	4.162	6.400	1.158	4.080	1.688
Road 53	53	0600-0700	6.946	1.268	4.438	6.800	1.218	4.320	1.788
Road 53	53	0700-0800	7.366	1.348	4.714	7.200	1.278	4.560	1.888
Road 53	53	0800-0900	7.786	1.428	4.990	7.600	1.338	4.840	1.988
Road 53	53	0900-1000	8.206	1.508	5.266	8.100	1.398	5.120	2.088
Road 53	53	1000-1100	8.626	1.588	5.542	8.500	1.458	5.400	2.188
Road 53	53	1100-1200	9.046	1.668	5.818	8.900	1.518	5.680	2.288
Road 53	53	1200-1300	9.466	1.748	6.094	9.300	1.578	5.960	2.388
Road 53	53	1300-1400	9.886	1.828	6.370	9.700	1.638	6.240	2.488
Road 53	53	1400-1500	10.306	1.908	6.646	10.100	1.698	6.520	2.588
Road 53	53	1500-1600	10.726	1.988	6.922	10.500	1.758	6.800	2.688
Road 53	53	1600-1700	11.146	2.068	7.198	10.900	1.818	7.080	2.788
Road 53	53	1700-1800	11.566	2.148	7.474	11.300	1.878	7.360	2.888
Road 53	53	1800-1900	11.986	2.228	7.750	11.700	1.938	7.640	2.988
Road 53	53	1900-2000	12.406	2.308	8.026	12.100	1.998	7.920	3.088
Road 53	53	2000-2100	12.826	2.388	8.302	12.500	2.058	8.200	3.188
Road 53	53	2100-2200	13.246	2.468	8.578	12.900	2.118	8.480	3.288
Road 53	53	2200-2300	13.666	2.548	8.854	13.300	2.178	8.760	3.388
Road 53	53	2300-2400	14.086	2.628	9.130	13.700	2.238	9.040	3.488
Road 54	54	0900-0200	5.786	1.028	3.610	5.702	1.018	3.540	1.488
Road 54	54	0200-0300	6.206	1.108	3.886	6.100	1.088	3.820	1.588
Road 54	54	0300-0500	6.626	1.188	4.162	6.500	1.158	4.080	1.688
Road 54	54	0500-0600	7.046	1.268	4.438	6.900	1.218	4.320	1.788
Road 54	54	0600-0700	7.466	1.348	4.714	7.300	1.278	4.560	1.888
Road 54	54	0700-0800	7.886	1.428	4.990	7.700	1.338	4.840	1.988
Road 54	54	0800-0900	8.306	1.508	5.266	8.100	1.398	5.120	2.088
Road 54	54	0900-1000	8.726	1.588	5.542	8.500	1.458	5.400	2.188
Road 54	54	1000-1100	9.146	1.668	5.818	8.900	1.518	5.680	2.288
Road 54	54	1100-1200	9.566	1.748	6.094	9.300	1.578	5.960	2.388
Road 54	54	1200-1300	9.986	1.828	6.370	9.700	1.638	6.240	2.488
Road 54	54	1300-1400	10.406	1.908	6.646	10.100	1.698	6.520	2.588
Road 54	54	1400-1500	10.826	1.988	6.922	10.500	1.758	6.800	2.688
Road 54	54	1500-1600	11.246	2.068	7.198	10.900	1.818	7.080	2.788
Road 54	54	1600-1700	11.666	2.148	7.474	11.300	1.878	7.360	2.888
Road 54	54	1700-1800	12.086	2.228	7.750	11.700	1.938	7.640	2.988
Road 54	54	1800-1900	12.506	2.308	8.026	12.100	1.998	7.920	3.088
Road 54	54	1900-2000	12.926	2.388	8.302	12.500	2.058	8.200	3.188
Road 54	54	2000-2100	13.346	2.468	8.578	12.900	2.118	8.480	3.288
Road 54	54	2100-2200	13.766	2.548	8.854	13.300	2.178	8.760	3.388
Road 54	54	2200-2300	14.186	2.628	9.130	13.700	2.238	9.040	3.488
Road 54	54	2300-2400	14.606	2.708	9.406	14.100	2.298	9.320	3.588
Road 55	55	0900-0200	6.306	1.108	3.886	6.222	1.098	3.760	1.588
Road 55	55	0200-0300	6.726	1.188	4.162	6.600	1.158	4.080	1.688
Road 55	55	0300-0500	7.146	1.268	4.438	7.000	1.218	4.320	1.788
Road 55	55	0500-0600	7.566	1.348	4.714	7.400	1.278	4.560	1.888
Road 55	55	0600-0700	7.986	1.428	4.990	7.800	1.338	4.840	1.988
Road 55	55	0700-0800	8.406	1.508	5.266	8.200	1.398	5.120	2.088
Road 55	55	0800-0900	8.826	1.588	5.542	8.600	1.458	5.400	2.188
Road 55	55	0900-1000	9.246	1.668	5.818	9.000	1.518	5.680	2.288
Road 55	55	1000-1100	9.666	1.748	6.094	9.400	1.578	5.960	2.388
Road 55	55	1100-1200	10.086	1.828	6.370	9.800	1.638	6.240	2.488
Road 55	55	1200-1300	10.506	1.908	6.646	10.200	1.698	6.520	2.588
Road 55	55	1300-1400	10.926	1.988	6.922	10.600	1.758	6.800	2.688
Road 55	55	1400-1500	11.346	2.068	7.198	11.000	1.818	7.080	2.788
Road 55	55	1500-1600	11.766	2.148	7.474	11.400	1.878	7.360	2.888
Road 55	55	1600-1700	12.186	2.228	7.750	11.800	1.938	7.640	2.988
Road 55	55	1700-1800	12.606	2.308	8.026	12.200	1.998	7.920	3.088
Road 55	55	1800-1900	13.026	2.388	8.302	12.600	2.058	8.200	3.188
Road 55	55	1900-2000	13.446	2.468	8.578	13.000	2.118	8.480	3.288
Road 55	55	2000-2100	13.866	2.548	8.854	13.400	2.178	8.760	3.388
Road 55	55	2100-2200	14.286	2.628	9.130	13.800	2.238	9.040	3.488
Road 55	55	2200-2300	14.706	2.708	9.406	14.200	2.298	9.320	3.588
Road 55	55	2300-2400	15.126	2.788	9.682	14.600	2.358	9.600	3.688
Road 56	56	0900-0200	6.826	1.188	4.162	6.742	1.178	4.080	1.688

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry Open Road 24 hour Emission Factors for AEMAD model (November)																	
Year 2043																	
Road Name	Road ID	Hour	NO _x Emission						NO ₂ Emission								
			Monthly/Min			tonne/hour	Monthly/Average			tonne/hour	Monthly/Min			tonne/hour			
			g/m ³ /min	g/m ³ /s	g/m ³ /min		g/m ³ /s	g/m ³ /min	g/m ³ /s		g/m ³ /min	g/m ³ /s					
Road 17	17	1600-1700	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01
Road 17	17	1700-1800	3.99E+01	3.11E+01	1.631E+01	4.53E+01	4.83E+01	2.01E+01	5.64E+01	6.02E+01	6.55E+01	1.59E+01	1.67E+01	7.11E+01	7.41E+01	3.20E+01	3.42E+01
Road 17	17	1800-1900	2.05E+02	5.67E+01	5.84E+01	2.37E+01	2.53E+01	1.08E+01	2.91E+01	3.11E+01	3.61E+01	8.72E+01	1.06E+01	1.12E+01	4.87E+01	5.85E+01	7.05E+01
Road 17	17	1900-2000	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01
Road 17	17	2000-2100	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01
Road 17	17	2100-2200	9.28E+01	1.45E+01	1.58E+01	8.30E+01	8.88E+01	6.12E+01	9.78E+01	1.02E+01	1.14E+01	3.89E+01	4.16E+01	1.41E+01	1.59E+01	5.19E+01	5.46E+01
Road 17	17	2200-2300	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01
Road 18	18	0000-0100	6.35E+01	4.58E+01	7.03E+01	3.92E+01	4.46E+01	3.62E+01	5.17E+01	5.16E+01	5.18E+01	1.24E+01	1.27E+01	2.46E+01	2.46E+01	3.01E+01	3.21E+01
Road 18	18	0100-0200	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01
Road 18	18	0200-0300	7.99E+01	2.96E+01	4.37E+01	4.40E+01	4.67E+01	2.38E+01	5.19E+01	5.19E+01	5.19E+01	1.03E+01	1.03E+01	1.47E+01	1.47E+01	1.47E+01	1.47E+01
Road 18	18	0300-0400	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01
Road 18	18	0400-0500	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01
Road 18	18	0500-0600	9.53E+01	1.17E+01	1.67E+01	8.01E+01	6.14E+01	8.76E+01	3.30E+01	1.04E+01	1.04E+01	2.40E+01	2.40E+01	4.27E+01	4.27E+01	4.27E+01	4.27E+01
Road 18	18	0600-0700	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01
Road 18	18	0700-0800	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01
Road 18	18	0800-0900	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01
Road 18	18	0900-1000	1.17E+01	1.42E+01	3.50E+01	1.36E+01	1.94E+01	6.68E+01	1.57E+01	1.57E+01	1.57E+01	1.03E+01	1.03E+01	1.47E+01	1.47E+01	1.47E+01	1.47E+01
Road 18	18	1000-1100	1.33E+01	2.96E+01	4.13E+01	5.88E+01	1.28E+01	1.82E+01	1.57E+01	2.24E+01	3.37E+01	7.76E+01	1.10E+01	1.10E+01	1.10E+01	1.10E+01	1.10E+01
Road 18	18	1100-1200	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01
Road 18	18	1200-1300	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01
Road 18	18	1300-1400	1.62E+01	3.77E+01	5.38E+01	6.82E+01	1.28E+01	2.27E+01	1.87E+01	2.80E+01	4.37E+01	1.02E+01	1.45E+01	1.45E+01	1.45E+01	1.45E+01	1.45E+01
Road 18	18	1400-1500	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01
Road 18	18	1500-1600	1.45E+01	3.76E+01	5.38E+01	6.82E+01	1.28E+01	2.27E+01	1.87E+01	2.80E+01	4.37E+01	1.02E+01	1.45E+01	1.45E+01	1.45E+01	1.45E+01	1.45E+01
Road 18	18	1600-1700	1.57E+01	4.02E+01	5.79E+01	6.44E+01	1.22E+01	2.38E+01	2.02E+01	2.86E+01	4.12E+01	1.07E+01	1.52E+01	1.52E+01	1.52E+01	1.52E+01	1.52E+01
Road 18	18	1700-1800	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01
Road 18	18	1800-1900	6.35E+01	2.42E+01	3.45E+01	4.48E+01	4.67E+01	2.38E+01	5.19E+01	5.19E+01	5.19E+01	1.03E+01	1.03E+01	1.47E+01	1.47E+01	1.47E+01	1.47E+01
Road 18	18	1900-2000	6.83E+01	1.54E+01	2.19E+01	8.12E+01	1.73E+01	2.42E+01	4.50E+01	4.50E+01	4.50E+01	5.76E+01	5.76E+01	5.76E+01	5.76E+01	5.76E+01	5.76E+01
Road 18	18	2000-2100	6.68E+01	1.18E+01	1.68E+01	4.78E+01	4.78E+01	2.72E+01	3.10E+01	3.10E+01	3.10E+01	4.41E+01	4.41E+01	4.41E+01	4.41E+01	4.41E+01	4.41E+01
Road 18	18	2100-2200	6.68E+01	1.18E+01	1.68E+01	4.78E+01	4.78E+01	2.72E+01	3.10E+01	3.10E+01	3.10E+01	4.41E+01	4.41E+01	4.41E+01	4.41E+01	4.41E+01	4.41E+01
Road 18	18	2200-2300	6.68E+01	1.18E+01	1.68E+01	4.78E+01	4.78E+01	2.72E+01	3.10E+01	3.10E+01	3.10E+01	4.41E+01	4.41E+01	4.41E+01	4.41E+01	4.41E+01	4.41E+01
Road 18	18	2300-2400	6.68E+01	1.18E+01	1.68E+01	4.78E+01	4.78E+01	2.72E+01	3.10E+01	3.10E+01	3.10E+01	4.41E+01	4.41E+01	4.41E+01	4.41E+01	4.41E+01	4.41E+01
Road 19	19	0000-0100	9.21E+01	6.80E+01	5.30E+01	4.81E+01	2.63E+01	2.77E+01	5.73E+01	5.73E+01	5.73E+01	1.86E+01	1.86E+01	3.42E+01	3.42E+01	3.42E+01	3.42E+01
Road 19	19	0100-0200	1.02E+01	4.12E+01	4.33E+01	5.06E+01	2.02E+01	2.16E+01	6.07E+01	6.07E+01	6.07E+01	1.18E+01	1.18E+01	1.18E+01	1.18E+01	1.18E+01	1.18E+01
Road 19	19	0200-0300	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01
Road 19	19	0300-0400	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01
Road 19	19	0400-0500	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01
Road 19	19	0500-0600	1.18E+01	1.74E+01	2.48E+01	3.56E+01	5.35E+01	3.71E+01	6.81E+01	6.81E+01	6.81E+01	1.32E+01	1.32E+01	1.32E+01	1.32E+01	1.32E+01	1.32E+01
Road 19	19	0600-0700	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01	1.540E+01	1.630E+01	2.540E+01
Road 19	19	0700-0800	1.34E+01	3.27E+01	4.34E+01	5.20E+01	1.73E+01	1.82E+01	7.54E+01	7.54E+01	7.54E+01	1.12E+01	1.12E+01	1.12E+01	1.12E+01	1.12E+01	1.12E+01
Road 19	19	0800-0900	1.34E+01	3.27E+01	4.34E+01	5.20E+01	1.73E+01	1.82E+01	7.54E+01	7.54E+01	7.54E+01	1.12E+01	1.12E+01	1.12E+01	1.12E+01	1.12E+01	1.12E+01
Road 19	19	0900-1000	1.34E+01	3.27E+01	4.34E+01	5.20E+01	1.73E+01	1.82E+01	7.54E+01	7.54E+01	7.54E+01	1.12E+01	1.12E+01	1.12E+01	1.12E+01	1.12E+01	1.12E+01
Road 19	19	1000-1100	1.72E+01	4.48E+01	4.71E+01	7.13E+01	1.86E+01	2.02E+01	1.12E+01	2.86E+01	2.86E+01	2.86E+01	2.86E+01	2.86E+01	2.86E+01	2.86E+01	2.86E+01
Road 19	19	1100-1200	1.64E+01	4.08E+01	4.27E+01	6.73E+01	1.72E+01	1.86E+01	1.06E+01	2.62E+01	2.62E+01	2.62E+01	2.62E+01	2.62E+01	2.62E+01	2.62E+01	2.62E+01
Road 19	19	1200-1300	2.06E+01	5.22E+01	5.49E+01	8.26E+01	1.99E+01	2.13E+01	2.53E+01	4.43E+01	4.43E+01	4.43E+01	4.43E+01	4.43E+01	4.43E+01	4.43E+01	4.43E+01
Road 19	19	1300-1400	2.06E+01	5.22E+01	5.49E+01	8.26E+01	1.99E+01	2.13E+01	2.53E+01	4.43E+01	4.43E+01	4.43E+01	4.43E+01	4.43E+01	4.43E+01	4.43E+01	4.43E+01
Road 19	19	1400-1500	2.06E+01	5.22E+01	5.49E+01	8.26E+01	1.99E+01	2.13E+01	2.53E+01	4.43E+01	4.43E+01	4.43E+01	4.43E+01	4.43E+01	4.43E+01	4.43E+01	4.43E+01
Road 19	19	1500-1600	1.89E+01	5.10E+01	5.62E+01	7.10E+01	2.30E+01	2.48E+01	2.76E+01	2.84E+01	2.84E+01	2.84E+01	2.84E+01	2.84E+01	2.84E+01	2.84E+01	2.84E+01
Road 19	19	1600-1700	1.94E+01	5.26E+01	5.53E+01	6.76E+01	2.09E+01	2.26E+01	2.61E+01	2.75E+01	2.75E+01	2.75E+01	2.75E+01	2.75E+01	2.75E+01	2.75E+01	2.75E+01
Road 19	19	1700-1800	2.06E+01	5.22E+01	5.49E+01	8.26E+01	1.99E+01	2.13E+01	2.53E+01	4.43E+01	4.43E+01	4.43E+01	4.43E+01	4.43E+01	4.43E+01	4.43E+01	4.43E+01
Road 19	19	1800-1900															

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Tsing Yi North Underground Quarry		Open Road 24 hour Emission Factors for		Year 2043	
AERMOD model (November)		NO _x Emission		NO Emission	

Road Name	Road ID	Hour	Monthly/hour			Monthly/hour/ave			Monthly/hour			Monthly/hour/ave		
			g/km/hr	g/s/m	tonne/hour	g/km/hr	t/s/m	tonne/hour	g/km/hr	g/s/m	tonne/hour	g/km/hr	g/s/m	tonne/hr
Road 1	54	0800-0900	8.04E+02	3.04E+07	2.53E+03	2.98E+01	1.02E+06	9.28E+03	3.30E+03	1.42E+06	1.18E+02	9.58E+03	3.98E+06	
Road 1	54	0900-1000	1.22E+03	4.32E+07	3.62E+03	4.12E+01	1.47E+06	1.32E+04	4.72E+03	2.02E+06	1.72E+02	1.42E+04	5.62E+06	
Road 1	54	1000-1100	1.01E+03	3.41E+07	2.84E+03	3.65E+01	1.20E+06	9.95E+03	3.62E+04	1.54E+06	1.28E+02	1.15E+04	3.84E+06	
Road 1	54	1100-1200	1.10E+03	3.81E+07	2.64E+03	3.58E+01	1.18E+06	9.37E+03	4.59E+04	1.44E+06	1.20E+02	1.14E+04	3.95E+06	
Road 1	54	1200-1300	1.22E+03	4.21E+07	3.52E+03	4.02E+01	1.42E+06	1.32E+04	4.72E+03	2.02E+06	1.72E+02	1.42E+04	5.62E+06	
Road 1	54	1300-1400	1.02E+03	3.59E+07	2.74E+03	3.43E+01	1.04E+06	8.69E+03	5.56E+04	1.34E+06	1.12E+02	1.32E+04	3.17E+06	
Road 1	54	1400-1500	1.24E+03	4.01E+07	2.95E+03	4.25E+01	1.08E+06	8.68E+03	5.49E+04	1.33E+06	1.11E+02	1.33E+04	3.24E+06	
Road 1	54	1500-1600	1.22E+03	4.21E+07	3.52E+03	4.02E+01	1.42E+06	1.32E+04	4.72E+03	2.02E+06	1.72E+02	1.42E+04	5.62E+06	
Road 1	54	1600-1700	1.18E+03	3.84E+07	2.65E+03	4.15E+01	9.98E+07	8.30E+03	5.33E+04	1.28E+06	1.09E+02	1.28E+04	3.09E+06	
Road 1	54	1700-1800	9.76E+02	2.27E+07	1.89E+03	3.84E+01	8.91E+07	7.43E+03	4.81E+04	1.12E+06	9.32E+04	1.24E+06	2.71E+06	
Road 1	54	1800-1900	8.06E+02	1.53E+07	1.27E+03	3.23E+01	6.11E+07	5.08E+03	4.03E+04	7.64E+05	8.06E+04	1.00E+06	1.90E+06	
Road 1	54	1900-2000	1.01E+03	3.41E+07	2.84E+03	3.65E+01	1.20E+06	9.95E+03	3.62E+04	1.54E+06	1.28E+02	1.15E+04	3.84E+06	
Road 1	54	2000-2100	6.91E+02	7.55E+06	6.28E+02	2.75E+01	3.01E+07	2.50E+04	3.34E+04	3.76E+07	3.13E+04	8.69E+04	1.04E+08	
Road 1	54	2100-2200	6.99E+02	7.68E+06	6.40E+02	2.78E+01	3.05E+07	2.54E+04	3.47E+04	3.82E+07	3.18E+04	8.42E+04	1.04E+08	
Road 1	54	2200-2300	7.29E+02	7.86E+06	6.52E+02	2.82E+01	3.12E+07	2.62E+04	3.56E+04	3.94E+07	3.26E+04	8.69E+04	1.04E+08	
Road 1	54	2300-0000	7.32E+02	7.78E+06	6.48E+02	2.67E+01	2.15E+07	1.74E+04	3.31E+04	2.67E+07	2.28E+04	6.78E+04	7.55E+06	
Road 1	101	0000-0100	8.57E+02	2.98E+06	1.10E+03	3.77E+02	5.18E+07	7.50E+03	4.32E+04	5.94E+07	8.59E+03	4.14E+04	1.49E+08	
Road 1	101	0100-0200	8.10E+02	2.81E+06	1.03E+03	3.18E+02	4.42E+07	6.95E+03	4.03E+04	5.44E+07	7.68E+03	3.84E+04	1.39E+08	
Road 1	101	0200-0300	6.67E+02	4.36E+06	6.30E+04	4.10E+02	2.77E+07	3.51E+03	4.79E+04	3.14E+07	4.54E+03	1.71E+07	1.63E+08	
Road 1	101	0300-0400	7.17E+02	3.74E+06	5.41E+04	4.24E+02	2.20E+07	3.20E+03	4.69E+07	2.59E+07	3.78E+03	8.69E+04	1.96E+08	
Road 1	101	0400-0500	7.05E+02	3.47E+06	5.24E+04	4.42E+02	2.18E+07	3.18E+03	4.42E+07	2.56E+07	3.68E+03	8.69E+04	1.96E+08	
Road 1	101	0500-0600	8.24E+02	2.95E+06	1.15E+03	4.52E+02	5.49E+07	6.54E+03	5.34E+04	5.32E+07	7.73E+03	3.18E+06	3.12E+08	
Road 1	101	0600-0700	8.82E+03	1.80E+07	2.75E+04	4.70E+02	1.01E+08	1.44E+08	5.58E+02	1.20E+06	1.47E+06	2.31E+07	2.97E+08	
Road 1	101	0700-0800	9.25E+03	4.09E+07	5.91E+04	4.62E+02	1.11E+08	3.05E+08	5.79E+02	2.52E+06	2.64E+02	4.49E+07	1.55E+09	
Road 1	101	0800-0900	9.31E+03	4.17E+07	5.99E+04	4.62E+02	1.12E+08	3.08E+08	5.98E+02	2.57E+06	2.71E+02	4.91E+07	1.55E+09	
Road 1	101	0900-1000	1.05E+04	5.00E+07	6.51E+04	4.93E+02	1.21E+08	3.08E+08	5.98E+02	2.57E+06	2.71E+02	4.91E+07	1.55E+09	
Road 1	101	1000-1100	1.24E+04	4.50E+07	6.51E+04	5.19E+02	1.38E+08	3.82E+08	6.39E+02	2.40E+06	1.47E+02	3.20E+07	1.25E+09	
Road 1	101	1100-1200	1.35E+04	4.92E+07	6.51E+04	5.45E+02	1.45E+08	3.92E+08	6.72E+02	2.46E+06	1.52E+02	3.26E+07	1.25E+09	
Road 1	101	1200-1300	1.26E+04	4.34E+07	6.27E+04	5.18E+02	1.39E+08	2.61E+02	6.24E+02	2.24E+06	3.39E+02	1.18E+07	1.71E+08	
Road 1	101	1300-1400	1.29E+04	4.49E+07	6.49E+04	5.39E+02	1.40E+08	2.79E+02	6.06E+02	2.37E+06	3.43E+02	1.48E+07	1.95E+08	
Road 1	101	1400-1500	1.35E+04	4.92E+07	6.51E+04	5.45E+02	1.45E+08	3.92E+08	6.72E+02	2.46E+06	1.52E+02	3.26E+07	1.25E+09	
Road 1	101	1500-1600	1.17E+02	4.57E+07	6.61E+03	5.30E+02	1.80E+06	2.98E+02	6.40E+02	2.53E+06	1.29E+02	3.29E+07	1.65E+08	
Road 1	101	1600-1700	1.23E+02	4.55E+07	7.30E+03	5.13E+02	2.11E+06	3.05E+02	6.39E+02	2.61E+06	1.37E+02	3.33E+07	1.98E+08	
Road 1	101	1700-1800	8.75E+02	4.02E+07	5.43E+03	4.92E+02	2.02E+06	3.05E+02	6.25E+02	2.45E+06	1.54E+02	3.11E+07	1.61E+08	
Road 1	101	1800-1900	8.44E+02	3.91E+07	5.43E+03	4.93E+02	2.01E+06	3.07E+02	6.26E+02	2.45E+06	1.54E+02	3.11E+07	1.61E+08	
Road 1	101	1900-2000	5.96E+03	2.10E+07	3.04E+03	4.23E+02	1.28E+06	1.62E+02	3.77E+04	1.47E+06	1.21E+02	1.43E+07	5.57E+06	
Road 1	101	2000-2100	5.23E+03	1.58E+07	2.29E+03	3.57E+02	1.08E+06	1.58E+02	4.09E+02	1.42E+06	1.78E+02	1.73E+07	4.18E+06	
Road 1	101	2100-2200	4.68E+03	1.41E+07	2.14E+03	3.14E+02	9.61E+05	1.40E+02	3.72E+02	1.29E+06	1.57E+02	1.57E+07	3.59E+06	
Road 1	101	2200-2300	4.64E+03	1.35E+07	1.96E+03	3.51E+02	1.08E+06	1.49E+02	3.97E+02	1.17E+06	1.68E+02	1.16E+07	3.41E+06	
Road 1	101	2300-0000	5.14E+03	1.51E+07	1.64E+03	3.64E+02	8.01E+05	1.18E+02	3.15E+02	9.14E+02	1.32E+02	1.31E+07	2.89E+06	
Road 1	101	0000-0100	4.11E+03	1.24E+07	1.64E+03	3.14E+02	9.61E+05	1.40E+02	3.72E+02	1.29E+06	1.57E+02	1.57E+07	3.59E+06	
Road 1	102	0000-0100	8.32E+02	3.33E+06	5.88E+04	4.45E+02	3.42E+07	4.83E+03	5.27E+06	1.96E+07	4.98E+03	7.23E+07	1.71E+08	
Road 1	102	0100-0200	8.93E+02	3.07E+06	8.88E+04	4.47E+02	2.65E+07	3.60E+03	5.56E+06	3.16E+07	4.24E+03	6.17E+07	1.37E+08	
Road 1	102	0200-0300	8.35E+02	2.95E+06	8.35E+04	4.35E+02	2.55E+07	3.58E+03	5.50E+06	3.14E+07	4.24E+03	6.17E+07	1.37E+08	
Road 1	102	0300-0400	1.02E+02	5.15E+06	1.98E+04	5.00E+02	2.52E+07	3.42E+03	6.02E+04	2.02E+07	4.12E+03	7.79E+04	1.40E+08	
Road 1	102	0400-0500	1.06E+02	5.60E+06	1.98E+04	5.19E+02	4.97E+07	6.22E+02	6.27E+02	5.55E+07	5.02E+02	5.96E+04	2.61E+08	
Road 1	102	0500-0600	1.12E+02	5.60E+06	1.98E+04	5.19E+02	4.97E+07	6.22E+02	6.27E+02	5.55E+07	5.02E+02	5.96E+04	2.61E+08	
Road 1	102	0600-0700	1.21E+02	5.74E+07	4.33E+04	5.51E+02	2.16E+08	3.08E+02	6.72E+04	2.46E+06	1.58E+02	3.30E+07	1.29E+09	
Road 1	102	0700-0800	1.17E+02	5.39E+07	7.30E+04	5.23E+02	2.24E+08	3.28E+02	6.40E+04	2.94E+06	1.59E+02	3.25E+07	1.46E+09	
Road 1	102	0800-0900	1.38E+02	5.54E+07	7.51E+04	5.89E+02	2.38E+08	3.22E+02	7.21E+04	2.93E+06	1.68E+02	3.68E+07	1.68E+09	
Road 1	102	0900-1000	1.35E+02	5.50E+07	7.45E+04	5.84E+02	2.36E+08	3.22E+02	7.21E+04	2.93E+06	1.68E+02	3.68E+07	1.68E+09	
Road 1	102	1000-1100	1.56E+02	5.16E+07	6.00E+04	6.10E+02	2.10E+08	2.89E+02	7.60E+04	2.62E+06	1.59E+02	3.46E+07	1.47E+09	
Road 1	102	1100-1200	1.59E+02	5.24E+07	6.34E+04	5.18E+02	1.63E+08	2.21E+02	6.69E+04	2.20E+06	1.47E+02	3.44E+07	1.06E+09	
Road 1	102	1200-1300	1.68E+02	5.25E+07	6.34E+04	5.18E+02	1.63E+08	2.21E+02	6.69E+04	2.20E+06	1.47E+02	3.44E+07	1.06E+09	
Road 1	102	1300-1400	1.27E+02	4.36E+07	5.91E+04	5.28E+02	1.80E+08	2.44E+02	6.59E+04	2.72E+06	1.55E+02	3.51E+07	1.21E+09	
Road 1	102	1400-1500	1.18E+02	4.15E+07	5.62E+04	5.28E+02	1.80E+08	2.52E+02	6.46E+04	2.72E+06	1.55E+02	3.51E+07	1.21E+09	
Road 1	102	1500-1600	1.18E+02	4.15E+07	5.62E+04	5.28E+02	1.80E+08	2.52E+02	6.46E+04	2.72E+06	1.55E+02	3.51E+07	1.21E+09	
Road 1	102	1600-1700	1.18E+02	4.15E+07	5.62E+04	5.28E+02	1.80E+08	2.52E+02	6.46E+04	2.72E+06	1.55E+02	3.51E+07	1.21E+09	
Road 1	102	1700-1800	1.18E+02	4.15E+07	5.62E+04	5.28E+02	1.80E+08	2.52E+02	6.46E+04	2.72E+06	1.55E+02	3.51E+07	1.21E+09	
Road 1	102	1800-1900	1.18E+02	4.15E+07	5.62E+04	5.28E+02	1.80E+08	2.52E+02	6.46E+04	2.72E+06	1.55E+02	3.51E+07	1.21E+09	
Road 1	102	1900-2000	1.18E+02	4.15E+07	5.62E+04	5.28E+02	1.80E+08	2.52E+02	6.46E+04	2.72E+06	1.55E+02	3.51E+07	1.21E+09	
Road 1	102	2000-2100	1.18E+02	4.15E+07	5.62E+04	5.28E+02	1.80E+08	2.52E+02	6.46E+04	2.72E+06	1.55E+02	3.51E+07	1.21E+09	
Road 1	102	2100-2200	1.18E+02	4.15E+07	5.62E+04	5.28E+02	1.80E+08	2.52E+02	6.46E+04	2.72E+06	1.55E+02	3.51E+07	1.21E+09	
Road 1	102	2200-2300	1.18E+02	4.15E+07	5.62E+04	5.28E+02	1.80E+08	2.52E+02	6.46E+04	2.72E+06	1.55E+02	3.51E+07	1.21E+09	
Road 1	102	2300-0000	1.18E+02	4.15E+07	5.62E+04	5.28E+02	1.80E+08	2.52E+02	6.46E+04	2.72E+06	1.55E+02	3.51E+07	1.21E+09	
Road 1	103	0000-0100	5.32E+03	7.72E+07	6.77E+04	3.72E+02	5.60E+07	4.74E+03	4.25E+07	6.17E+04	5.41E+03	3.96E+07	1.96E+08	
Road 1	103	0100-0200	5.83E+03	5.52E+08	3.85E+04	3.85E+02	3.64E+07	3.20E+03	4.42E+07	5.88E+03	4.49E+03	1.41E+08	1.24E+09	
Road 1	103	0200-0300	5.83E+03	5.52E+08	3.85E+04	3.85E+02	3.64E+07	3.20E+03	4.42E+07	5.88E+03	4.49E+03	1.41E+08	1.24E+09	
Road 1	103	0300-0400	6.93E+03	5.81E+08	3.94E+04	4.18E+02	2.31E+07	2.02E+03	4.08E+07	2.88E+03	7.17E+03	9.80E+07	8.01E+08	

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Using 11 North Underground Quarry		Open Road 24 hour Emission Factors for		Year 2043	
AERMOD model (December)					
		NO _x Emission		NO Emission	

Row	Node Name	Node ID	Hour	Monthly/Node			Monthly/Average			Monthly/Node			Monthly/Average		
				g/kN/m	g/s/m	tonne/hour	g/kN/m	g/s/m	tonne/hour	g/kN/m	g/s/m	tonne/hour	g/kN/m	g/s/m	tonne/hour
1	Node 1	1	1600-1700	1.342	0.465	1.582	1.342	0.465	1.582	1.342	0.465	1.582	1.342	0.465	1.582
2	Node 2	2	1700-1800	2.502	0.822	1.166	2.502	0.822	1.166	2.502	0.822	1.166	2.502	0.822	1.166
3	Node 3	3	1800-1900	3.342	1.086	0.954	3.342	1.086	0.954	3.342	1.086	0.954	3.342	1.086	0.954
4	Node 4	4	1900-2000	6.698	0.693	1.816	6.698	0.693	1.816	6.698	0.693	1.816	6.698	0.693	1.816
5	Node 5	5	2000-2100	2.682	0.866	0.418	2.682	0.866	0.418	2.682	0.866	0.418	2.682	0.866	0.418
6	Node 6	6	2100-2200	6.698	0.693	1.816	6.698	0.693	1.816	6.698	0.693	1.816	6.698	0.693	1.816
7	Node 7	7	2200-2300	5.528	0.723	1.127	5.528	0.723	1.127	5.528	0.723	1.127	5.528	0.723	1.127
8	Node 8	8	2300-0000	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
9	Node 9	9	0000-0100	4.772	0.854	0.954	4.772	0.854	0.954	4.772	0.854	0.954	4.772	0.854	0.954
10	Node 10	10	0100-0200	3.342	0.923	0.899	3.342	0.923	0.899	3.342	0.923	0.899	3.342	0.923	0.899
11	Node 11	11	0200-0300	6.698	0.693	1.816	6.698	0.693	1.816	6.698	0.693	1.816	6.698	0.693	1.816
12	Node 12	12	0300-0400	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
13	Node 13	13	0400-0500	6.698	0.693	1.816	6.698	0.693	1.816	6.698	0.693	1.816	6.698	0.693	1.816
14	Node 14	14	0500-0600	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
15	Node 15	15	0600-0700	7.012	0.598	0.886	7.012	0.598	0.886	7.012	0.598	0.886	7.012	0.598	0.886
16	Node 16	16	0700-0800	8.056	0.503	1.416	8.056	0.503	1.416	8.056	0.503	1.416	8.056	0.503	1.416
17	Node 17	17	0800-0900	7.986	0.593	1.596	7.986	0.593	1.596	7.986	0.593	1.596	7.986	0.593	1.596
18	Node 18	18	0900-1000	6.698	0.693	1.816	6.698	0.693	1.816	6.698	0.693	1.816	6.698	0.693	1.816
19	Node 19	19	1000-1100	6.698	0.693	1.816	6.698	0.693	1.816	6.698	0.693	1.816	6.698	0.693	1.816
20	Node 20	20	1100-1200	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
21	Node 21	21	1200-1300	6.698	0.693	1.816	6.698	0.693	1.816	6.698	0.693	1.816	6.698	0.693	1.816
22	Node 22	22	1300-1400	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
23	Node 23	23	1400-1500	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
24	Node 24	24	1500-1600	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
25	Node 25	25	1600-1700	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
26	Node 26	26	1700-1800	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
27	Node 27	27	1800-1900	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
28	Node 28	28	1900-2000	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
29	Node 29	29	2000-2100	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
30	Node 30	30	2100-2200	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
31	Node 31	31	2200-2300	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
32	Node 32	32	2300-0000	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
33	Node 33	33	0000-0100	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
34	Node 34	34	0100-0200	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
35	Node 35	35	0200-0300	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
36	Node 36	36	0300-0400	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
37	Node 37	37	0400-0500	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
38	Node 38	38	0500-0600	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
39	Node 39	39	0600-0700	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
40	Node 40	40	0700-0800	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
41	Node 41	41	0800-0900	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
42	Node 42	42	0900-1000	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
43	Node 43	43	1000-1100	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
44	Node 44	44	1100-1200	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
45	Node 45	45	1200-1300	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
46	Node 46	46	1300-1400	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
47	Node 47	47	1400-1500	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
48	Node 48	48	1500-1600	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
49	Node 49	49	1600-1700	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
50	Node 50	50	1700-1800	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
51	Node 51	51	1800-1900	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
52	Node 52	52	1900-2000	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
53	Node 53	53	2000-2100	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
54	Node 54	54	2100-2200	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
55	Node 55	55	2200-2300	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
56	Node 56	56	2300-0000	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
57	Node 57	57	0000-0100	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
58	Node 58	58	0100-0200	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
59	Node 59	59	0200-0300	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
60	Node 60	60	0300-0400	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
61	Node 61	61	0400-0500	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
62	Node 62	62	0500-0600	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
63	Node 63	63	0600-0700	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
64	Node 64	64	0700-0800	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
65	Node 65	65	0800-0900	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
66	Node 66	66	0900-1000	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
67	Node 67	67	1000-1100	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
68	Node 68	68	1100-1200	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
69	Node 69	69	1200-1300	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
70	Node 70	70	1300-1400	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
71	Node 71	71	1400-1500	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
72	Node 72	72	1500-1600	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
73	Node 73	73	1600-1700	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
74	Node 74	74	1700-1800	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
75	Node 75	75	1800-1900	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968
76	Node 76	76	1900-2000	1.166	0.385	0.968	1.166	0.385	0.968	1.166	0.385	0.968	1.166		

Tsing Yi North Underground Quarry
Open Road 24 hour Emission Factors for

AERMOD model (December)		Year 2043		NO _x Emission				NO Emission						
Road Name	Road ID	Hour	Monthly/Year		Monthly/hour		Monthly/Year		Monthly/hour		Monthly/Year			
			g/min	g/yr	g/min	g/yr	g/min	g/yr	g/min	g/yr	g/min	g/yr		
Road 21	21	0000-0100	9.546/48	6.766/68	3.026/48	4.986/42	3.376/47	1.586/43	5.936/42	3.96/47	1.986/43	7.516/43	1.666/48	7.976/45
Road 21	21	0100-0200	10.486/48	6.586/68	2.156/48	5.176/42	2.256/47	1.096/43	6.216/42	2.716/47	1.316/43	7.266/43	1.206/48	5.806/45
Road 21	21	0200-0300	11.326/48	6.406/68	1.436/48	5.416/42	1.536/47	0.816/43	5.436/42	2.136/47	1.036/43	6.586/43	1.096/48	5.396/45
Road 21	21	0300-0400	1.226/42	3.216/48	1.556/48	4.586/42	1.486/47	1.186/43	6.906/42	1.716/47	0.736/43	8.736/42	1.476/48	4.096/45
Road 21	21	0400-0500	1.286/42	3.746/48	0.806/48	5.886/42	0.716/47	6.246/43	7.146/42	2.086/47	1.006/43	4.346/43	0.916/48	4.786/45
Road 21	21	0500-0600	1.306/42	3.766/48	0.826/48	5.906/42	0.736/47	6.266/43	7.166/42	2.106/47	1.026/43	4.366/43	0.936/48	4.806/45
Road 21	21	0600-0700	1.376/42	3.516/47	0.7966/48	6.266/42	0.956/47	6.356/43	7.656/42	2.486/47	1.406/43	1.646/43	0.1026/48	1.946/45
Road 21	21	0700-0800	1.536/42	3.486/47	1.686/48	6.796/42	1.556/46	6.716/43	8.316/42	1.976/46	0.916/43	3.916/43	0.806/48	4.316/45
Road 21	21	0800-0900	1.606/42	4.386/47	2.006/48	7.176/42	1.636/47	7.876/43	8.536/42	2.276/46	1.106/43	4.396/43	1.056/48	5.066/45
Road 21	21	0900-1000	1.886/42	4.386/47	2.226/48	7.176/42	1.776/47	8.876/43	8.536/42	2.276/46	1.106/43	4.396/43	1.056/48	5.066/45
Road 21	21	1000-1100	1.986/42	4.276/47	2.066/48	7.746/42	1.7786/47	8.586/43	9.786/42	2.156/46	1.046/43	5.086/43	1.126/48	5.416/45
Road 21	21	1100-1200	1.856/42	3.896/47	1.886/48	7.766/42	1.686/47	7.706/43	9.516/42	1.956/46	0.956/43	4.936/43	1.106/48	4.966/45
Road 21	21	1200-1300	2.226/42	3.896/47	1.886/48	7.766/42	1.686/47	7.706/43	9.516/42	1.956/46	0.956/43	4.936/43	1.106/48	4.966/45
Road 21	21	1300-1400	2.246/42	4.836/47	2.336/48	8.886/42	1.926/46	9.246/43	1.116/41	2.406/46	1.186/42	5.886/42	1.276/48	6.136/45
Road 21	21	1400-1500	2.346/42	5.116/47	2.476/48	8.886/42	1.976/46	9.486/43	1.1316/41	2.406/46	1.186/42	5.886/42	1.316/48	6.316/45
Road 21	21	1500-1600	2.326/42	5.116/47	2.476/48	8.886/42	1.976/46	9.486/43	1.1316/41	2.406/46	1.186/42	5.886/42	1.316/48	6.316/45
Road 21	21	1600-1700	2.226/42	5.086/47	2.456/48	8.886/42	1.986/46	9.536/43	1.096/41	2.486/46	1.206/42	5.606/42	1.286/48	6.186/45
Road 21	21	1700-1800	1.886/42	3.966/47	1.916/48	7.616/42	1.786/46	8.626/43	0.2966/42	2.186/46	1.056/42	4.436/43	1.046/48	5.026/45
Road 21	21	1800-1900	1.886/42	3.966/47	1.916/48	7.616/42	1.786/46	8.626/43	0.2966/42	2.186/46	1.056/42	4.436/43	1.046/48	5.026/45
Road 21	21	1900-2000	1.026/42	1.676/47	0.806/48	5.076/42	0.346/47	4.026/43	6.096/42	1.106/46	0.4836/43	2.786/42	5.886/42	2.216/45
Road 21	21	2000-2100	0.9946/42	1.286/48	0.6186/48	3.536/42	0.656/43	3.616/43	6.311/42	0.8136/42	0.326/43	7.326/42	3.526/42	7.066/42
Road 21	21	2100-2200	0.9946/42	1.286/48	0.6186/48	3.536/42	0.656/43	3.616/43	6.311/42	0.8136/42	0.326/43	7.326/42	3.526/42	7.066/42
Road 21	21	2200-2300	0.9866/42	1.2116/47	0.6046/48	3.136/42	0.246/47	3.016/43	6.096/42	0.7456/46	0.3666/43	2.636/42	3.276/42	1.566/43
Road 21	21	2300-0000	1.686/42	1.0116/47	0.4886/48	3.546/42	0.5016/47	2.426/43	6.426/42	0.6206/47	2.916/42	2.896/42	1.136/48	1.316/45
Road 22	22	0000-0100	1.056/42	1.296/48	0.336/48	3.866/42	0.446/47	3.026/43	4.696/42	0.596/47	3.896/42	1.126/47	0.736/48	8.916/45
Road 22	22	0100-0200	1.056/42	1.296/48	0.336/48	3.866/42	0.446/47	3.026/43	4.696/42	0.596/47	3.896/42	1.126/47	0.736/48	8.916/45
Road 22	22	0200-0300	0.926/42	0.696/48	0.2966/48	3.606/42	0.406/47	1.666/43	4.596/42	0.106/47	1.966/42	1.736/42	0.746/48	0.846/45
Road 22	22	0300-0400	1.0116/41	0.666/48	0.686/48	3.676/42	0.2956/47	1.346/43	4.686/42	0.2356/47	1.706/42	1.416/42	0.696/48	4.146/45
Road 22	22	0400-0500	1.046/41	0.666/48	0.686/48	3.676/42	0.2956/47	1.346/43	4.686/42	0.2356/47	1.706/42	1.416/42	0.696/48	4.146/45
Road 22	22	0500-0600	1.1516/41	1.376/47	0.816/48	4.116/42	0.506/47	3.216/43	5.276/41	0.6317/41	4.116/42	1.226/46	0.466/48	9.506/45
Road 22	22	0600-0700	1.266/41	3.496/47	2.276/48	4.596/42	0.246/47	3.586/43	6.166/42	1.066/46	1.026/42	1.296/42	0.506/48	2.286/45
Road 22	22	0700-0800	1.266/41	3.496/47	2.276/48	4.596/42	0.246/47	3.586/43	6.166/42	1.066/46	1.026/42	1.296/42	0.506/48	2.286/45
Road 22	22	0800-0900	1.496/41	1.0116/48	0.5866/48	5.336/42	0.676/47	2.396/43	6.786/42	0.466/46	3.056/42	1.176/42	0.946/48	6.166/45
Road 22	22	0900-1000	1.5916/41	1.1446/48	0.7396/48	5.486/42	1.166/47	2.716/43	6.996/41	0.536/46	3.246/42	1.416/42	0.1076/48	6.976/45
Road 22	22	1000-1100	1.616/41	1.1446/48	0.7396/48	5.486/42	1.166/47	2.716/43	6.996/41	0.536/46	3.246/42	1.416/42	0.1076/48	6.976/45
Road 22	22	1100-1200	1.6116/41	1.1266/47	0.726/48	5.626/42	0.906/47	2.546/43	7.236/42	0.506/46	3.276/42	1.486/42	1.036/48	6.986/45
Road 22	22	1200-1300	1.686/41	1.196/48	0.7726/48	5.556/42	1.366/47	2.586/43	7.2116/41	0.5146/46	3.386/42	1.506/42	1.1076/48	6.976/45
Road 22	22	1300-1400	1.686/41	1.196/48	0.7726/48	5.556/42	1.366/47	2.586/43	7.2116/41	0.5146/46	3.386/42	1.506/42	1.1076/48	6.976/45
Road 22	22	1400-1500	1.686/41	1.196/48	0.7726/48	5.556/42	1.366/47	2.586/43	7.2116/41	0.5146/46	3.386/42	1.506/42	1.1076/48	6.976/45
Road 22	22	1500-1600	1.456/41	1.2116/48	0.7856/48	5.466/42	0.986/47	2.566/43	6.926/42	0.5786/47	3.276/42	1.386/42	1.156/48	7.666/45
Road 22	22	1600-1700	1.5916/41	1.2116/48	0.7856/48	5.466/42	0.986/47	2.566/43	6.986/41	0.5146/46	3.526/42	1.446/42	1.116/48	7.666/45
Road 22	22	1700-1800	1.686/41	1.196/48	0.7726/48	5.556/42	1.366/47	2.586/43	7.2116/41	0.5146/46	3.386/42	1.506/42	1.1076/48	6.976/45
Road 22	22	1800-1900	1.686/41	1.196/48	0.7726/48	5.556/42	1.366/47	2.586/43	7.2116/41	0.5146/46	3.386/42	1.506/42	1.1076/48	6.976/45
Road 22	22	1900-2000	0.9316/42	0.616/48	0.246/48	3.136/42	0.246/47	3.016/43	6.096/42	0.7456/46	0.3666/43	2.636/42	3.276/42	1.566/43
Road 22	22	2000-2100	0.9316/42	0.616/48	0.246/48	3.136/42	0.246/47	3.016/43	6.096/42	0.7456/46	0.3666/43	2.636/42	3.276/42	1.566/43
Road 22	22	2100-2200	0.9316/42	0.616/48	0.246/48	3.136/42	0.246/47	3.016/43	6.096/42	0.7456/46	0.3666/43	2.636/42	3.276/42	1.566/43
Road 22	22	2200-2300	0.9316/42	0.616/48	0.246/48	3.136/42	0.246/47	3.016/43	6.096/42	0.7456/46	0.3666/43	2.636/42	3.276/42	1.566/43
Road 22	22	2300-0000	0.9866/42	0.7166/48	0.3666/48	3.616/42	0.986/47	6.726/41	4.611/42	0.9776/41	0.858/42	1.166/42	0.506/48	2.166/45
Road 23	23	0000-0100	1.146/41	1.966/48	1.3326/48	3.666/42	1.106/47	4.786/42	4.676/41	0.976/48	6.114/42	1.186/42	2.286/48	1.546/45
Road 23	23	0100-0200	1.146/41	1.966/48	1.3326/48	3.666/42	1.106/47	4.786/42	4.676/41	0.976/48	6.114/42	1.186/42	2.286/48	1.546/45
Road 23	23	0200-0300	0.9966/42	1.296/48	0.636/48	3.566/42	0.446/47	3.136/43	4.576/42	0.596/48	3.996/42	1.176/42	1.526/48	1.036/45
Road 23	23	0300-0400	0.9966/42	1.296/48	0.636/48	3.566/42	0.446/47	3.136/43	4.576/42	0.596/48	3.996/42	1.176/42	1.526/48	1.036/45
Road 23	23	0400-0500	1.0616/41	1.596/48	0.716/48	3.786/42	0.748/48	3.886/42	4.802/41	0.7326/48	4.936/42	1.216/42	0.816/48	1.246/45
Road 23	23	0500-0600	1.0616/41	1.596/48	0.716/48	3.786/42	0.748/48	3.886/42	4.802/41	0.7326/48	4.936/42	1.216/42	0.816/48	1.246/45
Road 23	23	0600-0700	1.0616/41	1.596/48	0.716/48	3.786/42	0.748/48	3.886/42	4.802/41	0.7326/48	4.936/42	1.216/42	0.816/48	1.246/45
Road 23	23	0700-0800	1.306/41	1.7776/47	1.196/48	4.621/42	0.306/47	4.256/43	5.926/42	0.8076/47	5.446/42	3.346/42	1.836/48	1.246/45
Road 23	23	0800-0900	1.346/41	2.026/47	1.276/48	4.676/42	0.346/47	4.556/43	5.986/42	0.846/47	5.436/42	3.316/42	2.136/48	1.446/45
Road 23	23	0900-1000	1.346/41	2.026/47	1.276/48	4.676/42	0.346/47	4.556/43	5.986/42	0.846/47	5.436/42	3.316/42	2.136/48	1.446/45
Road 23	23	1000-1100	1.346/41	2.4116/47	1.626/48	4.976/42	0.526/47	5.746/43	6.096/42	1.906/46	1.376/42	3.966/42	5.066/48	1.686/45
Road 23	23	1100-1200	1.346/41	2.2956/47	1.5116/48	4.746/42	0.7996/47	5.696/43	6.106/42	1.906/46	1.376/42	3.966/42	5.066/48	1.686/45
Road 23	23	1200-1300	1.346/41	2.2956/47	1.5116/48	4.746/42	0.7996/47	5.696/43	6.106/42	1.906/46	1.376/42	3.966/42	5.066/48	1.686/45
Road 23	23	1300-1400	1.346/41	2.566/47	1.726/48	4.786/42	0.9136/47	6.136/43	6.126/41	1.176/46	1.786/42	3.886/42	2.646/48	1.786/45
Road 23	23	1400-1500	1.3766/41	2.606/47	1.7586/47	4.786/42	0.9136/47	6.136/43	6.126/41	1.176/46	1.786/42	3.886/42	2.646/48	1.786/45
Road 23	23	1500-1600	1.3766/41	2.606/47	1.7586/47									

Tsing Yi North Underground Quarry

[illegible]

Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

Jing Yi North Underground Quarry Open Road 24 hour Emission Factors for AERMOD model (December)		Year 2043
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Road Name	Road ID	Hour	No Emission									Mortality/green									No Emission																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
			g/km/h			g/m ² /h			tonne/hour			g/km/h			g/m ² /h			tonne/hour			g/km/h			g/m ² /h			tonne/hour																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																								
			g/km/h	g/m ² /h	tonne/hour	g/km/h	g/m ² /h	tonne/hour	g/km/h	g/m ² /h	tonne/hour	g/km/h	g/m ² /h	tonne/hour	g/km/h	g/m ² /h	tonne/hour	g/km/h	g/m ² /h	tonne/hour	g/km/h	g/m ² /h	tonne/hour	g/km/h	g/m ² /h	tonne/hour																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
Road 47	1600-1700	2.06E-02	3.24E-07	4.50E-07	4.721E-02	1.60E-06	1.83E-02	1.06E-01	2.00E-06	2.27E-02	3.19E-03	3.04E-06	6.69E-04	Road 47	1700-1800	1.46E-02	3.94E-07	8.741E-02	1.80E-06	1.931E-06	1.911E-06	2.72E-02	3.04E-03	5.04E-06	5.49E-04	Road 47	1800-1900	2.46E-02	3.94E-07	8.741E-02	1.80E-06	1.931E-06	1.911E-06	2.72E-02	3.04E-03	5.04E-06	5.49E-04	Road 47	1900-2000	8.57E-03	1.07E-07	1.93E-03	4.82E-02	9.55E-07	1.09E-02	5.68E-02	1.12E-06	1.28E-02	1.36E-03	2.67E-06	3.05E-04	Road 47	2000-2100	7.68E-03	1.22E-07	1.39E-03	4.54E-07	9.05E-05	5.68E-02	8.16E-06	1.07E-06	1.28E-02	1.36E-03	2.67E-06	3.05E-04	Road 47	2100-2200	3.02E-03	1.37E-07	5.29E-04	1.46E-07	3.67E-05	5.68E-02	1.12E-06	1.28E-02	1.36E-03	2.67E-06	3.05E-04	Road 47	2200-2300	6.27E-03	9.03E-08	1.06E-01	4.83E-02	7.22E-07	8.23E-04	5.15E-02	8.15E-07	9.29E-02	9.50E-04	1.42E-04	1.62E-04	Road 47	2300-2400	6.57E-03	7.93E-08	8.39E-04	4.82E-07	5.78E-07	6.13E-03	5.48E-01	6.11E-07	6.96E-03	1.06E-03	1.18E-04	1.40E-04	Road 47	2400-2500	4.96E-03	7.93E-08	8.39E-04	4.82E-07	5.78E-07	6.13E-03	5.48E-01	6.11E-07	6.96E-03	1.06E-03	1.18E-04	1.40E-04	Road 48	0100-0200	4.97E-03	2.67E-08	1.47E-04	3.53E-02	1.91E-07	1.05E-03	4.03E-02	2.17E-07	1.29E-02	1.25E-03	6.72E-05	3.70E-05	Road 48	0200-0300	5.43E-03	2.14E-08	1.18E-04	3.31E-07	1.46E-07	8.04E-04	4.75E-02	1.67E-07	9.27E-04	1.37E-03	3.39E-05	2.97E-05	Road 48	0300-0400	5.89E-03	1.62E-08	8.71E-05	3.83E-07	1.62E-07	6.55E-04	4.41E-03	1.37E-07	7.56E-04	1.49E-03	4.73E-05	2.56E-05	Road 48	0400-0500	6.80E-03	1.89E-08	2.21E-04	5.10E-02	4.36E-07	2.36E-03	8.84E-02	4.44E-07	2.60E-02	2.56E-03	6.40E-05	3.49E-05	Road 48	0500-0600	6.81E-03	4.02E-08	2.21E-04	5.10E-02	4.26E-07	1.32E-03	4.74E-02	2.80E-07	5.54E-04	1.49E-03	4.73E-05	2.56E-05	Road 48	0600-0700	7.38E-03	9.24E-08	5.08E-04	4.22E-04	3.34E-07	2.94E-03	4.92E-02	3.49E-07	3.49E-03	1.87E-03	2.96E-05	1.38E-04	Road 48	0700-0800	7.73E-03	7.73E-08	1.21E-04	2.98E-02	4.22E-07	2.36E-03	8.84E-02	4.44E-07	2.60E-02	2.56E-03	6.40E-05	3.49E-05	Road 48	0800-0900	7.86E-03	1.06E-08	1.20E-03	1.83E-06	1.13E-06	6.24E-03	4.57E-02	1.35E-06	7.44E-03	1.95E-03	5.76E-05	1.38E-04	Road 48	0900-1000	8.45E-03	2.60E-08	1.13E-02	4.22E-06	1.08E-06	5.69E-05	1.07E-06	1.28E-02	1.36E-03	2.67E-06	3.05E-04	Road 48	1000-1100	9.61E-03	3.41E-08	1.46E-02	5.44E-06	1.33E-06	1.46E-03	5.71E-02	1.35E-06	8.84E-03	2.52E-03	6.01E-06	1.40E-04	Road 48	1100-1200	1.14E-04	1.85E-07	9.98E-04	4.45E-03	8.83E-07	4.81E-03	5.37E-06	1.06E-06	5.86E-04	2.48E-03	4.92E-06	2.71E-04	Road 48	1200-1300	1.50E-02	2.86E-07	1.59E-02	5.62E-06	1.08E-06	5.98E-03	7.12E-02	1.37E-06	7.57E-04	4.81E-06	8.07E-04	4.40E-04	Road 48	1300-1400	1.74E-02	3.41E-07	1.84E-02	6.72E-06	1.28E-06	6.47E-03	7.22E-02	1.57E-06	8.73E-04	4.25E-04	9.49E-04	4.92E-04	Road 48	1400-1500	1.50E-02	3.17E-07	1.74E-02	5.17E-05	1.25E-06	6.63E-03	7.12E-02	1.37E-06	7.57E-04	4.81E-06	8.07E-04	4.40E-04	Road 48	1500-1600	1.38E-02	2.99E-07	1.65E-02	5.71E-05	1.22E-06	6.79E-03	7.09E-02	1.53E-06	8.45E-04	4.81E-06	8.07E-04	4.40E-04	Road 48	1600-1700	1.47E-02	3.17E-07	1.74E-02	5.17E-05	1.25E-06	6.63E-03	7.12E-02	1.57E-06	8.73E-04	4.25E-04	9.49E-04	4.92E-04	Road 48	1700-1800	1.47E-02	3.17E-07	1.74E-02	5.17E-05	1.25E-06	6.63E-03	7.12E-02	1.57E-06	8.73E-04	4.25E-04	9.49E-04	4.92E-04	Road 48	1800-1900	7.80E-03	1.82E-07	1.62E-02	3.50E-02	8.62E-07	4.75E-03	4.24E-02	1.04E-06	7.16E-03	2.13E-03	2.25E-06	1.89E-04	Road 48	1900-2000	6.68E-03	1.26E-07	1.49E-02	3.09E-02	6.41E-07	3.53E-03	3.29E-02	7.67E-07	4.22E-03	1.82E-03	2.56E-06	1.95E-04	Road 48	2000-2100	6.68E-03	1.26E-07	1.49E-02	3.09E-02	6.41E-07	3.53E-03	3.29E-02	7.67E-07	4.22E-03	1.82E-03	2.56E-06	1.95E-04	Road 48	2100-2200	6.07E-03	8.11E-08	5.02E-04	5.56E-05	3.55E-07	2.95E-03	4.17E-02	6.29E-07	3.43E-04	1.72E-03	5.58E-04	4.22E-04	Road 48	2200-2300	6.03E-03	8.78E-08	4.84E-04	3.48E-05	3.08E-07	2.80E-03	4.09E-02	6.59E-07	3.28E-03	1.63E-03	5.29E-04	4.13E-04	Road 48	2300-2400	6.03E-03	8.78E-08	4.84E-04	3.48E-05	3.08E-07	2.80E-03	4.09E-02	6.59E-07	3.28E-03	1.63E-03	5.29E-04	4.13E-04	Road 48	2400-2500	6.13E-03	8.63E-08	3.12E-04	5.44E-04	2.50E-07	2.31E-03	5.15E-02	2.84E-07	2.63E-04	9.84E-04	5.43E-05	5.00E-05	Road 49	0100-0200	6.23E-03	2.22E-08	2.04E-04	4.44E-02	1.46E-05	5.06E-06	1.81E-06	1.81E-06	1.81E-06	1.81E-06	1.81E-06	1.81E-06	Road 49	0200-0300	7.13E-03	1.70E-08	1.70E-04	3.64E-02	1.15E-05	3.15E-06	1.15E-06	1.15E-06	1.15E-06	1.15E-06	1.15E-06	1.15E-06	Road 49	0300-0400	7.31E-03	1.50E-08	1.50E-04	3.76E-02	7.48E-06	8.97E-04	5.49E-02	1.12E-07	1.04E-06	1.26E-03	2.63E-02	2.42E-05	Road 49	0400-0500	7.54E-03	1.78E-08	1.64E-04	4.93E-02	1.10E-05	1.02E-03	5.72E-02	1.28E-07	1.18E-04	1.41E-03	3.14E-02	2.90E-05	Road 49	0500-0600	7.54E-03	1.78E-08	1.64E-04	4.93E-02	1.10E-05	1.02E-03	5.72E-02	1.28E-07	1.18E-04	1.41E-03	3.14E-02	2.90E-05	Road 49	0600-0700	7.54E-03	1.78E-08	1.64E-04	4.93E-02	1.10E-05	1.02E-03	5.72E-02	1.28E-07	1.18E-04	1.41E-03	3.14E-02	2.90E-05	Road 49	0700-0800	1.14E-04	1.56E-04	8.78E-06	6.26E-05	1.16E-05	7.41E-03	6.11E-07	5.63E-01	5.63E-01	1.50E-03	1.98E-04	Road 49	0800-0900	1.14E-04	1.56E-04	8.78E-06	6.26E-05	1.16E-05	7.41E-03	6.11E-07	5.63E-01	5.63E-01	1.50E-03	1.98E-04	Road 49	0900-1000	1.14E-04	1.56E-04	8.78E-06	6.26E-05	1.16E-05	7.41E-03	6.11E-07	5.63E-01	5.63E-01	1.50E-03	1.98E-04	Road 49	1000-1100	1.14E-04	1.56E-04	8.78E-06	6.26E-05	1.16E-05	7.41E-03	6.11E-07	5.63E-01	5.63E-01	1.50E-03	1.98E-04	Road 49	1100-1200	1.14E-04	1.56E-04	8.78E-06	6.26E-05	1.16E-05	7.41E-03	6.11E-07	5.63E-01	5.63E-01	1.50E-03	1.98E-04	Road 49	1200-1300	1.14E-04	1.56E-04	8.78E-06	6.26E-05	1.16E-05	7.41E-03	6.11E-07	5.63E-01	5.63E-01	1.50E-03	1.98E-04	Road 49	1300-1400	1.14E-04	1.56E-04	8.78E-06	6.26E-05	1.16E-05	7.41E-03	6.11E-07	5.63E-01	5.63E-01	1.50E-03	1.98E-04	Road 49	1400-1500	1.14E-04	1.56E-04	8.78E-06	6.26E-05	1.16E-05	7.41E-03	6.11E-07	5.63E-01	5.63E-01	1.50E-03	1.98E-04	Road 49	1500-1600	1.14E-04	1.56E-04	8.78E-06	6.26E-05	1.16E-05	7.41E-03	6.11E-07	5.63E-01	5.63E-01	1.50E-03	1.98E-04	Road 49	1600-1700	1.14E-04	1.56E-04	8.78E-06	6.26E-05	1.16E-05	7.41E-03	6.11E-07	5.63E-01	5.63E-01	1.50E-03	1.98E-04	Road 49	1700-1800	1.14E-04	1.56E-04	8.78E-06	6.26E-05	1.16E-05	7.41E-03	6.11E-07	5.63E-01	5.63E-01	1.50E-03	1.98E-04	Road 49	1800-1900	1.14E-04	1.56E-04	8.78E-06	6.26E-05	1.16E-05	7.41E-03	6.11E-07	5.63E-01	5.63E-01	1.50E-03	1.98E-04	Road 49	1900-2000	1.14E-04	1.56E-04	8.78E-06	6.26E-05	1.16E-05	7.41E-03	6.11E-07	5.63E-01	5.63E-01	1.50E-03	1.98E-04	Road 49	2000-2100	1.14E-04	1.56E-04	8.78E-06	6.26E-05	1.16E-05	7.41E-03	6.11E-07	5.63E-01	5.63E-01	1.50E-03	1.98E-04	Road 49	2100-2200	1.14E-04	1.56E-04	8.78E-06	6.26E-05	1.16E-05	7.41E-03	6.11E-07	5.63E-01	5.63E-01	1.50E-03	1.98E-04	Road 49	2200-2300	1.14E-04	1.56E-04	8.78E-06	6.26E-05	1.16E-05	7.41E-03	6.11E-07	5.63E-01	5.63E-01	1.50E-03	1.98E-04	Road 49	2300-2400	1.14E-04	1.56E-04	8.78E-06	6.26E-05	1.16E-05	7.41E-03	6.11E-07	5.63E-01	5.63E-01	1.50E-03	1.98E-04	Road 49	2400-2500	1.14E-04	1.56E-04	8.78E-06	6.26E-05	1.16E-05	7.41E-03	6.11E-07	5.63E-01	5.63E-01	1.50E-03	1.98E-04	Road 50	0100-0200	3.95E-02	1.29E-06	3.95E-04	4.40E-02	3.41E-07	3.08E-03	4.97E-02	3.77E-07	3.74E-04	8.67E-04	5.58E-05	1.05E-05	Road 50	0200-0300	3.95E-02	1.29E-06	3.95E-04	4.40E-02	3.41E-07	3.08E-03	4.97E-02	3.77E-07	3.74E-04	8.67E-04	5.58E-05	1.05E-05	Road 50	0300-0400	3.95E-02	1.29E-06	3.95E-04	4.40E-02	3.41E-07	3.08E-03	4.97E-02	3.77E-07	3.74E-04	8.67E-04	5.58E-05	1.05E-05	Road 50	0400-0500	3.95E-02	1.29E-06	3.95E-04	4.40E-02	3.41E-07	3.08E-03	4.97E-02	3.77E-07	3.74E-04	8.67E-04	5.58E-05	1.05E-05	Road 50	0500-0600	3.95E-02	1.29E-06	3.95E-04	4.40E-02	3.41E-07	3.08E-03	4.97E-02	3.77E-07	3.74E-04	8.67E-04	5.58E-05	1.05E-05	Road 50	0600-0700	3.95E-02	1.29E-06	3.95E-04	4.40E-02	3.41E-07	3.08E-03	4.97E-02	3.77E-07	3.74E-04	8.67E-04	5.58E-05	1.05E-05	Road 50	0700-0800	3.95E-02	1.29E-06	3.95E-04	4.40E-02	3.41E-07	3.08E-03	4.97E-02	3.77E-07	3.74E-04	8.67E-04	5.58E-05	1.05E-05	Road 50	0800-0900	3.95E-02	1.29E-06	3.95E-04	4.40E-02	3.41E-07	3.08E-03	4.97E-02	3.77E-07	3.74E-04	8.67E-04	5.58E-05	1.05E-05	Road 50	0900-1000	3.95E-02	1.29E-06	3.95E-04	4.40E-02	3.41E-07	3.08E-03	4.97E-02	3.77E-07	3.74E-04	8.67E-04	5.58E-05	1.05E-05	Road 50	1000-1100	3.95E-02	1.29E-06	3.95E-04	4.40E-02	3.41E-07	3.08E-03	4.97E-02	3.77E-07	3.74E-04	8.67E-04	5.58E-05	1.05E-05	Road 50	1100-1200	3.95E-02	1.29E-06	3.95E-04	4.40E-02	3.41E-07	3.08E-03	4.97E-02	3.77E-07	3.74E-04	8.67E-04	5.58E-05	1.05E-05	Road 50	1200-1300	3.95E-02	1.29E-06

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Appendix 4.5 Calculation of Vehicular Emission (Scenario B)

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Appendix 4.6

Appendix 4.6 Calculation of Start Emissions

Calculation of Idling Emission Factor

PC (Diesel)
NO/NO₂ Ratio^[1] = 7.94 From EMFAC

	Population	Idling Emission Factor				Mass Factor ^[19]	AC Factor ^[6]	Average Idling Emission Factor (g/min)							
		Cold Idling		Hot Idling				Cold Idling				Hot Idling			
		NOx (g/s) ^[2]	PM (g/hr) ^[3]	NOx (g/hr) ^[4]	PM (g/hr) ^[5]			NOx	NO	NO ₂	PM ^[7]	NOx	NO	NO ₂	PM ^[7]
Euro VI	46.75%	4.47E-04	5.00E-02	1.61E+00	5.00E-02	-	1.3	5.657E-02	5.024E-02	6.325E-03	7.908E-04	5.657E-02	5.024E-02	6.325E-03	7.908E-04
Euro V	52.41%	9.58E-04	2.00E-02	3.45E+00	2.00E-02										
Euro IV	0.56%	1.66E-03	1.60E-01	5.96E+00	1.60E-01										
Euro I	0.13%	1.36E-03	5.80E-01	4.88E+00	5.80E-01										
Pre-Euro	0.16%	1.83E-03	6.30E-01	6.57E+00	6.30E-01										

PC (Petrol)
NO/NO₂ Ratio^[1] = 19.59 From EMFAC

	Population	Idling Emission Factor				Mass Factor ^[19]	AC Factor ^[6]	Average Idling Emission Factor (g/min)							
		Cold Idling		Hot Idling				Cold Idling				Hot Idling			
		NOx (g/s) ^[2]	PM (g/hr) ^[3]	NOx (g/hr) ^[5]	PM (g/hr) ^[5]			NOx	NO	NO ₂	PM ^[7]	NOx	NO	NO ₂	PM ^[7]
Euro VI	80.49%	1.67E-05	0.00E+00	6.00E-02	0.00E+00	-	1.3	1.567E-03	1.491E-03	7.611E-05	3.174E-05	1.567E-03	1.491E-03	7.611E-05	3.174E-05
Euro V	14.56%	2.22E-05	1.00E-02	8.00E-02	1.00E-02										
Euro IV	4.41%	6.39E-05	0.00E+00	2.30E-01	0.00E+00										
Euro III	0.44%	8.33E-05	0.00E+00	3.00E-01	0.00E+00										
Euro II	0.07%	2.67E-04	1.00E-02	9.60E-01	1.00E-02										
Euro I	0.01%	2.11E-04	1.00E-02	7.60E-01	1.00E-02										
Pre-Euro	0.01%	3.28E-04	1.00E-02	1.18E+00	1.00E-02										

Taxi (Petrol)
NO/NO₂ Ratio^[1] = 18.93 From EMFAC

	Population	Idling Emission Factor				Mass Factor ^[10]	AC Factor ^[6]	Average Idling Emission Factor (g/min)							
		Cold Idling		Hot Idling				Cold Idling				Hot Idling			
		NOx (g/s) ^[2]	PM (g/hr) ^[3]	NOx (g/hr) ^[11]	PM (g/hr) ^[11]			NOx	NO	NO ₂	PM ^[7]	NOx	NO	NO ₂	PM ^[7]
Euro V	100.00%	2.22E-05	1.00E-02	8.00E-02	1.00E-02	-	1.3	1.733E-03	1.646E-03	8.699E-05	2.167E-04	1.733E-03	1.646E-03	8.699E-05	2.167E-04

Taxi (LPG)
NO/NO₂ Ratio^[1] = 35.96 From EMFAC

	Population	Idling Emission Factor				Mass Factor ^[19]	AC Factor ^[6]	Average Idling Emission Factor (g/min)							
		Cold Idling		Hot Idling				Cold Idling				Hot Idling			
		%	NOx (g/s) ^[12]	PM (g/hr) ^[10]	NOx (g/hr) ^[12]			PM (g/hr) ^[10]	NOx	NO	NO ₂	PM ^[7]	NOx	NO	NO ₂
Euro VI	73.40%	2.80E-03	0.00E+00	1.01E+01	0.00E+00	-	1.3	1.685E-01	1.639E-01	4.559E-03	0.000E+00	2.190E-01	2.131E-01	5.927E-03	0.000E+00
Euro V	26.04%	2.80E-03	0.00E+00	1.01E+01	0.00E+00										
Euro IV	0.37%	3.50E-03	0.00E+00	1.26E+01	0.00E+00										
Euro II/III	0.19%	5.70E-03	0.00E+00	2.05E+01	0.00E+00										

LGV3 (Diesel)
NO/NO₂ Ratio^[1] = 11.15 From EMFAC

	Population	Idling Emission Factor				Mass Factor ^[10]	AC Factor ^[6]	Average Idling Emission Factor (g/min)							
		Cold Idling		Hot Idling				Cold Idling				Hot Idling			
		%	NOx (g/s) ^[2]	PM (g/hr) ^[3]	NOx (g/hr) ^[13]			PM (g/hr) ^[14]	NOx	NO	NO ₂	PM ^[7]	NOx	NO	NO ₂
	Euro VI	62.97%	3.56E-04	2.00E-02	1.28E+00	2.00E-02	-	1.3	4.635E-02	4.253E-02	3.816E-03	4.333E-04	4.635E-02	4.253E-02	3.816E-03
Euro V	37.03%	1.00E-03	2.00E-02	3.60E+00	2.00E-02										

LGV3 (Petrol)
NO/NO₂ Ratio^[1] = 19.02 From EMFAC

	Population	Idling Emission Factor				Mass Factor ^[10]	AC Factor ^[6]	Average Idling Emission Factor (g/min)							
		Cold Idling		Hot Idling				Cold Idling				Hot Idling			
		NOx (g/s) ^[2]	PM (g/hr) ^[3]	NOx (g/hr) ^[15]	PM (g/hr) ^[16]			NOx	NO	NO ₂	PM ^[7]	NOx	NO	NO ₂	PM ^[7]
Euro VI	54.60%	1.94E-05	0.00E+00	7.00E-02	0.00E+00	-	1.3	4.395E-03	4.176E-03	2.196E-04	3.106E-05	4.395E-03	4.176E-03	2.196E-04	3.106E-05
Euro V	19.40%	1.67E-05	0.00E+00	6.00E-02	0.00E+00										
Euro IV	4.89%	4.72E-05	0.00E+00	1.70E-01	0.00E+00										
Euro III	6.77%	9.44E-05	0.00E+00	3.40E-01	0.00E+00										
Euro II	2.51%	1.67E-04	1.00E-02	6.00E-01	1.00E-02										
Euro I	2.77%	4.69E-04	1.00E-02	1.69E+00	1.00E-02										
Pre-Euro	9.06%	1.83E-04	1.00E-02	6.60E-01	1.00E-02										

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Appendix 4.6 Calculation of Start Emissions

Calculation of Idling Emission Factor

LGV6 (Diesel)
NO/NO₂ Ratio^[1] = 2.57 From EMFAC

	Population	Idling Emission Factor				Mass Factor ^[19]	AC Factor ^[6]	Average Idling Emission Factor (g/min)							
		Cold Idling		Hot Idling				Cold Idling				Hot Idling			
		NOx (g/s) ^[12]	PM (g/hr) ^[3]	NOx (g/hr) ^[13]	PM (g/hr) ^[14]			NOx	NO	NO ₂	PM ^[7]	NOx	NO	NO ₂	PM ^[7]
Euro VI	58.17%	1.00E-03	2.00E-02	1.28E+00	2.00E-02	-	1.3	1.052E-01	7.573E-02	2.945E-02	4.336E-04	4.876E-02	3.511E-02	1.365E-02	4.336E-04
Euro V	41.83%	2.80E-03	2.00E-02	3.60E+00	2.00E-02										
Euro IV	0.01%	2.80E-03	1.60E-01	3.62E+00	1.60E-01										
Euro III	0.00%	2.80E-03	1.00E-01	4.12E+00	1.00E-01										
Euro II	0.00%	2.80E-03	5.40E-01	5.53E+00	5.40E-01										
Euro I	0.00%	2.80E-03	6.30E-01	5.88E+00	6.30E-01										
Pre-Euro	0.00%	2.80E-03	1.59E+00	6.52E+00	1.59E+00										

HGV7 (Diesel)
NO/NO₂ Ratio^[1] = 2.28 From EMFAC

	Population	Idling Emission Factor				Mass Factor ^[19]	AC Factor ^[6]	Average Idling Emission Factor (g/min)							
		Cold Idling		Hot Idling				Cold Idling				Hot Idling			
		%	NOx (g/s) ^[12]	PM (g/hr) ^[3]	NOx (g/hr) ^[17]			PM (g/hr) ^[18]	NOx	NO	NO ₂	PM ^[7]	NOx	NO	NO ₂
Euro VI	53.78%	5.90E-03	1.00E-02	1.75E+00	1.00E-02	0.9	1.3	3.540E-01	2.461E-01	1.079E-01	1.006E-03	1.239E-01	8.614E-02	3.775E-02	1.006E-03
Euro V	46.21%	5.90E-03	1.00E-01	1.17E+01	1.00E-01										
Euro IV	0.01%	5.90E-03	2.00E-01	7.51E+00	2.00E-01										

HGV8 (Diesel)
NO/NO₂ Ratio^[1] = 3.92 From EMFAC

	Population	Idling Emission Factor				Mass Factor ^[10]	AC Factor ^[6]	Average Idling Emission Factor (g/min)							
		Cold Idling		Hot Idling				Cold Idling				Hot Idling			
		NOx (g/s) ^[12]	PM (g/hr) ^[5]	NOx (g/hr) ^[17]	PM (g/hr) ^[15]			NOx	NO	NO ₂	PM ^[7]	NOx	NO	NO ₂	PM ^[7]
Euro VI	61.37%	3.70E-03	1.00E-02	1.75E+00	1.00E-02	1.0	1.3	6.693E-01	5.332E-01	1.362E-01	9.704E-04	1.213E-01	9.661E-02	2.467E-02	9.704E-04
Euro V	38.62%	2.30E-02	1.00E-01	1.17E+01	1.00E-01										
Euro IV	0.01%	1.44E-02	2.00E-01	7.51E+00	2.00E-01										
Euro III	0.00%	1.44E-02	1.29E+00	4.21E+01	1.29E+00										
Euro II	0.00%	1.44E-02	1.43E+00	4.06E+01	1.43E+00										
Euro I	0.00%	1.44E-02	5.53E+00	3.26E+01	5.53E+00										
Pre-Euro	0.00%	1.44E-02	6.62E+00	4.06E+01	6.62E+00										

Appendix 4.6 Calculation of Start Emissions

Calculation of Idling Emission Factor

PV4 (Petrol)

NO/NO₂ Ratio^[1] = 18.97 From EMFAC

	Population	Idling Emission Factor				Mass Factor ^[19]	AC Factor ^[6]	Average Idling Emission Factor (g/min)							
		Cold Idling		Hot Idling				Cold Idling				Hot Idling			
		NOx (g/s) ^[2]	PM (g/hr) ^[3]	NOx (g/hr) ^[15]	PM (g/hr) ^[16]			NOx	NO	NO ₂	PM ^[7]	NOx	NO	NO ₂	PM ^[7]
		%													
Euro V	40.50%	1.67E-05	0.00E+00	6.00E-02	0.00E+00	-	1.3	3.367E-03	3.199E-03	1.686E-04	7.880E-07	3.367E-03	3.199E-03	1.686E-04	7.880E-07
Euro IV	42.43%	4.72E-05	0.00E+00	1.70E-01	0.00E+00										
Euro III	16.71%	9.44E-05	0.00E+00	3.40E-01	0.00E+00										
Euro II	0.36%	1.67E-04	1.00E-02	6.00E-01	1.00E-02										

PV5 (Diesel)

NO/NO₂ Ratio^[1] = 2.57 From EMFAC

	Population	Idling Emission Factor				Mass Factor ^[19]	AC Factor ^[6]	Average Idling Emission Factor (g/min)							
		Cold Idling		Hot Idling				Cold Idling				Hot Idling			
		NOx (g/s) ^[12]	PM (g/hr) ^[3]	NOx (g/hr) ^[13]	PM (g/hr) ^[14]			NOx	NO	NO ₂	PM ^[7]	NOx	NO	NO ₂	PM ^[7]
	%														
Euro VI	70.26%	1.00E-03	2.00E-02	1.28E+00	2.00E-02	-	1.3	6.000E-02	4.320E-02	1.680E-02	4.336E-04	4.268E-02	3.073E-02	1.195E-02	4.336E-04
Euro V	29.73%	1.00E-03	2.00E-02	3.60E+00	2.00E-02										
Euro IV	0.01%	1.00E-03	1.60E-01	3.62E+00	1.60E-01										
Euro III	0.00%	1.00E-03	1.00E-01	4.12E+00	1.00E-01										
Euro II	0.00%	1.00E-03	5.40E-01	5.53E+00	5.40E-01										
Euro I	0.00%	1.00E-03	6.30E-01	5.88E+00	6.30E-01										
Pre-Euro	0.00%	1.00E-03	1.59E+00	6.52E+00	1.59E+00										

PV5 (LPG)

NO/NO₂ Ratio^[1] = 193.14 From EMFAC

	Population	Idling Emission Factor				Mass Factor ^[19]	AC Factor ^[6]	Average Idling Emission Factor (g/min)							
		Cold Idling		Hot Idling				Cold Idling				Hot Idling			
		NOx (g/s) ^[2]	PM (g/hr) ^[3]	NOx (g/hr) ^[13]	PM (g/hr) ^[14]			NOx		NO		NO ₂		PM ^[7]	
Euro V	74.12%	1.00E-03	2.00E-02	3.60E+00	2.00E-02	-	1.3	7.888E-02	7.848E-02	4.063E-04	1.126E-03	7.888E-02	7.848E-02	4.063E-04	1.126E-03
Euro IV	18.76%	1.01E-03	1.60E-01	3.62E+00	1.60E-01										
Euro III	7.12%	1.14E-03	1.00E-01	4.12E+00	1.00E-01										

PV5 (Petrol)

NO/NO₂ Ratio^[1] = 19.00 From EMFAC

	Population	Idling Emission Factor				Mass Factor ^[19]	AC Factor ^[6]	Average Idling Emission Factor (g/min)							
		Cold Idling		Hot Idling				Cold Idling				Hot Idling			
		NOx (g/s) ^[2]	PM (g/hr) ^[3]	NOx (g/hr) ^[15]	PM (g/hr) ^[16]			NOx	NO	NO ₂	PM ^[7]	NOx	NO	NO ₂	PM ^[7]
	%														
Euro V	61.78%	1.67E-05	0.00E+00	6.00E-02	0.00E+00	-	1.3	9.506E-03	9.031E-03	4.754E-04	4.799E-05	9.506E-03	9.031E-03	4.754E-04	4.799E-05
Euro IV	16.07%	4.72E-05	0.00E+00	1.70E-01	0.00E+00										
Euro I	22.15%	4.69E-04	1.00E-02	1.69E+00	1.00E-02										

NFB8 (Diesel)

NO/NO₂ Ratio^[1] = 5.11 From EMFAC

	Population	Idling Emission Factor				Mass Factor ^[19]	AC Factor ^[6]	Average Idling Emission Factor (g/min)							
		Cold Idling		Hot Idling				Cold Idling				Hot Idling			
		%	NOx (g/s) ^[12]	PM (g/hr) ^[3]	NOx (g/hr) ^[17]			PM (g/hr) ^[18]	NOx	NO	NO ₂	PM ^[7]	NOx	NO	NO ₂
Euro VI	70.94%	7.70E-03	1.00E-02	1.75E+00	1.00E-02	1.0	1.3	1.154E+00	9.652E-01	1.890E-01	7.850E-04	1.007E-01	8.417E-02	1.648E-02	7.850E-04
Euro V	29.05%	4.74E-02	1.00E-01	1.17E+01	1.00E-01										
Euro IV	0.00%	5.73E-02	2.00E-01	7.51E+00	2.00E-01										
Euro II	0.01%	5.73E-02	1.43E+00	4.06E+01	1.43E+00										

FBSD (Diesel)

NO/NO₂ Ratio^[1] = 16.02 From EMFAC

	Population	Idling Emission Factor				Mass Factor ^[19]	AC Factor ^[6]	Average Idling Emission Factor (g/min)							
		Cold Idling		Hot Idling				Cold Idling				Hot Idling			
		NOx (g/s) ^[12]	PM (g/hr) ^[3]	NOx (g/hr) ^[17]	PM (g/hr) ^[18]			NOx	NO	NO ₂	PM ^[7]	NOx	NO	NO ₂	PM ^[7]
Euro VI	43.27%	7.70E-03	1.00E-02	1.75E+00	1.00E-02	1.0	1.3	1.813E+00	1.707E+00	1.066E-01	1.323E-03	1.603E-01	1.509E-01	9.423E-03	1.323E-03
Euro V	56.73%	4.74E-02	1.00E-01	1.17E+01	1.00E-01										
Euro IV	0.00%	5.73E-02	2.00E-01	7.51E+00	2.00E-01										

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Appendix 4.6 Calculation of Start Emissions

Calculation of Idling Emission Factor

FBDD (Diesel)

NO/NO₂ Ratio^[1] = 19.75 From EMFAC

	Population	Idling Emission Factor				Mass Factor ^[19]	AC Factor ^[6]	Average Idling Emission Factor (g/min)							
		Cold Idling		Hot Idling				Cold Idling				Hot Idling			
		NOx (g/s) ^[12]	PM (g/hr) ^[3]	NOx (g/hr) ^[17]	PM (g/hr) ^[15]			NOx	NO	NO ₂	PM ^[7]	NOx	NO	NO ₂	PM ^[7]
Euro VI	27.01%	2.25E-02	1.00E-02	1.75E+00	1.00E-02	1.2	1.3	7.087E+00	6.746E+00	3.415E-01	1.973E-03	2.343E-01	2.230E-01	1.129E-02	1.973E-03
Euro V	72.81%	1.54E-01	1.00E-01	1.17E+01	1.00E-01										
Euro IV	0.19%	1.54E-01	2.00E-01	7.51E+00	2.00E-01										
Euro III	0.00%	7.37E-02	1.29E+00	4.21E+01	1.29E+00										
Euro II	0.00%	7.37E-02	1.43E+00	4.06E+01	1.43E+00										
Euro I	0.00%	7.37E-02	5.53E+00	3.26E+01	5.53E+00										
Pre-Euro	0.00%	7.37E-02	6.62E+00	4.06E+01	6.62E+00										

MC (Petrol)

NO/NO₂ Ratio^[1] = 19.01 From EMFAC

	Population	Idling Emission Factor				Mass Factor ^[19]	AC Factor ^[6]	Average Idling Emission Factor (g/min)							
		Cold Idling		Hot Idling				Cold Idling				Hot Idling			
		NOx (g/s) ^[2]	PM (g/hr) ^[3]	NOx (g/hr) ^[8]	PM (g/hr) ^[9]			NOx	NO	NO ₂	PM ^[7]	NOx	NO	NO ₂	PM ^[7]
Euro IV	62.01%	6.39E-05	0.00E+00	2.30E-01	0.00E+00	-	1.3	6.204E-03	5.894E-03	3.101E-04	1.240E-05	6.204E-03	5.894E-03	3.101E-04	1.240E-05
Euro III	32.27%	8.33E-05	0.00E+00	3.00E-01	0.00E+00										
Euro I	4.91%	2.11E-04	1.00E-02	7.60E-01	1.00E-02										
Pre-Euro	0.81%	3.28E-04	1.00E-02	1.18E+00	1.00E-02										

HGV9 (Diesel)

NO/NO₂ Ratio^[1] = 4.45 From EMFAC

	Population	Idling Emission Factor	
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Appendix 4.6 Calculation of Start Emissions

Year 2028 - Worst Temp & RH (9°C and 16% RH, Petrol)

Running Exhaust Emission Factor (gram/mile/vehicle) - NO

Speed (km/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles<=2.5t	04 - Lt Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles>3.5t	06 - Medium Goods Vehicles<=15t	07 - Medium Goods Vehicles15-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchise d Bus<=6.4t	12 - Non-franchise d Bus 6.4-15t	13 - Non-franchise d Bus 15-24t	14 - Franchise d Bus (SD)	15 - Franchise d Bus (DD)	16 - Motorcycles	17 - Heavy Goods Vehicles>24t	18 - Non-franchise d Bus >24t
15	0.05379	0.08224	0.92725	0.15130	0.00000	0.00000	0.00000	0.00000	0.54653	0.89270	0.00000	0.00000	0.00000	0.00000	0.00000	0.48326	0.00000	0.00000

Starting Emission Factor (gram/trip) - NO

Time (min)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles<=2.5t	04 - Lt Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles>3.5t	06 - Medium Goods Vehicles<=15t	07 - Medium Goods Vehicles15-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchise d Bus<=6.4t	12 - Non-franchise d Bus 6.4-15t	13 - Non-franchise d Bus 15-24t	14 - Franchise d Bus (SD)	15 - Franchise d Bus (DD)	16 - Motorcycles	17 - Heavy Goods Vehicles>24t	18 - Non-franchise d Bus >24t
5	0.05786	0.07310	0.15999	0.04300	0.00000	0.00000	0.00000	0.00000	0.12770	0.87060	0.00000	0.00000	0.00000	0.00000	0.00000	0.07073	0.00000	0.00000
10	0.05897	0.07440	0.18887	0.04604	0.00000	0.00000	0.00000	0.00000	0.15540	1.04580	0.00000	0.00000	0.00000	0.00000	0.00000	0.08181	0.00000	0.00000
20	0.06118	0.07680	0.24024	0.05162	0.00000	0.00000	0.00000	0.00000	0.20440	1.35510	0.00000	0.00000	0.00000	0.00000	0.00000	0.10152	0.00000	0.00000
30	0.06319	0.07900	0.28288	0.05639	0.00000	0.00000	0.00000	0.00000	0.24470	1.60990	0.00000	0.00000	0.00000	0.00000	0.00000	0.11810	0.00000	0.00000
40	0.06520	0.08120	0.31704	0.06025	0.00000	0.00000	0.00000	0.00000	0.27630	1.80990	0.00000	0.00000	0.00000	0.00000	0.00000	0.13151	0.00000	0.00000
50	0.06700	0.08340	0.34263	0.06330	0.00000	0.00000	0.00000	0.00000	0.29920	1.95560	0.00000	0.00000	0.00000	0.00000	0.00000	0.14173	0.00000	0.00000
60	0.06871	0.08550	0.35947	0.06554	0.00000	0.00000	0.00000	0.00000	0.31330	2.04650	0.00000	0.00000	0.00000	0.00000	0.00000	0.14876	0.00000	0.00000
120	0.07631	0.09510	0.37650	0.07057	0.00000	0.00000	0.00000	0.00000	0.32400	2.15220	0.00000	0.00000	0.00000	0.00000	0.00000	0.15176	0.00000	0.00000
180	0.08291	0.10360	0.38368	0.07675	0.00000	0.00000	0.00000	0.00000	0.35240	2.15960	0.00000	0.00000	0.00000	0.00000	0.00000	0.15013	0.00000	0.00000
240	0.08230	0.10270	0.37715	0.07612	0.00000	0.00000	0.00000	0.00000	0.35020	2.14560	0.00000	0.00000	0.00000	0.00000	0.00000	0.14666	0.00000	0.00000
300	0.08110	0.10130	0.36878	0.07518	0.00000	0.00000	0.00000	0.00000	0.34670	2.12470	0.00000	0.00000	0.00000	0.00000	0.00000	0.14233	0.00000	0.00000
360	0.07949	0.09920	0.35847	0.07394	0.00000	0.00000	0.00000	0.00000	0.34240	2.09690	0.00000	0.00000	0.00000	0.00000	0.00000	0.13705	0.00000	0.00000
420	0.07739	0.09660	0.34643	0.07219	0.00000	0.00000	0.00000	0.00000	0.33690	2.06230	0.00000	0.00000	0.00000	0.00000	0.00000	0.13095	0.00000	0.00000
480	0.07498	0.09340	0.33244	0.07014	0.00000	0.00000	0.00000	0.00000	0.33030	2.02070	0.00000	0.00000	0.00000	0.00000	0.00000	0.12392	0.00000	0.00000
540	0.07187	0.08960	0.31671	0.06788	0.00000	0.00000	0.00000	0.00000	0.32260	1.97240	0.00000	0.00000	0.00000	0.00000	0.00000	0.11595	0.00000	0.00000
600	0.06846	0.08520	0.29905	0.06521	0.00000	0.00000	0.00000	0.00000	0.31390	1.91710	0.00000	0.00000	0.00000	0.00000	0.00000	0.10718	0.00000	0.00000
660	0.06455	0.08030	0.27964	0.06213	0.00000	0.00000	0.00000	0.00000	0.30400	1.85500	0.00000	0.00000	0.00000	0.00000	0.00000	0.09755	0.00000	0.00000
720	0.06014	0.07480	0.25831	0.05865	0.00000	0.00000	0.00000	0.00000	0.29310	1.78600	0.00000	0.00000	0.00000	0.00000	0.00000	0.08697	0.00000	0.00000

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Appendix 4.6 Calculation of Start Emissions

Year 2028 - Worst Temp & RH (9°C and 16% RH, Petrol)

Running Exhaust Emission Factor (gram/mile/vehicle) - NO2

Speed (km/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles<=2.5t	04 - Lt Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles>3.5t	06 - Medium Goods Vehicles<=15t	07 - Medium Goods Vehicles15-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchise d Bus<=6.4t	12 - Non-franchise d Bus 6.4-15t	13 - Non-franchise d Bus 15-24t	14 - Franchise d Bus (SD)	15 - Franchise d Bus (DD)	16 - Motorcycles	17 - Heavy Goods Vehicles>24t	18 - Non-franchise d Bus >24t
15	0.00275	0.00435	0.04875	0.00797	0.00000	0.00000	0.00000	0.00000	0.02881	0.04699	0.00000	0.00000	0.00000	0.00000	0.00000	0.02550	0.00000	0.00000

Starting Emission Factor (gram/trip) - NO2

Time (min)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles<=2.5t	04 - Lt Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles>3.5t	06 - Medium Goods Vehicles<=15t	07 - Medium Goods Vehicles15-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchise d Bus<=6.4t	12 - Non-franchise d Bus 6.4-15t	13 - Non-franchise d Bus 15-24t	14 - Franchise d Bus (SD)	15 - Franchise d Bus (DD)	16 - Motorcycles	17 - Heavy Goods Vehicles>24t	18 - Non-franchise d Bus >24t
5	0.00300	0.00390	0.00838	0.00223	0.00000	0.00000	0.00000	0.00000	0.00670	0.04580	0.00000	0.00000	0.00000	0.00000	0.00000	0.00374	0.00000	0.00000
10	0.00310	0.00390	0.00994	0.00243	0.00000	0.00000	0.00000	0.00000	0.00820	0.05500	0.00000	0.00000	0.00000	0.00000	0.00000	0.00431	0.00000	0.00000
20	0.00320	0.00400	0.01261	0.00273	0.00000	0.00000	0.00000	0.00000	0.01080	0.07130	0.00000	0.00000	0.00000	0.00000	0.00000	0.00536	0.00000	0.00000
30	0.00330	0.00420	0.01488	0.00294	0.00000	0.00000	0.00000	0.00000	0.01290	0.08470	0.00000	0.00000	0.00000	0.00000	0.00000	0.00622	0.00000	0.00000
40	0.00341	0.00430	0.01668	0.00314	0.00000	0.00000	0.00000	0.00000	0.01450	0.09530	0.00000	0.00000	0.00000	0.00000	0.00000	0.00691	0.00000	0.00000
50	0.00351	0.00440	0.01800	0.00334	0.00000	0.00000	0.00000	0.00000	0.01570	0.10290	0.00000	0.00000	0.00000	0.00000	0.00000	0.00742	0.00000	0.00000
60	0.00361	0.00450	0.01893	0.00344	0.00000	0.00000	0.00000	0.00000	0.01650	0.10770	0.00000	0.00000	0.00000	0.00000	0.00000	0.00783	0.00000	0.00000
120	0.00401	0.00500	0.01983	0.00375	0.00000	0.00000	0.00000	0.00000	0.01710	0.11330	0.00000	0.00000	0.00000	0.00000	0.00000	0.00799	0.00000	0.00000
180	0.00441	0.00540	0.02019	0.00404	0.00000	0.00000	0.00000	0.00000	0.01850	0.11370	0.00000	0.00000	0.00000	0.00000	0.00000	0.00793	0.00000	0.00000
240	0.00431	0.00540	0.01982	0.00404	0.00000	0.00000	0.00000	0.00000	0.01840	0.11290	0.00000	0.00000	0.00000	0.00000	0.00000	0.00772	0.00000	0.00000
300	0.00431	0.00530	0.01938	0.00394	0.00000	0.00000	0.00000	0.00000	0.01830	0.11180	0.00000	0.00000	0.00000	0.00000	0.00000	0.00749	0.00000	0.00000
360	0.00420	0.00520	0.01888	0.00384	0.00000	0.00000	0.00000	0.00000	0.01800	0.11040	0.00000	0.00000	0.00000	0.00000	0.00000	0.00723	0.00000	0.00000
420	0.00410	0.00510	0.01821	0.00384	0.00000	0.00000	0.00000	0.00000	0.01770	0.10850	0.00000	0.00000	0.00000	0.00000	0.00000	0.00690	0.00000	0.00000
480	0.00390	0.00490	0.01748	0.00373	0.00000	0.00000	0.00000	0.00000	0.01740	0.10640	0.00000	0.00000	0.00000	0.00000	0.00000	0.00649	0.00000	0.00000
540	0.00380	0.00470	0.01668	0.00353	0.00000	0.00000	0.00000	0.00000	0.01700	0.10380	0.00000	0.00000	0.00000	0.00000	0.00000	0.00611	0.00000	0.00000
600	0.00360	0.00450	0.01572	0.00343	0.00000	0.00000	0.00000	0.00000	0.01650	0.10090	0.00000	0.00000	0.00000	0.00000	0.00000	0.00563	0.00000	0.00000
660	0.00340	0.00420	0.01470	0.00322	0.00000	0.00000	0.00000	0.00000	0.01600	0.09760	0.00000	0.00000	0.00000	0.00000	0.00000	0.00512	0.00000	0.00000
720	0.00320	0.00390	0.01360	0.00312	0.00000	0.00000	0.00000	0.00000	0.01540	0.09400	0.00000	0.00000	0.00000	0.00000	0.00000	0.00456	0.00000	0.00000

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Appendix 4.6 Calculation of Start Emissions

Year 2028 - Worst Temp & RH (9°C and 16% RH, Petrol)

Running Exhaust Emission Factor (gram/mile/vehicle) - RSP

Speed (km/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles<=2.5t	04 - Lt Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles>3.5t	06 - Medium Goods Vehicles<=15t	07 - Medium Goods Vehicles15-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchise d Bus<=6.4t	12 - Non-franchise d Bus 6.4-15t	13 - Non-franchise d Bus 15-24t	14 - Franchise d Bus (SD)	15 - Franchise d Bus (DD)	16 - Motorcycl es	17 - Heavy Goods Vehicles>24t	18 - Non-franchise d Bus >24t
15	0.01240	0.01239	0.02974	0.02320	0.00000	0.00000	0.00000	0.00000	0.07017	0.01239	0.00000	0.00000	0.00000	0.00000	0.00000	0.01578	0.00000	0.00000

Starting Emission Factor (gram/trip) - RSP

Time (min)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles<=2.5t	04 - Lt Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles>3.5t	06 - Medium Goods Vehicles<=15t	07 - Medium Goods Vehicles15-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchise d Bus<=6.4t	12 - Non-franchise d Bus 6.4-15t	13 - Non-franchise d Bus 15-24t	14 - Franchise d Bus (SD)	15 - Franchise d Bus (DD)	16 - Motorcycl es	17 - Heavy Goods Vehicles>24t	18 - Non-franchise d Bus >24t
5	0.00040	0.00040	0.00381	0.00022	0.00000	0.00000	0.00000	0.00000	0.00080	0.00100	0.00000	0.00000	0.00000	0.00000	0.00000	0.00287	0.00000	0.00000
10	0.00080	0.00080	0.00390	0.00042	0.00000	0.00000	0.00000	0.00000	0.00150	0.00190	0.00000	0.00000	0.00000	0.00000	0.00000	0.00297	0.00000	0.00000
20	0.00150	0.00150	0.00407	0.00091	0.00000	0.00000	0.00000	0.00000	0.00300	0.00370	0.00000	0.00000	0.00000	0.00000	0.00000	0.00322	0.00000	0.00000
30	0.00230	0.00230	0.00426	0.00131	0.00000	0.00000	0.00000	0.00000	0.00440	0.00540	0.00000	0.00000	0.00000	0.00000	0.00000	0.00349	0.00000	0.00000
40	0.00300	0.00300	0.00448	0.00171	0.00000	0.00000	0.00000	0.00000	0.00560	0.00690	0.00000	0.00000	0.00000	0.00000	0.00000	0.00374	0.00000	0.00000
50	0.00360	0.00360	0.00482	0.00200	0.00000	0.00000	0.00000	0.00000	0.00680	0.00830	0.00000	0.00000	0.00000	0.00000	0.00000	0.00407	0.00000	0.00000
60	0.00430	0.00420	0.00519	0.00240	0.00000	0.00000	0.00000	0.00000	0.00800	0.00960	0.00000	0.00000	0.00000	0.00000	0.00000	0.00441	0.00000	0.00000
120	0.00710	0.00700	0.00831	0.00381	0.00000	0.00000	0.00000	0.00000	0.01240	0.01410	0.00000	0.00000	0.00000	0.00000	0.00000	0.00677	0.00000	0.00000
180	0.00790	0.00790	0.00982	0.00422	0.00000	0.00000	0.00000	0.00000	0.01350	0.01500	0.00000	0.00000	0.00000	0.00000	0.00000	0.00786	0.00000	0.00000
240	0.00870	0.00870	0.01120	0.00462	0.00000	0.00000	0.00000	0.00000	0.01450	0.01590	0.00000	0.00000	0.00000	0.00000	0.00000	0.00879	0.00000	0.00000
300	0.00940	0.00930	0.01236	0.00493	0.00000	0.00000	0.00000	0.00000	0.01550	0.01670	0.00000	0.00000	0.00000	0.00000	0.00000	0.00969	0.00000	0.00000
360	0.00990	0.00990	0.01348	0.00523	0.00000	0.00000	0.00000	0.00000	0.01630	0.01740	0.00000	0.00000	0.00000	0.00000	0.00000	0.01049	0.00000	0.00000
420	0.01040	0.01040	0.01438	0.00554	0.00000	0.00000	0.00000	0.00000	0.01700	0.01800	0.00000	0.00000	0.00000	0.00000	0.00000	0.01121	0.00000	0.00000
480	0.01080	0.01070	0.01524	0.00574	0.00000	0.00000	0.00000	0.00000	0.01750	0.01860	0.00000	0.00000	0.00000	0.00000	0.00000	0.01175	0.00000	0.00000
540	0.01111	0.01100	0.01588	0.00584	0.00000	0.00000	0.00000	0.00000	0.01800	0.01910	0.00000	0.00000	0.00000	0.00000	0.00000	0.01224	0.00000	0.00000
600	0.01121	0.01120	0.01639	0.00594	0.00000	0.00000	0.00000	0.00000	0.01840	0.01960	0.00000	0.00000	0.00000	0.00000	0.00000	0.01269	0.00000	0.00000
660	0.01131	0.01130	0.01686	0.00604	0.00000	0.00000	0.00000	0.00000	0.01860	0.02000	0.00000	0.00000	0.00000	0.00000	0.00000	0.01305	0.00000	0.00000
720	0.01131	0.01130	0.01710	0.00604	0.00000	0.00000	0.00000	0.00000	0.01880	0.02030	0.00000	0.00000	0.00000	0.00000	0.00000	0.01328	0.00000	0.00000

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Appendix 4.6 Calculation of Start Emissions

Year 2028 - Worst Temp & RH (9°C and 16% RH, Petrol)

Running Exhaust Emission Factor (gram/mile/vehicle) - FSP

Speed (km/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles<=2.5t	04 - Lt Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles>3.5t	06 - Medium Goods Vehicles<=15t	07 - Medium Goods Vehicles15-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchise d Bus<=6.4t	12 - Non-franchise d Bus 6.4-15t	13 - Non-franchise d Bus 15-24t	14 - Franchised Bus (SD)	15 - Franchised Bus (DD)	16 - Motorcycles	17 - Heavy Goods Vehicles>24t	18 - Non-franchise d Bus >24t
15	0.01143	0.01143	0.02627	0.02142	0.00000	0.00000	0.00000	0.00000	0.06502	0.01143	0.00000	0.00000	0.00000	0.00000	0.00000	0.01342	0.00000	0.00000

Starting Emission Factor (gram/trip) - FSP

Time (min)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles<=2.5t	04 - Lt Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles>3.5t	06 - Medium Goods Vehicles<=15t	07 - Medium Goods Vehicles15-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchise d Bus<=6.4t	12 - Non-franchise d Bus 6.4-15t	13 - Non-franchise d Bus 15-24t	14 - Franchise d Bus (SD)	15 - Franchise d Bus (DD)	16 - Motorcycl es	17 - Heavy Goods Vehicles>24t	18 - Non-franchise d Bus >24t
5	0.00040	0.00040	0.00299	0.00021	0.00000	0.00000	0.00000	0.00000	0.00070	0.00090	0.00000	0.00000	0.00000	0.00000	0.00000	0.00223	0.00000	0.00000
10	0.00070	0.00070	0.00308	0.00041	0.00000	0.00000	0.00000	0.00000	0.00140	0.00180	0.00000	0.00000	0.00000	0.00000	0.00000	0.00238	0.00000	0.00000
20	0.00140	0.00140	0.00332	0.00081	0.00000	0.00000	0.00000	0.00000	0.00280	0.00350	0.00000	0.00000	0.00000	0.00000	0.00000	0.00268	0.00000	0.00000
30	0.00210	0.00210	0.00365	0.00121	0.00000	0.00000	0.00000	0.00000	0.00410	0.00500	0.00000	0.00000	0.00000	0.00000	0.00000	0.00300	0.00000	0.00000
40	0.00280	0.00270	0.00398	0.00150	0.00000	0.00000	0.00000	0.00000	0.00520	0.00640	0.00000	0.00000	0.00000	0.00000	0.00000	0.00333	0.00000	0.00000
50	0.00340	0.00340	0.00430	0.00190	0.00000	0.00000	0.00000	0.00000	0.00640	0.00770	0.00000	0.00000	0.00000	0.00000	0.00000	0.00363	0.00000	0.00000
60	0.00400	0.00390	0.00462	0.00220	0.00000	0.00000	0.00000	0.00000	0.00740	0.00890	0.00000	0.00000	0.00000	0.00000	0.00000	0.00395	0.00000	0.00000
120	0.00660	0.00650	0.00732	0.00351	0.00000	0.00000	0.00000	0.00000	0.01150	0.01310	0.00000	0.00000	0.00000	0.00000	0.00000	0.00601	0.00000	0.00000
180	0.00740	0.00730	0.00853	0.00391	0.00000	0.00000	0.00000	0.00000	0.01250	0.01390	0.00000	0.00000	0.00000	0.00000	0.00000	0.00688	0.00000	0.00000
240	0.00810	0.00800	0.00955	0.00432	0.00000	0.00000	0.00000	0.00000	0.01350	0.01470	0.00000	0.00000	0.00000	0.00000	0.00000	0.00762	0.00000	0.00000
300	0.00870	0.00870	0.01057	0.00462	0.00000	0.00000	0.00000	0.00000	0.01430	0.01550	0.00000	0.00000	0.00000	0.00000	0.00000	0.00827	0.00000	0.00000
360	0.00920	0.00920	0.01139	0.00482	0.00000	0.00000	0.00000	0.00000	0.01510	0.01610	0.00000	0.00000	0.00000	0.00000	0.00000	0.00891	0.00000	0.00000
420	0.00970	0.00960	0.01221	0.00513	0.00000	0.00000	0.00000	0.00000	0.01570	0.01670	0.00000	0.00000	0.00000	0.00000	0.00000	0.00952	0.00000	0.00000
480	0.01000	0.01000	0.01283	0.00523	0.00000	0.00000	0.00000	0.00000	0.01630	0.01730	0.00000	0.00000	0.00000	0.00000	0.00000	0.00995	0.00000	0.00000
540	0.01030	0.01020	0.01336	0.00543	0.00000	0.00000	0.00000	0.00000	0.01670	0.01780	0.00000	0.00000	0.00000	0.00000	0.00000	0.01040	0.00000	0.00000
600	0.01040	0.01040	0.01379	0.00553	0.00000	0.00000	0.00000	0.00000	0.01700	0.01820	0.00000	0.00000	0.00000	0.00000	0.00000	0.01074	0.00000	0.00000
660	0.01050	0.01050	0.01412	0.00553	0.00000	0.00000	0.00000	0.00000	0.01730	0.01850	0.00000	0.00000	0.00000	0.00000	0.00000	0.01104	0.00000	0.00000
720	0.01050	0.01050	0.01435	0.00563	0.00000	0.00000	0.00000	0.00000	0.01740	0.01880	0.00000	0.00000	0.00000	0.00000	0.00000	0.01126	0.00000	0.00000

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Appendix 4.6 Calculation of Start Emissions

Year 2028 - Worst Temp & RH (9°C and 16% RH, Diesel)

Running Exhaust Emission Factor (gram/mile/vehicle) - NO

Speed (km/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles< =2.5t	04 - Lt Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles> 3.5t	06 - Medium Goods Vehicles< =15t	07 - Medium Goods Vehicles1 5-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non- franchise d Bus<=6.4t	12 - Non- franchise d Bus 6.4- 15t	13 - Non- franchise d Bus 15- 24t	14 - Franchise d Bus (SD)	15 - Franchise d Bus (DD)	16 - Motorcycl es	17 - Heavy Goods Vehicles> 24t	18 - Non- franchise d Bus >24t
15	0.134219	0	2.479033	2.421097	2.152176	3.357092	5.608725	1.099504	1.70848	1.268646	2.13399	2.963124	7.48184	6.812192	13.27113	0	6.852909	2.971493

Starting Emission Factor (gram/trip) - NO

Time (min)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles< =2.5t	04 - Lt Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles> 3.5t	06 - Medium Goods Vehicles< =15t	07 - Medium Goods Vehicles1 5-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non- franchise d Bus<=6.4t	12 - Non- franchise d Bus 6.4- 15t	13 - Non- franchise d Bus 15- 24t	14 - Franchise d Bus (SD)	15 - Franchise d Bus (DD)	16 - Motorcycl es	17 - Heavy Goods Vehicles> 24t	18 - Non- franchise d Bus >24t
5	0.00000	0.00000	0.00000	0.00000	0.03540	0.05870	0.16160	0.03920	0.00000	0.03460	0.03600	0.06610	0.19060	0.32670	0.72490	0.00000	0.18100	0.08340
10	0.00000	0.00000	0.00000	0.00000	0.06380	0.10580	0.29100	0.07050	0.00000	0.06230	0.06470	0.11890	0.34310	0.58800	1.30490	0.00000	0.32580	0.15000
20	0.00000	0.00000	0.00000	0.00000	0.08510	0.14090	0.38800	0.09400	0.00000	0.08320	0.08630	0.15860	0.45740	0.78410	1.73970	0.00000	0.43450	0.20000
30	0.00000	0.00000	0.00000	0.00000	0.12050	0.19980	0.54960	0.13320	0.00000	0.11780	0.12230	0.22470	0.64800	1.11070	2.46470	0.00000	0.61550	0.28340
40	0.00000	0.00000	0.00000	0.00000	0.14890	0.24670	0.67890	0.16450	0.00000	0.14560	0.15100	0.27760	0.80050	1.37210	3.04460	0.00000	0.76030	0.35000
50	0.00000	0.00000	0.00000	0.00000	0.19860	0.32890	0.90520	0.21940	0.00000	0.19400	0.20150	0.37010	1.06740	1.82940	4.05950	0.00000	1.01380	0.46670
60	0.00000	0.00000	0.00000	0.00000	0.29070	0.48160	1.32550	0.32130	0.00000	0.28420	0.29500	0.54190	1.56290	2.67880	5.94420	0.00000	1.48450	0.68330
120	0.00000	0.00000	0.00000	0.00000	0.36160	0.59920	1.64880	0.39960	0.00000	0.35340	0.36690	0.67420	1.94410	3.33210	7.39400	0.00000	1.84660	0.85000
180	0.00000	0.00000	0.00000	0.00000	0.53190	0.88100	2.42460	0.58760	0.00000	0.51980	0.53960	0.99140	2.85910	4.90020	10.87360	0.00000	2.71550	1.24990
240	0.00000	0.00000	0.00000	0.00000	0.69500	1.15130	3.16820	0.76780	0.00000	0.67930	0.70500	1.29530	3.73570	6.40290	14.20810	0.00000	3.54830	1.63320
300	0.00000	0.00000	0.00000	0.00000	0.78000	1.29220	3.55620	0.86180	0.00000	0.76240	0.79130	1.45400	4.19320	7.18690	15.94790	0.00000	3.98280	1.83320
360	0.00000	0.00000	0.00000	0.00000	0.92190	1.52710	4.20270	1.01850	0.00000	0.90100	0.93530	1.71830	4.95560	8.49370	18.84750	0.00000	4.70690	2.16660
420	0.00000	0.00000	0.00000	0.00000	1.01410	1.67980	4.62300	1.12040	0.00000	0.99120	1.02880	1.89020	5.45120	9.34300	20.73230	0.00000	5.17760	2.38320
480	0.00000	0.00000	0.00000	0.00000	1.06370	1.76210	4.84930	1.17530	0.00000	1.03960	1.07910	1.98270	5.71800	9.80040	21.74720	0.00000	5.43110	2.49990
540	0.00000	0.00000	0.00000	0.00000	1.09210	1.80910	4.97860	1.20660	0.00000	1.06730	1.10790	2.03560	5.87050	10.06170	22.32710	0.00000	5.57590	2.56660
600	0.00000	0.00000	0.00000	0.00000	1.12050	1.85610	5.10790	1.23790	0.00000	1.09510	1.13670	2.08840	6.02300	10.32310	22.90700	0.00000	5.72080	2.63320
660	0.00000	0.00000	0.00000	0.00000	1.13460	1.87960	5.17250	1.25360	0.00000	1.10890	1.15110	2.11490	6.09920	10.45370	23.19700	0.00000	5.79320	2.66660
720	0.00000	0.00000	0.00000	0.00000	1.13460	1.87960	5.17250	1.25360	0.00000	1.10890	1.15110	2.11490	6.09920	10.45370	23.19700	0.00000	5.79320	2.66660

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Appendix 4.6 Calculation of Start Emissions

Year 2028 - Worst Temp & RH (9°C and 16% RH, Diesel)

Running Exhaust Emission Factor (gram/mile/vehicle) - NO2

Speed (km/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles< =2.5t	04 - Lt Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles> 3.5t	06 - Medium Goods Vehicles< =15t	07 - Medium Goods Vehicles1 5-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non- franchise d Bus<=6.4t	12 - Non- franchise d Bus 6.4- 15t	13 - Non- franchise d Bus 15- 24t	14 - Franchise d Bus (SD)	15 - Franchise d Bus (DD)	16 - Motorcycl es	17 - Heavy Goods Vehicles> 24t	18 - Non- franchise d Bus >24t
15	0.016898	0	0.222411	0.200041	0.83702	1.471262	1.432316	0.427603	0.42712	0.493264	0.829939	1.459192	1.464825	0.42535	0.671901	0	1.540786	1.463537

Starting Emission Factor (gram/trip) - NO2

Time (min)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles< =2.5t	04 - Lt Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles> 3.5t	06 - Medium Goods Vehicles< =15t	07 - Medium Goods Vehicles1 5-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non- franchise d Bus<=6.4t	12 - Non- franchise d Bus 6.4- 15t	13 - Non- franchise d Bus 15- 24t	14 - Franchise d Bus (SD)	15 - Franchise d Bus (DD)	16 - Motorcycl es	17 - Heavy Goods Vehicles> 24t	18 - Non- franchise d Bus >24t
5	0.00000	0.00000	0.00000	0.00000	0.01380	0.02570	0.02840	0.01520	0.00000	0.01350	0.01400	0.03250	0.03310	0.02300	0.04520	0.00000	0.02530	0.04100
10	0.00000	0.00000	0.00000	0.00000	0.02480	0.04620	0.05110	0.02740	0.00000	0.02430	0.02520	0.05860	0.05960	0.04140	0.08140	0.00000	0.04550	0.07390
20	0.00000	0.00000	0.00000	0.00000	0.03310	0.06170	0.06810	0.03660	0.00000	0.03230	0.03360	0.07810	0.07950	0.05510	0.10860	0.00000	0.06060	0.09850
30	0.00000	0.00000	0.00000	0.00000	0.04690	0.08730	0.09650	0.05180	0.00000	0.04580	0.04760	0.11060	0.11260	0.07810	0.15380	0.00000	0.08590	0.13950
40	0.00000	0.00000	0.00000	0.00000	0.05790	0.10790	0.11930	0.06400	0.00000	0.05660	0.05880	0.13660	0.13910	0.09650	0.19000	0.00000	0.10610	0.17240
50	0.00000	0.00000	0.00000	0.00000	0.07720	0.14390	0.15900	0.08530	0.00000	0.07550	0.07830	0.18220	0.18540	0.12870	0.25330	0.00000	0.14140	0.22980
60	0.00000	0.00000	0.00000	0.00000	0.11310	0.21070	0.23280	0.12490	0.00000	0.11050	0.11470	0.26680	0.27150	0.18840	0.37090	0.00000	0.20710	0.33660
120	0.00000	0.00000	0.00000	0.00000	0.14070	0.26200	0.28960	0.15540	0.00000	0.13750	0.14270	0.33180	0.33770	0.23440	0.46140	0.00000	0.25760	0.41860
180	0.00000	0.00000	0.00000	0.00000	0.20680	0.38540	0.42590	0.22850	0.00000	0.20220	0.20980	0.48800	0.49660	0.34470	0.67850	0.00000	0.37880	0.61570
240	0.00000	0.00000	0.00000	0.00000	0.27030	0.50350	0.55650	0.29860	0.00000	0.26410	0.27420	0.63770	0.64900	0.45040	0.88660	0.00000	0.49500	0.80450
300	0.00000	0.00000	0.00000	0.00000	0.30340	0.56520	0.62460	0.33520	0.00000	0.29650	0.30780	0.71570	0.72840	0.50550	0.99520	0.00000	0.55560	0.90300
360	0.00000	0.00000	0.00000	0.00000	0.35850	0.66800	0.73820	0.39610	0.00000	0.35040	0.36370	0.84590	0.86090	0.59740	1.17610	0.00000	0.65660	1.06710
420	0.00000	0.00000	0.00000	0.00000	0.39440	0.73480	0.81200	0.43570	0.00000	0.38540	0.40010	0.93050	0.94690	0.65720	1.29370	0.00000	0.72230	1.17390
480	0.00000	0.00000	0.00000	0.00000	0.41370	0.77070	0.85180	0.45700	0.00000	0.40430	0.41970	0.97600	0.99330	0.68930	1.35700	0.00000	0.75760	1.23130
540	0.00000	0.00000	0.00000	0.00000	0.42470	0.79130	0.87450	0.46920	0.00000	0.41510	0.43090	1.00200	1.01980	0.70770	1.39320	0.00000	0.77780	1.26410
600	0.00000	0.00000	0.00000	0.00000	0.43570	0.81180	0.89720	0.48140	0.00000	0.42590	0.44210	1.02810	1.04630	0.72610	1.42940	0.00000	0.79800	1.29700
660	0.00000	0.00000	0.00000	0.00000	0.44130	0.82210	0.90860	0.48750	0.00000	0.43130	0.44760	1.04110	1.05950	0.73530	1.44750	0.00000	0.80810	1.31340
720	0.00000	0.00000	0.00000	0.00000	0.44130	0.82210	0.90860	0.48750	0.00000	0.43130	0.44760	1.04110	1.05950	0.73530	1.44750	0.00000	0.80810	1.31340

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Running Exhaust Emission Factor (gram/mile/vehicle) - RSP

Starting Emission Factor (gram/trip) - RSP

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Running Exhaust Emission Factor (gram/mile/vehicle) - FSP

Starting Emission Factor (gram/trip) - FSP

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Appendix 4.6 Calculation of Start Emissions

Year 2028 - Worst Temp & RH (9°C and 16% RH, LPG)

Running Exhaust Emission Factor (gram/mile/vehicle) - NO

Speed (km/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles<=2.5t	04 - Lt Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles>3.5t	06 - Medium Goods Vehicles<=15t	07 - Medium Goods Vehicles15-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchise d Bus<=6.4t	12 - Non-franchise d Bus 6.4-15t	13 - Non-franchise d Bus 15-24t	14 - Franchise d Bus (SD)	15 - Franchise d Bus (DD)	16 - Motorcycles	17 - Heavy Goods Vehicles>24t	18 - Non-franchise d Bus >24t
15	0	1.232597	0	0	0	0	0	2.731057	0	1.98931	0	0	0	0	0	0	0	0

Starting Emission Factor (gram/trip) - NO

Time (min)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles<=2.5t	04 - Lt Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles>3.5t	06 - Medium Goods Vehicles<=15t	07 - Medium Goods Vehicles15-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchise d Bus<=6.4t	12 - Non-franchise d Bus 6.4-15t	13 - Non-franchise d Bus 15-24t	14 - Franchise d Bus (SD)	15 - Franchise d Bus (DD)	16 - Motorcycles	17 - Heavy Goods Vehicles>24t	18 - Non-franchise d Bus >24t
5	0.00000	0.98750	0.00000	0.00000	0.00000	0.00000	0.00000	1.68900	0.00000	1.14620	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
10	0.00000	1.00390	0.00000	0.00000	0.00000	0.00000	0.00000	2.54490	0.00000	1.72700	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
20	0.00000	1.03580	0.00000	0.00000	0.00000	0.00000	0.00000	4.04800	0.00000	2.74700	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
30	0.00000	1.06670	0.00000	0.00000	0.00000	0.00000	0.00000	5.27280	0.00000	3.57810	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
40	0.00000	1.09660	0.00000	0.00000	0.00000	0.00000	0.00000	6.21940	0.00000	4.22040	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
50	0.00000	1.12540	0.00000	0.00000	0.00000	0.00000	0.00000	6.88750	0.00000	4.67390	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
60	0.00000	1.15320	0.00000	0.00000	0.00000	0.00000	0.00000	7.27740	0.00000	4.93840	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
120	0.00000	1.28340	0.00000	0.00000	0.00000	0.00000	0.00000	7.45300	0.00000	5.05760	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
180	0.00000	1.39690	0.00000	0.00000	0.00000	0.00000	0.00000	7.42560	0.00000	5.03900	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
240	0.00000	1.38540	0.00000	0.00000	0.00000	0.00000	0.00000	7.38380	0.00000	5.01060	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
300	0.00000	1.36590	0.00000	0.00000	0.00000	0.00000	0.00000	7.32750	0.00000	4.97240	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
360	0.00000	1.33870	0.00000	0.00000	0.00000	0.00000	0.00000	7.25670	0.00000	4.92440	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
420	0.00000	1.30350	0.00000	0.00000	0.00000	0.00000	0.00000	7.17150	0.00000	4.86660	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
480	0.00000	1.26040	0.00000	0.00000	0.00000	0.00000	0.00000	7.07180	0.00000	4.79890	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
540	0.00000	1.20930	0.00000	0.00000	0.00000	0.00000	0.00000	6.95770	0.00000	4.72140	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
600	0.00000	1.15040	0.00000	0.00000	0.00000	0.00000	0.00000	6.82910	0.00000	4.63420	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
660	0.00000	1.08350	0.00000	0.00000	0.00000	0.00000	0.00000	6.68610	0.00000	4.53710	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
720	0.00000	1.00870	0.00000	0.00000	0.00000	0.00000	0.00000	6.52850	0.00000	4.43020	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

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Appendix 4.6 Calculation of Start Emissions

Year 2028 - Worst Temp & RH (9°C and 16% RH, LPG)

Running Exhaust Emission Factor (gram/mile/vehicle) - NO2

Speed (km/hr)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles<=2.5t	04 - Lt Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles>3.5t	06 - Medium Goods Vehicles<=15t	07 - Medium Goods Vehicles15-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchise d Bus<=6.4t	12 - Non-franchise d Bus 6.4-15t	13 - Non-franchise d Bus 15-24t	14 - Franchise d Bus (SD)	15 - Franchise d Bus (DD)	16 - Motorcycles	17 - Heavy Goods Vehicles>24t	18 - Non-franchise d Bus >24t
15	0	0.034279	0	0	0	0	0	0.014484	0	0.0103	0	0	0	0	0	0	0	0

Starting Emission Factor (gram/trip) - NO2

Time (min)	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles<=2.5t	04 - Lt Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles>3.5t	06 - Medium Goods Vehicles<=15t	07 - Medium Goods Vehicles15-24t	08 - Public Light Buses	09 - Private Light Bus <=3.5t	10 - Private Light Bus >3.5t	11 - Non-franchise d Bus<=6.4t	12 - Non-franchise d Bus 6.4-15t	13 - Non-franchise d Bus 15-24t	14 - Franchise d Bus (SD)	15 - Franchise d Bus (DD)	16 - Motorcycles	17 - Heavy Goods Vehicles>24t	18 - Non-franchise d Bus >24t
5	0.00000	0.02770	0.00000	0.00000	0.00000	0.00000	0.00000	0.00900	0.00000	0.00590	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
10	0.00000	0.02810	0.00000	0.00000	0.00000	0.00000	0.00000	0.01360	0.00000	0.00890	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
20	0.00000	0.02900	0.00000	0.00000	0.00000	0.00000	0.00000	0.02160	0.00000	0.01410	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
30	0.00000	0.02990	0.00000	0.00000	0.00000	0.00000	0.00000	0.02810	0.00000	0.01840	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
40	0.00000	0.03070	0.00000	0.00000	0.00000	0.00000	0.00000	0.03310	0.00000	0.02170	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
50	0.00000	0.03150	0.00000	0.00000	0.00000	0.00000	0.00000	0.03670	0.00000	0.02400	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
60	0.00000	0.03230	0.00000	0.00000	0.00000	0.00000	0.00000	0.03880	0.00000	0.02540	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
120	0.00000	0.03600	0.00000	0.00000	0.00000	0.00000	0.00000	0.03970	0.00000	0.02600	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
180	0.00000	0.03910	0.00000	0.00000	0.00000	0.00000	0.00000	0.03960	0.00000	0.02590	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
240	0.00000	0.03880	0.00000	0.00000	0.00000	0.00000	0.00000	0.03930	0.00000	0.02580	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
300	0.00000	0.03830	0.00000	0.00000	0.00000	0.00000	0.00000	0.03900	0.00000	0.02560	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
360	0.00000	0.03750	0.00000	0.00000	0.00000	0.00000	0.00000	0.03870	0.00000	0.02530	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
420	0.00000	0.03650	0.00000	0.00000	0.00000	0.00000	0.00000	0.03820	0.00000	0.02500	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
480	0.00000	0.03530	0.00000	0.00000	0.00000	0.00000	0.00000	0.03770	0.00000	0.02470	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
540	0.00000	0.03390	0.00000	0.00000	0.00000	0.00000	0.00000	0.03710	0.00000	0.02430	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
600	0.00000	0.03220	0.00000	0.00000	0.00000	0.00000	0.00000	0.03640	0.00000	0.02380	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
660	0.00000	0.03040	0.00000	0.00000	0.00000	0.00000	0.00000	0.03560	0.00000	0.02330	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
720	0.00000	0.02830	0.00000	0.00000	0.00000	0.00000	0.00000	0.03480	0.00000	0.02280	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

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Running Exhaust Emission Factor (gram/mile/vehicle) - RSP

Starting Emission Factor (gram/trip) - RSP

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Running Exhaust Emission Factor (gram/mile/vehicle) - FSP

Starting Emission Factor (gram/trip) - FSP

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Appendix 4.6 Calculation of Start Emissions

Car Park 1 Site Parameters	
Average Distance from Starting Place to PT1(Parking Site Egress (m))	40
Average Travelling Distance within PT1(Parking Site (m))	80
Average Travelling Speed (km/h)	15

Frequency																		
Hour	01 - Private Cars	02 - Taxi	03 - Light Goods Vehicles<2.5t	04 - Li Goods Vehicles 2.5-3.5t	05 - Light Goods Vehicles>3.5t	06 - Medium Goods Vehicles<15t	07 - Medium Goods Vehicles15-20t	08 - Public Light Buses	09 - Private Light Bus >3.5t	10 - Private Light Bus >3.5t	11 - Non-Franchised Bus <4.15t	12 - Non-Franchised Bus 4.15-10t	13 - Non-Franchised Bus 10-24t	14 - Franchised Bus (SD)	15 - Franchised Bus (DO)	16 - Motorcycle s	17 - Heavy Goods Vehicles<4t	18 - Non-Franchised Bus >24t
0000 - 0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100 - 0200	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0200 - 0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300 - 0400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400 - 0500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0500 - 0600	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0600 - 0700	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
0700 - 0800	11	3	0	2	0	0	0	0	4	0	0	0	4	0	0	0	0	0
0800 - 0900	7	3	0	3	0	0	0	0	0	0	0	0	3	0	0	1	0	0
0900 - 1000	21	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0
1000 - 1100	17	4	0	11	0	0	0	0	0	0	0	0	5	0	0	1	1	0
1100 - 1200	25	0	0	19	0	0	0	0	0	0	0	0	4	0	0	0	0	0
1200 - 1300	15	1	0	7	0	0	0	0	1	0	0	0	3	0	0	0	0	0
1300 - 1400	15	1	0	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0
1400 - 1500	34	0	0	5	0	1	0	0	1	0	0	0	1	0	0	0	0	0
1500 - 1600	22	0	0	5	0	0	0	0	0	0	0	0	3	0	0	0	1	0
1600 - 1700	12	1	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0
1700 - 1800	2	0	0	1	0	0	0	0	0	0	0	0	1	0	0	0	2	0
1800 - 1900	29	1	0	3	0	0	0	0	0	0	0	0	2	0	0	0	0	0
1900 - 2000	13	1	0	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
2000 - 2100	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2100 - 2200	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
2200 - 2300	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2300 - 2400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Vehicle Parameters																																							
		01 - Private Cars		02 - Taxi		03 - Light Goods Vehicles<2.5t		04 - Light Goods Vehicles 2.5-3.5t		05 - Light Goods Vehicles>3.5t		06 - Medium Goods Vehicles<15t		07 - Medium Goods Vehicles15-20t		08 - Public Light Buses		09 - Private Light Bus <3.5t		10 - Private Light Bus >3.5t		11 - Private Light Bus >3.5t		12 - Non-Franchised Bus <4.15t		13 - Non-Franchised Bus 4.15-10t		14 - Franchised Bus (SD)		15 - Franchised Bus (DO)		16 - Motorcycle s		17 - Heavy Goods Vehicle<4t		18 - Non-Franchised Bus >24t			
		Diesel	Petrol	LPG	Petrol	Diesel	Petrol	Diesel	Petrol	Diesel	Petrol	Diesel	Petrol	Diesel	Petrol	LPG	Diesel	Petrol	Diesel	Petrol	Diesel	Petrol	Diesel	Petrol	Diesel	Petrol	Diesel	Petrol	Diesel	Petrol	Diesel	Petrol	Diesel	Petrol	Diesel	Petrol	Diesel	Petrol	Diesel
Speed Distance of Adjusted Start Emission (m/s)		700	0	0	0	700	0	700	0	700	0	700	0	700	0	700	150	700	0	700	150	700	0	700	150	700	0	700	150	700	0	700	150	700	0	700	150	700	0
Max. idling Time for Adjusting Starting Emission (min)		0	0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Start Time (duration of engine off prior to engine ignition) (min)		60	240	240	240	60	240	60	240	60	240	60	240	60	240	60	240	60	240	60	240	60	240	60	240	60	240	60	240	60	240	60	240	60	240	60	240	60	240
Average Speed Distance within PT1(Parking Site (m))		660	0	150	0	660	0	660	0	660	0	660	150	660	150	660	150	660	150	660	150	660	150	660	150	660	150	660	150	660	150	660	150	660	150	660	150	660	150
Waiting Time for Terminating Vehicle (min)		1.73	1.71	1.71	1.71	1.73	1.71	1.73	1.71	1.73	1.71	1.73	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	
Waiting Time for Non-terminating Vehicle (min)		1.73	1.71	1.71	1.71	1.73	1.71	1.73	1.71	1.73	1.71	1.73	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	2.50	
Vehicle Percentage (%)		98.34%	98.99%	98.99%	98.99%	98.34%	98.99%	98.99%	98.99%	98.34%	98.99%	98.99%	98.99%	98.99%	98.99%	98.99%	98.99%	98.99%	98.99%	98.99%	98.99%	98.99%	98.99%	98.99%	98.99%	98.99%	98.99%	98.99%	98.99%	98.99%	98.99%	98.99%	98.99%	98.99%	98.99%	98.99%	98.99%	98.99%	
NO _x Cold idling Emission Factor (g/min)		5.02E-02	1.46E-01	1.46E-01	1.46E-01	4.73E-02	4.17E-03	5.02E-02	2.48E-01	5.13E-02	4.73E-01	5.27E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	
NO _x Hot idling Emission Factor (g/min)		5.02E-02	1.46E-01	1.46E-01	1.46E-01	4.73E-02	4.17E-03	5.02E-02	2.48E-01	5.13E-02	4.73E-01	5.27E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	3.19E-02	
CO Cold idling Emission Factor (g/min)		6.35E-05	7.61E-05	5.97E-05	5.97E-05	6.89E-05	2.19E-04	6.35E-05	1.36E-02	3.77E-05	2.46E-02	0.000E+00	4.15E-04	4.64E-04	3.10E-04	1.19E-02	4.00E-04	4.15E-04	4.64E-04	3.10E-04	1.19E-02	4.00E-04	4.15E-04	4.64E-04	3.10E-04	1.19E-02	4.00E-04	4.15E-04	4.64E-04	3.10E-04	1.19E-02	4.00E-04	4.15E-04	4.64E-04	3.10E-04	1.19E-02	4.00E-04	4.15E-04	4.64E-04
CO Hot idling Emission Factor (g/min)		7.88E-04	3.17E-05	0.000E+00	2.35E-04	4.33E-04	3.10E-05	7.88E-04	3.17E-05	0.000E+00	2.35E-04	4.33E-04	3.10E-05	7.88E-04	3.17E-05	0.000E+00	2.35E-04	4.33E-04	3.10E-05	7.88E-04	3.17E-05	0.000E+00	2.35E-04	4.33E-04	3.10E-05	7.88E-04	3.17E-05	0.000E+00	2.35E-04	4.33E-04	3.10E-05	7.88E-04	3.17E-05	0.000E+00	2.35E-04	4.33E-04	3.10E-05	7.88E-04	3.17E-05
TSP Cold idling Emission Factor (g/min)		7.88E-04	3.17E-05	0.000E+00	2.35E-04	4.33E-04	3.10E-05	7.88E-04	3.17E-05	0.000E+00	2.35E-04	4.33E-04	3.10E-05	7.88E-04	3.17E-05	0.000E+00	2.35E-04	4.33E-04	3.10E-05	7.88E-04	3.17E-05	0.000E+00	2.35E-04	4.33E-04	3.10E-05	7.88E-04	3.17E-05	0.000E+00	2.35E-04	4.33E-04	3.10E-05	7.88E-04	3.17E-05	0.000E+00	2.35E-04	4.33E-04	3.10E-05	7.88E-04	3.17E-05
TSP Hot idling Emission Factor (g/min)		7.88E-04	3.17E-05	0.000E+00	2.35E-04	4.33E-04	3.10E-05	7.88E-04	3.17E-05	0.000E+00	2.35E-04	4.33E-04	3.10E-05	7.88E-04	3.17E-05	0.000E+00	2.35E-04	4.33E-04	3.10E-05	7.88E-04	3.17E-05	0.000E+00	2.35E-04	4.33E-04	3.10E-05	7.88E-04	3.17E-05	0.000E+00	2.35E-04	4.33E-04	3.10E-05	7.88E-04	3.17E-05	0.000E+00	2.35E-04	4.33E-04	3.10E-05	7.88E-04	3.17E-05
CO ₂ Running Emission Factor (g/min/vehicle)		1.342E-01	3.37E-01	1.233E+00	8.24E-02	2.47E+00	3.27E-01	1.342E-01	3.37E-01	1.233E+00	8.24E-02	2.47E+00	3.27E-01	1.342E-01	3.37E-01	1.233E+00	8.24E-02	2.47E+00	3.27E-01	1.342E-01	3.37E-01	1.233E+00	8.24E-02	2.47E+00	3.27E-01	1.342E-01	3.37E-01	1.233E+00	8.24E-02	2.47E+00	3.27E-01	1.342E-01	3.37E-01	1.233E+00	8.24E-02	2.47E+00	3.27E-01	1.342E-01	3.37E-01
NO _x Running Emission Factor (g/min/vehicle)		1.488E-02	1.74E-02	1.43E-02	4.34E-03	2.22E-02	4.87E-03	1.488E-02	1.74E-02	1.43E-02	4.34E-03	2.22E-02	4.87E-03	1.488E-02	1.74E-02	1.43E-02	4.34E-03	2.22E-02	4.87E-03	1.488E-02	1.74E-02	1.43E-02	4.34E-03	2.22E-02	4.87E-03	1.488E-02	1.74E-02	1.43E-02	4.34E-03	2.22E-02	4.87E-03	1.488E-02	1.74E-02	1.43E-02	4.34E-03	2.22E-02	4.87E-03	1.488E-02	1.74E-02
TSP Running Emission Factor (g/min/vehicle)		9.61E-03	1.27E-02	0.000E+00	1.27E-02	3.39E-02	1.11E-02	9.61E-03	1.27E-02	0.000E+00	1.27E-02	3.39E-02	1.11E-02	9.61E-03	1.27E-02	0.000E+00	1.27E-02	3.39E-02	1.11E-02	9.61E-03	1.27E-02	0.000E+00	1.27E-02	3.39E-02	1.11E-02	9.61E-03	1.27E-02	0.000E+00	1.27E-02	3.39E-02	1.11E-02	9.61E-03	1.27E-02	0.000E+00	1.27E-02	3.39E-02	1.11E-02	9.61E-03	1.27E-02
CO ₂ Running Emission Factor (g/min/vehicle)		9.61E-03	1.27E-02	0.000E+00	1.27E-02	3.39E-02	1.11E-02	9.61E-03	1.27E-02	0.000E+00	1.27E-02	3.39E-02	1.11E-02	9.61E-03	1.27E-02	0.000E+00	1.27E-02	3.39E-02	1.11E-02	9.61E-03	1.27E-02	0.000E+00	1.27E-02	3.39E-02	1.11E-02	9.61E-03	1.27E-02	0.000E+00	1.27E-02	3.39E-02	1.11E-02	9.61E-03	1.27E-02	0.000E+00	1.27E-02	3.39E-02	1.11E-02	9.61E-03	1.27E-02
TSP Running Emission Factor (g/min/vehicle)		8.36E-03	1.14E-02	0.000E+00	1.14E-02	3.12E-02	2.62E-02	8.36E-03	1.14E-02	0.000E+00	1.14E-02	3.12E-02	2.62E-02	8.36E-03	1.14E-02	0.000E+00	1.14E-02	3.12E-02	2.62E-02	8.36E-03	1.14E-02	0.000E+00	1.14E-02	3.12E-02	2.62E-02	8.36E-03	1.14E-02	0.000E+00	1.14E-02	3.12E-02	2.62E-02	8.36E-03	1.14E-02	0.000E+00	1.14E-02	3.12E-02	2.62E-02	8.36E-03	1.14E-02

Survey Data on Start Emission ⁰¹

01 - Private Cars (Code: 1)

Setting Time (min)	Bypass	5	10	15	20	30	40	50	60	120	180	240	300	360	420	480	540	600	660	720	>720	Total
0000 - 0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100 - 0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
0200 - 0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300 - 0400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400 - 0500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0500 - 0600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0600 - 0700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0700 - 0800	0	0	7	1	4	2	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	11
0800 - 0900	0	1	1	0	1	1	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0
0900 - 1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1000 - 1100	0	2	1	3	2	1	1	2	0	4	1	0	0	0	0	0	0	0	0	0	0	17
1100 - 1200	0	0	1	1	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2
1200 - 1300	0	0	0	0	1	0	0	0	0	4	0	0	1	0	0	0	0	0	0	0	0	12
1300 - 1400	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
1400 - 1500	17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	17
1500 - 1600	20	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	20
1600 - 1700	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
1700 - 1800	26	0	0	0	0	0	1	0	0	2	0	0	0	0	0	0	0	0	0	0	0	28
1800 - 1900	19	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	20
1900 - 2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2000 - 2100	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	3
2100 - 2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2200 - 2300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2300 - 2400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
154	154	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	254

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15-Transit (non-franchised) Buses		(Code: 10)																				
	Buses	5	10	15	20	30	40	50	60	120	180	240	300	360	420	480	540	600	660	720	+720	Total
0000-0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100-0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0200-0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300-0400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400-0500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0500-0600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0600-0700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0700-0800	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
0800-0900	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	3
0900-1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1000-1100	0	0	0	1	0	0	0	0	1	0	2	1	0	0	0	0	0	0	0	0	0	5
1100-1200	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2
1200-1300	1	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	3
1300-1400	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
1400-1500	1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2
1500-1600	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1600-1700	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1700-1800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1800-1900	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
1900-2000	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
2000-2100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2100-2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2200-2300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2300-2400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	19	1	2	3	1	0	1	1	0	8	2	0	0	1	0	0	0	0	0	0	1	40

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Medium Grade (excludes 13-24)		(Code: G)																			
Sitting Time (min)	Bypass	5	10	20	30	40	50	60	120	180	240	300	360	420	480	540	600	660	720	Total	
0000 - 0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0100 - 0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0200 - 0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0300 - 0400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0400 - 0500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0500 - 0600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0600 - 0700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0700 - 0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0800 - 0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0900 - 1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1000 - 1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1100 - 1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1200 - 1300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1300 - 1400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1400 - 1500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1500 - 1600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1600 - 1700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1700 - 1800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1800 - 1900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1900 - 2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2000 - 2100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2100 - 2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2200 - 2300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2300 - 2400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	

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11 Non-franchised Bus 15-24h		(Code: 10)																		
Sitting Time (min)	Baypass	5	10	20	30	40	50	60	120	180	240	300	360	420	480	540	600	660	720	Total
0000-0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100-0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0200-0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300-0400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400-0500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0500-0600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0600-0700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0700-0800	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	4
0800-0900	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
0900-1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
1000-1100	0	0	0	0	1	0	0	0	1	0	2	1	0	0	0	0	0	0	0	5
1100-1200	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1200-1300	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
1300-1400	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
1400-1500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1500-1600	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1600-1700	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1700-1800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1800-1900	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
1900-2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2000-2100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2100-2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2200-2300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2300-2400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	59	1	2	4	0	1	1	0	8	2	0	0	1	0	0	0	0	0	1	40

[illegible]

10. *Journal of the American Medical Association*, 2000; 284: 1039-1044.

14. Franchised Bus (30)																						
Sitting Time (min)		(Code: 12)																				
Stops	5	10	15	20	30	40	50	60	120	180	240	300	360	420	480	540	600	660	720	720	Total	
0000-0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0100-0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0200-0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0300-0400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0400-0500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0500-0600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0600-0700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0700-0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0800-0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0900-1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1000-1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1100-1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1200-1300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1300-1400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1400-1500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1500-1600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1600-1700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1700-1800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1800-1900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1900-2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2000-2100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2100-2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2200-2300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2300-2400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

15. Franchised Bus (30)																						
Sitting Time (min)		(Code: 18)																				
Stops	5	10	15	20	30	40	50	60	120	180	240	300	360	420	480	540	600	660	720	720	Total	
0000-0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0100-0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0200-0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0300-0400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0400-0500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0500-0600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0600-0700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0700-0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0800-0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0900-1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1000-1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1100-1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1200-1300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1300-1400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1400-1500	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
1500-1600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1600-1700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1700-1800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1800-1900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1900-2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2000-2100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2100-2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2200-2300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2300-2400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	

[illegible][illegible]

[1] Number of starts were derived based on on-site observations at the PTIs and operators' published schedules, while stiling time was obtained based on on-site observations at PTIs.

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Part 1		Part 2		Part 3		Part 4		Part 5		Part 6		Part 7		Part 8		Part 9		Part 10		Part 11		Part 12		Part 13		Part 14		Part 15		Part 16		Part 17		Part 18		Part 19		Part 20		Part 21		Part 22		Part 23		Part 24		Part 25		Part 26		Part 27		Part 28		Part 29		Part 30		Part 31		Part 32		Part 33		Part 34		Part 35		Part 36		Part 37		Part 38		Part 39		Part 40		Part 41		Part 42		Part 43		Part 44		Part 45		Part 46		Part 47		Part 48		Part 49		Part 50		Part 51		Part 52		Part 53		Part 54		Part 55		Part 56		Part 57		Part 58		Part 59		Part 60		Part 61		Part 62		Part 63		Part 64		Part 65		Part 66		Part 67		Part 68		Part 69		Part 70		Part 71		Part 72		Part 73		Part 74		Part 75		Part 76		Part 77		Part 78		Part 79		Part 80		Part 81		Part 82		Part 83		Part 84		Part 85		Part 86		Part 87		Part 88		Part 89		Part 90		Part 91		Part 92		Part 93		Part 94		Part 95		Part 96		Part 97		Part 98		Part 99		Part 100		Part 101		Part 102		Part 103		Part 104		Part 105		Part 106		Part 107		Part 108		Part 109		Part 110		Part 111		Part 112		Part 113		Part 114		Part 115		Part 116		Part 117		Part 118		Part 119		Part 120		Part 121		Part 122		Part 123		Part 124		Part 125		Part 126		Part 127		Part 128		Part 129		Part 130		Part 131		Part 132		Part 133		Part 134		Part 135		Part 136		Part 137		Part 138		Part 139		Part 140		Part 141		Part 142		Part 143		Part 144		Part 145		Part 146		Part 147		Part 148		Part 149	
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Remark

1. $R = E_r \cdot t \cdot d_r \cdot p$
where
R: running emission at a specific speed for a vehicle type with a fuel type in an hour;
E_r: running emission factor for the vehicle type at the specific speed, obtained from the EMFACEInf tab;
t: total traffic frequency of the vehicle type in the hour, obtained from the Frequency table;
d_r: average travelling distance within PTI, obtained from the Site Parameters table;
p: vehicle percentage of the fuel type, obtained from the Vehicle Parameters table.

[illegible]

Remark

1. $S_{\text{start}} = \sum_i (E_{s,i} \cdot f_i) \cdot p$
 where
 S_{start} : total start emission for a vehicle type with a fuel type in an hour,
 $E_{s,i}$: start emission factor of the vehicle type with sitting time i min, obtained from the EMFACemf tab,
 f_i : traffic frequency of the vehicle type with sitting time i min in the hour, obtained from the Traffic Flow to
 p: vehicle percentage of the fuel type, obtained from the Vehicle Parameters table.

[illegible]

Mark

$$I = E_0 + T_1 \cdot (\frac{t}{\tau} - p) + E_{-1} \cdot (\frac{\tau}{t} - p)$$

where:

- i. sliding emission within PTV of a vehicle type with a fuel type in one term (terminating vehicle);
- j. cold start emission rate of the vehicle type with the fuel type, obtained from the Vehicle Parameters table;
- k. hot start emission rate of the vehicle type with the fuel type, obtained from the Vehicle Parameters table;
- l. ending time of the terminating vehicle, obtained from the Vehicle Parameters table;
- m. arrival percentages of the fuel type, obtained from the Fuel Parameters table;
- n. total traffic frequency of the vehicle types with the fuel type for cold starting emission, obtained from the Traffic Flow table of the vehicle type;
- o. total traffic frequency of the vehicle types with the fuel type for hot start emission, obtained from the Traffic Flow table of the vehicle type.

2. According to Calculation of Start Emission in Air Quality Impact Assessment, the soak time for cold idling is longer than or equal to 240 min per petrol/PVG vehicles & 60 min diesel ICGT vehicles

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1. $R \in E_i, \forall i \in A, \forall p$
 where
 i running emission at a specific speed for a vehicle type with a fuel type in an hour,
 e running emission factor for the vehicle type at the specific speed, obtained from the *EMPA/CCEI* table,
 t total traffic frequency of the vehicle type in the hour, obtained from the *Frequency* table,
 d average traveling distance within 1h, obtained from the *Site Parameter* table,
 p vehicle percentage of the fuel type, obtained from the *Vehicle Parameter* table.

[illegible][illegible]

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[illegible][illegible][illegible]

Table 1. Average frequency of the vehicle type in the hour, obtained from the Frequency table, $\bar{a}$, average travelling distance within PM, obtained from the Size Parameters table, $\bar{a}_i$, vehicle percentage of the full type, obtained from the Vehicle Parameters table.

[illegible]

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[illegible]

Motorcycles		(Code: 15)																				Total
Starting time (min)	Buses	1	5	10	20	30	40	50	60	120	180	240	300	360	420	480	540	600	660	720		
0100 - 0500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
0200 - 0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
0300 - 0400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
0400 - 0500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
0500 - 0600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
0600 - 0700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
0700 - 0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
0800 - 0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
0900 - 1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
1000 - 1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
1100 - 1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
1200 - 1300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
1300 - 1400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
1400 - 1500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
1500 - 1600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
1600 - 1700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
1700 - 1800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1		
1800 - 1900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
1900 - 2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
2000 - 2100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
2100 - 2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1		
2200 - 2300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
2300 - 2400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1 2		

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Site Parameters	
Average Distance from Starting Place to PT1/Parking Site Egress (m)	6
Average Travelling Distance within PT1/Parking Site (m)	12
Average Travelling Speed (km/h)	15

Hour	01- Private Care	02- 2ad	03- Light Goods Vehicles 2-3H	04- Light Goods Vehicles 2.5-3.5H	05- Light Goods Vehicles 4H	06- Medium Goods Vehicles 4H	07- Medium Goods Vehicles 4H	08- Light Buses	09- Public Light Buses	10- Private Light Bus not B	10- Private Light Bus 7-10	11- Non-Franchised Bus not B	12- Non-Franchised Bus 6-10	13- Non-Franchised Bus 15-24	14- Franchised Bus (B)	15- Franchised Bus (B)	16- Franchised Bus	17- Heavy Goods Vehicles 2-4t	18- Non-Franchised Bus 24H
0900-0930	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0930-1000	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1000-1030	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1030-1400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400-0500	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0500-0600	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0600-0700	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0700-0800	0	0	0	2	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0
0800-0900	0	1	0	3	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
0900-1000	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
1000-1100	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
1100-1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200-1300	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1300-1400	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1400-1500	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
1500-1600	0	0	0	11	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0
1600-1700	0	0	0	5	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
1700-1800	0	0	0	8	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0
1800-1900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1900-2000	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2000-2100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2100-2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2200-2300	0	0	0	8	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
2300-2400	0	0	0	0	9	0	0	0	0	0	1	0	0	0	0	0	0	0	0

	01 - Private Cars		02 - Taxi		03 - Light Goods Vehicles 2-5t		04 - Light Goods Vehicles 2-5t		05 - Motorcycles 16		06 - Motorcycles 16		07 - Motorcycles 41		08 - Motorcycles 41		09 - Motorcycles 41		10 - Motorcycles 41		11 - Motorcycles 41		12 - Motorcycles 41		13 - Motorcycles 41		14 - Motorcycles 41		15 - Motorcycles 41		16 - Motorcycles 41		17 - Motorcycles 41		18 - Motorcycles 41		19 - Motorcycles 41		20 - Motorcycles 41		21 - Motorcycles 41		22 - Motorcycles 41		23 - Motorcycles 41		24 - Motorcycles 41		25 - Motorcycles 41		26 - Motorcycles 41		27 - Motorcycles 41		28 - Motorcycles 41		29 - Motorcycles 41		30 - Motorcycles 41		31 - Motorcycles 41		32 - Motorcycles 41		33 - Motorcycles 41		34 - Motorcycles 41		35 - Motorcycles 41		36 - Motorcycles 41		37 - Motorcycles 41		38 - Motorcycles 41		39 - Motorcycles 41		40 - Motorcycles 41		41 - Motorcycles 41		42 - Motorcycles 41		43 - Motorcycles 41		44 - Motorcycles 41		45 - Motorcycles 41		46 - Motorcycles 41		47 - Motorcycles 41		48 - Motorcycles 41		49 - Motorcycles 41		50 - Motorcycles 41		51 - Motorcycles 41		52 - Motorcycles 41		53 - Motorcycles 41		54 - Motorcycles 41		55 - Motorcycles 41		56 - Motorcycles 41		57 - Motorcycles 41		58 - Motorcycles 41		59 - Motorcycles 41		60 - Motorcycles 41		61 - Motorcycles 41		62 - Motorcycles 41		63 - Motorcycles 41		64 - Motorcycles 41		65 - Motorcycles 41		66 - Motorcycles 41		67 - Motorcycles 41		68 - Motorcycles 41		69 - Motorcycles 41		70 - Motorcycles 41		71 - Motorcycles 41		72 - Motorcycles 41		73 - Motorcycles 41		74 - Motorcycles 41		75 - Motorcycles 41		76 - Motorcycles 41		77 - Motorcycles 41		78 - Motorcycles 41		79 - Motorcycles 41		80 - Motorcycles 41		81 - Motorcycles 41		82 - Motorcycles 41		83 - Motorcycles 41		84 - Motorcycles 41		85 - Motorcycles 41		86 - Motorcycles 41		87 - Motorcycles 41		88 - Motorcycles 41		89 - Motorcycles 41		90 - Motorcycles 41		91 - Motorcycles 41		92 - Motorcycles 41		93 - Motorcycles 41		94 - Motorcycles 41		95 - Motorcycles 41		96 - Motorcycles 41		97 - Motorcycles 41		98 - Motorcycles 41		99 - Motorcycles 41		100 - Motorcycles 41		101 - Motorcycles 41		102 - Motorcycles 41		103 - Motorcycles 41		104 - Motorcycles 41		105 - Motorcycles 41		106 - Motorcycles 41		107 - Motorcycles 41		108 - Motorcycles 41		109 - Motorcycles 41		110 - Motorcycles 41		111 - Motorcycles 41		112 - Motorcycles 41		113 - Motorcycles 41		114 - Motorcycles 41		115 - Motorcycles 41		116 - Motorcycles 41		117 - Motorcycles 41		118 - Motorcycles 41		119 - Motorcycles 41		120 - Motorcycles 41		121 - Motorcycles 41		122 - Motorcycles 41		123 - Motorcycles 41		124 - Motorcycles 41		125 - Motorcycles 41		126 - Motorcycles 41		127 - Motorcycles 41		128 - Motorcycles 41		129 - Motorcycles 41		130 - Motorcycles 41		131 - Motorcycles 4
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[illegible]

01 - Private Cars		(Code: 1)																		
Sitting Time (min)	Bypass	5	10	20	30	40	50	60	120	180	240	300	360	420	480	540	600	660	720	Total
0000 - 0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0100 - 0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0200 - 0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300 - 0400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400 - 0500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0500 - 0600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0600 - 0700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0700 - 0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800 - 0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0900 - 1000	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1000 - 1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1100 - 1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200 - 1300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1300 - 1400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1400 - 1500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1500 - 1600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1600 - 1700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1700 - 1800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1800 - 1900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1900 - 2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2000 - 2100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2100 - 2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2200 - 2300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2300 - 2400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL	2	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2

[illegible][illegible]

Light Green Vehicles (3.1)													Dark Green Vehicles (3.2)												
[Code: 4]													[Code: 5]												
0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23		
9500 - 9100	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9100 - 9200	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9200 - 9300	2	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9300 - 9400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9400 - 9500	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9500 - 9600	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9600 - 9700	2	2	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9700 - 9800	2	2	2	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9800 - 9900	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
9900 - 1000	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
1000 - 1100	3	0	0	0	0	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0		
1100 - 1200	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
1200 - 1300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
1300 - 1400	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
1400 - 1500	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
1500 - 1600	1	0	2	2	1	0	0	0	1	0	1	0	0	1	0	1	0	0	0	0	0	0	0		
1600 - 1700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
1700 - 1800	0	2	2	0	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
1800 - 1900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
1900 - 2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
2000 - 2100	0	1	1	1	1	1	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0		
2100 - 2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
2200 - 2300	2	2	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
2300 - 2400	4	2	0	0	0	10	11	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0		
Total	11	19	29	7	0	13	13	1	2	4	4	1	0	7	13	8	3	1	12						

[illegible][illegible][illegible]

[illegible]

L:\Secure\Environment_Projects\60733229\L1.01\Others\AA\Modelling\Appendix\Calculation of Start Emissions\Calculation of Start Emissions.xlsx

[illegible][illegible][illegible][illegible][illegible]

Part 4																						
SE - Medium Goods Vehicle<=15t																						
(Code: 5)																						
Sitting Time (min)																						
Begin	5	10	15	20	30	40	50	60	120	180	240	300	360	420	480	540	600	660	720	1720	Total	
0000 - 0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0100 - 0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
0200 - 0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0300 - 0400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0400 - 0500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0500 - 0600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0600 - 0700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0700 - 0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0800 - 0900	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	
0900 - 1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1000 - 1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1100 - 1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1200 - 1300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1300 - 1400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1400 - 1500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1500 - 1600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1600 - 1700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1700 - 1800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1800 - 1900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1900 - 2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2000 - 2100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2100 - 2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2200 - 2300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2300 - 2400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	
07 - Medium Goods Vehicle<15.24t																						
(Code: 6)																						
Sitting Time (min)																						
Begin	5	10	15	20	30	40	50	60	120	180	240	300	360	420	480	540	600	660	720	1720	Total	
0000 - 0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0100 - 0200	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
0200 - 0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0300 - 0400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0400 - 0500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0500 - 0600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0600 - 0700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0700 - 0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0800 - 0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0900 - 1000	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	
1000 - 1100	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2	
1100 - 1200	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	
1200 - 1300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1300 - 1400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1400 - 1500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1500 - 1600	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
1600 - 1700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1700 - 1800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1800 - 1900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1900 - 2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2000 - 2100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2100 - 2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2200 - 2300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
2300 - 2400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	2	0	0	0	1	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	7	
09 - Private Light Bus <=15t																						
(Code: 7)																						
Sitting Time (min)																						
Begin	5	10	15	20	30	40	50	60	120	180	240	300	360	420	480	540	600	660	720	1720	Total	
0000 - 0100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0100 - 0200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0200 - 0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0300 - 0400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0400 - 0500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0500 - 0600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0600 - 0700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0700 - 0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0800 - 0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0900 - 1000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1000 - 1100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1100 - 1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1200 - 1300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1300 - 1400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1400 - 1500	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1500 - 1600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1600 - 1700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1700 - 1800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1800 - 1900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1900 - 2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2000 - 2100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2100 - 2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2200 - 2300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2300 - 2400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

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Medium Goods Vehicles(15-24)																				
(Code: 6)																				
Sitting Time (min)	Baggage	5	10	20	30	40	50	60	120	180	240	300	360	420	480	540	600	660	720	Total
0100-0100	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
0100-0300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0300-0400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0400-0600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0600-0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0900-0700	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0700-0800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0800-0900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0900-1000	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2
1000-1100	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	2
1100-1200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1200-1300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1300-1400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1400-1600	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1600-1800	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
1800-1900	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1900-2000	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2000-2100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2100-2200	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2200-2300	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
2300-2400	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	2	0	0	1	1	0	0	0	0	1	1	0	0	0	1	0	0	0	0	7

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[1] Number of starts were derived based on on-site observations at the PTIs and operators' published schedules, while sitting time was obtained based on on-site observations at PTIs.

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Appendix 4.6 Calculation of Start Emissions

Emission Source Listing in AERMOD
(Cold Start Operation Phase)

Carports	Source ID	Type	X Start	Y Start	X End	Y End	Road Width (m)	Release Height (mAG)	No. of Vertices	Synrt	Sanit	Operation Period (hr)	Area (m ²)	Travel Distance outside Bus Terminus (m)	Flow Percentage (%)	NO Emission Rate (g/s or g/m ³ /s)	NO _x Emission Rate (g/s or g/m ³ /s)	RSP Emission Rate (g/s or g/m ³ /s)	FSP Emission Rate (g/s or g/m ³ /s)
Start Emission inside Parking Area																			
Car_Park_1	CP1_1005	AREAPOLY	826488.86	826490.05	-	-	-	0.50	9	-	-	24	9900.32	-	-	1.2401E-06	2.5203E-07	1.6751E-08	1.5995E-08
Car_Park_1	CP1_1006	AREAPOLY	826506.13	826484.66	-	-	-	0.50	8	-	-	24	1775.37	-	-	8.4622E-07	1.6002E-07	1.2174E-08	1.1317E-08
Car_Park_1_1	CP1_1005	AREAPOLY	826657.46	826032.17	-	-	-	0.50	4	-	-	24	194.39	-	-	1.4072E-07	1.8072E-07	4.4633E-08	4.0684E-08
Car_Park_1_2	CP1_2005	AREAPOLY	826676.53	826182.01	-	-	-	0.50	4	-	-	24	1699.66	-	-	7.2037E-07	1.9400E-07	2.8302E-08	2.6370E-08
Car_Park_1_3	CP1_2005	AREAPOLY	826708.76	827086.00	-	-	-	0.50	4	-	-	24	152.83	-	-	4.5188E-06	1.4418E-06	6.7046E-09	6.6662E-09
Car_Park_4	CP4_1005	AREAPOLY	826484.95	823781.50	-	-	-	0.50	20	-	-	24	203991.08	-	-	2.5846E-08	2.5846E-08	2.7868E-09	-
Start Emission outside Parking Area (Spread Distance = 100m)																			
Car_Park_1	CP1_1009	LINE	826553.64	826277.11	826570.05	826250.68	3.50	2.80	-	-	2.60	24	109	31	100%	7.4657E-07	1.3542E-07	-	-
Car_Park_1	CP1_1007	LINE	826570.05	826250.68	826570.29	826243.80	3.50	2.80	-	-	2.60	24	36	10	100%	7.4657E-07	1.3542E-07	-	-
Car_Park_1	CP1_1008	LINE	826570.29	826243.80	826571.93	826227.87	3.50	2.80	-	-	2.60	24	50	14	100%	7.4657E-07	1.3542E-07	-	-
Car_Park_1	CP1_1009	LINE	826571.93	826227.87	826593.57	826222.88	3.50	2.80	-	-	2.60	24	50	14	100%	7.4657E-07	1.3542E-07	-	-
Car_Park_1	CP1_1100	LINE	826593.57	826222.88	826614.30	826212.52	3.50	2.80	-	-	2.60	24	54	15	100%	7.4657E-07	1.3542E-07	-	-
Car_Park_1	CP1_1111	LINE	826614.30	826212.52	826517.87	826226.99	3.50	2.80	-	-	2.60	24	94	27	100%	7.4657E-07	1.3542E-07	-	-
Car_Park_1	CP1_1112	LINE	826517.87	826226.99	826496.53	826232.53	12.00	2.80	-	-	2.60	24	138	45	100%	2.1775E-07	3.9498E-08	-	-
Car_Park_1	CP1_1113	LINE	826496.53	826232.53	826476.11	826249.11	12.00	2.80	-	-	2.60	24	443	37	100%	2.1775E-07	3.9498E-08	-	-
Car_Park_1	CP1_1114	LINE	826476.11	826249.11	826464.79	826246.32	12.00	2.80	-	-	2.60	24	380	32	100%	2.1775E-07	3.9498E-08	-	-
Car_Park_1	CP1_1115	LINE	826464.79	826246.32	826436.75	826266.75	12.00	2.80	-	-	2.60	24	403	33	100%	2.1775E-07	3.9498E-08	-	-
Car_Park_1	CP1_1116	LINE	826436.75	826266.75	826439.33	826292.33	12.00	2.80	-	-	2.60	24	403	33	100%	2.1775E-07	3.9498E-08	-	-
Car_Park_1	CP1_1117	LINE	826439.33	826292.33	826407.12	826429.04	12.00	2.80	-	-	2.60	24	484	40	100%	2.1775E-07	3.9498E-08	-	-
Car_Park_1	CP1_1118	LINE	826407.12	826429.04	826307.43	826455.30	12.00	2.80	-	-	2.60	24	406	34	100%	2.1775E-07	3.9498E-08	-	-
Car_Park_1	CP1_1119	LINE	826307.43	826455.32	826327.60	826465.74	12.00	2.80	-	-	2.60	24	269	22	100%	2.1775E-07	3.9498E-08	-	-
Car_Park_1	CP1_1120	LINE	826327.60	826465.74	826470.39	826467.34	6.00	2.80	-	-	2.60	24	388	34	100%	2.1775E-07	3.9498E-08	-	-
Car_Park_1	CP1_1121	LINE	826327.60	826465.74	826362.86	826488.17	6.00	2.80	-	-	2.60	24	242	20	70%	2.2864E-07	4.1473E-08	-	-
Car_Park_1	CP1_1122	LINE	826362.86	826488.17	826371.04	826507.78	6.00	2.80	-	-	2.60	24	284	36	70%	2.2864E-07	4.1473E-08	-	-
Car_Park_1	CP1_1123	LINE	826371.04	826507.78	826376.31	826483.37	6.00	2.80	-	-	2.60	24	337	20	100%	9.7887E-08	1.7774E-08	-	-
Car_Park_1	CP1_1124	LINE	826376.31	826483.37	826462.59	826467.65	6.00	2.80	-	-	2.60	24	186	18	30%	9.7887E-08	1.7774E-08	-	-
Car_Park_1	CP1_1125	LINE	826462.59	826467.65	826460.70	826460.41	6.00	2.80	-	-	2.60	24	132	14	30%	9.7887E-08	1.7774E-08	-	-
Car_Park_1	CP1_1126	LINE	826460.70	826467.65	826467.81	826477.79	6.00	2.80	-	-	2.60	24	141	18	30%	9.7887E-08	1.7774E-08	-	-
Car_Park_1	CP1_1127	LINE	826467.81	826477.79	826502.15	826452.54	6.00	2.80	-	-	2.60	24	140	18	30%	9.7887E-08	1.7774E-08	-	-
Car_Park_1	CP1_1128	LINE	826502.15	826452.54	826460.48	826437.51	6.00	2.80	-	-	2.60	24	137	20	30%	9.7887E-08	1.7774E-08	-	-
Car_Park_1	CP1_1129	LINE	826460.48	826437.51	826463.33	826411.80	6.00	2.80	-	-	2.60	24	210	26	30%	9.7887E-08	1.7774E-08	-	-
Car_Park_1	CP1_1130	LINE	826463.33	826411.80	826437.85	826368.96	6.00	2.80	-	-	2.60	24	371	46	30%	9.7887E-08	1.7774E-08	-	-
Car_Park_1	CP1_1131	LINE	826437.85	826368.96	826327.62	826337.71	6.00	2.80	-	-	2.60	24	252	32	30%	9.7887E-08	1.7774E-08	-	-
Car_Park_1	CP1_1132	LINE	826327.62	826337.71	826347.23	826283.83	6.00	2.80	-	-	2.60	24	248	36	30%	9.7887E-08	1.7774E-08	-	-
Car_Park_1	CP1_1133	LINE	826347.23	826283.83	826353.39	826353.48	6.00	2.80	-	-	2.60	24	195	23	100%	1.7774E-08	1.7774E-08	-	-
Car_Park_2	CP2_1005	LINE	826613.30	826274.22	826292.62	826292.62	3.50	2.86	-	-	2.66	24	718	205	100%	2.1439E-06	2.9300E-07	-	-
Car_Park_2	CP2_1005	LINE	826274.22	826292.62	826232.05	826388.78	3.50	2.86	-	-	2.66	24	25	8	600%	2.1439E-06	2.9300E-07	-	-
Car_Park_2	CP2_1003	LINE	826272.05	826388.78	826275.63	826378.03	3.50	2.86	-	-	2.66	24	43	12	75%	1.6079E-06	2.1975E-07	-	-
Car_Park_2	CP2_1004	LINE	826275.63	826378.03	826271.63	826367.35	3.50	2.86	-	-	2.66	24	43	12	75%	1.6079E-06	2.1975E-07	-	-
Car_Park_2	CP2_1004	LINE	826271.63	826367.35	826269.35	826368.28	3.50	2.86	-	-	2.66	24	38	11	75%	1.6079E-06	2.1975E-07	-	-
Car_Park_2	CP2_1006	LINE	826269.35	826368.28	826270.19	826374.11	3.50	2.86	-	-	2.66	24	36	8	75%	1.6079E-06	2.1975E-07	-	-
Car_Park_2	CP2_1007	LINE	826270.19	826374.11	826406.98	826383.94	3.50	2.86	-	-	2.66	24	30	6	75%	1.6079E-06	2.1975E-07	-	-
Car_Park_2	CP2_1008	LINE	826406.98	826383.94	826391.20	826391.20	3.50	2.86	-	-	2.66	24	35	10	75%	1.6079E-06	2.1975E-07	-	-
Car_Park_2	CP2_1009	LINE	826391.20	826391.20	826391.20	826391.20	3.50	2.86	-	-	2.66	24	67	19	75%	1.6079E-06	2.1975E-07	-	-
Car_Park_2	CP2_1010	LINE	826391.20	826391.20	826391.20	826391.20	3.50	2.86	-	-	2.66	24	100	29	75%	1.6079E-06	2.1975E-07	-	-
Car_Park_2	CP2_1111	LINE	826623.09	826409.16	826608.44	826410.35	3.50	2.86	-	-	2.66	24	157	29	75%	1.6079E-06	2.1975E-07	-	-
Car_Park_2	CP2_1112	LINE	826608.44	826410.35	826602.35	826418.64	3.50	2.86	-	-	2.66	24	58	16	75%	1.6079E-06	2.1975E-07	-	-
Car_Park_2	CP2_1113	LINE	826602.35	826418.64	826588.35	826418.82	3.50	2.86	-	-	2.66	24	96	27	75%	1.6079E-06	2.1975E-07	-	-
Car_Park_2	CP2_1114	LINE	826588.35	826418.82	826581.92	826417.86	3.50	2.86	-	-	2.66	24	154	43	75%	1.6079E-06	2.1975E-07	-	-
Car_Park_2	CP2_1115	LINE	826581.92	826417.86	826565.08	826376.35	3.50	2.86	-	-	2.66	24	137	36	75%	1.6079E-06	2.1975E-07	-	-
Car_Park_2	CP2_1116	LINE	826565.08	826376.35	826589.78	826724.54	3.50	2.86	-	-	2.66	24	45	13	25%	5.5398E-07	7.3251E-08	-	-
Car_Park_2	CP2_1117	LINE	826589.78	826724.54	826592.30	826598.18	3.50	2.86	-	-	2.66	24	45	13	25%	5.5398E-07	7.3251E-08	-	-
Car_Park_2	CP2_1118	LINE	826592.30	826598.18	826399.59	826393.13	3.50	2.86	-	-	2.66	24	57	16	25%	5.5398E-07	7.3251E-08	-	-
Car_Park_2	CP2_1119	LINE	826399.59	826393.13	826393.13	826393.13	3.50	2.86	-	-	2.66	24	45	13	25%	5.5398E-07	7.3251E-08	-	-
Car_Park_2	CP2_1120	LINE	826393.13	826393.13	826393.13	826393.13	3.50	2.86	-	-	2.66	24	45	13	25%	5.5398E-07	7.3251E-08	-	-
Car_Park_2	CP2_1121	LINE	826393.13	826393.13	826393.13	826393.13	3.50	2.86	-	-	2.66	24	45	13	25%	5.5398E-07	7.3251E-08	-	-
Car_Park_2	CP2_1122	LINE	826393.13	826393.13	826393.13	826393.13	3.50	2.86	-	-	2.66	24	45	13	25%	5.5398E-07	7.3251E-08	-	-
Car_Park_2	CP2_1123	LINE	826608.44	826410.35	826608.14	826429.88	12.00	2.86	-	-	2.66	24	1177	98	25%	1.5833E-07	2.1360E-08	-	-

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Appendix 4.6 Calculation of Start Emissions

Emission Source Listing in AERMOD
(Cold Start Operation Phase)

Carports	Source ID	Type	X Start	Y Start	X End	Y End	Road Width (m)	Release Height (mAG)	No. of Vertices	Synrt	Sanit	Operation Period (hr)	Area (m ²)	Travel Distance outside Bus Terminus (m)	Flow Percentage (%)	NO Emission Rate (g/s or g/m ³ /s)	NO _x Emission Rate (g/s or g/m ³ /s)	RSP Emission Rate (g/s or g/m ³ /s)	FSP Emission Rate (g/s or g/m ³ /s)
Car_Park_1_2	CP1_2112	LINE	826702.48	823919.18	826714.22	823892.62	3.50	2.58	-	-	2.40	24	102	29	100%	2.5493E-07	9.9342E-08	-	-
Car_Park_1_2	CP1_2113	LINE	826714.22	823892.62	826722.05	823889.78	3.50	2.58	-	-	2.40	24	20	20	100%	2.5493E-07	9.9342E-08	-	-
Car_Park_1_2	CP1_2114	LINE	826722.05	823889.78	826724.61	823878.05	3.50	2.58	-	-	2.40	24	20	20	100%	2.5493E-07	9.9342E-08	-	-
Car_Park_1_2	CP1_2115	LINE	826724.61	823889.78	826733.05	823880.35	3.50	2.58	-	-	2.40	24	20	20	100%	2.5493E-07	9.9342E-08	-	-
Car_Park_1_2	CP1_2116	LINE	826733.05	823887.35	826738.95	823866.28	3.50	2.58	-	-	2.40	24	30	11	75%	1.9120E-07	7.435E-08	-	-
Car_Park_1_2	CP1_2117	LINE	826738.95	823866.28	826740.11	823850.11	3.50	2.58	-	-	2.40	24	30	11	75%	1.9120E-07	7.435E-08	-	-
Car_Park_1_2	CP1_2118	LINE	826740.11	823850.11	826749.98	823844.98	3.50	2.58	-	-	2.40	24	30	11	75%	1.9120E-07	7.435E-08	-	-
Car_Park_1_2	CP1_2119	LINE	826749.98	823844.98	826750.10	823831.20	3.50	2.58	-	-	2.40	24	30	10	75%	1.9120E-07	7.435E-08	-	-
Car_Park_1_2	CP1_2120	LINE	826750.10	823831.20	826759.98	823826.98	3.50	2.58	-	-	2.40	24	30	10	75%	1.9120E-07	7.435E-08	-	-
Car_Park_1_2	CP1_2121	LINE	826759.98	823826.98	826763.09	823807.16	3.50	2.58	-	-	2.40	24	640	185	75%	1.9120E-07	7.435E-08	-	-
Car_Park_1_2	CP1_2122	LINE	826763.09	823807.16	826765.98	823790.35	3.50	2.58	-	-	2.40	24	100	29	75%	1.9120E-07	7.435E-08	-	-
Car_Park_1_2	CP1_2123	LINE	826765.98	823790.35	826768.98	823764.48	3.50	2.58	-	-	2.40	24	50	18	75%	1.9120E-07	7.435E-08	-	-
Car_Park_1_2	CP1_2124	LINE	826768.98	823764.48	826770.55	823744.82	3.50	2.58	-	-	2.40	24	90	27	75%	1.9120E-07	7.435E-08	-	-
Car_Park_1_2	CP1_2125	LINE	826770.55	823744.82	826773.85	823724.85	3.50	2.58	-	-	2.40	24	130	43	75%	1.9120E-07	7.435E-08	-	-
Car_Park_1_2	CP1_2126	LINE	826773.85	823724.85	826776.87	823704.99	3.50	2.58	-	-	2.40	24	230	66	75%	1.9120E-07	7.435E-08	-	-
Car_Park_1_2	CP1_2127	LINE	826776.87	823704.99	826780.55	823680.55	3.50	2.58	-	-	2.40	24	230	66	75%	1.9120E-07	7.435E-08	-	-
Car_Park_1_2	CP1_2128	LINE	826780.55	823680.55	826783.22	823659.11	3.50	2.58	-	-	2.40	24	440	97	75%	1.5566E-08	2.168E-08	-	-
Car_Park_1_2	CP1_2129	LINE	826783.22	823659.11	826784.98	823639.98	3.50	2.58	-	-	2.40	24	288	32	75%	1.5566E-08	2.168E-08	-	-
Car_Park_1_2	CP1_2130	LINE	826784.98	823639.98	826785.32	823619.08	3.50	2.58	-	-	2.40	24	120	18	75%	1.5566E-08	2.168E-08	-	-
Car_Park_1_2	CP1_2131	LINE	826785.32	823619.08	826786.44	823601.01	3.50	2.58	-	-	2.40	24	60	10	75%	1.5566E-08	2.168E-08	-	-
Car_Park_1_2	CP1_2132	LINE	826786.44	823601.01	826788.78	823584.34	3.50	2.58	-	-	2.40	24	130	13	240%	6.1733E-08	2.4769E-08	-	-
Car_Park_1_2	CP1_2133	LINE	826788.78	823584.34	826789.95	823569.95	3.50	2.58	-	-	2.40	24	50	13	25%	6.1733E-08	2.4769E-08	-	-
Car_Park_1_2	CP1_2134	LINE	826789.95	823569.95	826794.98	823549.98	3.50	2.58	-	-	2.40	24	20	20	100%	6.1733E-08	2.4769E-08	-	-
Car_Park_1_2	CP1_2135	LINE	826794.98	823549.98	826795.05	823536.05	3.50	2.58	-	-	2.40	24	40	14	25%	6.1733E-08	2.4769E-08	-	-
Car_Park_1_2	CP1_2136	LINE	826795.05	823536.05	826796.74	823516.74	3.50	2.58	-	-	2.40	24	44	13	25%	6.1733E-08	2.4769E-08	-	-
Car_Park_1_2	CP1_2137	LINE	826796.74	823516.74	826798.77	823498.77	3.50	2.58	-	-	2.40	24	44	13	25%	6.1733E-08	2.4769E-08	-	-
Car_Park_1_2	CP1_2138	LINE	826798.77	823498.77	826800.46	823480.46	3.50	2.58	-	-	2.40	24	282	230	25%	1.8098E-08	7.2291E-08	-	-
Car_Park_1_2	CP1_2139	LINE	826800.46	823480.46	826801.84	823461.84	3.50	2.58	-	-	2.40	24	120	34	25%	1.8098E-08	7.2291E-08	-	-
Car_Park_1_2	CP1_2140	LINE	826801.84	823461.84	826803.76	823443.76	3.50	2.58	-	-	2.40	24	800	850	25%	1.8098E-08	7.2291E-08	-	-
Car_Park_1_2	CP1_2141	LINE	826803.76	823443.76	826805.32	823425.72	3.50	2.58	-	-	2.40	24	1300	115	25%	1.8098E-08	7.2291E-08	-	-
Car_Park_1_2	CP1_2142	LINE	826805.32	823425.72	826807.99	823407.99	3.50	2.58	-	-	2.40	24	243	18	25%	1.8098E-08	7.2291E-08	-	-
Car_Park_1_2	CP1_2143	LINE	826807.99	823407.99	826810.24	823390.24	3.50	2.62	-	-	2.43	24	154	44	100%	2.6217E-07	6.9793E-08	-	-
Car_Park_1_2	CP1_2144	LINE	826810.24	823390.24	826812.24	823372.24	3.50	2.62	-	-	2.43	24	30	30	100%	2.6217E-07	6.9793E-08	-	-
Car_Park_1_2	CP1_2145	LINE	826812.24	823372.24	826814.24	823354.24	3.50	2.62	-	-	2.43	24	41	12	100%	2.6217E-07	6.9793E-08	-	-
Car_Park_1_2	CP1_2146	LINE	826814.24	823354.24	826816.48	823336.48	3.50	2.62	-	-	2.43	24	130	34	100%	2.6217E-07	6.9793E-08	-	-
Car_Park_1_2	CP1_2147	LINE	826816.48	823336.48	826819.38	823318.38	3.50	2.62	-	-	2.43	24	130	34	100%	2.6217E-07	6.9793E-08	-	-
Car_Park_1_2	CP1_2148	LINE	826819.38	823318.38	826821.98	823300.98	3.50	2.62	-	-	2.43	24	130	34	100%	2.6217E-07	6.9793E-08	-	-
Car_Park_1_2	CP1_2149	LINE	826821.98	823300.98	826824.35	823283.35	3.50	2.62	-	-	2.43	24	130	34	100%	2.6217E-07	6.9793E-08	-	-
Car_Park_1_2	CP1_2150	LINE	826824.35	823283.35	826826.48	823265.48	3.50	2.62	-	-	2.43	24	130	34	100%	2.6217E-07	6.9793E-08	-	-
Car_Park_1_2	CP1_2151	LINE	826826.48	823265.48	826828.78	823247.78	3.50	2.62	-	-	2.43	24	130	34	100%	2.6217E-07	6.9793E-08	-	-
Car_Park_1_2	CP1_2152	LINE	826828.78	823247.78	826831.14	823229.14	3.50	2.62	-	-	2.43	24	130	34	100%	2.6217E-07	6.9793E-08	-	-
Car_Park_1_2	CP1_2153	LINE	826831.14	823229.14	826833.64	823210.64	3.50	2.62	-	-	2.43	24	130	34	100%	2.6217E-07	6.9793E-08	-	-
Car_Park_1_2	CP1_2154	LINE	826833.64	823210.64	826836.35	823192.35	3.50	2.62	-	-	2.43	24	130	34	100%	2.6217E-07	6.9793E-08	-	-
Car_Park_1_2	CP1_2155	LINE	826836.35	823192.35	826839.18	823173.18	3.50	2.62	-	-	2.43	24	130	34	100%	2.6217E-07	6.9793E-08	-	-
Car_Park_1_2	CP1_2156	LINE	826839.18	823173.18	826842.05	823153.05	3.50	2.62	-	-	2.43	24	130	34	100%	2.6217E-07	6.9793E-08	-	-
Car_Park_1_2	CP1_2157	LINE	826842.05	823153.05	826845.05	823132.05	3.50	2.62	-	-	2.43	24	130	34	100%	2.6217E-07	6.9793E-08	-	-
Car_Park_1_2	CP1_2158	LINE	826845.05	823132.05	826848.18	823110.18	3.50	2.62	-	-	2.43	24	130	34	100%	2.6217E-07	6.9793E-08	-	-
Car_Park_1_2	CP1_2159	LINE	826848.18	823110.18	826851.42	823087.42	3.50	2.62	-	-	2.43	24	130	34	100%	2.6217E-07	6.9793E-08	-	-
Car_Park_1_2	CP1_2160	LINE	826851.42	823087.42	826854.85	823063.85	3.50	2.62	-	-	2.43	24	130	34	100%	2.6217E-07	6.9793E-08	-	-
Car_Park_1_2	CP1_2161	LINE	826854.85	823063.85	826858.45	823039.45	3.50	2.62	-	-	2.43	24	270	23	75%	5.7508E-08	1.5267E-08	-	-
Car_Park_1_2	CP1_2162	LINE	826858.45	823039.45	826862.28	823014.28	3.50	2.62	-	-	2.43	24	240	24	240%	6.2002E-08	2.114E-08	-	-
Car_Park_1_2	CP1_2163	LINE	826862.28	823014.28	826866.35	822988.35	3.50	2.62	-	-	2.43	24	270	23	75%	5.7508E-08	1.5267E-08	-	-
Car_Park_1_2	CP1_2164	LINE	826866.35	822988.35	826870.65	822961.65	3.50	2.62	-	-	2.43	24	110	10	70%	8.6009E-08	2.137E-08	-	-
Car_Park_1_2	CP1_2165	LINE	826870.65	822961.65	826875.25	822934.25	3.50	2.62	-	-	2.43	24	140	18	75%	5.7508E-08	1.5267E-08	-	-
Car_Park_1_2	CP1_2166	LINE	826875.25	822934.25	826880.15	822906.15	3.50	2.62	-	-	2.43	24	70	14	5%	5.7508E-08	1.5267E-08	-	-
Car_Park_1_2	CP1_2167	LINE	826880.15	822906.15	826885.25	822877.25	3.50	2.62	-	-	2.43	24	160	18	5%	5.7508E-08	1.5267E-08	-	-
Car_Park_1_2	CP1_2168	LINE	826885.25	822877.25	826890.95	822847.95	3.50	2.62	-	-	2.43	24	40	10	5%	5.7508E-08	1.5267E-08	-	-
Car_Park_1_2	CP1_2169	LINE	826890.95	822847.95	826897.15	822817.15	3.50	2.62	-	-	2.43	24	140	18	5%	5.7508E-08	1.5267E-08	-	-
Car_Park_1_2	CP1_2170	LINE	826897.15	822817.15	826903.95	822786.95	3.50	2.62	-	-	2.43	24	60	10	5%	5.7508E-08	1.5267E-08	-	-
Car_Park_1_2	CP1_2171	LINE	826903.95	822786.95	826911.35	822755.35	3.50	2.62	-	-	2.43	24	40	10	5%	5.7508E-08	1.5267E-08	-	-
Car_Park_1_2	CP1_2172	LINE	826911.35	822755.35	826919.35	822723.35	3.50	2.62	-	-	2.43	24	40	10	5%	5.7508E-08	1.5267E-08	-	-
Car_Park_1_2	CP1_2173	LINE	826919.35	822723.35	826927.95	822690.95	3.50	2.62	-	-	2.43	24	29	8	25%	6.5343E-08	1.7448E-08	-	-
Car_Park_1_2																			

Appendix 4.6 Calculation of Start Emissions

Hourly Profile for CP1_1V01

Hour	NO	NO2	RSP	FSP
Hour 1	0.0000	0.0000	0.0000	0.0000
Hour 2	0.0046	0.0013	0.0481	0.0479
Hour 3	0.0000	0.0000	0.0000	0.0000
Hour 4	0.0000	0.0000	0.0000	0.0000
Hour 5	0.0083	0.0024	0.1000	0.0998
Hour 6	0.0038	0.0011	0.0502	0.0501
Hour 7	0.2045	0.2116	0.0787	0.0786
Hour 8	0.3235	0.2282	0.4817	0.4812
Hour 9	0.4391	0.3726	0.4193	0.4195
Hour 10	0.3078	0.2632	0.8168	0.8165
Hour 11	1.0000	1.0000	1.0000	1.0000
Hour 12	0.8322	0.9780	0.9163	0.9172
Hour 13	0.5900	0.6578	0.5929	0.5935
Hour 14	0.1469	0.1135	0.2811	0.2813
Hour 15	0.5302	0.4962	0.8557	0.8581
Hour 16	0.2329	0.2986	0.5742	0.5759
Hour 17	0.1714	0.1921	0.2960	0.2971
Hour 18	0.3588	0.3582	0.7843	0.7856
Hour 19	0.2095	0.1830	0.5954	0.5957
Hour 20	0.2941	0.2520	0.3873	0.3850
Hour 21	0.0145	0.0042	0.1012	0.1013
Hour 22	0.0486	0.0537	0.1300	0.1305
Hour 23	0.0050	0.0014	0.0422	0.0420
Hour 24	0.0000	0.0000	0.0000	0.0000

Hourly Profile for CP2_1V01

Hour	NO	NO2	RSP	FSP
Hour 1	0.3240	0.3740	0.3971	0.3977
Hour 2	0.0266	0.0372	0.0814	0.0818
Hour 3	0.0406	0.0714	0.0784	0.0787
Hour 4	0.0000	0.0000	0.0000	0.0000
Hour 5	0.0908	0.0972	0.1208	0.1200
Hour 6	0.0945	0.1338	0.2083	0.2085
Hour 7	0.0609	0.1071	0.1176	0.1180
Hour 8	0.2759	0.2867	0.3508	0.3508
Hour 9	0.3804	0.4537	0.4998	0.4986
Hour 10	0.4303	0.5339	0.7992	0.7978
Hour 11	0.1220	0.1820	0.2412	0.2410
Hour 12	0.2405	0.2644	0.2295	0.2294
Hour 13	0.0634	0.1116	0.1082	0.1079
Hour 14	0.0203	0.0357	0.0392	0.0393
Hour 15	0.3161	0.3865	0.3440	0.3440
Hour 16	1.0000	1.0000	1.0000	1.0000
Hour 17	0.1926	0.2669	0.4295	0.4286
Hour 18	0.0000	0.0000	0.0000	0.0000
Hour 19	0.0000	0.0000	0.0000	0.0000
Hour 20	0.0000	0.0000	0.0000	0.0000
Hour 21	0.1998	0.1928	0.1574	0.1574
Hour 22	0.0540	0.0624	0.1299	0.1298
Hour 23	0.0000	0.0000	0.0000	0.0000
Hour 24	0.0203	0.0357	0.0392	0.0393

Hourly Profile for CP1_1L06-CP1_1L33

Hour	NO	NO2	RSP	FSP
Hour 1	0.0000	0.0000	-	-
Hour 2	0.0000	0.0000	-	-
Hour 3	0.0000	0.0000	-	-
Hour 4	0.0000	0.0000	-	-
Hour 5	0.0000	0.0000	-	-
Hour 6	0.0000	0.0000	-	-
Hour 7	0.7797	0.7288	-	-
Hour 8	0.1198	0.1191	-	-
Hour 9	0.2226	0.2143	-	-
Hour 10	0.2341	0.2543	-	-
Hour 11	1.0000	1.0000	-	-
Hour 12	0.6257	0.7590	-	-
Hour 13	0.6678	0.8785	-	-
Hour 14	0.0000	0.0000	-	-
Hour 15	0.6060	0.5625	-	-
Hour 16	0.0000	0.0000	-	-
Hour 17	0.0173	0.0372	-	-
Hour 18	0.0000	0.0000	-	-
Hour 19	0.0693	0.1485	-	-
Hour 20	0.1921	0.2177	-	-
Hour 21	0.0000	0.0000	-	-
Hour 22	0.0000	0.0000	-	-
Hour 23	0.0000	0.0000	-	-
Hour 24	0.0000	0.0000	-	-

Hourly Profile for CP2_1L01-CP2_1L23

Hour	NO	NO2	RSP	FSP
Hour 1	0.2612	0.2456	-	-
Hour 2	0.0000	0.0000	-	-
Hour 3	0.0000	0.0000	-	-
Hour 4	0.0000	0.0000	-	-
Hour 5	0.1394	0.1627	-	-
Hour 6	0.0000	0.0000	-	-
Hour 7	0.0000	0.0000	-	-
Hour 8	0.0937	0.0749	-	-
Hour 9	0.1376	0.1868	-	-
Hour 10	0.2083	0.2613	-	-
Hour 11	0.0479	0.1362	-	-
Hour 12	0.2037	0.2357	-	-
Hour 13	0.0419	0.1192	-	-
Hour 14	0.0000	0.0000	-	-
Hour 15	0.3149	0.4124	-	-
Hour 16	1.0000	1.0000	-	-
Hour 17	0.0569	0.1620	-	-
Hour 18	0.0000	0.0000	-	-
Hour 19	0.0000	0.0000	-	-
Hour 20	0.0000	0.0000	-	-
Hour 21	0.1769	0.1596	-	-
Hour 22	0.0000	0.0000	-	-
Hour 23	0.0000	0.0000	-	-
Hour 24	0.0000	0.0000	-	-

Hourly Profile for CP1_1L01-CP1_1L05

Hour	NO	NO2	RSP	FSP
Hour 1	0.0000	0.0000	-	-
Hour 2	0.0000	0.0000	-	-
Hour 3	0.0000	0.0000	-	-
Hour 4	0.0000	0.0000	-	-
Hour 5	0.0000	0.0000	-	-
Hour 6	0.0000	0.0000	-	-
Hour 7	0.0000	0.0000	-	-
Hour 8	0.2386	0.2385	-	-
Hour 9	0.2304	0.2303	-	-
Hour 10	0.0000	0.0000	-	-
Hour 11	1.0000	1.0000	-	-
Hour 12	0.0000	0.0000	-	-
Hour 13	0.0000	0.0000	-	-
Hour 14	0.0000	0.0000	-	-
Hour 15	0.0000	0.0000	-	-
Hour 16	0.0000	0.0000	-	-
Hour 17	0.0000	0.0000	-	-
Hour 18	0.0000	0.0000	-	-
Hour 19	0.0000	0.0000	-	-
Hour 20	0.3313	0.3311	-	-
Hour 21	0.0000	0.0000	-	-
Hour 22	0.0000	0.0000	-	-
Hour 23	0.0000	0.0000	-	-
Hour 24	0.0000	0.0000	-	-

Appendix 4.6 Calculation of Start Emissions

Hourly Profile for CP3_1V01

Hour	NO	NO2	RSP	FSP
Hour 1	0.0000	0.0000	0.0000	0.0000
Hour 2	0.0000	0.0000	0.0000	0.0000
Hour 3	0.0000	0.0000	0.0000	0.0000
Hour 4	0.0000	0.0000	0.0000	0.0000
Hour 5	0.0000	0.0000	0.0000	0.0000
Hour 6	0.0000	0.0000	0.0000	0.0000
Hour 7	0.0000	0.0000	0.0000	0.0000
Hour 8	0.0000	0.0000	0.0000	0.0000
Hour 9	0.0000	0.0000	0.0000	0.0000
Hour 10	0.1729	0.1746	0.1259	0.1294
Hour 11	0.1595	0.1593	0.1135	0.1158
Hour 12	0.0000	0.0000	0.0000	0.0000
Hour 13	0.3434	0.3415	0.2767	0.2826
Hour 14	0.0000	0.0000	0.0000	0.0000
Hour 15	0.0000	0.0000	0.0000	0.0000
Hour 16	0.0000	0.0000	0.0000	0.0000
Hour 17	0.0000	0.0000	0.0000	0.0000
Hour 18	1.0000	1.0000	1.0000	1.0000
Hour 19	0.5733	0.5753	0.7088	0.7220
Hour 20	0.0000	0.0000	0.0000	0.0000
Hour 21	0.0000	0.0000	0.0000	0.0000
Hour 22	0.2066	0.2044	0.2134	0.1986
Hour 23	0.0000	0.0000	0.0000	0.0000
Hour 24	0.0000	0.0000	0.0000	0.0000

Hourly Profile for CP3_2V01

Hour	NO	NO2	RSP	FSP
Hour 1	0.9060	1.0000	0.8381	0.8384
Hour 2	0.1392	0.0921	0.2139	0.2133
Hour 3	0.1827	0.0204	0.0229	0.0230
Hour 4	0.2409	0.1067	0.0562	0.0558
Hour 5	0.0801	0.1093	0.0526	0.0526
Hour 6	0.3979	0.0983	0.2733	0.2740
Hour 7	0.4145	0.2761	0.4220	0.4216
Hour 8	0.5682	0.3786	0.5665	0.5628
Hour 9	0.5635	0.6009	0.4729	0.4688
Hour 10	0.6086	0.6690	0.5096	0.5067
Hour 11	0.2458	0.2831	0.2369	0.2371
Hour 12	0.3453	0.3786	0.3380	0.3386
Hour 13	0.5628	0.6473	0.5364	0.5365
Hour 14	0.0782	0.0810	0.0792	0.0793
Hour 15	0.7968	0.9965	0.6246	0.6263
Hour 16	0.6612	0.6975	0.5265	0.5227
Hour 17	0.2613	0.2381	0.2733	0.2598
Hour 18	0.6926	0.7819	0.7640	0.7506
Hour 19	0.5024	0.5005	0.6885	0.6887
Hour 20	0.3623	0.2176	0.2038	0.2035
Hour 21	0.8611	0.5359	0.8520	0.8511
Hour 22	0.9588	0.5638	0.6689	0.6656
Hour 23	0.9345	0.8983	1.0000	1.0000
Hour 24	1.0000	0.7670	0.8228	0.8227

Hourly Profile for CP3_1L01-CP3_1L38

Hour	NO	NO2	RSP	FSP
Hour 1	-	-	-	-
Hour 2	-	-	-	-
Hour 3	-	-	-	-
Hour 4	-	-	-	-
Hour 5	-	-	-	-
Hour 6	-	-	-	-
Hour 7	-	-	-	-
Hour 8	-	-	-	-
Hour 9	-	-	-	-
Hour 10	-	-	-	-
Hour 11	-	-	-	-
Hour 12	-	-	-	-
Hour 13	-	-	-	-
Hour 14	-	-	-	-
Hour 15	-	-	-	-
Hour 16	-	-	-	-
Hour 17	-	-	-	-
Hour 18	-	-	-	-
Hour 19	-	-	-	-
Hour 20	-	-	-	-
Hour 21	-	-	-	-
Hour 22	-	-	-	-
Hour 23	-	-	-	-
Hour 24	-	-	-	-

Hourly Profile for CP3_2L12-CP3_2L41

Hour	NO	NO2	RSP	FSP
Hour 1	0.4963	0.3769	-	-
Hour 2	0.0001	0.0002	-	-
Hour 3	0.0000	0.0000	-	-
Hour 4	0.0000	0.0000	-	-
Hour 5	0.1271	0.1272	-	-
Hour 6	0.0000	0.0000	-	-
Hour 7	0.0000	0.0000	-	-
Hour 8	0.1614	0.1615	-	-
Hour 9	0.5047	0.5049	-	-
Hour 10	0.6060	0.6060	-	-
Hour 11	0.1651	0.1652	-	-
Hour 12	0.1777	0.1778	-	-
Hour 13	0.3778	0.3778	-	-
Hour 14	0.0128	0.0127	-	-
Hour 15	0.2756	0.2755	-	-
Hour 16	0.3421	0.3420	-	-
Hour 17	0.2543	0.2544	-	-
Hour 18	0.2446	0.2447	-	-
Hour 19	0.2607	0.2609	-	-
Hour 20	0.1683	0.1683	-	-
Hour 21	0.0000	0.0000	-	-
Hour 22	0.2931	0.1993	-	-
Hour 23	1.0000	1.0000	-	-
Hour 24	0.4222	0.4224	-	-

Hourly Profile for CP3_2L01-CP3_2L11

Hour	NO	NO2	RSP	FSP
Hour 1	0.0000	0.0000	-	-
Hour 2	0.0000	0.0000	-	-
Hour 3	0.0000	0.0000	-	-
Hour 4	0.0000	0.0000	-	-
Hour 5	0.0000	0.0000	-	-
Hour 6	1.0000	1.0000	-	-
Hour 7	0.0000	0.0000	-	-
Hour 8	0.0000	0.0000	-	-
Hour 9	0.0000	0.0000	-	-
Hour 10	0.0000	0.0000	-	-
Hour 11	0.0000	0.0000	-	-
Hour 12	0.0000	0.0000	-	-
Hour 13	0.0000	0.0000	-	-
Hour 14	0.0000	0.0000	-	-
Hour 15	0.0000	0.0000	-	-
Hour 16	0.0000	0.0000	-	-
Hour 17	0.0000	0.0000	-	-
Hour 18	0.0000	0.0000	-	-
Hour 19	0.0000	0.0000	-	-
Hour 20	0.0000	0.0000	-	-
Hour 21	0.0000	0.0000	-	-
Hour 22	0.7129	0.7129	-	-
Hour 23	0.0000	0.0000	-	-
Hour 24	0.7129	0.7129	-	-

Appendix 4.6 Calculation of Start Emissions

Hourly Profile for CP3_3V01

Hour	NO	NO2	RSP	FSP
Hour 1	0.2559	0.2984	0.2522	0.2550
Hour 2	0.1536	0.1790	0.1513	0.1530
Hour 3	0.1532	0.1786	0.1513	0.1530
Hour 4	0.0000	0.0000	0.0000	0.0000
Hour 5	0.1021	0.1191	0.1009	0.1020
Hour 6	0.1534	0.1788	0.1513	0.1530
Hour 7	0.2555	0.2979	0.2522	0.2550
Hour 8	0.9715	0.8323	1.0000	1.0000
Hour 9	0.2633	0.2387	0.2590	0.2594
Hour 10	0.7662	0.6143	0.3322	0.3318
Hour 11	0.6635	0.6985	0.5921	0.5975
Hour 12	0.2568	0.2994	0.2522	0.2550
Hour 13	0.1534	0.1788	0.1513	0.1530
Hour 14	0.2046	0.2385	0.2017	0.2040
Hour 15	0.5114	0.5219	0.4153	0.4179
Hour 16	0.9706	1.0000	0.8256	0.8303
Hour 17	0.3077	0.3416	0.3077	0.3115
Hour 18	1.0000	0.9099	0.6213	0.6240
Hour 19	0.3082	0.3593	0.2522	0.2550
Hour 20	0.2052	0.2392	0.2017	0.2040
Hour 21	0.3601	0.4198	0.3026	0.3060
Hour 22	0.3069	0.3578	0.3026	0.3060
Hour 23	0.5132	0.5813	0.4590	0.4645
Hour 24	0.5669	0.6405	0.5094	0.5155

Hourly Profile for CP4_1V01

Hour	NO	NO2	RSP	FSP
Hour 1	0.2013	0.2651	0.2094	0.2099
Hour 2	0.3888	0.4707	0.4384	0.4389
Hour 3	0.0149	0.0029	0.0552	0.0553
Hour 4	0.0000	0.0000	0.0000	0.0000
Hour 5	0.0289	0.0057	0.1176	0.1183
Hour 6	0.0000	0.0000	0.0000	0.0000
Hour 7	0.0000	0.0000	0.0000	0.0000
Hour 8	0.1418	0.1965	0.1451	0.1454
Hour 9	0.0000	0.0000	0.0000	0.0000
Hour 10	0.9205	1.0000	0.8285	0.8277
Hour 11	1.0000	0.9217	1.0000	1.0000
Hour 12	0.0839	0.0995	0.1164	0.1167
Hour 13	0.0276	0.0054	0.0829	0.0833
Hour 14	0.1983	0.2436	0.2101	0.2103
Hour 15	0.2562	0.3342	0.2768	0.2777
Hour 16	0.4464	0.4697	0.6132	0.6140
Hour 17	0.1244	0.1347	0.2190	0.2194
Hour 18	0.0271	0.0053	0.1081	0.1085
Hour 19	0.0377	0.0074	0.1596	0.1602
Hour 20	0.0121	0.0024	0.0215	0.0214
Hour 21	0.0000	0.0000	0.0000	0.0000
Hour 22	0.0000	0.0000	0.0000	0.0000
Hour 23	0.5586	0.5359	0.3885	0.3881
Hour 24	0.0000	0.0000	0.0000	0.0000

Hourly Profile for CP3_3L08-CP3_3L44

Hour	NO	NO2	RSP	FSP
Hour 1	0.0710	0.1037	-	-
Hour 2	0.0432	0.0632	-	-
Hour 3	0.0001	0.0002	-	-
Hour 4	0.0000	0.0000	-	-
Hour 5	0.0000	0.0000	-	-
Hour 6	0.0248	0.0362	-	-
Hour 7	0.0219	0.0321	-	-
Hour 8	0.3559	0.3506	-	-
Hour 9	0.1200	0.1753	-	-
Hour 10	0.6061	0.4300	-	-
Hour 11	0.3206	0.4683	-	-
Hour 12	0.1786	0.2609	-	-
Hour 13	0.0217	0.0318	-	-
Hour 14	0.0374	0.0546	-	-
Hour 15	0.3702	0.5409	-	-
Hour 16	0.6845	1.0000	-	-
Hour 17	0.0956	0.1397	-	-
Hour 18	1.0000	0.7367	-	-
Hour 19	0.1917	0.2801	-	-
Hour 20	0.1108	0.1620	-	-
Hour 21	0.2900	0.4236	-	-
Hour 22	0.0619	0.0905	-	-
Hour 23	0.2286	0.3341	-	-
Hour 24	0.1839	0.2690	-	-

Hourly Profile for CP4_1L01-CP4_1L04

Hour	NO	NO2	RSP	FSP
Hour 1	0.2453	0.4266	-	-
Hour 2	0.0000	0.0000	-	-
Hour 3	0.0000	0.0000	-	-
Hour 4	0.0000	0.0000	-	-
Hour 5	0.0000	0.0000	-	-
Hour 6	0.0000	0.0000	-	-
Hour 7	0.0000	0.0000	-	-
Hour 8	0.0001	0.0002	-	-
Hour 9	0.0000	0.0000	-	-
Hour 10	0.8642	1.0000	-	-
Hour 11	0.7540	0.6849	-	-
Hour 12	0.0001	0.0002	-	-
Hour 13	0.0000	0.0000	-	-
Hour 14	0.1255	0.2181	-	-
Hour 15	0.0662	0.1152	-	-
Hour 16	0.1116	0.0859	-	-
Hour 17	0.0498	0.0866	-	-
Hour 18	0.0000	0.0000	-	-
Hour 19	0.0000	0.0000	-	-
Hour 20	0.0000	0.0000	-	-
Hour 21	0.0000	0.0000	-	-
Hour 22	0.0000	0.0000	-	-
Hour 23	1.0000	0.7413	-	-
Hour 24	0.0000	0.0000	-	-

Hourly Profile for CP3_3L01-CP3_3L07

Hour	NO	NO2	RSP	FSP
Hour 1	0.0000	0.0000	-	-
Hour 2	0.0000	0.0000	-	-
Hour 3	0.0000	0.0000	-	-
Hour 4	0.0000	0.0000	-	-
Hour 5	0.0000	0.0000	-	-
Hour 6	0.0000	0.0000	-	-
Hour 7	0.0000	0.0000	-	-
Hour 8	1.0000	1.0000	-	-
Hour 9	0.0000	0.0000	-	-
Hour 10	0.0000	0.0000	-	-
Hour 11	0.0000	0.0000	-	-
Hour 12	0.0000	0.0000	-	-
Hour 13	0.0000	0.0000	-	-
Hour 14	0.0000	0.0000	-	-
Hour 15	0.0000	0.0000	-	-
Hour 16	0.0000	0.0000	-	-
Hour 17	0.0000	0.0000	-	-
Hour 18	0.0000	0.0000	-	-
Hour 19	0.0000	0.0000	-	-
Hour 20	0.0000	0.0000	-	-
Hour 21	0.0000	0.0000	-	-
Hour 22	0.0000	0.0000	-	-
Hour 23	0.0000	0.0000	-	-
Hour 24	0.2578	0.2580	-	-

Appendix 4.6 Calculation of Start Emissions

Vertices of Area Source

Source ID	Vertex 1		Vertex 2		Vertex 3		Vertex 4		Vertex 5		Vertex 6		Vertex 7		Vertex 8		Vertex 9		Vertex 10	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
CP1_1V01	826486.86	824349.05	826509.04	824348.98	826520.54	824343.54	826558.16	824279.32	826535.49	824267.29	826518.82	824257.78	826489.22	824308.84	826481.81	824324.91	826478.91	824337.13	-	-
CP2_1V01	826596.13	824146.66	826568.09	824187.52	826587.01	824197.13	826616.95	824210.99	826639.94	824144.31	826651.01	824076.76	826637.02	824073.89	826631.71	824085.05	-	-	-	-
CP3_1V01	826657.46	824032.17	826678.86	824041.64	826685.68	824026.23	826664.28	824016.76	-	-	-	-	-	-	-	-	-	-	-	-
CP3_2V01	826676.53	824019.01	826724.78	823909.86	826711.75	823904.10	826663.50	824013.25	-	-	-	-	-	-	-	-	-	-	-	-
CP3_3V01	826708.76	823986.00	826718.99	823990.53	826724.51	823978.04	826714.28	823973.51	-	-	-	-	-	-	-	-	-	-	-	-
CP4_1V01	826484.95	823781.50	826534.34	823793.57	826607.49	823801.82	826667.22	823807.47	826731.46	823821.48	826779.11	823797.62	826800.48	823777.90	826781.33	823735.19	826761.70	823728.40	826716.41	823731.79

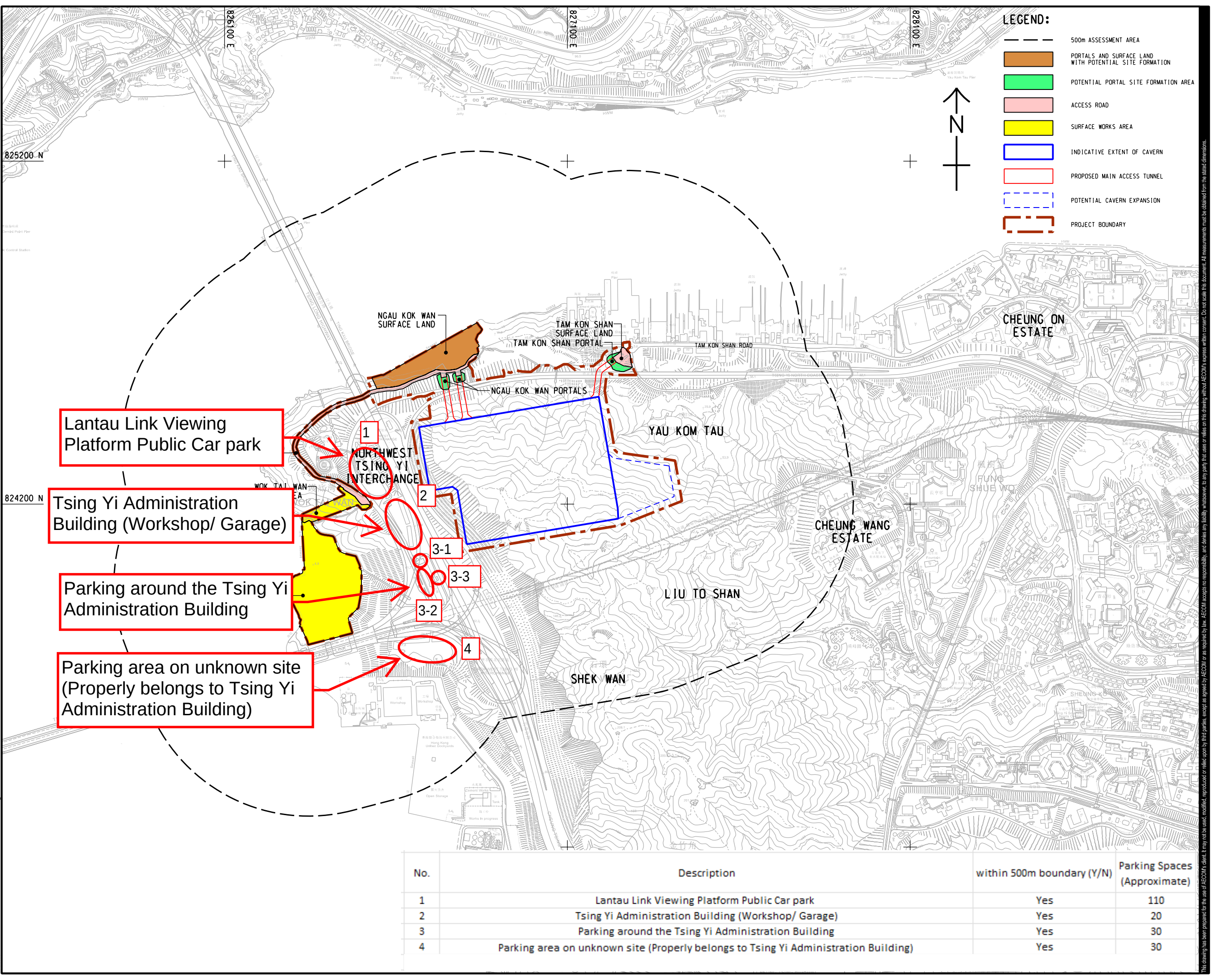
Appendix 4.6 Calculation of Start Emissions

Vertices of Area Source

Source ID	Vertex 11		Vertex 12		Vertex 13		Vertex 14		Vertex 15		Vertex 16		Vertex 17		Vertex 18		Vertex 19		Vertex 20	
	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y	X	Y
CP1_1V01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CP2_1V01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CP3_1V01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CP3_2V01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CP3_3V01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CP4_1V01	826694.77	823748.30	826653.67	823758.58	826631.09	823749.47	826608.73	823767.00	826584.11	823767.59	826569.43	823749.73	826560.18	823724.18	826552.75	823713.31	826498.72	823697.20	826498.73	823734.03

ISO A1 594mm x 841mm
Approved:
Checked:
Designer:
Project Management Initials:

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STATUS

SCALE
A3 1: 10000

DIMENSION UNIT
METRES

KEY PLAN

PROJECT NO.
60733229

AGREEMENT NO.
CE 79/2023 (GE)

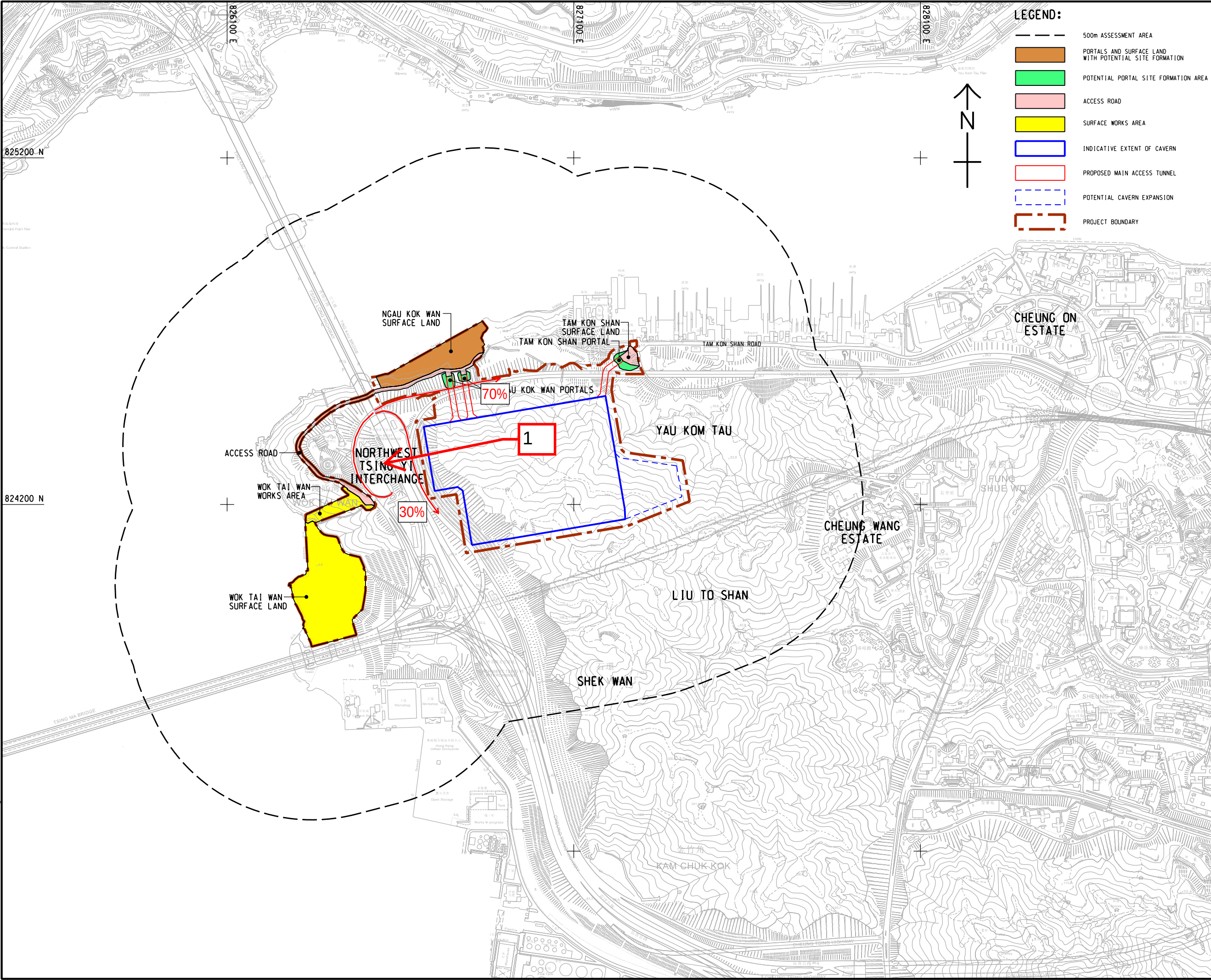
SHEET TITLE
Location of Cold Start
Survey

SHEET NUMBER
60733229/SK7035

No.	Description	within 500m boundary (Y/N)	Parking Spaces (Approximate)
1	Lantau Link Viewing Platform Public Car park	Yes	110
2	Tsing Yi Administration Building (Workshop/ Garage)	Yes	20
3	Parking around the Tsing Yi Administration Building	Yes	30
4	Parking area on unknown site (Properly belongs to Tsing Yi Administration Building)	Yes	30

ISO A1 594mm x 841mm
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- LEGEND:**
- 500m ASSESSMENT AREA
 - PORTALS AND SURFACE LAND WITH POTENTIAL SITE FORMATION
 - POTENTIAL PORTAL SITE FORMATION AREA
 - ACCESS ROAD
 - SURFACE WORKS AREA
 - INDICATIVE EXTENT OF CAVERN
 - PROPOSED MAIN ACCESS TUNNEL
 - POTENTIAL CAVERN EXPANSION
 - PROJECT BOUNDARY

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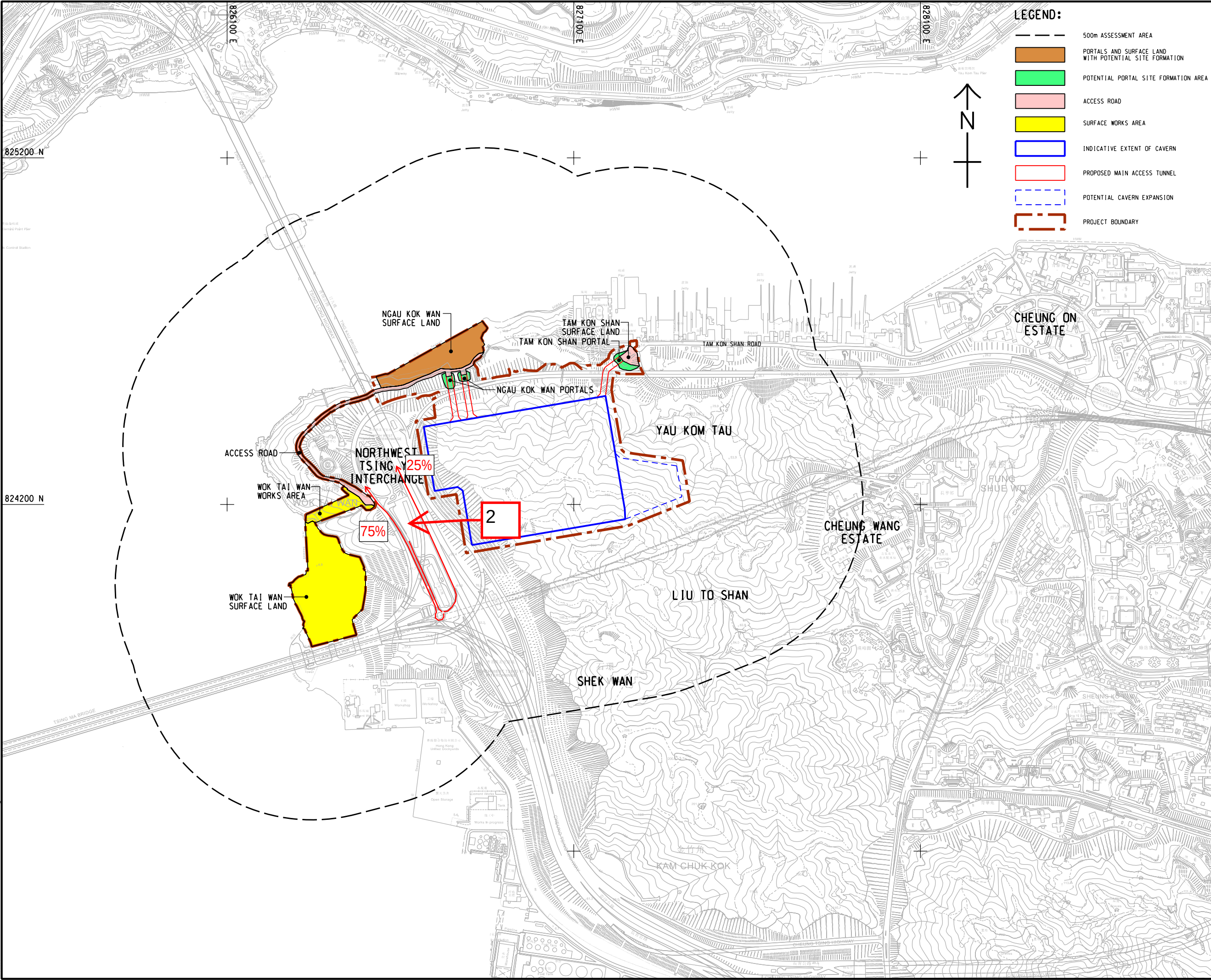
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SHEET TITLE
700m Egress for L1

SHEET NUMBER
60733229/SK7035

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Project Management Initials:

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AGREEMENT NO.
CE 79/2023 (GE)

SHEET TITLE
700m Egress for L2

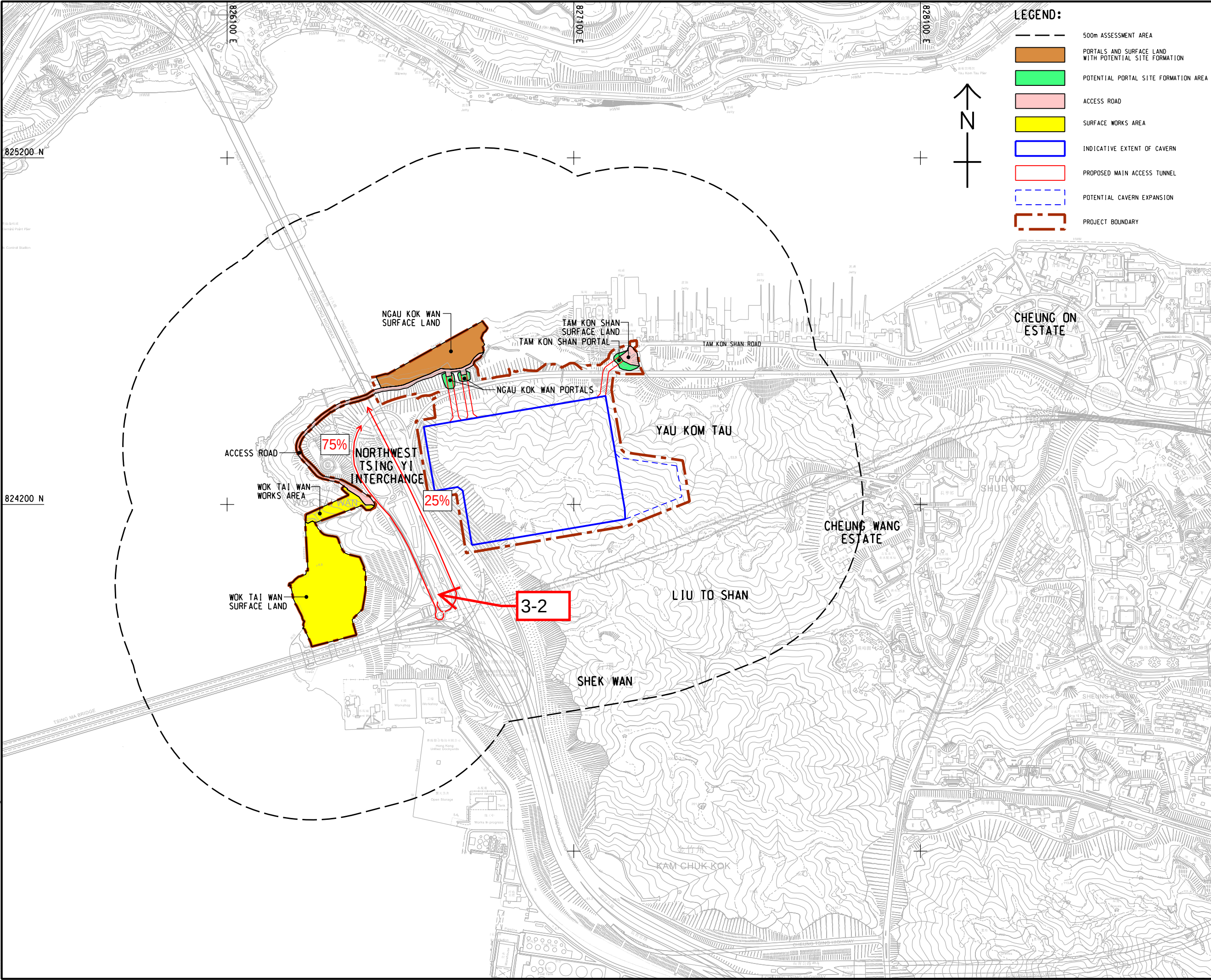
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60733229/SK7035



60733229/SK7035

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SCALE
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DIMENSION UNIT
METRES

KEY PLAN

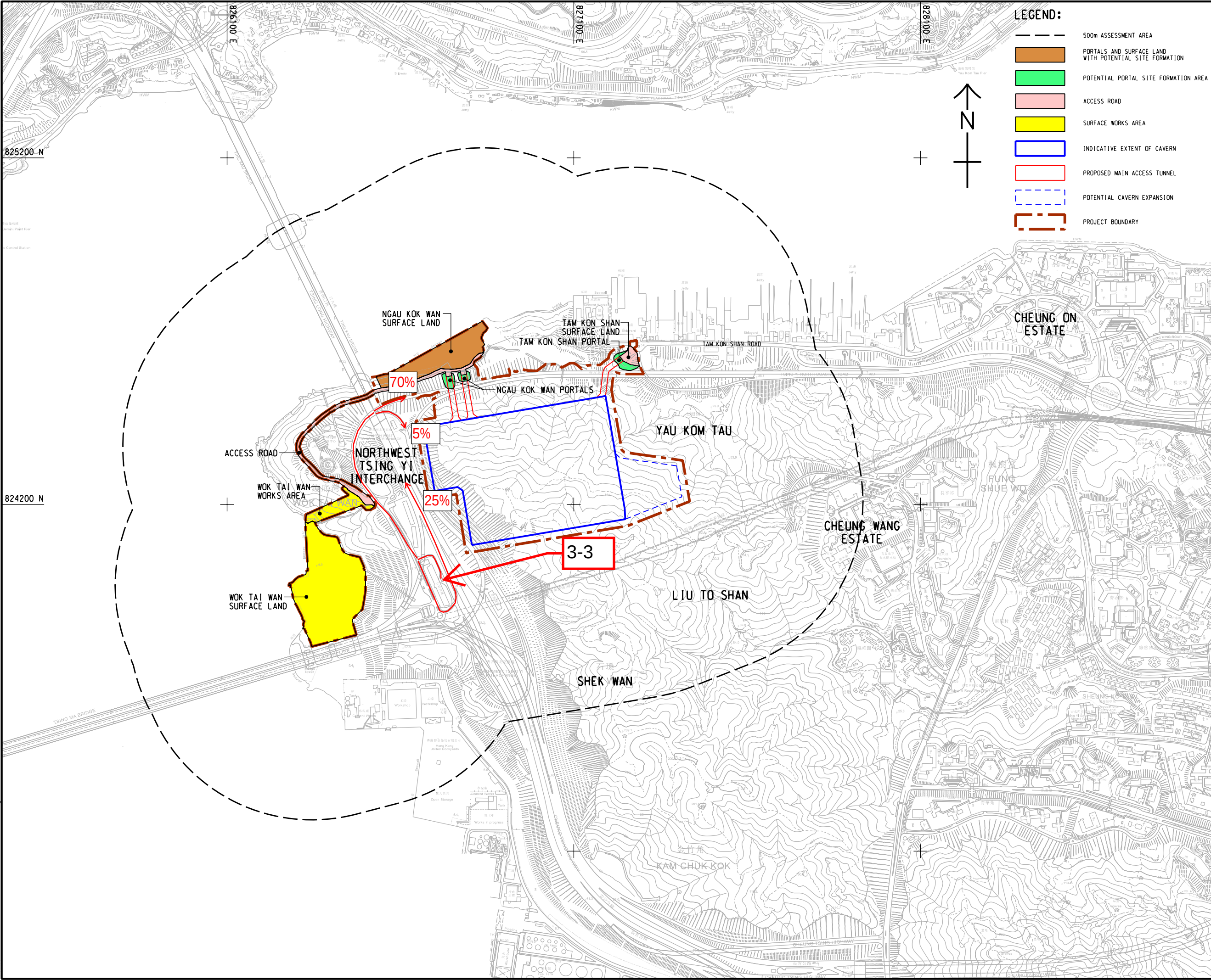
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CE 79/2023 (GE)

SHEET TITLE
700m Egress for L3-2

SHEET NUMBER
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DIMENSION UNIT
METRES

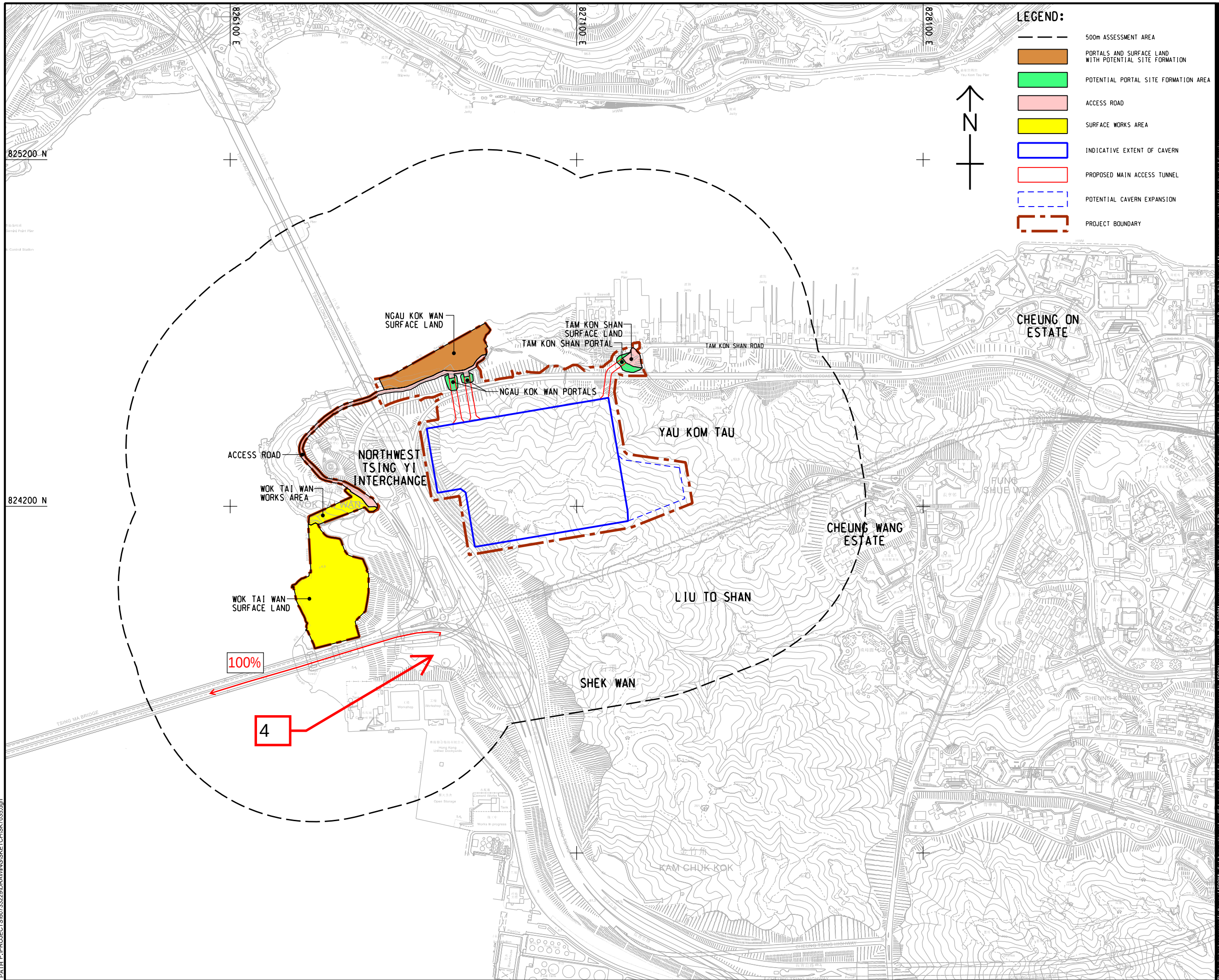
KEY PLAN

PROJECT NO.
60733229

AGREEMENT NO.
CE 79/2023 (GE)

SHEET TITLE
700m Egress for L3-3

SHEET NUMBER
60733229/SK7035



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修訂	日期	內容摘要	校核

STATUS

SCALE 比例	DIMENSION UNIT 尺寸單位
A3 1:10000	METRES

KEY PLAN

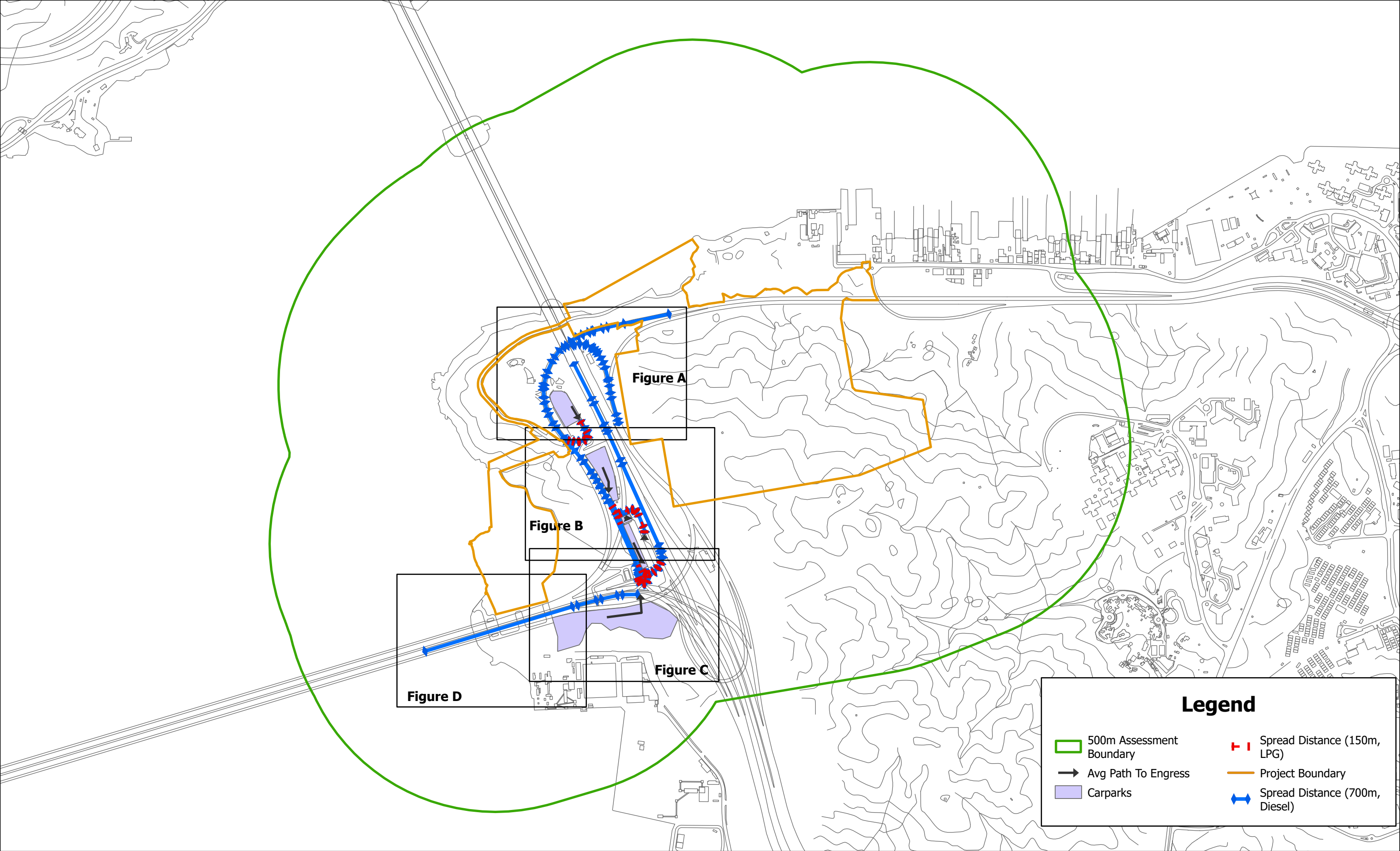
PROJECT NO. 項目編號	AGREEMENT NO. 協議編號
60733229	CE 79/2023 (GE)

SHEET TITLE
図紙名稱

700m Egress for L4

SHEET NUMBER

60733229/SK7035

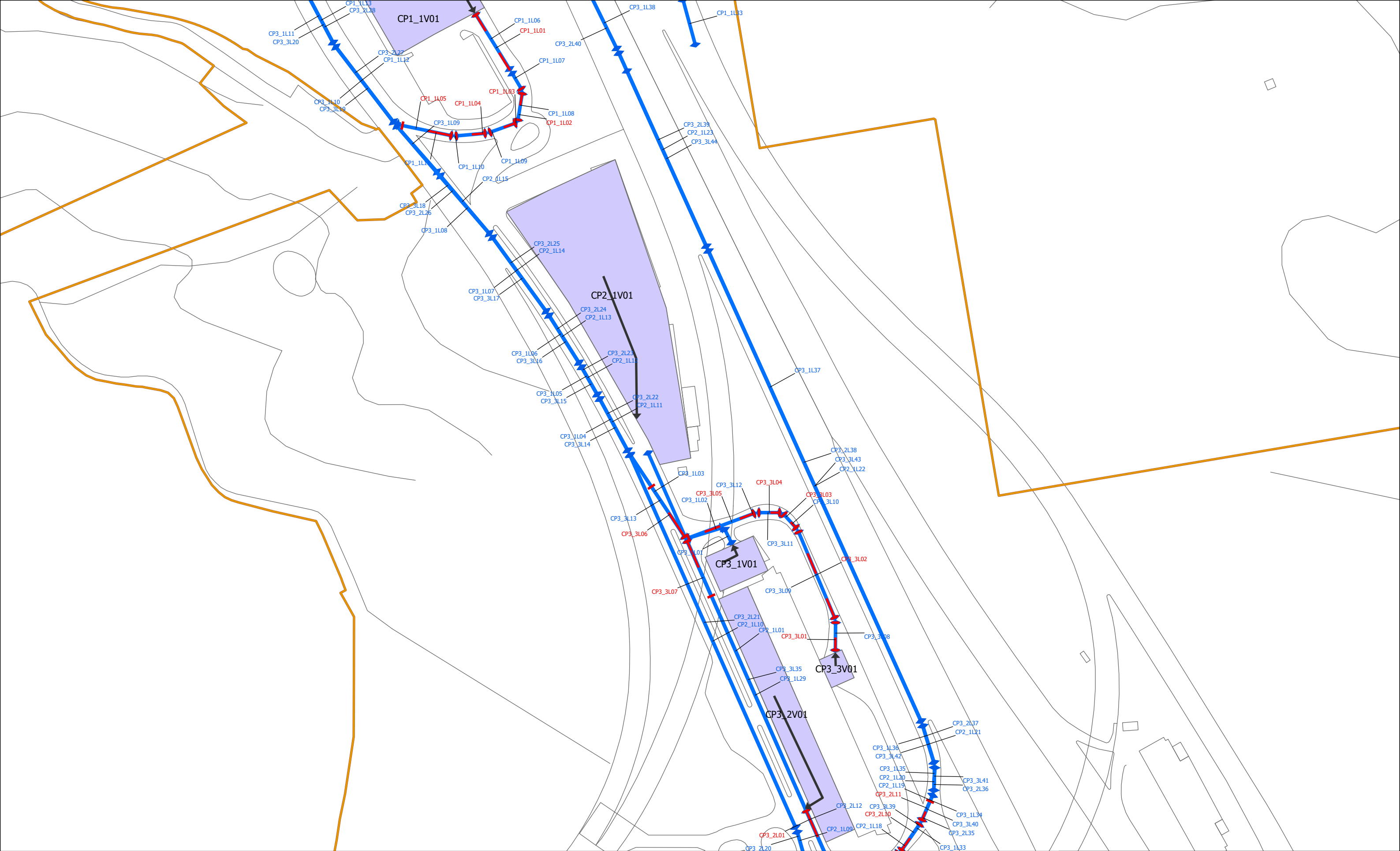


Locations of Start Emission Sources (Key Plan)

0 0.15 0.3 0.6 Kilometers

Legend

- | | |
|--------------------------|--------------------------------|
| 500m Assessment Boundary | Spread Distance (150m, LPG) |
| Avg Path To Egress | Project Boundary |
| Carparks | Spread Distance (700m, Diesel) |

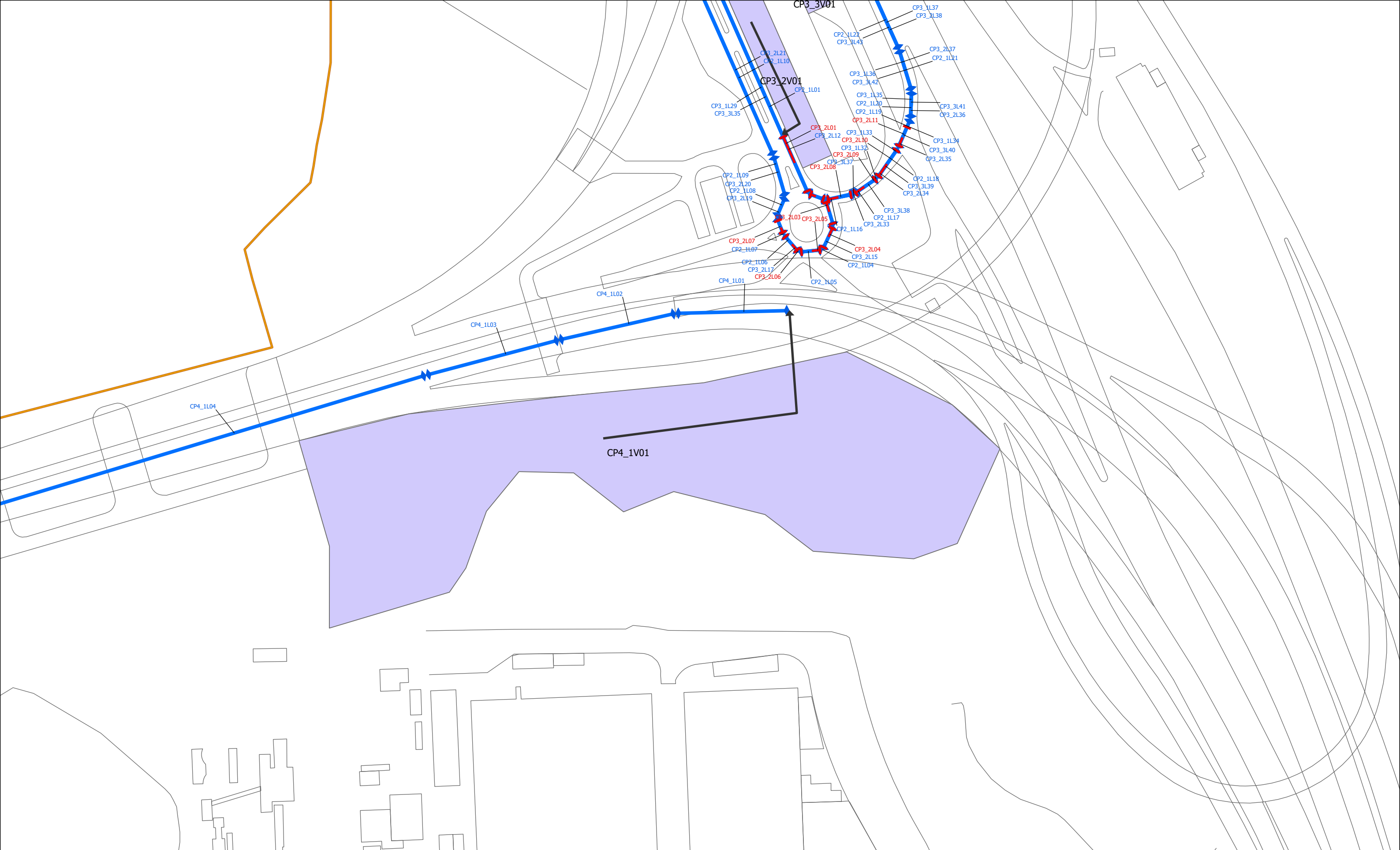


0 0.03 0.05 0.1 Kilometers

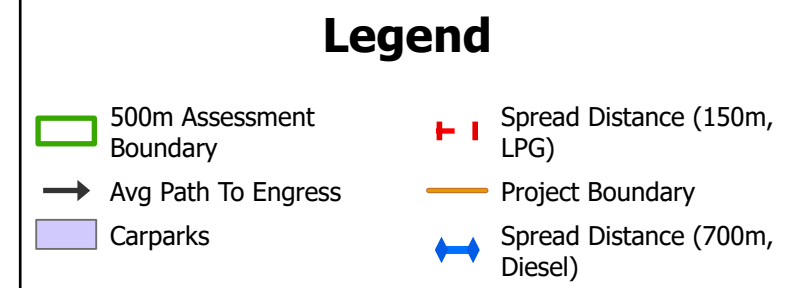
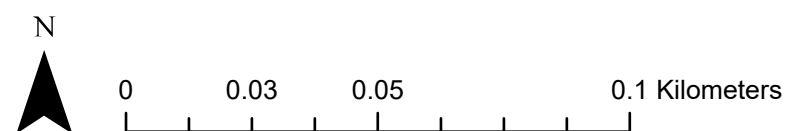
Locations of Start Emission Sources
Figure B

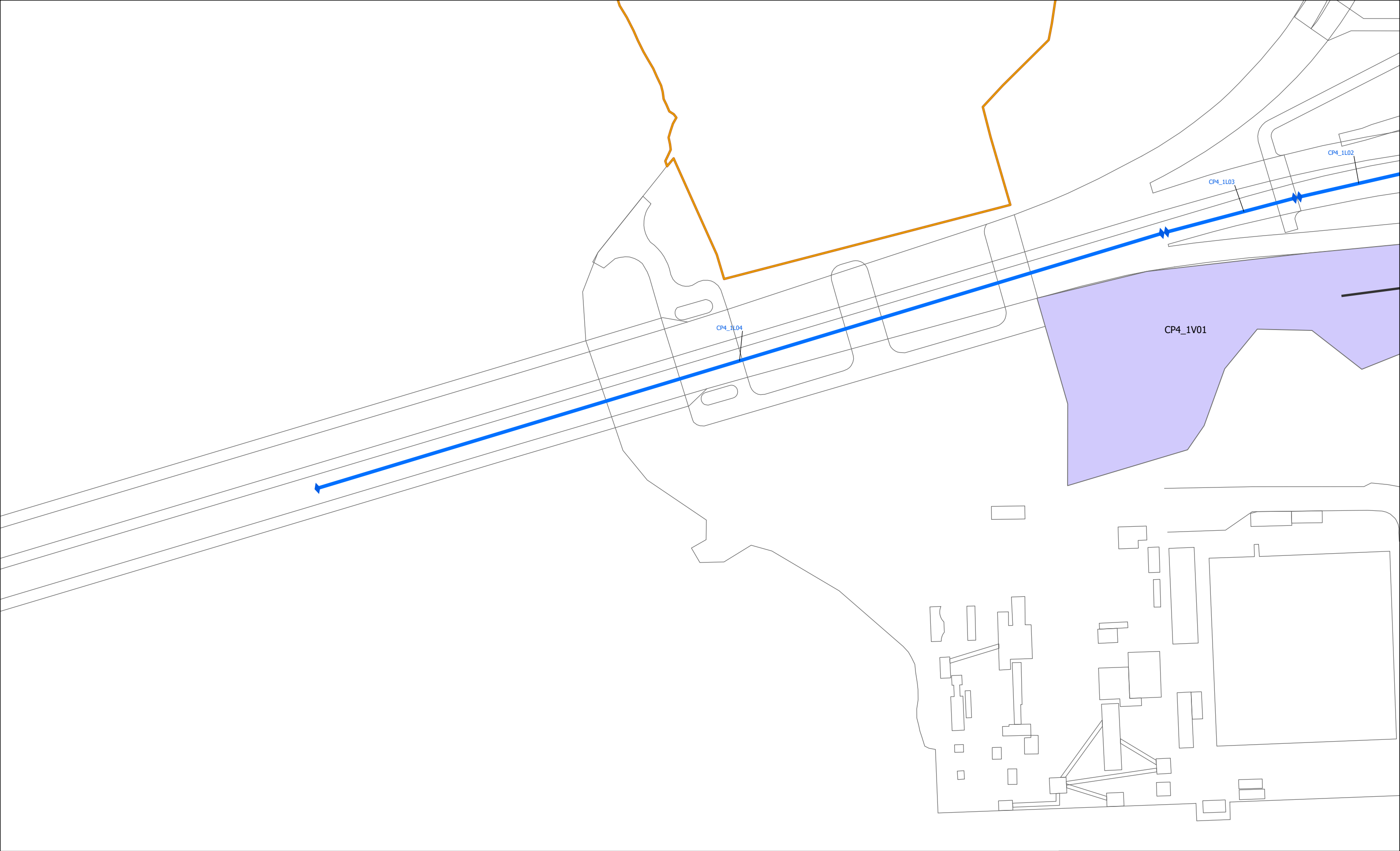
Legend

- 500m Assessment Boundary
- Avg Path To Engrss
- Carparks
- Spread Distance (150m, LPG)
- Project Boundary
- Spread Distance (700m, Diesel)



Locations of Start Emission Sources Figure C





Locations of Start Emission Sources
Figure D



0 0.03 0.05 0.1 Kilometers

Legend

- | | |
|--|--|
|  500m Assessment Boundary |  Spread Distance (150m, LPG) |
|  Avg Path To Engrss |  Project Boundary |
|  Carparks |  Spread Distance (700m, Diesel) |

Appendix 4.7

Appendix 4.7 Determination of Surface Characteristics

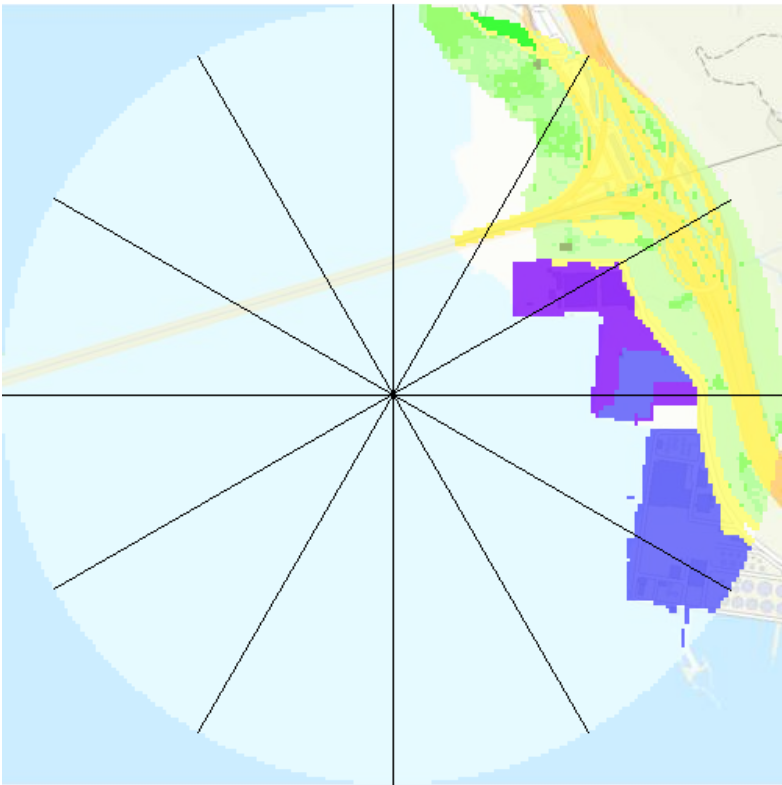
Surface Characteristics for the Assessment Area of Grid 30_36

Angle	Sector(degrees in clockwise)	Inverse-Distance ⁴	Surface Roughness (m) ^{3,4}	Albedo ^{1,4}	Bowen Ratio ^{2,4}
0	0 - 30	5.176	0.006	0.142	0.365
30	30 - 60	5.318	0.033		
60	60 - 90	5.176	0.016		
90	90 - 120	5.176	0.009		
120	120 - 150	5.318	0.002		
150	150 - 180	5.176	0.001		
180	180 - 210	5.176	0.001		
210	210 - 240	5.318	0.001		
240	240 - 270	5.176	0.001		
270	270 - 300	5.176	0.001		
300	300 - 330	5.318	0.001		
330	330 - 360	5.176	0.001		

- Notes of Surface Characteristics of Grid 30_36:
- 1. Reference to AERMOD Implementation Guide, the determination of the albedo should be based on a simple unweighted arithmetic mean (i.e., no direction or distance dependency) for the same representative domain as defined for Bowen ratio, with a default domain defined by a 10km by 10km region centered at the measurement site.
 - 2. Reference to AERMOD Implementation Guide, the determination of the Bowen ratio should be based on a simple unweighted geometric mean (i.e., no direction or distance dependency) for a representative domain, with a default domain defined by a 10km by 10km region centered on the measurement site.
 - 3. Surface roughness length is based on an upwind distance of 1km relative to the grid.
 - 4. The parameters such as Inverse-Distance, Albedo, Bowen Ratio, and Surface Roughness are extracted from the Smart Air Modelling Platform (SAMP) version 2.1 developed by the Hong Kong Environmental Protection Department (HKEPD).

1km Boundary from Grid 30_36

Center: X=826125, Y=823355, Z=1.3; Met Year=2019;

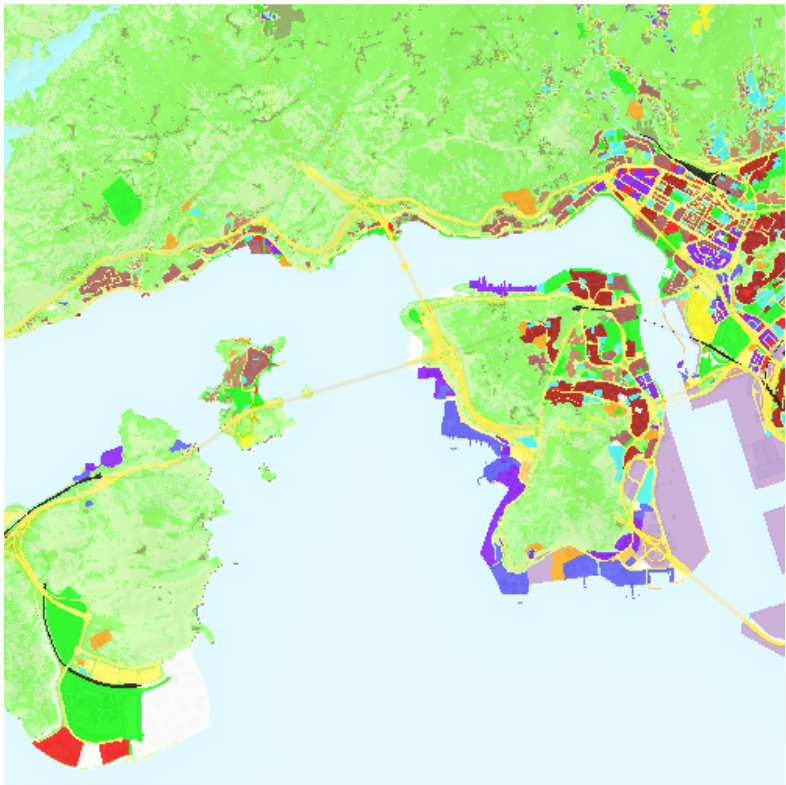


Land Utilization in Hong Kong 2024

- Note:
- [1] The land utilization area is determined based on the Hong Kong Planning Department Classification.
 - [2] The spatial center of each grid is determined by the location of the air-sensitive receivers within that grid. AERMET files are generated by inputting the locations of air-sensitive receivers (ASRs) and the site boundary using the SAMP version 2.1.

10km by 10km Region Centered at Grid 30_36

Center: X=826125, Y=823355, Z=1.3; Met Year=2019;



Land Utilization in Hong Kong 2024

Appendix 4.7 Determination of Surface Characteristics

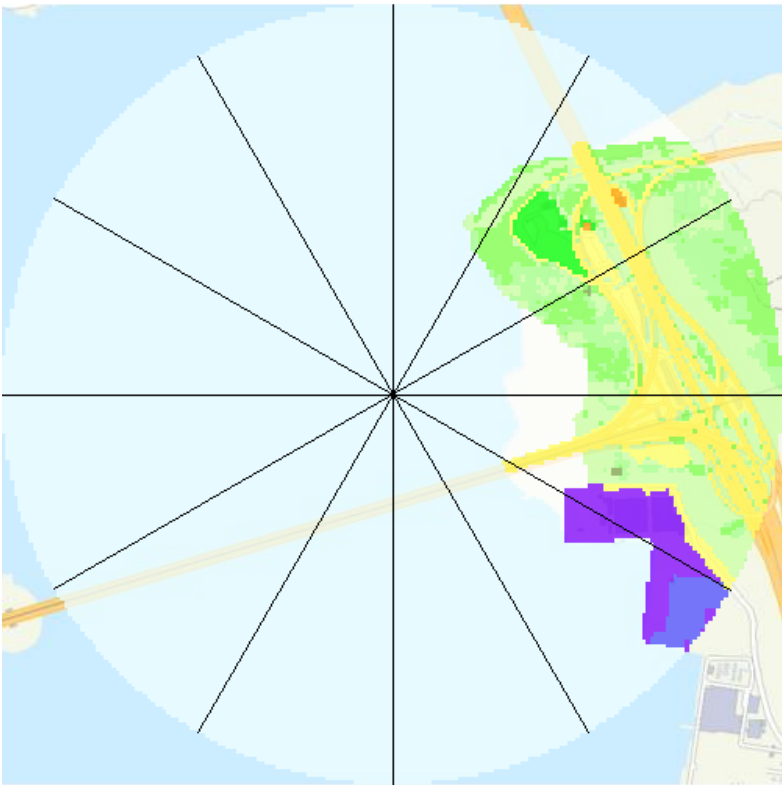
Surface Characteristics for the Assessment Area of Grid 30_37

Angle	Sector(degrees in clockwise)	Inverse-Distance ⁴	Surface Roughness (m) ^{3,4}	Albedo ^{1,4}	Bowen Ratio ^{2,4}
0	0 - 30	5.176	0.001	0.145	0.404
30	30 - 60	5.318	0.016		
60	60 - 90	5.176	0.046		
90	90 - 120	5.176	0.050		
120	120 - 150	5.318	0.003		
150	150 - 180	5.176	0.001		
180	180 - 210	5.176	0.001		
210	210 - 240	5.318	0.001		
240	240 - 270	5.176	0.001		
270	270 - 300	5.176	0.001		
300	300 - 330	5.318	0.001		
330	330 - 360	5.176	0.001		

- Notes of Surface Characteristics of Grid 30_37:
- 1. Reference to AERMOD Implementation Guide, the determination of the albedo should be based on a simple unweighted arithmetic mean (i.e., no direction or distance dependency) for the same representative domain as defined for Bowen ratio, with a default domain defined by a 10km by 10km region centered at the measurement site.
 - 2. Reference to AERMOD Implementation Guide, the determination of the Bowen ratio should be based on a simple unweighted geometric mean (i.e., no direction or distance dependency) for a representative domain, with a default domain defined by a 10km by 10km region centered on the measurement site.
 - 3. Surface roughness length is based on an upwind distance of 1km relative to the grid.
 - 4. The parameters such as Inverse-Distance, Albedo, Bowen Ratio, and Surface Roughness are extracted from the Smart Air Modelling Platform (SAMP) version 2.1 developed by the Hong Kong Environmental Protection Department (HKEPD).

1km Boundary from Grid 30_37

Center: X=825995, Y=823935, Z=1.3; Met Year=2019;

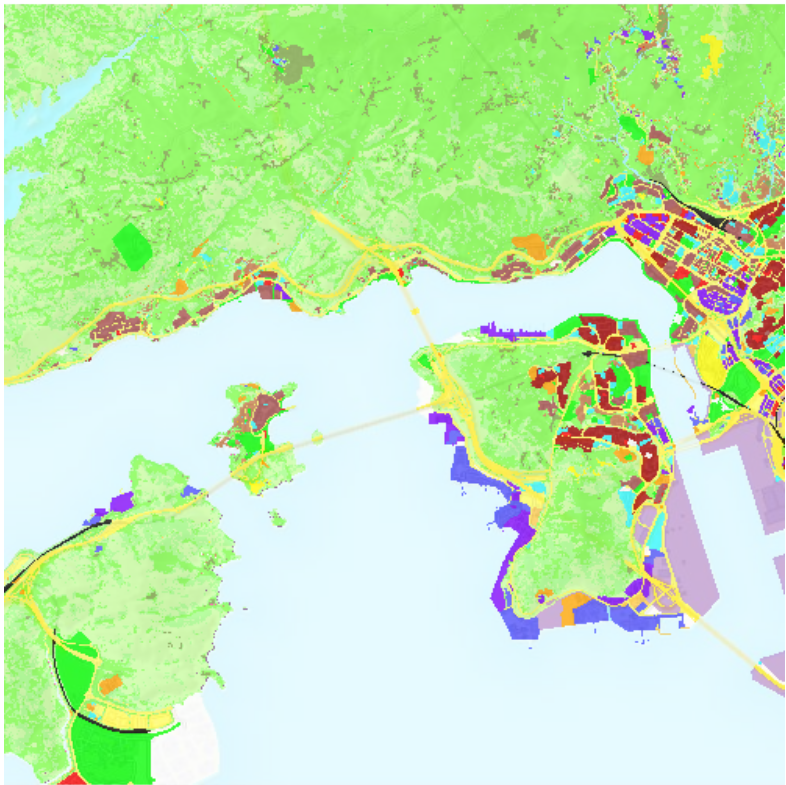


Land Utilization in Hong Kong 2024

- Note:
- [1] The land utilization area is determined based on the Hong Kong Planning Department Classification.
 - [2] The spatial center of each grid is determined by the location of the air-sensitive receivers within that grid. AERMET files are generated by inputting the locations of air-sensitive receivers (ASRs) and the site boundary using the SAMP version 2.1.

10km by 10km Region Centered at Grid 30_37

Center: X=825995, Y=823935, Z=1.3; Met Year=2019;



Land Utilization in Hong Kong 2024

Appendix 4.7 Determination of Surface Characteristics

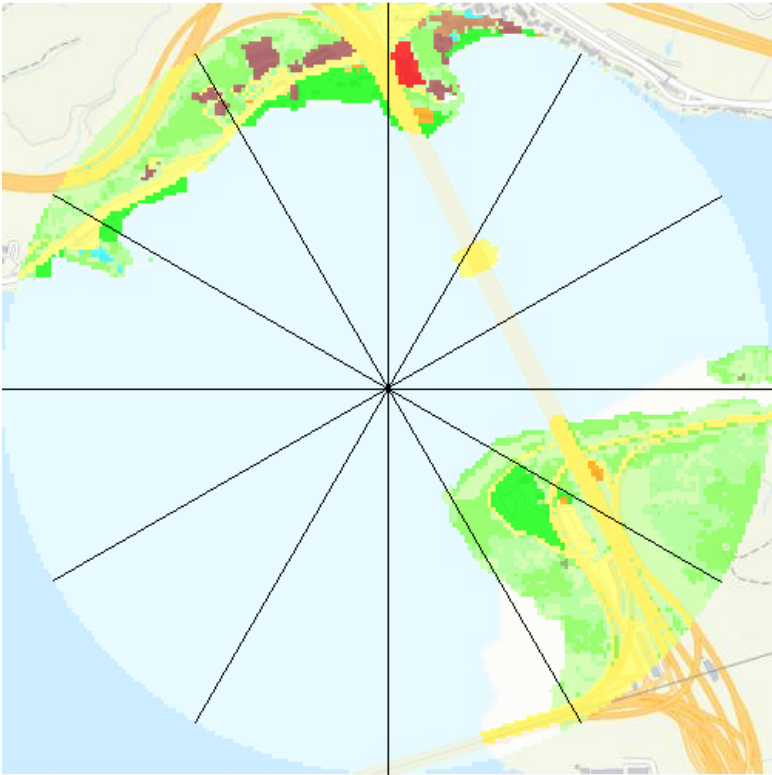
Surface Characteristics for the Assessment Area of Grid 30_38

Angle	Sector(degrees in clockwise)	Inverse-Distance ⁴	Surface Roughness (m) ^{3,4}	Albedo ^{1,4}	Bowen Ratio ^{2,4}
0	0 - 30	5.176	0.003	0.149	0.453
30	30 - 60	5.318	0.001		
60	60 - 90	5.176	0.001		
90	90 - 120	5.176	0.027		
120	120 - 150	5.318	0.044		
150	150 - 180	5.176	0.002		
180	180 - 210	5.176	0.001		
210	210 - 240	5.318	0.001		
240	240 - 270	5.176	0.001		
270	270 - 300	5.176	0.002		
300	300 - 330	5.318	0.004		
330	330 - 360	5.176	0.004		

- Notes of Surface Characteristics of Grid 30_38:
- 1. Reference to AERMOD Implementation Guide, the determination of the albedo should be based on a simple unweighted arithmetic mean (i.e., no direction or distance dependency) for the same representative domain as defined for Bowen ratio, with a default domain defined by a 10km by 10km region centered at the measurement site.
 - 2. Reference to AERMOD Implementation Guide, the determination of the Bowen ratio should be based on a simple unweighted geometric mean (i.e., no direction or distance dependency) for a representative domain, with a default domain defined by a 10km by 10km region centered on the measurement site.
 - 3. Surface roughness length is based on an upwind distance of 1km relative to the grid.
 - 4. The parameters such as Inverse-Distance, Albedo, Bowen Ratio, and Surface Roughness are extracted from the Smart Air Modelling Platform (SAMP) version 2.1 developed by the Hong Kong Environmental Protection Department (HKEPD).

1km Boundary from Grid 30_38

Center: X=826035, Y=824655, Z=1.3; Met Year=2019;

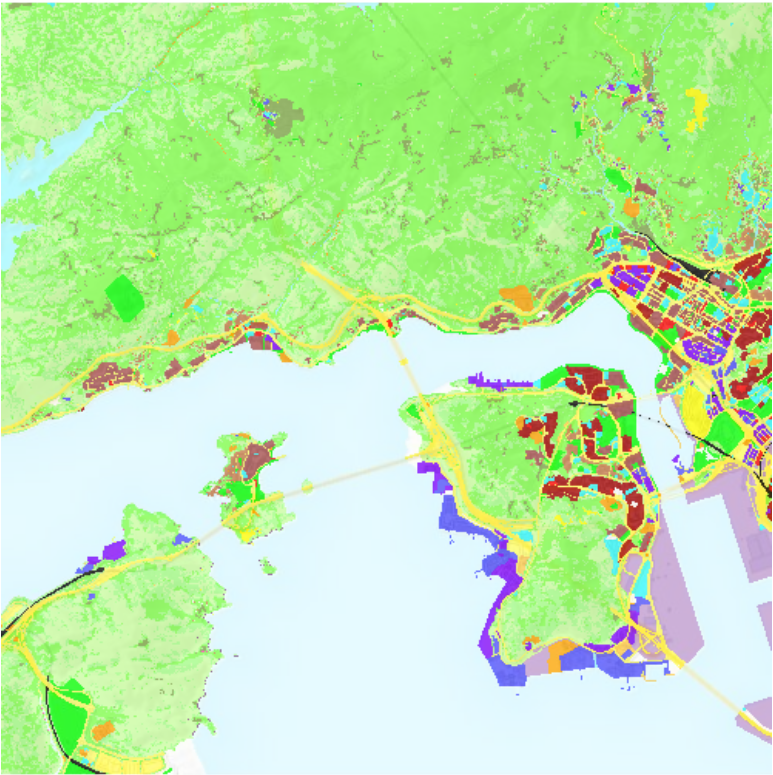


Land Utilization in Hong Kong 2024

- Note:
- [1] The land utilization area is determined based on the Hong Kong Planning Department Classification.
 - [2] The spatial center of each grid is determined by the location of the air-sensitive receivers within that grid. AERMET files are generated by inputting the locations of air-sensitive receivers (ASRs) and the site boundary using the SAMP version 2.1.

10km by 10km Region Centered at Grid 30_38

Center: X=826035, Y=824655, Z=1.3; Met Year=2019;



Land Utilization in Hong Kong 2024

Appendix 4.7 Determination of Surface Characteristics

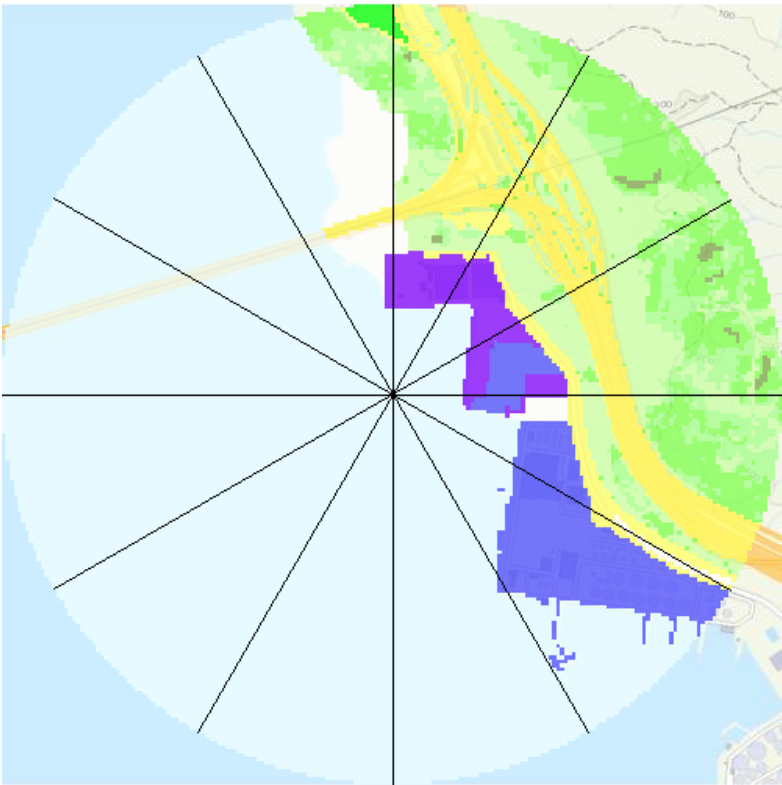
Surface Characteristics for the Assessment Area of Grid 31_36

Angle	Sector(degrees in clockwise)	Inverse-Distance ⁴	Surface Roughness (m) ^{3,4}	Albedo ^{1,4}	Bowen Ratio ^{2,4}
0	0 - 30	5.176	0.092	0.142	0.370
30	30 - 60	5.318	0.063		
60	60 - 90	5.176	0.116		
90	90 - 120	5.176	0.078		
120	120 - 150	5.318	0.012		
150	150 - 180	5.176	0.001		
180	180 - 210	5.176	0.001		
210	210 - 240	5.318	0.001		
240	240 - 270	5.176	0.001		
270	270 - 300	5.176	0.001		
300	300 - 330	5.318	0.001		
330	330 - 360	5.176	0.007		

- Notes of Surface Characteristics of Grid 31_36:
- 1. Reference to AERMOD Implementation Guide, the determination of the albedo should be based on a simple unweighted arithmetic mean (i.e., no direction or distance dependency) for the same representative domain as defined for Bowen ratio, with a default domain defined by a 10km by 10km region centered at the measurement site.
 - 2. Reference to AERMOD Implementation Guide, the determination of the Bowen ratio should be based on a simple unweighted geometric mean (i.e., no direction or distance dependency) for a representative domain, with a default domain defined by a 10km by 10km region centered on the measurement site.
 - 3. Surface roughness length is based on an upwind distance of 1km relative to the grid.
 - 4. The parameters such as Inverse-Distance, Albedo, Bowen Ratio, and Surface Roughness are extracted from the Smart Air Modelling Platform (SAMP) version 2.1 developed by the Hong Kong Environmental Protection Department (HKEPD).

1km Boundary from Grid 31_36

Center: X=826455, Y=823335, Z=1.3; Met Year=2019;

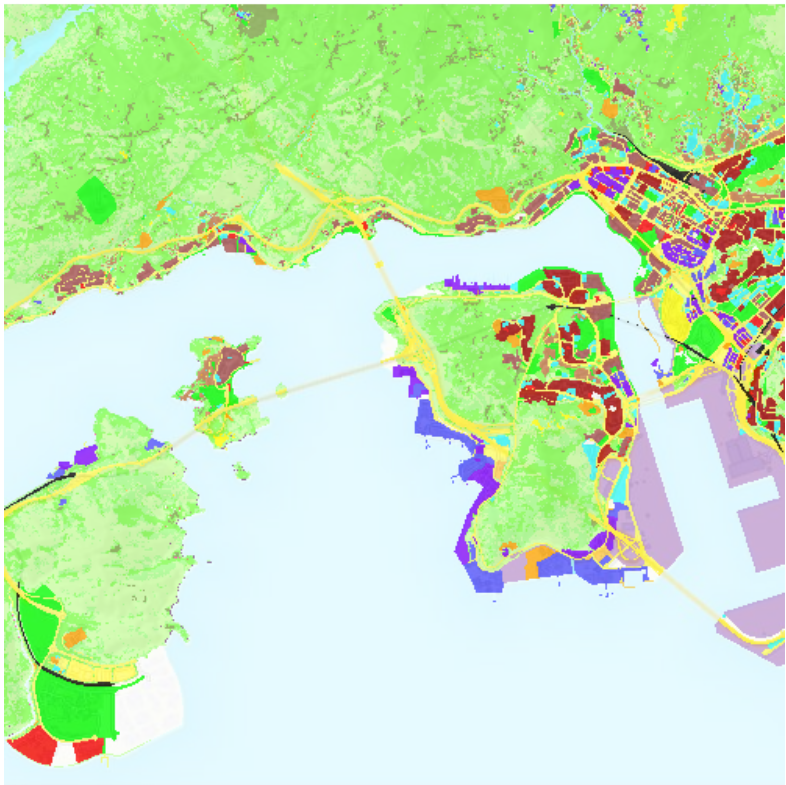


Land Utilization in Hong Kong 2024

- Note:
- [1] The land utilization area is determined based on the Hong Kong Planning Department Classification.
 - [2] The spatial center of each grid is determined by the location of the air-sensitive receivers within that grid. AERMET files are generated by inputting the locations of air-sensitive receivers (ASRs) and the site boundary using the SAMP version 2.1.

10km by 10km Region Centered at Grid 31_36

Center: X=826455, Y=823335, Z=1.3; Met Year=2019;



Land Utilization in Hong Kong 2024

Appendix 4.7 Determination of Surface Characteristics

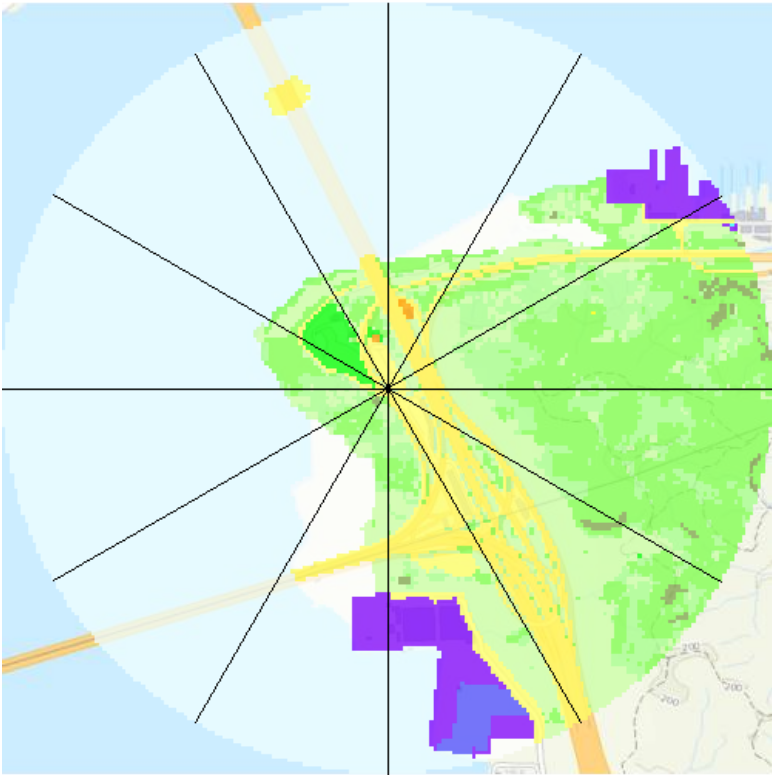
Surface Characteristics for the Assessment Area of Grid 31_37

Angle	Sector(degrees in clockwise)	Inverse-Distance ⁴	Surface Roughness (m) ^{3,4}	Albedo ^{1,4}	Bowen Ratio ^{2,4}
0	0 - 30	5.176	0.011	0.147	0.437
30	30 - 60	5.318	0.083		
60	60 - 90	5.176	0.422		
90	90 - 120	5.176	0.457		
120	120 - 150	5.318	0.329		
150	150 - 180	5.176	0.189		
180	180 - 210	5.176	0.028		
210	210 - 240	5.318	0.007		
240	240 - 270	5.176	0.003		
270	270 - 300	5.176	0.006		
300	300 - 330	5.318	0.005		
330	330 - 360	5.176	0.009		

- Notes of Surface Characteristics of Grid 31_37:
- 1. Reference to AERMOD Implementation Guide, the determination of the albedo should be based on a simple unweighted arithmetic mean (i.e., no direction or distance dependency) for the same representative domain as defined for Bowen ratio, with a default domain defined by a 10km by 10km region centered at the measurement site.
 - 2. Reference to AERMOD Implementation Guide, the determination of the Bowen ratio should be based on a simple unweighted geometric mean (i.e., no direction or distance dependency) for a representative domain, with a default domain defined by a 10km by 10km region centered on the measurement site.
 - 3. Surface roughness length is based on an upwind distance of 1km relative to the grid.
 - 4. The parameters such as Inverse-Distance, Albedo, Bowen Ratio, and Surface Roughness are extracted from the Smart Air Modelling Platform (SAMP) version 2.1 developed by the Hong Kong Environmental Protection Department (HKEPD).

1km Boundary from Grid 31_37

Center: X=826525, Y=824235, Z=54.0; Met Year=2019;

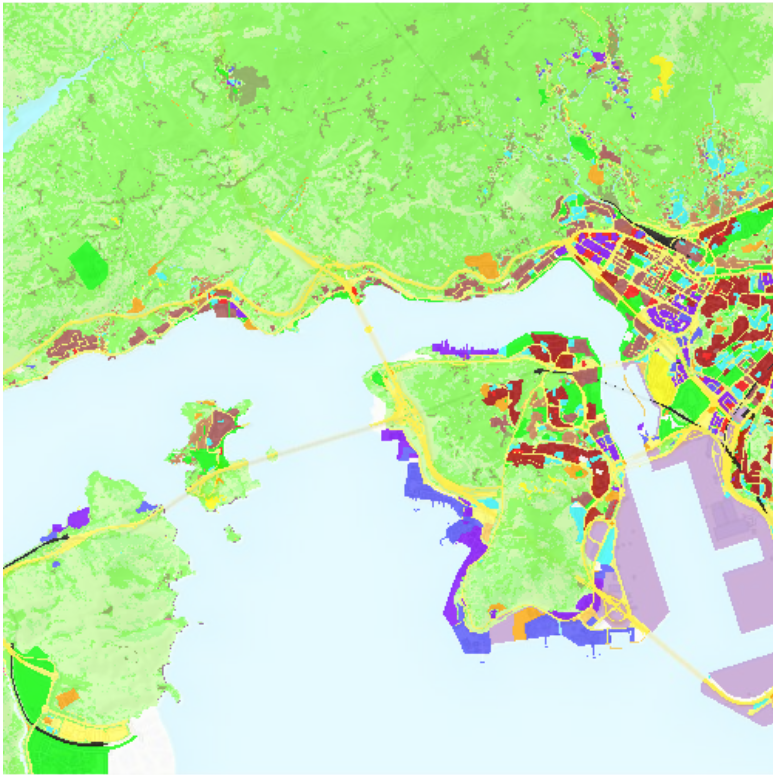


Land Utilization in Hong Kong 2024

- Note:
- [1] The land utilization area is determined based on the Hong Kong Planning Department Classification.
 - [2] The spatial center of each grid is determined by the location of the air-sensitive receivers within that grid. AERMET files are generated by inputting the locations of air-sensitive receivers (ASRs) and the site boundary using the SAMP version 2.1.

10km by 10km Region Centered at Grid 31_37

Center: X=826525, Y=824235, Z=54.0; Met Year=2019;



Land Utilization in Hong Kong 2024

Appendix 4.7 Determination of Surface Characteristics

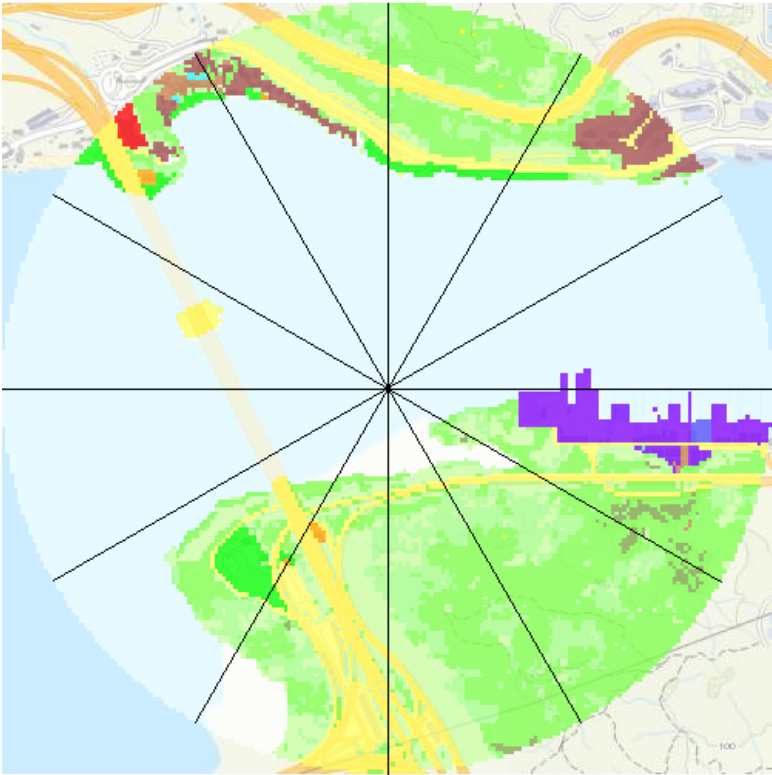
Surface Characteristics for the Assessment Area of Grid 31_38

Angle	Sector(degrees in clockwise)	Inverse-Distance ⁴	Surface Roughness (m) ^{3,4}	Albedo ^{1,4}	Bowen Ratio ^{2,4}
0	0 - 30	5.176	0.014	0.151	0.487
30	30 - 60	5.318	0.004		
60	60 - 90	5.176	0.001		
90	90 - 120	5.176	0.067		
120	120 - 150	5.318	0.194		
150	150 - 180	5.176	0.191		
180	180 - 210	5.176	0.117		
210	210 - 240	5.318	0.007		
240	240 - 270	5.176	0.001		
270	270 - 300	5.176	0.001		
300	300 - 330	5.318	0.002		
330	330 - 360	5.176	0.005		

- Notes of Surface Characteristics of Grid 31_38:
- 1. Reference to AERMOD Implementation Guide, the determination of the albedo should be based on a simple unweighted arithmetic mean (i.e., no direction or distance dependency) for the same representative domain as defined for Bowen ratio, with a default domain defined by a 10km by 10km region centered at the measurement site.
 - 2. Reference to AERMOD Implementation Guide, the determination of the Bowen ratio should be based on a simple unweighted geometric mean (i.e., no direction or distance dependency) for a representative domain, with a default domain defined by a 10km by 10km region centered on the measurement site.
 - 3. Surface roughness length is based on an upwind distance of 1km relative to the grid.
 - 4. The parameters such as Inverse-Distance, Albedo, Bowen Ratio, and Surface Roughness are extracted from the Smart Air Modelling Platform (SAMP) version 2.1 developed by the Hong Kong Environmental Protection Department (HKEPD).

1km Boundary from Grid 31_38

Center: X=826755, Y=824815, Z=1.3; Met Year=2019;

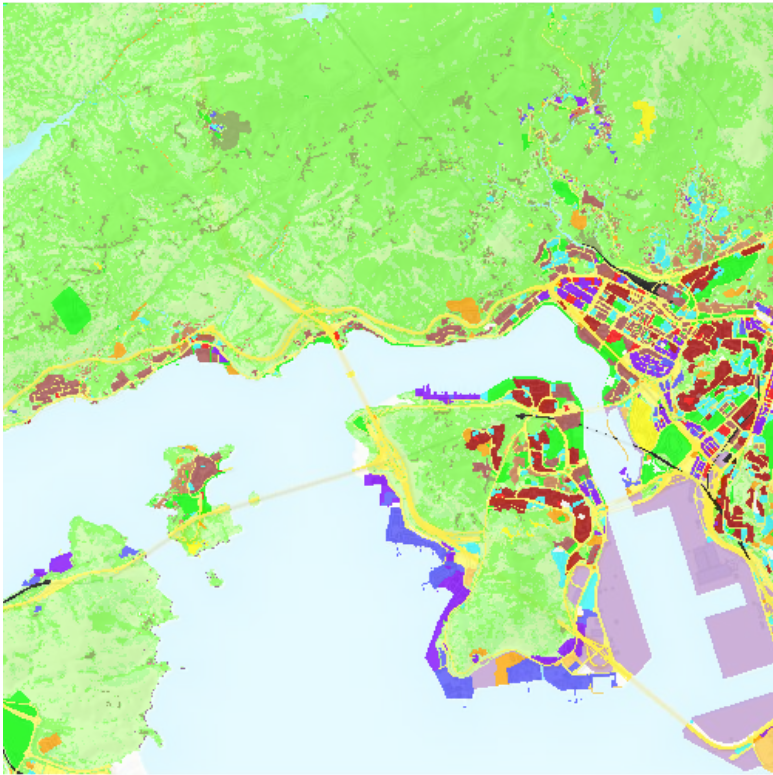


Land Utilization in Hong Kong 2024

- Note:
- [1] The land utilization area is determined based on the Hong Kong Planning Department Classification.
 - [2] The spatial center of each grid is determined by the location of the air-sensitive receivers within that grid. AERMET files are generated by inputting the locations of air-sensitive receivers (ASRs) and the site boundary using the SAMP version 2.1.

10km by 10km Region Centered at Grid 31_38

Center: X=826755, Y=824815, Z=1.3; Met Year=2019;



Land Utilization in Hong Kong 2024

Appendix 4.7 Determination of Surface Characteristics

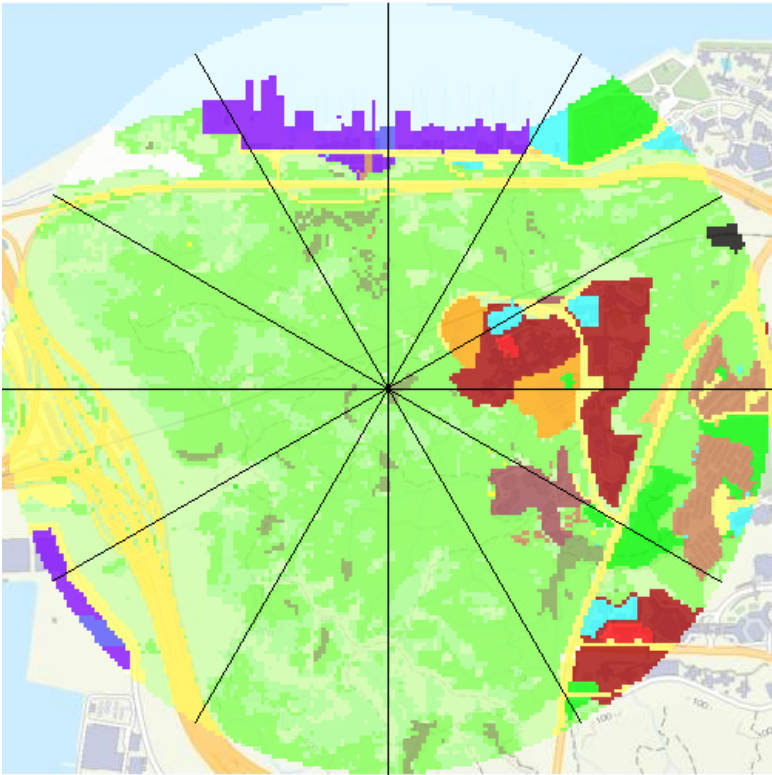
Surface Characteristics for the Assessment Area of Grid 32_37

Angle	Sector(degrees in clockwise)	Inverse-Distance ⁴	Surface Roughness (m) ^{3,4}	Albedo ^{1,4}	Bowen Ratio ^{2,4}
0	0 - 30	5.176	0.106	0.147	0.445
30	30 - 60	5.318	0.466		
60	60 - 90	5.176	0.736		
90	90 - 120	5.176	0.556		
120	120 - 150	5.318	0.632		
150	150 - 180	5.176	0.516		
180	180 - 210	5.176	0.487		
210	210 - 240	5.318	0.396		
240	240 - 270	5.176	0.471		
270	270 - 300	5.176	0.551		
300	300 - 330	5.318	0.409		
330	330 - 360	5.176	0.129		

- Notes of Surface Characteristics of Grid 32_37:
- 1. Reference to AERMOD Implementation Guide, the determination of the albedo should be based on a simple unweighted arithmetic mean (i.e., no direction or distance dependency) for the same representative domain as defined for Bowen ratio, with a default domain defined by a 10km by 10km region centered at the measurement site.
 - 2. Reference to AERMOD Implementation Guide, the determination of the Bowen ratio should be based on a simple unweighted geometric mean (i.e., no direction or distance dependency) for a representative domain, with a default domain defined by a 10km by 10km region centered on the measurement site.
 - 3. Surface roughness length is based on an upwind distance of 1km relative to the grid.
 - 4. The parameters such as Inverse-Distance, Albedo, Bowen Ratio, and Surface Roughness are extracted from the Smart Air Modelling Platform (SAMP) version 2.1 developed by the Hong Kong Environmental Protection Department (HKEPD).

1km Boundary from Grid 32_37

Center: X=827575, Y=824055, Z=157.0; Met Year=2019;

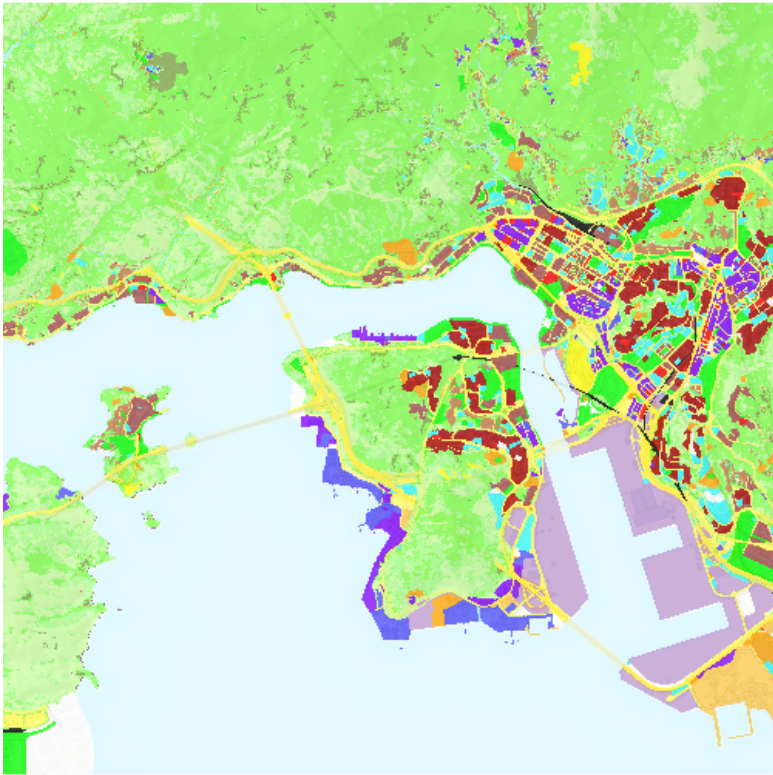


Land Utilization in Hong Kong 2024

- Note:
- [1] The land utilization area is determined based on the Hong Kong Planning Department Classification.
 - [2] The spatial center of each grid is determined by the location of the air-sensitive receivers within that grid. AERMET files are generated by inputting the locations of air-sensitive receivers (ASRs) and the site boundary using the SAMP version 2.1.

10km by 10km Region Centered at Grid 32_37

Center: X=827575, Y=824055, Z=157.0; Met Year=2019;



Land Utilization in Hong Kong 2024

Surface Characteristics for the Assessment Area of Grid 32_38

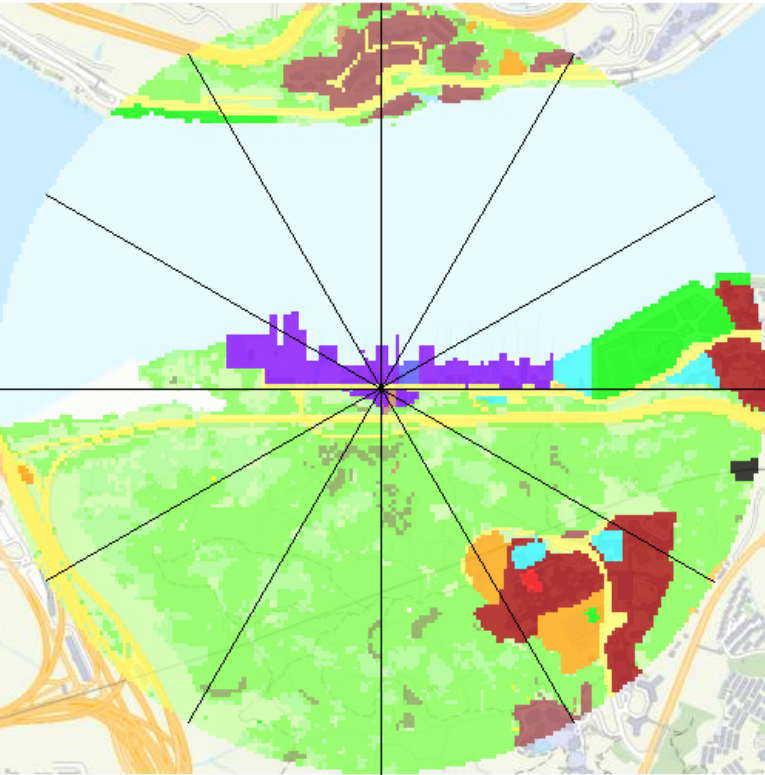
Angle	Sector(degrees in clockwise)	Inverse-Distance ⁴	Surface Roughness (m) ^{3,4}	Albedo ^{1,4}	Bowen Ratio ^{2,4}
0	0 - 30	5.176	0.007	0.151	0.496
30	30 - 60	5.318	0.003		
60	60 - 90	5.176	0.028		
90	90 - 120	5.176	0.571		
120	120 - 150	5.318	0.639		
150	150 - 180	5.176	0.734		
180	180 - 210	5.176	0.591		
210	210 - 240	5.318	0.514		
240	240 - 270	5.176	0.270		
270	270 - 300	5.176	0.019		
300	300 - 330	5.318	0.004		
330	330 - 360	5.176	0.010		

Notes of Surface Characteristics of Grid 32_38:

1. Reference to AERMOD Implementation Guide, the determination of the albedo should be based on a simple unweighted arithmetic mean (i.e., no direction or distance dependency) for the same representative domain as defined for Bowen ratio, with a default domain defined by a 10km by 10km region centered at the measurement site.
2. Reference to AERMOD Implementation Guide, the determination of the Bowen ratio should be based on a simple unweighted geometric mean (i.e., no direction or distance dependency) for a representative domain, with a default domain defined by a 10km by 10km region centered on the measurement site.
3. Surface roughness length is based on an upwind distance of 1km relative to the grid.
4. The parameters such as Inverse-Distance, Albedo, Bowen Ratio, and Surface Roughness are extracted from the Smart Air Modelling Platform (SAMP) version 2.1 developed by the Hong Kong Environmental Protection Department (HKEPD).

1km Boundary from Grid 32_38

Center: X=827495, Y=824665, Z=7.0; Met Year=2019;



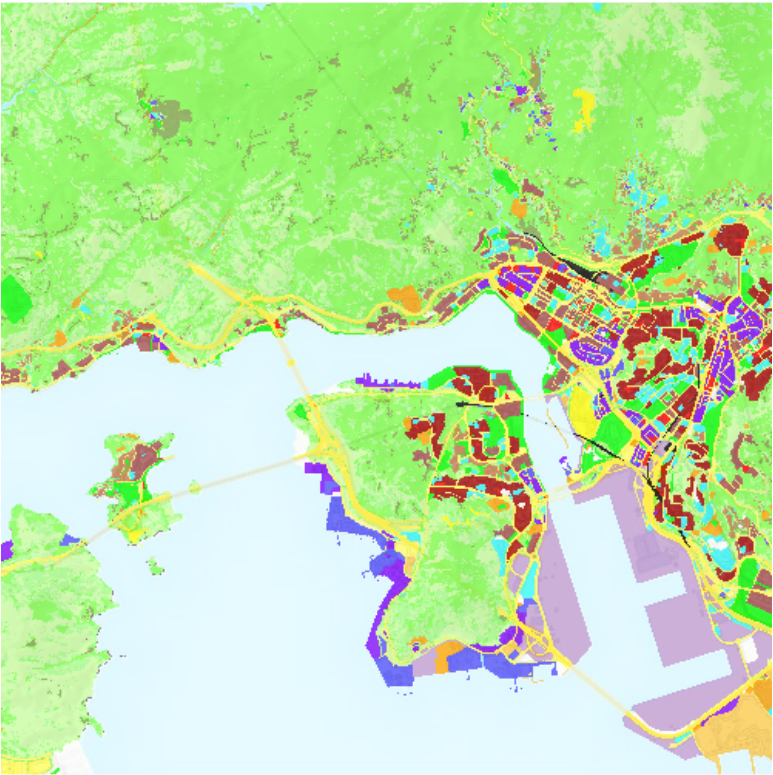
Land Utilization in Hong Kong 2024

Note:

- [1] The land utilization area is determined based on the Hong Kong Planning Department Classification.
- [2] The spatial center of each grid is determined by the location of the air-sensitive receivers within that grid. AERMET files are generated by inputting the locations of air-sensitive receivers (ASRs) and the site boundary using the SAMP version 2.1.

10km by 10km Region Centered at Grid 32_38

Center: X=827495, Y=824665, Z=7.0; Met Year=2019;



Land Utilization in Hong Kong 2024

Appendix 4.8

Jenkin Method for Long-term Cumulative NO₂ Assessment

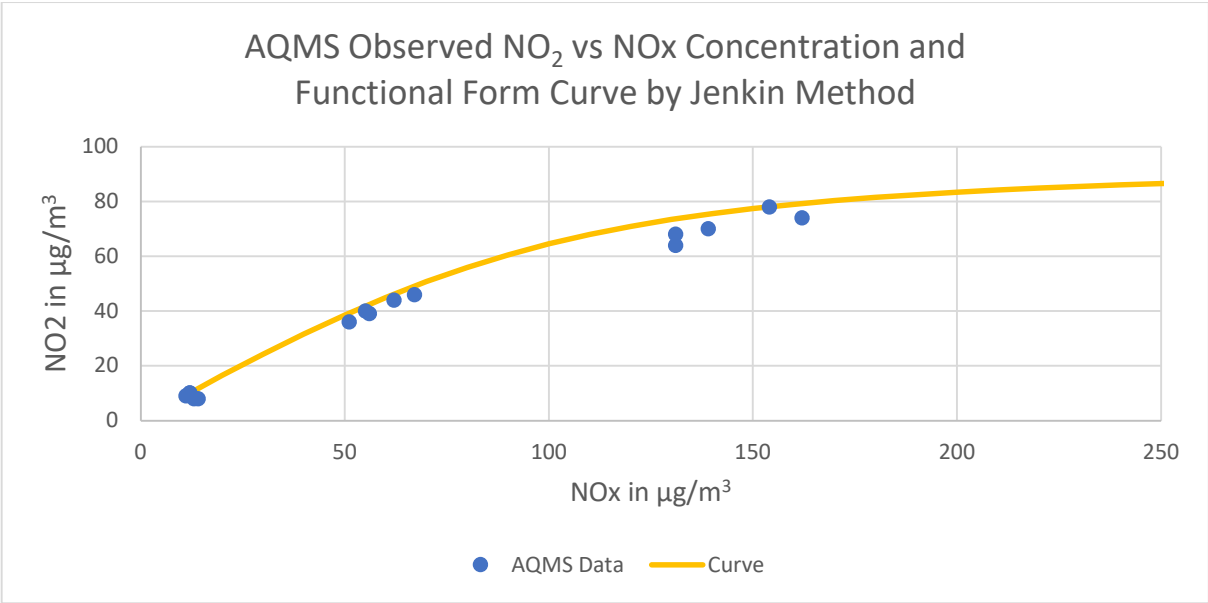
With reference to the *Review of Methods for NO to NO₂ Conversion in plumes at short ranges*¹, Jenkin method was adopted for the conversion of cumulative annual average NO_x to NO₂ by using the functional form of annual mean of NO₂-to-NO_x. The mentioned functional form is referenced from Jenkin, 2004a² and is presented below:

$$[NO_2] = \frac{([NO_x] + [OX] + \frac{J}{k}) - \sqrt{([NO_x] + [OX] + \frac{J}{k})^2 - 4[NO_x][OX]}}{2}$$

where

- [NO₂] is the NO₂ concentration
- [NO_x] is the NO_x concentration
- [OX] is the sum of NO₂ concentration and O₃ concentration (i.e. [OX] = [NO₂] + [O₃])
- J is the photolysis rate of NO₂
- k is the rate coefficient for reaction between NO and O₃

The above functional form was used to analyze the annual mean data obtained from the nearest EPD's air quality monitoring stations (AQMS) including Tsuen Wan general station, Tap Mun general station and Roadside AQMS (i.e. Mong Kok roadside station). The recent five years annual mean data are extracted and presented in below table. Scattered plot for recent 5 years annual means NO₂ versus NO_x concentrations obtained from relevant AQMS was created. The functional form curve would fit the annual mean data when [OX] = 95.57 µg/m³ and J/k = 17.114 µg/m³. The value of [OX] and J/k are considered reasonable as they are within typical value range for Hong Kong. The resulting functional form curve was adopted for the cumulative annual average NO_x to NO₂ conversion. The curve is slightly higher than all the annual mean data obtained from AQMS, the calculated annual average NO₂ concentration using the obtained functional form curve based on the observed annual average NO_x obtained from AQMS are presented in below table, the calculated annual average NO₂ concentration are higher than the observed annual average NO₂ concentration, no underestimation of the annual average NO₂ concentration is expected.



For the long-term cumulative NO₂ assessment (i.e. predictions of annual average NO₂ concentration), cumulative annual average NO_x to NO₂ conversion equation for this assessment was calculated as follows:

$$[NO_2]_c = \frac{([NO_x]_c + 95.57 + 17.11) - \sqrt{([NO_x]_c + 95.57 + 17.11)^2 - 4[NO_x]_c \times 95.57}}{2}$$

where

- [NO₂]_c is the predicted cumulative NO₂ concentration
- [NO_x]_c is the predicted cumulative NO_x concentration

¹ Environment Agency. 2007. *Review of methods for NO to NO₂ conversion in plumes at short range*. Prepared by Environmental Agency.

² Jenkin. 2004a. *Analysis of sources and partitioning of oxidant in the UK – Part 1: The NO_x-dependence of annual mean concentrations of nitrogen dioxide and ozone*. Atmospheric Environment, 38, 5117-5129.

Appendix 4.8 Derivation of Cumulative Annual Average NOX-to-NO2 Conversion Equation using Jenkin Method

Annual Average NO_x, NO₂ and O₃ concentration in Recent Five Years (Year 2019-2023) at Selected EPD AQMS

AQMS Data of the Past 5 Years				
Year	Station	NO2 (ug/m3)	NOx (ug/m3)	Conversion
2019	TSUEN WAN	46	67	49.0
2020	TSUEN WAN	36	51	39.1
2021	TSUEN WAN	44	62	46.1
2022	TSUEN WAN	39	56	42.4
2023	TSUEN WAN	40	55	41.7
2019	TAP MUN	10	12	10.0
2020	TAP MUN	9	11	9.2
2021	TAP MUN	10	12	10.0
2022	TAP MUN	8	13	10.8
2023	TAP MUN	8	14	11.6
2019	MONG KOK	78	154	78.0
2020	MONG KOK	74	162	79.2
2021	MONG KOK	70	139	75.3
2022	MONG KOK	64	131	73.6
2023	MONG KOK	68	131	73.6

Appendix 4.9

Tsing Yi North Underground Quarry (Year 2028)
10th Highest Daily RSP Concentration ($\mu\text{g}/\text{m}^3$)

Remark	
[1]	Worst affected level of each ASR is highlighted.

Tsing Yi North Underground Quarry (Year 2028)
Annual RSP Concentration ($\mu\text{g}/\text{m}^3$)

Tsing Yi North Underground Quarry (Year 2028)
19th Highest Daily FSP Concentration ($\mu\text{g}/\text{m}^3$)

Remark	
[1]	Worst affected level of each ASR is highlighted.

Tsing Yi North Underground Quarry (Year 2028)
Annual FSP Concentration ($\mu\text{g}/\text{m}^3$)

Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)
4th Highest 10-Min SO2 Concentration (µg/m3)

ASR	Height (mAG)	Project-induced Marine emissions	Asphalt Facility	Adjacent SP-short term	Ma Wan Fairway	Channel across Ting Kau Bridge	Background	Total	Compliance with corresponding concentration limit (500 µg/m3)
A02	1.5	0.00	0.00	26.11	0.09	0.00	2.35	38.53	✓
A02	5	0.00	0.00	26.30	0.09	0.00	2.35	38.80	✓
A02	10	0.00	0.00	23.18	0.16	0.00	4.15	37.11	✓
A02	15	0.00	0.00	24.23	0.15	0.00	4.15	38.52	✓
A03	1.5	1.08	0.00	0.07	0.26	0.00	12.27	33.53	✓
A03	5	1.06	0.00	0.07	0.26	0.00	12.27	33.47	✓
A03	10	1.03	0.00	0.07	0.26	0.00	12.27	33.39	✓
A04	1.5	0.53	0.04	0.35	0.14	0.03	12.20	32.56	✓
A04	5	0.53	0.04	0.35	0.14	0.03	12.20	32.56	✓
A04	10	0.53	0.04	0.35	0.14	0.03	12.20	32.55	✓
A05	1.5	0.32	0.02	0.14	0.13	0.00	9.61	25.05	✓
A05	5	0.32	0.02	0.14	0.13	0.00	9.61	25.02	✓
A05	10	0.31	0.01	0.14	0.13	0.00	9.61	25.00	✓
A05	15	0.31	0.01	0.13	0.13	0.00	9.61	24.97	✓
A05	20	0.30	0.01	0.13	0.13	0.00	9.61	24.95	✓
A06	1.5	0.01	0.00	0.48	0.09	0.00	9.62	25.03	✓
A06	5	0.01	0.00	0.48	0.09	0.00	9.62	25.03	✓
A06	10	0.01	0.00	0.48	0.09	0.00	9.62	25.02	✓
A07	1.5	0.50	0.05	0.32	0.14	0.04	12.20	32.45	✓
A07	5	0.50	0.05	0.32	0.14	0.04	12.20	32.44	✓
A07	10	0.50	0.05	0.32	0.14	0.04	12.20	32.44	✓
A08	1.5	0.49	0.05	0.32	0.14	0.04	12.20	32.43	✓
A08	5	0.49	0.05	0.32	0.14	0.04	12.20	32.43	✓
A08	10	0.49	0.05	0.32	0.14	0.04	12.20	32.42	✓

Remark
[1] Worst affected level of each ASR is highlighted.

Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)
4th Highest Daily SO2 Concentration (µg/m3)

ASR	Height (mAG)	Project-induced Marine emissions	Asphalt Facility (Long term)	Adjacent SP-long term	Ma Wan Fairway	Channel across Ting Kau Bridge	Background	Total	Compliance with corresponding concentration limit (40 µg/m3)
A02	1.5	0.02	0.00	1.08	0.08	0.01	7.06	8.24	✓
A02	5	0.02	0.00	1.08	0.08	0.01	7.06	8.25	✓
A02	10	0.02	0.00	1.10	0.08	0.01	7.06	8.27	✓
A02	15	0.02	0.00	1.12	0.08	0.01	7.06	8.29	✓
A03	1.5	0.21	0.00	0.18	0.08	0.01	8.06	8.55	✓
A03	5	0.21	0.00	0.18	0.08	0.01	8.06	8.55	✓
A03	10	0.40	0.01	0.08	0.01	0.06	7.95	8.51	✓
A04	1.5	0.26	0.01	0.04	0.02	0.10	7.95	8.38	✓
A04	5	0.25	0.01	0.04	0.02	0.10	7.95	8.37	✓
A04	10	0.24	0.03	0.04	0.02	0.09	7.95	8.36	✓
A05	1.5	0.03	0.00	0.06	0.02	0.08	7.29	7.48	✓
A05	5	0.03	0.00	0.06	0.02	0.07	7.29	7.46	✓
A05	10	0.03	0.00	0.05	0.01	0.06	7.29	7.45	✓
A05	15	0.03	0.00	0.05	0.01	0.05	7.29	7.44	✓
A05	20	0.03	0.00	0.05	0.01	0.04	7.29	7.42	✓
A06	1.5	0.01	0.00	0.08	0.01	0.03	7.29	7.43	✓
A06	5	0.01	0.00	0.08	0.01	0.02	7.29	7.42	✓
A06	10	0.01	0.00	0.08	0.01	0.02	7.29	7.42	✓
A07	1.5	0.30	0.01	0.04	0.02	0.11	7.95	8.42	✓
A07	5	0.29	0.01	0.03	0.02	0.10	7.95	8.41	✓
A07	10	0.28	0.02	0.03	0.02	0.09	7.95	8.40	✓
A08	1.5	0.30	0.01	0.04	0.02	0.11	7.95	8.42	✓
A08	5	0.30	0.01	0.03	0.02	0.10	7.95	8.41	✓
A08	10	0.29	0.02	0.03	0.02	0.09	7.95	8.40	✓

Remark
[1] Worst affected level of each ASR is highlighted.

Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)
19th Highest Hourly NO2 Concentration (µg/m3)

ASR	Height (mAG)	Project-induced Marine emissions	Asphalt Facility	Adjacent SP-short term	Ma Wan Fairway	Channel across Ting Kau Bridge	Start Emissions	Vehicular Emission on Paved Haul Road (Long term)	Portal emission	OpenRoad2028S	Background	Total	Compliance with corresponding concentration limit (200 µg/m3)
A02	1.5	0.06	3.01	0.03	0.59	13.09	3.40	0.58	0.00	61.67	84.76	167.18	✓
A02	5	0.01	0.06	0.03	0.49	33.58	0.21	0.02	0.22	102.86	25.23	162.71	✓
A02	10	4.97	1.24	0.05	0.24	30.86	0.32	3.81	8.55	63.70	39.77	153.50	✓
A02	15	0.06	0.16	0.13	0.92	6.56	0.03	0.01	0.00	113.53	118.91	138.32	✓
A03	1.5	0.01	0.15	0.05	21.73	33.13	0.22	0.00	0.24	63.75	59.55	178.83	✓
A03	5	0.02	0.22	0.07	1.45	39.65	0.02	0.06	0.62	84.27	46.49	172.88	✓
A03	10	0.06	0.16	0.06	1.01	51.66	0.15	0.30	1.52	81.07	25.99	161.98	✓
A04	1.5	0.01	0.00	0.02	12.08	28.96	0.00	0.07	7.43	107.45	156.02	✓	
A04	5	0.01	0.04	0.07	0.42	1.74	0.89	0.00	0.19	90.10	60.12	153.58	✓
A04	10	0.01	0.23	0.05	1.06	4.07	1.00	0.00	0.30	88.63	51.05	146.41	✓
A05	1.5	0.02	0.48	0.11	1.86	116.63	0.00	0.00	2.64	0.99	29.53	152.25	✓
A05	5	0.01	0.18	0.05	0.79	95.62	0.00	0.00	0.90	0.00	50.26	147.80	✓
A05	10	0.03	0.08	0.02	0.57	59.30	0.00	0.18	0.93	0.26	79.24	140.60	✓
A05	15	0.05	0.06	0.01	0.42	57.57	0.00	0.07	0.49	0.32	79.24	138.23	✓
A05	20	0.94	4.88	0.03	9.02	44.62	0.00	4.96	9.95	7.50	51.25	133.17	✓
A06	1.5	0.48	0.93	0.13	2.39	13.20	0.00	0.41	0.00	9.06	116.20	142.79	✓
A06	5	0.03	2.07	0.70	16.52	24.17	0.05	1.51	1.22	40.59	45.61	132.47	✓
A06	10	0.02	0.18	0.07	0.88	62.41	0.00	0.47	0.00	66.85	130.99	✓	
A07	1.5	0.01	0.12	0.05	13.57	62.21	0.00	0.41	0.00	13.68	59.55	149.59	✓
A07	5	0.02	0.29	3.66	2.20	5.76	0.50	0.00	0.51	57.53	77.35	147.81	✓
A07	10	0.76	8.35	0.02	0.40	45.77	0.04	11.07	12.48	37.87	25.62	142.38	✓
A08	1.5	0.01	0.18	0.25	1.15	1.34	1.10	0.00	0.45	102.40	38.24	145.12	✓
A08	5	0.01	0.16	0.05	13.21	58.58	0.00	0.00	0.36	11.13	59.55	143.04	✓
A08	10	0.01	0.24	0.07	1.08	4.38	0.69	0.00	0.29	79.80	51.05	137.62	✓

Remark
[1] Worst affected level of each ASR is highlighted.

Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)
Daily 10th NO2 Concentration (µg/m3)

ASR	Height (mAG)	Project-induced Marine emissions	Asphalt Facility	Adjacent SP-short term	Ma Wan Fairway	Channel across Ting Kau Bridge	Start Emissions	Vehicular Emission on Paved Haul Road (Short term)	Portal emission	OpenRoad2028S	Background	Total	Compliance with corresponding concentration limit (120 µg/m3)
A02	1.5	0.45	0.28	0.94	0.45	1.55	0.31	0.33	0.05	33.91	39.68	77.95	✓
A02	5	0.47	0.26	0.94	0.44	1.51	0.19	0.32	0.05	30.41	39.68	74.26	✓
A02	10	0.78	0.63	0.74	1.46	4.92	0.36	0.27	0.24	20.59	38.67	68.65	✓
A02	15	0.81	0.70	0.74	1.42	4.59	0.16	0.22	0.22	16.16	38.67	63.68	✓
A03	1.5	0.56	0.15	1.97	1.58	0.92	0.60	0.00	0.04	23.39	49.51	78.73	✓
A03	5	0.58	0.10	0.44	1.39	1.37	0.45	0.01	0.06	24.27	46.14	74.81	✓
A03	10	1.34	0.76	1.28	1.37	5.31	0.23	0.48	0.44	19.26	38.67	69.14	✓
A04	1.5	0.66	1.03	0.59	0.71	3.16	0.16	1.73	0.48	16.23	41.59	66.34	✓
A04	5	0.68	1.11	0.59	0.71	3.12	0.14	1.61	0.46	15.53	41.59	65.55	✓
A04	10	0.71	1.73	0.59	0.70	3.07	0.09	1.27	0.42	14.23	41.59	64.40	✓
A05	1.5	1.03	0.68	0.58	1.44	7.92	0.01	0.40	0.40	7.34	35.68	55.47	✓
A05	5	1.03	0.66	0.58	1.39	7.76	0.01	0.40	0.39	5.46	35.68	53.36	✓
A05	10	0.44	0.19	0.29	0.56	2.36	0.00	0.05	0.14	1.95	44.93	50.91	✓
A05	15	0.44	0.17	0.28	0.54	2.18	0.00	0.05	0.13	1.59	44.93	50.32	✓
A05	20	0.14	0.14	0.16	0.47	2.64	0.00	0.01	0.14	4.49	41.13	49.34	✓
A06	1.5	0.05	0.23	0.26	0.85	3.52	0.00	0.10	0.08	10.85	36.46	52.40	✓
A06	5	0.08	0.13	0.11	0.41	2.72	0.00	0.01	0.09	5.57	41.13	50.24	✓
A06	10	0.44	0.57	0.15	1.42	3.68	0.00	0.26	0.03	3.60	37.62	47.77	✓
A07	1.5	1.04	0.28	0.26	0.93	4.30	0.02	0.15	0.06	6.65	50.95	64.43	✓
A07	5	1.08	0.30	0.26	0.93	4.11	0.02	0.13	0.06	6.11	50.95	63.96	✓
A07	10	1.14	0.42	0.26	0.94	4.08	0.01	0.10	0.06	5.11	50.95	63.08	✓
A08	1.5	1.03	0.26	0.26	0.98	4.11	0.01	0.11	0.06	6.80	50.95	64.58	✓
A08	5	1.07	0.27	0.26	0.98	4.12	0.01	0.10	0.06	6.04	50.95	63.87	✓
A08	10	1.13	0.36	0.26	1.00	4.09	0.01	0.08	0.05	4.84	50.95	62.78	✓

Remark
[1] Worst affected level of each ASR is highlighted.

Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Annual NO2 Concentration (µg/m3)

ASR	Height (mAG)	Project-Induced Marine emissions	Asphalt Facility (Long term)	Adjacent SP-Long term	Ma Wan Fairway	Channel across Ting Kau Bridge	Start Emissions	Vehicular Emission on Paved Haul Road (Long term)	Portal emission	OpenRoad2028L	Background	Total	Converted NO ₂ [2]	Compliance with corresponding concentration limit (40 µg/m3)
A02	1.5	0.21	0.05	0.83	0.50	0.62	0.34	0.03	0.05	21.41	32.08	56.12	36.2 [3]	✓
A02	5	0.21	0.05	0.83	0.49	0.60	0.17	0.03	0.05	18.52	32.08	53.03	35.42 [3]	✓
A02	10	0.21	0.05	0.83	0.48	0.56	0.06	0.03	0.04	13.81	32.08	48.16	37.23	✓
A02	15	0.21	0.05	0.83	0.46	0.51	0.03	0.02	0.04	9.76	32.08	44.00	34.38	✓
A04	1.5	0.67	0.13	0.99	0.78	1.24	0.34	0.12	0.11	12.93	32.08	49.23	37.95	✓
A04	5	0.67	0.14	0.99	0.77	1.19	0.12	0.15	0.11	11.66	32.08	47.89	37.05	✓
A04	10	0.68	0.20	1.00	0.75	1.12	0.09	0.12	0.10	9.49	32.08	45.62	35.51	✓
A05	1.5	0.16	0.08	0.21	0.42	3.84	0.00	0.03	0.11	5.70	28.54	39.10	30.92	✓
A05	5	0.16	0.08	0.21	0.40	3.47	0.00	0.03	0.10	4.04	28.54	37.03	29.42	✓
A05	10	0.16	0.07	0.20	0.37	3.00	0.00	0.03	0.09	2.48	28.54	34.94	27.89	✓
A05	15	0.16	0.06	0.20	0.35	2.53	0.00	0.03	0.08	1.94	28.54	33.89	27.11	✓
A05	20	0.16	0.06	0.19	0.33	2.06	0.00	0.02	0.08	1.71	28.54	33.15	26.56	✓
A06	1.5	0.08	0.04	0.14	0.30	1.98	0.00	0.01	0.03	4.11	28.54	35.24	28.11	✓
A06	5	0.08	0.04	0.14	0.28	1.78	0.00	0.01	0.03	2.59	28.54	33.49	26.81	✓
A06	10	0.08	0.04	0.14	0.26	1.53	0.00	0.01	0.03	1.32	28.54	31.94	25.66	✓
A07	1.5	0.75	0.14	0.92	0.79	1.35	0.07	0.20	0.13	9.78	32.08	46.21	35.91	✓
A07	5	0.75	0.15	0.92	0.78	1.30	0.07	0.18	0.12	9.51	32.08	45.88	35.68	✓
A07	10	0.76	0.24	0.93	0.76	1.23	0.06	0.14	0.12	8.55	32.08	44.86	34.98	✓
A08	1.5	0.79	0.14	0.93	0.82	1.35	0.06	0.18	0.12	8.84	32.08	45.32	35.30	✓
A08	5	0.79	0.15	0.93	0.81	1.31	0.06	0.17	0.12	8.62	32.08	45.05	35.11	✓
A08	10	0.80	0.24	0.94	0.79	1.23	0.05	0.13	0.11	7.87	32.08	44.34	34.55	✓

Remark

[1] Worst affected level of each ASR is highlighted.

[2] The annual NO2 concentrations are calculated by Jenkin Method, the detailed equations and steps are presented in Appendix 3.8

[3] Air purification system with at least 10% NO2 removal efficiency will be provided such that no adverse impact is expected. The predicted values before application of air purification system are 42.44µg/m³ and 40.46µg/m³ at 1.5mAG and 5mAG at A02 respectively.

Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Highest Hourly Arsenic Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (0.2 µg/m3)
A02	1.5	6.083E-04	2.419E-07	1.100E-02	1.161E-02	✓
A02	5	5.797E-04	2.613E-07	1.100E-02	1.158E-02	✓
A02	10	5.473E-04	2.931E-07	1.100E-02	1.155E-02	✓
A02	15	5.230E-04	3.302E-07	1.100E-02	1.152E-02	✓
A03	1.5	8.350E-04	4.521E-07	1.100E-02	1.184E-02	✓
A03	5	7.945E-04	4.626E-07	1.100E-02	1.179E-02	✓
A03	10	7.445E-04	4.812E-07	1.100E-02	1.174E-02	✓
A04	1.5	9.407E-04	5.650E-07	1.100E-02	1.194E-02	✓
A04	5	9.268E-04	5.659E-07	1.100E-02	1.193E-02	✓
A04	10	1.074E-03	3.653E-07	1.100E-02	1.207E-02	✓
A05	1.5	5.535E-04	1.443E-07	1.100E-02	1.155E-02	✓
A05	5	5.674E-04	1.729E-07	1.100E-02	1.157E-02	✓
A05	10	6.064E-04	1.590E-07	1.100E-02	1.161E-02	✓
A05	15	6.207E-04	1.489E-07	1.100E-02	1.162E-02	✓
A05	20	6.177E-04	1.420E-07	1.100E-02	1.162E-02	✓
A06	1.5	3.752E-04	1.486E-07	1.100E-02	1.138E-02	✓
A06	5	3.848E-04	1.395E-07	1.100E-02	1.138E-02	✓
A06	10	3.871E-04	1.299E-07	1.100E-02	1.139E-02	✓
A07	1.5	1.800E-03	9.763E-09	1.100E-02	1.280E-02	✓
A07	5	1.877E-03	1.030E-08	1.100E-02	1.288E-02	✓
A07	10	1.871E-03	1.101E-08	1.100E-02	1.287E-02	✓
A08	1.5	1.398E-03	9.763E-09	1.100E-02	1.240E-02	✓
A08	5	1.462E-03	1.030E-08	1.100E-02	1.246E-02	✓
A08	10	1.476E-03	1.101E-08	1.100E-02	1.248E-02	✓

Remark

Worst affected level of each ASR is highlighted.

Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Highest 8-Hour Arsenic Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (0.015 µg/m3)
A02	1.5	4.349E-05	4.389E-06	1.100E-02	1.129E-02	✓
A02	5	4.300E-05	4.370E-06	1.100E-02	1.128E-02	✓
A02	10	4.231E-05	4.340E-06	1.100E-02	1.126E-02	✓
A02	15	4.165E-05	4.307E-06	1.100E-02	1.125E-02	✓
A03	1.5	8.508E-05	3.080E-06	1.100E-02	1.139E-02	✓
A03	5	8.368E-05	3.062E-06	1.100E-02	1.137E-02	✓
A03	10	8.172E-05	3.036E-06	1.100E-02	1.135E-02	✓
A04	1.5	8.404E-04	3.909E-07	1.100E-02	1.134E-02	✓
A04	5	8.360E-04	3.921E-07	1.100E-02	1.134E-02	✓
A04	10	6.114E-04	2.304E-07	1.100E-02	1.157E-02	✓
A05	1.5	5.846E-05	2.087E-07	1.100E-02	1.126E-02	✓
A05	5	1.969E-05	9.088E-08	1.100E-02	1.127E-02	✓
A05	10	1.289E-05	8.609E-08	1.100E-02	1.128E-02	✓
A05	15	9.353E-06	8.449E-08	1.100E-02	1.128E-02	✓
A05	20	7.324E-06	8.556E-08	1.100E-02	1.127E-02	✓
A06	1.5	3.862E-05	2.070E-07	1.100E-02	1.115E-02	✓
A06	5	3.005E-05	1.958E-07	1.100E-02	1.115E-02	✓
A06	10	1.052E-05	9.479E-08	1.100E-02	1.116E-02	✓
A07	1.5	1.430E-04	9.159E-07	1.100E-02	1.140E-02	✓
A07	5	1.397E-04	9.068E-07	1.100E-02	1.144E-02	✓
A07	10	1.610E-04	1.921E-07	1.100E-02	1.161E-02	✓
A08	1.5	1.533E-04	9.180E-07	1.100E-02	1.135E-02	✓
A08	5	1.499E-04	9.090E-07	1.100E-02	1.138E-02	✓
A08	10	6.694E-04	2.494E-07	1.100E-02	1.152E-02	✓

Remark

Worst affected level of each ASR is highlighted.

Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Annual Arsenic Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (0.015 µg/m3)
A02	1.5	3.664E-06	4.641E-06	1.943E-03	1.951E-03	✓
A02	5	3.579E-06	4.674E-06	1.943E-03	1.951E-03	✓
A02	10	3.646E-06	4.687E-06	1.943E-03	1.951E-03	✓
A02	15	3.813E-06	4.671E-06	1.943E-03	1.951E-03	✓
A04	10	1.540E-05	5.729E-06	1.943E-03	1.964E-03	✓
A05	1.5	6.434E-06	1.152E-06	1.943E-03	1.950E-03	✓
A05	5	5.875E-06	1.129E-06	1.943E-03	1.950E-03	✓
A05	10	5.306E-06	1.105E-06	1.943E-03	1.949E-03	✓
A05	15	4.863E-06	1.089E-06	1.943E-03	1.949E-03	✓
A05	20	4.479E-06	1.080E-06	1.943E-03	1.948E-03	✓
A06	1.5	3.169E-06	7.855E-07	1.943E-03	1.947E-03	✓
A06	5	2.923E-06	7.659E-07	1.943E-03	1.947E-03	✓
A06	10	2.665E-06	7.451E-07	1.943E-03	1.946E-03	✓
A07	1.5	1.040E-05	5.218E-06	1.943E-03	1.958E-03	✓
A07	5	1.167E-05	5.266E-06	1.943E-03	1.960E-03	✓
A07	10	1.813E-05	5.322E-06	1.943E-03	1.966E-03	✓
A08	1.5	1.047E-05	5.276E-06	1.943E-03	1.959E-03	✓
A08	5	1.171E-05	5.326E-06	1.943E-03	1.960E-03	✓
A08	10	1.790E-05	5.386E-06	1.943E-03	1.966E-03	✓

Remark

Worst affected level of each ASR is highlighted.

Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Highest 8-Hour Barium Concentration (ug/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (500 µg/m3)
A02	1.5	9.189E-05	9.273E-06	3.100E-01	3.106E-01	✓
A02	5	9.084E-05	9.233E-06	3.100E-01	3.106E-01	✓
A02	10	8.938E-05	9.170E-06	3.100E-01	3.106E-01	✓
A02	15	8.799E-05	9.100E-06	3.100E-01	3.105E-01	✓
A03	1.5	1.797E-04	6.507E-06	3.100E-01	3.108E-01	✓
A03	5	1.768E-04	6.470E-06	3.100E-01	3.108E-01	✓
A03	10	1.726E-04	6.414E-06	3.100E-01	3.107E-01	✓
A04	1.5	1.775E-03	8.258E-07	3.100E-01	3.107E-01	✓
A04	5	1.766E-03	8.284E-07	3.100E-01	3.107E-01	✓
A04	10	1.292E-03	4.868E-07	3.100E-01	3.112E-01	✓
A05	1.5	1.235E-04	4.410E-07	3.100E-01	3.105E-01	✓
A05	5	4.160E-05	1.920E-07	3.100E-01	3.106E-01	✓
A05	10	2.722E-05	1.819E-07	3.100E-01	3.106E-01	✓
A05	15	1.976E-05	1.785E-07	3.100E-01	3.106E-01	✓
A05	20	1.547E-05	1.808E-07	3.100E-01	3.106E-01	✓
A06	1.5	8.159E-05	4.373E-07	3.100E-01	3.103E-01	✓
A06	5	6.349E-05	4.136E-07	3.100E-01	3.103E-01	✓
A06	10	2.222E-05	2.003E-07	3.100E-01	3.103E-01	✓
A07	1.5	3.022E-04	1.935E-06	3.100E-01	3.108E-01	✓
A07	5	2.952E-04	1.916E-06	3.100E-01	3.109E-01	✓
A07	10	3.401E-04	4.058E-07	3.100E-01	3.113E-01	✓
A08	1.5	3.239E-04	1.940E-06	3.100E-01	3.107E-01	✓
A08	5	3.167E-04	1.920E-06	3.100E-01	3.108E-01	✓
A08	10	1.414E-03	5.269E-07	3.100E-01	3.111E-01	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Highest 8-Hour Beryllium Concentration (ug/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (0.2 µg/m3)
A02	1.5	9.511E-06	9.600E-07	4.000E-05	1.038E-04	✓
A02	5	9.402E-06	9.558E-07	4.000E-05	1.012E-04	✓
A02	10	9.252E-06	9.492E-07	4.000E-05	9.764E-05	✓
A02	15	9.108E-06	9.420E-07	4.000E-05	9.421E-05	✓
A03	1.5	1.860E-05	6.736E-07	4.000E-05	1.256E-04	✓
A03	5	1.830E-05	6.697E-07	4.000E-05	1.215E-04	✓
A03	10	1.787E-05	6.640E-07	4.000E-05	1.171E-04	✓
A04	1.5	1.838E-04	8.548E-08	4.000E-05	1.143E-04	✓
A04	5	1.828E-04	8.575E-08	4.000E-05	1.142E-04	✓
A04	10	1.337E-04	5.039E-08	4.000E-05	1.657E-04	✓
A05	1.5	1.278E-05	4.565E-08	4.000E-05	9.644E-05	✓
A05	5	4.306E-06	1.988E-08	4.000E-05	9.856E-05	✓
A05	10	2.818E-06	1.883E-08	4.000E-05	1.001E-04	✓
A05	15	2.045E-06	1.848E-08	4.000E-05	1.005E-04	✓
A05	20	1.602E-06	1.871E-08	4.000E-05	9.990E-05	✓
A06	1.5	8.446E-06	4.526E-08	4.000E-05	7.183E-05	✓
A06	5	6.572E-06	4.282E-08	4.000E-05	7.342E-05	✓
A06	10	2.300E-06	2.073E-08	4.000E-05	7.464E-05	✓
A07	1.5	3.128E-05	2.003E-07	4.000E-05	1.275E-04	✓
A07	5	3.055E-05	1.983E-07	4.000E-05	1.360E-04	✓
A07	10	3.521E-05	4.200E-08	4.000E-05	1.731E-04	✓
A08	1.5	3.353E-05	2.008E-07	4.000E-05	1.166E-04	✓
A08	5	3.278E-05	1.988E-07	4.000E-05	1.231E-04	✓
A08	10	1.464E-04	5.454E-08	4.000E-05	1.534E-04	✓

Remark
Worst affected level of each ASR is highlighted.

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Tsing Yi North Underground Quarry (Year 2028)

Highest Hourly Beryllium Concentration (ug/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (0.53 µg/m3)
A02	1.5	1.330E-04	5.291E-08	4.000E-05	1.731E-04	✓
A02	5	1.268E-04	5.714E-08	4.000E-05	1.668E-04	✓
A02	10	1.197E-04	6.409E-08	4.000E-05	1.597E-04	✓
A02	15	1.144E-04	7.221E-08	4.000E-05	1.544E-04	✓
A03	1.5	1.826E-04	9.887E-08	4.000E-05	2.227E-04	✓
A03	5	1.737E-04	1.012E-07	4.000E-05	2.138E-04	✓
A03	10	1.628E-04	1.052E-07	4.000E-05	2.029E-04	✓
A04	1.5	2.057E-04	1.236E-07	4.000E-05	2.458E-04	✓
A04	5	2.027E-04	1.238E-07	4.000E-05	2.428E-04	✓
A04	10	2.348E-04	7.989E-08	4.000E-05	2.749E-04	✓
A05	1.5	1.210E-04	3.156E-08	4.000E-05	1.611E-04	✓
A05	5	1.241E-04	3.781E-08	4.000E-05	1.641E-04	✓
A05	10	1.326E-04	3.478E-08	4.000E-05	1.726E-04	✓
A05	15	1.357E-04	3.257E-08	4.000E-05	1.758E-04	✓
A05	20	1.351E-04	3.106E-08	4.000E-05	1.751E-04	✓
A06	1.5	8.204E-05	3.249E-08	4.000E-05	1.221E-04	✓
A06	5	8.414E-05	3.051E-08	4.000E-05	1.242E-04	✓
A06	10	8.464E-05	2.842E-08	4.000E-05	1.247E-04	✓
A07	1.5	3.937E-04	2.135E-09	4.000E-05	4.337E-04	✓
A07	5	4.105E-04	2.252E-09	4.000E-05	4.505E-04	✓
A07	10	4.092E-04	2.407E-09	4.000E-05	4.492E-04	✓
A08	1.5	3.057E-04	2.135E-09	4.000E-05	3.457E-04	✓
A08	5	3.198E-04	2.252E-09	4.000E-05	3.598E-04	✓
A08	10	3.228E-04	2.407E-09	4.000E-05	3.628E-04	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Highest 8-Hour Cadmium Concentration (ug/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (5 µg/m3)
A02	1.5	4.199E-05	4.236E-06	2.500E-03	2.782E-03	✓
A02	5	4.151E-05	4.218E-06	2.500E-03	2.770E-03	✓
A02	10	4.085E-05	4.189E-06	2.500E-03	2.754E-03	✓
A02	15	4.021E-05	4.157E-06	2.500E-03	2.739E-03	✓
A03	1.5	8.213E-05	2.972E-06	2.500E-03	2.878E-03	✓
A03	5	8.078E-05	2.955E-06	2.500E-03	2.860E-03	✓
A03	10	7.889E-05	2.930E-06	2.500E-03	2.840E-03	✓
A04	1.5	8.113E-04	3.772E-07	2.500E-03	2.828E-03	✓
A04	5	8.071E-04	3.784E-07	2.500E-03	2.828E-03	✓
A04	10	5.902E-04	2.223E-07	2.500E-03	3.055E-03	✓
A05	1.5	5.644E-05	2.014E-07	2.500E-03	2.749E-03	✓
A05	5	1.901E-05	8.771E-08	2.500E-03	2.759E-03	✓
A05	10	1.244E-05	8.308E-08	2.500E-03	2.766E-03	✓
A05	15	9.029E-06	8.154E-08	2.500E-03	2.767E-03	✓
A05	20	7.070E-06	8.257E-08	2.500E-03	2.764E-03	✓
A06	1.5	3.728E-05	1.997E-07	2.500E-03	2.641E-03	✓
A06	5	2.901E-05	1.889E-07	2.500E-03	2.648E-03	✓
A06	10	1.015E-05	9.147E-08	2.500E-03	2.653E-03	✓
A07	1.5	1.381E-04	8.839E-07	2.500E-03	2.886E-03	✓
A07	5	1.349E-04	8.752E-07	2.500E-03	2.924E-03	✓
A07	10	1.554E-04	1.853E-07	2.500E-03	3.087E-03	✓
A08	1.5	1.480E-04	8.860E-07	2.500E-03	2.838E-03	✓
A08	5	1.447E-04	8.772E-07	2.500E-03	2.867E-03	✓
A08	10	6.462E-04	2.407E-07	2.500E-03	3.001E-03	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Annual Cadmium Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (0.005 µg/m3)
A02	1.5	3.537E-06	4.478E-06	4.738E-04	4.818E-04	✓
A02	5	3.456E-06	4.510E-06	4.738E-04	4.817E-04	✓
A02	10	3.519E-06	4.523E-06	4.738E-04	4.818E-04	✓
A02	15	3.681E-06	4.508E-06	4.738E-04	4.820E-04	✓
A04	10	1.486E-05	5.529E-06	4.738E-04	4.942E-04	✓
A05	1.5	6.211E-06	1.112E-06	4.738E-04	4.811E-04	✓
A05	5	5.672E-06	1.089E-06	4.738E-04	4.805E-04	✓
A05	10	5.123E-06	1.066E-06	4.738E-04	4.800E-04	✓
A05	15	4.694E-06	1.051E-06	4.738E-04	4.795E-04	✓
A05	20	4.324E-06	1.042E-06	4.738E-04	4.791E-04	✓
A06	1.5	3.059E-06	7.581E-07	4.738E-04	4.776E-04	✓
A06	5	2.822E-06	7.391E-07	4.738E-04	4.773E-04	✓
A06	10	2.573E-06	7.191E-07	4.738E-04	4.771E-04	✓
A07	1.5	1.004E-05	5.035E-06	4.738E-04	4.888E-04	✓
A07	5	1.127E-05	5.082E-06	4.738E-04	4.901E-04	✓
A07	10	1.750E-05	5.136E-06	4.738E-04	4.964E-04	✓
A08	1.5	1.011E-05	5.091E-06	4.738E-04	4.890E-04	✓
A08	5	1.130E-05	5.140E-06	4.738E-04	4.902E-04	✓
A08	10	1.728E-05	5.198E-06	4.738E-04	4.963E-04	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Highest Hourly Copper Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (100 µg/m3)
A02	1.5	2.685E-03	1.068E-06	1.400E-01	1.427E-01	✓
A02	5	2.558E-03	1.153E-06	1.400E-01	1.426E-01	✓
A02	10	2.415E-03	1.293E-06	1.400E-01	1.424E-01	✓
A02	15	2.308E-03	1.457E-06	1.400E-01	1.423E-01	✓
A03	1.5	3.685E-03	1.995E-06	1.400E-01	1.437E-01	✓
A03	5	3.507E-03	2.041E-06	1.400E-01	1.435E-01	✓
A03	10	3.286E-03	2.124E-06	1.400E-01	1.433E-01	✓
A04	1.5	4.152E-03	2.493E-06	1.400E-01	1.442E-01	✓
A04	5	4.090E-03	2.497E-06	1.400E-01	1.441E-01	✓
A04	10	4.739E-03	1.612E-06	1.400E-01	1.447E-01	✓
A05	1.5	2.443E-03	6.368E-07	1.400E-01	1.424E-01	✓
A05	5	2.504E-03	7.629E-07	1.400E-01	1.425E-01	✓
A05	10	2.676E-03	7.018E-07	1.400E-01	1.427E-01	✓
A05	15	2.739E-03	6.572E-07	1.400E-01	1.427E-01	✓
A05	20	2.726E-03	6.266E-07	1.400E-01	1.427E-01	✓
A06	1.5	1.656E-03	6.556E-07	1.400E-01	1.417E-01	✓
A06	5	1.698E-03	6.157E-07	1.400E-01	1.417E-01	✓
A06	10	1.708E-03	5.734E-07	1.400E-01	1.417E-01	✓
A07	1.5	7.946E-03	4.308E-08	1.400E-01	1.479E-01	✓
A07	5	8.285E-03	4.543E-08	1.400E-01	1.483E-01	✓
A07	10	8.258E-03	4.856E-08	1.400E-01	1.483E-01	✓
A08	1.5	6.170E-03	4.308E-08	1.400E-01	1.462E-01	✓
A08	5	6.454E-03	4.543E-08	1.400E-01	1.465E-01	✓
A08	10	6.514E-03	4.856E-08	1.400E-01	1.465E-01	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Highest 8-Hour Chromium Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (500 µg/m3)
A02	1.5	4.472E-05	4.513E-06	1.400E-02	1.430E-02	✓
A02	5	4.421E-05	4.494E-06	1.400E-02	1.429E-02	✓
A02	10	4.351E-05	4.462E-06	1.400E-02	1.427E-02	✓
A02	15	4.423E-05	4.429E-06	1.400E-02	1.425E-02	✓
A03	1.5	8.749E-05	3.167E-06	1.400E-02	1.440E-02	✓
A03	5	8.605E-05	3.148E-06	1.400E-02	1.438E-02	✓
A03	10	8.403E-05	3.122E-06	1.400E-02	1.436E-02	✓
A04	1.5	8.641E-04	4.019E-07	1.400E-02	1.435E-02	✓
A04	5	8.597E-04	4.031E-07	1.400E-02	1.435E-02	✓
A04	10	6.287E-04	2.369E-07	1.400E-02	1.459E-02	✓
A05	1.5	6.012E-05	2.146E-07	1.400E-02	1.427E-02	✓
A05	5	2.025E-05	9.344E-08	1.400E-02	1.428E-02	✓
A05	10	1.325E-05	8.851E-08	1.400E-02	1.428E-02	✓
A05	15	9.617E-06	8.687E-08	1.400E-02	1.428E-02	✓
A05	20	7.531E-06	8.797E-08	1.400E-02	1.428E-02	✓
A06	1.5	3.971E-05	2.128E-07	1.400E-02	1.415E-02	✓
A06	5	3.090E-05	2.013E-07	1.400E-02	1.416E-02	✓
A06	10	1.082E-05	9.746E-08	1.400E-02	1.416E-02	✓
A07	1.5	1.471E-04	9.417E-07	1.400E-02	1.441E-02	✓
A07	5	1.437E-04	9.324E-07	1.400E-02	1.445E-02	✓
A07	10	1.656E-04	1.975E-07	1.400E-02	1.463E-02	✓
A08	1.5	1.576E-04	9.439E-07	1.400E-02	1.436E-02	✓
A08	5	1.541E-04	9.346E-07	1.400E-02	1.439E-02	✓
A08	10	6.883E-04	2.564E-07	1.400E-02	1.453E-02	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Highest 8-Hour Copper Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (100 µg/m3)
A02	1.5	1.920E-04	1.937E-05	1.400E-01	1.413E-01	✓
A02	5	1.898E-04	1.929E-05	1.400E-01	1.412E-01	✓
A02	10	1.867E-04	1.915E-05	1.400E-01	1.412E-01	✓
A02	15	1.838E-04	1.901E-05	1.400E-01	1.411E-01	✓
A03	1.5	3.755E-04	1.359E-05	1.400E-01	1.417E-01	✓
A03	5	3.693E-04	1.351E-05	1.400E-01	1.416E-01	✓
A03	10	3.607E-04	1.340E-05	1.400E-01	1.416E-01	✓
A04	1.5	3.709E-03	1.725E-06	1.400E-01	1.415E-01	✓
A04	5	3.690E-03	1.730E-06	1.400E-01	1.415E-01	✓
A04	10	2.698E-03	1.017E-06	1.400E-01	1.425E-01	✓
A05	1.5	2.580E-04	9.212E-07	1.400E-01	1.411E-01	✓
A05	5	8.691E-05	4.010E-07	1.400E-01	1.412E-01	✓
A05	10	5.687E-05	3.799E-07	1.400E-01	1.412E-01	✓
A05	15	4.128E-05	3.729E-07	1.400E-01	1.412E-01	✓
A05	20	3.232E-05	3.776E-07	1.400E-01	1.412E-01	✓
A06	1.5	1.705E-04	9.133E-07	1.400E-01	1.406E-01	✓
A06	5	1.326E-04	8.640E-07	1.400E-01	1.407E-01	✓
A06	10	4.642E-05	4.183E-07	1.400E-01	1.407E-01	✓
A07	1.5	6.313E-04	4.042E-06	1.400E-01	1.418E-01	✓
A07	5	6.166E-04	4.002E-06	1.400E-01	1.419E-01	✓
A07	10	7.106E-04	8.475E-07	1.400E-01	1.427E-01	✓
A08	1.5	6.766E-04	4.051E-06	1.400E-01	1.415E-01	✓
A08	5	6.616E-04	4.011E-06	1.400E-01	1.417E-01	✓
A08	10	2.954E-03	1.101E-06	1.400E-01	1.423E-01	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Highest Hourly Hexavalent chromium Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (0.0085 µg/m3)
A02	1.5	4.113E-05	1.636E-08	1.100E-04	1.512E-04	✓
A02	5	3.920E-05	1.766E-08	1.100E-04	1.492E-04	✓
A02	10	3.701E-05	1.981E-08	1.100E-04	1.470E-04	✓
A02	15	3.537E-05	2.232E-08	1.100E-04	1.454E-04	✓
A03	1.5	5.647E-05	3.056E-08	1.100E-04	1.665E-04	✓
A03	5	5.373E-05	3.127E-08	1.100E-04	1.638E-04	✓
A03	10	5.035E-05	3.253E-08	1.100E-04	1.604E-04	✓
A04	1.5	6.361E-05	3.820E-08	1.100E-04	1.737E-04	✓
A04	5	6.267E-05	3.826E-08	1.100E-04	1.727E-04	✓
A04	10	7.262E-05	2.470E-08	1.100E-04	1.826E-04	✓
A05	1.5	3.743E-05	9.756E-09	1.100E-04	1.474E-04	✓
A05	5	3.837E-05	1.169E-08	1.100E-04	1.484E-04	✓
A05	10	4.101E-05	1.075E-08	1.100E-04	1.510E-04	✓
A05	15	4.198E-05	1.007E-08	1.100E-04	1.520E-04	✓
A05	20	4.177E-05	9.600E-09	1.100E-04	1.518E-04	✓
A06	1.5	2.537E-05	1.004E-08	1.100E-04	1.354E-04	✓
A06	5	2.602E-05	9.432E-09	1.100E-04	1.360E-04	✓
A06	10	2.618E-05	8.784E-09	1.100E-04	1.362E-04	✓
A07	1.5	1.218E-04	6.600E-10	1.100E-04	2.318E-04	✓
A07	5	1.270E-04	6.960E-10	1.100E-04	2.370E-04	✓
A07	10	1.265E-04	7.440E-10	1.100E-04	2.365E-04	✓
A08	1.5	9.454E-05	6.600E-10	1.100E-04	2.045E-04	✓
A08	5	9.889E-05	6.960E-10	1.100E-04	2.089E-04	✓
A08	10	9.982E-05	7.440E-10	1.100E-04	2.098E-04	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Annual Hexavalent chromium Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (0.1 µg/m3)
A02	1.5	2.478E-07	3.137E-07	1.100E-04	1.106E-04	✓
A02	5	2.421E-07	3.160E-07	1.100E-04	1.106E-04	✓
A02	10	2.465E-07	3.169E-07	1.100E-04	1.106E-04	✓
A02	15	2.578E-07	3.158E-07	1.100E-04	1.106E-04	✓
A04	10	1.041E-06	3.873E-07	1.100E-04	1.114E-04	✓
A05	1.5	4.351E-07	7.787E-08	1.100E-04	1.105E-04	✓
A05	5	3.973E-07	7.631E-08	1.100E-04	1.105E-04	✓
A05	10	3.589E-07	7.471E-08	1.100E-04	1.104E-04	✓
A05	15	3.288E-07	7.363E-08	1.100E-04	1.104E-04	✓
A05	20	3.029E-07	7.302E-08	1.100E-04	1.104E-04	✓
A06	1.5	2.143E-07	5.311E-08	1.100E-04	1.103E-04	✓
A06	5	1.977E-07	5.178E-08	1.100E-04	1.102E-04	✓
A06	10	1.802E-07	5.037E-08	1.100E-04	1.102E-04	✓
A07	1.5	7.032E-07	3.527E-07	1.100E-04	1.111E-04	✓
A07	5	7.895E-07	3.560E-07	1.100E-04	1.111E-04	✓
A07	10	1.226E-06	3.598E-07	1.100E-04	1.116E-04	✓
A08	1.5	7.081E-07	3.567E-07	1.100E-04	1.111E-04	✓
A08	5	7.916E-07	3.601E-07	1.100E-04	1.112E-04	✓
A08	10	1.211E-06	3.642E-07	1.100E-04	1.116E-04	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Highest 8-Hour Hexavalent chromium Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (5 µg/m3)
A02	1.5	2.941E-06	2.967E-07	1.100E-04	1.297E-04	✓
A02	5	2.908E-06	2.955E-07	1.100E-04	1.289E-04	✓
A02	10	2.861E-06	2.934E-07	1.100E-04	1.278E-04	✓
A02	15	2.817E-06	2.912E-07	1.100E-04	1.268E-04	✓
A03	1.5	5.754E-06	2.082E-07	1.100E-04	1.365E-04	✓
A03	5	5.659E-06	2.070E-07	1.100E-04	1.352E-04	✓
A03	10	5.526E-06	2.053E-07	1.100E-04	1.339E-04	✓
A04	1.5	5.683E-05	2.642E-08	1.100E-04	1.330E-04	✓
A04	5	5.654E-05	2.651E-08	1.100E-04	1.330E-04	✓
A04	10	4.135E-05	1.558E-08	1.100E-04	1.489E-04	✓
A05	1.5	3.954E-06	1.411E-08	1.100E-04	1.275E-04	✓
A05	5	1.332E-06	6.144E-09	1.100E-04	1.281E-04	✓
A05	10	8.714E-07	5.820E-09	1.100E-04	1.286E-04	✓
A05	15	6.325E-07	5.712E-09	1.100E-04	1.287E-04	✓
A05	20	4.953E-07	5.784E-09	1.100E-04	1.285E-04	✓
A06	1.5	2.612E-06	1.399E-08	1.100E-04	1.198E-04	✓
A06	5	2.032E-06	1.324E-08	1.100E-04	1.203E-04	✓
A06	10	7.114E-07	6.408E-09	1.100E-04	1.207E-04	✓
A07	1.5	9.673E-06	6.192E-08	1.100E-04	1.371E-04	✓
A07	5	9.449E-06	6.131E-08	1.100E-04	1.397E-04	✓
A07	10	1.089E-05	1.298E-08	1.100E-04	1.511E-04	✓
A08	1.5	1.037E-05	6.206E-08	1.100E-04	1.337E-04	✓
A08	5	1.014E-05	6.145E-08	1.100E-04	1.357E-04	✓
A08	10	4.527E-05	1.686E-08	1.100E-04	1.451E-04	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Highest 8-Hour Lead Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (50 µg/m3)
A02	1.5	7.204E-05	7.270E-06	4.600E-02	4.648E-02	✓
A02	5	7.122E-05	7.239E-06	4.600E-02	4.646E-02	✓
A02	10	7.008E-05	7.189E-06	4.600E-02	4.644E-02	✓
A02	15	6.898E-05	7.134E-06	4.600E-02	4.641E-02	✓
A03	1.5	1.409E-04	5.101E-06	4.600E-02	4.665E-02	✓
A03	5	1.386E-04	5.072E-06	4.600E-02	4.662E-02	✓
A03	10	1.354E-04	5.029E-06	4.600E-02	4.658E-02	✓
A04	1.5	1.392E-03	6.474E-07	4.600E-02	4.656E-02	✓
A04	5	1.385E-03	6.494E-07	4.600E-02	4.656E-02	✓
A04	10	1.013E-03	3.816E-07	4.600E-02	4.695E-02	✓
A05	1.5	9.683E-05	3.457E-07	4.600E-02	4.643E-02	✓
A05	5	3.262E-05	1.505E-07	4.600E-02	4.644E-02	✓
A05	10	2.134E-05	1.426E-07	4.600E-02	4.646E-02	✓
A05	15	1.549E-05	1.399E-07	4.600E-02	4.646E-02	✓
A05	20	1.213E-05	1.417E-07	4.600E-02	4.645E-02	✓
A06	1.5	6.397E-05	3.428E-07	4.600E-02	4.624E-02	✓
A06	5	4.978E-05	3.243E-07	4.600E-02	4.625E-02	✓
A06	10	1.742E-05	1.570E-07	4.600E-02	4.626E-02	✓
A07	1.5	2.369E-04	1.517E-06	4.600E-02	4.666E-02	✓
A07	5	2.314E-04	1.502E-06	4.600E-02	4.673E-02	✓
A07	10	2.667E-04	3.181E-07	4.600E-02	4.701E-02	✓
A08	1.5	2.539E-04	1.521E-06	4.600E-02	4.658E-02	✓
A08	5	2.483E-04	1.506E-06	4.600E-02	4.663E-02	✓
A08	10	1.109E-03	4.131E-07	4.600E-02	4.686E-02	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)
Tsing Yi North Underground Quarry (Year 2028)
Annual Lead Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (0.5 µg/m3)
A02	1.5	6.069E-06	7.686E-06	1.097E-02	1.099E-02	✓
A02	5	5.929E-06	7.741E-06	1.097E-02	1.099E-02	✓
A02	10	6.038E-06	7.763E-06	1.097E-02	1.099E-02	✓
A02	15	6.315E-06	7.737E-06	1.097E-02	1.099E-02	✓
A04	10	2.550E-05	9.489E-06	1.097E-02	1.101E-02	✓
A05	1.5	1.066E-05	1.908E-06	1.097E-02	1.099E-02	✓
A05	5	9.731E-06	1.870E-06	1.097E-02	1.099E-02	✓
A05	10	8.789E-06	1.830E-06	1.097E-02	1.098E-02	✓
A05	15	8.054E-06	1.804E-06	1.097E-02	1.098E-02	✓
A05	20	7.418E-06	1.789E-06	1.097E-02	1.098E-02	✓
A06	1.5	5.249E-06	1.301E-06	1.097E-02	1.098E-02	✓
A06	5	4.841E-06	1.269E-06	1.097E-02	1.098E-02	✓
A06	10	4.414E-06	1.234E-06	1.097E-02	1.098E-02	✓
A07	1.5	1.722E-05	8.642E-06	1.097E-02	1.100E-02	✓
A07	5	1.934E-05	8.722E-06	1.097E-02	1.100E-02	✓
A07	10	3.003E-05	8.815E-06	1.097E-02	1.101E-02	✓
A08	1.5	1.734E-05	8.738E-06	1.097E-02	1.100E-02	✓
A08	5	1.939E-05	8.822E-06	1.097E-02	1.100E-02	✓
A08	10	2.965E-05	8.922E-06	1.097E-02	1.101E-02	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)
Tsing Yi North Underground Quarry (Year 2028)
Annual Manganese Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (0.09 µg/m3)
A02	1.5	3.853E-05	4.881E-05	1.765E-02	1.773E-02	✓
A02	5	3.764E-05	4.916E-05	1.765E-02	1.773E-02	✓
A02	10	3.834E-05	4.930E-05	1.765E-02	1.774E-02	✓
A02	15	4.010E-05	4.913E-05	1.765E-02	1.774E-02	✓
A04	10	1.619E-04	6.026E-05	1.765E-02	1.787E-02	✓
A05	1.5	6.766E-05	1.211E-05	1.765E-02	1.773E-02	✓
A05	5	6.179E-05	1.187E-05	1.765E-02	1.772E-02	✓
A05	10	5.581E-05	1.162E-05	1.765E-02	1.771E-02	✓
A05	15	5.114E-05	1.146E-05	1.765E-02	1.771E-02	✓
A05	20	4.710E-05	1.136E-05	1.765E-02	1.771E-02	✓
A06	1.5	3.333E-05	8.262E-06	1.765E-02	1.769E-02	✓
A06	5	3.074E-05	8.056E-06	1.765E-02	1.769E-02	✓
A06	10	2.803E-05	7.837E-06	1.765E-02	1.768E-02	✓
A07	1.5	1.094E-04	5.488E-05	1.765E-02	1.781E-02	✓
A07	5	1.228E-04	5.538E-05	1.765E-02	1.783E-02	✓
A07	10	1.907E-04	5.598E-05	1.765E-02	1.789E-02	✓
A08	1.5	1.101E-04	5.549E-05	1.765E-02	1.781E-02	✓
A08	5	1.231E-04	5.602E-05	1.765E-02	1.783E-02	✓
A08	10	1.883E-04	5.666E-05	1.765E-02	1.789E-02	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)
Tsing Yi North Underground Quarry (Year 2028)
Highest 8-Hour Manganese Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (0.17 µg/m3)
A02	1.5	4.574E-04	4.617E-05	6.900E-02	7.207E-02	✓
A02	5	4.522E-04	4.597E-05	6.900E-02	7.194E-02	✓
A02	10	4.450E-04	4.565E-05	6.900E-02	7.177E-02	✓
A02	15	4.380E-04	4.531E-05	6.900E-02	7.161E-02	✓
A03	1.5	8.948E-04	3.239E-05	6.900E-02	7.311E-02	✓
A03	5	8.801E-04	3.221E-05	6.900E-02	7.292E-02	✓
A03	10	8.594E-04	3.194E-05	6.900E-02	7.271E-02	✓
A04	1.5	8.838E-03	4.111E-06	6.900E-02	7.257E-02	✓
A04	5	8.792E-03	4.124E-06	6.900E-02	7.257E-02	✓
A04	10	6.430E-03	2.423E-06	6.900E-02	7.504E-02	✓
A05	1.5	6.148E-04	2.196E-06	6.900E-02	7.171E-02	✓
A05	5	2.071E-04	9.559E-07	6.900E-02	7.182E-02	✓
A05	10	1.355E-04	9.055E-07	6.900E-02	7.189E-02	✓
A05	15	9.836E-05	8.887E-07	6.900E-02	7.191E-02	✓
A05	20	7.702E-05	8.999E-07	6.900E-02	7.188E-02	✓
A06	1.5	4.062E-04	2.177E-06	6.900E-02	7.053E-02	✓
A06	5	3.161E-04	2.059E-06	6.900E-02	7.061E-02	✓
A06	10	1.106E-04	9.970E-07	6.900E-02	7.067E-02	✓
A07	1.5	1.504E-03	9.634E-06	6.900E-02	7.321E-02	✓
A07	5	1.469E-03	9.539E-06	6.900E-02	7.362E-02	✓
A07	10	1.693E-03	2.020E-06	6.900E-02	7.540E-02	✓
A08	1.5	1.612E-03	9.656E-06	6.900E-02	7.268E-02	✓
A08	5	1.577E-03	9.561E-06	6.900E-02	7.300E-02	✓
A08	10	7.040E-03	2.623E-06	6.900E-02	7.446E-02	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)
Tsing Yi North Underground Quarry (Year 2028)
Highest Hourly Mercury Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (0.6 µg/m3)
A02	1.5	3.695E-04	1.471E-07	1.900E-04	5.597E-04	✓
A02	5	3.521E-04	1.588E-07	1.900E-04	5.423E-04	✓
A02	10	3.325E-04	1.781E-07	1.900E-04	5.226E-04	✓
A02	15	3.177E-04	2.007E-07	1.900E-04	5.079E-04	✓
A03	1.5	5.073E-04	2.748E-07	1.900E-04	6.975E-04	✓
A03	5	4.827E-04	2.812E-07	1.900E-04	6.730E-04	✓
A03	10	4.523E-04	2.925E-07	1.900E-04	6.426E-04	✓
A04	1.5	5.715E-04	3.434E-07	1.900E-04	7.618E-04	✓
A04	5	5.630E-04	3.440E-07	1.900E-04	7.534E-04	✓
A04	10	6.523E-04	2.221E-07	1.900E-04	8.426E-04	✓
A05	1.5	3.362E-04	8.772E-08	1.900E-04	5.263E-04	✓
A05	5	3.447E-04	1.051E-07	1.900E-04	5.348E-04	✓
A05	10	3.684E-04	9.668E-08	1.900E-04	5.585E-04	✓
A05	15	3.771E-04	9.053E-08	1.900E-04	5.672E-04	✓
A05	20	3.752E-04	8.632E-08	1.900E-04	5.653E-04	✓
A06	1.5	2.279E-04	9.031E-08	1.900E-04	4.180E-04	✓
A06	5	2.338E-04	8.481E-08	1.900E-04	4.238E-04	✓
A06	10	2.352E-04	7.898E-08	1.900E-04	4.252E-04	✓
A07	1.5	1.094E-03	5.935E-09	1.900E-04	1.284E-03	✓
A07	5	1.140E-03	6.258E-09	1.900E-04	1.330E-03	✓
A07	10	1.137E-03	6.690E-09	1.900E-04	1.327E-03	✓
A08	1.5	8.493E-04	5.935E-09	1.900E-04	1.039E-03	✓
A08	5	8.883E-04	6.258E-09	1.900E-04	1.078E-03	✓
A08	10	8.967E-04	6.690E-09	1.900E-04	1.087E-03	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Highest 8-Hour Mercury Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (0.06 µg/m3)
A02	1.5	2.642E-05	2.668E-06	1.900E-04	3.672E-04	✓
A02	5	2.612E-05	2.657E-06	1.900E-04	3.601E-04	✓
A02	10	2.570E-05	2.638E-06	1.900E-04	3.501E-04	✓
A02	15	2.530E-05	2.618E-06	1.900E-04	3.406E-04	✓
A03	1.5	5.169E-05	1.872E-06	1.900E-04	4.277E-04	✓
A03	5	5.084E-05	1.861E-06	1.900E-04	4.165E-04	✓
A03	10	4.965E-05	1.846E-06	1.900E-04	4.043E-04	✓
A04	1.5	5.105E-04	2.376E-07	1.900E-04	3.965E-04	✓
A04	5	5.079E-04	2.384E-07	1.900E-04	3.962E-04	✓
A04	10	3.714E-04	1.401E-07	1.900E-04	5.391E-04	✓
A05	1.5	3.552E-05	1.269E-07	1.900E-04	3.468E-04	✓
A05	5	1.196E-05	5.524E-08	1.900E-04	3.527E-04	✓
A05	10	7.828E-06	5.233E-08	1.900E-04	3.571E-04	✓
A05	15	5.682E-06	5.136E-08	1.900E-04	3.581E-04	✓
A05	20	4.449E-06	5.201E-08	1.900E-04	3.564E-04	✓
A06	1.5	2.346E-05	1.258E-07	1.900E-04	2.784E-04	✓
A06	5	1.826E-05	1.190E-07	1.900E-04	2.829E-04	✓
A06	10	6.390E-06	5.762E-08	1.900E-04	2.862E-04	✓
A07	1.5	8.690E-05	5.568E-07	1.900E-04	4.331E-04	✓
A07	5	8.488E-05	5.513E-07	1.900E-04	4.568E-04	✓
A07	10	9.781E-05	1.167E-07	1.900E-04	5.596E-04	✓
A08	1.5	9.314E-05	5.581E-07	1.900E-04	4.028E-04	✓
A08	5	9.107E-05	5.526E-07	1.900E-04	4.209E-04	✓
A08	10	4.066E-04	1.516E-07	1.900E-04	5.051E-04	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Highest Hourly Nickel Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (0.2 µg/m3)
A02	1.5	1.628E-02	6.476E-06	9.300E-03	2.559E-02	✓
A02	5	1.552E-02	6.993E-06	9.300E-03	2.482E-02	✓
A02	10	1.465E-02	7.844E-06	9.300E-03	2.396E-02	✓
A02	15	1.400E-02	8.837E-06	9.300E-03	2.331E-02	✓
A03	1.5	2.235E-02	1.210E-05	9.300E-03	3.166E-02	✓
A03	5	2.127E-02	1.238E-05	9.300E-03	3.058E-02	✓
A03	10	1.993E-02	1.288E-05	9.300E-03	2.924E-02	✓
A04	1.5	2.518E-02	1.512E-05	9.300E-03	3.449E-02	✓
A04	5	2.481E-02	1.515E-05	9.300E-03	3.412E-02	✓
A04	10	2.874E-02	9.778E-06	9.300E-03	3.805E-02	✓
A05	1.5	1.481E-02	3.863E-06	9.300E-03	2.412E-02	✓
A05	5	1.519E-02	4.627E-06	9.300E-03	2.449E-02	✓
A05	10	1.623E-02	4.257E-06	9.300E-03	2.554E-02	✓
A05	15	1.661E-02	3.986E-06	9.300E-03	2.592E-02	✓
A05	20	1.653E-02	3.801E-06	9.300E-03	2.584E-02	✓
A06	1.5	1.004E-02	3.977E-06	9.300E-03	1.935E-02	✓
A06	5	1.030E-02	3.734E-06	9.300E-03	1.960E-02	✓
A06	10	1.036E-02	3.478E-06	9.300E-03	1.966E-02	✓
A07	1.5	4.819E-02	2.613E-07	9.300E-03	5.749E-02	✓
A07	5	5.025E-02	2.756E-07	9.300E-03	5.955E-02	✓
A07	10	5.009E-02	2.946E-07	9.300E-03	5.939E-02	✓
A08	1.5	3.742E-02	2.613E-07	9.300E-03	4.672E-02	✓
A08	5	3.914E-02	2.756E-07	9.300E-03	4.844E-02	✓
A08	10	3.951E-02	2.946E-07	9.300E-03	4.881E-02	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Annual Mercury Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (0.03 µg/m3)
A02	1.5	2.226E-06	2.821E-06	1.708E-04	1.759E-04	✓
A02	5	2.175E-06	2.841E-06	1.708E-04	1.758E-04	✓
A02	10	2.215E-06	2.849E-06	1.708E-04	1.759E-04	✓
A02	15	2.316E-06	2.839E-06	1.708E-04	1.760E-04	✓
A04	10	9.354E-06	3.482E-06	1.708E-04	1.837E-04	✓
A05	1.5	3.909E-06	7.001E-07	1.708E-04	1.754E-04	✓
A05	5	3.569E-06	6.861E-07	1.708E-04	1.751E-04	✓
A05	10	3.224E-06	6.717E-07	1.708E-04	1.747E-04	✓
A05	15	2.954E-06	6.621E-07	1.708E-04	1.744E-04	✓
A05	20	2.721E-06	6.566E-07	1.708E-04	1.742E-04	✓
A06	1.5	1.925E-06	4.775E-07	1.708E-04	1.732E-04	✓
A06	5	1.776E-06	4.656E-07	1.708E-04	1.731E-04	✓
A06	10	1.619E-06	4.529E-07	1.708E-04	1.729E-04	✓
A07	1.5	6.317E-06	3.172E-06	1.708E-04	1.803E-04	✓
A07	5	7.092E-06	3.201E-06	1.708E-04	1.811E-04	✓
A07	10	1.101E-05	3.235E-06	1.708E-04	1.851E-04	✓
A08	1.5	6.361E-06	3.207E-06	1.708E-04	1.804E-04	✓
A08	5	7.112E-06	3.238E-06	1.708E-04	1.812E-04	✓
A08	10	1.088E-05	3.274E-06	1.708E-04	1.850E-04	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Highest 8-Hour Nickel Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (0.06 µg/m3)
A02	1.5	1.164E-03	1.175E-04	9.300E-03	1.711E-02	✓
A02	5	1.151E-03	1.170E-04	9.300E-03	1.679E-02	✓
A02	10	1.133E-03	1.162E-04	9.300E-03	1.636E-02	✓
A02	15	1.115E-03	1.153E-04	9.300E-03	1.594E-02	✓
A03	1.5	2.277E-03	8.243E-05	9.300E-03	1.977E-02	✓
A03	5	2.240E-03	8.196E-05	9.300E-03	1.928E-02	✓
A03	10	2.187E-03	8.127E-05	9.300E-03	1.874E-02	✓
A04	1.5	2.249E-02	1.046E-05	9.300E-03	1.840E-02	✓
A04	5	2.238E-02	1.049E-05	9.300E-03	1.839E-02	✓
A04	10	1.637E-02	6.167E-06	9.300E-03	2.468E-02	✓
A05	1.5	1.565E-03	5.587E-06	9.300E-03	1.621E-02	✓
A05	5	5.271E-04	2.433E-06	9.300E-03	1.647E-02	✓
A05	10	3.449E-04	2.304E-06	9.300E-03	1.666E-02	✓
A05	15	2.503E-04	2.261E-06	9.300E-03	1.671E-02	✓
A05	20	1.960E-04	2.290E-06	9.300E-03	1.663E-02	✓
A06	1.5	1.034E-03	5.540E-06	9.300E-03	1.320E-02	✓
A06	5	8.045E-04	5.240E-06	9.300E-03	1.339E-02	✓
A06	10	2.816E-04	2.537E-06	9.300E-03	1.354E-02	✓
A07	1.5	3.829E-03	2.452E-05	9.300E-03	2.001E-02	✓
A07	5	3.740E-03	2.427E-05	9.300E-03	2.106E-02	✓
A07	10	4.310E-03	5.141E-06	9.300E-03	2.559E-02	✓
A08	1.5	4.104E-03	2.457E-05	9.300E-03	1.868E-02	✓
A08	5	4.013E-03	2.433E-05	9.300E-03	1.948E-02	✓
A08	10	1.792E-02	6.675E-06	9.300E-03	2.318E-02	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Annual Nickel Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (0.02 µg/m3)
A02	1.5	9.808E-05	1.242E-04	3.804E-03	4.026E-03	✓
A02	5	9.581E-05	1.251E-04	3.804E-03	4.025E-03	✓
A02	10	9.758E-05	1.255E-04	3.804E-03	4.027E-03	✓
A02	15	1.021E-04	1.250E-04	3.804E-03	4.031E-03	✓
A04	10	4.122E-04	1.533E-04	3.804E-03	4.370E-03	✓
A05	1.5	1.722E-04	3.083E-05	3.804E-03	4.007E-03	✓
A05	5	1.573E-04	3.021E-05	3.804E-03	3.992E-03	✓
A05	10	1.420E-04	2.958E-05	3.804E-03	3.976E-03	✓
A05	15	1.302E-04	2.915E-05	3.804E-03	3.963E-03	✓
A05	20	1.199E-04	2.891E-05	3.804E-03	3.953E-03	✓
A06	1.5	8.483E-05	2.103E-05	3.804E-03	3.910E-03	✓
A06	5	7.824E-05	2.050E-05	3.804E-03	3.903E-03	✓
A06	10	7.134E-05	1.994E-05	3.804E-03	3.895E-03	✓
A07	1.5	2.783E-04	1.397E-04	3.804E-03	4.222E-03	✓
A07	5	3.125E-04	1.409E-04	3.804E-03	4.258E-03	✓
A07	10	4.853E-04	1.424E-04	3.804E-03	4.432E-03	✓
A08	1.5	2.803E-04	1.412E-04	3.804E-03	4.226E-03	✓
A08	5	3.133E-04	1.426E-04	3.804E-03	4.260E-03	✓
A08	10	4.792E-04	1.442E-04	3.804E-03	4.427E-03	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Annual Selenium Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (20 µg/m3)
A02	1.5	3.196E-06	4.047E-06	6.352E-04	6.425E-04	✓
A02	5	3.122E-06	4.076E-06	6.352E-04	6.424E-04	✓
A02	10	3.180E-06	4.088E-06	6.352E-04	6.425E-04	✓
A02	15	3.326E-06	4.074E-06	6.352E-04	6.426E-04	✓
A04	10	1.343E-05	4.996E-06	6.352E-04	6.537E-04	✓
A05	1.5	5.612E-06	1.004E-06	6.352E-04	6.419E-04	✓
A05	5	5.125E-06	9.844E-07	6.352E-04	6.414E-04	✓
A05	10	4.629E-06	9.637E-07	6.352E-04	6.408E-04	✓
A05	15	4.241E-06	9.499E-07	6.352E-04	6.404E-04	✓
A05	20	3.907E-06	9.419E-07	6.352E-04	6.401E-04	✓
A06	1.5	2.764E-06	6.851E-07	6.352E-04	6.387E-04	✓
A06	5	2.549E-06	6.679E-07	6.352E-04	6.385E-04	✓
A06	10	2.325E-06	6.498E-07	6.352E-04	6.382E-04	✓
A07	1.5	9.070E-06	4.550E-06	6.352E-04	6.489E-04	✓
A07	5	1.018E-05	4.592E-06	6.352E-04	6.500E-04	✓
A07	10	1.581E-05	4.641E-06	6.352E-04	6.557E-04	✓
A08	1.5	9.133E-06	4.601E-06	6.352E-04	6.490E-04	✓
A08	5	1.021E-05	4.645E-06	6.352E-04	6.501E-04	✓
A08	10	1.562E-05	4.698E-06	6.352E-04	6.556E-04	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Highest 8-Hour Selenium Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (200 µg/m3)
A02	1.5	3.794E-05	3.828E-06	2.200E-03	2.454E-03	✓
A02	5	3.750E-05	3.811E-06	2.200E-03	2.444E-03	✓
A02	10	3.690E-05	3.785E-06	2.200E-03	2.430E-03	✓
A02	15	3.633E-05	3.757E-06	2.200E-03	2.416E-03	✓
A03	1.5	7.421E-05	2.686E-06	2.200E-03	2.541E-03	✓
A03	5	7.299E-05	2.671E-06	2.200E-03	2.525E-03	✓
A03	10	7.128E-05	2.648E-06	2.200E-03	2.508E-03	✓
A04	1.5	7.330E-04	3.409E-07	2.200E-03	2.496E-03	✓
A04	5	7.292E-04	3.420E-07	2.200E-03	2.496E-03	✓
A04	10	5.333E-04	2.009E-07	2.200E-03	2.701E-03	✓
A05	1.5	5.099E-05	1.820E-07	2.200E-03	2.425E-03	✓
A05	5	1.718E-05	7.926E-08	2.200E-03	2.434E-03	✓
A05	10	1.124E-05	7.508E-08	2.200E-03	2.440E-03	✓
A05	15	8.158E-06	7.368E-08	2.200E-03	2.441E-03	✓
A05	20	6.388E-06	7.461E-08	2.200E-03	2.439E-03	✓
A06	1.5	3.369E-05	1.805E-07	2.200E-03	2.327E-03	✓
A06	5	2.621E-05	1.707E-07	2.200E-03	2.333E-03	✓
A06	10	9.175E-06	8.266E-08	2.200E-03	2.338E-03	✓
A07	1.5	1.248E-04	7.988E-07	2.200E-03	2.549E-03	✓
A07	5	1.219E-04	7.909E-07	2.200E-03	2.583E-03	✓
A07	10	1.404E-04	1.675E-07	2.200E-03	2.731E-03	✓
A08	1.5	1.337E-04	8.006E-07	2.200E-03	2.506E-03	✓
A08	5	1.308E-04	7.927E-07	2.200E-03	2.532E-03	✓
A08	10	5.839E-04	2.175E-07	2.200E-03	2.652E-03	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Highest 8-Hour Zinc Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (5000 µg/m3)
A02	1.5	7.543E-04	7.612E-05	2.300E-01	2.351E-01	✓
A02	5	7.457E-04	7.579E-05	2.300E-01	2.349E-01	✓
A02	10	7.338E-04	7.526E-05	2.300E-01	2.346E-01	✓
A02	15	7.223E-04	7.469E-05	2.300E-01	2.343E-01	✓
A03	1.5	1.476E-03	5.341E-05	2.300E-01	2.368E-01	✓
A03	5	1.451E-03	5.310E-05	2.300E-01	2.365E-01	✓
A03	10	1.417E-03	5.265E-05	2.300E-01	2.361E-01	✓
A04	1.5	1.457E-02	6.778E-06	2.300E-01	2.359E-01	✓
A04	5	1.450E-02	6.799E-06	2.300E-01	2.359E-01	✓
A04	10	1.060E-02	3.995E-06	2.300E-01	2.400E-01	✓
A05	1.5	1.014E-03	3.620E-06	2.300E-01	2.345E-01	✓
A05	5	3.415E-04	1.576E-06	2.300E-01	2.346E-01	✓
A05	10	2.235E-04	1.493E-06	2.300E-01	2.348E-01	✓
A05	15	1.622E-04	1.465E-06	2.300E-01	2.348E-01	✓
A05	20	1.270E-04	1.484E-06	2.300E-01	2.348E-01	✓
A06	1.5	6.698E-04	3.589E-06	2.300E-01	2.325E-01	✓
A06	5	5.212E-04	3.395E-06	2.300E-01	2.327E-01	✓
A06	10	1.824E-04	1.644E-06	2.300E-01	2.327E-01	✓
A07	1.5	2.481E-03	1.588E-05	2.300E-01	2.369E-01	✓
A07	5	2.423E-03	1.573E-05	2.300E-01	2.376E-01	✓
A07	10	2.792E-03	3.330E-06	2.300E-01	2.406E-01	✓
A08	1.5	2.659E-03	1.592E-05	2.300E-01	2.361E-01	✓
A08	5	2.600E-03	1.576E-05	2.300E-01	2.366E-01	✓
A08	10	1.161E-02	4.325E-06	2.300E-01	2.390E-01	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Highest Daily Bitumen Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (7 µg/m3)
A02	1.5	2.645E-02	3.405E-05	0.000E+00	2.648E-02	✓
A02	5	2.540E-02	3.380E-05	0.000E+00	2.543E-02	✓
A02	10	2.624E-02	1.652E-05	0.000E+00	2.626E-02	✓
A02	15	3.206E-02	1.679E-05	0.000E+00	3.208E-02	✓
A03	1.5	3.664E-02	1.190E-05	0.000E+00	3.665E-02	✓
A03	5	3.500E-02	1.181E-05	0.000E+00	3.501E-02	✓
A03	10	3.570E-02	1.245E-05	0.000E+00	3.571E-02	✓
A04	1.5	3.728E-02	5.558E-05	0.000E+00	3.733E-02	✓
A04	5	3.950E-02	5.524E-05	0.000E+00	3.956E-02	✓
A04	10	5.621E-02	6.251E-05	0.000E+00	5.627E-02	✓
A05	1.5	2.506E-02	2.320E-05	0.000E+00	2.508E-02	✓
A05	5	2.431E-02	3.321E-05	0.000E+00	2.435E-02	✓
A05	10	2.483E-02	3.293E-05	0.000E+00	2.486E-02	✓
A05	15	2.487E-02	3.289E-05	0.000E+00	2.491E-02	✓
A05	20	2.454E-02	3.299E-05	0.000E+00	2.457E-02	✓
A06	1.5	1.369E-02	2.829E-05	0.000E+00	1.372E-02	✓
A06	5	1.351E-02	1.641E-05	0.000E+00	1.353E-02	✓
A06	10	1.403E-02	1.586E-05	0.000E+00	1.404E-02	✓
A07	1.5	4.113E-02	5.025E-06	0.000E+00	4.113E-02	✓
A07	5	4.577E-02	5.216E-06	0.000E+00	4.577E-02	✓
A07	10	7.134E-02	5.237E-06	0.000E+00	7.134E-02	✓
A08	1.5	4.508E-02	5.237E-06	0.000E+00	4.508E-02	✓
A08	5	4.985E-02	5.237E-06	0.000E+00	4.986E-02	✓
A08	10	7.340E-02	5.237E-06	0.000E+00	7.340E-02	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Highest 8-Hour Acetaldehyde Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (300 µg/m3)
A02	1.5	1.960E-02	1.978E-03	1.200E+01	1.213E+01	✓
A02	5	1.938E-02	1.970E-03	1.200E+01	1.213E+01	✓
A02	10	1.907E-02	1.956E-03	1.200E+01	1.212E+01	✓
A02	15	1.877E-02	1.941E-03	1.200E+01	1.211E+01	✓
A03	1.5	3.835E-02	1.388E-03	1.200E+01	1.218E+01	✓
A03	5	3.772E-02	1.380E-03	1.200E+01	1.217E+01	✓
A03	10	3.683E-02	1.368E-03	1.200E+01	1.216E+01	✓
A04	1.5	3.788E-01	1.762E-04	1.200E+01	1.215E+01	✓
A04	5	3.768E-01	1.767E-04	1.200E+01	1.215E+01	✓
A04	10	2.756E-01	1.038E-04	1.200E+01	1.226E+01	✓
A05	1.5	2.635E-02	9.408E-05	1.200E+01	1.212E+01	✓
A05	5	8.875E-03	4.096E-05	1.200E+01	1.212E+01	✓
A05	10	5.808E-03	3.880E-05	1.200E+01	1.212E+01	✓
A05	15	4.215E-03	3.808E-05	1.200E+01	1.212E+01	✓
A05	20	3.301E-03	3.856E-05	1.200E+01	1.212E+01	✓
A06	1.5	1.741E-02	9.328E-05	1.200E+01	1.207E+01	✓
A06	5	1.355E-02	8.824E-05	1.200E+01	1.207E+01	✓
A06	10	4.741E-03	4.272E-05	1.200E+01	1.207E+01	✓
A07	1.5	6.447E-02	4.128E-04	1.200E+01	1.218E+01	✓
A07	5	6.297E-02	4.087E-04	1.200E+01	1.220E+01	✓
A07	10	7.257E-02	8.656E-05	1.200E+01	1.227E+01	✓
A08	1.5	6.910E-02	4.138E-04	1.200E+01	1.216E+01	✓
A08	5	6.756E-02	4.097E-04	1.200E+01	1.217E+01	✓
A08	10	3.017E-01	1.124E-04	1.200E+01	1.223E+01	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Highest Hourly Acetaldehyde Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (470 µg/m3)
A02	1.5	2.741E-01	1.090E-04	1.200E+01	1.227E+01	✓
A02	5	2.613E-01	1.178E-04	1.200E+01	1.226E+01	✓
A02	10	2.467E-01	1.321E-04	1.200E+01	1.225E+01	✓
A02	15	2.357E-01	1.488E-04	1.200E+01	1.224E+01	✓
A03	1.5	3.763E-01	2.038E-04	1.200E+01	1.238E+01	✓
A03	5	3.581E-01	2.085E-04	1.200E+01	1.236E+01	✓
A03	10	3.355E-01	2.169E-04	1.200E+01	1.234E+01	✓
A04	1.5	4.240E-01	2.546E-04	1.200E+01	1.242E+01	✓
A04	5	4.177E-01	2.550E-04	1.200E+01	1.242E+01	✓
A04	10	4.840E-01	1.646E-04	1.200E+01	1.248E+01	✓
A05	1.5	2.495E-01	6.504E-05	1.200E+01	1.225E+01	✓
A05	5	2.557E-01	7.792E-05	1.200E+01	1.226E+01	✓
A05	10	2.733E-01	7.168E-05	1.200E+01	1.227E+01	✓
A05	15	2.798E-01	6.712E-05	1.200E+01	1.228E+01	✓
A05	20	2.784E-01	6.400E-05	1.200E+01	1.228E+01	✓
A06	1.5	1.691E-01	6.696E-05	1.200E+01	1.217E+01	✓
A06	5	1.734E-01	6.288E-05	1.200E+01	1.217E+01	✓
A06	10	1.745E-01	5.856E-05	1.200E+01	1.217E+01	✓
A07	1.5	8.115E-01	4.400E-06	1.200E+01	1.281E+01	✓
A07	5	8.461E-01	4.640E-06	1.200E+01	1.285E+01	✓
A07	10	8.433E-01	4.960E-06	1.200E+01	1.284E+01	✓
A08	1.5	6.301E-01	4.400E-06	1.200E+01	1.263E+01	✓
A08	5	6.590E-01	4.640E-06	1.200E+01	1.266E+01	✓
A08	10	6.653E-01	4.960E-06	1.200E+01	1.267E+01	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Annual Acetaldehyde Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (9 µg/m3)
A02	1.5	1.651E-03	2.092E-03	4.407E+00	4.411E+00	✓
A02	5	1.613E-03	2.106E-03	4.407E+00	4.411E+00	✓
A02	10	1.643E-03	2.112E-03	4.407E+00	4.411E+00	✓
A02	15	1.718E-03	2.105E-03	4.407E+00	4.411E+00	✓
A04	10	6.940E-03	2.582E-03	4.407E+00	4.417E+00	✓
A05	1.5	2.900E-03	5.191E-04	4.407E+00	4.411E+00	✓
A05	5	2.648E-03	5.087E-04	4.407E+00	4.410E+00	✓
A05	10	2.392E-03	4.980E-04	4.407E+00	4.410E+00	✓
A05	15	2.192E-03	4.909E-04	4.407E+00	4.410E+00	✓
A05	20	2.019E-03	4.868E-04	4.407E+00	4.410E+00	✓
A06	1.5	1.428E-03	3.540E-04	4.407E+00	4.409E+00	✓
A06	5	1.317E-03	3.452E-04	4.407E+00	4.409E+00	✓
A06	10	1.201E-03	3.358E-04	4.407E+00	4.409E+00	✓
A07	1.5	4.686E-03	2.352E-03	4.407E+00	4.414E+00	✓
A07	5	5.262E-03	2.373E-03	4.407E+00	4.415E+00	✓
A07	10	8.171E-03	2.399E-03	4.407E+00	4.418E+00	✓
A08	1.5	4.719E-03	2.378E-03	4.407E+00	4.414E+00	✓
A08	5	5.276E-03	2.400E-03	4.407E+00	4.415E+00	✓
A08	10	8.069E-03	2.428E-03	4.407E+00	4.418E+00	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Highest Hourly Benzene Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (27 µg/m3)
A02	1.5	2.399E-01	9.541E-05	1.800E+00	2.040E+00	✓
A02	5	2.286E-01	1.030E-04	1.800E+00	2.029E+00	✓
A02	10	2.158E-01	1.156E-04	1.800E+00	2.016E+00	✓
A02	15	2.063E-01	1.302E-04	1.800E+00	2.006E+00	✓
A03	1.5	3.293E-01	1.783E-04	1.800E+00	2.129E+00	✓
A03	5	3.134E-01	1.824E-04	1.800E+00	2.114E+00	✓
A03	10	2.936E-01	1.898E-04	1.800E+00	2.094E+00	✓
A04	1.5	3.710E-01	2.228E-04	1.800E+00	2.171E+00	✓
A04	5	3.655E-01	2.232E-04	1.800E+00	2.166E+00	✓
A04	10	4.235E-01	1.441E-04	1.800E+00	2.224E+00	✓
A05	1.5	8.731E-02	5.691E-05	1.800E+00	1.887E+00	✓
A05	5	8.951E-02	6.818E-05	1.800E+00	1.890E+00	✓
A05	10	9.566E-02	6.272E-05	1.800E+00	1.896E+00	✓
A05	15	9.792E-02	5.873E-05	1.800E+00	1.898E+00	✓
A05	20	9.744E-02	5.600E-05	1.800E+00	1.897E+00	✓
A06	1.5	5.919E-02	5.859E-05	1.800E+00	1.859E+00	✓
A06	5	6.070E-02	5.502E-05	1.800E+00	1.861E+00	✓
A06	10	6.106E-02	5.124E-05	1.800E+00	1.861E+00	✓
A07	1.5	7.101E-01	3.850E-06	1.800E+00	2.510E+00	✓
A07	5	7.404E-01	4.060E-06	1.800E+00	2.540E+00	✓
A07	10	7.380E-01	4.340E-06	1.800E+00	2.538E+00	✓
A08	1.5	5.514E-01	3.850E-06	1.800E+00	2.351E+00	✓
A08	5	5.767E-01	4.060E-06	1.800E+00	2.377E+00	✓
A08	10	5.821E-01	4.340E-06	1.800E+00	2.382E+00	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Annual Benzene Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (3 µg/m3)
A02	1.5	1.445E-03	1.830E-03	8.021E-01	8.054E-01	✓
A02	5	1.412E-03	1.843E-03	8.021E-01	8.053E-01	✓
A02	10	1.438E-03	1.848E-03	8.021E-01	8.054E-01	✓
A02	15	1.504E-03	1.842E-03	8.021E-01	8.054E-01	✓
A04	10	6.073E-03	2.259E-03	8.021E-01	8.104E-01	✓
A05	1.5	2.537E-03	4.542E-04	8.021E-01	8.051E-01	✓
A05	5	2.317E-03	4.451E-04	8.021E-01	8.048E-01	✓
A05	10	2.093E-03	4.358E-04	8.021E-01	8.046E-01	✓
A05	15	1.918E-03	4.295E-04	8.021E-01	8.044E-01	✓
A05	20	1.766E-03	4.259E-04	8.021E-01	8.043E-01	✓
A06	1.5	1.250E-03	3.098E-04	8.021E-01	8.036E-01	✓
A06	5	1.153E-03	3.020E-04	8.021E-01	8.035E-01	✓
A06	10	1.051E-03	2.938E-04	8.021E-01	8.034E-01	✓
A07	1.5	4.101E-03	2.058E-03	8.021E-01	8.082E-01	✓
A07	5	4.604E-03	2.077E-03	8.021E-01	8.088E-01	✓
A07	10	7.150E-03	2.099E-03	8.021E-01	8.113E-01	✓
A08	1.5	4.130E-03	2.081E-03	8.021E-01	8.083E-01	✓
A08	5	4.617E-03	2.100E-03	8.021E-01	8.088E-01	✓
A08	10	7.061E-03	2.124E-03	8.021E-01	8.113E-01	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Highest 8-Hour Benzene Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (3 µg/m3)
A02	1.5	1.715E-02	1.731E-03	1.800E+00	1.915E+00	✓
A02	5	1.696E-02	1.724E-03	1.800E+00	1.910E+00	✓
A02	10	1.669E-02	1.712E-03	1.800E+00	1.904E+00	✓
A02	15	1.643E-02	1.699E-03	1.800E+00	1.898E+00	✓
A03	1.5	3.355E-02	1.215E-03	1.800E+00	1.954E+00	✓
A03	5	3.300E-02	1.208E-03	1.800E+00	1.947E+00	✓
A03	10	3.223E-02	1.197E-03	1.800E+00	1.939E+00	✓
A04	1.5	3.314E-01	1.541E-04	1.800E+00	1.934E+00	✓
A04	5	3.297E-01	1.546E-04	1.800E+00	1.934E+00	✓
A04	10	2.411E-01	9.086E-05	1.800E+00	2.027E+00	✓
A05	1.5	2.306E-02	8.232E-05	1.800E+00	1.902E+00	✓
A05	5	7.766E-03	3.584E-05	1.800E+00	1.906E+00	✓
A05	10	5.082E-03	3.395E-05	1.800E+00	1.908E+00	✓
A05	15	3.689E-03	3.332E-05	1.800E+00	1.909E+00	✓
A05	20	2.889E-03	3.374E-05	1.800E+00	1.908E+00	✓
A06	1.5	1.523E-02	8.162E-05	1.800E+00	1.857E+00	✓
A06	5	1.185E-02	7.721E-05	1.800E+00	1.860E+00	✓
A06	10	4.149E-03	3.738E-05	1.800E+00	1.862E+00	✓
A07	1.5	5.642E-02	3.612E-04	1.800E+00	1.958E+00	✓
A07	5	5.510E-02	3.576E-04	1.800E+00	1.973E+00	✓
A07	10	6.350E-02	7.574E-05	1.800E+00	2.040E+00	✓
A08	1.5	6.047E-02	3.620E-04	1.800E+00	1.938E+00	✓
A08	5	5.912E-02	3.585E-04	1.800E+00	1.950E+00	✓
A08	10	2.640E-01	9.835E-05	1.800E+00	2.005E+00	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Annual Ethylbenzene Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (1000 µg/m3)
A02	1.5	1.135E-02	1.438E-02	4.430E+00	4.456E+00	✓
A02	5	1.109E-02	1.448E-02	4.430E+00	4.456E+00	✓
A02	10	1.130E-02	1.452E-02	4.430E+00	4.456E+00	✓
A02	15	1.182E-02	1.447E-02	4.430E+00	4.456E+00	✓
A04	10	4.772E-02	1.775E-02	4.430E+00	4.495E+00	✓
A05	1.5	1.994E-02	3.569E-03	4.430E+00	4.454E+00	✓
A05	5	1.821E-02	3.497E-03	4.430E+00	4.452E+00	✓
A05	10	1.644E-02	3.424E-03	4.430E+00	4.450E+00	✓
A05	15	1.507E-02	3.375E-03	4.430E+00	4.448E+00	✓
A05	20	1.388E-02	3.347E-03	4.430E+00	4.447E+00	✓
A06	1.5	9.821E-03	2.434E-03	4.430E+00	4.442E+00	✓
A06	5	9.058E-03	2.373E-03	4.430E+00	4.441E+00	✓
A06	10	8.260E-03	2.309E-03	4.430E+00	4.441E+00	✓
A07	1.5	3.222E-02	1.617E-02	4.430E+00	4.478E+00	✓
A07	5	3.618E-02	1.632E-02	4.430E+00	4.482E+00	✓
A07	10	5.618E-02	1.649E-02	4.430E+00	4.503E+00	✓
A08	1.5	3.245E-02	1.635E-02	4.430E+00	4.479E+00	✓
A08	5	3.628E-02	1.650E-02	4.430E+00	4.483E+00	✓
A08	10	5.548E-02	1.669E-02	4.430E+00	4.502E+00	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Highest 30-mins & 1-hour Formaldehyde Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total 1-hour Formaldehyde Concentration (µg/m3)	Coverted Maximum 30-min Formaldehyde Concentration (µg/m3) [1]	Compliance with corresponding concentration limit (98.1 µg/m3 for 1-hour Formaldehyde Concentration)	Compliance with corresponding concentration limit (100 µg/m3 for 30-mins Formaldehyde Concentration)
A02	1.5	6.341E-01	2.522E-04	1.400E+01	1.463E+01	2.063E+01	✓	✓
A02	5	6.042E-01	2.723E-04	1.400E+01	1.460E+01	2.059E+01	✓	✓
A02	10	5.705E-01	3.054E-04	1.400E+01	1.457E+01	2.054E+01	✓	✓
A02	15	5.452E-01	3.441E-04	1.400E+01	1.455E+01	2.051E+01	✓	✓
A03	1.5	8.704E-01	4.712E-04	1.400E+01	1.487E+01	2.097E+01	✓	✓
A03	5	8.282E-01	4.821E-04	1.400E+01	1.483E+01	2.091E+01	✓	✓
A03	10	7.761E-01	5.015E-04	1.400E+01	1.478E+01	2.083E+01	✓	✓
A04	1.5	9.806E-01	5.889E-04	1.400E+01	1.498E+01	2.112E+01	✓	✓
A04	5	9.661E-01	5.898E-04	1.400E+01	1.497E+01	2.110E+01	✓	✓
A04	10	1.119E+00	3.807E-04	1.400E+01	1.512E+01	2.132E+01	✓	✓
A05	1.5	5.769E-01	1.504E-04	1.400E+01	1.458E+01	2.055E+01	✓	✓
A05	5	5.915E-01	1.802E-04	1.400E+01	1.459E+01	2.057E+01	✓	✓
A05	10	6.321E-01	1.658E-04	1.400E+01	1.463E+01	2.063E+01	✓	✓
A05	15	6.470E-01	1.552E-04	1.400E+01	1.465E+01	2.065E+01	✓	✓
A05	20	6.439E-01	1.480E-04	1.400E+01	1.464E+01	2.065E+01	✓	✓
A06	1.5	3.911E-01	1.548E-04	1.400E+01	1.439E+01	2.029E+01	✓	✓
A06	5	4.011E-01	1.454E-04	1.400E+01	1.440E+01	2.031E+01	✓	✓
A06	10	4.035E-01	1.354E-04	1.400E+01	1.440E+01	2.031E+01	✓	✓
A07	1.5	1.877E+00	1.018E-05	1.400E+01	1.588E+01	2.239E+01	✓	✓
A07	5	1.957E+00	1.073E-05	1.400E+01	1.596E+01	2.250E+01	✓	✓
A07	10	1.951E+00	1.147E-05	1.400E+01	1.595E+01	2.249E+01	✓	✓
A08	1.5	1.457E+00	1.018E-05	1.400E+01	1.546E+01	2.179E+01	✓	✓
A08	5	1.524E+00	1.073E-05	1.400E+01	1.552E+01	2.189E+01	✓	✓
A08	10	1.539E+00	1.147E-05	1.400E+01	1.554E+01	2.191E+01	✓	✓

Remark
[1] The predicted maximum 1-hour average formaldehyde concentration at each ASRs was converted to 30-minute average using the highest conversion factor of 1.41, as presented in Table 4.19

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Highest 8-Hour Quinone Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (440 µg/m3)
A02	1.5	1.654E-02	1.669E-03	0.000E+00	1.110E-01	✓
A02	5	1.635E-02	1.662E-03	0.000E+00	1.065E-01	✓
A02	10	1.609E-02	1.651E-03	0.000E+00	1.002E-01	✓
A02	15	1.584E-02	1.638E-03	0.000E+00	9.427E-02	✓
A03	1.5	3.236E-02	1.171E-03	0.000E+00	1.488E-01	✓
A03	5	3.182E-02	1.165E-03	0.000E+00	1.418E-01	✓
A03	10	3.108E-02	1.155E-03	0.000E+00	1.341E-01	✓
A04	1.5	3.196E-01	1.486E-04	0.000E+00	1.293E-01	✓
A04	5	3.179E-01	1.491E-04	0.000E+00	1.291E-01	✓
A04	10	2.325E-01	8.762E-05	0.000E+00	2.186E-01	✓
A05	1.5	2.223E-02	7.938E-05	0.000E+00	9.815E-02	✓
A05	5	7.489E-03	3.456E-05	0.000E+00	1.018E-01	✓
A05	10	4.901E-03	3.274E-05	0.000E+00	1.046E-01	✓
A05	15	3.557E-03	3.213E-05	0.000E+00	1.052E-01	✓
A05	20	2.785E-03	3.254E-05	0.000E+00	1.042E-01	✓
A06	1.5	1.469E-02	7.871E-05	0.000E+00	5.536E-02	✓
A06	5	1.143E-02	7.445E-05	0.000E+00	5.813E-02	✓
A06	10	4.000E-03	3.605E-05	0.000E+00	6.025E-02	✓
A07	1.5	5.440E-02	3.483E-04	0.000E+00	1.522E-01	✓
A07	5	5.314E-02	3.449E-04	0.000E+00	1.670E-01	✓
A07	10	6.123E-02	7.304E-05	0.000E+00	2.314E-01	✓
A08	1.5	5.830E-02	3.491E-04	0.000E+00	1.332E-01	✓
A08	5	5.701E-02	3.457E-04	0.000E+00	1.446E-01	✓
A08	10	2.546E-01	9.484E-05	0.000E+00	1.973E-01	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Annual Formaldehyde Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (9 µg/m3)
A02	1.5	3.820E-03	4.837E-03	6.464E+00	6.472E+00	✓
A02	5	3.731E-03	4.871E-03	6.464E+00	6.472E+00	✓
A02	10	3.800E-03	4.885E-03	6.464E+00	6.472E+00	✓
A02	15	3.975E-03	4.868E-03	6.464E+00	6.472E+00	✓
A04	10	1.605E-02	5.971E-03	6.464E+00	6.486E+00	✓
A05	1.5	6.707E-03	1.200E-03	6.464E+00	6.472E+00	✓
A05	5	6.125E-03	1.176E-03	6.464E+00	6.471E+00	✓
A05	10	5.532E-03	1.152E-03	6.464E+00	6.470E+00	✓
A05	15	5.069E-03	1.135E-03	6.464E+00	6.470E+00	✓
A05	20	4.669E-03	1.126E-03	6.464E+00	6.469E+00	✓
A06	1.5	3.304E-03	8.187E-04	6.464E+00	6.468E+00	✓
A06	5	3.047E-03	7.982E-04	6.464E+00	6.467E+00	✓
A06	10	2.778E-03	7.766E-04	6.464E+00	6.467E+00	✓
A07	1.5	1.084E-02	5.438E-03	6.464E+00	6.480E+00	✓
A07	5	1.217E-02	5.488E-03	6.464E+00	6.481E+00	✓
A07	10	1.890E-02	5.547E-03	6.464E+00	6.488E+00	✓
A08	1.5	1.091E-02	5.499E-03	6.464E+00	6.480E+00	✓
A08	5	1.220E-02	5.551E-03	6.464E+00	6.481E+00	✓
A08	10	1.866E-02	5.614E-03	6.464E+00	6.488E+00	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Highest Hourly Toluene Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (5000 µg/m3)
A02	1.5	8.568E-01	3.408E-04	1.300E+01	1.386E+01	✓
A02	5	8.165E-01	3.680E-04	1.300E+01	1.382E+01	✓
A02	10	7.709E-01	4.128E-04	1.300E+01	1.377E+01	✓
A02	15	7.367E-01	4.650E-04	1.300E+01	1.374E+01	✓
A03	1.5	1.176E+00	6.368E-04	1.300E+01	1.418E+01	✓
A03	5	1.119E+00	6.515E-04	1.300E+01	1.412E+01	✓
A03	10	1.049E+00	6.778E-04	1.300E+01	1.405E+01	✓
A04	1.5	1.325E+00	7.958E-04	1.300E+01	1.433E+01	✓
A04	5	1.305E+00	7.970E-04	1.300E+01	1.431E+01	✓
A04	10	1.513E+00	5.145E-04	1.300E+01	1.451E+01	✓
A05	1.5	7.796E-01	2.033E-04	1.300E+01	1.378E+01	✓
A05	5	7.993E-01	2.435E-04	1.300E+01	1.380E+01	✓
A05	10	8.541E-01	2.240E-04	1.300E+01	1.385E+01	✓
A05	15	8.743E-01	2.098E-04	1.300E+01	1.387E+01	✓
A05	20	8.700E-01	2.000E-04	1.300E+01	1.387E+01	✓
A06	1.5	5.285E-01	2.093E-04	1.300E+01	1.353E+01	✓
A06	5	5.420E-01	1.965E-04	1.300E+01	1.354E+01	✓
A06	10	5.452E-01	1.830E-04	1.300E+01	1.355E+01	✓
A07	1.5	2.536E+00	1.375E-05	1.300E+01	1.554E+01	✓
A07	5	2.644E+00	1.450E-05	1.300E+01	1.564E+01	✓
A07	10	2.636E+00	1.550E-05	1.300E+01	1.564E+01	✓
A08	1.5	1.969E+00	1.375E-05	1.300E+01	1.497E+01	✓
A08	5	2.060E+00	1.450E-05	1.300E+01	1.506E+01	✓
A08	10	2.079E+00	1.550E-05	1.300E+01	1.508E+01	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Highest 8-Hour Toluene Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (830 µg/m3)
A02	1.5	6.127E-02	6.182E-03	3.100E+01	3.141E+01	✓
A02	5	6.057E-02	6.156E-03	3.100E+01	3.139E+01	✓
A02	10	5.960E-02	6.113E-03	3.100E+01	3.137E+01	✓
A02	15	5.867E-02	6.067E-03	3.100E+01	3.135E+01	✓
A03	1.5	1.198E-01	4.338E-03	3.100E+01	3.155E+01	✓
A03	5	1.179E-01	4.313E-03	3.100E+01	3.153E+01	✓
A03	10	1.151E-01	4.276E-03	3.100E+01	3.150E+01	✓
A04	1.5	1.184E+00	5.505E-04	3.100E+01	3.148E+01	✓
A04	5	1.178E+00	5.523E-04	3.100E+01	3.148E+01	✓
A04	10	8.612E-01	3.245E-04	3.100E+01	3.181E+01	✓
A05	1.5	8.235E-02	2.940E-04	3.100E+01	3.136E+01	✓
A05	5	2.774E-02	1.280E-04	3.100E+01	3.138E+01	✓
A05	10	1.815E-02	1.213E-04	3.100E+01	3.139E+01	✓
A05	15	1.317E-02	1.190E-04	3.100E+01	3.139E+01	✓
A05	20	1.032E-02	1.205E-04	3.100E+01	3.139E+01	✓
A06	1.5	5.440E-02	2.915E-04	3.100E+01	3.121E+01	✓
A06	5	4.233E-02	2.758E-04	3.100E+01	3.122E+01	✓
A06	10	1.482E-02	1.335E-04	3.100E+01	3.122E+01	✓
A07	1.5	2.015E-01	1.290E-03	3.100E+01	3.156E+01	✓
A07	5	1.968E-01	1.277E-03	3.100E+01	3.162E+01	✓
A07	10	2.268E-01	2.705E-04	3.100E+01	3.186E+01	✓
A08	1.5	2.160E-01	1.293E-03	3.100E+01	3.149E+01	✓
A08	5	2.112E-01	1.280E-03	3.100E+01	3.154E+01	✓
A08	10	9.428E-01	3.513E-04	3.100E+01	3.173E+01	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Highest Hourly Xylene Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (22000 µg/m3)
A02	1.5	2.313E+00	9.200E-04	3.950E+01	4.181E+01	✓
A02	5	2.204E+00	9.936E-04	3.950E+01	4.171E+01	✓
A02	10	2.081E+00	1.114E-03	3.950E+01	4.158E+01	✓
A02	15	1.989E+00	1.256E-03	3.950E+01	4.149E+01	✓
A03	1.5	3.176E+00	1.719E-03	3.950E+01	4.268E+01	✓
A03	5	3.022E+00	1.759E-03	3.950E+01	4.252E+01	✓
A03	10	2.831E+00	1.830E-03	3.950E+01	4.233E+01	✓
A04	1.5	3.577E+00	2.149E-03	3.950E+01	4.308E+01	✓
A04	5	3.525E+00	2.152E-03	3.950E+01	4.303E+01	✓
A04	10	4.084E+00	1.389E-03	3.950E+01	4.359E+01	✓
A05	1.5	2.105E+00	5.488E-04	3.950E+01	4.161E+01	✓
A05	5	2.158E+00	6.575E-04	3.950E+01	4.166E+01	✓
A05	10	2.306E+00	6.048E-04	3.950E+01	4.181E+01	✓
A05	15	2.361E+00	5.663E-04	3.950E+01	4.186E+01	✓
A05	20	2.349E+00	5.400E-04	3.950E+01	4.185E+01	✓
A06	1.5	1.427E+00	5.650E-04	3.950E+01	4.093E+01	✓
A06	5	1.463E+00	5.306E-04	3.950E+01	4.096E+01	✓
A06	10	1.472E+00	4.941E-04	3.950E+01	4.097E+01	✓
A07	1.5	6.847E+00	3.713E-05	3.950E+01	4.635E+01	✓
A07	5	7.139E+00	3.915E-05	3.950E+01	4.664E+01	✓
A07	10	7.116E+00	4.185E-05	3.950E+01	4.662E+01	✓
A08	1.5	5.317E+00	3.713E-05	3.950E+01	4.482E+01	✓
A08	5	5.561E+00	3.915E-05	3.950E+01	4.506E+01	✓
A08	10	5.613E+00	4.185E-05	3.950E+01	4.511E+01	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Annual Toluene Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (420 µg/m3)
A02	1.5	5.161E-03	6.536E-03	5.214E+00	5.225E+00	✓
A02	5	5.042E-03	6.583E-03	5.214E+00	5.225E+00	✓
A02	10	5.135E-03	6.601E-03	5.214E+00	5.226E+00	✓
A02	15	5.371E-03	6.579E-03	5.214E+00	5.226E+00	✓
A04	10	2.169E-02	8.069E-03	5.214E+00	5.244E+00	✓
A05	1.5	9.063E-03	1.622E-03	5.214E+00	5.224E+00	✓
A05	5	8.276E-03	1.590E-03	5.214E+00	5.224E+00	✓
A05	10	7.475E-03	1.556E-03	5.214E+00	5.223E+00	✓
A05	15	6.849E-03	1.534E-03	5.214E+00	5.222E+00	✓
A05	20	6.309E-03	1.521E-03	5.214E+00	5.222E+00	✓
A06	1.5	4.464E-03	1.106E-03	5.214E+00	5.219E+00	✓
A06	5	4.117E-03	1.079E-03	5.214E+00	5.219E+00	✓
A06	10	3.754E-03	1.049E-03	5.214E+00	5.219E+00	✓
A07	1.5	1.465E-02	7.349E-03	5.214E+00	5.236E+00	✓
A07	5	1.644E-02	7.416E-03	5.214E+00	5.238E+00	✓
A07	10	2.554E-02	7.496E-03	5.214E+00	5.247E+00	✓
A08	1.5	1.475E-02	7.431E-03	5.214E+00	5.236E+00	✓
A08	5	1.649E-02	7.501E-03	5.214E+00	5.238E+00	✓
A08	10	2.522E-02	7.587E-03	5.214E+00	5.247E+00	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Highest Hourly Xylene Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (22000 µg/m3)
A02	1.5	2.313E+00	9.200E-04	4.700E+01	4.931E+01	✓
A02	5	2.204E+00	9.936E-04	4.700E+01	4.921E+01	✓
A02	10	2.081E+00	1.114E-03	4.700E+01	4.908E+01	✓
A02	15	1.989E+00	1.256E-03	4.700E+01	4.899E+01	✓
A03	1.5	3.176E+00	1.719E-03	4.700E+01	5.018E+01	✓
A03	5	3.022E+00	1.759E-03	4.700E+01	5.002E+01	✓
A03	10	2.831E+00	1.830E-03	4.700E+01	4.983E+01	✓
A04	1.5	3.577E+00	2.149E-03	4.700E+01	5.058E+01	✓
A04	5	3.525E+00	2.152E-03	4.700E+01	5.053E+01	✓
A04	10	4.084E+00	1.389E-03	4.700E+01	5.109E+01	✓
A05	1.5	2.105E+00	5.488E-04	4.700E+01	4.911E+01	✓
A05	5	2.158E+00	6.575E-04	4.700E+01	4.916E+01	✓
A05	10	2.306E+00	6.048E-04	4.700E+01	4.931E+01	✓
A05	15	2.361E+00	5.663E-04	4.700E+01	4.936E+01	✓
A05	20	2.349E+00	5.400E-04	4.700E+01	4.935E+01	✓
A06	1.5	1.427E+00	5.650E-04	4.700E+01	4.843E+01	✓
A06	5	1.463E+00	5.306E-04	4.700E+01	4.846E+01	✓
A06	10	1.472E+00	4.941E-04	4.700E+01	4.847E+01	✓
A07	1.5	6.847E+00	3.713E-05	4.700E+01	5.385E+01	✓
A07	5	7.139E+00	3.915E-05	4.700E+01	5.414E+01	✓
A07	10	7.116E+00	4.185E-05	4.700E+01	5.412E+01	✓
A08	1.5	5.317E+00	3.713E-05	4.700E+01	5.232E+01	✓
A08	5	5.561E+00	3.915E-05	4.700E+01	5.256E+01	✓
A08	10	5.613E+00	4.185E-05	4.700E+01	5.261E+01	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Highest 8-Hour Xylene Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (435000 µg/m3)
A02	1.5	1.654E-01	1.669E-02	4.700E+01	4.718E+01	✓
A02	5	1.635E-01	1.662E-02	4.700E+01	4.718E+01	✓
A02	10	1.609E-01	1.651E-02	4.700E+01	4.718E+01	✓
A02	15	1.584E-01	1.638E-02	4.700E+01	4.717E+01	✓
A03	1.5	3.236E-01	1.171E-02	4.700E+01	4.734E+01	✓
A03	5	3.182E-01	1.165E-02	4.700E+01	4.733E+01	✓
A03	10	3.108E-01	1.155E-02	4.700E+01	4.732E+01	✓
A04	1.5	3.196E+00	1.486E-03	4.700E+01	5.020E+01	✓
A04	5	3.179E+00	1.491E-03	4.700E+01	5.018E+01	✓
A04	10	2.325E+00	8.762E-04	4.700E+01	4.933E+01	✓
A05	1.5	2.223E-01	7.938E-04	4.700E+01	4.722E+01	✓
A05	5	7.489E-02	3.456E-04	4.700E+01	4.708E+01	✓
A05	10	4.901E-02	3.274E-04	4.700E+01	4.705E+01	✓
A05	15	3.557E-02	3.213E-04	4.700E+01	4.704E+01	✓
A05	20	2.785E-02	3.254E-04	4.700E+01	4.703E+01	✓
A06	1.5	1.469E-01	7.871E-04	4.700E+01	4.715E+01	✓
A06	5	1.143E-01	7.445E-04	4.700E+01	4.712E+01	✓
A06	10	4.000E-02	3.605E-04	4.700E+01	4.704E+01	✓
A07	1.5	5.440E-01	3.483E-03	4.700E+01	4.755E+01	✓
A07	5	5.314E-01	3.449E-03	4.700E+01	4.753E+01	✓
A07	10	6.123E-01	7.304E-04	4.700E+01	4.761E+01	✓
A08	1.5	5.830E-01	3.491E-03	4.700E+01	4.759E+01	✓
A08	5	5.701E-01	3.457E-03	4.700E+01	4.757E+01	✓
A08	10	2.546E+00	9.484E-04	4.700E+01	4.955E+01	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Highest Hourly Xylene Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (22000 µg/m3)
A02	1.5	2.313E+00	9.200E-04	3.200E+01	3.431E+01	✓
A02	5	2.204E+00	9.936E-04	3.200E+01	3.421E+01	✓
A02	10	2.081E+00	1.114E-03	3.200E+01	3.408E+01	✓
A02	15	1.989E+00	1.256E-03	3.200E+01	3.399E+01	✓
A03	1.5	3.176E+00	1.719E-03	3.200E+01	3.518E+01	✓
A03	5	3.022E+00	1.759E-03	3.200E+01	3.502E+01	✓
A03	10	2.831E+00	1.830E-03	3.200E+01	3.483E+01	✓
A04	1.5	3.577E+00	2.149E-03	3.200E+01	3.558E+01	✓
A04	5	3.525E+00	2.152E-03	3.200E+01	3.553E+01	✓
A04	10	4.084E+00	1.389E-03	3.200E+01	3.609E+01	✓
A05	1.5	2.105E+00	5.488E-04	3.200E+01	3.411E+01	✓
A05	5	2.158E+00	6.575E-04	3.200E+01	3.416E+01	✓
A05	10	2.306E+00	6.048E-04	3.200E+01	3.431E+01	✓
A05	15	2.361E+00	5.663E-04	3.200E+01	3.436E+01	✓
A05	20	2.349E+00	5.400E-04	3.200E+01	3.435E+01	✓
A06	1.5	1.427E+00	5.650E-04	3.200E+01	3.343E+01	✓
A06	5	1.463E+00	5.306E-04	3.200E+01	3.346E+01	✓
A06	10	1.472E+00	4.941E-04	3.200E+01	3.347E+01	✓
A07	1.5	6.847E+00	3.713E-05	3.200E+01	3.885E+01	✓
A07	5	7.139E+00	3.915E-05	3.200E+01	3.914E+01	✓
A07	10	7.116E+00	4.185E-05	3.200E+01	3.912E+01	✓
A08	1.5	5.317E+00	3.713E-05	3.200E+01	3.732E+01	✓
A08	5	5.561E+00	3.915E-05	3.200E+01	3.756E+01	✓
A08	10	5.613E+00	4.185E-05	3.200E+01	3.761E+01	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Annual Xylene Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (100 µg/m3)
A02	1.5	1.393E-02	1.765E-02	2.178E+01	2.181E+01	✓
A02	5	1.361E-02	1.777E-02	2.178E+01	2.181E+01	✓
A02	10	1.386E-02	1.782E-02	2.178E+01	2.181E+01	✓
A02	15	1.450E-02	1.776E-02	2.178E+01	2.181E+01	✓
A04	10	5.856E-02	2.179E-02	2.178E+01	2.186E+01	✓
A05	1.5	2.447E-02	4.380E-03	2.178E+01	2.181E+01	✓
A05	5	2.234E-02	4.292E-03	2.178E+01	2.180E+01	✓
A05	10	2.018E-02	4.202E-03	2.178E+01	2.180E+01	✓
A05	15	1.849E-02	4.142E-03	2.178E+01	2.180E+01	✓
A05	20	1.703E-02	4.107E-03	2.178E+01	2.180E+01	✓
A06	1.5	1.205E-02	2.987E-03	2.178E+01	2.179E+01	✓
A06	5	1.112E-02	2.913E-03	2.178E+01	2.179E+01	✓
A06	10	1.014E-02	2.833E-03	2.178E+01	2.179E+01	✓
A07	1.5	3.954E-02	1.984E-02	2.178E+01	2.184E+01	✓
A07	5	4.440E-02	2.002E-02	2.178E+01	2.184E+01	✓
A07	10	6.895E-02	2.024E-02	2.178E+01	2.187E+01	✓
A08	1.5	3.982E-02	2.006E-02	2.178E+01	2.184E+01	✓
A08	5	4.452E-02	2.025E-02	2.178E+01	2.184E+01	✓
A08	10	6.808E-02	2.048E-02	2.178E+01	2.187E+01	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Highest Hourly Benzo[a]pyrene Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (0.387 µg/m3)
A02	1.5	2.656E-07	1.056E-10	2.600E-04	2.603E-04	✓
A02	5	2.531E-07	1.141E-10	2.600E-04	2.603E-04	✓
A02	10	2.390E-07	1.280E-10	2.600E-04	2.602E-04	✓
A02	15	2.284E-07	1.442E-10	2.600E-04	2.602E-04	✓
A03	1.5	3.646E-07	1.974E-10	2.600E-04	2.604E-04	✓
A03	5	3.469E-07	2.020E-10	2.600E-04	2.603E-04	✓
A03	10	3.251E-07	2.101E-10	2.600E-04	2.603E-04	✓
A04	1.5	4.108E-07	2.467E-10	2.600E-04	2.604E-04	✓
A04	5	4.047E-07	2.471E-10	2.600E-04	2.604E-04	✓
A04	10	4.689E-07	1.595E-10	2.600E-04	2.605E-04	✓
A05	1.5	2.417E-07	6.301E-11	2.600E-04	2.602E-04	✓
A05	5	2.478E-07	7.549E-11	2.600E-04	2.602E-04	✓
A05	10	2.648E-07	6.944E-11	2.600E-04	2.603E-04	✓
A05	15	2.710E-07	6.502E-11	2.600E-04	2.603E-04	✓
A05	20	2.697E-07	6.200E-11	2.600E-04	2.603E-04	✓
A06	1.5	1.638E-07	6.487E-11	2.600E-04	2.602E-04	✓
A06	5	1.680E-07	6.092E-11	2.600E-04	2.602E-04	✓
A06	10	1.690E-07	5.673E-11	2.600E-04	2.602E-04	✓
A07	1.5	7.862E-07	4.263E-12	2.600E-04	2.608E-04	✓
A07	5	8.197E-07	4.495E-12	2.600E-04	2.608E-04	✓
A07	10	8.171E-07	4.805E-12	2.600E-04	2.608E-04	✓
A08	1.5	6.104E-07	4.263E-12	2.600E-04	2.606E-04	✓
A08	5	6.385E-07	4.495E-12	2.600E-04	2.606E-04	✓
A08	10	6.445E-07	4.805E-12	2.600E-04	2.606E-04	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Highest Daily Benzo(a)pyrene Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (0.000873 µg/m3)
A02	1.5	4.405E-08	1.845E-09	2.600E-04	2.600E-04	✓
A02	5	4.230E-08	1.835E-09	2.600E-04	2.600E-04	✓
A02	10	4.370E-08	8.931E-10	2.600E-04	2.600E-04	✓
A02	15	5.340E-08	9.015E-10	2.600E-04	2.601E-04	✓
A03	1.5	6.102E-08	6.402E-10	2.600E-04	2.601E-04	✓
A03	5	5.829E-08	6.368E-10	2.600E-04	2.601E-04	✓
A03	10	5.945E-08	6.728E-10	2.600E-04	2.601E-04	✓
A04	1.5	6.209E-08	3.020E-09	2.600E-04	2.601E-04	✓
A04	5	6.579E-08	3.003E-09	2.600E-04	2.601E-04	✓
A04	10	9.361E-08	3.408E-09	2.600E-04	2.601E-04	✓
A05	1.5	4.174E-08	1.235E-09	2.600E-04	2.600E-04	✓
A05	5	4.049E-08	1.792E-09	2.600E-04	2.600E-04	✓
A05	10	4.136E-08	1.781E-09	2.600E-04	2.600E-04	✓
A05	15	4.143E-08	1.779E-09	2.600E-04	2.600E-04	✓
A05	20	4.086E-08	1.787E-09	2.600E-04	2.600E-04	✓
A06	1.5	2.280E-08	1.521E-09	2.600E-04	2.600E-04	✓
A06	5	2.226E-08	1.489E-09	2.600E-04	2.600E-04	✓
A06	10	2.336E-08	8.450E-10	2.600E-04	2.600E-04	✓
A07	1.5	6.850E-08	2.709E-10	2.600E-04	2.601E-04	✓
A07	5	7.623E-08	2.796E-10	2.600E-04	2.601E-04	✓
A07	10	1.188E-07	2.790E-10	2.600E-04	2.601E-04	✓
A08	1.5	7.507E-08	2.809E-10	2.600E-04	2.601E-04	✓
A08	5	8.303E-08	2.802E-10	2.600E-04	2.601E-04	✓
A08	10	1.222E-07	2.795E-10	2.600E-04	2.601E-04	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Highest 8-Hour Naphthalene Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (50000 µg/m3)
A02	1.5	2.205E-03	2.226E-04	4.482E-01	4.630E-01	✓
A02	5	2.180E-03	2.216E-04	4.482E-01	4.624E-01	✓
A02	10	2.145E-03	2.201E-04	4.482E-01	4.616E-01	✓
A02	15	2.112E-03	2.184E-04	4.482E-01	4.608E-01	✓
A03	1.5	4.314E-03	1.562E-04	4.482E-01	4.681E-01	✓
A03	5	4.243E-03	1.553E-04	4.482E-01	4.671E-01	✓
A03	10	4.144E-03	1.539E-04	4.482E-01	4.661E-01	✓
A04	1.5	4.261E-02	1.982E-05	4.482E-01	4.655E-01	✓
A04	5	4.239E-02	1.988E-05	4.482E-01	4.654E-01	✓
A04	10	3.100E-02	1.168E-05	4.482E-01	4.774E-01	✓
A05	1.5	2.964E-03	1.058E-05	4.482E-01	4.613E-01	✓
A05	5	9.985E-04	4.608E-06	4.482E-01	4.618E-01	✓
A05	10	6.534E-04	4.365E-06	4.482E-01	4.622E-01	✓
A05	15	4.742E-04	4.284E-06	4.482E-01	4.622E-01	✓
A05	20	3.714E-04	4.338E-06	4.482E-01	4.621E-01	✓
A06	1.5	1.958E-03	1.049E-05	4.482E-01	4.556E-01	✓
A06	5	1.524E-03	9.927E-06	4.482E-01	4.560E-01	✓
A06	10	5.334E-04	4.806E-06	4.482E-01	4.563E-01	✓
A07	1.5	7.253E-03	4.644E-05	4.482E-01	4.685E-01	✓
A07	5	7.085E-03	4.598E-05	4.482E-01	4.705E-01	✓
A07	10	8.164E-03	9.738E-06	4.482E-01	4.791E-01	✓
A08	1.5	7.774E-03	4.655E-05	4.482E-01	4.660E-01	✓
A08	5	7.601E-03	4.609E-05	4.482E-01	4.675E-01	✓
A08	10	3.394E-02	1.265E-05	4.482E-01	4.745E-01	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Annual Benzo(a)pyrene Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (0.002 µg/m3)
A02	1.5	1.600E-09	2.026E-09	6.636E-05	6.637E-05	✓
A02	5	1.563E-09	2.041E-09	6.636E-05	6.637E-05	✓
A02	10	1.592E-09	2.046E-09	6.636E-05	6.637E-05	✓
A02	15	1.665E-09	2.039E-09	6.636E-05	6.637E-05	✓
A04	10	6.724E-09	2.501E-09	6.636E-05	6.637E-05	✓
A05	1.5	2.809E-09	5.029E-10	6.636E-05	6.637E-05	✓
A05	5	2.566E-09	4.928E-10	6.636E-05	6.637E-05	✓
A05	10	2.317E-09	4.825E-10	6.636E-05	6.637E-05	✓
A05	15	2.123E-09	4.755E-10	6.636E-05	6.637E-05	✓
A05	20	1.956E-09	4.716E-10	6.636E-05	6.637E-05	✓
A06	1.5	1.384E-09	3.430E-10	6.636E-05	6.637E-05	✓
A06	5	1.276E-09	3.344E-10	6.636E-05	6.637E-05	✓
A06	10	1.164E-09	3.253E-10	6.636E-05	6.637E-05	✓
A07	1.5	4.540E-09	2.278E-09	6.636E-05	6.637E-05	✓
A07	5	5.098E-09	2.299E-09	6.636E-05	6.637E-05	✓
A07	10	7.917E-09	2.324E-09	6.636E-05	6.637E-05	✓
A08	1.5	4.572E-09	2.304E-09	6.636E-05	6.637E-05	✓
A08	5	5.112E-09	2.325E-09	6.636E-05	6.637E-05	✓
A08	10	7.817E-09	2.352E-09	6.636E-05	6.637E-05	✓

Remark
Worst affected level of each ASR is highlighted.

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Appendix 4.9 Detailed Prediction Results (Operation Phase, Year 2028)

Tsing Yi North Underground Quarry (Year 2028)

Annual Naphthalene Concentration (µg/m3)

ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (10 µg/m3)
A02	1.5	1.858E-04	2.353E-04	2.920E-01	2.924E-01	✓
A02	5	1.815E-04	2.370E-04	2.920E-01	2.924E-01	✓
A02	10	1.849E-04	2.376E-04	2.920E-01	2.924E-01	✓
A02	15	1.933E-04	2.368E-04	2.920E-01	2.924E-01	✓
A04	10	7.808E-04	2.905E-04	2.920E-01	2.930E-01	✓
A05	1.5	3.262E-04	5.840E-05	2.920E-01	2.923E-01	✓
A05	5	2.979E-04	5.723E-05	2.920E-01	2.923E-01	✓
A05	10	2.691E-04	5.603E-05	2.920E-01	2.923E-01	✓
A05	15	2.466E-04	5.522E-05	2.920E-01	2.923E-01	✓
A05	20	2.271E-04	5.476E-05	2.920E-01	2.922E-01	✓
A06	1.5	1.607E-04	3.983E-05	2.920E-01	2.922E-01	✓
A06	5	1.482E-04	3.883E-05	2.920E-01	2.921E-01	✓
A06	10	1.351E-04	3.778E-05	2.920E-01	2.921E-01	✓
A07	1.5	5.273E-04	2.646E-04	2.920E-01	2.927E-01	✓
A07	5	5.920E-04	2.670E-04	2.920E-01	2.928E-01	✓
A07	10	9.193E-04	2.698E-04	2.920E-01	2.931E-01	✓
A08	1.5	5.309E-04	2.675E-04	2.920E-01	2.927E-01	✓
A08	5	5.936E-04	2.700E-04	2.920E-01	2.928E-01	✓
A08	10	9.078E-04	2.731E-04	2.920E-01	2.931E-01	✓

Remark
Worst affected level of each ASR is highlighted.

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ASR	Height (mAG)	Asphalt Production	Adjacent Industrial Source	Background	Total	Compliance with corresponding concentration limit (860 µg/m3)
A02	1.5	1.777E-03	1.793E-04	7.000E-02	8.192E-02	✓
A02	5	1.756E-03	1.785E-04	7.000E-02	8.144E-02	✓
A02	10	1.728E-03	1.773E-04	7.000E-02	8.077E-02	✓
A02	15	1.701E-03	1.759E-04	7.000E-02	8.013E-02	✓
A03	1.5	3.475E-03	1.258E-04	7.000E-02	8.598E-02	✓
A03	5	3.418E-03	1.251E-04	7.000E-02	8.523E-02	✓
A03	10	3.338E-03	1.240E-04	7.000E-02	8.441E-02	✓
A04	1.5	3.433E-02	1.596E-05	7.000E-02	8.388E-02	✓
A04	5	3.415E-02	1.602E-05	7.000E-02	8.387E-02	✓
A04	10	2.498E-02	9.411E-06	7.000E-02	9.348E-02	✓
A05	1.5	2.388E-03	8.526E-06	7.000E-02	8.054E-02	✓
A05	5	8.044E-04	3.712E-06	7.000E-02	8.094E-02	✓
A05	10	5.264E-04	3.516E-06	7.000E-02	8.123E-02	✓
A05	15	3.820E-04	3.451E-06	7.000E-02	8.130E-02	✓
A05	20	2.992E-04	3.495E-06	7.000E-02	8.119E-02	✓
A06	1.5	1.578E-03	8.454E-06	7.000E-02	7.595E-02	✓
A06	5	1.228E-03	7.997E-06	7.000E-02	7.624E-02	✓
A06	10	4.297E-04	3.872E-06	7.000E-02	7.647E-02	✓
A07	1.5	5.843E-03	3.741E-05	7.000E-02	8.635E-02	✓
A07	5	5.707E-03	3.704E-05	7.000E-02	8.794E-02	✓
A07	10	6.577E-03	7.845E-06	7.000E-02	9.485E-02	✓
A08	1.5	6.263E-03	3.750E-05	7.000E-02	8.431E-02	✓
A08	5	6.123E-03	3.713E-05	7.000E-02	8.553E-02	✓
A08	10	2.734E-02	1.019E-05	7.000E-02	9.119E-02	✓

Remark
Worst affected level of each ASR is highlighted.

Appendix 4.10

Appendix 4.10 Calculation of Marine Emission (in Ma Wan Fairway and nearby Channel)

Vessel Type in MTIA and AQM

No.	Marine Traffic TYPE		LOA (m)	EPD TYPE (OG)	EPD TYPE (RT)
1	OGV	Ocean Going Vessel	>100	Chemical Carrier/Tanker Conventional Cargo Vessel Cruise/Ferry Dry Bulk Carrier Fully Cellular Container Vessel Gas Carrier/Tanker Oil Tanker Roll On/Roll Off Semi-container Vessel	
2	RTV	Rivertrade Vessel	<100		Chemical Carrier/Tanker Conventional Cargo Vessel Dry Bulk Carrier Fishing/Fish Processing Vessel Fully Cellular Container Vessel Gas Carrier/Tanker Lighter/Barge/Cargo Junk Oil Tanker Pleasure Vessel Roll On/Roll Off Semi-container Vessel
3	TT	Tug and Tow			
4	FF / CBF	Fast Ferry or Cross Boundary Ferry			Cruise/Ferry
5	LF	Local Ferry or Domestic Ferry			
6	FL	Fast Launch			
7	SC	Small Craft			

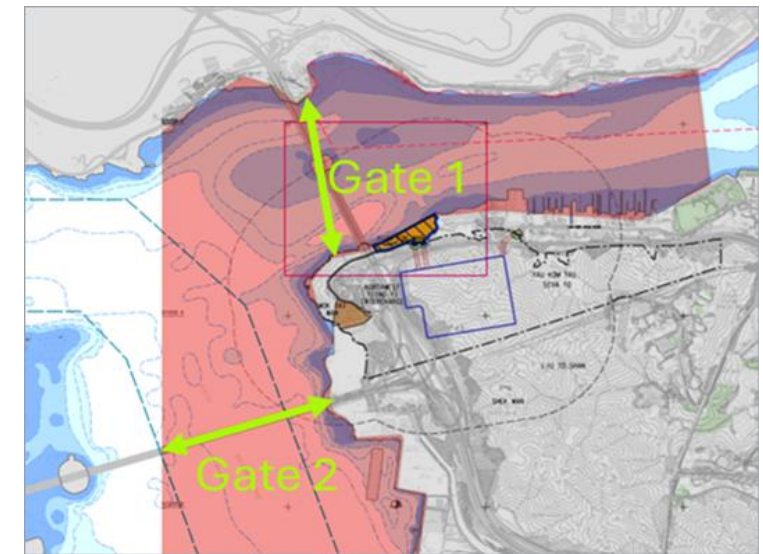
Appendix 4.10 Calculation of Marine Emission (in Ma Wan Fairway and nearby Channel)

2043 Hourly Traffic Profile (No. of Moves per Day during Each Hour)

		Hour per Day																							Daily Total	
Gate No.	ShipType	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		23
1	OG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
1	RT	1.8	2.4	2.2	1.5	1.9	2.0	2.5	4.2	4.3	3.0	3.3	3.8	3.8	3.2	3.1	3.3	3.4	3.6	3.5	2.1	2.2	2.0	1.9	2.0	67
1	TT	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1	0.0	0.1	0.2	2
1	FF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0
1	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.6	9.2	1.9	0.5	2.1	0.2	0.3	2.5	0.3	0.6	2.7	0.7	8.5	3.2	1.4	1.3	0.0	0.0	36
1	FL	0.0	0.0	0.0	0.8	0.0	0.0	1.7	0.9	0.9	0.9	0.9	1.7	0.9	0.9	0.0	0.0	0.0	0.8	0.8	0.0	0.0	0.8	0.0	12	
1	SC	1.3	1.8	1.2	1.0	0.7	3.5	4.9	15.1	6.2	5.4	4.9	8.1	5.5	4.4	6.2	6.0	4.9	7.9	15.1	4.2	1.5	1.8	2.7	2.7	117
																									234	

		Hour per Day																							Daily Total	
Gate No.	ShipType	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22		23
2	OG	1.8	1.8	1.5	1.7	1.3	1.8	1.6	1.8	1.8	1.9	2.0	2.0	2.0	2.4	1.4	1.9	2.0	1.7	1.6	1.5	1.6	1.3	1.6	42	
2	RT	2.3	2.2	1.7	2.0	2.0	3.7	2.6	3.6	4.6	3.3	4.0	4.4	3.9	4.0	4.5	4.4	5.0	5.1	4.5	3.8	3.8	3.7	2.3	2.6	84
2	TT	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.5	1.0	1.0	0.5	0.5	0.5	0.0	0.5	0.5	1.5	0.5	0.5	0.5	0.5	0.5	0.5	0.0	10
2	FF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	2.9	2.2	1.8	2.7	1.3	0.1	2.2	1.8	4.3	1.6	3.0	1.7	0.6	0.0	0.0	0.0	27
2	LF	0.0	0.0	0.0	0.0	0.0	0.0	0.1	2.7	1.1	1.5	1.1	0.5	0.7	0.9	0.7	0.6	1.0	0.8	2.0	2.0	1.2	1.1	0.6	0.4	19
2	FL	0.0	0.0	0.0	0.3	0.0	0.0	0.7	0.3	0.7	0.7	0.4	0.4	0.7	1.4	0.4	0.4	0.4	0.3	0.3	0.3	0.0	0.0	0.3	0.0	8
2	SC	2.5	2.8	2.8	2.5	2.4	5.0	3.2	19.3	10.2	8.6	10.8	10.0	7.4	5.9	7.8	9.0	8.4	11.1	13.0	5.6	3.1	3.4	3.8	3.4	162
																									352	

Notes:
The marine traffic is provided by Marine Traffic Consultant



Appendix 4.10 Calculation of Marine Emission (in Ma Wan Fairway and nearby Channel)

Average Speed

Gate #	Ship Type	Average Speed (Knots)
1	RT	6
1	TT	4
1	LF	14
1	FL	10
1	SC	7

Gate #	Ship Type	Average Speed (Knots)
2	OG	12
2	RT	6
2	TT	3
2	FF	30
2	LF	18
2	FL	10
2	SC	7

Appendix 4.10 Calculation of Marine Emission (in Ma Wan Fairway and nearby Channel)

Calculation of Marine Emission (Across Ting Kau Bridge, RTV)

Vessel-Specific Parameters - Main Engine (ME)

Vessel ID	Vessel Type [1][2]	Main Engine (ME) Type [3]	Fuel [4]	GRT Sub-group [5]	Main Engine Power (kW) [6]	SO ₂ Emission Factors_ME (g/kWh) [7]	NOx Emission Factors_ME (g/kWh) [7]	RSP Emission Factors_ME (g/kWh) [7]	FSP Emission Factor_ME (g/kWh) [7]
TKBR01	Fully Cellular Container Vessel	Diesel Engine	Marine Light Diesel (Sulphur Content <= 0.05%)	GRT >= 1000	704	0.21	10.0	0.17	0.16
TKBR02	Conventional Cargo Vessel	Diesel Engine	Marine Light Diesel (Sulphur Content <= 0.05%)	GRT >= 1000	654	0.21	10.0	0.17	0.16
TKBR03	Dry Bulk Carrier	Diesel Engine	Marine Light Diesel (Sulphur Content <= 0.05%)	GRT >= 1000	744	0.21	10.0	0.17	0.16
TKBR04	Semi-container Vessel	Diesel Engine	Marine Light Diesel (Sulphur Content <= 0.05%)	GRT >= 1000	626	0.21	10.0	0.17	0.16
TKBR05	Gas Carrier/Tanker	Diesel Engine	Marine Light Diesel (Sulphur Content <= 0.05%)	GRT >= 1000	1565	0.21	13.2	0.17	0.16
TKBR06	Chemical Carrier/Tanker	Diesel Engine	Marine Light Diesel (Sulphur Content <= 0.05%)	GRT >= 1000	1565	0.21	13.2	0.17	0.16
TKBR07	Oil Tanker	Diesel Engine	Marine Light Diesel (Sulphur Content <= 0.05%)	GRT >= 1000	1565	0.21	13.2	0.17	0.16
TKBR08	Lighter/Barge/Cargo Junk	Diesel Engine	Marine Light Diesel (Sulphur Content <= 0.05%)	GRT >= 1000	727	0.21	10.0	0.17	0.16

Calculation of ME Emission Rate

Vessel ID	Vessel Type	Average Speed (Knot) [8]	Operation Mode^	Maximum Length of Sailing Route (nautical miles) [8]	Time-in-mode (hr) [8]	Load Factor [9]	SO2 Emission Rate_ME (g/s-trip) [10]	NOx Emission Rate_ME (g/s-trip) [10]	RSP Emission Rate_ME (g/s-trip) [10]	FSP Emission Rate_ME (g/s-trip) [10]
TKBR01	Fully Cellular Container Vessel	6	Maneuvering	0.851	0.1318	0.3	1.610E-03	7.731E-02	1.286E-03	1.247E-03
TKBR02	Conventional Cargo Vessel	6	Maneuvering	0.851	0.1318	0.3	1.495E-03	7.182E-02	1.195E-03	1.159E-03
TKBR03	Dry Bulk Carrier	6	Maneuvering	0.851	0.1318	0.3	1.701E-03	8.171E-02	1.359E-03	1.318E-03
TKBR04	Semi-container Vessel	6	Maneuvering	0.851	0.1318	0.3	1.431E-03	6.875E-02	1.144E-03	1.109E-03
TKBR05	Gas Carrier/Tanker	6	Maneuvering	0.851	0.1318	0.3	3.579E-03	2.269E-01	2.859E-03	2.773E-03
TKBR06	Chemical Carrier/Tanker	6	Maneuvering	0.851	0.1318	0.3	3.579E-03	2.269E-01	2.859E-03	2.773E-03
TKBR07	Oil Tanker	6	Maneuvering	0.851	0.1318	0.3	3.579E-03	2.269E-01	2.859E-03	2.773E-03
TKBR08	Lighter/Barge/Cargo Junk	6	Maneuvering	0.851	0.1318	0.3	1.662E-03	7.984E-02	1.328E-03	1.288E-03

Notes:

- *

Unless specified otherwise, references were made to Study on Marine Vessels Emission Inventory (MVEIS)
- ^

Operation mode refers to Table 3-24 of MVEIS.
- [1]

No breakdown of RTV types are available in the traffic data. Therefore, vessel types catalogized by the Marine Department is adopted to breakdown the marine traffic data. (https://www.mardep.gov.hk/filemanager/en/share/fact/pdf/portstat_2_y_a2.pdf)
- [2]

According to data from marine consultants, tugs and cross boundary ferry are classified as an independent vessel type and are consequently excluded from calculation of marine emission of RTV.
- [3]

The Main Engine type refers to S4.2.6 of MVEIS
- [4]

According to the Air Pollution Control (Marine Light Diesel) Regulation, the sulphur content of locally supplied marine light diesel is capped at 0.05%; Locally supplied marine light diesel oil are assumed to be used for refueling RTVs in Hong Kong.
- [5]

The GRT sub-group refers to Table 4-5; the highest GRT for each vessel type is adopted as a conservative approach.
- [6]

The average ME Power refers Table 4-5 of MVEIS
- [7]

— The SO2 emission factor is calcaulted based on the formula stated in Paragraph 4.2.31 of MVEIS: BSFC x 2 x 0.97753 x Fuel Sulphur Fraction, where BSFC for main engine installed in RTV is 213 and Fuel Sulphur Fraction is 0.0005.

— The emission factors for NOx refer to Table 4-16 of MVEIS.

— The RSP emission factors for Main Engine were calcaulted based on the formula stated in Paragraph 4.2.31 of MVEIS: 0.23* BSFC x 7 x 0.02247 x (Fuel Sulphur Fraction - 0.0024), where BSFC for main engine installed in RTV is 213 and Fuel Sulphur Fraction is 0.0005.

— According to Paragraph 4.2.32 of MVEIS, the RSP to FSP conversion factor is 0.97.
- [8]

The average speed and sailing route are provided by marine traffic consultant. The time-in-mode is calculated as: Time-in-mode (hr) = Maximun Length of Sailing Route within Assessment Boundary (nautical miles) / Average speed (knot)
- [9]

The ME Load Factor refers to Table 4-7 of MVEIS
- [10]

The calculations of emission rates refer to the following equation: Emission Rate (g/s) = Engine Power (kW) * Time-in-mode per hour * Engine Load Factor * Emission Factor (g/kWh) / 3600 , where Time-in-mode per hour refers to the duration ratio of a vessel operating in a specific mode within a one-hour period (i.e., Time-in-mode (hr) / 1 hour)

Appendix 4.10 Calculation of Marine Emission (in Ma Wan Fairway and nearby Channel)

Vessel-Specific Parameters - Auxiliary Engine (AE)

Vessel ID	Vessel Type	GRT Sub-group	Auxiliary Engine Power (kW) [1]	SO2 Emission Factors_AE (g/kWh) [2]	NOx Emission Factors_AE (g/kWh) [2]	RSP Emission Factors_AE (g/kWh) [2]	FSP Emission Factor_AE (g/kWh) [2]
TKBR01	Fully Cellular Container Vessel	GRT >= 1000	115	0.21	10	0.17	0.16
TKBR02	Conventional Cargo Vessel	GRT >= 1000	115	0.21	10	0.17	0.16
TKBR03	Dry Bulk Carrier	GRT >= 1000	115	0.21	10	0.17	0.16
TKBR04	Semi-container Vessel	GRT >= 1000	115	0.21	10	0.17	0.16
TKBR05	Gas Carrier/Tanker	GRT >= 1000	375	0.21	10	0.17	0.16
TKBR06	Chemical Carrier/Tanker	GRT >= 1000	375	0.21	10	0.17	0.16
TKBR07	Oil Tanker	GRT >= 1000	375	0.21	10	0.17	0.16
TKBR08	Lighter/Barge/Cargo Junk	GRT >= 1000	116	0.21	10	0.17	0.16

Calculation of AE Emission Rate

Vessel ID	Vessel Type	Average Speed (Knot)	Operation Mode	Maximum Length of Sailing Route (nautical miles)	Time-in-mode (hr)	Load Factor [3]	SO2 Emission Rate_AE (g/s-trip) [4]	NOx Emission Rate_AE (g/s-trip) [4]	RSP Emission Rate_AE (g/s-trip) [4]	FSP Emission Rate_AE (g/s-trip) [4]
TKBR01	Fully Cellular Container Vessel	6	Maneuvering	0.851	0.1318	0.43	3.769E-04	1.810E-02	3.011E-04	2.921E-04
TKBR02	Conventional Cargo Vessel	6	Maneuvering	0.851	0.1318	0.43	3.769E-04	1.810E-02	3.011E-04	2.921E-04
TKBR03	Dry Bulk Carrier	6	Maneuvering	0.851	0.1318	0.43	3.769E-04	1.810E-02	3.011E-04	2.921E-04
TKBR04	Semi-container Vessel	6	Maneuvering	0.851	0.1318	0.43	3.769E-04	1.810E-02	3.011E-04	2.921E-04
TKBR05	Gas Carrier/Tanker	6	Maneuvering	0.851	0.1318	0.43	1.229E-03	5.903E-02	9.819E-04	9.525E-04
TKBR06	Chemical Carrier/Tanker	6	Maneuvering	0.851	0.1318	0.43	1.229E-03	5.903E-02	9.819E-04	9.525E-04
TKBR07	Oil Tanker	6	Maneuvering	0.851	0.1318	0.43	1.229E-03	5.903E-02	9.819E-04	9.525E-04
TKBR08	Lighter/Barge/Cargo Junk	6	Maneuvering	0.851	0.1318	0.43	3.802E-04	1.826E-02	3.037E-04	2.946E-04

- Notes
- [1]

[2]

[3]

[4]
- The AE Power refers to Table 4-6 of MVEIS

— The SO2 emission factor is calcaulted based on the formula stated in Paragraph 4.2.31 of MVEIS: BSFC x 2 x 0.97753 x Fuel Sulphur Fraction, where BSFC for main engine installed in RTV is 213 and Fuel Sulphur Fraction is 0.0005.

— The emission factors for NOx refer to Table 4-16 of MVEIS.

— The RSP emission factors for Main Engine were calcaulted based on the formula stated in Paragraph 4.2.31 of MVEIS: 0.23+ BSFC x 7 x 0.02247 x (Fuel Sulphur Fraction - 0.0024), where BSFC for main engine installed in RTV is 213 and Fuel Sulphur Fraction is 0.0005.

— According to Paragraph 4.2.32 of MVEIS, the RSP to FSP conversion factor is 0.97.

The AE Load Factors refer to Table 4-10 of MVEIS

The calculations of emission rates refer to the following equation: Emission Rate (g/s) = Engine Power (kW) * Time-in-mode per hour * Engine Load Factor * Emission Factor (g/kWh) / 3600 , where Time-in-mode per hour refers to the duration ratio of a vessel operating in a specific mode within a one-hour period (i.e., Time-in-mode (hr) / 1 hour)

Total Emission Rate

Vessel ID	Total SO2 Emission Rate (g/s-trip) [1]	Total NOx Emission Rate (g/s-trip) [1]	Total RSP Emission Rate (g/s-trip) [1]	Total FSP Emission Rate (g/s-trip) [1]
TKBR01	1.987E-03	9.542E-02	1.587E-03	1.540E-03
TKBR02	1.872E-03	8.993E-02	1.496E-03	1.451E-03
TKBR03	2.078E-03	9.981E-02	1.660E-03	1.610E-03
TKBR04	1.808E-03	8.685E-02	1.445E-03	1.401E-03
TKBR05	4.808E-03	2.859E-01	3.841E-03	3.726E-03
TKBR06	4.808E-03	2.859E-01	3.841E-03	3.726E-03
TKBR07	4.808E-03	2.859E-01	3.841E-03	3.726E-03
TKBR08	2.043E-03	9.810E-02	1.632E-03	1.583E-03

- Notes
- [1]
- Total Emission Rate is determined by this equation : ME Emission Rate + AE Emission Rate

Appendix 4.10 Calculation of Marine Emission (in Ma Wan Fairway and nearby Channel)

Proportion of Arrivals for Each Vessel Type

Vessel ID	Vessel Type	Number of Arrivals in 2025 [1]	Proportion of Arrivals by vessel type
TKBR01	Fully Cellular Container Vessel	21550	52.0%
TKBR02	Conventional Cargo Vessel	2209	5.3%
TKBR03	Dry Bulk Carrier	7695	18.6%
TKBR04	Semi-container Vessel	9100	22.0%
TKBR05	Gas Carrier/Tanker	149	0.4%
TKBR06	Chemical Carrier/Tanker	217	0.5%
TKBR07	Oil Tanker	265	0.6%
TKBR08	Lighter/Barge/Cargo Junk	224	0.5%

Notes:
[15] The number of arrivals in 2025 refers to statistics published by Marine Department (https://www.mardep.gov.hk/filemanager/en/share/fact/pdf/portstat_1_y_a2.pdf).

Hourly Traffic Volume

Hourly Traffic Volume of Each Vessel Type in Year 2043 [1][2]								
Hour per Day	TKBR01	TKBR02	TKBR03	TKBR04	TKBR05	TKBR06	TKBR07	TKBR08
0	0.937	0.096	0.334	0.396	0.006	0.009	0.012	0.010
1	1.249	0.128	0.446	0.527	0.009	0.013	0.015	0.013
2	1.145	0.117	0.409	0.483	0.008	0.012	0.014	0.012
3	0.781	0.080	0.279	0.330	0.005	0.008	0.010	0.008
4	0.989	0.101	0.353	0.418	0.007	0.010	0.012	0.010
5	1.041	0.107	0.372	0.440	0.007	0.010	0.013	0.011
6	1.301	0.133	0.465	0.549	0.009	0.013	0.016	0.014
7	2.186	0.224	0.780	0.923	0.015	0.022	0.027	0.023
8	2.238	0.229	0.799	0.945	0.015	0.023	0.028	0.023
9	1.561	0.160	0.557	0.659	0.011	0.016	0.019	0.016
10	1.717	0.176	0.613	0.725	0.012	0.017	0.021	0.018
11	1.978	0.203	0.706	0.835	0.014	0.020	0.024	0.021
12	1.978	0.203	0.706	0.835	0.014	0.020	0.024	0.021
13	1.665	0.171	0.595	0.703	0.012	0.017	0.020	0.017
14	1.613	0.165	0.576	0.681	0.011	0.016	0.020	0.017
15	1.717	0.176	0.613	0.725	0.012	0.017	0.021	0.018
16	1.769	0.181	0.632	0.747	0.012	0.018	0.022	0.018
17	1.874	0.192	0.669	0.791	0.013	0.019	0.023	0.019
18	1.821	0.187	0.650	0.769	0.013	0.018	0.022	0.019
19	1.093	0.112	0.390	0.461	0.008	0.011	0.013	0.011
20	1.145	0.117	0.409	0.483	0.008	0.012	0.014	0.012
21	1.041	0.107	0.372	0.440	0.007	0.010	0.013	0.011
22	0.989	0.101	0.353	0.418	0.007	0.010	0.012	0.010
23	1.041	0.107	0.372	0.440	0.007	0.010	0.013	0.011

Notes:
[1] The hourly traffic volume is provided by marine traffic consultant and agreed by Marine Department. The highest traffic flow within 15 years after commencement is adopted as a conservative assumption.
[2] No breakdown of RTV types are available in the traffic data. Therefore, the hourly traffic volume of each vessel type is calculated by the following equation: Hourly traffic volume of RTV (provided by marine traffic consultant) * Proportion of Arrivals by vessel type

Appendix 4.10 Calculation of Marine Emission (in Ma Wan Fairway and nearby Channel)

Calculation of Marine Emission (Across Ting Kau Bridge, Local Ferry)

Vessel-Specific Parameters - Main Engine (ME)

Vessel ID	Vessel Type	Main Engine (ME) Type	Fuel	Main Engine Power (kW) [3]	SO ₂ Emission Factors_ME (g/kWh) [4]	NOx Emission Factors_ME (g/kWh) [4]	RSP Emission Factors_ME (g/kWh) [5]	FSP Emission Factor_ME (g/kWh) [5][6]
TKBL01	Local Ferry (Park Island <=> Central)	Diesel Engine [1]	Marine Light Diesel (Sulphur Content <= 0.05%) [2]	2686	0.21	13.2	0.17	0.16

Calculation of ME Emission Rate

Vessel ID	Vessel Type	Average Speed (Knot) [7]	Operation Mode^	Maximum Length of Sailing Route (nautical miles) [7]	Time-in-mode (hr) [7]	Load Factor [8]	SO ₂ Emission Rate_ME (g/s-trip) [9]	NOx Emission Rate_ME (g/s-trip) [9]	RSP Emission Rate_ME (g/s-trip) [9]	FSP Emission Rate_ME (g/s-trip) [9]
TKBL01	Local Ferry (Park Island <=> Central)	14	Fairway Cruise	0.851	0.0606	0.8	1.505E-02	9.541E-01	1.202E-02	1.166E-02

Notes:

- *

Unless specified otherwise, references were made to Study on Marine Vessels Emission Inventory (MVEIS)
- ^

Operation mode refers to Table 3-24 of MVEIS.
- [1]

The main engine type is based on desktop review. (http://www.barcaferry.com/photo/photo_shipyards/marintekink/marintekink_cpv38_date.html)
- [2]

According to the Air Pollution Control (Marine Light Diesel) Regulation, local vessel in Hong Kong should be using marine light diesel with sulphur content of 0.05%.
- [3]

There are two fleets for Park Island Ferry. The ferry model having higher main engine power is adopted as a worst-case scenario. Also, the vessels are installed with two main engines, each rated at 1343 kW; and the total engine power (2686 kW) is presented and adopted. (http://www.barcaferry.com/photo/photo_shipyards/marintekink/marintekink_cpv38_date.html)
- [4]

— The SO2 emission factors were calcaulted based on the formula stated in Paragraph 4.2.31 of MVEIS: BSFC x 2 x 0.97753 x Fuel Sulphur Fraction, where BSFC for main engine installed in RTV is 213 and Fuel Sulphur Fraction is 0.0005.
— The NOx emission rate for Main Engine was adopted based on Table 4-17 of MVEIS.
- [5]

The RSP emission factors were adjusted based on the formula stated in Paragraph 4.2.31 of MVEIS: The formula of RSP Emission Factor is 0.23+ BSFC x 7 x 0.02247 x (Fuel Sulphur Fraction - 0.0024), where BSFC for Ferry is 213 and Fuel Sulphur Fraction is 0.0005.
- [6]

According to Paragraph 4.2.32 of MVEIS, the RSP to FSP conversion factor is 0.97.
- [7]

The average speed and sailing route are provided by marine traffic consultant. Based on the operation needs, the ferries could get a Speed Restriction Exemption Permits (SREPs) from the Marine Department. The vessel with the license is allowed to proceed at a speed exceeding the maximum permitted speed within Zone A or
- [8]

The Main Engine Load Factor of Park Island Ferry is based on Table 4-9 of MVEIS.
- [9]

The calculations of emission rates refer to the following equation: Emission Rate (g/s) = No. of Engine * Engine Power (kW) * Time-in-mode per hour * Engine Load Factor * Emission Factor (g/kWh), where Time-in-mode per hour refers to the duration ratio of a vessel operating in a specific mode within a one-hour period (i.e., Time-in-mode (hr) / 1 hour)

Appendix 4.10 Calculation of Marine Emission (in Ma Wan Fairway and nearby Channel)

Vessel-Specific Parameters - Auxiliary Engine (AE)

Vessel ID	Vessel Type	Auxiliary Engine Power (kW) [1]	SO ₂ Emission Factors_AE (g/kWh) [2]	NOx Emission Factors_AE (g/kWh) [2]	RSP Emission Factors_AE (g/kWh) [3]	FSP Emission Factor_AE (g/kWh) [3]
TKBL01	Local Ferry (Park Island <=> Central)	326	0.21	10	0.17	0.16

Calculation of AE Emission Rate

Vessel ID	Vessel Type	Average Speed (Knot)	Operation Mode	Maximum Length of Sailing Route (nautical miles)	Time-in-mode (hr)	Load Factor [4]	SO ₂ Emission Rate_AE (g/s-trip) [5]	NOx Emission Rate_AE (g/s-trip) [5]	RSP Emission Rate_AE (g/s-trip) [5]	FSP Emission Rate_AE (g/s-trip) [5]
TKBL01	Local Ferry (Park Island <=> Central)	14	Fairway Cruise	0.851	0.0606	0.45	5.138E-04	2.467E-02	4.104E-04	3.981E-04

- Notes
- [1]

According to Paragraph 4.2.12 of MVEIS, the auxiliary engine power of a Macau ferry ranges from 120-326 kW. As a worst-case scenario, 326 kW is adopted for AE power calculation.
- [2]

— The SO2 emission factors were calcaulted based on the formula stated in Paragraph 4.2.31 of MVEIS: BSFC x 2 x 0.97753 x Fuel Sulphur Fraction, where BSFC for main engine installed in RTV is 213 and Fuel Sulphur Fraction is 0.0005.

— The NOx emission rate for Auxiliary Engine was adopted based on Table 4-17 of MVEIS
- [3]

The formula of RSP Emission Factor is 0.23+ BSFC x 7 x 0.02247 x (Fuel Sulphur Fraction - 0.0024), where BSFC for Ferry is 213 and Fuel Sulphur Fraction is 0.0005. According to Paragraph 4.2.32 of MVEIS, the RSP to FSP conversion factor is 0.97.
- [4]

The Auxiliary Engine Load Factors of Park Island Ferry is based on Table 4-10 of MVEIS.
- [5]

The calculations of emission rates refer to the following equation: Emission Rate (g/s) = No. of Engine * Engine Power (kW) * Time-in-mode per hour * Engine Load Factor * Emission Factor (g/kWh), where Time-in-mode per hour refers to the duration ratio of a vessel operating in a specific mode within a one-hour period (i.e., Time-in-mode (hr) / 1 hour)

Total Emission Rate

Vessel ID	Total SO ₂ Emission Rate (g/s-trip) [1]	Total NOx Emission Rate (g/s-trip) [1]	Total RSP Emission Rate (g/s-trip) [1]	Total FSP Emission Rate (g/s-trip) [1]
TKBL01	1.556E-02	9.788E-01	1.243E-02	1.206E-02

- Notes
- [1]

Total Emission Rate is determined by this equation : ME Emission Rate + AE Emission Rate

Appendix 4.10 Calculation of Marine Emission (in Ma Wan Fairway and nearby Channel)

Hourly Traffic Volume

	Hourly Traffic Volume [1]
Hour per Day	TKBL01
0	0.000
1	0.000
2	0.000
3	0.000
4	0.000
5	0.000
6	0.600
7	9.200
8	1.900
9	0.500
10	2.100
11	0.200
12	0.300
13	2.500
14	0.300
15	0.600
16	2.700
17	0.700
18	8.500
19	3.200
20	1.400
21	1.300
22	0.000
23	0.000

Notes:
[1] The hourly traffic volume is provided by marine traffic consultant, agreed by Marine Department.

Appendix 4.10 Calculation of Marine Emission (in Ma Wan Fairway and nearby Channel)

Calculation of Marine Emission (Across Ting Kau Bridge, Tugs, Fast Launches and Small Crafts)

Vessel-Specific Parameters - Main Engine (ME)

Vessel ID	Vessel Type	Vessel Type (MVEIS) [1]	Main Engine (ME) Type [2]	Fuel [3]	Main Engine Power (kW) [4]	SO ₂ Emission Factors_ME (g/kWh) [5]	NOx Emission Factors_ME (g/kWh) [5]	RSP Emission Factors_ME (g/kWh) [5]	FSP Emission Factor_ME (g/kWh) [5]
TKBT01	Tug	Tug (GRT>=1000)	Diesel Engine	Marine Light Diesel (Sulphur Content <= 0.05%)	2371	0.21	13.2	0.17	0.16
TKBF01	Fast Launch	Others (GRT >= 1000)	Diesel Engine	Marine Light Diesel (Sulphur Content <= 0.05%)	707	0.21	10	0.17	0.16
TKBS01	Small Craft (Pleasure Vessel)	Others (GRT >= 1000)	Diesel Engine	Marine Light Diesel (Sulphur Content <= 0.05%)	707	0.21	10	0.17	0.16

Calculation of ME Emission Rate

Vessel ID	Vessel Type	Average Speed (Knot) [6]	Operation Mode	Maximum Length of Sailing Route (nautical miles) [6]	Time-in-mode (hr) [6]	Load Factor [7]	SO ₂ Emission Rate_ME (g/s-trip) [8]	NOx Emission Rate_ME (g/s-trip) [8]	RSP Emission Rate_ME (g/s-trip) [8]	FSP Emission Rate_ME (g/s-trip) [8]
TKBT01	Tug	4.1	Maneuvering	0.851	0.2056	0.3	8.460E-03	5.363E-01	6.759E-03	6.556E-03
TKBF01	Fast Launch	10.4	Slow Cruise	0.851	0.0819	0.3	1.004E-03	4.823E-02	8.023E-04	7.782E-04
TKBS01	Small Craft (Pleasure Vessel)	6.8	Maneuvering	0.851	0.1259	0.45	2.317E-03	1.113E-01	1.851E-03	1.796E-03

Notes:

- *

Unless specified otherwise, references are made to Study on Marine Vessels Emission Inventory (MVEIS)
- [1]

Classification of vessel type refer Table 4-1 of MVEIS, Small Craft and Fast Launch are classified as "Others (GRT >= 1000)" as a conservative estimation
- [2]

The main engine type refers to S4.2.6 of MVEIS
- [3]

According to the Air Pollution Control (Marine Light Diesel) Regulation, local vessel in Hong Kong should be using marine light diesel with sulphur content of 0.05%.
- [4]

The average ME Power refer to Table 4-5 of MVEIS
- [5]

— The SO2 emission factors were calcaulted based on the formula stated in Paragraph 4.2.31 of MVEIS: BSFC x 2 x 0.97753 x Fuel Sulphur Fraction, where BSFC for main engine installed in RTV is 213 and Fuel Sulphur Fraction is 0.0005.

— The NOx emission factors for refer to Table 4.16.

— The RSP emission factors were adjusted based on the formula stated in Paragraph 4.2.31 of MVEIS: The formula of RSP Emission Factor is 0.23+ BSFC x 7 x 0.02247 x (Fuel Sulphur Fraction - 0.0024), where BSFC is 213 and Fuel Sulphur Fraction is 0.0005.

— According to Paragraph 4.2.32 of MVEIS, the RSP to FSP conversion factor is 0.97.
- [6]

The average speed and sailing route provided by Marine Traffic Consultant. Moreover, the time-in-mode is calculated as: Time-in-mode (hr) = Maximun Length of Sailing Route within Assessment Boundary (nautical miles) / Average speed (knot)
- [7]

The load factors are determined from Table 4-7 of MVEIS.
- [8]

The calculations of emission rates refer to the following equation: Emission Rate (g/s) = Engine Power (kWh) * Time-in-mode per hour * Engine Load Factor * Emission Factor (g/kWh) / 3600 , where Time-in-mode per hour refers to the duration ratio of a vessel operating in a specific mode within a one-hour period (i.e., Time-in-mode (hr) / 1 hour)

Appendix 4.10 Calculation of Marine Emission (in Ma Wan Fairway and nearby Channel)

Vessel-Specific Parameters - Auxiliary Engine (AE)

Vessel ID	Vessel Type	Vessel Type (MVEIS)	Auxiliary Engine Power (kW) [1]	SO ₂ Emission Factors_AE (g/kWh) [2]	NOx Emission Factors_AE (g/kWh) [2]	RSP Emission Factors_AE (g/kWh) [2]	FSP Emission Factor_AE (g/kWh) [2]
TK8T01	Tug	Tug (GRT>=1000)	220	0.21	10.0	0.17	0.16
TK8F01	Fast Launch	Others (GRT >= 1000)	115	0.21	10.0	0.17	0.16
TK8S01	Small Craft (Pleasure Vessel)	Others (GRT >= 1000)	115	0.21	10.0	0.17	0.16

Calculation of AE Emission Rate

Vessel ID	Vessel Type	Average Speed (Knot)	Operation Mode	Maximum Length of Sailing Route (nautical miles)	Time-in-mode (hr)	Load Factor [3]	SO ₂ Emission Rate_AE (g/s-trip) [4]	NOx Emission Rate_AE (g/s-trip) [4]	RSP Emission Rate_AE (g/s-trip) [4]	FSP Emission Rate_AE (g/s-trip) [4]
TK8T01	Tug	4	Maneuvering	0.851	0.2056	0.43	1.125E-03	5.404E-02	8.989E-04	8.719E-04
TK8F01	Fast Launch	10	Slow Cruise	0.851	0.0819	0.43	2.341E-04	1.124E-02	1.870E-04	1.814E-04
TK8S01	Small Craft (Pleasure Vessel)	7	Maneuvering	0.851	0.1259	0.43	3.602E-04	1.730E-02	2.878E-04	2.791E-04

- Notes
- [1]

[2]

[3]

[4]
- The AE Power refer Table 4-6 of MVEIS

— The SO2 emission factors were calcaulted based on the formula stated in Paragraph 4.2.31 of MVEIS: BSFC x 2 x 0.97753 x Fuel Sulphur Fraction, where BSFC for main engine installed in RTV is 213 and Fuel Sulphur Fraction is 0.0005.

— The Emission Factors refer to Table 4-16 of MVEIS.

— The RSP emission factors were adjusted based on the formula stated in Paragraph 4.2.31 of MVEIS: The formula of RSP Emission Factor is 0.23+ BSFC x 7 x 0.02247 x (Fuel Sulphur Fraction - 0.0024), where BSFC is 213 and Fuel Sulphur Fraction is 0.0005.

— According to Paragraph 4.2.32 of MVEIS, the RSP to FSP conversion factor is 0.97.

The AE Load Factors of Others (GRT >= 1000) and Tug refer to Table 4-10 of MVEIS

The calculations of emission rates refer to the following equation: Emission Rate (g/s) = Engine Power (kW) * Time-in-mode per hour * Engine Load Factor * Emission Factor (g/kWh) / 3600 , where Time-in-mode per hour refers to the duration ratio of a vessel operating in a specific mode within a one-hour period (i.e., Time-in-mode (hr) / 1 hour)

Total Emission Rate

Vessel ID	Total SO ₂ Emission Rate (g/s-trip) [1]	Total NOx Emission Rate (g/s-trip) [1]	Total RSP Emission Rate (g/s-trip) [1]	Total FSP Emission Rate (g/s-trip) [1]
TK8T01	9.585E-03	5.904E-01	7.658E-03	7.428E-03
TK8F01	1.238E-03	5.947E-02	9.893E-04	9.596E-04
TK8S01	2.678E-03	1.286E-01	2.139E-03	2.075E-03

- Note:
- [1]
- Total Emission Rate is determined by this equation : ME Emission Rate + AE Emission Rate

Appendix 4.10 Calculation of Marine Emission (in Ma Wan Fairway and nearby Channel)

Hourly Traffic Volume

Hour per Day	Average Traffic Flow of Each Vessel ID [1]		
	TKBT01	TKBF01	TKBS01
0	0.00	0.00	1.30
1	0.10	0.00	1.80
2	0.00	0.00	1.20
3	0.00	0.80	1.00
4	0.00	0.00	0.70
5	0.00	0.00	3.50
6	0.00	1.70	4.90
7	0.10	0.90	15.10
8	0.20	0.90	6.20
9	0.10	0.90	5.40
10	0.20	0.90	4.90
11	0.10	1.70	8.10
12	0.10	0.90	5.50
13	0.10	0.90	4.40
14	0.10	0.00	6.20
15	0.10	0.00	6.00
16	0.10	0.00	4.90
17	0.20	0.00	7.90
18	0.10	0.80	15.10
19	0.00	0.80	4.20
20	0.10	0.00	1.50
21	0.00	0.00	1.80
22	0.10	0.80	2.70
23	0.20	0.00	2.70

Note [1] The hourly traffic volume is provided by marine traffic consultant.

Appendix 4.10 Calculation of Marine Emission (in Ma Wan Fairway and nearby Channel)

Vessel-Specific Modeling Parameters (Across Ting Kau Bridge)

Vessel ID	Source ID	X (m)	Y (m)	Source Type	Total SO ₂ Emission (g/s-trip)	Total NOx Emission (g/s-trip)	Total RSP Emission (g/s-trip)	Total FSP Emission (g/s-trip)	Number of Port Sources	SO ₂ Emission / Point Source (g/s-trip)	NOx Emission / Point Source (g/s-trip)	RSP Emission / Point Source (g/s-trip)	FSP Emission / Point Source (g/s-trip)	Base Elevation mPD	Release Height mAG	Exit Temperature K	Exit Velocity m/s	Internal Diameter m
TKBR01	TKBR01_01	825758.29	824622.54	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_02	825820.20	824622.54	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_03	825820.23	824560.46	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_04	825835.85	824661.13	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_05	825851.80	824661.13	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_06	825945.09	824602.07	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_07	825990.70	824622.54	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_08	826036.32	824643.01	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_09	826081.94	824663.47	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_10	826127.56	824683.94	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_11	826171.81	824702.91	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_12	826220.28	824721.36	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_13	826266.76	824738.26	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_14	826313.23	824758.26	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_15	826359.70	824776.71	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_16	826405.17	824803.65	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_17	826452.64	824831.60	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_18	826499.12	824858.05	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_19	826545.59	824880.50	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_20	826590.72	824903.09	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_21	826640.72	824928.40	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_22	826689.42	824951.75	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_23	826738.11	824973.86	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_24	826786.81	824991.44	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_25	826835.51	825012.29	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_26	826881.90	825035.83	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_27	826930.29	825059.83	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_28	826981.59	825089.13	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_29	827030.29	825117.17	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_30	827079.44	825146.66	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_31	827129.40	825175.81	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_32	827179.36	825201.21	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_33	827229.31	825226.20	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_34	827279.27	825251.29	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_35	827329.23	825276.29	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_36	827379.18	825301.21	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_37	827429.14	825326.21	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_38	827479.10	825351.21	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_39	827529.05	825376.21	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_40	827579.01	825401.21	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_41	827629.97	825426.21	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_42	827679.92	825451.21	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_43	827729.88	825476.21	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_44	827779.83	825501.21	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_45	827829.78	825526.21	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_46	827879.73	825551.21	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_47	827929.68	825576.21	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_48	827979.63	825601.21	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_49	828029.58	825626.21	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_50	828079.53	825651.21	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_51	828129.48	825676.21	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_52	828179.43	825701.21	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_53	828229.38	825726.21	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_54	828279.33	825751.21	POINT	1.9876-03	9.5426-02	1.5870-03	1.5870-03	43	4.6206-05	2.2196-03	3.6916-05	1.5868-05	1.3	42	503.15	24.6	1.9
TKBR01	TKBR01_55	828329.28	825776.21	POINT														

Appendix 4.10 Calculation of Marine Emission (in Ma Wan Fairway and nearby Channel)
Vessel-Specific Modeling Parameters (Across Ting Kau Bridge)

Vessel ID	Source ID	X (m)	Y (m)	Source Type	Total SO ₂ Emission (g/s-trip)	Total NOx Emission (g/s-trip)	Total RSP Emission (g/s-trip)	Total FSP Emission (g/s-trip)	Number of Point Sources	SO ₂ Emission / Point Source (g/s-trip)	NOx Emission / Point Source (g/s-trip)	RSP Emission / Point Source (g/s-trip)	FSP Emission / Point Source (g/s-trip)	Base Elevation mPD	Release Height mAG	Exit Temperature K	Exit Velocity m/s	Internal Diameter m
TKB007	TKB007_25	827329.23	824596.33	POINT	4.800E-03	2.859E-01	3.841E-03	3.726E-03	43	1.118E-04	6.649E-03	8.932E-05	8.664E-05	1.3	20	503.15	25	0.8
TKB007	TKB007_36	827379.18	824596.33	POINT	4.800E-03	2.859E-01	3.841E-03	3.726E-03	43	1.118E-04	6.649E-03	8.932E-05	8.664E-05	1.3	20	503.15	25	0.8
TKB007	TKB007_37	827429.14	824596.33	POINT	4.800E-03	2.859E-01	3.841E-03	3.726E-03	43	1.118E-04	6.649E-03	8.932E-05	8.664E-05	1.3	20	503.15	25	0.8
TKB007	TKB007_38	827479.10	824596.33	POINT	4.800E-03	2.859E-01	3.841E-03	3.726E-03	43	1.118E-04	6.649E-03	8.932E-05	8.664E-05	1.3	20	503.15	25	0.8
TKB007	TKB007_39	827529.05	824596.33	POINT	4.800E-03	2.859E-01	3.841E-03	3.726E-03	43	1.118E-04	6.649E-03	8.932E-05	8.664E-05	1.3	20	503.15	25	0.8
TKB007	TKB007_40	827579.01	824596.33	POINT	4.800E-03	2.859E-01	3.841E-03	3.726E-03	43	1.118E-04	6.649E-03	8.932E-05	8.664E-05	1.3	20	503.15	25	0.8
TKB007	TKB007_41	827628.97	825002.02	POINT	4.800E-03	2.859E-01	3.841E-03	3.726E-03	43	1.118E-04	6.649E-03	8.932E-05	8.664E-05	1.3	20	503.15	25	0.8
TKB007	TKB007_42	827678.92	825004.10	POINT	4.800E-03	2.859E-01	3.841E-03	3.726E-03	43	1.118E-04	6.649E-03	8.932E-05	8.664E-05	1.3	20	503.15	25	0.8
TKB007	TKB007_43	827728.88	825006.18	POINT	4.800E-03	2.859E-01	3.841E-03	3.726E-03	43	1.118E-04	6.649E-03	8.932E-05	8.664E-05	1.3	20	503.15	25	0.8
TKB008	TKB008_01	825716.99	824999.73	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_02	825762.61	824520.20	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_03	825808.23	824540.66	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_04	825851.85	824561.13	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_05	825899.47	824581.60	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_06	825945.09	824602.07	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_07	825990.70	824622.54	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_08	826036.32	824643.01	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_09	826084.20	824663.47	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_10	826127.56	824683.94	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_11	826173.81	824702.91	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_12	826220.28	824721.36	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_13	826266.76	824739.81	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_14	826313.23	824758.26	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_15	826359.70	824776.71	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_16	826406.17	824795.15	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_17	826452.64	824813.60	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_18	826499.12	824832.05	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_19	826545.59	824850.50	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_20	826592.06	824868.95	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_21	826640.72	824888.40	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_22	826689.42	824909.15	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_23	826738.11	824930.09	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_24	826786.81	824951.01	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_25	826835.51	824971.93	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_26	826884.20	824992.85	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_27	826932.90	825013.77	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_28	826981.59	825034.69	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_29	827030.29	825055.61	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_30	827079.44	825076.53	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_31	827129.40	825097.45	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_32	827179.36	825118.37	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_33	827229.31	825139.29	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_34	827279.27	825160.21	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_35	827329.23	825181.13	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_36	827379.18	825202.02	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_37	827429.14	825222.94	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_38	827479.10	825243.86	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_39	827529.05	825264.78	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_40	827579.01	825285.70	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_41	827628.97	825306.62	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_42	827678.92	825327.54	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_43	827728.88	825348.46	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_44	827778.83	825369.38	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_45	827828.78	825390.30	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_46	827878.73	825411.22	POINT	2.043E-03	9.810E-02	1.632E-03	1.583E-03	43	4.750E-05	2.281E-03	3.795E-05	3.681E-05	1.3	8	503.15	8	0.2
TKB008	TKB008_47	827928.68	825432.14	POINT														

Appendix 4.10 Calculation of Marine Emission (in Ma Wan Fairway and nearby Channel)

Hourly Traffic Profile

	Hour per Day																							
Vessel ID	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
TKBR01	0.94	1.25	1.14	0.78	0.99	1.04	1.30	2.19	2.24	1.56	1.72	1.98	1.98	1.67	1.61	1.72	1.77	1.87	1.82	1.09	1.14	1.04	0.99	1.04
TKBR02	0.10	0.13	0.12	0.08	0.10	0.11	0.13	0.22	0.23	0.16	0.18	0.20	0.20	0.17	0.17	0.18	0.18	0.19	0.19	0.11	0.12	0.11	0.10	0.11
TKBR03	0.33	0.45	0.41	0.28	0.35	0.37	0.46	0.78	0.80	0.56	0.61	0.71	0.71	0.59	0.58	0.61	0.63	0.67	0.65	0.39	0.41	0.37	0.35	0.37
TKBR04	0.40	0.53	0.48	0.33	0.42	0.44	0.55	0.92	0.94	0.66	0.73	0.84	0.84	0.70	0.68	0.73	0.75	0.79	0.77	0.46	0.48	0.44	0.42	0.44
TKBR05	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
TKBR06	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01
TKBR07	0.01	0.02	0.01	0.01	0.01	0.01	0.02	0.03	0.03	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01
TKBR08	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.01
TKBL01	0.00	0.00	0.00	0.00	0.00	0.00	0.60	9.20	1.90	0.50	2.10	0.20	0.30	2.50	0.30	0.60	2.70	0.70	8.50	3.20	1.40	1.30	0.00	0.00
TKBT01	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.10	0.20	0.10	0.20	0.10	0.10	0.10	0.10	0.10	0.10	0.20	0.10	0.00	0.10	0.00	0.10	0.20
TKBF01	0.00	0.00	0.00	0.80	0.00	0.00	1.70	0.90	0.90	0.90	0.90	1.70	0.90	0.90	0.00	0.00	0.00	0.00	0.80	0.80	0.00	0.00	0.80	0.00
TKBS01	1.30	1.80	1.20	1.00	0.70	3.50	4.90	15.10	6.20	5.40	4.90	8.10	5.50	4.40	6.20	6.00	4.90	7.90	15.10	4.20	1.50	1.80	2.70	2.70

Appendix 4.10 Calculation of Marine Emission (in Ma Wan Fairway and nearby Channel)

Calculation of Marine Emission (Ma Wan Fairway, Gate 2, OGV)

Vessel-Specific Parameters - Main Engine (ME)

Vessel ID	Vessl Type [1]	Main Engine Type [2]	Proportion of each main engine type [3]	DWT / PAX Sub-Group [4]	Fuel [5]	Main Engine Power (kW) [6]	Baseline Specific Fuel Consumption (g/kWh) [7]	SO ₂ Emission Factors_ME (g/kWh) [8]	NOx Emission Factors_ME (g/kWh) [8]	RSP Emission Factors_ME (g/kWh) [9]	FSP Emission Factor_ME (g/kWh) [10]	SO ₂ Composite Emission Factors (g/kWh) [11]	NOx Composite Emission Factors (g/kWh) [11]	RSP Composite Emission Factors_ME (g/kWh) [11]	FSP Composite Emission Factor_ME (g/kWh) [11]
MO01	Fully Cellular Container Vessel (FCCV)	SSD	67.1%	DWT >= 100000	MDO at 0.5% Suphlur	64780	205	1.81	17.00	0.31	0.29	1.87	14.91	0.32	0.29
		MSD	8.8%				215	1.98	13.00	0.32	0.29				
		HSD	24.0%				225	1.98	9.80	0.32	0.30				
		ST	0.1%				340	2.83	2.10	0.37	0.34				
		SSD	12.2%				205	1.81	17.00	0.31	0.29				
MO02	Conventional Cargo Vessel	MSD	86.7%	DWT >= 30000	MDO at 0.5% Suphlur	2313	215	1.98	13.00	0.32	0.29	1.96	13.45	0.32	0.29
		HSD	0.9%				225	1.98	9.80	0.32	0.30				
		ST	0.1%				340	2.83	2.10	0.37	0.34				
		SSD	89.9%				205	1.81	17.00	0.31	0.29				
		MSD	7.3%				215	1.98	13.00	0.32	0.29				
MO03	Dry Bulk Carrier	HSD	2.8%	DWT >= 100000	MDO at 0.5% Suphlur	7555	225	1.98	9.80	0.32	0.30	1.83	16.51	0.31	0.29
		SSD	15.8%				205	1.81	17.00	0.31	0.29				
		MSD	84.2%				215	1.98	13.00	0.32	0.29				
MO04	Semi-container Vessel	SSD	16.1%	N.A	MDO at 0.5% Suphlur	3404	205	1.81	17.00	0.31	0.29	1.95	13.63	0.32	0.29
		MSD	80.7%				215	1.98	13.00	0.32	0.29				
		HSD	2.9%				225	1.98	9.80	0.32	0.30				
		ST	0.3%				340	2.83	2.10	0.37	0.34				
		SSD	26.3%				205	1.81	17.00	0.31	0.29				
MO05	Gas Carrier/Tanker	MSD	69.2%	DWT >= 40000	MDO at 0.5% Suphlur	3515	215	1.98	13.00	0.32	0.29	1.94	13.91	0.32	0.29
		HSD	4.4%				225	1.98	9.80	0.32	0.30				
		SSD	48.7%				205	1.81	17.00	0.31	0.29				
		MSD	46.1%				215	1.98	13.00	0.32	0.29				
		HSD	5.2%				225	1.98	9.80	0.32	0.30				
MO06	Chemical Carrier/Tanker	SSD	0.1%	DWT >= 40000	MDO at 0.5% Suphlur	3515	205	1.81	17.00	0.31	0.29	1.94	13.91	0.32	0.29
		MSD	69.2%				215	1.98	13.00	0.32	0.29				
		HSD	4.4%				225	1.98	9.80	0.32	0.30				
		SSD	26.3%				205	1.81	17.00	0.31	0.29				
MO07	Oil Tanker	MSD	46.1%	DWT >= 120000	MDO at 0.5% Suphlur	5652	215	1.98	13.00	0.32	0.29	1.90	14.78	0.32	0.29
		HSD	5.2%				225	1.98	9.80	0.32	0.30				
		SSD	0.1%				205	1.81	17.00	0.31	0.29				
		MSD	99.9%				215	1.98	13.00	0.32	0.29				
MO08	Cruise/Ferry	SSD	0.1%	PAX>=2600	MDO at 0.5% Suphlur	15184	205	1.81	17.00	0.31	0.29	1.98	13.00	0.32	0.29
		MSD	99.9%				215	1.98	13.00	0.32	0.29				

Calculation of ME Emission Rate

Vessel ID	Vessal Type	Average Speed (Knot) [12]	Operation Mode [13]	Maximum Length of Sailing Route (nautical miles)	Time-in-mode (hr) [14]	Load Factor [15]	Low -Load Adjustment Factor (SO ₂) [16]	Low -Load Adjustment Factor (NOx) [16]	Low-Load Adjustment Factor (RSP) [16]	Low-Load Adjustment Factor (FSP) [16]	SO ₂ Emission Rate_ME (g/s-trip) [17]	NOx Emission Rate_ME (g/s-trip) [17]	RSP Emission Rate_ME (g/s-trip) [17]	FSP Emission Rate_ME (g/s-trip) [17]
MO01	FCCV	12	Fairway Cruise	0.851	0.0692	0.473	1.000	1.00	1.00	1.00	1.100E+00	8.781E+00	1.863E-01	1.714E-01
MO02	Conventional Cargo Vessel	12	Fairway Cruise	0.851	0.0692	0.800	1.000	1.00	1.00	1.00	6.974E-02	4.784E-01	1.130E-02	1.039E-02
MO03	Dry Bulk Carrier	12	Fairway Cruise	0.851	0.0692	0.800	1.000	1.00	1.00	1.00	2.123E-01	1.918E+00	3.653E-02	3.361E-02
MO04	Semi-container Vessel	12	Fairway Cruise	0.851	0.0692	0.800	1.000	1.00	1.00	1.00	1.023E-01	7.137E-01	1.661E-02	1.528E-02
MO05	Gas Carrier/Tanker	12	Fairway Cruise	0.851	0.0692	0.800	1.000	1.00	1.00	1.00	1.012E-01	6.994E-01	1.643E-02	1.512E-02
MO06	Chemical Carrier/Tanker	12	Fairway Cruise	0.851	0.0692	0.800	1.000	1.00	1.00	1.00	1.046E-01	7.521E-01	1.714E-02	1.577E-02
MO07	Oil Tanker	12	Fairway Cruise	0.851	0.0692	0.800	1.000	1.00	1.00	1.00	1.649E-01	1.285E+00	2.749E-02	2.529E-02
MO08	Cruise/ferry	12	Fairway Cruise	0.851	0.0692	0.422	1.000	1.00	1.00	1.00	2.439E-01	1.602E+00	3.917E-02	3.604E-02

- Notes
- [1]

No breakdown of OGV types are available in the traffic data. Therefore, vessel types catalogized by the Marine Department is adopted to breakdown the marine traffic data.
- [2]

SSD, MSD, HSD and ST denote slow speed diesel, medium speed diesel, high speed diesel and steam turbine engine, respectively.
- [3]

Proportion of main engine type refers to Table 3-17 of MVEIS
- [4]

DWT / PAX Sub-Group refers to Table 3-18 of MVEIS; the highest DWT/PAX is adopted as a conservative approach
- [5]

All vessels are required to use compliant fuels (sulphur content <= 0.5%) under the Air Pollution Control (Fuel for Vessels) Regulations. Therefore, it is assumed that all vessels use MDO with a sulphur content of 0.5%.
- [6]

The average ME Power of FCCV refers to Table 3-16 of MVEIS. And the other vessel types refer to Table 3-15 of MVEIS.
- [7]

The Baseline Specific Fuel Consumption (SFC_BASE) refers to Table 19 of IMO Fourth Greenhouse Gas Study 2020. SFC_BASE for ships built in Years 1984-2000 is adopted as a balanced assumption.
- [8]

— The SO₂ emission factor refer to Table 3-27 of the MEVIS

— The NOx emission factor for HSD, MSD and SSD refer to Table 23 of IMO Fourth Greenhouse Gas Study 2020; The NOx emission factor for ST refers to Table 49 of IMO Fourth Greenhouse Gas Study 2020.
- [9]

The RSP emission factors were calculated by Equation 17 of IMO Fourth Greenhouse Gas Study 2020: 0.23 + SFC_i * 7 * 0.02247 * (Fuel Sulphur Fraction - 0.0024), where Fuel Sulphur Fraction is 0.005, and i denotes the specific engine/boiler system (i.e., Engine/Boiler Type and Fuel Type) for each vessel type.
- [10]

According to the Forth IMO Greenhouse Gas Study, the RSP to FSP conversion factor used is 0.92
- [11]

The composite emission factors are calculated by the following equation: SUM(Percentage distribution of each main engine type * Emission Factors of each main engine type)
- [12]

The average speed and actual sailing route are provided by Marine Traffic Consultant. The time-in-mode is calculated as: Time-in-mode (hr) = Maximun Length of Sailing Route within Assessment Boundary (nautical miles) / Average speed (knot)
- [13]

The operation mode refers to Table 3-24 of MVEIS.
- [14]

The ME Load Factors for FCCV and Criuse refers to Table 3-18 of MVEIS; The ME load Factors for other vessel types refer to *"Emission estimate methodology for maritime navigation"* (<https://www3.epa.gov/ttnchie1/conference/ei19/session10/trozzi.pdf>), the load factor of "Cruise" phase is adopted
- [15]

The Low Load Adjustment Factor refers to Table 3.30 of MVEIS
- [16]

The calculations of emission rates refer to the following equation: Emission Rate (g/s) = Engine Power (kW) * Time-in-mode per hour * Engine Load Factor * Low Load Adjustment Factor (if ME Load Factor < 0.2) * Emission Factor (g/kWh) / 3600, where Time-in-mode per hour refers to the duration ratio of a vessel operating in a specific mode within a one-hour period (i.e., Time-in-mode (hr) / 1 hour)

Appendix 4.10 Calculation of Marine Emission (in Ma Wan Fairway and nearby Channel)

Calculation of Marine Emission (Ma Wan Fairway, Gate 2, OGV)

Vessel-Specific Parameters - Auxiliary Engine (AE)

Vessel ID	Vessal Type	Fuel	Operation Mode	AE to ME Power Ratio [1]	Auxiliary Engine Power / Auxiliary Engine Load Defaults (kW) [2]	Auxiliary Engines Specific Fuel Consumption (g/kWh) [3]	SO ₂ Emission Factors_ME (g/kWh) [4]	NOx Emission Factors_AE (g/kWh) [4]	RSP Emission Factors_AE (g/kWh) [5]	FSP Emission Factor_AE (g/kWh) [5]
MO01	FCCV	MDO at 0.5% Suphlur	Fairway Cruise	Not Used [6]	1560	225	2.12	11.2	0.32	0.30
MO02	Conventional Cargo Vessel	MDO at 0.5% Suphlur	Fairway Cruise	0.191	442	225	2.12	11.2	0.32	0.30
MO03	Dry Bulk Carrier	MDO at 0.5% Suphlur	Fairway Cruise	0.222	1677	225	2.12	11.2	0.32	0.30
MO04	Semi-container Vessel	MDO at 0.5% Suphlur	Fairway Cruise	0.191	650	225	2.12	11.2	0.32	0.30
MO05	Gas Carrier/Tanker	MDO at 0.5% Suphlur	Fairway Cruise	0.211	710	225	2.12	11.2	0.32	0.30
MO06	Chemical Carrier/Tanker	MDO at 0.5% Suphlur	Fairway Cruise	0.211	742	225	2.12	11.2	0.32	0.30
MO07	Oil Tanker	MDO at 0.5% Suphlur	Fairway Cruise	0.211	1193	225	2.12	11.2	0.32	0.30
MO08	Cruise/Ferry	MDO at 0.5% Suphlur	Fairway Cruise	0.278	4221	225	2.12	11.2	0.32	0.30

Calculation of AE Emission Rate

Vessel ID	Vessal Type	Average Speed (Knot)	Operation Mode	Maximum Length of Sailing Route (nautical miles)	Time-in-mode (hr)	Load Factor [7]	SO ₂ Emission Rate_AE (g/s-trip) [8]	NOx Emission Rate_AE (g/s-trip) [8]	RSP Emission Rate_AE (g/s-trip) [8]	FSP Emission Rate_AE (g/s-trip) [8]
MO01	FCCV	12	Fairway Cruise	0.851	0.069	Not Used [6]	6.358E-02	3.359E-01	9.659E-03	8.886E-03
MO02	Conventional Cargo Vessel	12	Fairway Cruise	0.851	0.069	0.300	1.801E-02	2.854E-02	8.206E-04	7.550E-04
MO03	Dry Bulk Carrier	12	Fairway Cruise	0.851	0.069	0.300	6.836E-02	1.083E-01	3.115E-03	2.866E-03
MO04	Semi-container Vessel	12	Fairway Cruise	0.851	0.069	0.300	2.650E-02	4.200E-02	1.208E-03	1.111E-03
MO05	Gas Carrier/Tanker	12	Fairway Cruise	0.851	0.069	0.300	2.893E-02	4.585E-02	1.318E-03	1.213E-03
MO06	Chemical Carrier/Tanker	12	Fairway Cruise	0.851	0.069	0.300	3.023E-02	4.791E-02	1.378E-03	1.267E-03
MO07	Oil Tanker	12	Fairway Cruise	0.851	0.069	0.300	4.861E-02	7.704E-02	2.215E-03	2.038E-03
MO08	Cruise/Ferry	12	Fairway Cruise	0.851	0.069	0.416	1.721E-01	3.781E-01	1.087E-02	1.000E-02

Notes:

[1]

[2]

[3]

[4]

[5]

[6]

[7]

[8]

[9]

AE to ME Power Ratio refer to Table 3-20 of MVEIS

The AE Power is calculated by the following equation: AE Power = ME Power * AE to ME Power Ratio

According to Page 71 of IMO Fourth Greenhouse Gas Study, it is assumed the Auxiliary Engines Specific Fuel Consumption Specific Fuel Consumption = Baseline Specific Fuel Consumption of AE. The baseline specific fuel consumption of AE refer to Table 19 of IMO Fourth Greenhouse Gas Study 2020

— The SO₂ emission factor refer to Table 3-29 of the MEVIS

— The NO_x emission factors for NO_x refer to Table 49 of IMO Fourth Greenhouse Gas Study 2020 Annexes

The RSP emission factors were calculated by Equation 17 of IMO Fourth Greenhouse Gas Study 2020: 0.23 + SFC_i * 7 * 0.02247 * (Fuel Sulphur Fraction - 0.0024), where Fuel Sulphur Fraction is 0.005, and i denotes the specfic engine/boiler system (i.e., Engine/Boiler Type and Fuel Type) for each vessel type. According to the Forth IMO Greenhouse Gas Study, the RSP to FSP conversion factor used is 0.92

The Auxiliary Engine Load Defaults (Auxiliary Engine Load * Auxiliary Engine Power) for FCCV is adopted and presented (Table 3-22). Therefore, AE to ME power ratio and AE load factor are not used for FCCV

The NO_x emission factors for NO_x refer to Table 49 of IMO Fourth Greenhouse Gas Study 2020 Annexes

The AE Load Factors of all vessel types, expect FCCV and Cruise/Ferry, refer to “Emission estimate methodology for maritime navigation” (<https://www3.epa.gov/ttnchie1/conference/ei19/session10/trozzi.pdf>), the load factor of “Cruise” phase is adopted. The AE load Factor of Crusie/Ferry refer to Table 3-21 of MVEIS

The calculations of emission rates refer to the following equation: Emission Rate (g/s) = Engine Power (kW) * Time-in-mode per hour * Engine Load Factor * Emission Factor (g/kWh) / 3600 , where Time-in-mode per hour refers to the duration ratio of a vessel operating in a specific mode within a one-hour period (i.e., Time-in-mode (hr) / 1 hour)

Appendix 4.10 Calculation of Marine Emission (in Ma Wan Fairway and nearby Channel)

Calculation of Marine Emission (Ma Wan Fairway, Gate 2, OGV)

Vessel-Specific Parameters - Auxiliary Boiler (AB)

Vessel ID	Vessal Type	Fuel	Operation Mode	Auxiliary Boiler Energy Defaults (kW) [1]	Auxiliary boilers specific fuel consumption (g/kWh) [2]	SO ₂ Emission Factor_AB (g/s-trip) [3]	NOx Emission Factors_AB (g/kWh) [4]	RSP Emission Factors_AB (g/kWh) [5]	FSP Emission Factor_AB (g/kWh) [5]
MO01	FCCV	MDO at 0.5% Suphlur	Fairway Cruise	586	340	2.83	2.1	0.37	0.34
MO02	Conventional Cargo Vessel	MDO at 0.5% Suphlur	Fairway Cruise	252	340	2.83	2.1	0.37	0.34
MO03	Dry Bulk Carrier	MDO at 0.5% Suphlur	Fairway Cruise	403	340	2.83	2.1	0.37	0.34
MO04	Semi-container Vessel	MDO at 0.5% Suphlur	Fairway Cruise	252	340	2.83	2.1	0.37	0.34
MO05	Gas Carrier/Tanker	MDO at 0.5% Suphlur	Fairway Cruise	371	340	2.83	2.1	0.37	0.34
MO06	Chemical Carrier/Tanker	MDO at 0.5% Suphlur	Fairway Cruise	371	340	2.83	2.1	0.37	0.34
MO07	Oil Tanker	MDO at 0.5% Suphlur	Fairway Cruise	371	340	2.83	2.1	0.37	0.34
MO08	Cruise/Ferry	MDO at 0.5% Suphlur	Fairway Cruise	1000	340	2.83	2.1	0.37	0.34

Calculation of AB Emission Rate

Vessel ID	Vessal Type	Average Speed (Knot)	Operation Mode	Maximum Length of Sailing Route (nautical miles)	Time-in-mode (hr)	SO ₂ Emission Rate_AB (g/s-trip) [6]	NOx Emission Rate_AB (g/s-trip) [6]	RSP Emission Rate_AB (g/s-trip) [6]	FSP Emission Rate_AB (g/s-trip) [6]
MO01	FCCV	12	Fairway Cruise	0.851	0.069	3.188E-02	2.366E-02	4.158E-03	3.826E-03
MO02	Conventional Cargo Vessel	12	Fairway Cruise	0.851	0.069	1.371E-02	1.017E-02	1.788E-03	1.645E-03
MO03	Dry Bulk Carrier	12	Fairway Cruise	0.851	0.069	2.193E-02	1.627E-02	2.860E-03	2.631E-03
MO04	Semi-container Vessel	12	Fairway Cruise	0.851	0.069	1.371E-02	1.017E-02	1.788E-03	1.645E-03
MO05	Gas Carrier/Tanker	12	Fairway Cruise	0.851	0.069	2.019E-02	1.498E-02	2.633E-03	2.422E-03
MO06	Chemical Carrier/Tanker	12	Fairway Cruise	0.851	0.069	2.019E-02	1.498E-02	2.633E-03	2.422E-03
MO07	Oil Tanker	12	Fairway Cruise	0.851	0.069	2.019E-02	1.498E-02	2.633E-03	2.422E-03
MO08	Cruise/Ferry	12	Fairway Cruise	0.851	0.069	5.441E-02	4.037E-02	7.096E-03	6.529E-03

- Notes:
- [1]

The auxiliary boiler energy defaults refer to Table 3-23 of MVEIS.
- [2]

According to Page 71 of IMO Fourth Greenhouse Gas Study, it is assumed the Auxiliary Boiler Specific Fuel Consumption Specific Fuel Consumption = Baseline Specific Fuel Consumption of AB. The baseline specific fuel consumption of AB refer to Table 19 of IMO Fourth Greenhouse Gas Study 2020
- [3]

The SO₂ emission factor refer to Table 3-29 of the MEVIS
- [4]

The NO_x emission factors for NO_x refer to Table 49 of IMO Fourth Greenhouse Gas Study 2020 Annexes
- [5]

The RSP emission factors were calculated by Equation 17 of IMO Fourth Greenhouse Gas Study 2020: 0.23 + SFC_i * 7 * 0.02247 * (Fuel Sulphur Fraction - 0.0024), where Fuel Sulphur Fraction is 0.005, and i denotes the specific engine/boiler system (i.e., Engine/Boiler Type and Fuel Type) for each vessel type. According to the Forth IMO Greenhouse Gas Study, the RSP to FSP conversion factor used is 0.92
- [6]

The calculations of emission rates refer to the following equation: Emission Rate (g/s) = Auxiliary Boiler Energy Defaults (kW) * Time-in-mode per hour * Emission Factor (g/kWh) / 3600 , where Time-in-mode per hour refers to the duration ratio of a vessel operating in a specific mode within a one-hour period (i.e., Time-in-mode (hr) / 1 hour)

Total Emission Rate

Vessel ID	Vessal Type	Total SO ₂ Emission Rate (g/s-trip) [1]	Total NOx Emission Rate (g/s-trip) [1]	Total RSP Emission Rate (g/s-trip) [1]	Total FSP Emission Rate (g/s-trip) [1]
MO01	FCCV	1.195E+00	9.140E+00	2.001E-01	1.841E-01
MO02	Conventional Cargo Vessel	1.015E-01	5.171E-01	1.391E-02	1.279E-02
MO03	Dry Bulk Carrier	3.026E-01	2.043E+00	4.251E-02	3.911E-02
MO04	Semi-container Vessel	1.425E-01	7.659E-01	1.961E-02	1.804E-02
MO05	Gas Carrier/Tanker	1.503E-01	7.603E-01	2.038E-02	1.875E-02
MO06	Chemical Carrier/Tanker	1.550E-01	8.150E-01	2.115E-02	1.946E-02
MO07	Oil Tanker	2.337E-01	1.377E+00	3.233E-02	2.975E-02
MO08	Cruise/Ferry	4.704E-01	2.020E+00	5.714E-02	5.257E-02

- Notes:
- [1]

Total Emission Rate is determined by this equation : ME Emission Rate + AE Emission Rate + AB Emission Rate

Appendix 4.10 Calculation of Marine Emission (in Ma Wan Fairway and nearby Channel)

Calculation of Marine Emission (Ma Wan Fairway, Gate 2, OGV)

Proportion of Arrivals for Each Vessel Type

Vessel ID	Vessal Type	Number of Arrivals in 2025 [28]	Proportion of Arrivals by vessel type
MO01	FCCV	10733	58.8%
MO02	Conventional Cargo Vessel	1923	10.5%
MO03	Dry Bulk Carrier	3496	19.2%
MO04	Semi-container Vessel	225	1.2%
MO05	Gas Carrier/Tanker	400	2.2%
MO06	Chemical Carrier/Tanker	537	2.9%
MO07	Oil Tanker	746	4.1%
MO08	Cruise/Ferry	187	1.0%

Notes:

[28] The number of arrivals in 2025 refers to statistics published by Marine Department (https://www.mardep.gov.hk/filemanager/en/share/fact/pdf/portstat_1_y_a2.pdf).

Hourly Traffic Volume

Hourly Traffic Volume of Each Vessel Type in Year 2043 ^{[1][2]}								
Hour per Day	MO01	MO02	MO03	MO04	MO05	MO06	MO07	MO08
0	0.353	0.063	0.115	0.007	0.013	0.018	0.025	0.006
1	0.353	0.063	0.115	0.007	0.013	0.018	0.025	0.006
2	0.294	0.053	0.096	0.006	0.011	0.015	0.020	0.005
3	0.333	0.060	0.109	0.007	0.012	0.017	0.023	0.006
4	0.255	0.046	0.083	0.005	0.009	0.013	0.018	0.004
5	0.353	0.063	0.115	0.007	0.013	0.018	0.025	0.006
6	0.314	0.056	0.102	0.007	0.012	0.016	0.022	0.005
7	0.353	0.063	0.115	0.007	0.013	0.018	0.025	0.006
8	0.353	0.063	0.115	0.007	0.013	0.018	0.025	0.006
9	0.373	0.067	0.121	0.008	0.014	0.019	0.026	0.006
10	0.392	0.070	0.128	0.008	0.015	0.020	0.027	0.007
11	0.392	0.070	0.128	0.008	0.015	0.020	0.027	0.007
12	0.392	0.070	0.128	0.008	0.015	0.020	0.027	0.007
13	0.392	0.070	0.128	0.008	0.015	0.020	0.027	0.007
14	0.471	0.084	0.153	0.010	0.018	0.024	0.033	0.008
15	0.274	0.049	0.089	0.006	0.010	0.014	0.019	0.005
16	0.373	0.067	0.121	0.008	0.014	0.019	0.026	0.006
17	0.392	0.070	0.128	0.008	0.015	0.020	0.027	0.007
18	0.333	0.060	0.109	0.007	0.012	0.017	0.023	0.006
19	0.314	0.056	0.102	0.007	0.012	0.016	0.022	0.005
20	0.294	0.053	0.096	0.006	0.011	0.015	0.020	0.005
21	0.314	0.056	0.102	0.007	0.012	0.016	0.022	0.005
22	0.255	0.046	0.083	0.005	0.009	0.013	0.018	0.004
23	0.314	0.056	0.102	0.007	0.012	0.016	0.022	0.005

Notes:

[1] The hourly traffic volume is provided by marine traffic consultant and agreed by Marine Department. The highest traffic flow within 15 years after commencement is adopted as a conservative assumption. Moreover, it is noted that not all vessels passing the gate navigate within the 500 m assessment boundary. As such, the marine traffic flow has been divided into three routes , with reference to the approved EIA for the Tsing Yi–Lantau Link, in which three principal navigation routes are defined within the fairway.

[2] No breakdown of OGV types are available in the traffic data. Therefore, the hourly traffic volume of each vessel type is calculated by the following equation: Hourly traffic volume of OGV * Proportion of Arrivals by vessel type

Appendix 4.10 Calculation of Marine Emission (in Ma Wan Fairway and nearby Channel)

Calculation of Marine Emission (Ma Wan Fairway, Gate 2, RTV)

Vessel-Specific Parameters - Main Engine (ME)

Vessel ID	Vessel Type [1][2]	Main Engine (ME) Type [3]	Fuel [4]	GRT Sub-group [5]	Main Engine Power (kW) [6]	SO ₂ Emission Factors_ME (g/kWh) [7]	NOx Emission Factors_ME (g/kWh) [7]	RSP Emission Factors_ME (g/kWh) [7]	FSP Emission Factor_ME (g/kWh) [7]
MR01	Fully Cellular Container Vessel	Diesel Engine	Marine Light Diesel (Sulphur Content <= 0.05%)	GRT >= 1000	704	0.21	10.0	0.17	0.16
MR02	Conventional Cargo Vessel	Diesel Engine	Marine Light Diesel (Sulphur Content <= 0.05%)	GRT >= 1000	654	0.21	10.0	0.17	0.16
MR03	Dry Bulk Carrier	Diesel Engine	Marine Light Diesel (Sulphur Content <= 0.05%)	GRT >= 1000	744	0.21	10.0	0.17	0.16
MR04	Semi-container Vessel	Diesel Engine	Marine Light Diesel (Sulphur Content <= 0.05%)	GRT >= 1000	626	0.21	10.0	0.17	0.16
MR05	Gas Carrier/Tanker	Diesel Engine	Marine Light Diesel (Sulphur Content <= 0.05%)	GRT >= 1000	1565	0.21	13.2	0.17	0.16
MR06	Chemical Carrier/Tanker	Diesel Engine	Marine Light Diesel (Sulphur Content <= 0.05%)	GRT >= 1000	1565	0.21	13.2	0.17	0.16
MR07	Oil Tanker	Diesel Engine	Marine Light Diesel (Sulphur Content <= 0.05%)	GRT >= 1000	1565	0.21	13.2	0.17	0.16
MR08	Lighter/Barge/Cargo Junk	Diesel Engine	Marine Light Diesel (Sulphur Content <= 0.05%)	GRT >= 1000	727	0.21	10.0	0.17	0.16

Calculation of ME Emission Rate

Vessel ID	Vessel Type	Average Speed (Knot) [8]	Operation Mode^	Maximum Length of Sailing Route (nautical miles) [8]	Time-in-mode (hr) [8]	Load Factor [9]	SO2 Emission Rate_ME (g/s-trip) [10]	NOx Emission Rate_ME (g/s-trip) [10]	RSP Emission Rate_ME (g/s-trip) [10]	FSP Emission Rate_ME (g/s-trip) [10]
MR01	Fully Cellular Container Vessel	6	Maneuvering	0.851	0.1314	0.3	1.605E-03	7.708E-02	1.282E-03	1.244E-03
MR02	Conventional Cargo Vessel	6	Maneuvering	0.851	0.1314	0.3	1.491E-03	7.160E-02	1.191E-03	1.155E-03
MR03	Dry Bulk Carrier	6	Maneuvering	0.851	0.1314	0.3	1.696E-03	8.145E-02	1.355E-03	1.314E-03
MR04	Semi-container Vessel	6	Maneuvering	0.851	0.1314	0.3	1.427E-03	6.854E-02	1.140E-03	1.106E-03
MR05	Gas Carrier/Tanker	6	Maneuvering	0.851	0.1314	0.3	3.568E-03	2.262E-01	2.850E-03	2.765E-03
MR06	Chemical Carrier/Tanker	6	Maneuvering	0.851	0.1314	0.3	3.568E-03	2.262E-01	2.850E-03	2.765E-03
MR07	Oil Tanker	6	Maneuvering	0.851	0.1314	0.3	3.568E-03	2.262E-01	2.850E-03	2.765E-03
MR08	Lighter/Barge/Cargo Junk	6	Maneuvering	0.851	0.1314	0.3	1.657E-03	7.959E-02	1.324E-03	1.284E-03

Notes:

- * Unless specified otherwise, references were made to Study on Marine Vessels Emission Inventory (MVEIS)
- ^ Operation mode refers to Table 3-24 of MVEIS.
- [1] No breakdown of RTV types are available in the traffic data. Therefore, vessel types catalogized by the Marine Department is adopted to breakdown the marine traffic data. (https://www.mardep.gov.hk/filemanager/en/share/fact/pdf/portstat_2_y_a2.pdf)
- [2] According to data from marine consultants, tugs and cross boundary ferry are classified as an independent vessel type and are consequently excluded from calculation of marine emission of RTV.
- [3] The Main Engine type refers to S4.2.6 of MVEIS
- [4] According to the Air Pollution Control (Marine Light Diesel) Regulation, the sulphur content of locally supplied marine light diesel is capped at 0.05%; Locally supplied marine light diesel oil are assumed to be used for refueling RTVs in Hong Kong.
- [5] The GRT sub-group refers to Table 4-5; the highest GRT for each vessel type is adopted as a conservative approach.
- [6] The average ME Power refers Table 4-5 of MVEIS
- [7] — The SO2 emission factor is calcaulted based on the formula stated in Paragraph 4.2.31 of MVEIS: BSFC x 2 x 0.97753 x Fuel Sulphur Fraction, where BSFC for main engine installed in RTV is 213 and Fuel Sulphur Fraction is 0.0005.
— The emission factors for NOx refer to Table 4-16 of MVEIS.
— The RSP emission factors for Main Engine were calcaulted based on the formula stated in Paragraph 4.2.31 of MVEIS: 0.23* BSFC x 7 x 0.02247 x (Fuel Sulphur Fraction - 0.0024), where BSFC for main engine installed in RTV is 213 and Fuel Sulphur Fraction is 0.0005.
— According to Paragraph 4.2.32 of MVEIS, the RSP to FSP conversion factor is 0.97.
- [8] The average speed and sailing route are provided by marine traffic consultant. The time-in-mode is calculated as: Time-in-mode (hr) = Maximun Length of Sailing Route within Assessment Boundary (nautical miles) / Average speed (knot)
- [9] The ME Load Factor refers to Table 4-7 of MVEIS
- [10] The calculations of emission rates refer to the following equation: Emission Rate (g/s) = Engine Power (kW) * Time-in-mode per hour * Engine Load Factor * Emission Factor (g/kWh) / 3600 , where Time-in-mode per hour refers to the duration ratio of a vessel operating in a specific mode within a one-hour period (i.e., Time-in-mode (hr) / 1 hour)

Appendix 4.10 Calculation of Marine Emission (in Ma Wan Fairway and nearby Channel)

Vessel-Specific Parameters - Auxiliary Engine (AE)

Vessel ID	Vessel Type	GRT Sub-group	Auxiliary Engine Power (kW) [1]	SO2 Emission Factors_AE (g/kWh) [2]	NOx Emission Factors_AE (g/kWh) [2]	RSP Emission Factors_AE (g/kWh) [2]	FSP Emission Factor_AE (g/kWh) [2]
MR01	Fully Cellular Container Vessel	GRT >= 1000	115	0.21	10	0.17	0.16
MR02	Conventional Cargo Vessel	GRT >= 1000	115	0.21	10	0.17	0.16
MR03	Dry Bulk Carrier	GRT >= 1000	115	0.21	10	0.17	0.16
MR04	Semi-container Vessel	GRT >= 1000	115	0.21	10	0.17	0.16
MR05	Gas Carrier/Tanker	GRT >= 1000	375	0.21	10	0.17	0.16
MR06	Chemical Carrier/Tanker	GRT >= 1000	375	0.21	10	0.17	0.16
MR07	Oil Tanker	GRT >= 1000	375	0.21	10	0.17	0.16
MR08	Lighter/Barge/Cargo Junk	GRT >= 1000	116	0.21	10	0.17	0.16

Calculation of AE Emission Rate

Vessel ID	Vessel Type	Average Speed (Knot)	Operation Mode	Maximum Length of Sailing Route (nautical miles)	Time-in-mode (hr)	Load Factor [3]	SO2 Emission Rate_AE (g/s-trip) [4]	NOx Emission Rate_AE (g/s-trip) [4]	RSP Emission Rate_AE (g/s-trip) [4]	FSP Emission Rate_AE (g/s-trip) [4]
MR01	Fully Cellular Container Vessel	6	Maneuvering	0.851	0.1314	0.43	3.757E-04	1.805E-02	3.002E-04	2.912E-04
MR02	Conventional Cargo Vessel	6	Maneuvering	0.851	0.1314	0.43	3.757E-04	1.805E-02	3.002E-04	2.912E-04
MR03	Dry Bulk Carrier	6	Maneuvering	0.851	0.1314	0.43	3.757E-04	1.805E-02	3.002E-04	2.912E-04
MR04	Semi-container Vessel	6	Maneuvering	0.851	0.1314	0.43	3.757E-04	1.805E-02	3.002E-04	2.912E-04
MR05	Gas Carrier/Tanker	6	Maneuvering	0.851	0.1314	0.43	1.225E-03	5.885E-02	9.789E-04	9.495E-04
MR06	Chemical Carrier/Tanker	6	Maneuvering	0.851	0.1314	0.43	1.225E-03	5.885E-02	9.789E-04	9.495E-04
MR07	Oil Tanker	6	Maneuvering	0.851	0.1314	0.43	1.225E-03	5.885E-02	9.789E-04	9.495E-04
MR08	Lighter/Barge/Cargo Junk	6	Maneuvering	0.851	0.1314	0.43	3.790E-04	1.820E-02	3.028E-04	2.937E-04

- Notes
- [1]

[2]

[3]

[4]
- The AE Power refers to Table 4-6 of MVEIS

— The SO2 emission factor is calcaulted based on the formula stated in Paragraph 4.2.31 of MVEIS: BSFC x 2 x 0.97753 x Fuel Sulphur Fraction, where BSFC for main engine installed in RTV is 213 and Fuel Sulphur Fraction is 0.0005.

— The emission factors for NOx refer to Table 4-16 of MVEIS.

— The RSP emission factors for Main Engine were calcaulted based on the formula stated in Paragraph 4.2.31 of MVEIS: 0.23+ BSFC x 7 x 0.02247 x (Fuel Sulphur Fraction - 0.0024), where BSFC for main engine installed in RTV is 213 and Fuel Sulphur Fraction is 0.0005.

— According to Paragraph 4.2.32 of MVEIS, the RSP to FSP conversion factor is 0.97.

The AE Load Factors refer to Table 4-10 of MVEIS

The calculations of emission rates refer to the following equation: Emission Rate (g/s) = Engine Power (kW) * Time-in-mode per hour * Engine Load Factor * Emission Factor (g/kWh) / 3600 , where Time-in-mode per hour refers to the duration ratio of a vessel operating in a specific mode within a one-hour period (i.e., Time-in-mode (hr) / 1 hour)

Total Emission Rate

Vessel ID	Total SO2 Emission Rate (g/s-trip) [1]	Total NOx Emission Rate (g/s-trip) [1]	Total RSP Emission Rate (g/s-trip) [1]	Total FSP Emission Rate (g/s-trip) [1]
MR01	1.981E-03	9.512E-02	1.582E-03	1.535E-03
MR02	1.867E-03	8.965E-02	1.491E-03	1.447E-03
MR03	2.072E-03	9.950E-02	1.655E-03	1.605E-03
MR04	1.803E-03	8.658E-02	1.440E-03	1.397E-03
MR05	4.793E-03	2.850E-01	3.829E-03	3.714E-03
MR06	4.793E-03	2.850E-01	3.829E-03	3.714E-03
MR07	4.793E-03	2.850E-01	3.829E-03	3.714E-03
MR08	2.036E-03	9.780E-02	1.627E-03	1.578E-03

- Notes
- [1]
- Total Emission Rate is determined by this equation : ME Emission Rate + AE Emission Rate

Appendix 4.10 Calculation of Marine Emission (in Ma Wan Fairway and nearby Channel)

Proportion of Arrivals for Each Vessel Type

Vessel ID	Vessel Type	Number of Arrivals in 2025 [1]	Proportion of Arrivals by vessel type
MR01	Fully Cellular Container Vessel	21550	52.0%
MR02	Conventional Cargo Vessel	2209	5.3%
MR03	Dry Bulk Carrier	7695	18.6%
MR04	Semi-container Vessel	9100	22.0%
MR05	Gas Carrier/Tanker	149	0.4%
MR06	Chemical Carrier/Tanker	217	0.5%
MR07	Oil Tanker	265	0.6%
MR08	Lighter/Barge/Cargo Junk	224	0.5%

Notes:
[15] The number of arrivals in 2025 refers to statistics published by Marine Department (https://www.mardep.gov.hk/filemanager/en/share/fact/pdf/portstat_1_y_a2.pdf).

Hourly Traffic Volume

Hourly Traffic Volume of Each Vessel Type in Year 2043 [1][2]								
Hour per Day	MR01	MR02	MR03	MR04	MR05	MR06	MR07	MR08
0	0.399	0.041	0.142	0.168	0.003	0.004	0.005	0.004
1	0.382	0.039	0.136	0.161	0.003	0.004	0.005	0.004
2	0.295	0.030	0.105	0.125	0.002	0.003	0.004	0.003
3	0.347	0.036	0.124	0.147	0.002	0.003	0.004	0.004
4	0.347	0.036	0.124	0.147	0.002	0.003	0.004	0.004
5	0.642	0.066	0.229	0.271	0.004	0.006	0.008	0.007
6	0.451	0.046	0.161	0.190	0.003	0.005	0.006	0.005
7	0.625	0.064	0.223	0.264	0.004	0.006	0.008	0.006
8	0.798	0.082	0.285	0.337	0.006	0.008	0.010	0.008
9	0.572	0.059	0.204	0.242	0.004	0.006	0.007	0.006
10	0.694	0.071	0.248	0.293	0.005	0.007	0.009	0.007
11	0.763	0.078	0.273	0.322	0.005	0.008	0.009	0.008
12	0.677	0.069	0.242	0.286	0.005	0.007	0.008	0.007
13	0.694	0.071	0.248	0.293	0.005	0.007	0.009	0.007
14	0.781	0.080	0.279	0.330	0.005	0.008	0.010	0.008
15	0.763	0.078	0.273	0.322	0.005	0.008	0.009	0.008
16	0.867	0.089	0.310	0.366	0.006	0.009	0.011	0.009
17	0.885	0.091	0.316	0.374	0.006	0.009	0.011	0.009
18	0.781	0.080	0.279	0.330	0.005	0.008	0.010	0.008
19	0.659	0.068	0.235	0.278	0.005	0.007	0.008	0.007
20	0.659	0.068	0.235	0.278	0.005	0.007	0.008	0.007
21	0.642	0.066	0.229	0.271	0.004	0.006	0.008	0.007
22	0.399	0.041	0.142	0.168	0.003	0.004	0.005	0.004
23	0.451	0.046	0.161	0.190	0.003	0.005	0.006	0.005

Notes:
[1] The hourly traffic volume is provided by marine traffic consultant and agreed by Marine Department. Moreover, it is noted that not all vessels passing the gate navigate within the 500 m assessment boundary. As such, the marine traffic flow has been divided into three routes , with reference to the approved EIA for the Tsing Yi–Lantau Link, in which three principal navigation routes are defined within the fairway.

[2] No breakdown of RTV types are available in the traffic data. Therefore, the hourly traffic volume of each vessel type is calculated by the following equation: Hourly traffic volume of RTV * Proportion of Arrivals by vessel type

Appendix 4.10 Calculation of Marine Emission (in Ma Wan Fairway and nearby Channel)

Calculation of Marine Emission (Ma Wan Fairway, Gate 2, Local Ferry)

Vessel-Specific Parameters - Main Engine (ME)

Vessel ID	Vessel Type	Main Engine (ME) Type	Fuel	Main Engine Power (kW) [3]	SO ₂ Emission Factors_ME (g/kWh) [4]	NOx Emission Factors_ME (g/kWh) [4]	RSP Emission Factors_ME (g/kWh) [5]	FSP Emission Factor_ME (g/kWh) [5][6]
ML01	Local Ferry (Park Island <=> Central)	Diesel Engine [1]	Marine Light Diesel (Sulphur Content <= 0.05%) [2]	2686	0.21	13.2	0.17	0.16

Calculation of ME Emission Rate

Vessel ID	Vessel Type	Average Speed (Knot) [7]	Operation Mode^	Maximum Length of Sailing Route (nautical miles) [7]	Time-in-mode (hr) [7]	Load Factor [8]	SO ₂ Emission Rate_ME (g/s-trip) [9]	NOx Emission Rate_ME (g/s-trip) [9]	RSP Emission Rate_ME (g/s-trip) [9]	FSP Emission Rate_ME (g/s-trip) [9]
ML01	Local Ferry (Park Island <=> Central)	18	Fairway Cruise	0.851	0.0463	0.8	1.150E-02	7.291E-01	9.188E-03	8.912E-03

Notes:

- *

Unless specified otherwise, references were made to Study on Marine Vessels Emission Inventory (MVEIS)
- ^

Operation mode refers to Table 3-24 of MVEIS.
- [1]

The main engine type is based on desktop review. (http://www.barcaferry.com/photo/photo_shipyards/marintekink/marintekink_cpv38_date.html)
- [2]

According to the Air Pollution Control (Marine Light Diesel) Regulation, local vessel in Hong Kong should be using marine light diesel with sulphur content of 0.05%.
- [3]

There are two fleets for Park Island Ferry. The ferry model having higher main engine power is adopted as a worst-case scenario. Also, the vessels are installed with two main engines, each rated at 1343 kW; and the total engine power (2686 kW) is presented and adopted. (http://www.barcaferry.com/photo/photo_shipyards/marintekink/marintekink_cpv38_date.html)
- [4]

— The SO2 emission factors were calcaulted based on the formula stated in Paragraph 4.2.31 of MVEIS: BSFC x 2 x 0.97753 x Fuel Sulphur Fraction, where BSFC for main engine installed in RTV is 213 and Fuel Sulphur Fraction is 0.0005.
— The NOx emission rate for Main Engine was adopted based on Table 4-17 of MVEIS.
- [5]

The RSP emission factors were adjusted based on the formula stated in Paragraph 4.2.31 of MVEIS: The formula of RSP Emission Factor is 0.23+ BSFC x 7 x 0.02247 x (Fuel Sulphur Fraction - 0.0024), where BSFC for Ferry is 213 and Fuel Sulphur Fraction is 0.0005.
- [6]

According to Paragraph 4.2.32 of MVEIS, the RSP to FSP conversion factor is 0.97.
- [7]

The average speed and sailing route are provided by marine traffic consultant. Based on the operation needs, the ferries could get a Speed Restriction Exemption Permits (SREPs) from the Marine Department. The vessel with the license is allowed to proceed at a speed exceeding the maximum permitted speed within Zone A or
- [8]

The Main Engine Load Factor of Park Island Ferry is based on Table 4-9 of MVEIS.
- [9]

The calculations of emission rates refer to the following equation: Emission Rate (g/s) = No. of Engine * Engine Power (kW) * Time-in-mode per hour * Engine Load Factor * Emission Factor (g/kWh), where Time-in-mode per hour refers to the duration ratio of a vessel operating in a specific mode within a one-hour period (i.e., Time-in-mode (hr) / 1 hour)

Appendix 4.10 Calculation of Marine Emission (in Ma Wan Fairway and nearby Channel)

Vessel-Specific Parameters - Auxiliary Engine (AE)

Vessel ID	Vessel Type	Auxiliary Engine Power (kW) [1]	SO ₂ Emission Factors_AE (g/kWh) [2]	NOx Emission Factors_AE (g/kWh) [2]	RSP Emission Factors_AE (g/kWh) [3]	FSP Emission Factor_AE (g/kWh) [3]
ML01	Local Ferry (Park Island <=> Central)	326	0.21	10	0.17	0.16

Calculation of AE Emission Rate

Vessel ID	Vessel Type	Average Speed (Knot)	Operation Mode	Maximum Length of Sailing Route (nautical miles)	Time-in-mode (hr)	Load Factor [4]	SO ₂ Emission Rate_AE (g/s-trip) [5]	NOx Emission Rate_AE (g/s-trip) [5]	RSP Emission Rate_AE (g/s-trip) [5]	FSP Emission Rate_AE (g/s-trip) [5]
ML01	Local Ferry (Park Island <=> Central)	18	Fairway Cruise	0.851	0.0463	0.45	3.926E-04	1.885E-02	3.136E-04	3.042E-04

- Notes
- [1]

According to Paragraph 4.2.12 of MVEIS, the auxiliary engine power of a Macau ferry ranges from 120-326 kW. As a worst-case scenario, 326 kW is adopted for AE power calculation.

[2]

— The SO2 emission factors were calcaulted based on the formula stated in Paragraph 4.2.31 of MVEIS: BSFC x 2 x 0.97753 x Fuel Sulphur Fraction, where BSFC for main engine installed in RTV is 213 and Fuel Sulphur Fraction is 0.0005.

— The NOx emission rate for Auxiliary Engine was adopted based on Table 4-17 of MVEIS

[3]

The formula of RSP Emission Factor is 0.23+ BSFC x 7 x 0.02247 x (Fuel Sulphur Fraction - 0.0024), where BSFC for Ferry is 213 and Fuel Sulphur Fraction is 0.0005. According to Paragraph 4.2.32 of MVEIS, the RSP to FSP conversion factor is 0.97.

[4]

The Auxiliary Engine Load Factors of Park Island Ferry is based on Table 4-10 of MVEIS.

[5]

The calculations of emission rates refer to the following equation: Emission Rate (g/s) = No. of Engine * Engine Power (kW) * Time-in-mode per hour * Engine Load Factor * Emission Factor (g/kWh), where Time-in-mode per hour refers to the duration ratio of a vessel operating in a specific mode within a one-hour period (i.e., Time-in-mode (hr) / 1 hour)
- Total Emission Rate
- | Vessel ID | Total SO ₂ Emission Rate (g/s-trip) [1] | Total NOx Emission Rate (g/s-trip) [1] | Total RSP Emission Rate (g/s-trip) [1] | Total FSP Emission Rate (g/s-trip) [1] |
|-----------|--|--|--|--|
| ML01 | 1.189E-02 | 7.479E-01 | 9.502E-03 | 9.216E-03 |
- Notes

[1]

Total Emission Rate is determined by this equation : ME Emission Rate + AE Emission Rate
- L:\Secure\Environment_Projects\60733229\1.01\Others\Air\Modelling\Appendix\Marine Emission\Marine Fairway\Method - Calculation\MarineEmission Calculation_Ma Wan Fairway.xlsx

Appendix 4.10 Calculation of Marine Emission (in Ma Wan Fairway and nearby Channel)

Hourly Traffic Volume

Hourly Traffic Volume [1]	
Hour per Day	ML01
0	0.000
1	0.000
2	0.000
3	0.000
4	0.000
5	0.000
6	0.714
7	4.143
8	4.857
9	4.857
10	3.429
11	2.000
12	2.000
13	2.000
14	2.000
15	2.000
16	2.000
17	2.714
18	3.429
19	3.429
20	3.429
21	2.714
22	2.000
23	2.000

Notes:
[1] The hourly traffic volume refer to Park Island ferry schedule (<http://www.pitcl.com.hk/attachment/ferry/pdf/168655763467Rqf.pdf>). The average hourly traffic flow is determined by the following equation: [5 * Hourly traffic volume (Mon - Fri) + 2 * Hourly traffic volume (Sat/Sun/Public Holiday)] / 7. Moreover, it is noted that not all vessels passing the gate navigate within the 500 m assessment boundary. As such, the marine traffic flow has been divided into three routes , with reference to the approved EIA for the Tsing Yi–Lantau Link, in which three principal navigation routes are defined within the fairway.

Appendix 4.10 Calculation of Marine Emission (in Ma Wan Fairway and nearby Channel)

Calculation of Marine Emission (Ma Wan Fairway, Gate 2, Cross Boundary Ferries)

Vessel-Specific Parameters - Main Engine (ME)

Vessel ID	Vessal Type	Route ^	Vessel Type (MVEIS)	Main Engine (ME) Type [1]	Fuel [2]	Average Main Engine Power (kW) [3]	Brake Specific Fuel Consumption (BSFC) [4]	SO ₂ Emission Factors_ME (g/kWh) [5]	NOx Emission Factors_ME (g/kWh) [5]	RSP Emission Factors_ME (g/kWh) [5]	FSP Emission Factor_ME (g/kWh) [5]
MC01	Cross Boundary Ferry	Hong Kong - Macau Ferry Terminal <=> Shekou	PRD Ferry	Diesel Engine	Marine Light Diesel (Sulphur Content <= 0.05%)	2184.6	213	0.21	13.2	0.17	0.16
	Cross Boundary Ferry	China Ferry Terminal <=> Nansha	PRD Ferry	Diesel Engine	Marine Light Diesel (Sulphur Content <= 0.05%)	3150.0	213	0.21	13.2	0.17	0.16
	Cross Boundary Ferry	China Ferry Terminal <=> Zhongshan	PRD Ferry	Diesel Engine	Marine Light Diesel (Sulphur Content <= 0.05%)	3840.0	213	0.21	13.2	0.17	0.16
	Cross Boundary Ferry	China Ferry Terminal <=> Zhuhai	PRD Ferry	Diesel Engine	Marine Light Diesel (Sulphur Content <= 0.05%)	4822.9	213	0.21	13.2	0.17	0.16
	Cross Boundary Ferry	Hong Kong - Macau Ferry Terminal <=> Zhuhai	PRD Ferry	Diesel Engine	Marine Light Diesel (Sulphur Content <= 0.05%)	4822.9	213	0.21	13.2	0.17	0.16

Calculation of ME Emission Rate

Vessel ID	Vessal Type	Route	Average Speed (Knot) [6]	Operation Mode [7]	Maximum Length of Sailing Route (nautical miles) [6]	Time-in-mode (hr) [6]	Load Factor [8]	SO2 Emission Rate_ME (g/s-trip) [9]	NOx Emission Rate_ME (g/s-trip) [9]	RSP Emission Rate_ME (g/s-trip) [9]	FSP Emission Rate_ME (g/s-trip) [9]
MC01	Cross Boundary Ferry	Hong Kong - Macau Ferry Terminal <=> Shekou	30	Fairway Cruise	0.851	0.028	0.8	2.861E-03	1.814E-01	2.286E-03	2.217E-03
	Cross Boundary Ferry	China Ferry Terminal <=> Nansha	30	Fairway Cruise	0.851	0.028	0.8	4.125E-03	2.615E-01	3.296E-03	3.197E-03
	Cross Boundary Ferry	China Ferry Terminal <=> Zhongshan	30	Fairway Cruise	0.851	0.028	0.8	5.029E-03	3.188E-01	4.017E-03	3.897E-03
	Cross Boundary Ferry	China Ferry Terminal <=> Zhuhai	30	Fairway Cruise	0.851	0.028	0.8	6.316E-03	4.004E-01	5.046E-03	4.894E-03
	Cross Boundary Ferry	Hong Kong - Macau Ferry Terminal <=> Zhuhai	30	Fairway Cruise	0.851	0.028	0.8	6.316E-03	4.004E-01	5.046E-03	4.894E-03

Notes:

- *

Unless specified otherwise, references are made to Study on Marine Vessels Emission Inventory (MVEIS)
- ^

The routes are advised by Marine Traffic Consultant
- [1]

The engine types are based on destop reseach, and the detailed sources are presented in the next section "List of PRD Ferries and References"
- [2]

According to the Air Pollution Control (Marine Light Diesel) Regulation, local vessel in Hong Kong should be using marine light diesel with sulphur content of 0.05%.
- [3]

The engine power for each ferry in the fleet is based on destop reseach; and the detailed sources are presented in the next section "List of PRD Ferries and References". The average engine power is derived from the following equation: Total engine power installed in the ferry fleet/number of ferries in the fleet
- [4]

Brake Specific Fuel Consumption (BSFC) for PRD ferry refers to Table 4-17 of MVEIS
- [5]

— The SO2 emission factors were calcaulted based on the formula stated in Paragraph 4.2.31 of MVEIS: BSFC x 2 x 0.97753 x Fuel Sulphur Fraction, where Fuel Sulphur Fraction is 0.0005.

— The emission factors for NOx of PRD ferry refer to Table 4-17 of MVEIS

— The RSP emission factors were adjusted based on the formula stated in Paragraph 4.2.31 of MVEIS: The formula of RSP Emission Factor is 0.23+ BSFC x 7 x 0.02247 x (Fuel Sulphur Fraction - 0.0024), where Fuel Sulphur Fraction is 0.0005. According to Paragraph 4.2.32 of MVEIS, the RSP to FSP conversion factor is 0.97.
- [6]

The average speed and sailing routes are provided by Marine Traffic Consultant; Based on the operation needs, CBF could get a Speed Restriction Exemption Permits (SREPs) from the Marine Department. The vessel with the license is allowed to proceed at a speed exceeding the maximum permitted speed within Zone A or B of Hong Kong Water. Moreover, the time-in-mode is calculated as: Time-in-mode (hr) = Maximun Length of Sailing Route within Assessment Boundary (nautical miles) / Average speed (knot)
- [7]

Operation mode refers to Table 3-24 of MVEIS.
- [8]

The ME Load Factors of PRD Ferry refer to Table 4-9
- [9]

The calculations of emission rates refer to the following equation: Emission Rate (g/s) = Engine Power (kW) * Time-in-mode per hour * Engine Load Factor * Emission Factor (g/kWh) / 3600 , where Time-in-mode per hour refers to the duration ratio of a vessel operating in a specific mode within a one-hour period (i.e., Time-in-mode (hr) / 1 hour)

Appendix 4.10 Calculation of Marine Emission (in Ma Wan Fairway and nearby Channel)

Vessel-Specific Parameters - Auxiliary Engine (AE)

Vessel ID	Vessal Type	Route	Vessel Type (MVEIS)	Auxiliary Engine Power (kW) [1]	SO ₂ Emission Factors_AE (g/kWh) [2]	NOx Emission Factors_AE (g/kWh) [2]	RSP Emission Factors_AE (g/kWh) [2]	FSP Emission Factor_AE (g/kWh) [2]
MC01	Cross Boundary Ferry	Hong Kong - Macau Ferry Terminal <=> Shekou	PRD Ferry	188	0.21	10	0.17	0.16
	Cross Boundary Ferry	China Ferry Terminal <=> Nansha	PRD Ferry	188	0.21	10	0.17	0.16
	Cross Boundary Ferry	China Ferry Terminal <=> Zhongshan	PRD Ferry	188	0.21	10	0.17	0.16
	Cross Boundary Ferry	China Ferry Terminal <=> Zhuhai	PRD Ferry	188	0.21	10	0.17	0.16
	Cross Boundary Ferry	Hong Kong - Macau Ferry Terminal <=> Zhuhai	PRD Ferry	188	0.21	10	0.17	0.16

Calculation of AE Emission Rate

Vessel ID	Vessal Type	Route	Average Speed (Knot)	Operation Mode	Maximum Length of Sailing Route (nautical miles)	Time-in-mode (hr)	Load Factor [3]	SO ₂ Emission Rate_ME (g/s-trip) [4]	NOx Emission Rate_ME (g/s-trip) [4]	RSP Emission Rate_ME (g/s-trip) [4]	FSP Emission Rate_ME (g/s-trip) [4]
MC01	Cross Boundary Ferry	Hong Kong - Macau Ferry Terminal <=> Shekou	30	Fairway Cruise	0.851	0.028	0.45	1.411E-04	6.651E-03	1.098E-04	1.065E-04
	Cross Boundary Ferry	China Ferry Terminal <=> Nansha	30	Fairway Cruise	0.851	0.028	0.45	1.411E-04	6.651E-03	1.098E-04	1.065E-04
	Cross Boundary Ferry	China Ferry Terminal <=> Zhongshan	30	Fairway Cruise	0.851	0.028	0.45	1.411E-04	6.651E-03	1.098E-04	1.065E-04
	Cross Boundary Ferry	China Ferry Terminal <=> Zhuhai	30	Fairway Cruise	0.851	0.028	0.45	1.411E-04	6.651E-03	1.098E-04	1.065E-04
	Cross Boundary Ferry	Hong Kong - Macau Ferry Terminal <=> Zhuhai	30	Fairway Cruise	0.851	0.028	0.45	1.411E-04	6.651E-03	1.098E-04	1.065E-04

Notes:

[1]

[2]

[3]

[4]

The AE Power of PRD Ferry refer to Section 4.2.13 of MVEIS

— The SO2 emission factors were calcaulted based on the formula stated in Paragraph 4.2.31 of MVEIS: BSFC x 2 x 0.97753 x Fuel Sulphur Fraction, where BSFC for AE (DE) is 217 Fuel Sulphur Fraction is 0.0005.

— The NOx Emission Factors refer to Table 4-17 of MVEIS

— The RSP emission factors were adjusted based on the formula stated in Paragraph 4.2.31 of MVEIS: The formula of RSP Emission Factor is 0.23+ BSFC x 7 x 0.02247 x (Fuel Sulphur Fraction - 0.0024), where BSFC for AE (DE) is 217 Fuel Sulphur Fraction is 0.0005.

— According to Paragraph 4.2.32 of MVEIS, the RSP to FSP conversion factor is 0.97.

The AE Load Factors of PRD Ferry refer to Table 4-10 of MVEIS

The calculations of emission rates refer to the following equation: Emission Rate (g/s) = Engine Power (kW) * Time-in-mode per hour * Engine Load Factor * Emission Factor (g/kWh) / 3600 , where Time-in-mode per hour refers to the duration ratio of a vessel operating in a specific mode within a one-hour period (i.e., Time-in-mode (hr) / 1 hour)

Appendix 4.10 Calculation of Marine Emission (in Ma Wan Fairway and nearby Channel)

Total Emission Rate

Vessel ID	Vessal Type	Route	Total SO ₂ Emission Rate (g/s-trip) [1]	Total NOx Emission Rate (g/s-trip) [1]	Total RSP Emission Rate (g/s-trip) [1]	Total FSP Emission Rate (g/s-trip) [1]	Number of Trips / Week [2]	Composite total SO ₂ Emission Rate (g/s-trip) [3]	Composite total NOx Emission Rate (g/s-trip) [3]	Composite total RSP Emission Rate (g/s-trip) [3]	Composite total FSP Emission Rate (g/s-trip) [3]
MC01	Cross Boundary Ferry	Hong Kong - Macau Ferry Terminal <=> Shekou	3.002E-03	1.880E-01	2.395E-03	2.324E-03	70	5.420E-03	3.413E-01	4.327E-03	4.197E-03
	Cross Boundary Ferry	China Ferry Terminal <=> Nansha	4.266E-03	2.682E-01	3.405E-03	3.303E-03	32				
	Cross Boundary Ferry	China Ferry Terminal <=> Zhongshan	5.170E-03	3.254E-01	4.127E-03	4.003E-03	84				
	Cross Boundary Ferry	China Ferry Terminal <=> Zhuhai	6.457E-03	4.070E-01	5.156E-03	5.001E-03	104				
	Cross Boundary Ferry	Hong Kong - Macau Ferry Terminal <=> Zhuhai	6.457E-03	4.070E-01	5.156E-03	5.001E-03	115				

Notes:
[1] Total Emission Rate is determined by this equation : ME Emission Rate + AE Emission Rate
[2] Number of trips per week were derived based on operators' published schedules
[3] Composite Total Emission Rate is calculated as follows, SUM(Total Emission Rate of route i * Number of trips of route i per week) / Total trips per week

Hourly Traffic Volume

	Hourly Traffic Volume [1]
Hour per Day	MC01
0	0.000
1	0.000
2	0.000
3	0.000
4	0.000
5	0.000
6	0.000
7	0.267
8	0.967
9	0.733
10	0.600
11	0.900
12	0.433
13	0.033
14	0.733
15	0.600
16	1.433
17	0.533
18	1.000
19	0.567
20	0.200
21	0.000
22	0.000
23	0.000

Notes:
[1] The hourly traffic volume is provided by marine traffic consultant. Moreover, it is noted that not all vessels passing the gate navigate within the 500 m assessment boundary. As such, the marine traffic flow has been divided into three routes , with reference to the approved EIA for the Tsing Yi–Lantau Link, in which three principal navigation routes are defined within the fairway.

Appendix 4.10 Calculation of Marine Emission (in Ma Wan Fairway and nearby Channel)

List of PRD Ferries and References						
Route	Operator	Vessel Name	Main engine	Main Engine Power	Reference (Vessel in the fleet and Operator)	Reference (Main Engine Parameters)
Hong Kong - Macau Ferry Terminal <=> Shekou	迅隆船務 / 深圳船務	迅隆壹號	2 x MTU 12V 183 TE 92 diesel engines	2 x 735kW	http://www.barcaferry.com/timetable/china/route_hksk.htm	http://www.barcaferry.com/photo/photo_shipyards/rosendal/admiral_36m.html
		迅隆貳號	2 x MTU 12V 2000 M70 diesel engines	2 x 788kW		http://www.barcaferry.com/photo/photo_shipyards/batservice/batservice_38m_date.html
		迅隆3	2 x MTU 16V 2000 M70 diesel engines	2 x 1,050kW		http://www.barcaferry.com/photo/photo_shipyards/wangtak/wangtak_33m_xunlong3_date.html
		迅隆4	2 x MTU 16V 2000 M70 diesel engines	2 x 1,050kW		http://www.barcaferry.com/photo/photo_shipyards/wangtak/wangtak_33m_xunlong3_date.html
		迅隆5	2 x MTU 16V 2000 M70 diesel engines	2 x 1,050kW		http://www.barcaferry.com/photo/photo_shipyards/incat_crowther/incat_crowther_34m_date.html
		迅隆6	2 x MTU 16V 2000 M70 diesel engines	2 x 1,050kW		http://www.barcaferry.com/photo/photo_shipyards/incat_crowther/incat_crowther_34m_date.html
		迅隆7	2 x MTU 16V2000 M72 diesel engines	2 x 1,050kW		http://www.barcaferry.com/photo/photo_shipyards/coco_yachts/cc300_date.html
		迅隆8	2 x MTU 16V2000 M72 diesel engines	2 x 1,440kW		http://www.barcaferry.com/photo/photo_shipyards/coco_yachts/cc300_date.html
		迅隆9	2 x MTU 16V2000M72 diesel engines	2 x 1,440kW		http://www.barcaferry.com/photo/photo_shipyards/coco_yachts/cc268_date.html
		鵬星1	2 x MTU 16V2000 M72 diesel engines	2 x 1,440kW		http://www.barcaferry.com/photo/photo_shipyards/coco_yachts/cc300_date.html
		鵬星2	2 x MTU 16V2000 M72 diesel engines	2 x 1,440kW		http://www.barcaferry.com/photo/photo_shipyards/coco_yachts/cc300_date.html
		鵬星11	2 x MTU 16V 2000 M72 diesel engines	2 x 1,080kW		http://www.barcaferry.com/photo/photo_shipyards/wangtak/wangtak_33m_pengxing11_date.html
		鵬星12	2 x MTU 16V 2000 M72 diesel engines	2 x 1,080kW		http://www.barcaferry.com/photo/photo_shipyards/wangtak/wangtak_33m_pengxing11_date.html
		鵬星15	2 x MTU 12V2000 M72 diesel engines	2 x 1,080kW		http://www.barcaferry.com/photo/photo_shipyards/coco_yachts/cc200_date.html
		鵬星16	2 x MTU 12V2000 M72 diesel engines	2 x 1,080kW		http://www.barcaferry.com/photo/photo_shipyards/coco_yachts/cc200_date.html
		鵬星18	2 x MTU 12V2000 M72 diesel engines	2 x 1,080kW		http://www.barcaferry.com/photo/photo_shipyards/coco_yachts/cc200_date.html
		鵬星19	2 x MTU 12V2000 M72 diesel engines	2 x 1,080kW		http://www.barcaferry.com/photo/photo_shipyards/coco_yachts/cc200_date.html
		鵬星20	2 x MTU 12V2000 M72 diesel engines	2 x 1,080kW		http://www.barcaferry.com/photo/photo_shipyards/coco_yachts/cc200_date.html
		鵬星21	2 x MTU 12V2000 M72 diesel engines	2 x 1,080kW		http://www.barcaferry.com/photo/photo_shipyards/coco_yachts/cc199_date.html
		鵬星22	2 x MTU 12V2000 M72 diesel engines	2 x 1,080kW		http://www.barcaferry.com/photo/photo_shipyards/coco_yachts/cc199_date.html
		鵬星23	2 x MTU 12V2000 M72 diesel engines	2 x 1,080kW		http://www.barcaferry.com/photo/photo_shipyards/coco_yachts/cc199_date.html
		恆星	2 x Cummins KTA 38-M2	2 x 895 kW		https://www.cheoylee.com/product/detail/24/
		瑞星	2 x Cummins KTA 38-M2	2 x 895 kW		https://www.cheoylee.com/product/detail/24/
China Ferry Terminal <=> Nansha	番禺蓮花山港客運有限公司	銀珠湖	2 x MTU 16V 2000 M72 diesel engines	2 x 1440 kW	http://www.barcaferry.com/timetable/china/route_cks_lianhua.htm	http://www.barcaferry.com/photo/photo_shipyards/brodrene_aa/40.8m_date.html
		銑珠湖	2 x MTU 16V 2000 M72 diesel engines	2 x 1440 kW		http://www.barcaferry.com/photo/photo_shipyards/brodrene_aa/40.8m_date.html
		鈺珠湖	2 x MTU 16V 2000 M72 diesel engines	2 x 1440 kW		http://www.barcaferry.com/photo/photo_shipyards/brodrene_aa/40.8m_date.html
		太建	2 x MTU 16V 396 T E74L	2 x 1,980 kW		https://www.austal.com/sites/default/files/data-sheet/H120-121%20datasheet%20low%20res_0.pdf
China Ferry Terminal <=> Zhongshan	中港客運聯營有限公司	中山6	4 x MTU 12V2000 M72 marine diesel engines	4 x 1,080kw	http://www.barcaferry.com/timetable/china/route_cks_klinzhongshan.htm	http://www.barcaferry.com/photo/photo_shipyards/brodrene_aa/44m_date.html
		中山20	4 x MTU 12V2000 M72 marine diesel engines	4 x 1,080kw		http://www.barcaferry.com/photo/photo_shipyards/brodrene_aa/44m_date.html
		中山26	2 x MTU 16V2000 M72 marine diesel engines	2 x 1,440kw		http://www.barcaferry.com/photo/photo_shipyards/brodrene_aa/42m_date.html
		海琴	2 x MTU 16V4000 M70 diesel engines	2 x 2240kW		http://www.barcaferry.com/photo/photo_shipyards/coco_yachts/cc288_date.html
China Ferry Terminal <=> Zhuhai	珠海高速客輪有限公司	海環	2 x MTU 16V4000 M70 diesel engines	2 x 2240kW	http://www.barcaferry.com/timetable/china/route_cks_klinjuzhou.htm	http://www.barcaferry.com/photo/photo_shipyards/coco_yachts/cc288_date.html
		新海山	2 x MTU 16V4000 M70 diesels engine	2 x 2240kW		http://www.barcaferry.com/photo/photo_shipyards/coco_yachts/cc300_xinhaishan_date.html
		新海威	2 x MTU 16V4000 M70 diesels engine	2 x 2240kW		https://www.made-in-china.com/showroom/8e8af849f86a9b43/product-detailCxMRHbyDnzki/China-42m-High-Speed-Passenger-Catamaran-for-Sale.html
		南沙68	4 x MTU 16V 396 TE 74L	4 x 1980kW		http://www.barcaferry.com/photo/photo_shipyards/newtech/newtech_42m_date.html
		海池	2 x MTU 16V 396TE 74L diesels engine	2 x 1,980kW		http://www.barcaferry.com/photo/photo_shipyards/austal/austal_40m_11m_nanhuaiclass_date.html
		海洋	2 x MTU 16V 396 TE 74L diesels engine	2 x 1,980kW		http://www.barcaferry.com/photo/photo_shipyards/austal/austal_40m_11m_nanhuaiclass_date.html
		海琴	2 x MTU 16V4000 M70 diesel engines	2 x 2240kW		http://www.barcaferry.com/photo/photo_shipyards/coco_yachts/cc288_date.html
Hong Kong - Macau Ferry Terminal <=> Zhuhai	珠海高速客輪有限公司	海環	2 x MTU 16V4000 M70 diesel engines	2 x 2240kW	http://www.barcaferry.com/timetable/china/route_cks_klinjuzhou.htm	http://www.barcaferry.com/photo/photo_shipyards/coco_yachts/cc288_date.html
		新海山	2 x MTU 16V4000 M70 diesels engine	2 x 2240kW		http://www.barcaferry.com/photo/photo_shipyards/coco_yachts/cc300_xinhaishan_date.html
		新海威	2 x MTU 16V4000 M70 diesels engine	2 x 2240kW		https://www.made-in-china.com/showroom/8e8af849f86a9b43/product-detailCxMRHbyDnzki/China-42m-High-Speed-Passenger-Catamaran-for-Sale.html
		南沙68	4 x MTU 16V 396 TE 74L	4 x 1980kW		http://www.barcaferry.com/photo/photo_shipyards/newtech/newtech_42m_date.html
		海池	2 x MTU 16V 396TE 74L diesels engine	2 x 1,980kW		http://www.barcaferry.com/photo/photo_shipyards/austal/austal_40m_11m_nanhuaiclass_date.html
		海洋	2 x MTU 16V 396 TE 74L diesels engine	2 x 1,980kW		http://www.barcaferry.com/photo/photo_shipyards/austal/austal_40m_11m_nanhuaiclass_date.html
		海琴	2 x MTU 16V4000 M70 diesel engines	2 x 2240kW		http://www.barcaferry.com/photo/photo_shipyards/coco_yachts/cc288_date.html

Notes:
[1] The engine type and engine power of "海珠湖" and "海珠灣" refer to the parameters of "銑珠湖" because the LOA of these vessels are similar and designed by the same company - Brødrene Aa

Appendix 4.10 Calculation of Marine Emission (in Ma Wan Fairway and nearby Channel)

Calculation of Marine Emission (Ma Wan Fairway, Gate 2, Tugs, Fast Launches and Small Crafts)

Vessel-Specific Parameters - Main Engine (ME)

Vessel ID	Vessel Type	Vessel Type (MVEIS) [1]	Main Engine (ME) Type [2]	Fuel [3]	Main Engine Power (kW) [4]	SO ₂ Emission Factors_ME (g/kWh) [5]	NOx Emission Factors_ME (g/kWh) [5]	RSP Emission Factors_ME (g/kWh) [5]	FSP Emission Factor_ME (g/kWh) [5]
MT01	Tug	Tug (GRT>=1000)	Diesel Engine	Marine Light Diesel (Sulphur Content <= 0.05%)	2371	0.21	13.2	0.17	0.16
MF01	Fast Launch	Others (GRT >= 1000)	Diesel Engine	Marine Light Diesel (Sulphur Content <= 0.05%)	707	0.21	10	0.17	0.16
MS01	Small Craft (Pleasure Vessel)	Others (GRT >= 1000)	Diesel Engine	Marine Light Diesel (Sulphur Content <= 0.05%)	707	0.21	10	0.17	0.16

Calculation of ME Emission Rate

Vessel ID	Vessel Type	Average Speed (Knot) [6]	Operation Mode	Maximum Length of Sailing Route (nautical miles) [6]	Time-in-mode (hr) [6]	Load Factor [7]	SO ₂ Emission Rate_ME (g/s-trip) [8]	NOx Emission Rate_ME (g/s-trip) [8]	RSP Emission Rate_ME (g/s-trip) [8]	FSP Emission Rate_ME (g/s-trip) [8]
MT01	Tug	2.5	Maneuvering	0.851	0.3378	0.3	1.390E-02	8.811E-01	1.110E-02	1.077E-02
MF01	Fast Launch	10.0	Slow Cruise	0.851	0.0848	0.3	1.040E-03	4.996E-02	8.310E-04	8.061E-04
MS01	Small Craft (Pleasure Vessel)	6.6	Maneuvering	0.851	0.1282	0.45	2.359E-03	1.133E-01	1.885E-03	1.828E-03

Notes:

- *

Unless specified otherwise, references are made to Study on Marine Vessels Emission Inventory (MVEIS)
- [1]

Classification of vessel type refer Table 4-1 of MVEIS, Small Craft and Fast Launch are classified as "Others (GRT >= 1000)" as a conservative estimation
- [2]

The main engine type refers to S4.2.6 of MVEIS
- [3]

According to the Air Pollution Control (Marine Light Diesel) Regulation, local vessel in Hong Kong should be using marine light diesel with sulphur content of 0.05%.
- [4]

The average ME Power refer to Table 4-5 of MVEIS
- [5]

— The SO2 emission factors were calcaulted based on the formula stated in Paragraph 4.2.31 of MVEIS: BSFC x 2 x 0.97753 x Fuel Sulphur Fraction, where BSFC for main engine installed in RTV is 213 and Fuel Sulphur Fraction is 0.0005.

— The NOx emission factors for refer to Table 4.16.

— The RSP emission factors were adjusted based on the formula stated in Paragraph 4.2.31 of MVEIS: The formula of RSP Emission Factor is 0.23+ BSFC x 7 x 0.02247 x (Fuel Sulphur Fraction - 0.0024), where BSFC is 213 and Fuel Sulphur Fraction is 0.0005.

— According to Paragraph 4.2.32 of MVEIS, the RSP to FSP conversion factor is 0.97.
- [6]

The average speed and sailing route provided by Marine Traffic Consultant. Moreover, the time-in-mode is calculated as: Time-in-mode (hr) = Maximun Length of Sailing Route within Assessment Boundary (nautical miles) / Average speed (knot)
- [7]

The load factors are determined from Table 4-7 of MVEIS.
- [8]

The calculations of emission rates refer to the following equation: Emission Rate (g/s) = Engine Power (kWh) * Time-in-mode per hour * Engine Load Factor * Emission Factor (g/kWh) / 3600 , where Time-in-mode per hour refers to the duration ratio of a vessel operating in a specific mode within a one-hour period (i.e., Time-in-mode (hr) / 1 hour)

Appendix 4.10 Calculation of Marine Emission (in Ma Wan Fairway and nearby Channel)

Vessel-Specific Parameters - Auxiliary Engine (AE)

Vessel ID	Vessel Type	Vessel Type (MVEIS)	Auxiliary Engine Power (kW) [1]	SO ₂ Emission Factors_AE (g/kWh) [2]	NOx Emission Factors_AE (g/kWh) [2]	RSP Emission Factors_AE (g/kWh) [2]	FSP Emission Factor_AE (g/kWh) [2]
MT01	Tug	Tug (GRT>=1000)	220	0.21	10.0	0.17	0.16
MF01	Fast Launch	Others (GRT >= 1000)	115	0.21	10.0	0.17	0.16
MS01	Small Craft (Pleasure Vessel)	Others (GRT >= 1000)	115	0.21	10.0	0.17	0.16

Calculation of AE Emission Rate

Vessel ID	Vessel Type	Average Speed (Knot)	Operation Mode	Maximum Length of Sailing Route (nautical miles)	Time-in-mode (hr)	Load Factor [3]	SO ₂ Emission Rate_AE (g/s-trip) [4]	NOx Emission Rate_AE (g/s-trip) [4]	RSP Emission Rate_AE (g/s-trip) [4]	FSP Emission Rate_AE (g/s-trip) [4]
MT01	Tug	3	Maneuvering	0.851	0.3378	0.43	1.848E-03	8.877E-02	1.477E-03	1.432E-03
MF01	Fast Launch	10	Slow Cruise	0.851	0.0848	0.43	2.425E-04	1.165E-02	1.937E-04	1.879E-04
MS01	Small Craft (Pleasure Vessel)	7	Maneuvering	0.851	0.1282	0.43	3.667E-04	1.761E-02	2.930E-04	2.842E-04

Notes

[1] The AE Power refer Table 4-6 of MVEIS

[2] — The SO2 emission factors were calcaulted based on the formula stated in Paragraph 4.2.31 of MVEIS: BSFC x 2 x 0.97753 x Fuel Sulphur Fraction, where BSFC for main engine installed in RTV is 213 and Fuel Sulphur Fraction is 0.0005.

— The Emission Factors refer to Table 4-16 of MVEIS.

— The RSP emission factors were adjusted based on the formula stated in Paragraph 4.2.31 of MVEIS: The formula of RSP Emission Factor is 0.23+ BSFC x 7 x 0.02247 x (Fuel Sulphur Fraction - 0.0024), where BSFC is 213 and Fuel Sulphur Fraction is 0.0005.

— According to Paragraph 4.2.32 of MVEIS, the RSP to FSP conversion factor is 0.97.

[3] The AE Load Factors of Others (GRT >= 1000) and Tug refer to Table 4-10 of MVEIS

[4] The calculations of emission rates refer to the following equation: Emission Rate (g/s) = Engine Power (kW) * Time-in-mode per hour * Engine Load Factor * Emission Factor (g/kWh) / 3600 , where Time-in-mode per hour refers to the duration ratio of a vessel operating in a specific mode within a one-hour period (i.e., Time-in-mode (hr) / 1 hour)

Total Emission Rate

Vessel ID	Total SO ₂ Emission Rate (g/s-trip) [1]	Total NOx Emission Rate (g/s-trip) [1]	Total RSP Emission Rate (g/s-trip) [1]	Total FSP Emission Rate (g/s-trip) [1]
MT01	1.575E-02	9.699E-01	1.258E-02	1.220E-02
MF01	1.283E-03	6.161E-02	1.025E-03	9.940E-04
MS01	2.726E-03	1.309E-01	2.178E-03	2.112E-03

Note:

[1] Total Emission Rate is determined by this equation : ME Emission Rate + AE Emission Rate

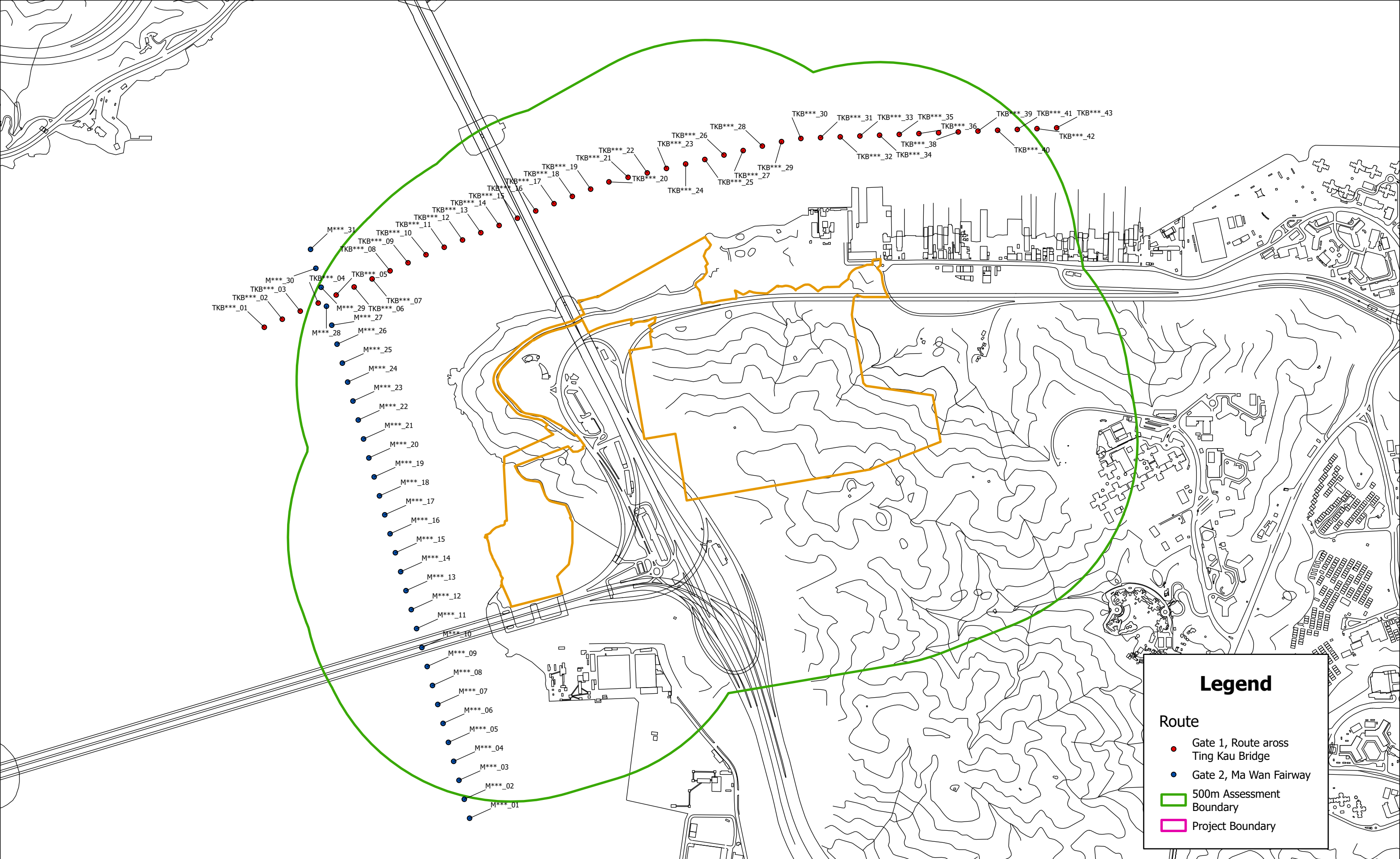
Appendix 4.10 Calculation of Marine Emission (in Ma Wan Fairway and nearby Channel)

Hourly Traffic Volume

Hour per Day	Average Traffic Flow of Each Vessel ID [1]		
	MT01	MF01	MS01
0	0.0	0.0	0.0
1	0.2	0.2	0.2
2	0.0	0.0	0.0
3	0.0	0.0	0.0
4	0.0	0.0	0.0
5	0.0	0.0	0.0
6	0.0	0.0	0.0
7	0.2	0.2	0.2
8	0.3	0.3	0.3
9	0.3	0.3	0.3
10	0.2	0.2	0.2
11	0.2	0.2	0.2
12	0.2	0.2	0.2
13	0.0	0.0	0.0
14	0.2	0.2	0.2
15	0.2	0.2	0.2
16	0.5	0.5	0.5
17	0.2	0.2	0.2
18	0.2	0.2	0.2
19	0.2	0.2	0.2
20	0.2	0.2	0.2
21	0.2	0.2	0.2
22	0.2	0.2	0.2
23	0.0	0.0	0.0

Note

[1] The hourly traffic volume is provided by marine traffic consultant. Moreover, it is noted that not all vessels passing the gate navigate within the 500 m assessment boundary. As such, the marine traffic flow has been divided into three routes , with reference to the approved EIA for the Tsing Yi–Lantau Link, in which three principal navigation routes are defined within the fairway.



Locations of Marine Emission Sources
(in Ma Wan Fairway and across Ting Kau Bridge)



0 0.1 0.2 0.4 Kilometers

Appendix 4.11

Appendix 4.11 Analysis of Particulates Emission by Proposed Asphalt Production.pdf

Proposed Asphalt Production in Option 1 [1]

Source ID	Source	Working Hour	Annual Production Factor	RSP Emission Rate (g/s)	FSP Emission Rate (g/s)
AP01	Cold Aggregate Hopper	00:00 - 24:00	0.4	3.067E-05	7.184E-06
AP02	Dust Emission System	00:00 - 24:00	0.4	9.013E-03	7.830E-03
AP03	Dust Collector at RAP Storage	00:00 - 24:00	0.4	6.667E-03	3.030E-03
AP04	Aggregate Reject Bin	00:00 - 24:00	0.4	5.843E-04	1.369E-04
AP05	Foul Batch Hopper	00:00 - 24:00	0.4	5.983E-05	5.983E-05
AP31	Dump Truck	00:00 - 24:00	0.4	1.173E-05	2.748E-06
AP32	Dump Truck	00:00 - 24:00	0.4	1.173E-05	2.748E-06
AP33	Dump Truck	00:00 - 24:00	0.4	1.173E-05	2.748E-06
AP34	Dump Truck	00:00 - 24:00	0.4	1.173E-05	2.748E-06
Sub-total				1.640E-02	1.108E-02

Total Emission Inventory from Proposed Asphalt Production (Option 1)

	RSP (g)	FSP (g)
Hourly Emission [2]	5.905E+01	3.987E+01
Annual Emission [3]	2.069E+05	1.397E+05

- Remarks
- [1]

The emission rates and operation details refer to Appendix 4.2
- [2]

Hourly Emission (g) = Total Emission Rate (g/s) * 3600
- [3]

Annual Emission (g) = Hourly Emission * 24 * 365 * Annual Production Factor

Proposed Concrete Batching Operation per 1 production Line in Option 1 (Mixer-A, EP28 as an example)

Dust Collectors on the Silos and Mixer [1]

Source ID	Source	Working Hour	Annual Production Factor	RSP Emission Rate (g/s)	FSP Emission Rate (g/s)
CBP23	Silica Fume Silo	07:00 - 19:00	0.9	2.667E-03	1.212E-03
CBP20	PFA Silo	07:00 - 19:00	0.9	2.667E-03	1.212E-03
CBP17	GGBS Silo	07:00 - 19:00	0.9	2.667E-03	1.212E-03
CBP11	Cement Silo	07:00 - 19:00	0.9	1.700E-03	7.727E-04
CBP12	Cement Silo	07:00 - 19:00	0.9	1.700E-03	7.727E-04
CBP26	Mixer	07:00 - 19:00	0.9	9.130E-03	4.150E-03
Sub-total				2.053E-02	9.332E-03

Unloading Aggregate to Hopper [2]

Source ID	Source	Working Hour	Annual Production Factor	Area (m ²)	RSP Emission Factor (g/s·m ²)	FSP Emission Factor (g/s·m ²)	RSP Emission Rate (g/s)	FSP Emission Rate (g/s)
CBP31	Unloading Aggregate to Hopper	07:00 - 19:00	0.9	25	1.407E-04	3.297E-05	3.518E-03	8.242E-04
CBP32	Unloading Aggregate to Hopper	07:00 - 19:00	0.9	25	2.908E-04	6.813E-05	7.271E-03	1.703E-03
Sub-total					4.316E-04	1.011E-04	1.079E-02	2.527E-03

Total Emission Inventory from proposed concrete batching operation (per 1 production Line)

	RSP (g)	FSP (g)
Hourly Emission [4]	1.128E+02	4.269E+01
Annual Emission [5]	4.445E+05	1.683E+05

- Remarks
- [1]

The emission rates and operation details , except working hour, refer to Appendix 4.2.
- [2]

As there are 5 production lines in the CBP, the emission rate is divided by 5
- [3]

Emission Rate (g/s) = Emission Factor (g/s·m²) * Area (m²)
- [4]

Hourly Emission (g) = Total Emission Rate (g/s) * 3600
- [5]

Annual Emission (g) = Hourly Emission * 12 * 365 * Annual Production Factor

Equivalent Production Rate of a CBP Production Line based on Particulate Emission Inventories

	In terms of 1 CBP Production Line of 100 m ³ /hr		Equivalent to CBP Production Rate (m ³ /hr)
	Based on RSP	Based on FSP	
Hourly	0.52	0.93	52.4
Annual	0.47	0.83	46.5

- [1]

Ratio of Emission Inventory of Asphalt Production to Concrete Batching Operation = Emission Inventory of Asphalt Production / Emission Inventory of Concrete Batching Production.
- [2]

The working hours of the equivalent CBP production line operates from 00:00 – 24:00, following the operation hours of the Asphalt Production

Appendix 4.12

Predicted Pollutant Concentrations at the Fresh Air Intakes of Tsing Ma Administrative Building

Fresh Air Intake	Assessment Height (mAG)	Fresh Air Intake Locations	The area to which the fresh air is supplied	Year 2028		Year 2030	
				Annual FSP Conc. ($\mu\text{g}/\text{m}^3$)	Annual NO2 Conc. ($\mu\text{g}/\text{m}^3$)	Annual FSP Conc. ($\mu\text{g}/\text{m}^3$)	Annual NO2 Conc. ($\mu\text{g}/\text{m}^3$)
FAI01	10.1	2/F	2/F	14.58	37.62	13.25	34.04
FAI01	14.1	2/F	2/F	14.33	34.48	13.04	31.54
FAI02	26	5/F	3/F	13.95	30.17	12.72	28.14
FAI02	30	5/F	3/F	13.86	29.45	12.63	27.56
FAI03	26	5/F	4/F	13.95	30.16	12.72	28.13
FAI03	30	5/F	4/F	13.86	29.44	12.63	27.54
FAI04	1.5	G/F	G/F	15.07	44.19	13.67	39.58
FAI04	3	G/F	G/F	15.01	43.10	13.62	38.55
FAI04	5.6	G/F	G/F	14.86	41.19	13.50	36.95
FAI05	10.1	2/F	1/F	14.52	37.17	13.20	33.76
FAI05	14.1	2/F	1/F	14.31	34.57	13.03	31.69

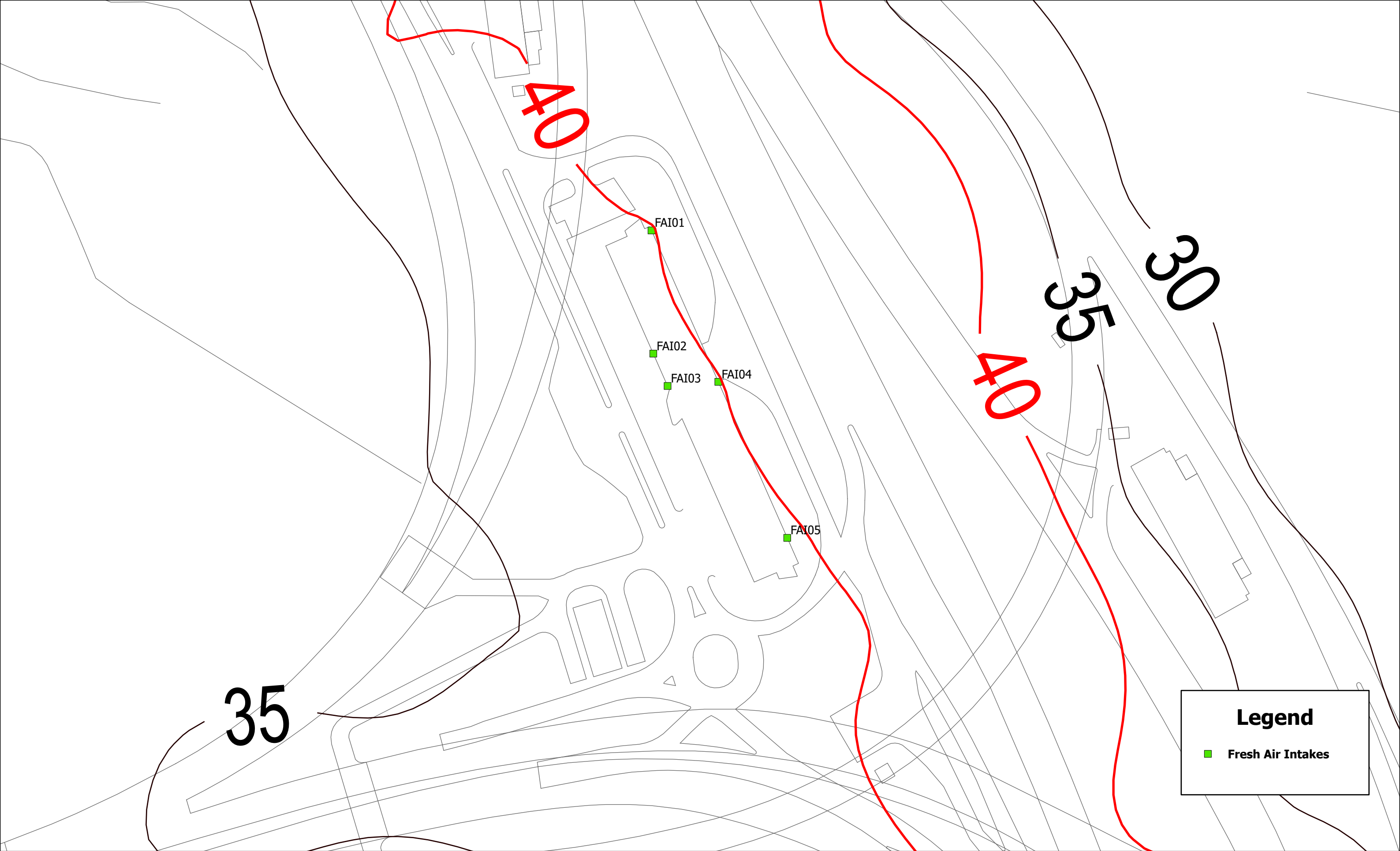
Remarks

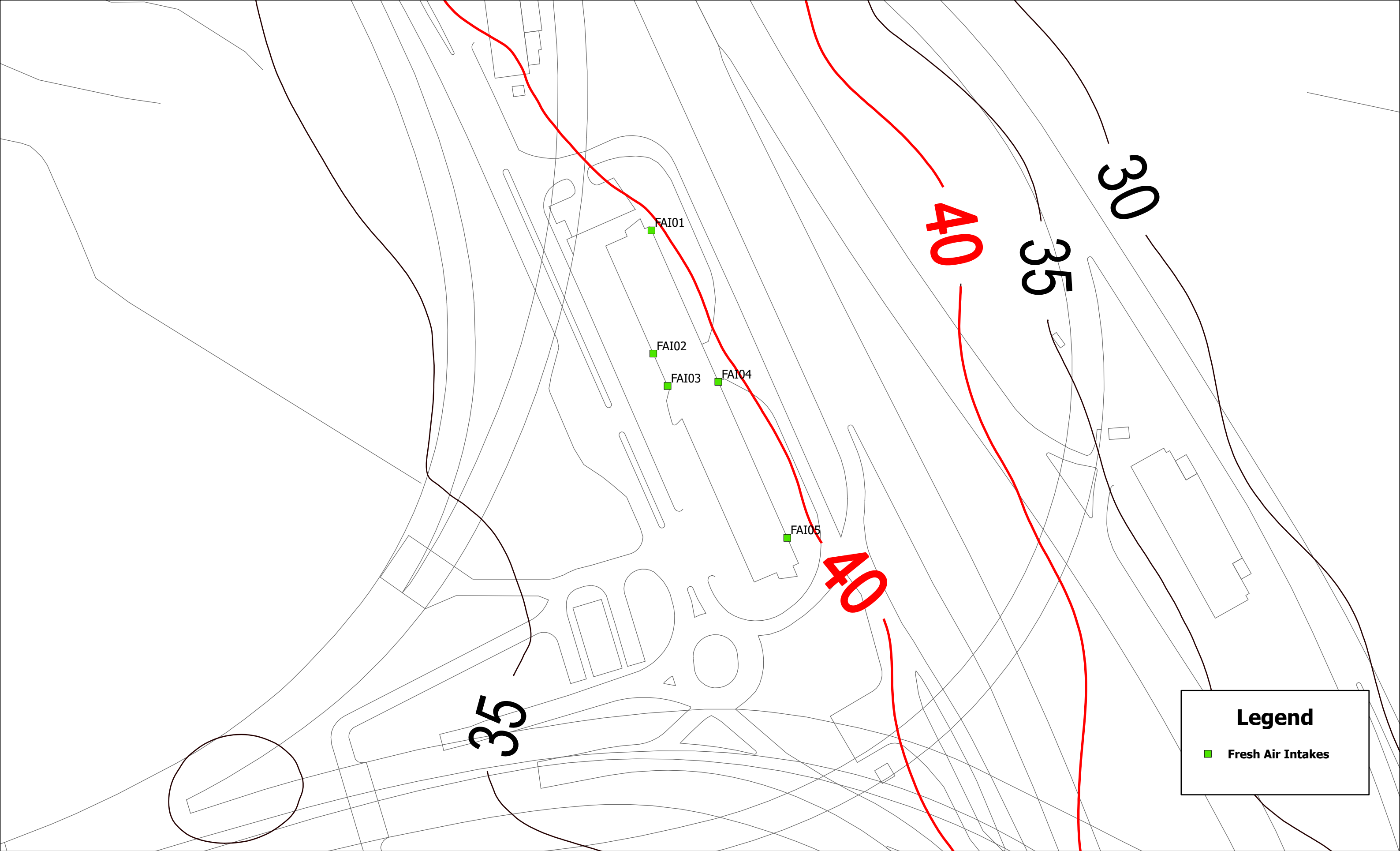
[1] The locations and heights are determined based on the floor plan of the Tsing Ma Administrative Building



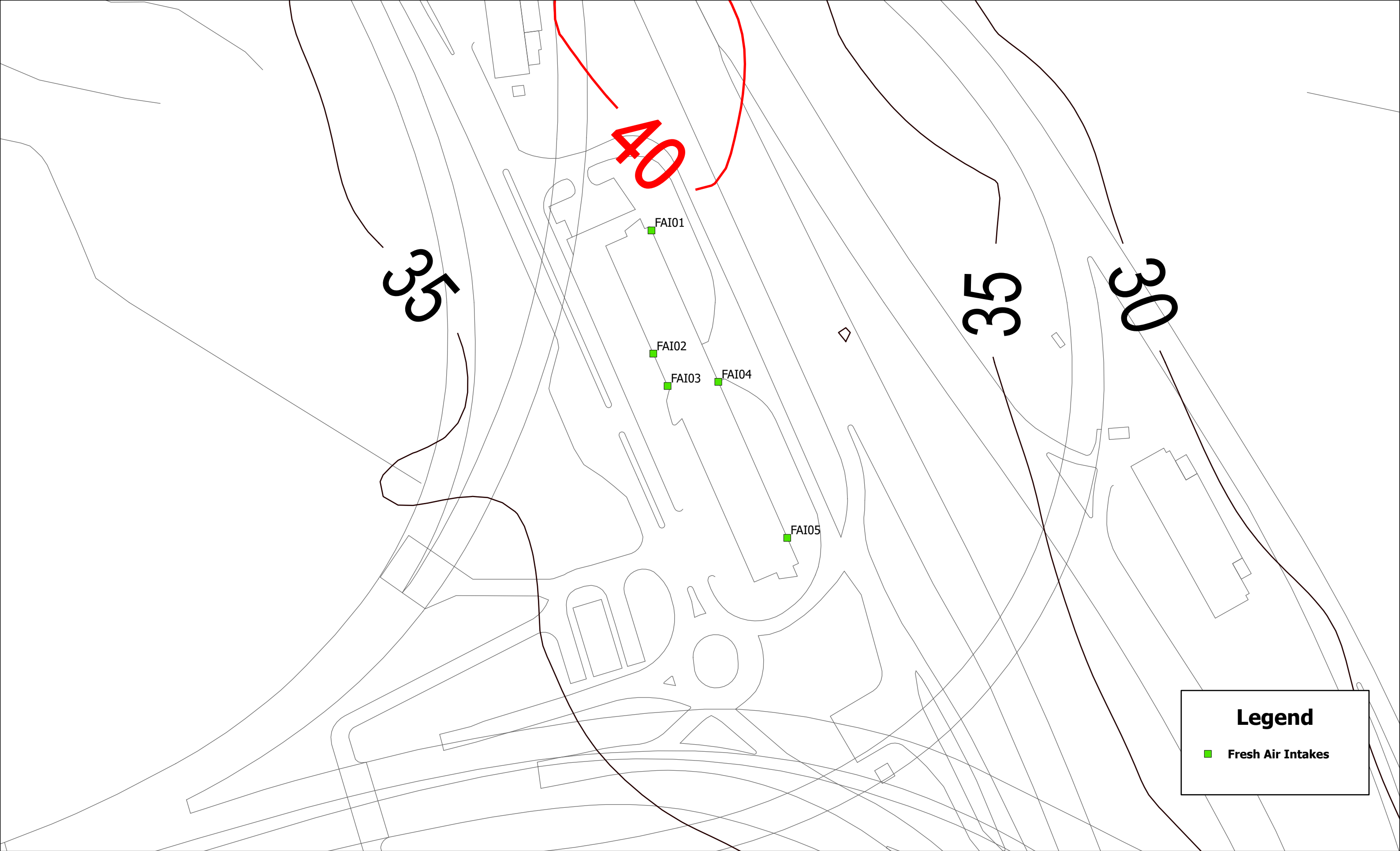
Location of Fresh Air Intakes for Tsing Ma Administrative Building

0 0.01 0.02 0.04 Kilometers





Contour Plot of Annual NO₂ Concentration at 3 mAG (Year 2030)



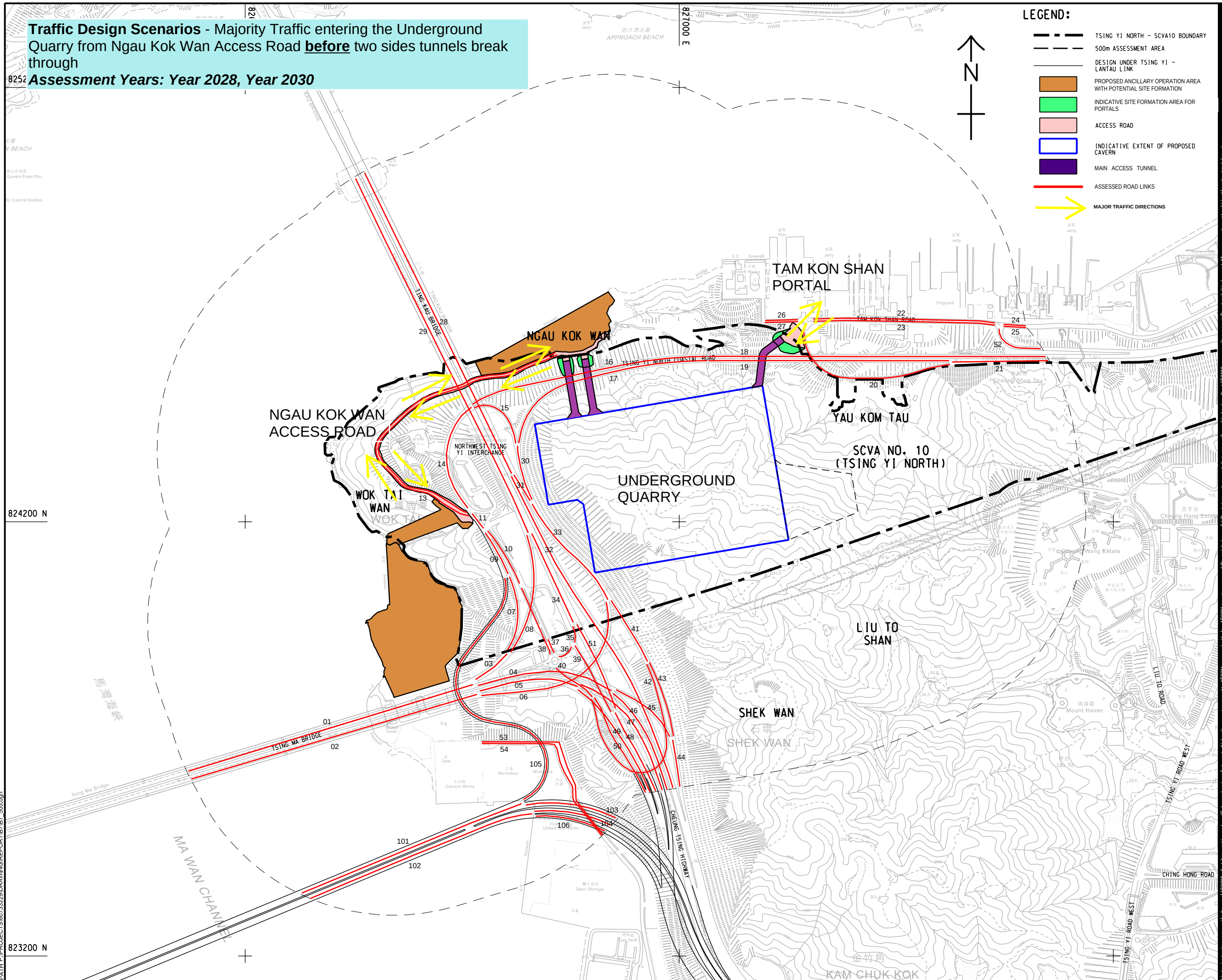
**Contour Plot of Annual NO₂ Concentration at
5.6 mAG (Year 2030)**

0 0.02 0.04 0.08 Kilometers

Appendix 4.13

Plot File by: ZHAOHQ2 2025/4/2
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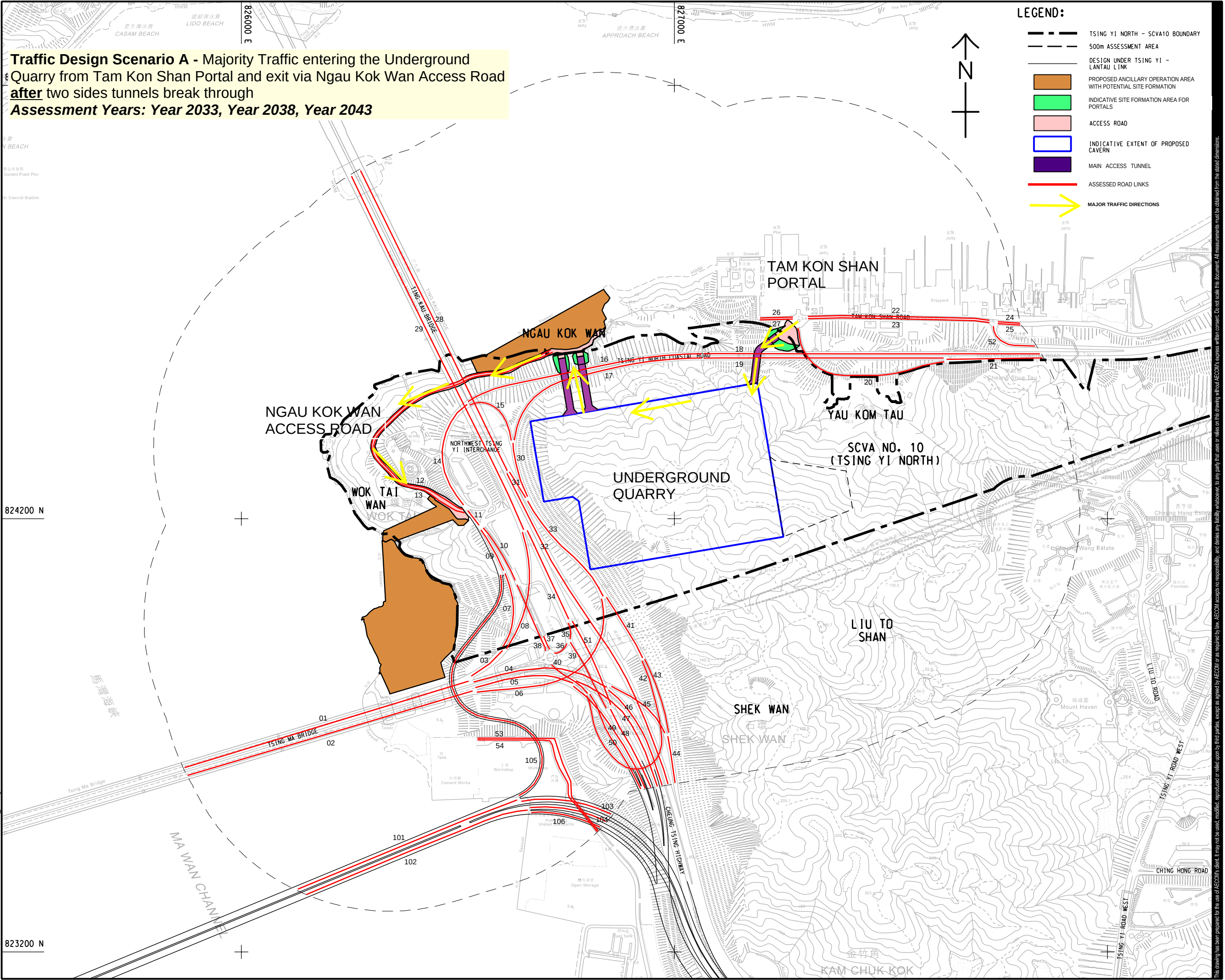
Assessment Years: Year 2028, Year 2030



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Designer:
Project Management Initials:



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PROJECT
項目

UNDERGROUND QUARRYING AT TSING YI NORTH – INVESTIGATION, DESIGN AND CONSTRUCTION

CLIENT
業主

 **土木工程拓展署**
Civil Engineering and Development Department

CONSULTANT
工程顧問公司

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比例

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DIMENSION UNIT
尺寸單位

METRES

KEY PLAN
索引圖

PROJECT NO.
項目編號

60733229

AGREEMENT NO.
協議編號

CE 79/2023 (GE)

SHEET TITLE
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Traffic Design Scenario B - Majority Traffic entering the Underground Quarry from Ngau Kok Wan Access Road after two sides tunnels break through
Assessment Years: Year 2033, Year 2038, Year 2043

- LEGEND:**
- TSING YI NORTH - SCVA10 BOUNDARY
 - 500m ASSESSMENT AREA
 - DESIGN UNDER TSING YI - LANTAU LINK
 - PROPOSED ANCILLARY OPERATION AREA WITH POTENTIAL SITE FORMATION
 - INDICATIVE SITE FORMATION AREA FOR PORTALS
 - ACCESS ROAD
 - INDICATIVE EXTENT OF PROPOSED CAVERN
 - MAIN ACCESS TUNNEL
 - ASSESSED ROAD LINKS
 - MAJOR TRAFFIC DIRECTIONS

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PROJECT
UNDERGROUND QUARRYING AT TSING YI NORTH - INVESTIGATION, DESIGN AND CONSTRUCTION

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Civil Engineering and Development Department

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SCALE	DIMENSION UNIT
比例	尺寸單位
A3 1: 8000	METRES

KEY PLAN
索引圖

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60733229

AGREEMENT NO.
CE 79/2023 (GE)

SHEET TITLE
圖紙名稱

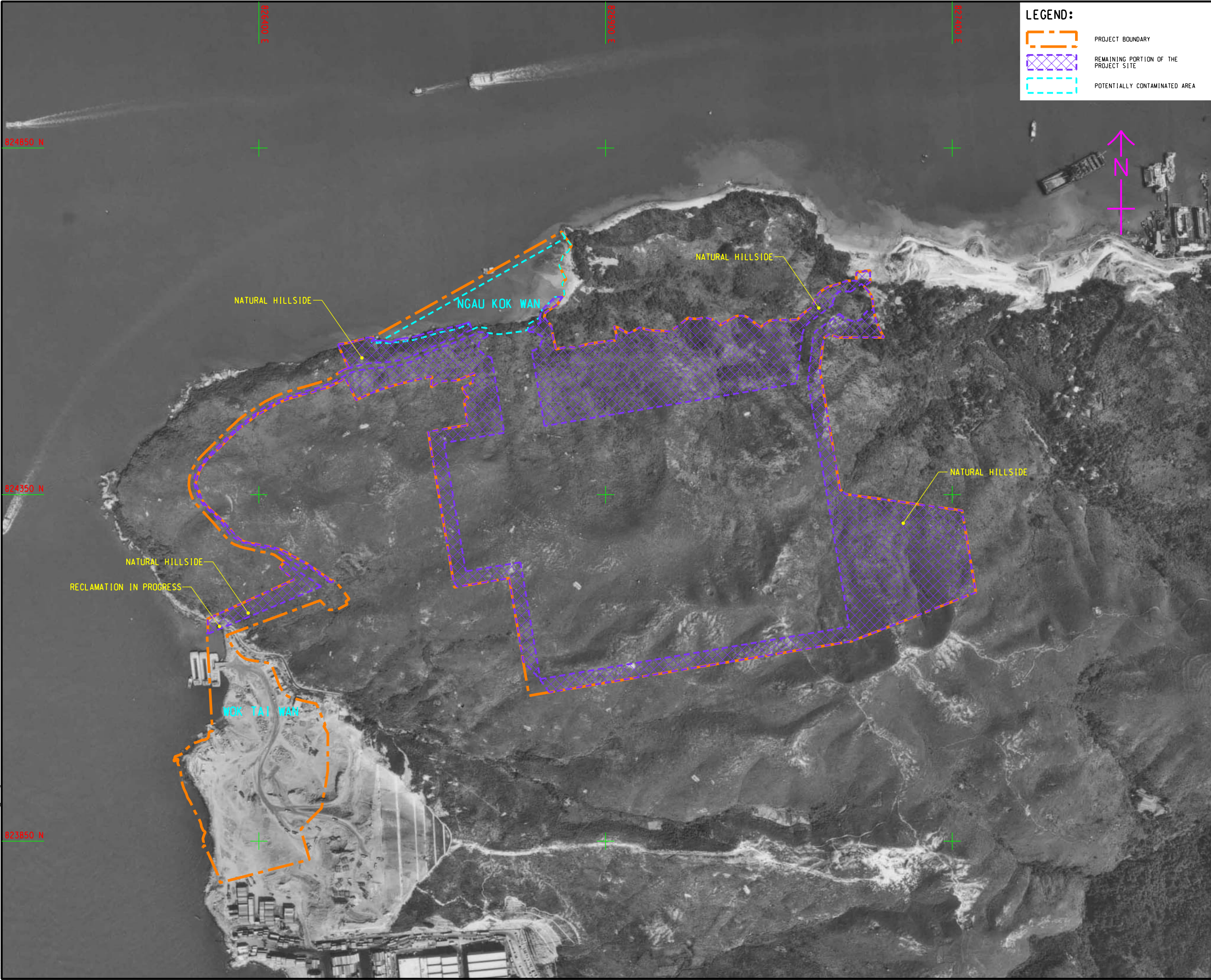
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Appendix 8.1

ISO A1 594mm x 841mm
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LEGEND:

- PROJECT BOUNDARY
- REMAINING PORTION OF THE PROJECT SITE
- POTENTIALLY CONTAMINATED AREA

AECOM

PROJECT
項目
UNDERGROUND QUARRYING AT TSING YI NORTH – INVESTIGATION, DESIGN AND CONSTRUCTION

CLIENT
業主
 **土木工程拓展署**
Civil Engineering and Development Department

CONSULTANT
顧問公司
AECOM Asia Company Ltd.
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ISSUE/REVISION			
修訂			
I/R	DATE	DESCRIPTION	CHK.
修訂	日期	修訂描述	校核

STATUS	
現狀	

SCALE	DIMENSION UNIT
比例	尺寸單位
A3 1: 5000	METRES

KEY PLAN	
索引圖	

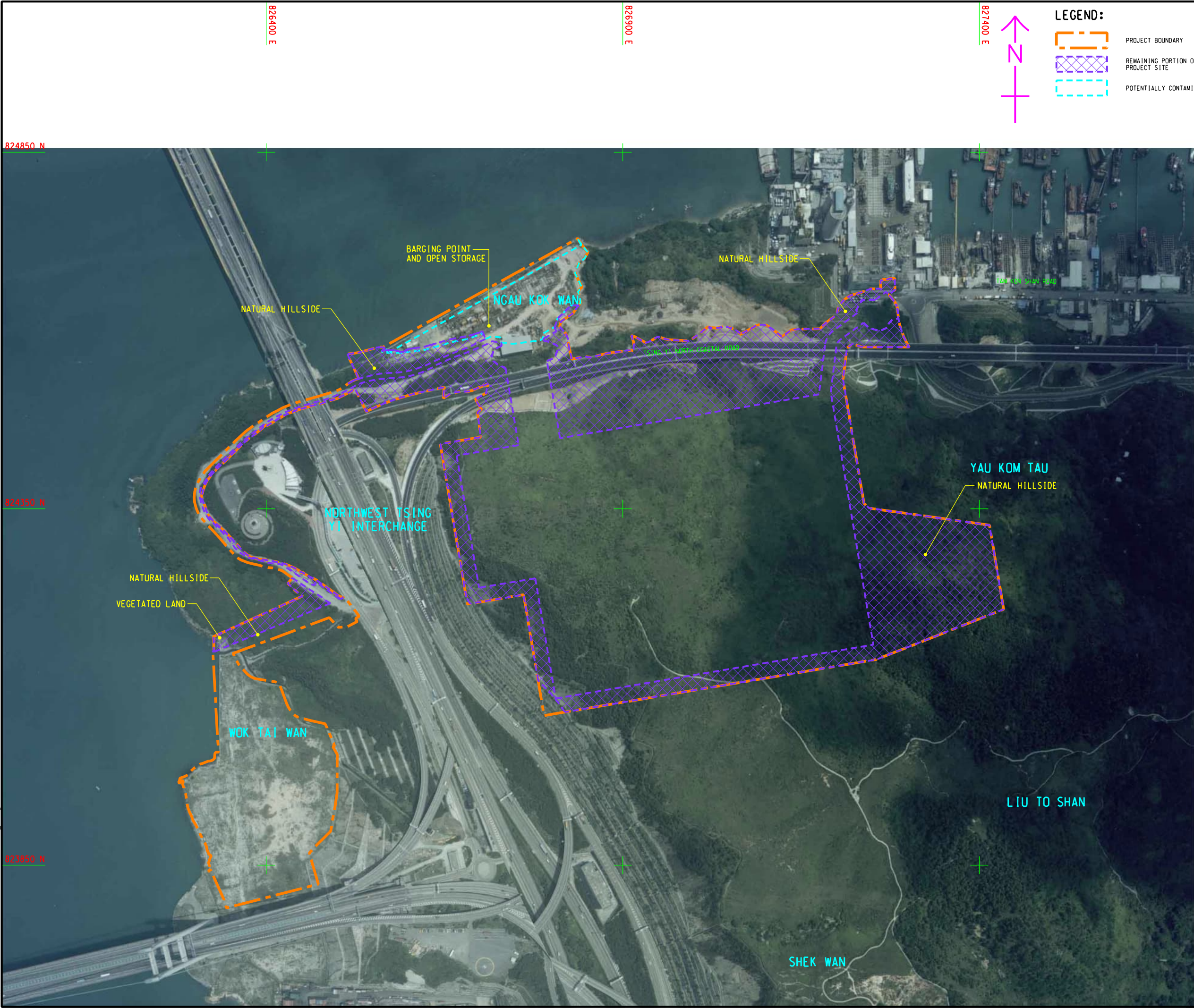
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60733229	CE 79/2023 (GE)

SHEET TITLE 圖紙名稱
AERIAL PHOTOGRAPH 1991

SHEET NUMBER 圖紙編號
60733229/B19/AP1

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PROJECT
UNDERGROUND
QUARRYING AT
TSING YI NORTH –
INVESTIGATION,
DESIGN AND
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CEDD
Civil Engineering and
Development Department

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ISSUE/REVISION			
I/R	DATE	DESCRIPTION	CHK.

SCALE	DIMENSION UNIT
A3 1: 5000	METRES

PROJECT NO.	AGREEMENT NO.
60733229	CE 79/2023 (GE)

SHEET TITLE
AERIAL PHOTOGRAPH 2002

SHEET NUMBER
60733229/B19/AP2

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PROJECT

UNDERGROUND QUARRYING AT TSING YI NORTH – INVESTIGATION, DESIGN AND CONSTRUCTION

CLIENT
業主



CONSULTANT
J. P. ELLIOTT & CO.

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ISSUE/REVISION

I/R	DATE	DESCRIPTION	CHK.
修订	日期	内容描述	收核

STATUS
阶段

SCALE

A3 1:5000

DIMENSION UNIT

METRES

KEY PLAN

PROJECT NO.
 027.03.60(30)

60733229

AGREEMENT NO.
DATE OF THE LAST SIGNATURE

CE 79/2023 (GE)

SHEET TITLE
圖紙名稱

AERIAL PHOTOGRAPH 2011

SHEET NUMBER

60733229/B19/AP3

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ISO A1 594mm x 841mm

Approved:

Checked:

Designer:

Project Management Initials:



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PROJECT
UNDERGROUND
QUARRYING AT
TSING YI NORTH –
INVESTIGATION,
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I/R	DATE	DESCRIPTION	CHK.

STATUS

SCALE DIMENSION UNIT

A3 1: 5000 METRES

KEY PLAN

PROJECT NO. AGREEMENT NO.

60733229 CE 79/2023 (GE)

SHEET TITLE

AERIAL PHOTOGRAPH 2016

SHEET NUMBER

60733229/B19/AP4

ISO A1 594mm x 841mm
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Checked:
Designer:
Project Management Initials:



LEGEND:

- PROJECT BOUNDARY
- ASSESSMENT AREA UNDER PREVIOUS PRELIMINARY ENVIRONMENTAL REVIEW UNDER CE 57/2018(GE)
- POTENTIALLY CONTAMINATED AREA



PROJECT
UNDERGROUND
QUARRYING AT
TSING YI NORTH –
INVESTIGATION,
DESIGN AND
CONSTRUCTION

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STATUS

SCALE

A3 1: 5000

DIMENSION UNIT

METRES

KEY PLAN

PROJECT NO. 60733229

AGREEMENT NO. CE 79/2023 (GE)

SHEET TITLE

AERIAL PHOTOGRAPH 2021

SHEET NUMBER

60733229/B19/AP5

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Approved:
Checked:
Designer:
Project Management Initials:



LEGEND:

PROJECT BOUNDARY

ASSESSMENT AREA UNDER PREVIOUS PRELIMINARY ENVIRONMENTAL REVIEW UNDER CE 57/2018(GE)

POTENTIALLY CONTAMINATED AREA



AECOM

PROJECT

UNDERGROUND QUARRYING AT TSING YI NORTH – INVESTIGATION, DESIGN AND CONSTRUCTION

CLIENT

CEDD

土木 工程 拓展 署
Civil Engineering and Development Department

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ISSUE/REVISION			
I/R	DATE	DESCRIPTION	CHK.

STATUS

SCALE	DIMENSION UNIT
A3 1: 5000	METRES

KEY PLAN

PROJECT NO.	AGREEMENT NO.
60733229	CE 79/2023 (GE)

SHEET TITLE
AERIAL PHOTOGRAPH 2023

SHEET NUMBER
60733229/B19/AP6

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Appendix 8.2

Annex C1

Site Walkover Checklist

DATE OF INSPECTION 8 April 2025

GENERAL SITE DETAILS

SITE OWNER/CLIENT Civil Engineering and Development Department (CEDD)

PROPERTY ADDRESS Drainage Services Department (DSD) Stockpiling Area and Rock Crushing
and Screening Facilities, Ngau Kok Wan, Tsing Yi
(Works Area WA3 of Contract No.: DC/2020/05) (GLA-TKT 1940)

PERSON CONDUCTING THE QUESTIONNAIRE

NAME Ms. Ariel Tam / Mr. Alex Fan

POSITION Assistant / Graduate Environmental Consultant

AUTHORIZED OWNER/CLIENT REPRESENTATIVE (IF APPLICABLE)

NAME Mr. Lam

POSITION Construction Team Leader

TELEPHONE [REDACTED]

SITE ACTIVITIES

Briefly describe activities carried out on site, including types of products/chemicals/materials handled.
Obtain a flow schematic if possible.

Number of employees: Full-time: 33

Part-time: /

Temporary/Seasonal: /

Maximum no. of people on site at any time: 33

Typical hours of operation: 7 am – 11 pm

Number of shifts: 2

Days per week: 7

Weeks per year: 52

Scheduled plant shut-down: N/A

Detail the main sources of energy at the site:

Gas	Yes /No	
Electricity	Yes/ No	
Coal	Yes /No	
Oil	Yes/ No	(Diesel)
Other	Yes /No	

SITE DESCRIPTION

This section is intended to gather information on site setting and environmental receptors on, adjacent or close to the site.

What is the total site area: Approx. 2.6 hectares

What area of the site is covered by buildings (%): 2%

Please list all current and previous owners/occupiers if possible. DSD, AECOM (consultant),
China State – Alchmex Joint Venture (contractor), Sheung Ying (contractor)

Is a site plan available? If yes, please attach. Yes/~~No~~ Refer to **Figure 8.01** in PER

Are there any other parties on site as tenants or sub-tenants? ~~Yes~~/No

If yes, identify those parties: N/A

Describe surrounding land use (residential, industrial, rural, etc.) and identify neighbouring facilities and types of industry.

North: Open water

South: Natural hillside, Tsing Yi North Coastal Road

East: Private sand factory (Industrial), Natural hillside

West: Natural hillside, Tsing Long Highway

Annex C1

Site Walkover Checklist

Describe the topography of the area (flat terrain, rolling hills, mountains, by a large body of water, vegetation, etc.).

The Site is situated on reclaimed land with stockpile of rocks next to open water.

State the size and location of the nearest residential communities.

Aztec Lodge (approx. 900 m of northwest of the Site, area of about 930 sq. m).

Are there any sensitive habitats nearby, such as nature reserves, parks, wetlands or sites of special scientific interest?

No.

Questionnaire with Existing/Previous Site Owner or Occupier

	Yes/No	Notes
1. What are the main activities/operations at the above address?	--	Temporary stockpiling area, rock crushing and screening facilities for rocks excavated from the cavern at Nui Po Shan of A Kung Kok
2. How long have you been occupying the site?	--	2 years, since end of 2022
3. Were you the first occupant on site? (If yes, what was the usage of the site prior to occupancy.)	No	
4. Prior to your occupancy, who occupied the site?	--	Vacant land
5. What were the main activities/operations during their occupancy?	--	Vacant land
6. Have there been any major changes in operations carried out at the site in the last 10 years?	No	
7. Have any polluting activities been carried out in the vicinity of the site in the past?	No	
8. To the best of your knowledge, has the site ever been used as a petrol filling station/car service garage?	No	
9. Are there any boreholes/wells or natural springs either on the site or in the surrounding area?	Yes	
10. Do you have any registered hazardous installations as defined under relevant ordinances? (If yes, please provide details.)	No	
11. Are any chemicals used in your daily operations? (If yes, please provide details.)	Yes	Gear oil, hydraulic oil, grease, lubricating oil, engine oil and fuel (diesel)
• Where do you store these chemicals?	--	Material store in the south of the site.
12. Material inventory lists, including quantities and locations available? (If yes, how often are these inventories updated?)	Yes	The material inventory list is updated weekly.
13. Has the facility produced a separate hazardous substance inventory?	No	
14. Have there ever been any incidents or accidents (e.g. spills, fires, injuries, etc.) involving any of these materials? (If yes, please provide details.)	No	

	Yes/No	Notes
15. How are materials received (e.g. rail, truck, etc.) and stored on site (e.g. drums, tanks, carboys, bags, silos, cisterns, vaults and cylinders)?	--	The materials are received by trucks. The rocks are stockpiled on site and chemicals are stored in buckets or drums on site.
16. Do you have any underground storage tanks? (If yes, please provide details.)	No	
• How many underground storage tanks do you have on site?	N/A	
• What are the tanks constructed of?	N/A	
• What are the contents of these tanks?	N/A	
• Are the pipelines above or below ground?	N/A	
• If the pipelines are below ground, has any leak and integrity testing been performed?	N/A	
• Have there been any spills associated with these tanks?	N/A	
17. Are there any disused underground storage tanks?	No	
18. Do you have regular check for any spillage and monitoring of chemicals handled? (If yes, please provide details.)	Yes	Weekly Environmental Team's (ET's) and Independent Environmental Checker's (IEC's) inspection is conducted.
19. How are the wastes disposed of?	--	The wastes are transported by refuse trucks for disposal.
20. Have you ever received any notices of violation of environmental regulations or received public complaints? (If yes, please provide details.)	Yes	Dust-related complaints were received.
21. Have any spills occurred on site? (If yes, please provide details.)	No	
• When did the spill occur?	N/A	
• What were the substances spilled?	N/A	
• What was the quantity of material spilled?	N/A	
• Did you notify the relevant departments of the spill?	N/A	
• What were the actions taken to clean up the spill?	N/A	
• What were the areas affected?	N/A	
22. Do you have any records of major renovation of your site or re-arrangement of underground utilities, pipe work/underground tanks (If yes, please provide details.)	No	
23. Have disused underground tanks been removed or otherwise secured (e.g. concrete, sand, etc.)?	No	
24. Are there any known contaminations on site? (If yes, please provide details.)	No	
25. Has the site ever been remediated? (If yes, please provide details.)	No	

Annex C1

Site Walkover Checklist

Observations

	Yes/No	Notes
1. Are chemical storage areas provided with secondary containment (i.e. bund walls and floors)?	No	The chemicals are stored directly on concrete paved floor.
2. What are the conditions of the bund walls and floors?	--	The concrete paved floor is in good condition.
3. Are any surface water drains located near to drum storage and unloading areas?	No	
4. Are any solid or liquid waste (other than wastewater) generated at the site? (If yes, please provide details.)	No	
5. Is there a storage site for the wastes?	Yes	Refuse skips are observed.
6. Is there an on-site landfill?	No	
7. Were any stressed vegetation noted on site during the site reconnaissance? (If yes, please indicate location and approximate size.)	No	
8. Were any stained surfaces noted on-site during the site reconnaissance? (If yes, please provide details.)	No	
9. Are there any potential off-site sources of contamination?	No	
10. Does the site have any equipment which might contain polychlorinated biphenyls (PCBs)?	No	
11. Are there any sumps, effluent pits, interceptors or lagoons on site?	No	
12. Any noticeable odours during site walkover?	No	
13. Are any of the following chemicals used on site: fuels, lubricating oils, hydraulic fluids, cleaning solvents, used chemical solutions, acids, anti-corrosive paints, thinners, coal, ash, oily tanks and bilge sludge, metal wastes, wood preservatives and polyurethane foam?	Yes	Hydraulic oil, lubricating oil, and fuel (diesel)

Annex C1

Site Walkover Checklist

DATE OF INSPECTION 8 April 2025

GENERAL SITE DETAILS

SITE OWNER/CLIENT Civil Engineering and Development Department (CEDD)

PROPERTY ADDRESS CEDD Works Area at Tam Kon Shan Road

(Contract No. GE/2022/08)

PERSON CONDUCTING THE QUESTIONNAIRE

NAME Ms. Ariel Tam / Mr. Alex Fan

POSITION Assistant / Graduate Environmental Consultant

AUTHORIZED OWNER/CLIENT REPRESENTATIVE (IF APPLICABLE)

NAME Mr. Hui

POSITION Sub-agent

TELEPHONE [REDACTED]

SITE ACTIVITIES

Briefly describe activities carried out on site, including types of products/chemicals/materials handled.
Obtain a flow schematic if possible.

Number of employees: Full-time: 7

Part-time: /

Temporary/Seasonal: /

Maximum no. of people on site at any time: 7

Typical hours of operation: 8 am – 6 pm

Number of shifts: /

Days per week: 6

Weeks per year: 52

Scheduled plant shut-down: N/A

Detail the main sources of energy at the site:

Gas	Yes /No	
Electricity	Yes /No	
Coal	Yes /No	
Oil	Yes/ No	(Diesel)
Other	Yes /No	

SITE DESCRIPTION

This section is intended to gather information on site setting and environmental receptors on, adjacent or close to the site.

What is the total site area: Approx. 850 sq. m

What area of the site is covered by buildings (%): 0%

Please list all current and previous owners/occupiers if possible. CEDD, Driltech (Contractor)

Is a site plan available? If yes, please attach. Yes/~~No~~ Refer to **Figure 8.01** in PER

Are there any other parties on site as tenants or sub-tenants? ~~Yes~~/No

If yes, identify those parties: N/A

Describe surrounding land use (residential, industrial, rural, etc.) and identify neighbouring facilities and types of industry.

North: Tam Kon Shan Road, The Hong Kong Shipyard Ltd (Industrial)

South: Natural hillside

East: Tam Kon Shan Road, Tsing Yi North Coastal Road

West: Natural hillside

Annex C1

Site Walkover Checklist

Describe the topography of the area (flat terrain, rolling hills, mountains, by a large body of water, vegetation, etc.).

Generally flat terrain in the northeast of the site and mountain in the southwest of the site.

State the size and location of the nearest residential communities.

Cheung Wang Estate (approx. 730 m of southeast of the Site, area of about 5.1 ha).

Are there any sensitive habitats nearby, such as nature reserves, parks, wetlands or sites of special scientific interest?

No.

Questionnaire with Existing/Previous Site Owner or Occupier

	Yes/No	Notes
1. What are the main activities/operations at the above address?	--	Ground investigation works
2. How long have you been occupying the site?	--	2 months, since February 2025
3. Were you the first occupant on site? (If yes, what was the usage of the site prior to occupancy.)	Yes	
4. Prior to your occupancy, who occupied the site?	--	Vegetated / vacant land
5. What were the main activities/operations during their occupancy?	--	
6. Have there been any major changes in operations carried out at the site in the last 10 years?	No	
7. Have any polluting activities been carried out in the vicinity of the site in the past?	No	
8. To the best of your knowledge, has the site ever been used as a petrol filling station/car service garage?	No	
9. Are there any boreholes/wells or natural springs either on the site or in the surrounding area?	Yes	
10. Do you have any registered hazardous installations as defined under relevant ordinances? (If yes, please provide details.)	No	
11. Are any chemicals used in your daily operations? (If yes, please provide details.)	Yes	Diesel, lubricating oil and compressed nitrogen cylinder
• Where do you store these chemicals?	--	Diesel is stored in chemical storage cabinets, lubricating oil is stored on elevated working platform and compressed nitrogen cylinder is stored inside the changing room.
12. Material inventory lists, including quantities and locations available? (If yes, how often are these inventories updated?)	No	
13. Has the facility produced a separate hazardous substance inventory?	No	
14. Have there ever been any incidents or accidents (e.g. spills, fires, injuries, etc.) involving any of these materials? (If yes, please provide details.)	No	

	Yes/No	Notes
15. How are materials received (e.g. rail, truck, etc.) and stored on site (e.g. drums, tanks, carboys, bags, silos, cisterns, vaults and cylinders)?	--	The materials are received by truck and stored in drums.
16. Do you have any underground storage tanks? (If yes, please provide details.)	No	
• How many underground storage tanks do you have on site?	N/A	
• What are the tanks constructed of?	N/A	
• What are the contents of these tanks?	N/A	
• Are the pipelines above or below ground?	N/A	
• If the pipelines are below ground, has any leak and integrity testing been performed?	N/A	
• Have there been any spills associated with these tanks?	N/A	
17. Are there any disused underground storage tanks?	No	
18. Do you have regular check for any spillage and monitoring of chemicals handled? (If yes, please provide details.)	Yes	Weekly inspection is conducted.
19. How are the wastes disposed of?	--	The wastes are sorted are transported to offsite warehouse for disposal.
20. Have you ever received any notices of violation of environmental regulations or received public complaints? (If yes, please provide details.)	No	
21. Have any spills occurred on site? (If yes, please provide details.)	No	
• When did the spill occur?	N/A	
• What were the substances spilled?	N/A	
• What was the quantity of material spilled?	N/A	
• Did you notify the relevant departments of the spill?	N/A	
• What were the actions taken to clean up the spill?	N/A	
• What were the areas affected?	N/A	
22. Do you have any records of major renovation of your site or re-arrangement of underground utilities, pipe work/underground tanks (If yes, please provide details.)	No	
23. Have disused underground tanks been removed or otherwise secured (e.g. concrete, sand, etc.)?	No	
24. Are there any known contaminations on site? (If yes, please provide details.)	No	
25. Has the site ever been remediated? (If yes, please provide details.)	No	

Annex C1

Site Walkover Checklist

Observations

	Yes/No	Notes
1. Are chemical storage areas provided with secondary containment (i.e. bund walls and floors)?	Yes	The diesel oil is stored in the chemical storage cabinets with drip trays. The lubricating oil is placed directly above wooden plank on the elevated working platform with wooden sideboards installed around the elevated working platform. The compressed nitrogen cylinder is stored directly above timber floorboard.
2. What are the conditions of the bund walls and floors?	--	The chemical storage cabinets, wooden plank and timber floorboard are in good condition.
3. Are any surface water drains located near to drum storage and unloading areas?	No	
4. Are any solid or liquid waste (other than wastewater) generated at the site? (If yes, please provide details.)	No	
5. Is there a storage site for the wastes?	Yes	Bins for chemical waste, construction waste, recyclables and general refuse are provided.
6. Is there an on-site landfill?	No	
7. Were any stressed vegetation noted on site during the site reconnaissance? (If yes, please indicate location and approximate size.)	No	
8. Were any stained surfaces noted on-site during the site reconnaissance? (If yes, please provide details.)	No	
9. Are there any potential off-site sources of contamination?	No	
10. Does the site have any equipment which might contain polychlorinated biphenyls (PCBs)?	No	
11. Are there any sumps, effluent pits, interceptors or lagoons on site?	No	
12. Any noticeable odours during site walkover?	No	
13. Are any of the following chemicals used on site: fuels, lubricating oils, hydraulic fluids, cleaning solvents, used chemical solutions, acids, anti-corrosive paints, thinners, coal, ash, oily tanks and bilge sludge, metal wastes, wood preservatives and polyurethane foam?	Yes	Lubricating oil and fuel (diesel)

Annex C1

Site Walkover Checklist

DATE OF INSPECTION 20 October 2025

GENERAL SITE DETAILS

~~SITE OWNER/CLIENT~~ Civil Engineering and Development Department (CEDD)

PROPERTY ADDRESS Drainage Services Department (DSD) Rock Storage Area

Wok Tai Wan, Tsing Yi

(Works Area WA4 of Contract No.: DC/2020/05) (GLA-TKT 1939)

PERSON CONDUCTING THE QUESTIONNAIRE

NAME Mr. Alex Fan / Ms. Ariel Tam

POSITION Assistant Environmental Consultant / Environmental Consultant, AECOM

AUTHORIZED OWNER/CLIENT REPRESENTATIVE (IF APPLICABLE)

NAME Mr. Chow

POSITION Resident Engineer, AECOM

TELEPHONE [REDACTED]

SITE ACTIVITIES

Briefly describe activities carried out on site, including types of products/chemicals/materials handled.
Obtain a flow schematic if possible.

Number of employees: Full-time: 15

Part-time: N/A

Temporary/Seasonal: N/A

Maximum no. of people on site at any time: 15

Typical hours of operation: 7:00 – 19:00

Number of shifts: -

Days per week: 6

Weeks per year: 52

Scheduled plant shut-down: N/A

Detail the main sources of energy at the site:

Gas	Yes /No
Electricity	Yes/ No
Coal	Yes /No
Oil	Yes /No
Other	Yes /No

SITE DESCRIPTION

This section is intended to gather information on site setting and environmental receptors on, adjacent or close to the site.

What is the total site area: approx. 5.0 hectares

What area of the site is covered by buildings (%): 0 %

Please list all current and previous owners/occupiers if possible. DSD,
AECOM (Consultant), China State - Alchmex Joint Venture (Contractor)

Is a site plan available? If yes, please attach. Yes/~~No~~ Refer to **Figure 8.01** in PER

Are there any other parties on site as tenants or sub-tenants? Yes/~~No~~

DSD, AECOM (Consultant),
If yes, identify those parties: China State - Alchmex Joint Venture (Contractor)

Describe surrounding land use (residential, industrial, rural, etc.) and identify neighbouring facilities and types of industry.

North: Vegetated land, Lantau Link Viewing Platform Car Park

South: Lantau Link, Sai Tso Wan Concrete Plant (Industrial)

East: Vegetated land, North West Tsing Yi Interchange

West: Open Water

Annex C1

Site Walkover Checklist

Describe the topography of the area (flat terrain, rolling hills, mountains, by a large body of water, vegetation, etc.).

Partially reclaimed land with stockpile of rocks next to open water.

State the size and location of the nearest residential communities.

Cheung Wan Estate (approx. 1.33 km east, area of about 4.4 ha)

Are there any sensitive habitats nearby, such as nature reserves, parks, wetlands or sites of special scientific interest?

No.

Questionnaire with Existing/~~Previous~~ Site Owner or Occupier

	Yes/No	Notes
1. What are the main activities/operations at the above address?	--	Storage site for excavated rocks from Sha Tin Cavern.
2. How long have you been occupying the site?	--	Three and half year, since early 2022
3. Were you the first occupant on site? (If yes, what was the usage of the site prior to occupancy.)	No	
4. Prior to your occupancy, who occupied the site?	N/A	Unknown
5. What were the main activities/operations during their occupancy?	N/A	Unknown
6. Have there been any major changes in operations carried out at the site in the last 10 years?	N/A	Unknown
7. Have any polluting activities been carried out in the vicinity of the site in the past?	N/A	Unknown
8. To the best of your knowledge, has the site ever been used as a petrol filling station/car service garage?	N/A	Unknown
9. Are there any boreholes/wells or natural springs either on the site or in the surrounding area?	No	
10. Do you have any registered hazardous installations as defined under relevant ordinances? (If yes, please provide details.)	No	
11. Are any chemicals used in your daily operations? (If yes, please provide details.)	Yes	Diesel
• Where do you store these chemicals?	--	Diesel is stored in drum at the north of the site for emergency use only
12. Material inventory lists, including quantities and locations available? (If yes, how often are these inventories updated?)	No	
13. Has the facility produced a separate hazardous substance inventory?	No	
14. Have there ever been any incidents or accidents (e.g. spills, fires, injuries, etc.) involving any of these materials? (If yes, please provide details.)	No	

	Yes/No	Notes
15. How are materials received (e.g. rail, truck, etc.) and stored on site (e.g. drums, tanks, carboys, bags, silos, cisterns, vaults and cylinders)?	--	The rocks are received by barge and stored on site temporarily. The diesel oil is received by oil tanker and refueled directly to the excavators as needed. The diesel oil drum is received by barge and stored on site for emergency use only.
16. Do you have any underground storage tanks? (If yes, please provide details.)	No	
• How many underground storage tanks do you have on site?	N/A	
• What are the tanks constructed of?	N/A	
• What are the contents of these tanks?	N/A	
• Are the pipelines above or below ground?	N/A	
• If the pipelines are below ground, has any leak and integrity testing been performed?	N/A	
• Have there been any spills associated with these tanks?	N/A	
17. Are there any disused underground storage tanks?	No	
18. Do you have regular check for any spillage and monitoring of chemicals handled? (If yes, please provide details.)	Yes	Daily inspection by resident site staff and weekly inspection by Environmental Team and Independent Environmental Checker are conducted.
19. How are the wastes disposed of?	Yes	The general refuse is collected and transferred to Ngau Kok Wan.
20. Have you ever received any notices of violation of environmental regulations or received public complaints? (If yes, please provide details.)	No	
21. Have any spills occurred on site? (If yes, please provide details.)	No	
• When did the spill occur?	N/A	
• What were the substances spilled?	N/A	
• What was the quantity of material spilled?	N/A	
• Did you notify the relevant departments of the spill?	N/A	
• What were the actions taken to clean up the spill?	N/A	
• What were the areas affected?	N/A	
22. Do you have any records of major renovation of your site or re-arrangement of underground utilities, pipe work/underground tanks (If yes, please provide details.)	No	
23. Have disused underground tanks been removed or otherwise secured (e.g. concrete, sand, etc.)?	No	Unknown
24. Are there any known contaminations on site? (If yes, please provide details.)	No	
25. Has the site ever been remediated? (If yes, please provide details.)	No	

Annex C1

Site Walkover Checklist

Observations

	Yes/No	Notes
1. Are chemical storage areas provided with secondary containment (i.e. bund walls and floors)?	--	The diesel oil is stored in drum with drip tray placed on unpaved ground.
2. What are the conditions of the bund walls and floors?	--	
3. Are any surface water drains located near to drum storage and unloading areas?	No	
4. Are any solid or liquid waste (other than wastewater) generated at the site? (If yes, please provide details.)	Yes	General refuse
5. Is there a storage site for the wastes?	Yes	
6. Is there an on-site landfill?	No	
7. Were any stressed vegetation noted on site during the site reconnaissance? (If yes, please indicate location and approximate size.)	No	
8. Were any stained surfaces noted on-site during the site reconnaissance? (If yes, please provide details.)	No	
9. Are there any potential off-site sources of contamination?	No	
10. Does the site have any equipment which might contain polychlorinated biphenyls (PCBs)?	No	
11. Are there any sumps, effluent pits, interceptors or lagoons on site?	No	
12. Any noticeable odours during site walkover?	No	
13. Are any of the following chemicals used on site: fuels, lubricating oils, hydraulic fluids, cleaning solvents, used chemical solutions, acids, anti-corrosive paints, thinners, coal, ash, oily tanks and bilge sludge, metal wastes, wood preservatives and polyurethane foam?	Yes	Fuel (diesel oil)

Appendix 8.3

Our Ref: GDCB:JYCT:kbs:60733229/2.5/2024004049G

26 August 2024

By Email and By Hand

Mr. POON Tsz Ming (Prin Env Protection Offr(Regional W))
Environmental Protection Department
Regional Office (West)
8/F, Tsuen Wan Government Offices
38 Sai Lau Kok Road, Tsuen Wan
New Territories

Dear Sir,

Agreement No. CE 79/2023 (GE)
Underground Quarrying at Tsing Yi North – Investigation, Design and Construction

Request for Information of Chemical Waste Producer and Chemical Spillage Accident

We are the Consultants commissioned by the Civil Engineering and Development Department (CEDD) to undertake the captioned consultancy Assignment. A copy of the memo from GEO ref. CEDD MIN-30-2020-26-1 dated on 12 June 2024 regarding the appointment is attached for your reference. Figure 1.1 showing the boundary of the project site is enclosed.

As part of the land contamination assessment and following the *Practice Guide for Investigation and Remediation of Contaminated Land* issued by EPD, we have to collect historical information regarding the past and present activities of the site. In order to facilitate our assessment, we would like to request for the following information regarding the captioned Concerned Area:

1. Current and past (as early as the records are available) registered Chemical Waste Producer(s) within the Concerned Area (preferably with the registration date, status (moved out or active), nature and quantity of the chemical waste); and
2. Reported accidents of spillage / leakage of chemicals within the Concerned Area.

We would be grateful if you can reply to the above on or before 6 September 2024. Should you have any inquiries or require any further information, please do not hesitate to contact our Ms. Chloe Ng at [REDACTED] or Mr. Alex Fan at [REDACTED]

Yours faithfully,
AECOM Asia Co. Ltd.

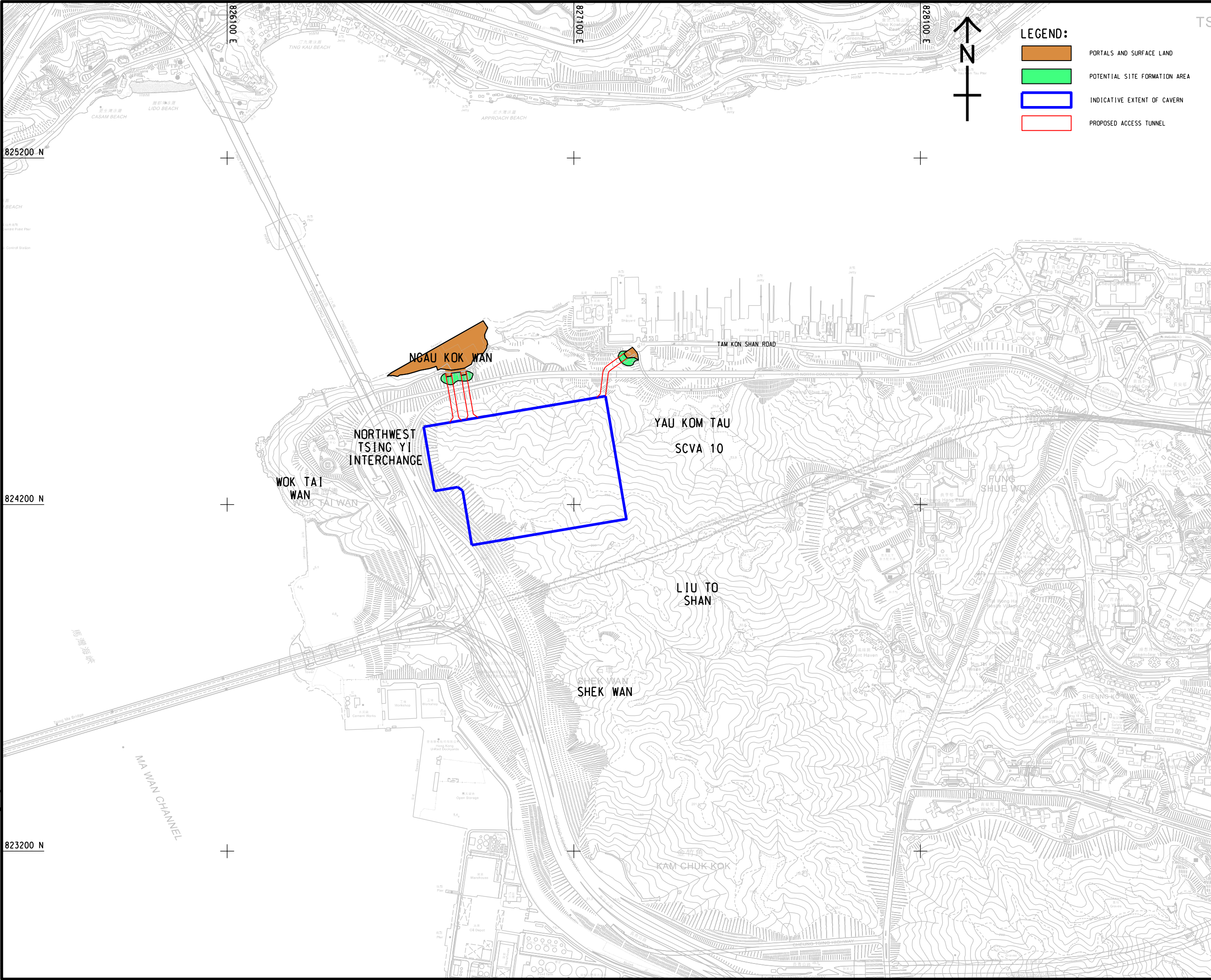


Guy Bridges
Project Director

Encl.

c.c. CEDD/GEO/Mines - Attn: Mr. LIU Jun Chang (Geo Engr / Mines 5) (Fax No.: 2714 0193) (w/o)

ISO A1 594mm x 841mm
Approved:
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Designer:
Project Management Initials:



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CONSTRUCTION

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Development Department

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PROJECT NO.
60733229
AGREEMENT NO.
CE 79/2023 (GE)

SHEET TITLE
LAYOUT PLAN FOR
UNDERGROUND QUARRYING AT
TSING YI NORTH

SHEET NUMBER
60733229/5.8/FIGURE 1.1

Fw: CE 79/2023 (GE) TYNUQ - Request for Information of Chemical Waste Producer and Chemical Spillage Accident

heidihycheung@epd.gov.hk [REDACTED]

Wed 4/9/24 7:03 PM

To: Yan, Jonathan [REDACTED]

Cc: Ng, Chloe [REDACTED]; Fan, Alex [REDACTED]

"SI[RW]41"@Not_For_Reply_From_Internet.hksarg.hk <"SI[RW]41"@Not_For_Reply_From_Internet.hksarg.hk>;

"SI[RW]46"@Not_For_Reply_From_Internet.hksarg.hk <"SI[RW]46"@Not_For_Reply_From_Internet.hksarg.hk>

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Report Suspicious

Dear Mr. Yan,

According to our record, there is no reported chemical spillage / leakage incident within the concerned area. If you have any question, please let me know. Thanks.

Regards,

Heidi Cheung / E(RW)41

Tel: 2417 6067

----- Forwarded by Heidi HY CHEUNG/EPD/HKSARG on 04/09/2024 19:00 -----

From: Heidi HY CHEUNG/EPD/HKSARG E[RW]41

To: [REDACTED]

Cc: "Ng, Chloe" [REDACTED], "Fan, Alex" [REDACTED], CI[RW]4, I[TC]51

Date: 29/08/2024 17:46

Subject: Fw: CE 79/2023 (GE) TYNUQ - Request for Information of Chemical Waste Producer and Chemical Spillage Accident

Dear Mr. Yan,

Thank you for your email. While this office is checking for records of accidents of spillage / leakage of chemicals within the Concerned Area, you may contact Mr. K.H. LO at [REDACTED] for making an appointment to view the records of Chemical Waste Producers (CWPs) at the Territory Control Office.

We will get back to you for the records of accidents of spillage / leakage of chemicals.
Thank you.

Regards,

Heidi Cheung / E(RW)41

Regional Office (West)

Tel: 2417 6067

----- Forwarded by Heidi HY CHEUNG/EPD/HKSARG on 29/08/2024 16:36 -----

----- Forwarded by TM POON/EPD/HKSARG on 28-08-24 04:32 PM -----

From: "Yan, Jonathan" [REDACTED]
To: [REDACTED]
Cc: [REDACTED], "Bridges, Guy" [REDACTED], "Fong, Matthew"
[REDACTED], "Lee, Chevonne" [REDACTED], "Ng, Chloe" [REDACTED], "Fan, Alex"
[REDACTED], "Chu, Isaac" [REDACTED], CE79/2023_TYNUQ [REDACTED]
Date: 28-08-24 04:29 PM
Subject: CE 79/2023 (GE) TYNUQ - Request for Information of Chemical Waste Producer and Chemical Spillage Accident

Dear Sir,

Agreement No. CE 79/2023 (GE)

Underground Quarrying at Tsing Yi North – Investigation, Design and Construction

Request for Information of Chemical Waste Producer and Chemical Spillage Accident

We are the Consultants commissioned by the Civil Engineering and Development Department (CEDD) to undertake the captioned consultancy Assignment. A copy of the memo from GEO ref. CEDD MIN-30-2020-26-1 dated on 12 June 2024 regarding the appointment is attached for your reference. Figure 1.1 showing the boundary of the project site is enclosed. A hard copy is being delivered to your office.

As part of the land contamination assessment and following the Practice Guide for Investigation and Remediation of Contaminated Land issued by EPD, we have to collect historical information regarding the past and present activities of the site. In order to facilitate our assessment, we would like to request for the following information regarding the captioned Concerned Area:

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2. Reported accidents of spillage / leakage of chemicals within the Concerned Area.

We would be grateful if you can reply to the above on or before 6 September 2024. Should you have any inquiries or require any further information, please do not hesitate to contact our Ms. Chloe Ng at [REDACTED] or Mr. Alex Fan at [REDACTED]
[REDACTED]

Regards,

Jonathan Yan FGS CGeol MIMMM CEng RoGEP NECREg
Associate, Geotechnical, Hong Kong
[REDACTED]

AECOM

9/F, Tower 2, Grand Central Plaza, 138 Shatin Rural Committee Road,
Shatin, New Territories, Hong Kong



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(See attached file: 2024004049G.pdf)

Re: CE 79/2023 (GE) TYNUQ - Request for Information of Chemical Waste Producer and Chemical Spillage Accident

From heidihycheung@epd.gov.hk [REDACTED]
Date Tue 22/4/25 10:27 AM
To Fan, Alex [REDACTED]
Cc Ng, Chloe [REDACTED]; Chu, Isaac [REDACTED]; Tso, Lawrence Shiu Heng [REDACTED]; "CI[RW]4"@Not_For_Reply_From_Internet.hksarg.hk <"CI[RW]4"@Not_For_Reply_From_Internet.hksarg.hk>; "I[TC]51"@Not_For_Reply_From_Internet.hksarg.hk <"I[TC]51"@Not_For_Reply_From_Internet.hksarg.hk>

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Dear Mr. Fan,

Re. Item 1 in your email below, you may contact Mr. K.H. LO at [REDACTED] for making an appointment to view the records of Chemical Waste Producers (CWPs) at the Territory Control Office.

Re. Item 2- According to this office's record, there is no reported chemical spillage / leakage incident within the concerned area / project site.

Thank you.

Regards,
Heidi Cheung / E(RW)41
Tel: [REDACTED]

From: "Fan, Alex" [REDACTED]
To: [REDACTED]
Cc: "Tso, Lawrence Shiu Heng" [REDACTED], "Ng, Chloe" [REDACTED], "Chu, Isaac" [REDACTED]
[REDACTED]
Date: 02/04/2025 10:36
Subject: Re: CE 79/2023 (GE) TYNUQ - Request for Information of Chemical Waste Producer and Chemical Spillage Accident

Dear Dr Cheung,

I refer to your email reply dated 4 September 2024, regarding our captioned information request. We would like to request for the following information regarding the updated boundary of the project site as indicated in **Figure 1.3** as attached:

1. Current and past (as early as the records are available) registered Chemical Waste Producer(s) within the updated boundary of the project site (preferably with the registration date, status (moved out or active), nature and quantity of the chemical waste); and
 2. Reported accidents of spillage / leakage of chemicals within the updated boundary of the project site.
- Due to tight study programme, grateful if you could provide the information by 11 April 2025.

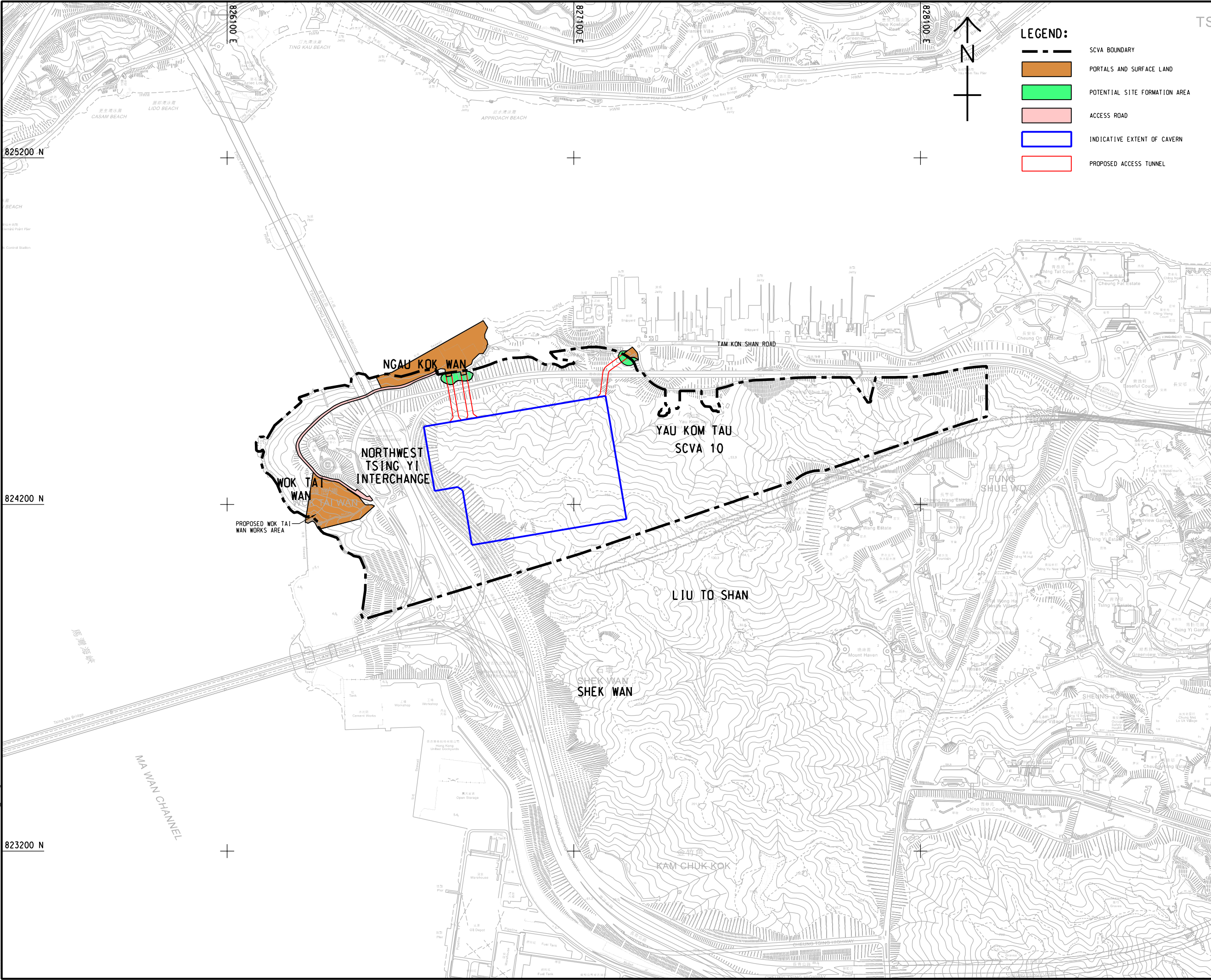
Please feel free to contact our Ms. Chloe Ng at [REDACTED] or Mr. Alex Fan at [REDACTED]
[REDACTED] should you have any queries.

Thank you very much for your kind assistance.

Best regards,

Alex Fan

ISO A1 594mm x 841mm
Approved:
Checked:
Designer:
Project Management Initials:



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Development Department

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PROJECT NO.
60733229
AGREEMENT NO.
CE 79/2023 (GE)

SHEET TITLE
LAYOUT PLAN FOR
UNDERGROUND QUARRYING AT
TSING YI NORTH

SHEET NUMBER
60733229/B19/FIGURE 1.3

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Plot File by: Zhengyi
PATH P:\PROJECTS\60733229\DRAWING\REPORT\B19\B19_303.dgn

Fw: CE 79/2023 (GE) TYNUQ - Request for Information of Chemical Waste Producer and Chemical Spillage Accident

From: [REDACTED]
Sent: Wednesday, October 22, 2025 2:35 PM
To: Fan, Alex [REDACTED]
Cc: Tam, Ariel [REDACTED]; Lau, Charlotte [REDACTED]; Ng, Chloe [REDACTED]; Chu, Isaac [REDACTED]; Tso, Lawrence Shiu Heng [REDACTED]
Subject: Re: CE 79/2023 (GE) TYNUQ - Request for Information of Chemical Waste Producer and Chemical Spillage Accident

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Dear Mr. Fan,

Re. Item 1 in your email below, you may contact Mr. K.H. LO at [REDACTED] for making an appointment to view the records of Chemical Waste Producers (CWPs) at the Territory Control Office.

Re. Item 2- According to this office's record, there is no reported chemical spillage / leakage incident within the concerned area / project site.

Thank you.

Regards,
Heidi Cheung / E(RW)41
Tel: [REDACTED]

From: "Fan, Alex" [REDACTED]
To: [REDACTED]
Cc: "Tso, Lawrence Shiu Heng" [REDACTED], "Ng, Chloe" [REDACTED], "Tam, Ariel" [REDACTED], "Chu, Isaac" [REDACTED], "Lau, Charlotte" [REDACTED]

Date: 15/10/2025 15:26

Subject: Re: CE 79/2023 (GE) TYNUQ - Request for Information of Chemical Waste Producer and Chemical Spillage Accident

Dear Dr. Cheung,

I refer to your email reply dated 22 April 2025, regarding our captioned information request. We would like to request for the following information regarding the updated boundary of the project site as indicated in **Figure 2.01** as attached:

1. Current and past (as early as the records are available) registered Chemical Waste Producer(s) within the updated boundary of the project site (preferably with the registration date, status (moved out or active), nature and quantity of the chemical waste); and
2. Reported accidents of spillage / leakage of chemicals within the updated boundary of the project site.

Due to tight study programme, grateful if you could provide the information by 22 October 2025.

Please feel free to contact our Ms. Ariel Tam at [REDACTED] or Mr. Alex Fan at [REDACTED] should you have any queries.

Thank you very much for your kind assistance.

Best regards,

Alex Fan

Assistant Environmental Consultant, Environment, Hong Kong

[REDACTED]
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From: [REDACTED]

Sent: Tuesday, April 22, 2025 10:23 AM

To: Fan, Alex [REDACTED]

Cc: Ng, Chloe [REDACTED]; Chu, Isaac [REDACTED]; Tso, Lawrence Shiu Heng [REDACTED]

[REDACTED]; "CI[RW]4"@Not_For_Reply_From_Internet.hksarg.hk

<"CI[RW]4"@Not_For_Reply_From_Internet.hksarg.hk>;

"I[TC]51"@Not_For_Reply_From_Internet.hksarg.hk <"I[TC]51"@Not_For_Reply_From_Internet.hksarg.hk>

Subject: Re: CE 79/2023 (GE) TYNUQ - Request for Information of Chemical Waste Producer and Chemical Spillage Accident

Dear Mr. Fan,

Re. Item 1 in your email below, you may contact Mr. K.H. LO at [REDACTED] for making an appointment to view the records of Chemical Waste Producers (CWPs) at the Territory Control Office.

Re. Item 2- According to this office's record, there is no reported chemical spillage / leakage incident within the concerned area / project site.

Thank you.

Regards,
Heidi Cheung / E(RW)41
Tel: [REDACTED]

From: "Fan, Alex" [REDACTED]
To: [REDACTED]
Cc: "Tso, Lawrence Shiu Heng" [REDACTED], "Ng, Chloe" [REDACTED], "Chu, Isaac" [REDACTED]
Date: 02/04/2025 10:36
Subject: Re: CE 79/2023 (GE) TYNUQ - Request for Information of Chemical Waste Producer and Chemical Spillage Accident

Dear Dr Cheung,

I refer to your email reply dated 4 September 2024, regarding our captioned information request. We would like to request for the following information regarding the updated boundary of the project site as indicated in **Figure 1.3** as attached:

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Please feel free to contact our Ms. Chloe Ng at [REDACTED] or Mr. Alex Fan at [REDACTED] should you have any queries.

Thank you very much for your kind assistance.

Best regards,

Alex Fan

Graduate Environmental Consultant, Environment, Hong Kong

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From: [REDACTED]
Sent: Wednesday, September 4, 2024 7:00 PM
To: Yan, Jonathan
Cc: Ng, Chloe; Fan, Alex; "SI[RW]41"@Not_For_Reply_From_Internet.hksarg.hk;
"SI[RW]46"@Not_For_Reply_From_Internet.hksarg.hk
Subject: Fw: CE 79/2023 (GE) TYNUQ - Request for Information of Chemical Waste Producer and Chemical Spillage Accident

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Regards,
Heidi Cheung / E(RW)41
Tel: [REDACTED]

----- Forwarded by Heidi HY CHEUNG/EPD/HKSARG on 04/09/2024 19:00 -----

From: Heidi HY CHEUNG/EPD/HKSARG E[RW]41
To: [REDACTED]
Cc: "Ng, Chloe" [REDACTED], "Fan, Alex" [REDACTED], CI[RW]4, I[TC]51
Date: 29/08/2024 17:46
Subject: Fw: CE 79/2023 (GE) TYNUQ - Request for Information of Chemical Waste Producer and Chemical Spillage Accident

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We will get back to you for the records of accidents of spillage / leakage of chemicals. Thank you.

Regards,
Heidi Cheung / E(RW)41
Regional Office (West)
Tel: [REDACTED]

----- Forwarded by Heidi HY CHEUNG/EPD/HKSARG on 29/08/2024 16:36 -----

----- Forwarded by TM POON/EPD/HKSARG on 28-08-24 04:32 PM -----

From: "Yan, Jonathan" [REDACTED]

To: "tmpoon@epd.gov.hk" [REDACTED]

Cc: [REDACTED], "Bridges, Guy" [REDACTED], "Fong, Matthew" [REDACTED], "Lee, Chevonne" [REDACTED], "Ng, Chloe" [REDACTED], "Fan, Alex" [REDACTED], "Chu, Isaac" [REDACTED]

[REDACTED], CE79/2023_TYNUQ [REDACTED]

Date: 28-08-24 04:29 PM

Subject: CE 79/2023 (GE) TYNUQ - Request for Information of Chemical Waste Producer and Chemical Spillage Accident

Dear Sir,

Agreement No. CE 79/2023 (GE)

Underground Quarrying at Tsing Yi North – Investigation, Design and Construction

Request for Information of Chemical Waste Producer and Chemical Spillage Accident

We are the Consultants commissioned by the Civil Engineering and Development Department (CEDD) to undertake the captioned consultancy Assignment. A copy of the memo from GEO ref. CEDD MIN-30-2020-26-1 dated on 12 June 2024 regarding the appointment is attached for your reference. Figure 1.1 showing the boundary of the project site is enclosed. A hard copy is being delivered to your office.

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2. Reported accidents of spillage / leakage of chemicals within the Concerned Area.

We would be grateful if you can reply to the above on or before 6 September 2024. Should you have any inquiries or require any further information, please do not hesitate to contact our Ms. Chloe Ng at [REDACTED] or Mr. Alex Fan at [REDACTED].

Regards,

Jonathan Yan FGS CGeol MIMMM CEng RoGEP NECREg

Associate, Geotechnical, Hong Kong

[REDACTED]

AECOM

9/F, Tower 2, Grand Central Plaza, 138 Shatin Rural Committee Road,
Shatin, New Territories, Hong Kong



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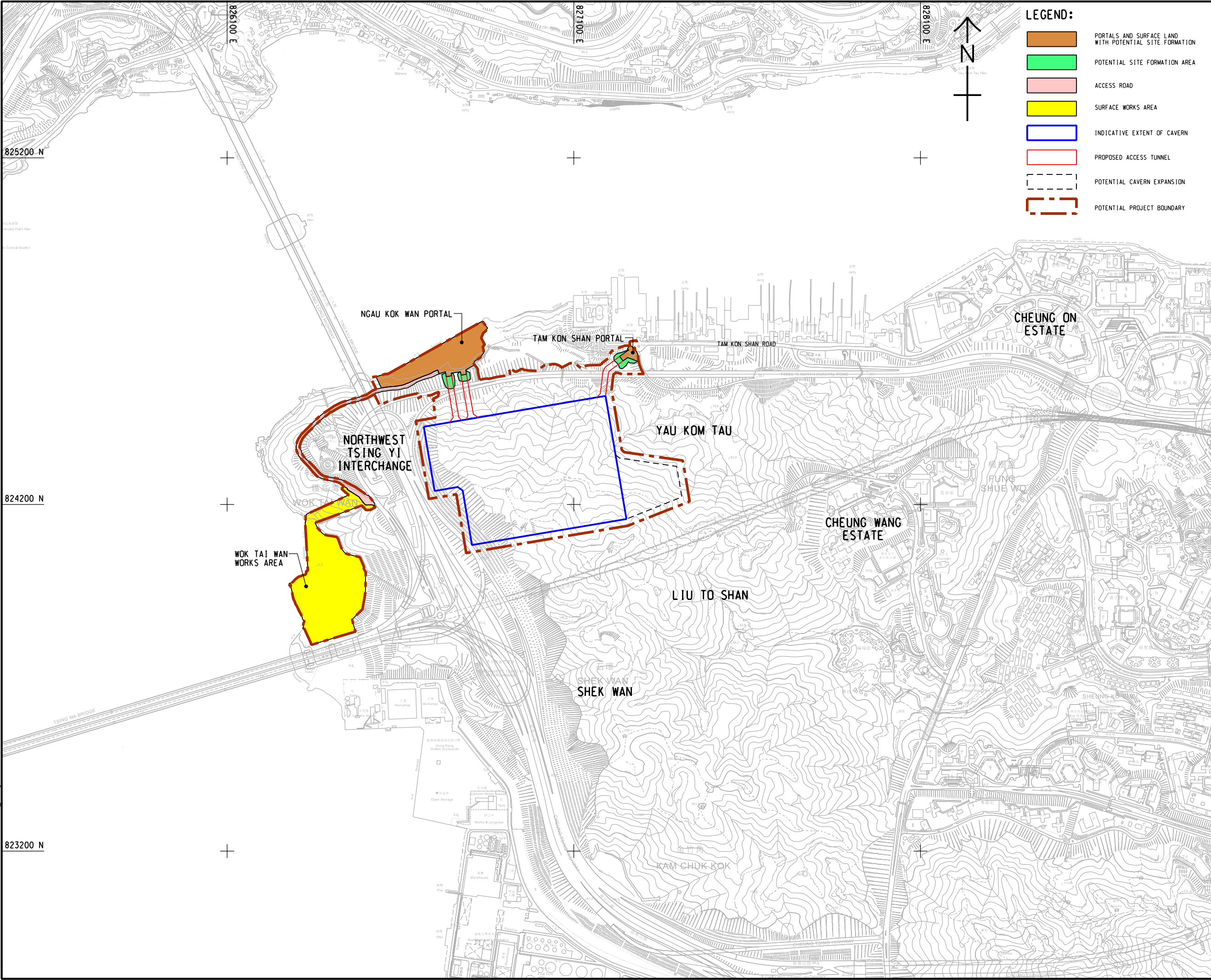
(See attached file: 2024004049G.pdf)

[attachment "Figure 1.3.pdf" deleted by Heidi HY CHEUNG/EPD/HKSARG]

[attachment "Figure 2.01.pdf" deleted by Heidi HY CHEUNG/EPD/HKSARG]

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Checked:
Designer:
Project Management Initials:

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Plot File by: LiuJ15
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PROJECT
UNDERGROUND
QUARRYING AT
TSING YI NORTH –
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DESIGN AND
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CLIENT
土木 工程 拓展 署
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Development Department

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KEY PLAN	

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60733229	CE 79/2023 (GE)
SHEET TITLE	
LOCATION OF THE PROJECT	
SHEET NUMBER	
60733229/B19/FIGURE 2.01	

Our Ref: GDCB:JYCT:kbs:60733229/2.5/2024004048G

26 August 2024

By Email and By Hand

Mr. TANG Wing Wah (Assistant Director (Licensing & Certification))
Fire Services Department
Licensing and Certification Command
5/F, South Wing, Fire Services Headquarters Building,
1 Hong Chong Road,
Kowloon

Dear Sir,

Agreement No. CE 79/2023 (GE)
Underground Quarrying at Tsing Yi North – Investigation, Design and Construction

Request for Information about Dangerous Goods Store and Incidents Records

We are the Consultants commissioned by the Civil Engineering and Development Department (CEDD) to undertake the captioned consultancy Assignment. A copy of the memo from GEO ref. CEDD MIN-30-2020-26-1 dated on 12 June 2024 regarding the appointment is attached for your reference. Figure 1.1 showing the boundary of the project site is enclosed.

As a part of the land contamination assessment and following the *Practice Guide for Investigation and Remediation of Contaminated Land* issued by EPD, we have to collect historical information regarding the past and present activities of the site. In order to facilitate our assessment, we would like to request for the following information regarding the captioned Concerned Area:

1. Records of current and past (as early as the records are available) registration of Dangerous Goods storage (with type of dangerous goods, storage method, quantity, licence no., date of issue and storage location) within the Concerned Area;
2. Any records of reported accidents of spillage/leakage of dangerous goods stored within the Concerned Area; and
3. Any records of fire incidents within the Concerned Area.

We would be grateful if you can reply to the above on or before 6 September 2024. Should you have any inquiries or require any further information, please do not hesitate to contact our Ms. Chloe Ng at [REDACTED] or Mr. Alex Fan at [REDACTED].

Yours faithfully,
AECOM Asia Co. Ltd.

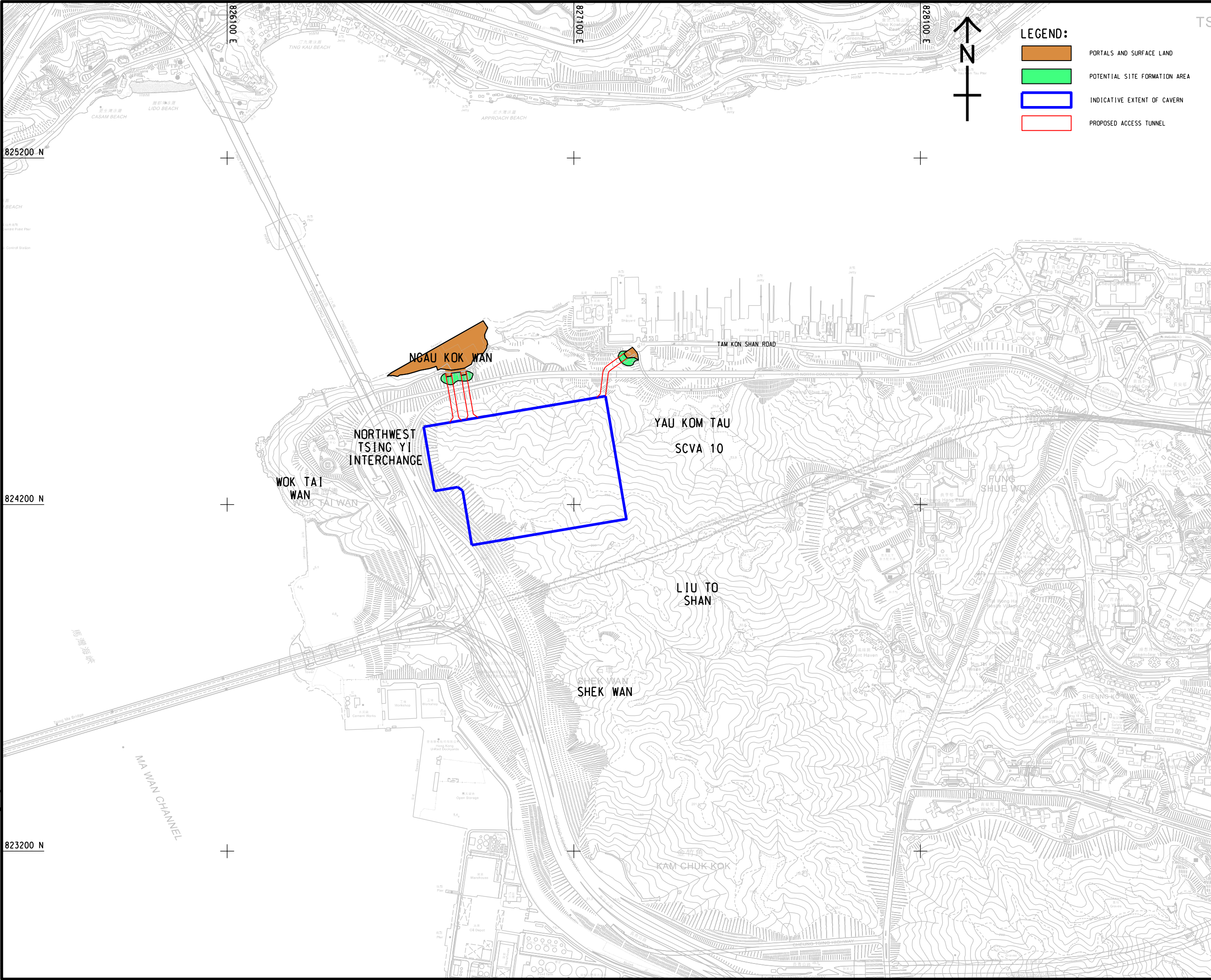


Guy Bridges
Project Director

Encl.

c.c. CEDD/GEO/Mines - Attn: Mr. LIU Jun Chang (Geo Engr / Mines 5) (Fax No.: 2714 0193) (w/o)

ISO A1 594mm x 841mm
Approved:
Checked:
Designer:
Project Management Initials:



LEGEND:

- PORTALS AND SURFACE LAND
- POTENTIAL SITE FORMATION AREA
- INDICATIVE EXTENT OF CAVERN
- PROPOSED ACCESS TUNNEL

AECOM

PROJECT
UNDERGROUND QUARRYING AT TSING YI NORTH – INVESTIGATION, DESIGN AND CONSTRUCTION

CLIENT
土木工程拓展署
Civil Engineering and Development Department

CONSULTANT
AECOM Asia Company Ltd.
www.aecom.com

ISSUE/REVISION			
I/R	DATE	DESCRIPTION	CHK.

SCALE	DIMENSION UNIT
A3 1: 10000	METRES
KEY PLAN	N.T.S

PROJECT NO.
60733229

AGREEMENT NO.
CE 79/2023 (GE)

SHEET TITLE
LAYOUT PLAN FOR UNDERGROUND QUARRYING AT TSING YI NORTH

SHEET NUMBER
60733229/5.8/FIGURE 1.1

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Plot File By: Wang52
23/8/2024
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消防處

香港九龍尖沙咀東部康莊道1號
消防處總部大廈



FIRE SERVICES DEPARTMENT
FIRE SERVICES HEADQUARTERS BUILDING,
No.1 Hong Chong Road,
Tsim Sha Tsui East, Kowloon,
Hong Kong.

本處檔號 OUR REF. : (61) in FSD GR 6-5/4 R Pt. 55
來函檔號 YOUR REF. : GDCB:JYCT:kbs:60733229/2.5/2024004048G
電子郵件 E-mail : hkfsdenq@hkfsd.gov.hk
圖文傳真 FAX NO. : 2988 1196
電話 TEL NO. : 2733 7896

26 September 2024

AECOM Asia Co. Ltd
12/F, Grand Central Plaza, Tower 2,
138 Shatin Rural Committee Road,
Shatin, Hong Kong.
(Attn: Mr. Guy BRIDGES, Project Director)

Dear Mr. BRIDGES,

Agreement No. CE 79/2023 (GE)
Underground Quarrying at Tsing Yi North –
Investigation, Design and Construction
Request for Information of Dangerous Goods & Incident Records

I refer to your letter of 26.8.2024 regarding the captioned request and reply below in response to your questions:-

1. No Dangerous Goods Licence was issued in respect of the captioned address.
2. A total of 2 incident records were found at the subject location. Please refer to **Appendix A** for details.

If you have further questions, please feel free to contact the undersigned.

Yours sincerely,

(AU Ting-hin)
for Director of Fire Services

Agreement No. CE 79/2023 (GE)
Underground Quarrying at Tsing Yi North –
Investigation, Design and Construction
Request for Information of Dangerous Goods & Incident Records

No.	Date	Type of Incident	Address
1	6/3/2023	Mountain Rescue	Hillsides near UT JK997754 of Tsing Yi Nature Trail
2.	10/6/2024	Mountain Rescue	Hillsides near UT KK000755 of TYI Nature Trails

Re: Fw: Fw: Agreement No. CE 79/2023 (GE) Underground Quarrying at Tsing Yi North – IDC – Request for Information of DG and Incident Records - Further Enquiries

From [REDACTED]

on behalf of

[REDACTED]

Date Tue 6/5/25 7:56 PM

To Fan, Alex [REDACTED]

Cc OE8 CS/FSD [REDACTED]

 2 attachments (180 KB)

(18)_Pt 58_ MC-incident_appendix A.pdf; (18)_Pt 58_ MC-incident_appendix A.pdf;

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This message came from outside your organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Report Suspicious

Our reference: (18) in FSD GR 6-5/4 R Pt. 58

Your reference: GDCB:JYCT:kbs:60733229/2.5/2024004048G

Dear Mr. FAN,

Underground Quarrying at Tsing Yi North – Investigation, Design and Construction
Request for Information of Dangerous Goods & Incident Records

I refer to your email of 2.4.2025 regarding the captioned request and reply below in response to your questions:-

1. No Dangerous Goods Licence was issued in respect of the captioned address.
2. A total of 2 incident records were found at the subject location. Please refer to Appendix A for details.

(File-Checksum-00000001)

If you have further questions, please feel free to contact the undersigned.

Best regards,

CHOW Yin-hei
Assistant Divisional Officer (Legal Affairs)
Corporate Services Division

Fire Services Department

Tel.: [REDACTED]

Remark:

Lift incidents are excluded unless otherwise required.

Disclaimer:

**Fire Services Department uses its best endeavor to ensure the accuracy and reliability of the information provided, but cannot guarantee its accuracy and reliability and accepts no liability of any nature for any loss or damage arising from any inaccuracies or omissions that may from the information provided.*

From: yin_hei CHOW [REDACTED] on behalf of ADO LEA CS [REDACTED]

Sent: Wednesday, April 2, 2025 19:16

To: Fan, Alex

Cc: OE8 CS/FSD

Subject: Re: Fw: Agreement No. CE 79/2023 (GE) Underground Quarrying at Tsing Yi North – IDC – Request for Information of DG and Incident Records - Further Enquiries

Our reference: (18) in FSD GR 6-5/4 R Pt. 58

Your reference: GDCB:JYCT:kbs:60733229/2.5/2024004048G

Dear Mr. FAN,

Underground Quarrying at Tsing Yi North – Investigation, Design and Construction
Request for Information of Dangerous Goods & Incident Records

I refer to your email of 2.4.2025 regarding the captioned subject.

Your case is being handled, and a reply will be furnished to you as soon as possible. Please be advised that due to time lapse, this Department can only provide the following information for your requested information:

- (i) Dangerous Goods Licence Record: from the year of 1990 to present moment.
- (ii) Incident Record: Past three years of fire and special services incidents. Lift trapping incidents will be excluded unless otherwise required.

Should you have further questions, please feel free to contact the undersigned.

Best regards,

CHOW Yin-hei
Assistant Divisional Officer (Legal Affairs)
Corporate Services Division
Fire Services Department

Tel.: [REDACTED]

----- Forwarded by FSD Enquiry/FSD/HKSARG on 02/04/2025 12:24 -----

Agreement No. CE 79/2023 (GE) Underground Quarrying at Tsing Yi North – IDC – Request for Information of DG and Incident Records - Further Enquiries

02/04/2025 11:09

From: "Fan, Alex" [REDACTED]

To: [REDACTED]

Cc: "Tso, Lawrence Shiu Heng" <[REDACTED]>, "Ng, Chloe" <[REDACTED]>, "Chu, Isaac" <[REDACTED]>

Dear Mr Au,

I refer to your reply with ref.: (61) in FSD GR 6-5/4 R Pt. 55 dated 26 September 2024, regarding our captioned information request. We would like to request for the following information regarding the updated boundary of the project site as indicated in **Figure 1.3** as attached:

1. Records of current and past (as early as the records are available) registration of Dangerous Goods storage (with type of dangerous goods, storage method, quantity, licence no., date of issue and storage location) within the updated boundary of the project site;
2. Any records of reported accidents of spillage/leakage of dangerous goods stored within the updated boundary of the project site; and
3. Any records of fire incidents within the updated boundary of the project site.

Attached the letter for your reference. Due to tight study programme, grateful if you could provide the information by 11 April 2025.

Please feel free to contact our Ms. Chloe Ng at [REDACTED] or Mr. Alex Fan at [REDACTED] should you have any queries.

Thank you very much for your kind assistance.

Best regards,

Alex Fan

Graduate Environmental Consultant, Environment, Hong Kong

[REDACTED]

[REDACTED]

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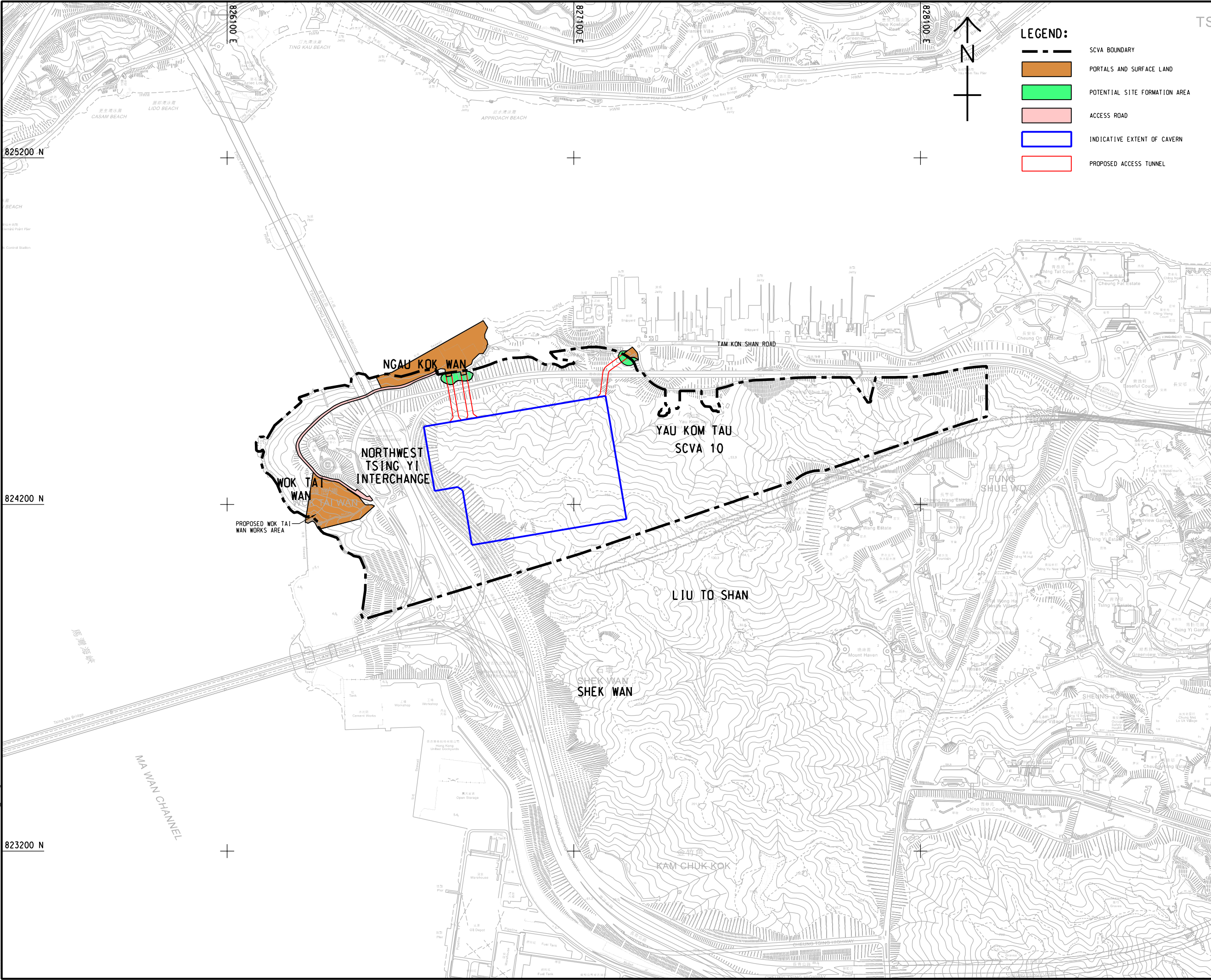
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[attachment "Figure 1.3.pdf" deleted by yin_hei CHOW/FSD/HKSARG] [attachment "FSD Reply_20240926.pdf" deleted by yin_hei CHOW/FSD/HKSARG]

[attachment "(18)_Pt 58_ MC-incident_appendix A.pdf" deleted by yin_hei CHOW/FSD/HKSARG]
(File-Checksum-00000002)

ISO A1 594mm x 841mm
Approved:
Checked:
Designer:
Project Management Initials:



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PROJECT
UNDERGROUND
QUARRYING AT
TSING YI NORTH –
INVESTIGATION,
DESIGN AND
CONSTRUCTION

CLIENT
土木工 程 拓 展 署
Civil Engineering and
Development Department

CONSULTANT
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ISSUE/REVISION
設計

I/R	DATE	DESCRIPTION	CHK.

STATUS
NOT

SCALE
比例

DIMENSION UNIT
尺寸單位

A3 1 : 10000 METRES

KEY PLAN N.T.S

PROJECT NO.
項目編號

AGREEMENT NO.
協議編號

60733229 CE 79/2023 (GE)

SHEET TITLE
圖紙名稱

LAYOUT PLAN FOR
UNDERGROUND QUARRYING AT
TSING YI NORTH

SHEET NUMBER
圖紙編號

60733229/B19/FIGURE 1.3

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Underground Quarrying at Tsing Yi North
– Investigation, Design and Construction
Request for Information of Dangerous Goods & Incident Records

No.	Date	Type of Incident	Address
1	10/6/2024	Special service (Mountain Rescue)	Hillside \UT KK000755 of Tsing Yi Nature Trail
2	6/3/2023	Special service (Mountain Rescue)	Near Hillside \UT JK997754 of Tsing Yi Nature Trail

Re: Fw: Fw: Fw: Agreement No. CE 79/2023 (GE) Underground Quarrying at Tsing Yi North – IDC – Request for Information of DG and Incident Records - Further Enquiries

From [REDACTED]
Date Wed 22/10/25 3:57 PM
To Fan, Alex [REDACTED]
Cc OE8 CS/FSD [REDACTED]

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This message came from outside your organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Report Suspicious

Dear Mr. FAN,

Please be informed that the captioned case did not involved any DG / chemicals.

Best regards,

LEE Yeung, Darwin
Assistant Divisional Officer (Legal Affairs) (Acting)
National Security and Legal Affairs Group
Corporate Services Division
Fire Services Department
Tel. [REDACTED]

From: "Fan, Alex" [REDACTED]
To: [REDACTED]
Cc: "OE8 CS/FSD" <[REDACTED]>, "Tso, Lawrence Shiu Heng" <[REDACTED]>, "Tam, Ariel" <[REDACTED]>, "Chu, Isaac" <[REDACTED]>, "Lau, Charlotte" <[REDACTED]>
<[REDACTED]>
Date: 2025/10/22 下午 03:10
Subject: Re: Fw: Fw: Fw: Agreement No. CE 79/2023 (GE) Underground Quarrying at Tsing Yi North – IDC – Request for Information of DG and Incident Records - Further Enquiries

Dear Mr. Lee,

I refer to your email reply below with reference (4) in FSD GR 6-5/4 R Pt.61. Refer to the incident below, could you provide us the following information as italic?

No.	Date	Address / Lamp Post No.	Type of Incident	Enquiry
1.	9/7/2025	Near Lamppost AC1725, Near Tam Kon Shan Road	Electrical Fire	<i>Would like to confirm if any DG / chemicals was involved in the accident</i>

Please feel free to contact us should you have any queries. Thank you.

Best regards,

Alex Fan

Assistant Environmental Consultant, Environment, Hong Kong

[REDACTED]
[REDACTED]

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From: [REDACTED]
Sent: Wednesday, October 22, 2025 2:18 PM
To: Fan, Alex [REDACTED]
Cc: OE8 CS/FSD [REDACTED]

Subject: Re: Fw: Fw: Fw: Agreement No. CE 79/2023 (GE) Underground Quarrying at Tsing Yi North – IDC – Request for Information of DG and Incident Records - Further Enquiries

Our reference: (4) in FSD GR 6-5/4 R Pt. 61 Your reference: - Dear Mr. FAN, Underground Quarrying at Tsing Yi North – Investigation, Design and Construction Request for Information – Dangerous Goods Record and Records of accidents of spillage/leakage

Our reference: (4) in FSD GR 6-5/4 R Pt. 61

Your reference: -

Dear Mr. FAN,

Underground Quarrying at Tsing Yi North – Investigation, Design and Construction
Request for Information – Dangerous Goods Record and Records of accidents of spillage/leakage

I refer to your email of 15.10.2025 regarding the captioned request and reply below in response to your questions:-

1. No Dangerous Goods Licence was issued in respect of the captioned address.
2. A total of 6 incident records were found at the subject location. Please refer to Appendix A for details.

If you have further questions, please feel free to contact the undersigned.

Best regards,

LEE Yeung, Darwin
Assistant Divisional Officer (Legal Affairs) (Acting)
Corporate Services Division
Fire Services Department

Tel.: [REDACTED]

Remark:

Lift incidents are excluded unless otherwise required.

Disclaimer:

**Fire Services Department uses its best endeavor to ensure the accuracy and reliability of the information provided, but cannot guarantee its accuracy and reliability and accepts no liability of any nature for any loss or damage arising from any inaccuracies or omissions that may from the information provided.*

From: Fan, Alex [REDACTED]
Sent: Friday, October 17, 2025 15:04
To: ADO LEA CS/FSD
Cc: OE8 CS/FSD; Tso, Lawrence Shiu Heng; Tam, Ariel; Chu, Isaac; Lau, Charlotte
Subject: Re: Fw: Fw: Agreement No. CE 79/2023 (GE) Underground Quarrying at Tsing Yi North – IDC – Request for Information of DG and Incident Records - Further Enquiries

Dear Mr. Lee,

I refer to your email reply below with reference (4) in FSD GR 6-5/4 R Pt. 61. Please find attached a copy of memo from GEO regarding the appointment for your reference. Please feel free to contact us should you have any queries. Thank you.

Best regards,

Alex Fan
Assistant Environmental Consultant, Environment, Hong Kong
[REDACTED]
[REDACTED]

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From: [REDACTED]
Sent: Friday, October 17, 2025 2:33 PM
To: Fan, Alex [REDACTED]
Cc: OE8 CS/FSD [REDACTED]
Subject: Re: Fw: Fw: Agreement No. CE 79/2023 (GE) Underground Quarrying at Tsing Yi North – IDC – Request for Information of DG and Incident Records - Further Enquiries

Our reference: (4) in FSD GR 6-5/4 R Pt. 61 Your reference: - Dear Mr. FAN, Underground Quarrying at Tsing Yi North – Investigation, Design and Construction Request for Information – Dangerous Goods Record and Records of accidents of spillage/leakage

Our reference: (4) in FSD GR 6-5/4 R Pt. 61

Your reference: -

Dear Mr. FAN,

Underground Quarrying at Tsing Yi North – Investigation, Design and Construction
Request for Information – Dangerous Goods Record and Records of accidents of spillage/leakage

I refer to your email on 15.10.2025 regarding the captioned subject.

Your case is being handled, and a reply will be furnished to you as soon as possible. Please be advised that due to time lapse, this Department can only provide the following information for your requested information:

- (i) Dangerous Goods Licence Record: from the year of 1990 to present moment.
- (ii) Incident Record: Past three years of fire and special services incidents. Lift incidents will be excluded unless otherwise required.

Please also submit the appointment letter from your client for record.

Should you have further questions, please feel free to contact the undersigned.

Best regards,

LEE Yeung, Darwin
Assistant Divisional Officer (Legal Affairs)(Acting)
Corporate Services Division
Fire Services Department

Tel.: [REDACTED]

From: Fan, Alex [REDACTED]
Sent: Wednesday, October 15, 2025 15:43
To: ADO LEA CS/FSD
Cc: OE8 CS/FSD; Tso, Lawrence Shiu Heng; Ng, Chloe; Tam, Ariel; Chu, Isaac; Lau, Charlotte
Subject: Re: Fw: Fw: Agreement No. CE 79/2023 (GE) Underground Quarrying at Tsing Yi North – IDC – Request for Information of DG and Incident Records - Further Enquiries

Dear Mr Chow,

I refer to your email reply dated 6 May 2025, regarding our captioned information request. We would like to request for the following information regarding the updated boundary of the project site as indicated in **Figure 2.01** as attached:

1. Records of current and past (as early as the records are available) registration of Dangerous Goods storage (with type of dangerous goods, storage method, quantity, licence no., date of issue and storage location) within the updated boundary of the project site;
2. Any records of reported accidents of spillage/leakage of dangerous goods stored within the updated boundary of the project site; and
3. Any records of fire incidents within the updated boundary of the project site.

Due to tight study programme, grateful if you could provide the information by 22 October 2025.

Please feel free to contact our Ms. Ariel Tam at [REDACTED] or Mr. Alex Fan at [REDACTED] should you have any queries.
Thank you very much for your kind assistance.

Best regards,

Alex Fan
Assistant Environmental Consultant, Environment, Hong Kong
[REDACTED]
[REDACTED]
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From: [REDACTED] on behalf of [REDACTED]
Sent: Tuesday, May 6, 2025 7:55 PM
To: Fan, Alex [REDACTED]
Cc: OE8 CS/FSD [REDACTED]
Subject: Re: Fw: Fw: Agreement No. CE 79/2023 (GE) Underground Quarrying at Tsing Yi North – IDC – Request for Information of DG and Incident Records - Further Enquiries

Our reference: (18) in FSD GR 6-5/4 R Pt. 58 Your reference: GDCB:JYCT:kbs:60733229/2.5/2024004048G Dear Mr. FAN, Underground Quarrying at Tsing Yi North – Investigation, Design and Construction Request for Information of Dangerous Goods &
Our reference: (18) in FSD GR 6-5/4 R Pt. 58
Your reference: GDCB:JYCT:kbs:60733229/2.5/2024004048G

Dear Mr. FAN,

**Underground Quarrying at Tsing Yi North – Investigation, Design and Construction
Request for Information of Dangerous Goods & Incident Records**

I refer to your email of 2.4.2025 regarding the captioned request and reply below in response to your questions:-

1. No Dangerous Goods Licence was issued in respect of the captioned address.
2. A total of 2 incident records were found at the subject location. Please refer to Appendix A for details.

If you have further questions, please feel free to contact the undersigned.

Best regards,

CHOW Yin-hei
Assistant Divisional Officer (Legal Affairs)
Corporate Services Division
Fire Services Department

Tel.: [REDACTED]

Remark:

Lift incidents are excluded unless otherwise required.

Disclaimer:

**Fire Services Department uses its best endeavor to ensure the accuracy and reliability of the information provided, but cannot guarantee its accuracy and reliability and accepts no liability of any nature for any loss or damage arising from any inaccuracies or omissions that may from the information provided.*

From: yin_hei CHOW [REDACTED] on behalf of ADO LEA CS [REDACTED]
Sent: Wednesday, April 2, 2025 19:16
To: Fan, Alex
Cc: OE8 CS/FSD
Subject: Re: Fw: Agreement No. CE 79/2023 (GE) Underground Quarrying at Tsing Yi North – IDC – Request for Information of DG and Incident Records - Further Enquiries

Our reference: (18) in FSD GR 6-5/4 R Pt. 58
Your reference: GDCB:JYCT:kbs:60733229/2.5/2024004048G

Dear Mr. FAN,

Underground Quarrying at Tsing Yi North – Investigation, Design and Construction
Request for Information of Dangerous Goods & Incident Records

I refer to your email of 2.4.2025 regarding the captioned subject.

Your case is being handled, and a reply will be furnished to you as soon as possible. Please be advised that due to time lapse, this Department can only provide the following information for your requested information:

- (i) Dangerous Goods Licence Record: from the year of 1990 to present moment.
- (ii) Incident Record: Past three years of fire and special services incidents. Lift trapping incidents will be excluded unless otherwise required.

Should you have further questions, please feel free to contact the undersigned.

Best regards,

CHOW Yin-hei
Assistant Divisional Officer (Legal Affairs)
Corporate Services Division
Fire Services Department

Tel.: [REDACTED]

----- Forwarded by FSD Enquiry/FSD/HKSARG on 02/04/2025 12:24 -----

From: "Fan, Alex" <alex.fan@aecom.com>

To: "hkfsdenq@hkfsd.gov.hk" <hkfsdenq@hkfsd.gov.hk>

Cc: "Tso, Lawrence Shiu Heng" [REDACTED] "Ng, Chloe" [REDACTED] "Chu, Isaac" [REDACTED]

Dear Mr Au,

I refer to your reply with ref.: (61) in FSD GR 6-5/4 R Pt. 55 dated 26 September 2024, regarding our captioned information request. We would like to request for the following information regarding the updated boundary of the project site as indicated in **Figure 1.3** as attached:

1. Records of current and past (as early as the records are available) registration of Dangerous Goods storage (with type of dangerous goods, storage method, quantity, licence no., date of issue and storage location) within the updated boundary of the project site;
2. Any records of reported accidents of spillage/leakage of dangerous goods stored within the updated boundary of the project site; and
3. Any records of fire incidents within the updated boundary of the project site.

Attached the letter for your reference. Due to tight study programme, grateful if you could provide the information by 11 April 2025.

Please feel free to contact our Ms. Chloe Ng at [REDACTED] or Mr. Alex Fan at [REDACTED] should you have any queries.

Thank you very much for your kind assistance.

Best regards,

Alex Fan

Graduate Environmental Consultant, Environment, Hong Kong

[REDACTED]

[REDACTED]

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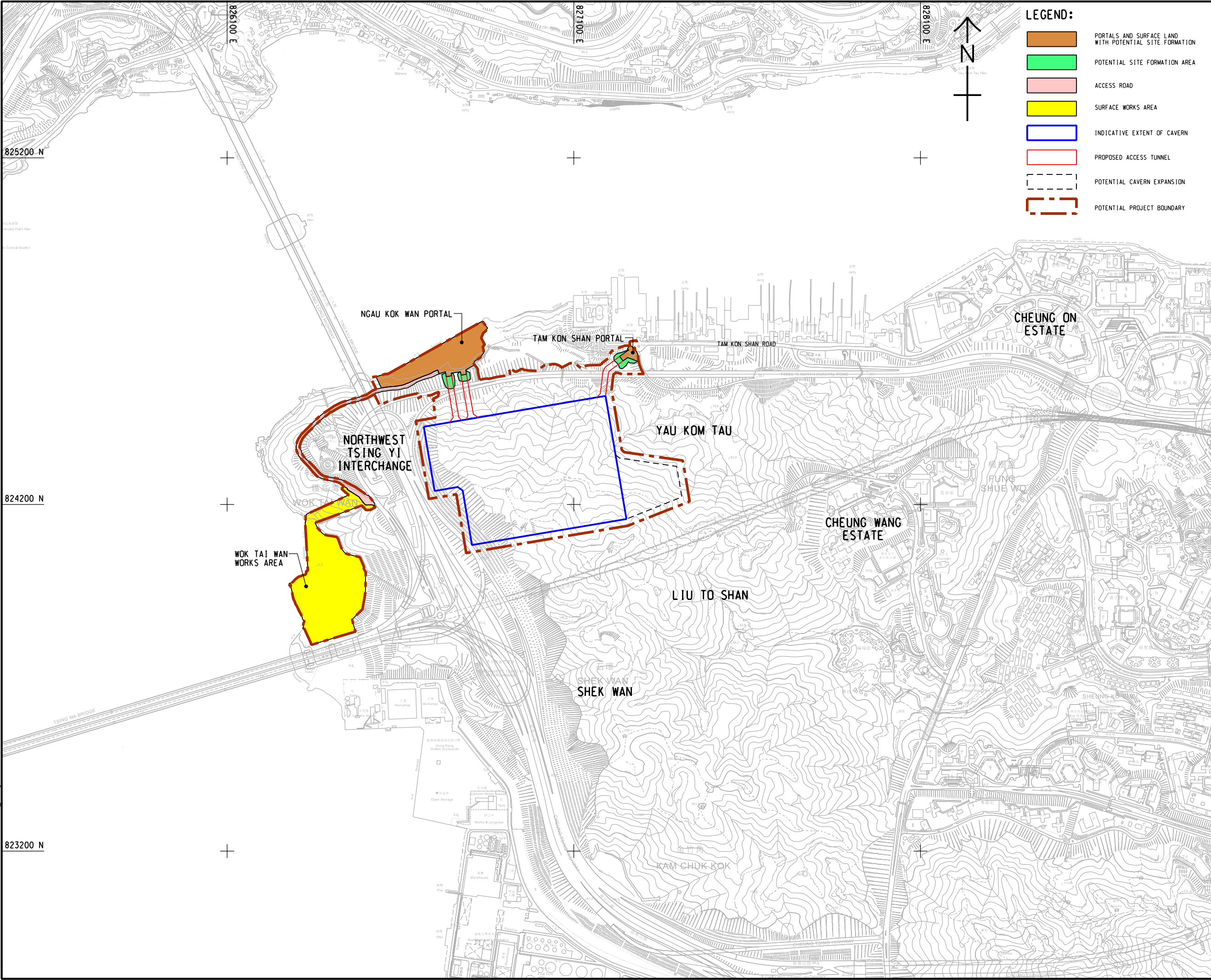
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[attachment "Figure 1.3.pdf" deleted by yin_hei CHOW/FSD/HKSARG] [attachment "FSD Reply_20240926.pdf" deleted by yin_hei CHOW/FSD/HKSARG]

[attachment "(18)_Pt 58_MC-incident_appendix A.pdf" deleted by yin_hei CHOW/FSD/HKSARG]

ISO A1 594mm x 841mm
Approved:
Checked:
Designer:
Project Management Initials:



PROJECT
UNDERGROUND
QUARRYING AT
TSING YI NORTH –
INVESTIGATION,
DESIGN AND
CONSTRUCTION

CLIENT
土木 工程 拓展 署
Civil Engineering and
Development Department

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ISSUE/REVISION			
I/R	DATE	DESCRIPTION	CHK.
STATUS			

SCALE	DIMENSION UNIT
A3 1 : 10000	METRES
KEY PLAN	

PROJECT NO.	AGREEMENT NO.
60733229	CE 79/2023 (GE)
SHEET TITLE	
LOCATION OF THE PROJECT	
SHEET NUMBER	
60733229/B19/FIGURE 2.01	

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Underground Quarrying at Tsing Yi North – Investigation, Design and Construction

Request for Information of Dangerous Goods & Incident Records

No.	Date	Type of Incident	Address
1	9/7/2025	Electrical Fire	Near Lamppost AC1725, Near Tam Kon Shan Road
2	14/9/2024	Mountain Rescue	Kiosk 5, UTM Grid Reference KK001751, Tsing Yi Nature Trail
3	10/6/2024	Mountain Rescue	Hillside, UTM Grid Reference KK000755, Tsing Yi Nature Trail
4	19/4/2024	No. 2 Alarm Fire	No. 80-82, Tam Kon Shan Road
5	5/8/2023	No. 1 Alarm Fire	Man Shun Shipyard, Tam Kon Shan Road
6	6/3/2023	Mountain Rescue	Hillside, UTM Grid Reference JK997754, Near Tsing Yi Nature Trail

Appendix 9.1

Appendix 9.1 Flora Species Recorded within the Assessment Area

Scientific Name	Common Name	Growth Form	Native / Exotic to Hong Kong	Distribution in Hong Kong ⁽¹⁾	Protection / Conservation Status ⁽²⁾	MWL	SL	PL	MWC	NWC	DA
<i>Acacia auriculiformis</i>	Ear-leaved Acacia	tree	exotic	Widely cultivated in Hong Kong	IUCN Red List: Least Concern	++		+			
<i>Acacia confusa</i>	Taiwan Acacia	tree	exotic	Widely cultivated in Hong Kong	IUCN Red List: Least Concern	+++		+++			+
<i>Acacia mangium</i>	Big-leaved Acacia	tree	exotic	Widely cultivated in Hong Kong	IUCN Red List: Least Concern	++	+	++			
<i>Adiantum flabellulatum</i>	Fan-leaved Maidenhair	herb	native	-	-	++	+	+			
<i>Adiantum malesianum</i>	Walking Maidenhair Fern	herb	native	-	-			+			
<i>Adina pilulifera</i>	Chinese Buttonbush	shrub or tree	native	Common in Hong Kong	IUCN Red List: Least Concern	+					
<i>Adinandra millettii</i>	Millett's Adinandra	shrub or small tree	native	Hong Kong Island, Sai Kung, Tai Mong Tsai, Ma On Shan, Fanling, Tai Lam Chung, Lantau Island	-	+					
<i>Allamanda schottii</i>	Small Allamanda	shrub	exotic	Commonly cultivated	-		+				
<i>Alocasia macrorrhizos</i>	Giant Alocasia	perennial herb	native	Common in Hong Kong	-	+	+	+	+		+
<i>Aloe vera</i>	Chinese Aloe	perennial herb	exotic	Cultivated	-			+			
<i>Alpinia zerumbet</i>	Shell Ginger	perennial herb	native	Common in Hong Kong	IUCN Red List: Data Deficient	+		+	+		
<i>Aporosa dioica</i>	Aporosa	tree	native	Common in Hong Kong	-	+					
<i>Aquilaria sinensis</i>	Incense Tree	tree	native	Common in Hong Kong	List of Wild Plants under State Protection: Category II; Protected under Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586); Rare and Precious Plants of Hong Kong (Status of China): Category 2 & 3 (Near Threatened); Listed in Wild Plants under State Protection: Category II; China Plant Red Data Book: Vulnerable; Rare and Endangered Plants and National Key Protected Plants in Guangdong: Near Threatened; Illustration of Rare and Endangered Plants in Guangdong Province; Threatened Species List of China's Higher Plants: Vulnerable; IUCN Red List: Vulnerable	+	+	+			
<i>Aralia chinensis</i>	-	tree	native	Common in Hong Kong	IUCN Red List: Vulnerable	+		+			
<i>Archidendron clypearia</i>	Monkey-pod	tree	native	Common in Hong Kong	IUCN Red List: Least Concern	+					
<i>Archidendron lucidum</i>	Chinese Apea Ear-ring	tree	native	Common in Hong Kong	IUCN Red List: Least Concern	+				+	
<i>Archontophoenix alexandrae</i>	Alexandra Palm	tree palm	exotic	Commonly cultivated	IUCN Red List: Least Concern		+				+
<i>Ardisia crenata</i>	Hilo Holly	shrub	native	Common in Hong Kong	-	+					
<i>Artocarpus heterophyllus</i>	Jackfruit	tree	exotic	Cultivated	-			+			
<i>Asparagus cochinchinensis</i>	Wild Asparagus	climbing herb	native	Common in Hong Kong	IUCN Red List: Data Deficient	+					
<i>Asparagus setaceus</i>	Asparagus Fern	-	exotic	-	-						+
<i>Asystasia micrantha</i>	-	perennial ascending herbs	exotic	Cultivated or naturalized	-	+		+			
<i>Atalantia buxifolia</i>	Box-leaved Atalantia	shrub	native	Hong Kong Island, Kowloon, Sai Kung, Lantau Island	IUCN Red List: Least Concern			+			
<i>Averrhoa carambola</i>	Carambola	small tree	exotic	Cultivated	-	+					

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<i>Baeckea frutescens</i>	Dwarf Mountain Pine	shrub or small tree	native	Common in Hong Kong	IUCN Red List: Least Concern		+				
<i>Bambusa textilis</i>	Weaver's Bamboo	clumped tree bamboo	exotic	Tai Po Kau, Kwun Yam Shan, Sheung Shui (cultivated)	-	+					
<i>Bauhinia glauca</i>	Climbing Bauhinia	climber: vine	native	Common in Hong Kong	IUCN Red List: Least Concern	+		+			
<i>Bauhinia purpurea</i>	Purple Camel's Foot	tree	exotic	Cultivated	IUCN Red List: Least Concern						+
<i>Bauhinia variegata</i> var. <i>candida</i>	White Bauhinia	tree	exotic	Cultivated	IUCN Red List: Least Concern						+
<i>Bauhinia x blakeana</i>	Hong Kong Orchid Tree	shrub or tree	native	Cultivated	-			+			+
<i>Bidens alba</i>	-	herb	exotic	Naturalized and widely distributed in Hong Kong	-	+		+	+	+	++
<i>Blechnum orientale</i>	Oriental Blechnum	herb	native	-	-	++	++	+		+	
<i>Bombax ceiba</i>	Tree Cotton	tree	exotic	Cultivated	IUCN Red List: Least Concern	+		+			+
<i>Bougainvillea spectabilis</i>	Brazil Bougainvillea	climbing shrub	exotic	Cultivated in gardens or as a pot plant	-	+	+	+			+
<i>Breynia fruticosa</i>	Waxy Leaf	shrub	native	Common in Hong Kong	IUCN Red List: Least Concern	+	+				
<i>Bridelia tomentosa</i>	Pop-gun Seed	shrub or small tree	native	Common in Hong Kong	IUCN Red List: Least Concern	+	+	+	+		+
<i>Brucea javanica</i>	False Sumac	shrub or small tree	native	Common in Hong Kong	IUCN Red List: Least Concern	+		+			
<i>Calliandra haematocephala</i>	Pink Powder Puff	shrub	exotic	Cultivated	-	+		+		+	+
<i>Carallia brachiata</i>	India Carallia	tree	native	Common in Hong Kong	-		+				
<i>Carica papaya</i>	Papaya	tree	exotic	Cultivated	IUCN Red List: Data Deficient			+			
<i>Cassytha filiformis</i>	Cassytha	parasitic climber: twining herb	native	Common in Hong Kong	-	+					
<i>Castanopsis fissa</i>	Castanopsis	tree	native	Common in Hong Kong	IUCN Red List: Least Concern	++				+	
<i>Casuarina equisetifolia</i>	Horsetail Tree	tree	exotic	Cultivated	IUCN Red List: Least Concern	++	+	++			+
<i>Catharanthus roseus</i>	Periwinkle	herb	exotic	Cultivated	-		+	+			
<i>Cayratia comiculata</i>	Corniculate Cayratia	herbaceous vine	native	Common in Hong Kong	-	+				+	
<i>Celosia argentea</i>	Wild Coxcomb	herb	native	Kowloon, Sha Tin, Fanling, Sheung Shui, Lantau Island	IUCN Red List: Least Concern				+		+
<i>Celtis biondii</i>	Biond's Hackberry	tree	native	Hong Kong Island, Peng Chau	IUCN Red List: Least Concern	+					
<i>Celtis sinensis</i>	Chinese Hackberry	tree	native	Common in Hong Kong and widely planted	IUCN Red List: Least Concern				+		+
<i>Centella asiatica</i>	Moneywort	procumbent herb	native	Common in Hong Kong	IUCN Red List: Least Concern					+	
<i>Centotheca lappacea</i>	Common Centotheca	perennial herb	native	Common in Hong Kong	-	+		+		++	
<i>Cheilosoria tenuifolia</i>	Narrow-leaved Lip-fern	herb	native	-	-	+					
<i>Chloranthus spicatus</i>	Pearl-orchid	-	exotic	Cultivated	-					+	
<i>Chloris barbata</i>	Peacock-plume Grass	herb	native	Common in Hong Kong	-						+
<i>Chukrasia tabularis</i>	Chittagong Chickrassy	tree	exotic	Cultivated	IUCN Red List: Least Concern	+					
<i>Cinnamomum burmannii</i>	Batavia Cinnamon	large shrub or tree	native	Common in Hong Kong	-	+		+			
<i>Cinnamomum camphora</i>	Camphor Tree	large tree	native	Common in Hong Kong. Also widely cultivated	IUCN Red List: Least Concern		+				
<i>Citrus maxima</i>	Pummelo	tree	exotic	Cultivated	IUCN Red List: Least Concern			+			
<i>Clausena lansium</i>	Wampi	small tree	exotic	Cultivated	IUCN Red List: Least Concern			+			
<i>Clerodendrum fortunatum</i>	Glorybower	shrub	native	Common in Hong Kong	IUCN Red List: Least Concern	+	+	+			
<i>Cocculus orbiculatus</i>	Snail Seed	climber: vine	native	Common in Hong Kong	-			+	+		+
<i>Commelina diffusa</i>	Diffuse Day-flower	herb	native	Common in Hong Kong	IUCN Red List: Least Concern					+	
<i>Corchorus aestuans</i>	Mock Jute	herb	native	Sha Tin, Sai Kung, Tai Long Sai Wan, Tsing Yi, Lantau Island	-						+
<i>Cordylone fruticosa</i>	Iron Plant	shrub	exotic	Cultivated	IUCN Red List: Least Concern		+	+			
<i>Costus speciosus</i>	Crape Ginger	herb	native	Mount Gough, Tai Hang Rd., Lantau Peak	-	+					

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<i>Cratoxylum cochinchinense</i>	Yellow Cow Wood	shrub or tree	native	Common in Hong Kong	IUCN Red List: Least Concern	+	+	++			
<i>Cuscuta campestris</i>	-	herb	native	Common in Hong Kong	-		+				
<i>Cyclea hypoglauca</i>	-	climber	native	Pok Fu Lam, Wong Nai Chung, Tai Tam, Victoria Peak, Mount Nicholson, Shing Mun, Ma On Shan, Tsing Yi	-	+					
<i>Cyclosorus parasiticus</i>	Wood-fern	herb	native	-	-	+	+	+	+	++	+
<i>Cyrtococcum patens</i>	Broad-leaved Bowgrass	herb	native	Common in Hong Kong	-	++			+		
<i>Dalbergia benthamii</i>	Bentham's Rosewood	climber: vine	native	Common in Hong Kong	IUCN Red List: Least Concern	+		+			
<i>Daphniphyllum calycinum</i>	-	tree	native	Common in Hong Kong	IUCN Red List: Least Concern	+	+	+			
<i>Delonix regia</i>	Flame Tree	tree	exotic	Cultivated	IUCN Red List: Least Concern						+
<i>Deparia japonica</i> subsp. <i>japonica</i>	Japanese Lady-fern	herb	native	-	-	+					
<i>Desmos chinensis</i>	Desmos	woody vine	native	Common in Hong Kong	-	+		+			
<i>Dianella ensifolia</i>	Dianella	herb	native	Common in Hong Kong	-	+	+	+			
<i>Dicranopteris pedata</i>	Dichotomy Forked Fern	herb	native	very common	-		+++	+			
<i>Dimocarpus longan</i> ⁽³⁾	Longan	tree	exotic	Cultivated	List of Wild Plants under State Protection: Category II; Threatened Species List of China's Higher Plants: Vulnerable; Rare and Endangered Plants and National Key Protected Plants in Guangdong: Near Threatened; IUCN Red List: Near Threatened	+		+			
<i>Dioscorea bulbifera</i>	Air Potato	climber: vine	native	Hong Kong Island, Tai Po Kau, Lam Tsuen, Sham Tseng, Ta Kwu Ling	-	+					
<i>Diospyros vaccinioides</i>	Small Persimmon	shrub	native	Common in Hong Kong	Threatened Species List of China's Higher Plants: Endangered; IUCN Red List: Critically Endangered	+		+			
<i>Diploclisia glaucescens</i>	Glaucescent Diploclisia	woody vine	native	Mount Parker, Cape D'Aguilar, Wan Chai, Tai Po Kau, Lantau Island	-	+					
<i>Dracaena fragrans</i>	Fragrant Dragon Tree	shrub	exotic	Cultivated	IUCN Red List: Least Concern	+	+	+			
<i>Dracaena marginata</i>	Madagascar Dragon Tree	shrub	exotic	-	-		+				
<i>Duranta erecta</i>	Golden Dewdrops	climbing shrub	exotic	Cultivated	IUCN Red List: Least Concern	+		+			
<i>Embelia laeta</i>	Twig-hanging Embelia	climber: vine	native	Widely distributed in Hong Kong	-	+	+				
<i>Emilia sonchifolia</i>	Tassel Flower	herb	native	Common in Hong Kong	-			+			
<i>Epipremnum aureum</i>	Ivy-arum	tall climbing plant	exotic	-	-	+		+			
<i>Epipremnum pinnatum</i>	Taro Vine	liana	exotic	New Territories	-					++	
<i>Enobotrya japonica</i>	Loquat	small tree	exotic	Cultivated	-			+			+
<i>Eucalyptus robusta</i>	Swamp Mahogany	tree	exotic	Cultivated	IUCN Red List: Near Threatened	++		+			
<i>Eucalyptus</i> spp.	-	tree	exotic	cultivated; common	-	+++	+	+++			
<i>Euonymus nitidus</i>	Chinese Euonymus	shrub	native	Common in Hong Kong	IUCN Red List: Least Concern	+					
<i>Euphorbia hirta</i>	Garden Spurge	herb	exotic	Naturalized	-						+

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<i>Euphorbia thymifolia</i>	Thyme-leaved Spurge	herb	native	Stubbs Rd., Tai Hang Rd., Victoria Park, Sheung Pak Nai, Yuen Long, Tsing Yi	-						+
<i>Eurya nitida</i>	Shining Eurya	shrub or small tree	native	Common in Hong Kong	IUCN Red List: Least Concern	+	++				
<i>Ficus elastica</i>	India-rubber Tree	tree	exotic	Cultivated	-						+
<i>Ficus fistulosa</i>	Common Yellow Steg-fig	tree	native	Common in Hong Kong	IUCN Red List: Least Concern	+				+	
<i>Ficus hirta</i>	Hairy Fig	shrub or small tree	native	Common in Hong Kong	-	+	+		+		
<i>Ficus hispida</i>	Opposite-leaved Fig	shrub or small tree	native	Common in Hong Kong	IUCN Red List: Least Concern		+	+	++	+	+
<i>Ficus microcarpa</i>	Chinese Banyan	tree	native	Common in Hong Kong	IUCN Red List: Least Concern	+					+
<i>Ficus pumila</i>	Creeping Fig	climbing woody vine	native	Common in Hong Kong	-			+			
<i>Ficus variegata</i>	Common Red-stem Fig	tree	native	Common in Hong Kong	IUCN Red List: Least Concern			+			
<i>Ficus virens</i>	Big-leaved Fig	tree	native	Cultivated	IUCN Red List: Least Concern			+			+
<i>Flueggea virosa</i>	Snow Berry	shrub	native	Tai Tam, Ngau Chi Wan, Fanling, Po Leng, Tai Po, Butterfly Hill	IUCN Red List: Least Concern			+			
<i>Gahnia tristis</i>	Triste Gahnia	herb	native	Common in Hong Kong	-	+	+				
<i>Gardenia jasminoides</i>	Cape Jasmine	shrub	native	Common in Hong Kong	-	+	+	+			
<i>Glochidion eriocarpum</i>	Hairy-fruited Abacus Plant	shrub	native	Common in Hong Kong	IUCN Red List: Least Concern	+	+			+	
<i>Glochidion lanceolarium</i>	Large-leaved Abacus Plant	shrub or tree	native	Common in Hong Kong	-	+	+	+			
<i>Glochidion zeylanicum</i>	Hong Kong Abacus Plant	shrub or small tree	native	Common in Hong Kong	IUCN Red List: Least Concern	+	+		+		
<i>Gnetum luofuense</i>	Luofushan Joint-fir	woody vine	native	Common in Hong Kong	IUCN Red List: Near Threatened	+					
<i>Hedyotis acutangula</i>	Angle-stemmed Hedyotis	herb	native	Common in Hong Kong	-		+				
<i>Hedyotis corymbosa</i>	Corymbose Hedyotis	herb	native	Common in Hong Kong	-						+
<i>Hedyotis hedyotideae</i>	White Ox Creeper	climbing subshrub	native	Common in Hong Kong	-	+					
<i>Helicteres angustifolia</i>	Narrow-leaved Screwtree	subshrub	native	Common in Hong Kong	-		+				
<i>Heterosmilax japonica</i>	Heterosmilax	climbing shrub	native	Pok Fu Lam	-	+	+				
<i>Hibiscus rosa-sinensis</i>	Chinese Hibiscus	shrub	exotic	Commonly cultivated in Hong Kong gardens	-	+	+	+		+	
<i>Hibiscus tiliaceus</i>	Cuban Bast	shrub or tree	native	Hong Kong Island, Shek O, Ma Liu Shui, Mai Po, Leung Shuen Wan Chau (Tall Island)	IUCN Red List: Least Concern	+		+	+		
<i>Hymenocallis littoralis</i>	American Hymenocallis	herb	exotic	Cultivated	-						+
<i>Ilex asprella</i>	Rough-leaved Holly	shrub	native	very common	-	++		+			
<i>Ilex pubescens</i>	Downy Holly	shrub	native	Common in Hong Kong	-	+	+				
<i>Indocalamus sinicus</i>	Chinese Cane	running shrubby bamboo	native	Common in Hong Kong	-	+		+		++	
<i>Ipomoea cairica</i>	Gairo Morning Glory	climber: twining herb	exotic	Common in Hong Kong	IUCN Red List: Least Concern			+			+
<i>Ixora chinensis</i>	Chinese Ixora	shrub	native	To Fung Shan, Man Kam To, Sai Kung, Ha Pak Nai, also widely cultivated	-		+				

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<i>Kyllinga polyphylla</i>	Aromatic Kyllinga	herb	exotic	Victoria Park, Tsiu Hang, Tai Po Kau	-			+			
<i>Lagerstroemia speciosa</i>	Queen Crape Myrtle	large tree	exotic	Cultivated	Protected under Forests and Countryside Ordinance (Cap. 96)						+
<i>Lantana camara</i>	Lantana	shrub	exotic	Naturalized in Hong Kong	-			+	+		+
<i>Leucaena leucocephala</i>	White Popinac	small tree	exotic	Cultivated and naturalized	-	+		+	++		+++
<i>Ligustrum sinense</i>	Chinese Privet	shrub or small tree	exotic	Common in Hong Kong and widely cultivated	-	+					
<i>Lindsaea ensifolia</i>	Sword-leaved Lindsaea	herb	native	-	-	+		+			
<i>Lindsaea heterophylla</i>	Heterophyllous Lindsaea	herb	native	-	-	+	+				
<i>Lindsaea orbiculata</i>	Orbicular Lindsaea	herb	native	-	-	+	+				
<i>Liquidambar formosana</i>	Sweet Gum	tree	native	Common in Hong Kong. Also widely planted	IUCN Red List: Least Concern	++					
<i>Liriope spicata</i>	Lily Turf	perennial herb	native	Common in Hong Kong	-	++		+		+	
<i>Litsea glutinosa</i>	Pond Spice	tree	native	Common in Hong Kong	IUCN Red List: Least Concern	+					+
<i>Litsea monopetala</i>	Persimmon-leaved Litsea	small tree	native	Hong Kong Island, Sai Kung, Lantau Island	IUCN Red List: Least Concern	+					
<i>Litsea rotundifolia</i> var. <i>oblongifolia</i>	Oblong-leaved Litsea	shrub	native	Common in Hong Kong	-	+	+				
<i>Livistona chinensis</i>	Chinese Fan-palm	tree palm	exotic	Cultivated	Threatened Species List of China's Higher Plants: Vulnerable	+		++			+
<i>Lophatherum gracile</i>	Common Lophanthelum	perennial herb	native	Common in Hong Kong	-	++	+	+	+	++	
<i>Loropetalum chinense</i> f. <i>rubrum</i>	Red Strap Flower	shrub or small tree	exotic	-	-		+				
<i>Lygodium flexuosum</i>	Flexuose Climbing Fern	climbing herb	native	-	-	+					
<i>Lygodium japonicum</i>	Climbing Fern	climbing herb	native	-	-	+	+	+			+
<i>Lygodium scandens</i>	Scansorial Climbing Fern	climbing herb	native	-	-	+	+	+		+	
<i>Macaranga tanarius</i> var. <i>tomentosa</i>	Elephant's Ear	tree	native	Common in Hong Kong	IUCN Red List: Least Concern	+		+	+	+	+
<i>Machilus</i> spp.	-	-	native	-	-	+					
<i>Macrothelypteris torresiana</i>	Mariana Maiden Fern	herb	native	-	-			+			
<i>Mallotus paniculatus</i>	Turn-in-the-wind	shrub or tree	native	Common in Hong Kong	IUCN Red List: Least Concern	+		+			+
<i>Mangifera indica</i>	Mango	tree	exotic	Cultivated	IUCN Red List: Data Deficient			+			
<i>Manihot esculenta</i>	Tapioca Plant	shrub	exotic	Cultivated	-			++			+
<i>Melaleuca cajuputi</i> subsp. <i>cumingiana</i>	Paper-bark Tree	tree	exotic	Cultivated	IUCN Red List: Least Concern			++			
<i>Melastoma malabathricum</i>	Common Melastoma	shrub	native	Common in Hong Kong	-			+			
<i>Melastoma sanguineum</i>	Blood-red Melastoma	shrub	native	Common in Hong Kong	IUCN Red List: Least Concern	+	+	+		+	
<i>Melicope pteleifolia</i>	Thin Evodia	shrub or small tree	native	Common in Hong Kong	IUCN Red List: Least Concern	+	+				
<i>Melinis repens</i>	Redtop	perennial herb	exotic	Common in Hong Kong (naturalized)	-						+
<i>Microcos nervosa</i>	Microcos	shrub or small tree	native	Common in Hong Kong	-	+		++	+		+
<i>Mikania micrantha</i>	Mile-a-minute Weed	climbing herb	exotic	Naturalized and widely distributed in Hong Kong	-	+		+	++		++
<i>Millettia nitida</i>	Glittering-leaved Millettia	climbing shrub	native	Common in Hong Kong	IUCN Red List: Least Concern	+					

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<i>Mimosa pudica</i>	Sensitive Plant	herb	exotic	Naturalized in Hong Kong	IUCN Red List: Least Concern			+			
<i>Miscanthus floridulus</i>	Many-flowered Silvergrass	perennial herb	native	Common in Hong Kong	-		+	+	++		+
<i>Morinda parvifolia</i>	Little-leaved Indian-mulberry	climbing shrub	native	Common in Hong Kong	-					+	
<i>Morus alba</i>	White Mulberry	shrub or tree	native	Common in Hong Kong. Also cultivated	IUCN Red List: Least Concern						+
<i>Murraya paniculata</i>	Orange-jessamine	small tree	exotic	Cultivated or naturalized	-			+			
<i>Musa x paradisiaca</i>	Common Banana	perennial herb	exotic	Cultivated	IUCN Red List: Least Concern		+	+	+	+	
<i>Mussaenda pubescens</i>	Splash-of-white	climbing shrub	native	Common in Hong Kong	-	+					
<i>Nephrolepis hirsutula</i>	Rough Sword Fern	herb	native	-	-			+			
<i>Oxalis corniculata</i>	Sorrel	perennial herb	native	Common in Hong Kong	-						+
<i>Oxalis debilis</i> subsp. <i>corymbosa</i>	Lavender Sorrel	perennial herb	exotic	A common weed in Hong Kong	-					+	
<i>Paederia scandens</i>	Chinese Fevervine	climber: vine	native	Common in Hong Kong	-	+			+		+
<i>Pandanus austrosinensis</i>	-	herb	native	Tai Mo Shan	-					+	
<i>Panicum maximum</i>	Guinea Grass	perennial herb	exotic	Cultivated for forage	-	+	+	+	+		+
<i>Parthenocissus dalzielii</i>	Diverse-leaved Creeper	woody vine	exotic	Cultivated	-						+
<i>Passiflora foetida</i>	Passion Flower	herbaceous vine	exotic	Common in Hong Kong. Naturalized	-				+		+
<i>Passiflora suberosa</i>	Triangular Passion Flower	herbaceous vine	exotic	-	-			+			
<i>Peltophorum tonkinense</i>	-	tree	exotic	Cultivated	-						+
<i>Persicaria chinensis</i>	Chinese Knotweed	herb	native	Common in Hong Kong	-					+	
<i>Phoenix loureiroi</i>	Spiny Date Palm	shrub or tree palm	native	Common in Hong Kong	IUCN Red List: Least Concern	+	+				
<i>Phoenix roebelenii</i>	Dwarf Date Palm	small tree palm	exotic	Cultivated	-						+
<i>Phyllanthus cochinchinensis</i>	Vietnam Leaf-flower	shrub	native	Common in Hong Kong	-	+	+			+	+
<i>Phyllanthus emblica</i>	Myrobalan	shrub or tree	native	Common in Hong Kong	IUCN Red List: Least Concern	+	+	+		+	+
<i>Pinus elliotii</i>	Slash Pine	tree	exotic	Widely planted in countryside	IUCN Red List: Least Concern		+				
<i>Platycladus orientalis</i>	Chinese Arborvitae	tree	exotic	Cultivated in gardens	IUCN Red List: Near Threatened	+					+
<i>Plumeria rubra</i>	Frangipani	tree	exotic	Commonly cultivated in Hong Kong	IUCN Red List: Least Concern			+			+
<i>Podocarpus macrophyllus</i> ⁽³⁾	Buddhist Pine	tree	native	Coastal hillslopes on eastern seashores. It is also cultivated in urban parks and gardens	List of Wild Plants under State Protection: Category II; Threatened Species List of China's Higher Plants: Vulnerable; IUCN Red List: Least Concern	+					
<i>Polyscias guilfoylei</i>	Panax	shrub	exotic	-	-		+				
<i>Polyspora axillaris</i>	Hong Kong Gordonia	shrub or small tree	native	Common in Hong Kong	IUCN Red List: Least Concern	+	+	+			
<i>Praxelis clematidea</i>	-	perennial herb	exotic	Naturalized and widely distributed in Hong Kong	-	+	+				
<i>Psychotria asiatica</i>	Wild Coffee	shrub or tree	native	Common in Hong Kong	IUCN Red List: Least Concern	++	+	+		++	
<i>Psychotria serpens</i>	Creeping Psychotria	semi-woody climber: vine	native	Common in Hong Kong	-	+		+			
<i>Pteridium aquilinum</i> var. <i>latiusculum</i>	Bracken Fern	herb	native	-	-	+					

Scientific Name	Common Name	Growth Form	Native / Exotic to Hong Kong	Distribution in Hong Kong ⁽¹⁾	Protection / Conservation Status ⁽²⁾	MWL	SL	PL	MWC	NWC	DA
<i>Pteris ensiformis</i>	Sword Brake	herb	native	-	-	+		+		+	
<i>Pteris linearis</i>	Lineate Brake	herb	native	-	-			+			
<i>Pteris semipinnata</i>	Semi-pinnated Brake	herb	native	-	-	++					
<i>Pteris vittata</i>	Ladder Brake	herb	native	-	IUCN Red List: Least Concern			+	+		
<i>Pueraria lobata</i> var. <i>montana</i>	Montane Kudzu	climber: vine	native	Common in Hong Kong	-	+		+	+	+	+
<i>Pueraria</i> spp.	Kudzu	climber: vine	-	-	-						+
<i>Pyrrosia adnascens</i>	Tongue-fern	herb	native	-	-	+					
<i>Reevesia thyrsoidea</i>	Reevesia	tree	native	Common in Hong Kong	IUCN Red List: Least Concern	+					
<i>Rhaphiolepis indica</i>	Hong Kong Hawthorn	shrub or small tree	native	Common in Hong Kong	-	+	+	+			
<i>Rhododendron pulchrum</i> var. <i>phoeniceum</i> ⁽³⁾	Purple Azalea	shrub	exotic	-	Protected under Forests and Countryside Ordinance (Cap. 96)						+
<i>Rhodomyrtus tomentosa</i>	Rose Myrtle	shrub	native	Common in Hong Kong	IUCN Red List: Least Concern		++	+			
<i>Rhus chinensis</i>	Sumac	shrub or small tree	native	Common in Hong Kong	IUCN Red List: Least Concern		+				+
<i>Rhus hypoleuca</i>	Sumac	shrub or small tree	native	Common in Hong Kong	-			+			
<i>Rhus succedanea</i>	Wax Tree	shrub or small tree	native	Common in Hong Kong	IUCN Red List: Least Concern		+	+			
<i>Roystonea regia</i>	Royal Palm	tree palm	exotic	Cultivated	IUCN Red List: Least Concern						+
<i>Rubus reflexus</i>	Rusty-haired Raspberry	climbing shrub	native	Common in Hong Kong	-	+	+				
<i>Ruellia coerulea</i>	-	herb	exotic	Cultivated	-		+				
<i>Sansevieria trifasciata</i>	Snake Plant	perennial herb	exotic	Cultivated	-	+					
<i>Sapium discolor</i>	Mountain Tallow Tree	small tree	native	Common in Hong Kong. Also planted	-	+	+	+			+
<i>Sapium sebiferum</i>	Chinese Tallow Tree	tree	native	Common in Hong Kong. Also planted	-	+					
<i>Schefflera actinophylla</i>	Umbrella Tree	tree	exotic	-	IUCN Red List: Least Concern			+			
<i>Schefflera arboricola</i>	Miniature Umbrella Plant	climbing shrub	exotic	-	-	+		+			
<i>Schefflera heptaphylla</i>	Ivy Tree	tree	native	Common in Hong Kong	IUCN Red List: Least Concern	+	+	+		+	+
<i>Scleria</i> spp.	-	-	-	-	-	+				+	
<i>Senna siamea</i>	Kassod Tree	tree	exotic	Cultivated	IUCN Red List: Least Concern			+			+
<i>Senna surattensis</i>	Sunshine Tree	shrub or small tree	exotic	Cultivated	IUCN Red List: Least Concern						+
<i>Sesbania cannabina</i>	Dhaincha	subshrub	exotic	Cultivated or naturalized	IUCN Red List: Least Concern				+		
<i>Solena amplexicaulis</i>	Clasping-stem Solena	climbing herbaceous vine	native	Common in Hong Kong	-	+					
<i>Stephania longa</i>	Long Stephania	climber: vine	native	Aberdeen, Tai Po Kau, Ma On Shan, Sheung Shui, Tai Mong Tsai	-	+					
<i>Sterculia lanceolata</i>	Lance-leaved Sterculia	semi-deciduous tree	native	Common in Hong Kong	IUCN Red List: Least Concern	++		++	+		
<i>Strophanthus divaricatus</i>	Goat Horns	woody vine	native	Common in Hong Kong	-		+	+			
<i>Syzygium jambos</i>	Rose Apple	tree	exotic	Cultivated & naturalized	IUCN Red List: Least Concern	+	+				
<i>Tadehagi triquetrum</i>	Triquetrous Tadehagi	subshrub or shrub	native	Common in Hong Kong	IUCN Red List: Least Concern		+	+			
<i>Tectaria subtriphylla</i>	-	herb	native	-	-	+					
<i>Tetracera asiatica</i>	Sandpaper Vine	woody vine	native	Common in Hong Kong	-	+				+	
<i>Thevetia peruviana</i>	Yellow Oleander	shrub or small tree	exotic	Commonly cultivated in Hong Kong	IUCN Red List: Vulnerable			+			
<i>Trema tomentosa</i>	India-charcoal Trema	shrub or small tree	native	Common in Hong Kong	IUCN Red List: Least Concern			+			
<i>Tridax procumbens</i>	Tridax	perennial herb	exotic	Naturalized and widely distributed in Hong Kong	-			+			+

Scientific Name	Common Name	Growth Form	Native / Exotic to Hong Kong	Distribution in Hong Kong ⁽¹⁾	Protection / Conservation Status ⁽²⁾	MWL	SL	PL	MWC	NWC	DA
<i>Vernonia cinerea</i>	Iron-weed	herb	native	Common in Hong Kong	-			+			
<i>Vitex negundo</i>	Yellow Bramble	shrub or small tree	native	Common in Hong Kong	IUCN Red List: Least Concern						+
<i>Wedelia trilobata</i>	-	perennial herb	exotic	Naturalized and widely cultivated	-	+	+	+++		+	
<i>Wikstroemia indica</i>	Indian Wikstroemia	shrub	native	Common in Hong Kong	-			+			
<i>Wodyetia bifurcata</i>	-	tree	exotic	-	-						+
<i>Zanthoxylum avicennae</i>	Prickly Ash	tree	native	Common in Hong Kong	-	+		+			
<i>Zanthoxylum nitidum</i>	Shiny-leaved Prickly Ash	climbing shrub	native	Common in Hong Kong	IUCN Red List: Least Concern	+	+				

Notes:

(1) Distribution in Hong Kong follows:

Flora of Hong Kong Volume 1-4. (2007-2011).

Wu, S.-H. & Lee, T.-C.W. (2000). Pteridophytes of Hong Kong. *Memoirs of the Hong Kong Natural History Society* **23**:5-20.

Xing, F.-W., Ng, S.C. & Chau, L.K.-C. (2000). Gymnosperms and Angiosperms of Hong Kong. *Memoirs of the Hong Kong Natural History Society* **23**:21-136.

Siu, L.-P.G. (2000). Orchidaceae of Hong Kong. *Memoirs of the Hong Kong Natural History Society* **23**:137-148.

(2) Protection statuses follow:

Protected under the Forests and Countryside Ordinance (Cap. 96)

Protected under the Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586)

Hu, Q.M., Wu, T.L., Xia, N.H., Xing F.W., Lai, C.C.P. & Yip, K.W. (2003). Rare and Precious Plants of Hong Kong. Agriculture, Fisheries and Conservation Department, HKSAR, Hong Kong. 234pp.

List of Wild Plants Under State Protection (promulgated by the National Forestry and Grassland Administration in 2021)

Fu, K.L. (1992). China Plant Red Data Book. Vol. 1 - Rare and Endangered Plants. Science Press, Beijing. 736pp. (In Chinese only).

Qin, *et al.* (2017). Threatened Species List of China's Higher Plants. *Biodiversity Science* **25**(7):696-747

International Union for the Conservation of Nature (IUCN) (2025). The IUCN Red List of Threatened Species. Version 2024.02.

Feng, Z.-J., Li, Z.-K., Li, B.-T., Xue, C.-G., Liu, J.-B. & He, Y.-Q. (2002). Study on Rare and Endangered Plants and National Key Protected Plants in Guangdong. *Journal of South China Agricultural University* **3**:24-27.

Wu, D.L. & Hu, C.X. (1988). Illustrations of Rare and Endangered Plants in Guangdong Province. China Environmental Science Press, Beijing. 46pp. (In Chinese only).

(3) The species is artificially introduced to the habitat, thus it is not considered as species of conservation importance.

Abbreviation for Habitats: MWL = Mixed Woodland; SL = Shrubland; PL = Plantation; MWC = Modified Watercourse; NWC = Natural Watercourse; and DA = Developed Area

Code for Abundance: +++++ = Dominant; ++++ = Abundant; +++ = Frequent; ++ = Occasional; + = Scarce

Species of conservation importance is in **bold** type face

Appendix 9.2

Appendix 9.2 Fauna Species Recorded within the Assessment Area
Avifauna

Common Name	Scientific Name	Distribution in Hong Kong ⁽³⁾	Principal Status ⁽⁴⁾	Level of Concern ⁽⁵⁾	Protection Status in China ⁽⁶⁾	China Red Data Book ⁽⁷⁾	Red List of China's Vertebrates ⁽⁸⁾	Redlist of China's Biodiversity ⁽⁹⁾	IUCN Red List ⁽¹⁰⁾	MWL	SL	PL	DA	IF
Black Kite ⁽²⁾⁽¹¹⁾	<i>Milvus migrans</i>	Common resident and winter visitor. Widely distributed in Hong Kong	W,R	(RC)	Class II	-	Least Concern	Least Concern	Least Concern					+
Black-collared Starling	<i>Gracupica nigricollis</i>	Common resident. Widely distributed in Hong Kong.	R	-	-	-	Least Concern	Least Concern	Least Concern				+	
Black-throated Laughingthrush	<i>Pterorhinus chinensis</i>	Common resident. Widely distributed in woodland and shrubland throughout Hong Kong.	R	-	Class II	-	Least Concern	Least Concern	Least Concern	+				
Blue Whistling Thrush	<i>Myophonus caeruleus</i>	Common resident. Widely distributed in shrubland and woodland throughout Hong Kong.	R	-	-	-	Least Concern	Least Concern	Least Concern	+				
Chestnut Bulbul	<i>Hemixos castanonotus</i>	Common resident and winter visitor. Widely distributed in woodland throughout Hong Kong.	R,W	-	-	-	Least Concern	Least Concern	Least Concern	+				
Chinese Bulbul	<i>Pycnonotus sinensis</i>	Abundant resident. Widely distributed in Hong Kong.	R	-	-	-	Least Concern	Least Concern	Least Concern	+	+	+		
Cinereous Tit	<i>Parus cinereus</i>	Common resident. Widely distributed in Hong Kong.	R	-	-	-	Least Concern	Least Concern	Least Concern	+		+		
Collared Scops Owl ⁽²⁾	<i>Otus lettia</i>	Common resident. Widely distributed in shrubland throughout Hong Kong.	R	-	Class II	-	Least Concern	Least Concern	Least Concern	+				
Common Tailorbird	<i>Orthotomus sutorius</i>	Common resident. Widely distributed in Hong Kong.	R	-	-	-	Least Concern	Least Concern	Least Concern	+	+		+	
Crested Goshawk ⁽²⁾	<i>Accipiter trivirgatus</i>	Common resident. Widely distributed in woodlands and shrublands throughout Hong Kong.	R	-	Class II	Rare	Near Threatened	Near Threatened	Least Concern					+
Daurian Redstart	<i>Phoenicurus aureus</i>	Common winter visitor. Widely distributed in Hong Kong.	W	-	-	-	Least Concern	Least Concern	Least Concern			+		
Eurasian Tree Sparrow	<i>Passer montanus</i>	Abundant resident. Widely distributed in Hong Kong.	R	-	-	-	Least Concern	Least Concern	Least Concern				+	
Grey-backed Thrush	<i>Turdus hortulorum</i>	Common winter visitor and migrant. Widely distributed in woodland throughout Hong Kong.	W	-	-	-	Least Concern	Least Concern	Least Concern	+				
Large-billed Crow	<i>Corvus macrorhynchos</i>	Common resident. Widely distributed in Hong Kong.	R	-	-	-	Least Concern	Least Concern	Least Concern	+	+	+		
Little Egret ⁽¹¹⁾	<i>Egretta garzetta</i>	Common resident, migrant and winter visitor. Widely distributed in coastal area throughout Hong Kong.	P	PRC (RC)	-	-	Least Concern	Least Concern	Least Concern					+
Olive-backed Pipit	<i>Anthus hodgsoni</i>	Common passage migrant and winter visitor. Widely distributed in Hong Kong.	W	-	-	-	Least Concern	Least Concern	Least Concern	+				
Pallas's Leaf Warbler	<i>Phylloscopus proregulus</i>	Common winter visitor and migrant. Found in woodland throughout Hong Kong.	W	-	-	-	Least Concern	Least Concern	Least Concern			+		
Red-billed Blue Magpie	<i>Urocissa erythroryncha</i>	Common resident. Widely distributed in woodland edges throughout Hong Kong.	R	-	-	-	Least Concern	Least Concern	Least Concern	+			+	
Red-whiskered Bulbul	<i>Pycnonotus jocosus</i>	Abundant resident. Widely distributed in Hong Kong.	R	-	-	-	Least Concern	Least Concern	Least Concern	+	+	+	+	
Rufous-tailed Robin	<i>Larvivora sibilans</i>	Common winter visitor and passage migrant. Widely distributed in woodland throughout Hong Kong.	W,SpM	-	-	-	Least Concern	Least Concern	Least Concern			+		
Scaly-breasted Munia	<i>Lonchura punctulata</i>	Abundant resident. Widely distributed in Hong Kong.	R	-	-	-	Least Concern	Least Concern	Least Concern				+	

Avifauna

Common Name	Scientific Name	Distribution in Hong Kong ⁽³⁾	Principal Status ⁽⁴⁾	Level of Concern ⁽⁵⁾	Protection Status in China ⁽⁶⁾	China Red Data Book ⁽⁷⁾	Red List of China's Vertebrates ⁽⁸⁾	Redlist of China's Biodiversity ⁽⁹⁾	IUCN Red List ⁽¹⁰⁾	MWL	SL	PL	DA	IF
Scarlet Minivet	<i>Pericrocotus speciosus</i>	Common resident. Found in Tai Po Kau, the Peak, Lam Tsuen, Cape D'Aguilar Road, Shing Mun.	R	-	-	-	Least Concern	-	Least Concern	+				
Scarlet-backed Flowerpecker	<i>Dicaeum cruentatum</i>	Common resident. Widely distributed in wooded area throughout Hong Kong.	R	-	-	-	Least Concern	Least Concern	Least Concern	+		+		
Spotted Dove	<i>Spilopelia chinensis</i>	Abundant resident. Widely distributed in Hong Kong.	R	-	-	-	Least Concern	Least Concern	Least Concern	+		+	+	
Swinhoe's White-eye	<i>Zosterops simplex</i>	Abundant resident. Widely distributed in Hong Kong.	R,?W	-	-	-	Least Concern	Least Concern	Least Concern	+++++	+	++++	+	
White Wagtail	<i>Motacilla alba</i>	Resident, common passage migrant and winter visitor. Widely distributed in Hong Kong.	W,R	-	-	-	Least Concern	Least Concern	Least Concern				+	
Yellow-bellied Prinia	<i>Prinia flaviventris</i>	Common resident. Widely distributed in Hong Kong.	R	-	-	-	Least Concern	Least Concern	Least Concern				+	
Yellow-browed Warbler	<i>Phylloscopus inornatus</i>	Abundant winter visitor and migrant. Widely distributed in woodland throughout Hong Kong.	W	-	-	-	Least Concern	Least Concern	Least Concern	+	+	+		

Notes:

(1) All wild birds are Protected under Wild Animals Protection Ordinance (Cap. 170).

(2) Protected under the Protection of Endangered Species of Animals and Plants Ordinance (Cap. 586).

(3) AFCD (2025). Hong Kong Biodiversity Information Hub.

(4) Carey, G.J., Chalmers, M.L., Diskin, D.A., Leader, P.J., Leven, M.R., Lewthwaite, M.R., Melville, D.S., Turnbull, M. & Young, L. (2001). The Avifauna of Hong Kong. Hong Kong Bird Watcing Society, Hong Kong. R=resident; W=winter visitor; Sp = spring; M=migrant; P=present all year, exact composition unknown; ?W=extent of migration in winter is unclear.

(5) Fellowes, J.R. *et al.* (2002). Wild Animals to Watch: Terrestrial and Freshwater Fauna of Conservation Concern in Hong Kong. *Memoirs of the Hong Kong Natural History Society* **25**:123-159. PRC=Potential Regional Concern, RC=Regional Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in nesting and/or roosting sites rather than in general occurrence.

(6) List of Wild Animals Under State Protection (promulgated by the National Forestry and Grassland Administration in 2021).

(7) Zheng, G. M. & Wang, Q. S. (1998). China Red Data Book of Endangered Animals. Aves. Science Press, Beijing, China. 346pp. (In Chinese only).

(8) Jiang *et al.* (2016). Red List of China's Vertebrates. *Biodiversity Science* **24**(5): 500-551.

(9) Redlist of China's Biodiversity - Vertebrates (2020) (promugated by the Ministry of Ecology and Environment and Chinese Academy of Sciences)

(10) International Union for the Conservation of Nature (IUCN) (2025). The IUCN Red List of Threatened Species. Version 2024-2.

(11) Wetland-dependent species (including wetland-dependent species and waterbirds).

Abbreviation for Habitats: MWL = Mixed Woodland; SL = Shrubland; PL = Plantation; DA = Developed Area; and IF = In Flight.

Code for Abundance: +++++ = Dominant; +++++ = Abundant; +++ = Frequent; ++ = Occasional; + = Scarce.

Species of conservation importance is in **bold** type face.

Appendix 9.2 Fauna Species Recorded within the Assessment Area
Mammal

Common Name	Scientific Name	Distribution in Hong Kong ⁽²⁾	Level of Concern ⁽³⁾	Protection Status in China ⁽⁴⁾	China Red Data Book ⁽⁵⁾	Red List of China's Vertebrates ⁽⁶⁾	Redlist of China's Biodiversity ⁽⁷⁾	IUCN Red List ⁽⁸⁾	MWL	SL	PL	DA
Eurasian Wild Pig	<i>Sus scrofa</i>	Very widely distributed in countryside areas throughout Hong Kong	-	-	-	Least Concern	Least Concern	Least Concern	+			
Greater Bent-winged Bat⁽¹⁾	<i>Miniopterus magnater</i>	Data deficient	PRC (RC)	-	-	Near Threatened	Near Threatened	Least Concern			+	
Indochinese Forest Rat	<i>Rattus andamanensis</i>	Widely distributed in countryside areas throughout Hong Kong	-	-	-	Least Concern	Least Concern	Least Concern			+	
Japanese Pipistrelle⁽¹⁾	<i>Pipistrellus abramus</i>	Widely distributed throughout Hong Kong.	-	-	-	Least Concern	Least Concern	Least Concern	+	+	+	
Lesser Yellow Bat⁽¹⁾	<i>Scotophilus kuhlii</i>	Fairly widely distributed in countryside areas throughout Hong Kong.	(LC)	-	-	Least Concern	Least Concern	Least Concern				+
Short-nosed Fruit Bat⁽¹⁾	<i>Cynopterus sphinx</i>	Very widely distributed in urban and countryside areas throughout Hong Kong.	-	-	Indeterminate	Near Threatened	Near Threatened	Least Concern	+		+	
Unknown Vespertilionidae species 1⁽¹⁾	-	-	-	-	-	-	-	Least Concern	+	+		+
Unknown Vespertilionidae species 2⁽¹⁾	-	-	-	-	-	-	-	Least Concern	+	+	+	+

Notes:

(1) Protected under Wild Animals Protection Ordinance (Cap. 170).

(2) AFCD (2025). Hong Kong Biodiversity Information Hub.

(3) Fellowes, J.R. *et al.* (2002). Wild Animals to Watch: Terrestrial and Freshwater Fauna of Conservation Concern in Hong Kong. *Memoirs of the Hong Kong Natural History Society* **25**:123-159. LC=Local Concern; PRC=Potential Regional Concern, RC=Regional Concern. Letters in parentheses indicate that the assessment is on the basis of restrictedness in nesting and/or roosting sites rather than in general occurrence.

(4) List of Wild Animals Under State Protection (promulgated by the National Forestry and Grassland Administration in 2021).

(5) Wang, S. (1998). China Red Data Book of Endangered Animals. Mammalia. Science Press, Beijing, China. 417pp. (In Chinese only).

(6) Jiang *et al.* (2016). Red List of China's Vertebrates. *Biodiversity Science* **24**(5): 500-551.

(7) Redlist of China's Biodiversity - Vertebrates (2020) (promugated by the Ministry of Ecology and Environment and Chinese Academy of Sciences)

(8) International Union for the Conservation of Nature (IUCN) (2025). The IUCN Red List of Threatened Species. Version 2024-2.

Abbreviation for Habitats: MWL = Mixed Woodland; SL = Shrubland; PL = Plantation; and DA = Developed Area.

Code for Abundance: +++++ = Dominant; +++++ = Abundant; +++ = Frequent; ++ = Occasional; + = Scarce.

Species of conservation importance is in **bold** type face.

Appendix 9.2 Fauna Species Recorded within the Assessment Area
Butterfly

Common Name	Scientific Name	Distribution in Hong Kong ⁽¹⁾	Level of Concern ⁽²⁾	Protection Status in China ⁽³⁾	Local Restrictedness and Species of Conservation Concern ⁽⁴⁾	IUCN Red List ⁽⁵⁾	MWL	SL	PL	MWC	DA
Blue-spotted Crow	<i>Euploea midamus</i>	Widely distributed throughout Hong Kong	-	-	Very Common	-	+				
Chocolate Pansy	<i>Junonia iphita</i>	Wu Kau Tang, Shan Liu, Shui Long Wo, Tong Fuk, Pak Tam Chung	-	-	Common	-	+				
Common Mime	<i>Chilasa clytia</i>	Widely distributed throughout Hong Kong	-	-	Common	-	+				
Common Mormon	<i>Papilio polytes</i>	Widely distributed throughout Hong Kong	-	-	Very Common	-	+				
Common Sailer	<i>Neptis hylas</i>	Tai Po Kau, Tai Mo Shan, Kadoorie Farm and Botanic Garden, Shing Mun	-	-	Very Common	-	+				+
Dark Evening Brown	<i>Melanitis phedima</i>	Widely distributed throughout Hong Kong	-	-	Uncommon	-	+				
Dark-brand Bush Brown	<i>Mycalasis mineus</i>	Widely distributed throughout Hong Kong	-	-	Very Common	-	+		+		
Eurema sp.	<i>Eurema sp.</i>	-	-	-	-	-	+			+	
Forest Hopper	<i>Astictopterus jama</i>	Widely distributed throughout Hong Kong	-	-	Common	-	+				
Great Eggfly	<i>Hypolimnas bolina</i>	Kowloon Reservoir, Tseng Lan Shue, Tai Lam	-	-	Common	-			+		+
Great Mormon	<i>Papilio memnon</i>	Widely distributed throughout Hong Kong	-	-	Very Common	-			+		
Indian Cabbage White	<i>Pieris canidia</i>	Widely distributed throughout Hong Kong	-	-	Very Common	-	+				
Large Faun	<i>Faunis eumeus</i>	New Territories	-	-	Common	-	+		+		
Lemon Emigrant	<i>Catopsilia pomona</i>	Widely distributed throughout Hong Kong	-	-	Common	-		+		+	+
Plum Judy	<i>Abisara echerius</i>	Tai Po Kau, Shing Mun Reservoir, Ngau Ngak Shan, Kwun Yam Shan, Sam A Chung, Cheung Sheung, Tai Lam, Tai Mo Shan	-	-	Very Common	-	+	+			
Red Helen	<i>Papilio helenus</i>	Widely distributed throughout Hong Kong	-	-	Very Common	-	+				
Red-base Jezebel	<i>Delias pasithoe</i>	Widely distributed throughout Hong Kong	-	-	Very Common	-	+	+	+		+
Rustic	<i>Cupha erymanthis</i>	Widely distributed throughout Hong Kong	-	-	Very Common	-	+	+			
Southern Sullied Sailer	<i>Neptis clinia</i>	Widely distributed throughout Hong Kong	-	-	Common	-	+				
Spangle	<i>Papilio protenor</i>	Widely distributed throughout Hong Kong	-	-	Very Common	-	+				
Transparent 6-line Blue	<i>Nacaduba kurava</i>	Widely distributed throughout Hong Kong	-	-	Common	-			+		

Notes:

(1) AFCD (2025). Hong Kong Biodiversity Information Hub.

(2) Fellowes, J.R. *et al.* (2002). Wild Animals to Watch: Terrestrial and Freshwater Fauna of Conservation Concern in Hong Kong. *Memoirs of the Hong Kong Natural History Society* **25**:123-159.

(3) List of Wild Animals Under State Protection (promulgated by the National Forestry and Grassland Administration in 2021).

(4) Chan, A, Cheung J., Sze, P., Wong, A., Wong, E. and Yau, E. (2011). A Review of the Local Restrictedness of Hong Kong Butterflies. *Hong Kong Biodiversity* **21**: 1-12.

(5) International Union for the Conservation of Nature (IUCN) (2025). The IUCN Red List of Threatened Species. Version 2024-2.

Abbreviation for Habitats: MWL = Mixed Woodland; SL = Shrubland; PL = Plantation; MWC = Modified Watercourse; and DA = Developed Area.

Code for Abundance: +++++ = Dominant; ++++ = Abundant; +++ = Frequent; ++ = Occasional; + = Scarce.

Species of conservation importance is in **bold** type face.

Appendix 9.2 Fauna Species Recorded within the Assessment Area
Odonate

Common Name	Scientific Name	Distribution in Hong Kong ⁽¹⁾	Level of Concern ⁽²⁾	Protection Status in China ⁽³⁾	Distribution and Conservation Significance ⁽⁴⁾	IUCN Red List ⁽⁵⁾	MWL	SL	PL	NWC	DA
Common Blue Skimmer	<i>Orthetrum glaucum</i>	Widely distributed in streams, conduits, drainage channels, seepages and road gutters throughout Hong Kong; Very Widespread	-	-	Very Widespread	Least Concern	+	+	+	+	
Common Red Skimmer	<i>Orthetrum pruinatum neglectum</i>	Widely distributed in slow streams, ponds, rain puddles and irrigation conduits; Widespread	-	-	Widespread	Least Concern				+	
Giant River Hawker	<i>Tetracanthagyna waterhousei</i>	Widely distributed in forested areas throughout the New Territories; Sparse	-	-	Scattered	Least Concern				+	
Green Skimmer	<i>Orthetrum sabina sabina</i>	Widely distributed in all wetland habitats throughout Hong Kong; Widespread	-	-	Widespread	Least Concern					+
Indigo Dropwing	<i>Trithemis festiva</i>	Favours sluggish sections of streams with a strong current or the small rock pools in of mountain streams. Widespread in Hong Kong; Widespread	-	-	Widespread	Least Concern	+				

Notes:
(1) AFCD (2025). Hong Kong Biodiversity Information Hub.
(2) Fellowes, J.R. *et al.* (2002). Wild Animals to Watch: Terrestrial and Freshwater Fauna of Conservation Concern in Hong Kong. *Memoirs of the Hong Kong Natural History Society* **25**:123-159.
(3) List of Wild Animals Under State Protection (promulgated by the National Forestry and Grassland Administration in 2021).
(4) Reels, G.T. (2019). An Annotated Check List of Hong Kong Dragonflies and Assessment of Their Local Conservation Significance. Faunistic Studies in South-east Asia and Pacific Island Odonata. *Journal of the International Dragonfly Fund* **30**: 1-49.
(5) International Union for the Conservation of Nature (IUCN) (2025). The IUCN Red List of Threatened Species. Version 2024-2.

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Appendix 9.2 Fauna Species Recorded within the Assessment Area
Herpetofauna

Common Name	Scientific Name	Distribution in Hong Kong ⁽¹⁾	Level of Concern ⁽²⁾	Protection Status in China ⁽³⁾	China Red Data Book ⁽⁴⁾	Red List of China's Vertebrates ⁽⁵⁾	Redlist of China's Biodiversity ⁽⁶⁾	IUCN Red List ⁽⁷⁾	MWL	SL	PL	DA
Asian Common Toad	<i>Duttaphrynus melanostictus</i>	Widely distributed in Hong Kong.	-	-	-	Least Concern	Least Concern	Least Concern	+		+	+
Bamboo Snake	<i>Cryptelytrops albolabris</i>	Very common and widespread in Hong Kong	-	-	-	Least Concern	-	Least Concern	+	+	+	
Brown Tree Frog	<i>Polypedates megacephalus</i>	Widely distributed throughout Hong Kong.	-	-	-	Least Concern	Least Concern	Least Concern	+	+		
Changeable Lizard	<i>Calotes versicolor</i>	Widely distributed throughout Hong Kong.	-	-	-	Least Concern	Least Concern	Least Concern	+			
Chinese Gecko	<i>Gekko chinensis</i>	Widely distributed throughout Hong Kong	-	-	-	Least Concern	Least Concern	Least Concern	+		+	
Four-clawed Gecko	<i>Gehyra mutilata</i>	Widely distributed throughout Hong Kong	-	-	-	Vulnerable	Vulnerable	Least Concern			+	
Garnot's Gecko	<i>Hemidactylus garnotii</i>	Distributed in Lantau Island, Hong Kong Island and Eastern New Territories	-	-	-	Least Concern	Least Concern	Least Concern	+	+	+	
Greenhouse Frog	<i>Eleutherodactylus planirostris</i>	Widely distributed throughout Hong Kong.	-	-	-	-	-	Least Concern	+		+	
Ornate Pigmy Frog	<i>Microhyla fissipes</i>	Widely distributed in Hong Kong.	-	-	-	Least Concern	Least Concern	Least Concern		+		

Notes:

(1) AFCD (2025). Hong Kong Biodiversity Information Hub.

(2) Fellowes, J.R. *et al.* (2002). Wild Animals to Watch: Terrestrial and Freshwater Fauna of Conservation Concern in Hong Kong. *Memoirs of the Hong Kong Natural History Society* **25**:123-159.

(3) List of Wild Animals Under State Protection (promulgated by the National Forestry and Grassland Administration in 2021).

(4) Zhao, E. & Wang, S. (1998). China Red Data Book of Endangered Animals. Amphibia and Reptilia. Science Press. Beijing, China. 330pp. (In Chinese only).

(5) Jiang *et al.* (2016). Red List of China's Vertebrates. *Biodiversity Science* **24**(5): 500-551.

(6) Redlist of China's Biodiversity - Vertebrates (2020) (promugated by the Ministry of Ecology and Environment and Chinese Academy of Sciences)

(7) International Union for the Conservation of Nature (IUCN) (2025). The IUCN Red List of Threatened Species. Version 2024-2.

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Appendix 9.2 Fauna Species Recorded within the Assessment Area
Freshwater Communities

Common Name	Scientific Name	Distribution in Hong Kong ⁽¹⁾	Level of Concern ⁽²⁾	Protection Status in China ⁽³⁾	China Red Data Book ⁽⁴⁾	Red List of China's Vertebrates ⁽⁵⁾	Redlist of China's Biodiversity ⁽⁶⁾	IUCN Red List ⁽⁷⁾	PL	MWC	NWC
-	<i>Macrobrachium sp.</i>	Very common	-	-	-	-	-	-		+	
-	<i>Rhinogobius duospilus</i>	Probably the commonest goby in Hong Kong and is widely distributed in upper and middle course of streams, sometimes occurs in lowland streams.	-	-	-	Data Deficient	Data Deficient	-			+
Backswimmer	<i>Enithares sp.</i>	Very common	-	-	-	-	-	-			+
Caddisfly (nymph)	<i>Unidentified Lepidostomatidae sp.</i>	-	-	-	-	-	-	-			+
Canton Bee Shrimp	<i>Caridina cantonensis</i>	Very common	-	-	-	-	-	Least Concern		++	+++++
Fishing Spider	<i>Unidentified sp. 1</i>	Common	-	-	-	-	-	-			+
Hong Kong Freshwater Crab	<i>Nanhaipotamon hongkongense</i>	Presumably endemic to Hong Kong, but been recently discovered in Shenzhen; Common	PGC	-	-	-	-	Least Concern	+		+
Large Stream Snail	<i>Sulcospira hainanensis</i>	Abundant and widespread; Very common	-	-	-	-	-	Least Concern			++
Waterskater/Water strider	<i>Unidentified sp. 1</i>	Common	-	-	-	-	-	-		+	

Notes:

(1) AFCD (2025). Hong Kong Biodiversity Information Hub.

Dudgeon D. (2003). Hong Kong Field Guides: Hillstreams.

Lee, L. F., Lam, K. S., Ng, K. Y., Chan, K. T. and Young, L. C. (2004). Field Guide to the Freshwater Fish of Hong Kong. Friends of the Country Parks.

(2) Fellowes, J.R. *et al.* (2002). Wild Animals to Watch: Terrestrial and Freshwater Fauna of Conservation Concern in Hong Kong. *Memoirs of the Hong Kong Natural History Society* **25**:123-159. PGC=Potential Global Concern.

(3) List of Wild Animals Under State Protection (promulgated by the National Forestry and Grassland Administration in 2021).

(4) Wang, S., Yue P. & Chen Y. (1998). China Red Data Book of Endangered Animals: Pisces. Science Press, Beijing, China. 247pp. (In Chinese only).

(5) Jiang *et al.* (2016). Red List of China's Vertebrates. *Biodiversity Science* **24**(5): 500-551.

(6) Redlist of China's Biodiversity - Vertebrates (2020) (promugated by the Ministry of Ecology and Environment and Chinese Academy of Sciences)

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Appendix 9.3



Tam Kon Shan Portal (Mixed Woodland)



Tam Kon Shan Portal (Plantation)



Ngau Kok Wan Portal (Mixed Woodland)



Ngau Kok Wan Portal (Plantation)



Ngau Kok Wan Portal (Modified Watercourse W1)



Ngau Kok Wan Portal (Developed Area)

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**Representative Photographs of
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Wok Tai Wan Works Area (Mixed Woodland)



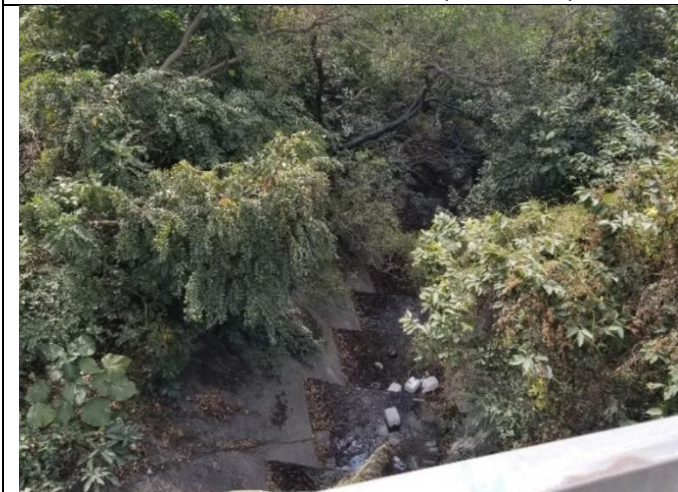
Wok Tai Wan Works Area (Shrubland)



Wok Tai Wan Works Area (Plantation)



Wok Tai Wan Works Area (Developed Area)



Wok Tai Wan Works Area (Modified Watercourse W3)



Wok Tai Wan Works Area (Natural Watercourse W6)

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Access Road west of Ngau Kok Wan Portal



Mixed Woodland



Shrubland



Plantation



Developed Area

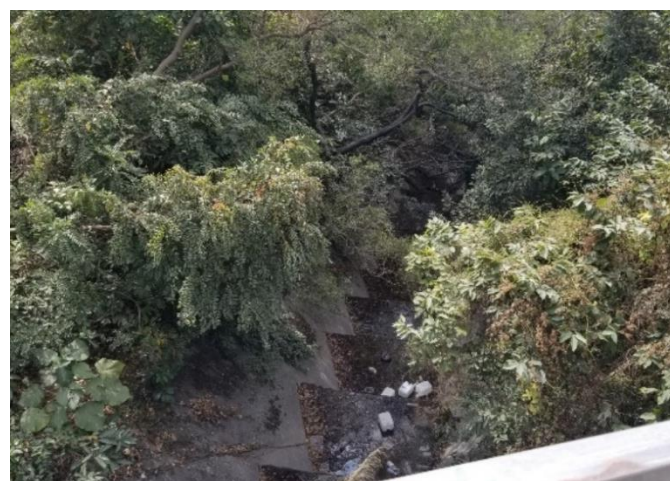


Modified Watercourse: Drainage Channel (W1)

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Modified Watercourse: Drainage Channel (W2)



Modified Watercourse: Drainage Channel (W3)



Natural Watercourse (W1a)



Natural Watercourse (W4)



Natural Watercourse (W5)



Natural Watercourse (W6)

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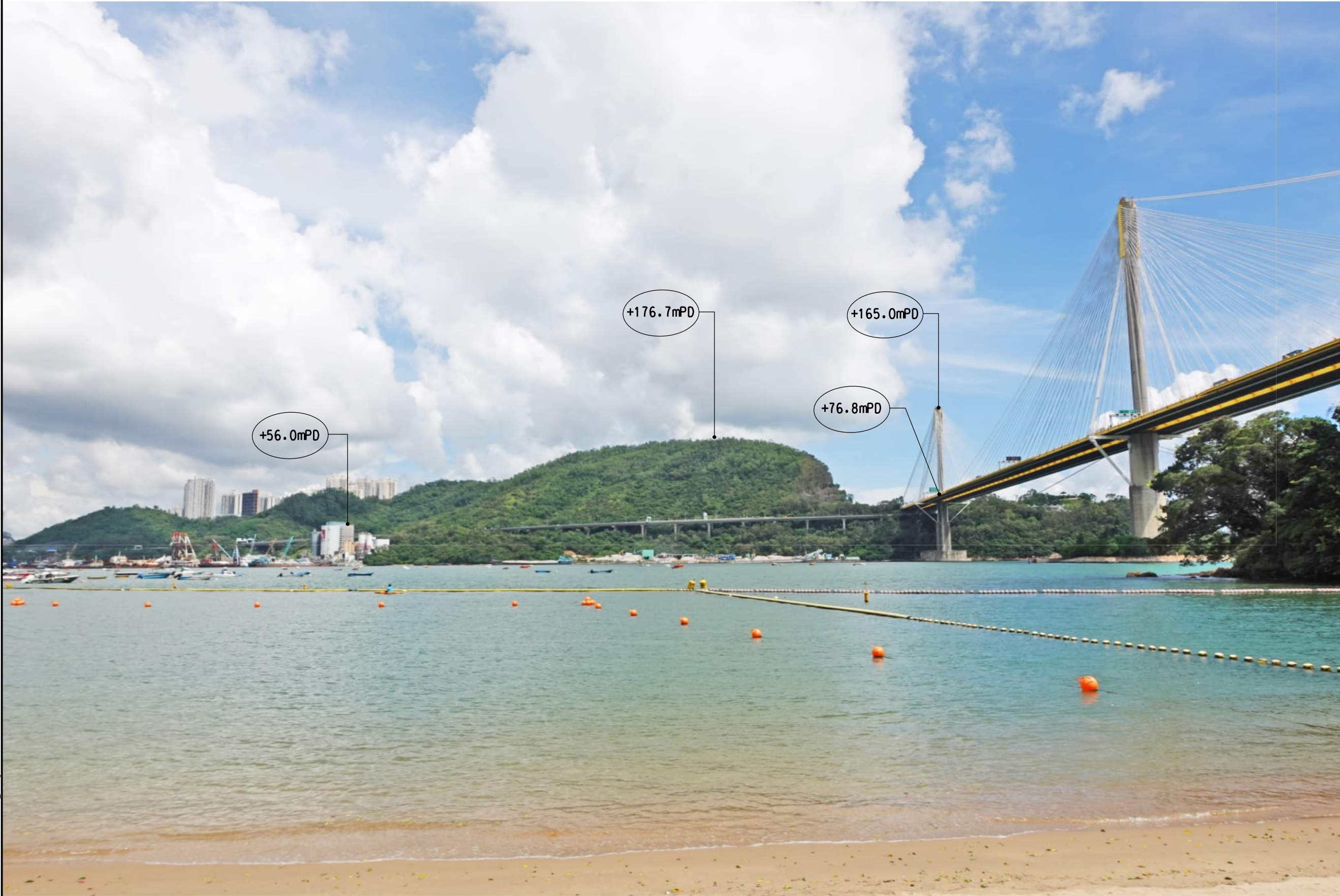
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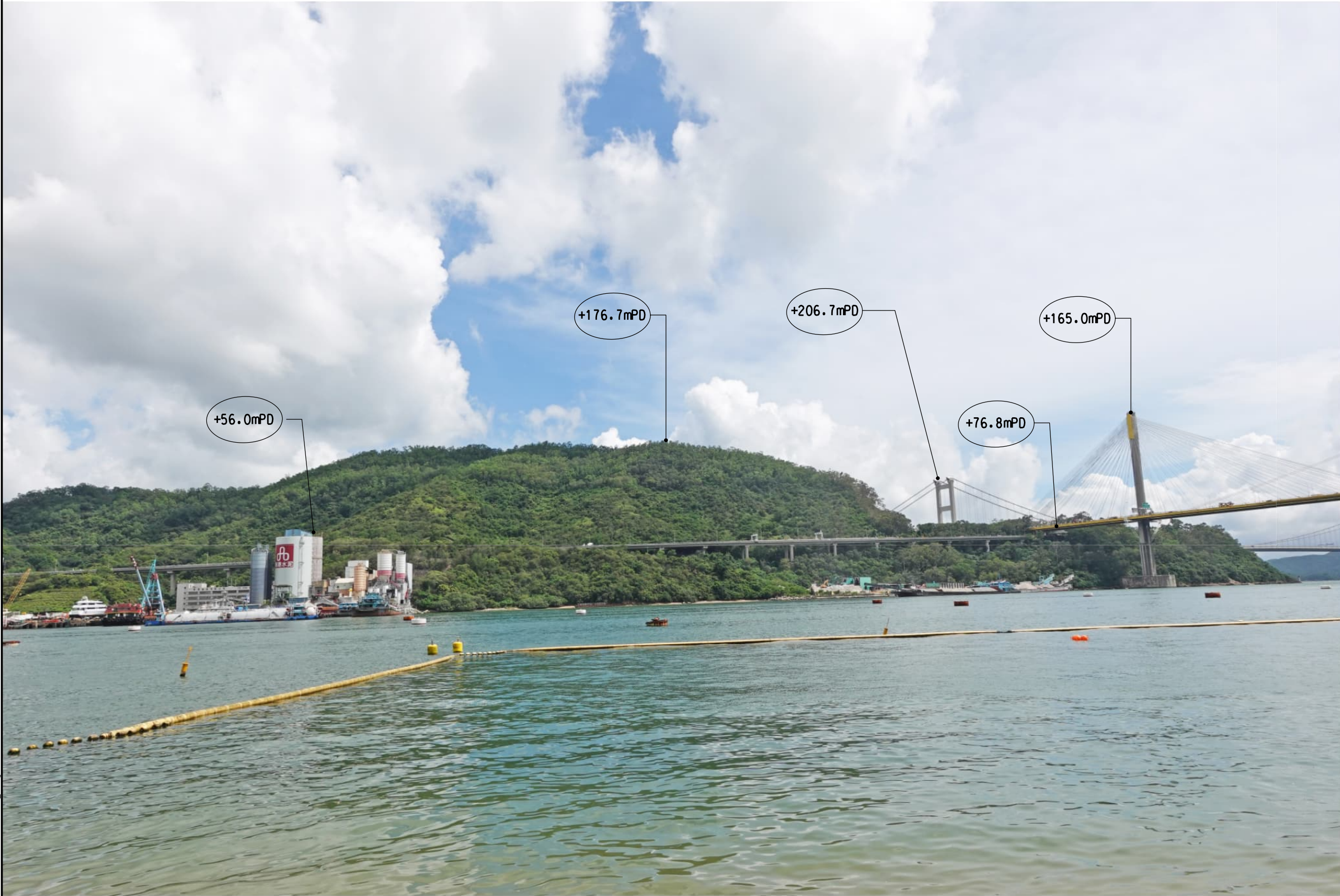
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VIEWPOINT 2 - BASELINE SCENARIO



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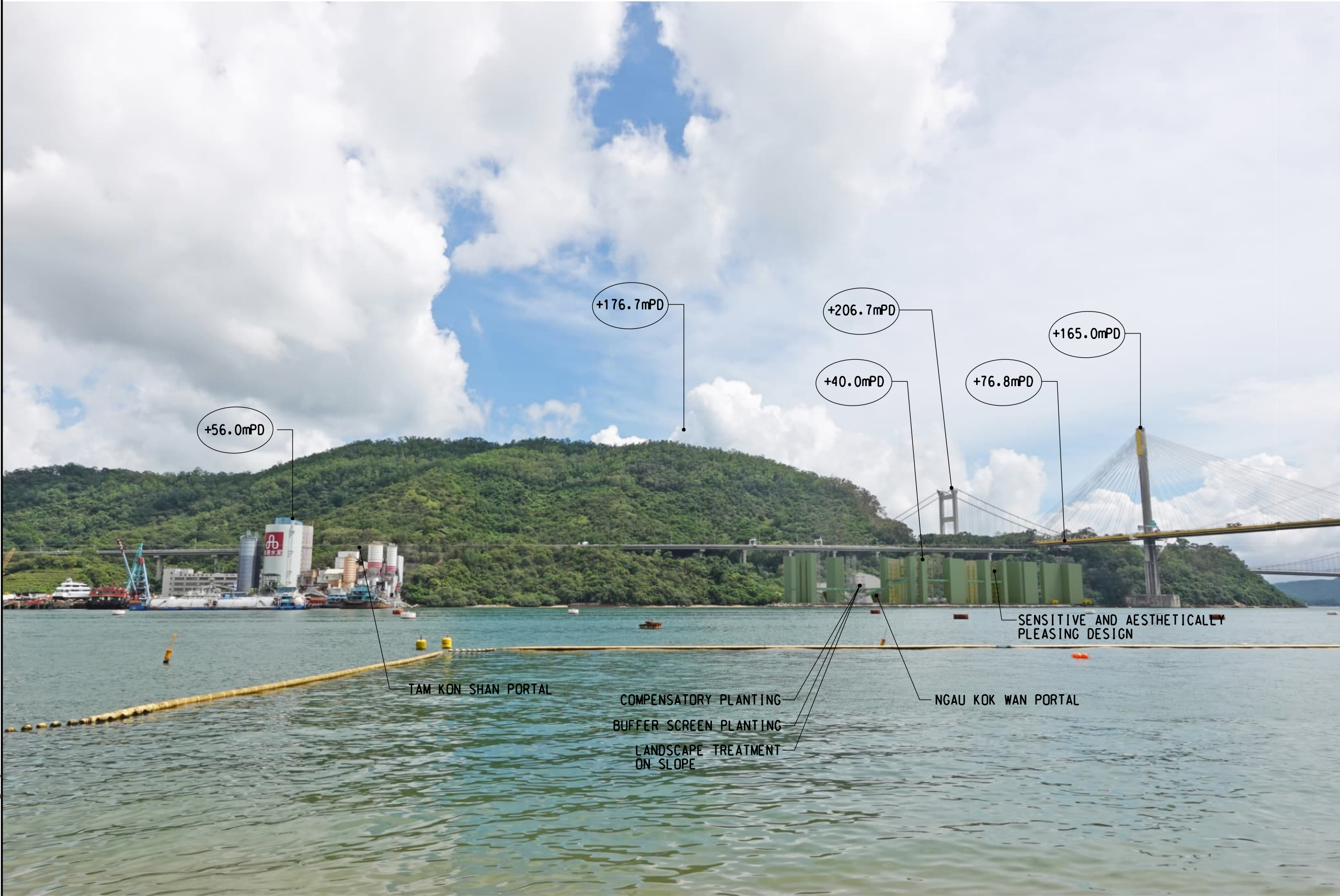
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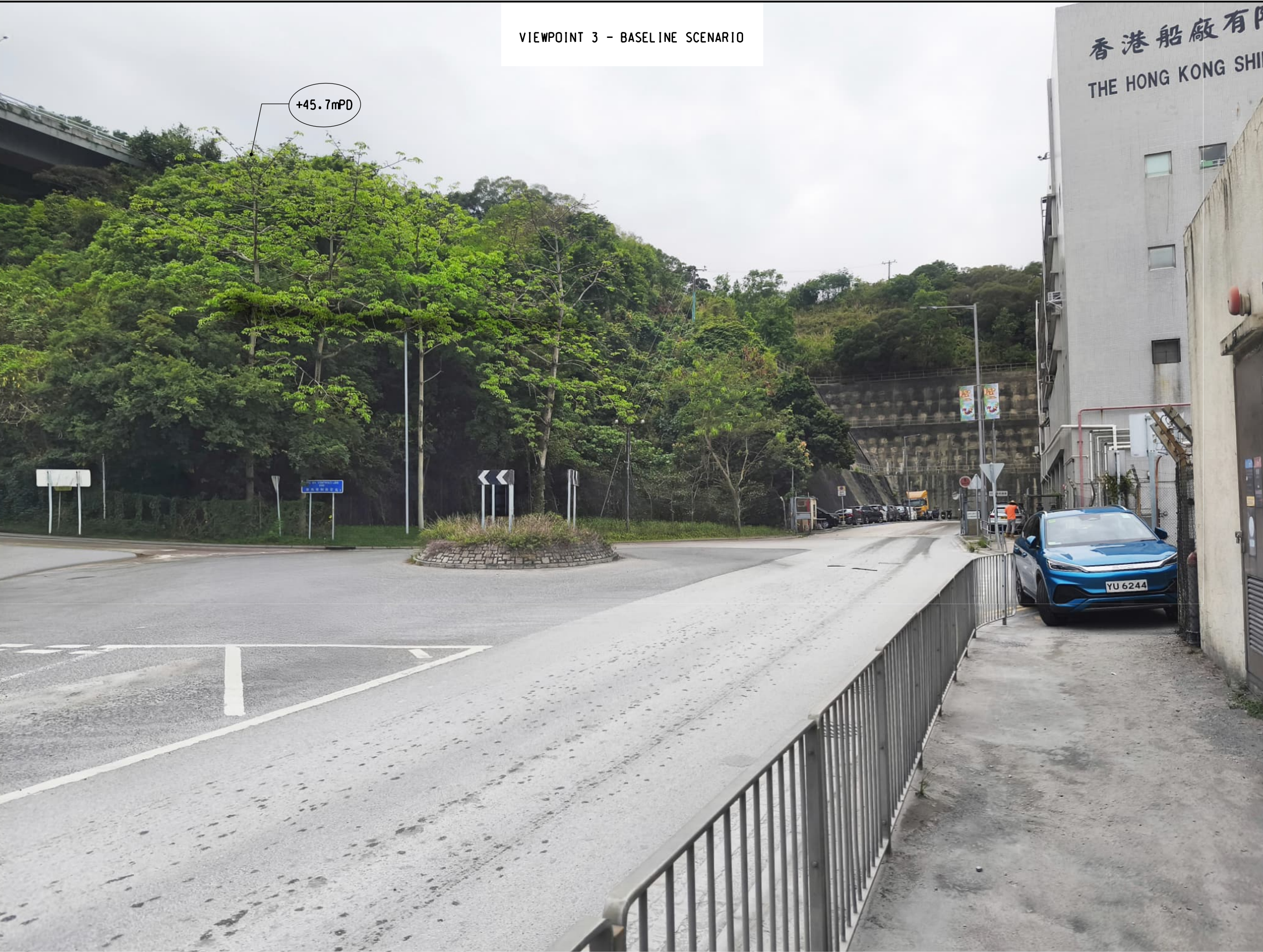
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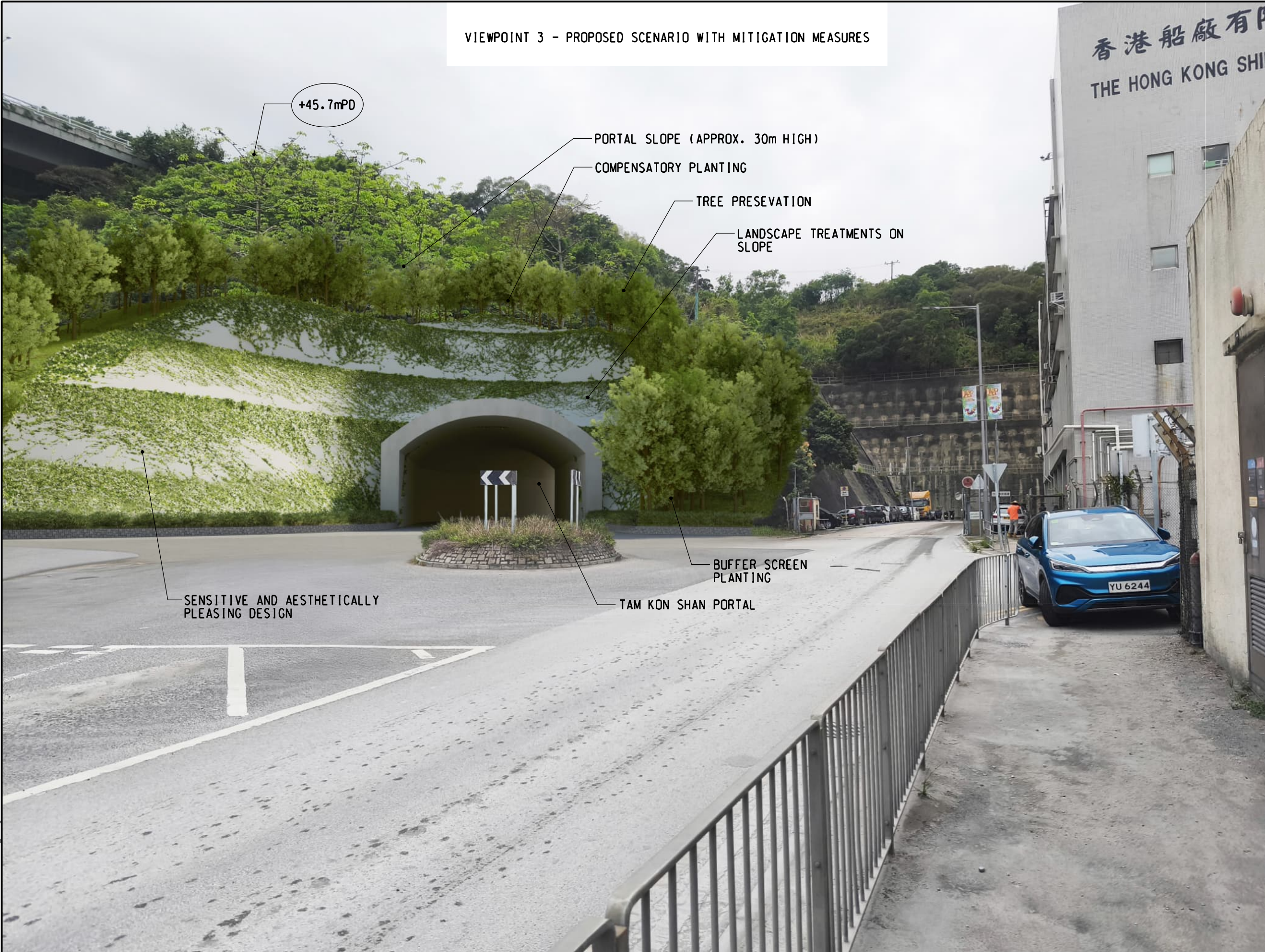
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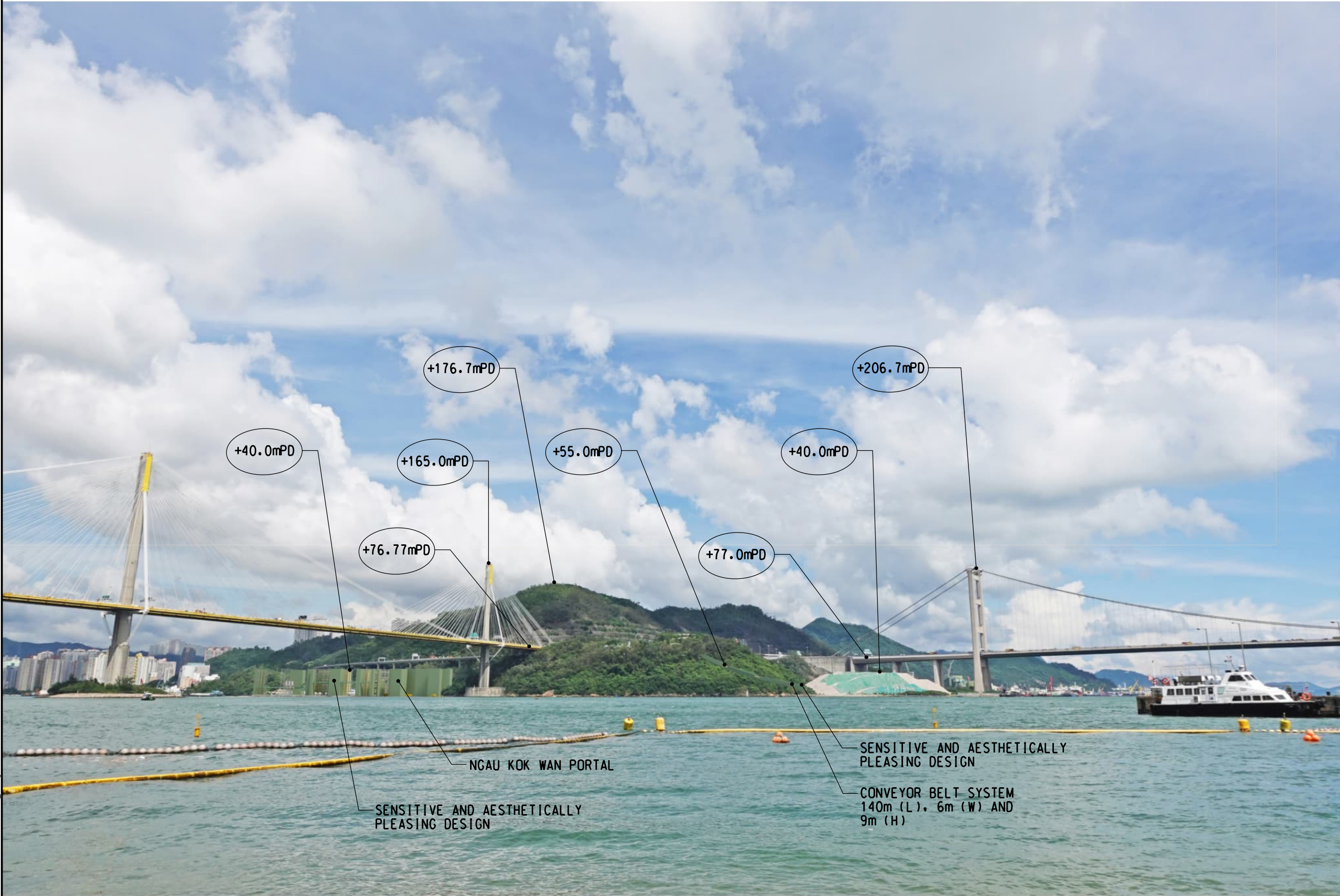
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VIEWPOINT 4 - PROPOSED SCENARIO WITH MITIGATION MEASURES



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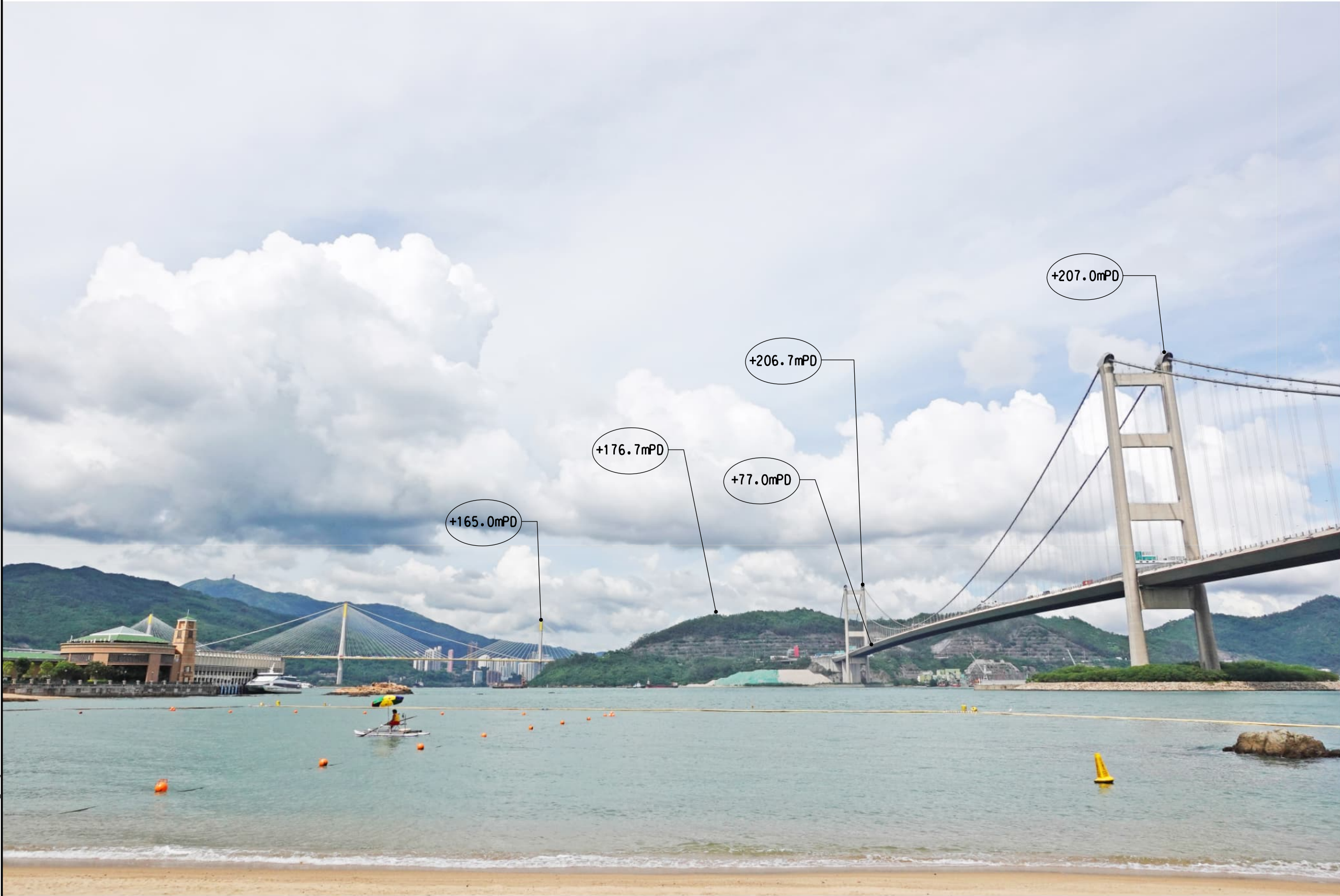
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VIEWPOINT 5 - BASELINE SCENARIO



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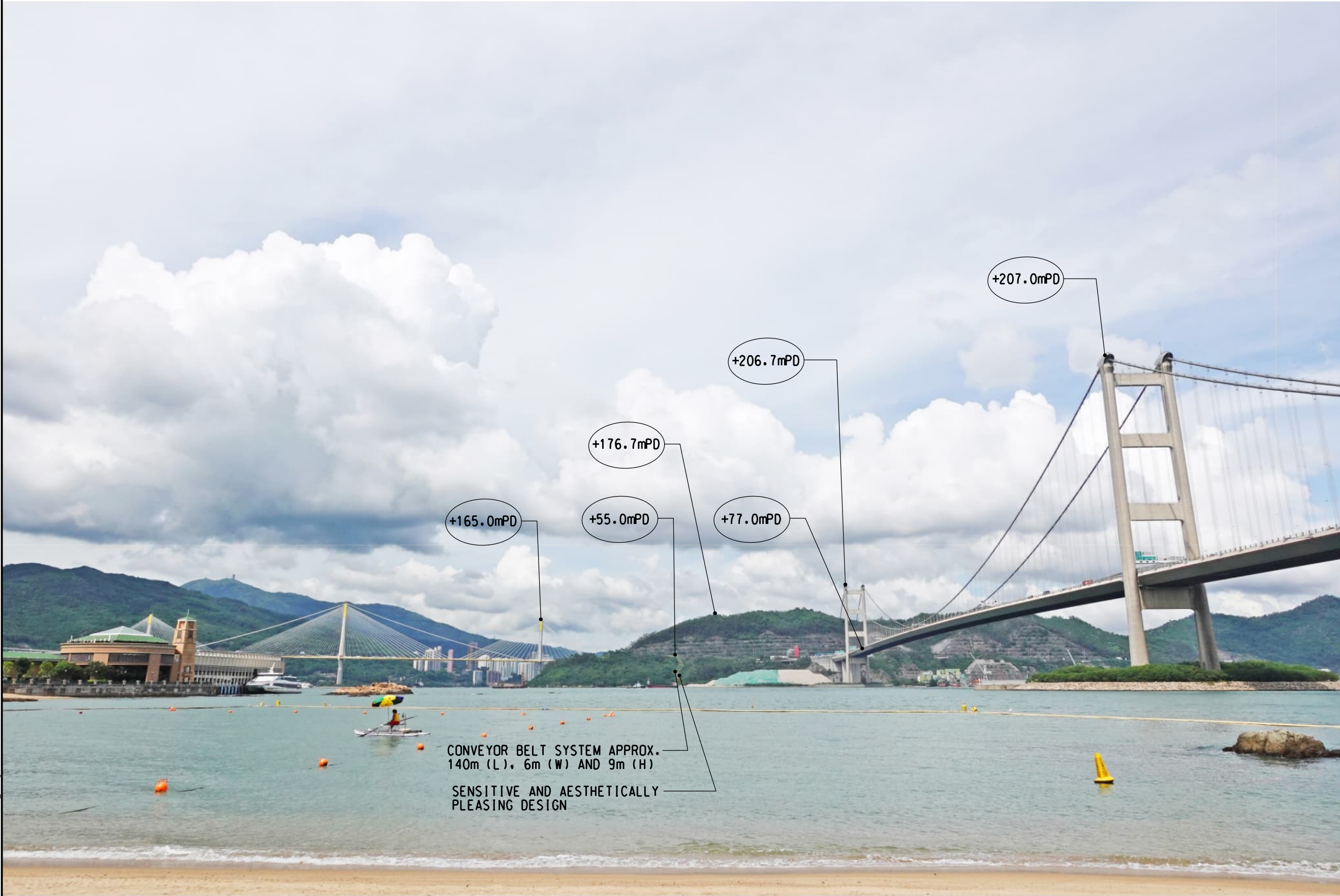
PHOTOMONTAGE OF PROPOSED
DEVELOPMENT (VIEWPOINT 5)

SHEET NUMBER
圖紙編號

60733229/B19/APPENDIX 10.1

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VIEWPOINT 5 - PROPOSED SCENARIO WITH MITIGATION MEASURES



CONVEYOR BELT SYSTEM APPROX.
140m (L), 6m (W) AND 9m (H)

SENSITIVE AND AESTHETICALLY
PLEASING DESIGN

GENERAL NOTE:
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SHEET TITLE
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DEVELOPMENT (VIEWPOINT 5)

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VIEWPOINT 6 - BASELINE SCENARIO



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SHEET TITLE
PHOTOMONTAGE OF PROPOSED
DEVELOPMENT (VIEWPOINT 6)

SHEET NUMBER
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VIEWPOINT 6 - PROPOSED SCENARIO WITH MITIGATION MEASURES



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SHEET TITLE

PHOTOMONTAGE OF PROPOSED
DEVELOPMENT (VIEWPOINT 6)

(SHEET 12 OF 14)

SHEET NUMBER

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VIEWPOINT 7 - BASELINE SCENARIO



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SHEET TITLE
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DEVELOPMENT (VIEWPOINT 7)

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VIEWPOINT 7 - PROPOSED SCENARIO WITH MITIGATION MEASURES



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Appendix 12.1

Underground Quarrying at Tsing Yi North
Hazard Register (After unloading the explosives to the Contractor)

Item No.	Potential Hazard Item	Possible Consequence	Potential Causes	List of Recommended Control Measures
Operation Phase				
1	Accidental Initiation of Explosives during Transport to Blast Faces	Fatalities of off-site population due to blast and overpressure waves	❶ Explosives load to be initiated when the load is engulfed by a non-crash fire of the explosive carrying vehicle for a period of time	◆ Use of secure, flame-resistant packaging / stowage of explosives (e.g., approved containers, flame-proof tarpaulins), with separation from vehicle heat sources (e.g., exhaust, batteries); prohibit mixing with other flammables, so that the explosives could not be detonated. No ferrous fixtures to be part of the explosive storage compartment.
			❶ Explosives load to be initiated when the load is engulfed by a crash fire of the explosive carrying vehicle for a period of time	◆ Equip the explosives transport vehicle with fully charged, multi-purpose dry-chemical fire extinguishers, which should be readily accessible to the driver and inspected regularly, so that any fire incident can be extinguished as soon as practicable.
			❶ The stability of the explosives load is affected by a significant mechanical impact during vehicle collision and initiate the explosion	◆ Implement speed limit within the construction sites, no significant collision is expected.
			❶ Spontaneous explosion of "unsafe explosives" resulting from breach of regulations caused by badly packaged, maunfactured, and / or 'out-of-specification' explosives	◆ Only use explosives approved for use by Mines Division. Separate transport of detonators from explosives and require qualified personnel (e.g., Registered Shotfirers and Resident Explosive Supervisors) to handle acceptance, inspection, and documentation. No unauthorised personnel allowed within designated zone of loading and unloading locations
				◆ The explosives are supplied by the CEDD Mines Division. The conditions of explosives will have been duly checked before unloading from the Kau Shat Wan Explosive Depot. Return the detonators or surface connectors to CEDD Mines Division if there are any badly packaged, manufactured, and/or 'out-of-specification' explosives.
				◆ If a thunderstorm warning has been issued by the Hong Kong Observatory, the delivery of explosives may be delayed or cancelled by Mines Division. If explosives are delivered, an assessment of the risks involved in transporting the explosives to the blast face(s) and unloading of explosives from the delivery vehicles will be made by the BE, RSF and the Mines Division Explosive Officer. A Lightning Detector will be used to indicate the weather conditions.

Underground Quarrying at Tsing Yi North

Hazard Register (After unloading the explosives to the Contractor)

Item No.	Potential Hazard Item	Possible Consequence	Potential Causes	List of Recommended Control Measures
2	More than the design MIC initiated during blasting	Fatalities of off-site population due to blast and overpressure waves	❶ Manufacturer defect of the detonators or the surface connectors	◆ Conduct thorough inspection upon receipt of detonator / explosive delivery: visually check packaging for damage, leaks, improper labeling / markings. Return the detonators or surface connectors to CEDD Mines Division if there are any manufacturer defects. Blast door at tunnel portal
		Stability of nearby building being affected by more than expected ground vibration, falling objects or building collapse resulted	❶ Wrong design of time delay of a blast face	◆ Use blast design software to model timing sequences, relief rates, and interactions; review against site geology and vibration limits. Ensure sufficient delay time interval (e.g. 8ms) during the blast design. Independent check of time delay for each blasting interval and endorsed by the Blasting Competent Supervisor (BCS).
		Stability of nearby slopes being affected by more than expected ground vibration and resulted in landslide	❶ Detonator put into wrong hole	◆ Clear demarcation on the rock face surface per blast hole. Primer assembly and Charging done by Qualified Shotfirers only using authorized methods under the supervision by RES. Independent check of time delay of each blast hole by Blasting Competent Supervisor before permission to blast is given.
		Stability of nearby terrains being affected by more than expected ground vibration and resulted in landslide or boulder fall	❶ Connection of a Detonator to a Wrong Surface	◆ Follow connection method as per approved blast design. Hook-up is inspected by Blasting Engineer. Use standardized connection procedures with visual aids (e.g., diagrams, color-coded trunk lines/connectors). Mark up the boundaries of each surface sector by paint on the rock face
		Blasting induced flyrock / fragments / missiles	Use of a Wrong Surface Connector	◆ Carry out pre-blast inventory check and reconciliation against design quantities/delays. Blast door at tunnel portal
			More bulk emulsion explosives loaded into a production hole than required	◆ Require loading logs with measured volumes per hole; cross-check against design powder factor. Supervision of loading of each blast hole by Resident Explosive Supervisor (RES)
			❶ More cartridge sticks loaded into a production hole than required	◆ Calculate and mark exact number of cartridges per hole based on design; use counting during loading. Supervision of loading of each blast hole by Resident Explosive Supervisor (RES)
			❶ Incorrect blasthole nos., length or diameter	◆ Use computer-controlled drilling jumbo and follow approved blast design for blast holes drilling. Blasthole length and diameter to be independently checked and confirmed as correct by Resident Explosive Supervisor before loading of explosives is permitted
				◆ Blast doors will be installed at the tunnel portals to prevent any flyrock hazard and air overpressure.
				◆ Inspection of critical sensitive receivers (e.g. building / utilities / slope) to be carried out after each blast to confirm the conditions are not affected by the blasting works.

Underground Quarrying at Tsing Yi North
Hazard Register (After unloading the explosives to the Contractor)

Item No.	Potential Hazard Item	Possible Consequence	Potential Causes	List of Recommended Control Measures
				Carry out the pre-tender and Contractor's blasting assessment to identify sensitive receivers by a Blasting Competent Person. The blasting assessment and blasting method statement will be submitted to CEDD Mines Division for approval before obtaining the blasting permissions. Blasting operations to be closely supervised by the Chief Registered Shot Firer, Blasting Engineer (BE), Blasting Resident Explosive Supervisors (RES), and Blasting Competent Supervisors (BCS)